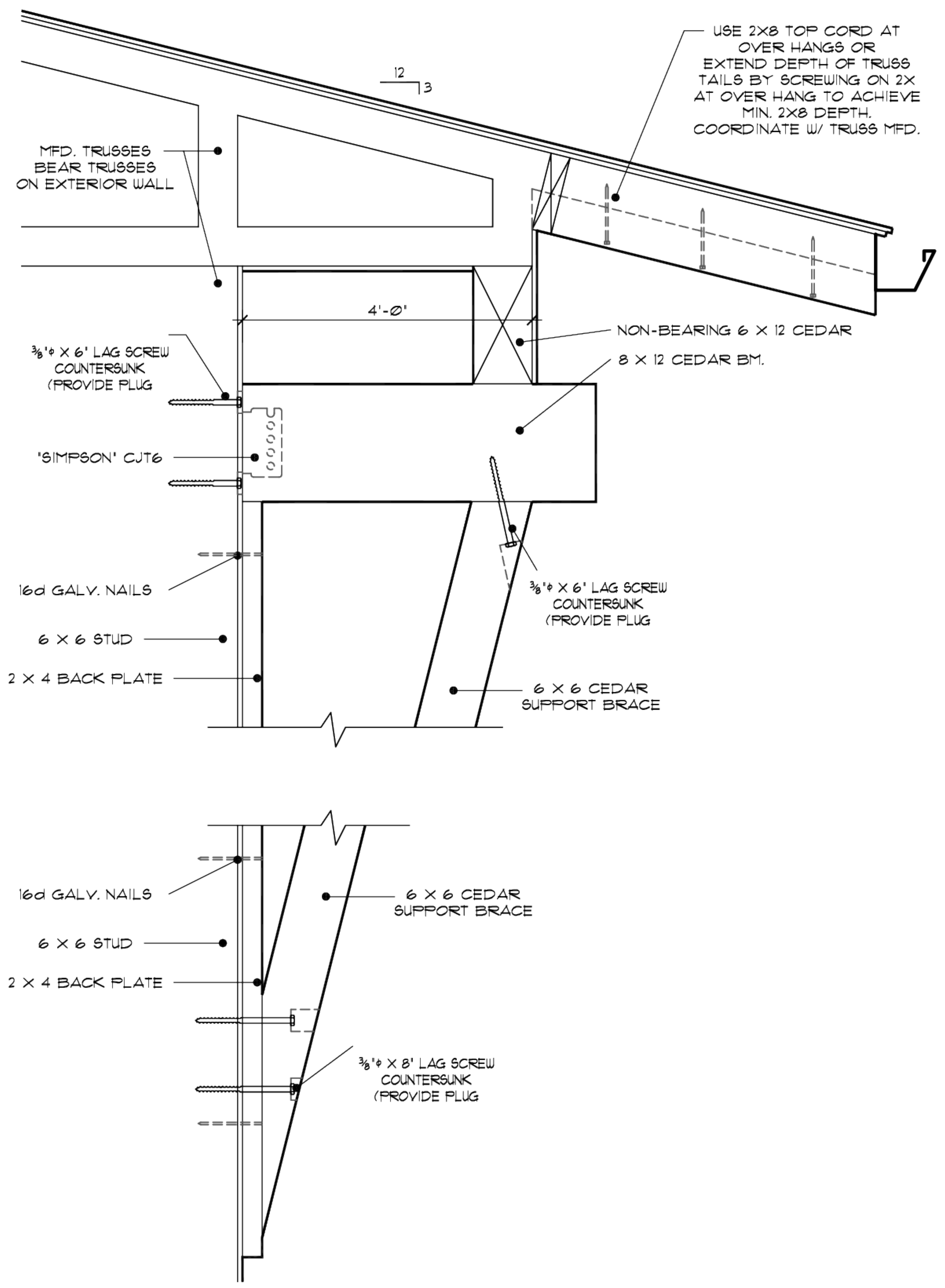
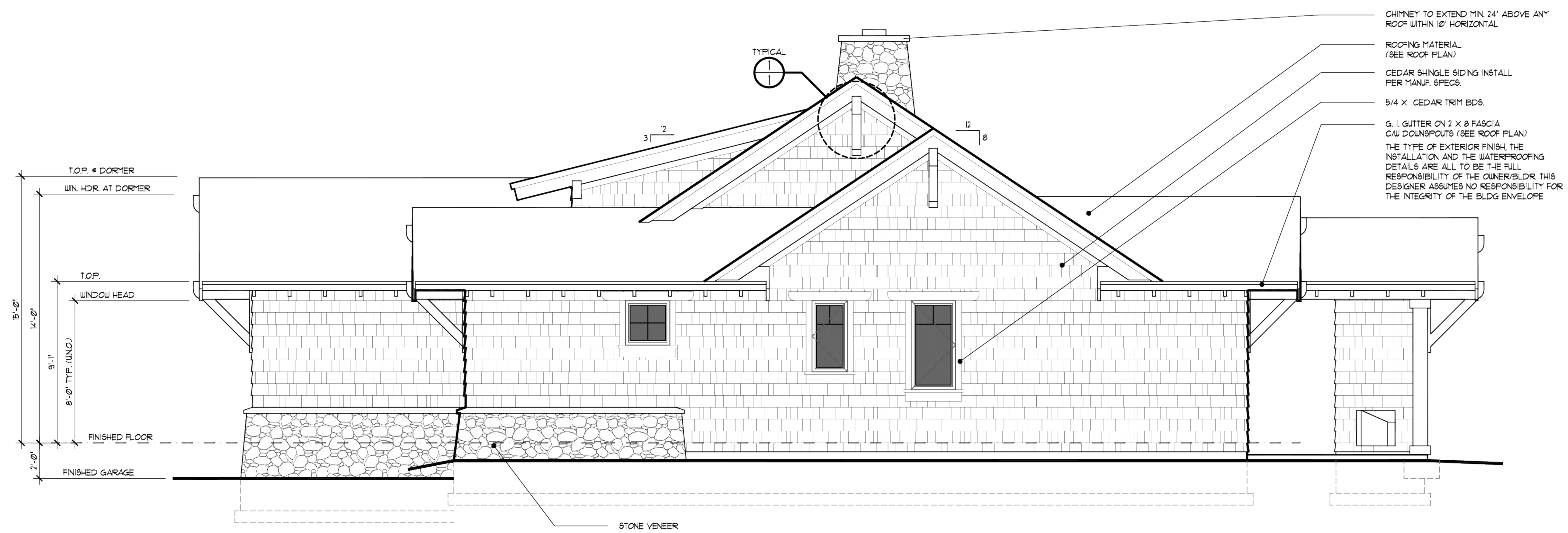


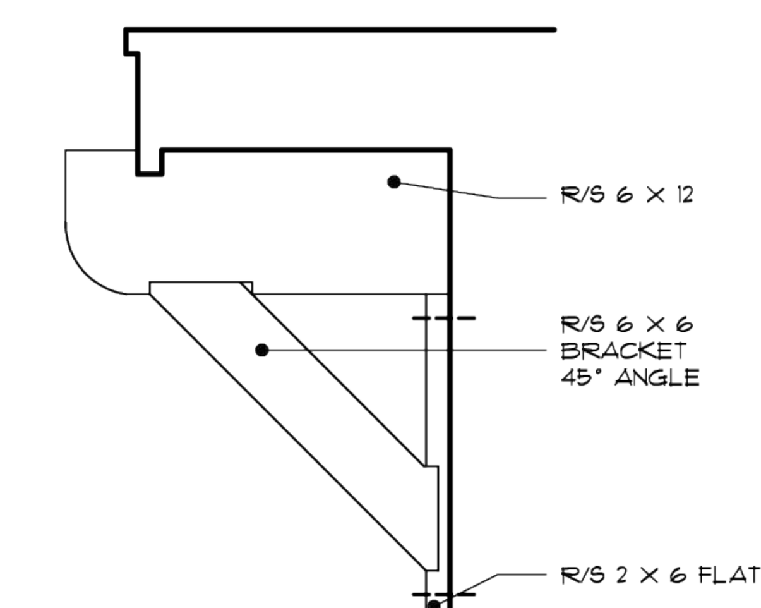
2 PORCH BRACKET

SCALE : NO SCALE



RIGHT SIDE ELEVATION

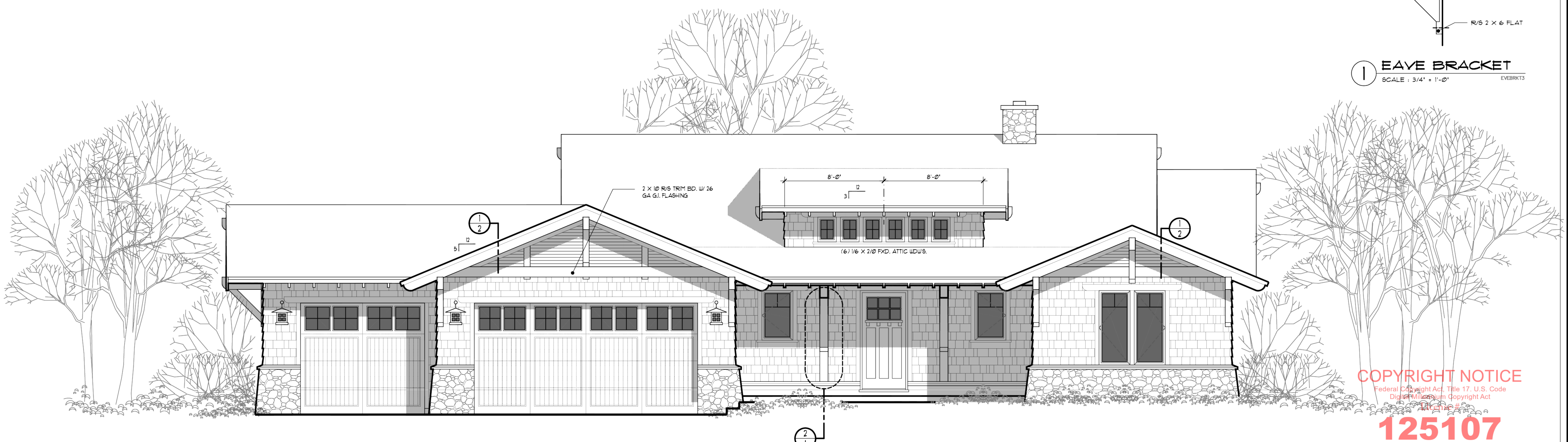
SCALE : 1/4" = 1'-0"



1 EAVE BRACKET

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

EVEBRKT3



FRONT ELEVATION

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

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

Mascord COLLECTION

ALAN MASCORD DESIGN ASSOCIATES, INC. http://www.mascord.com
2187 NW REED ST, SUITE 100 PORTLAND, OR 97210 503/225-9161 FAX 503/961-1961

1170-1-BRIARSTONE
PROJECT MANAGER:AEM
DRAWN 04/07/22 LAW

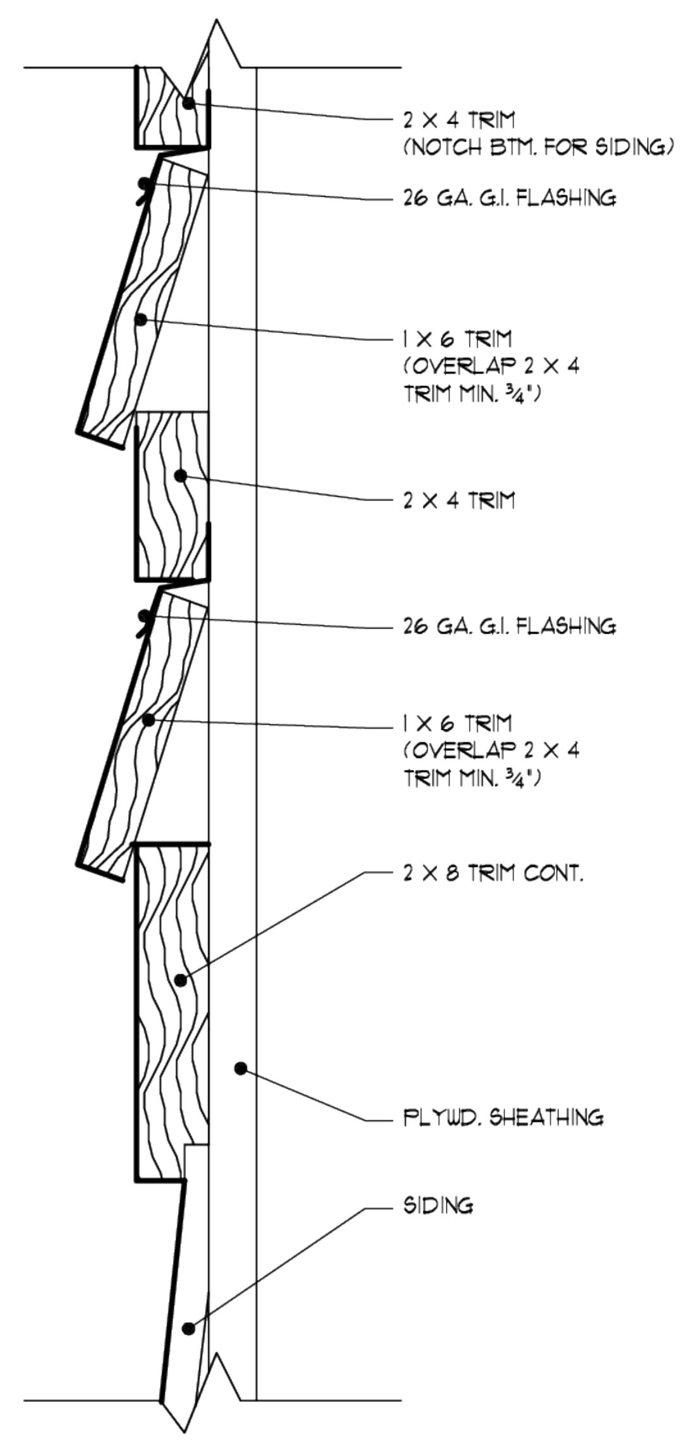
RESIDENCE BY:
BRIARSTONE HOMES
941 EAST MANZANITA DRIVE
UNION, WASHINGTON 98592

25# SNOW LOAD

MAIN FLOOR	1987 SQ. FT.
GARAGE AREA	+ 921 SQ. FT.

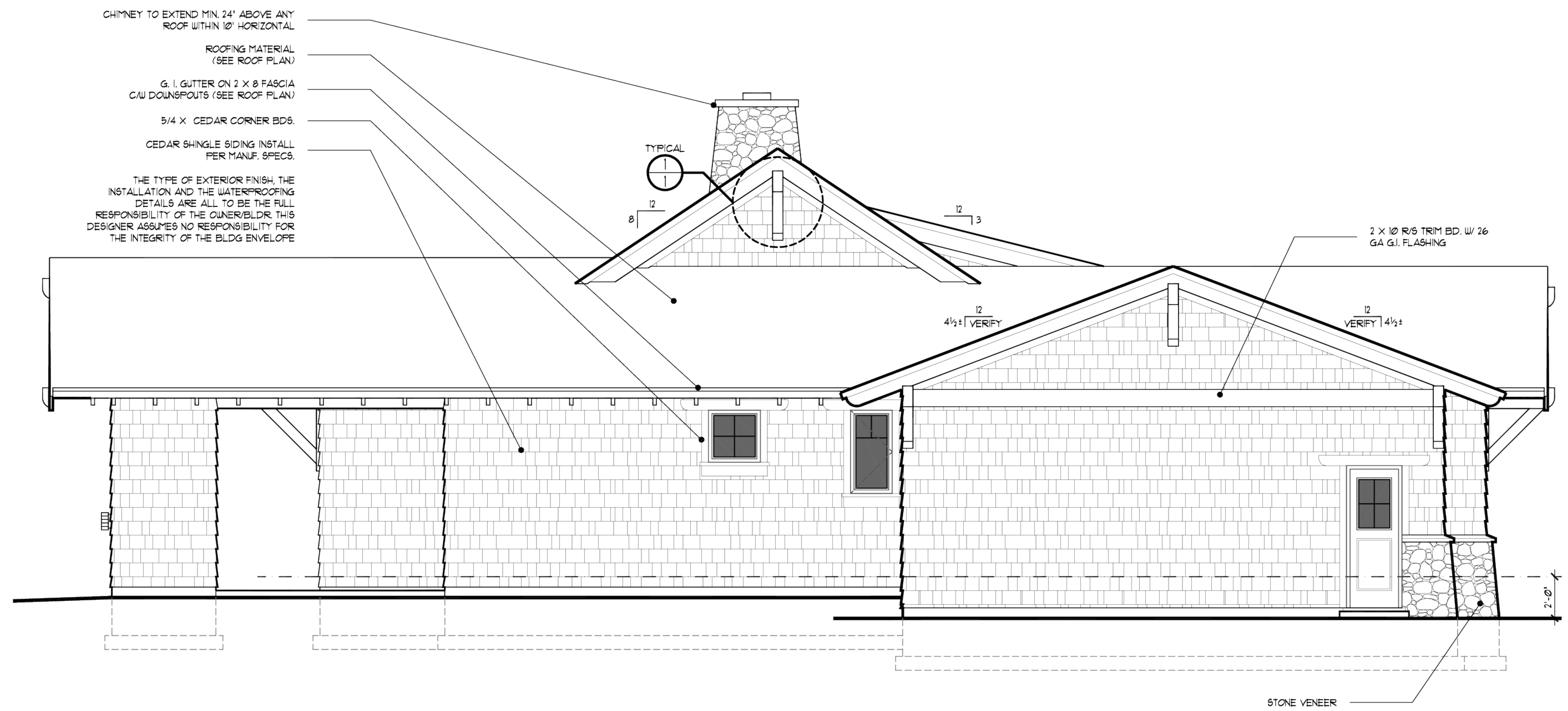
1170

1



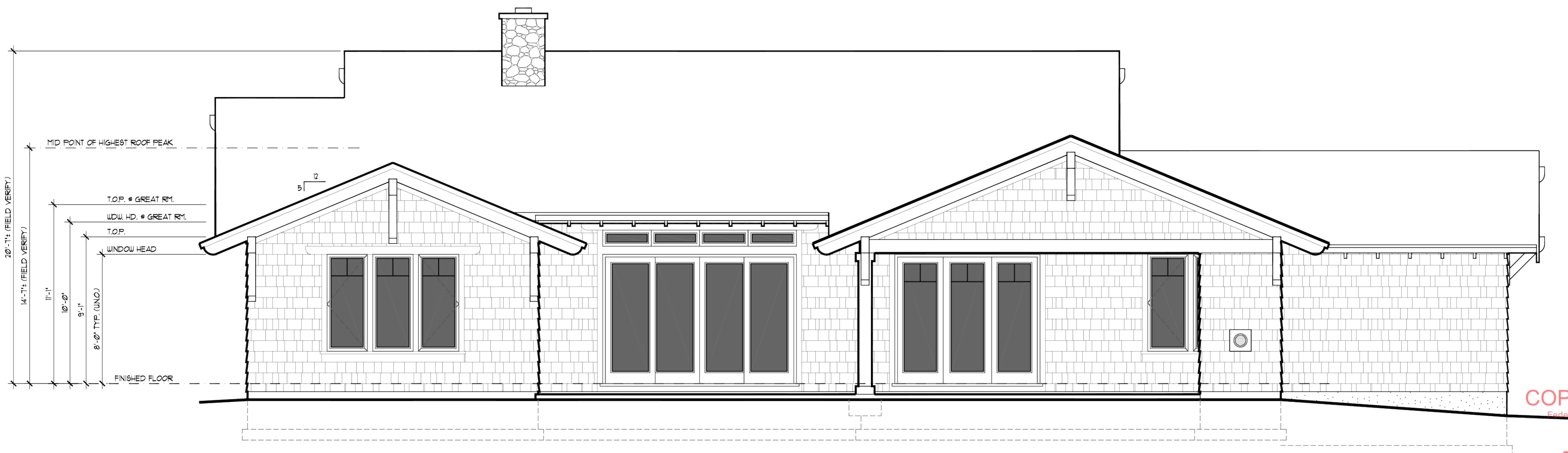
1 TRIM DETAIL

SCALE : 3" = 1'-0" TRIMDTL12



LEFT 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.

Mascord COLLECTION

ALAN MASCORD DESIGN ASSOCIATES, INC.
2187 NW REED ST, SUITE 100 PORTLAND, OR 97210 503/225-9161 FAX 503/961-1961
http://www.mascord.com

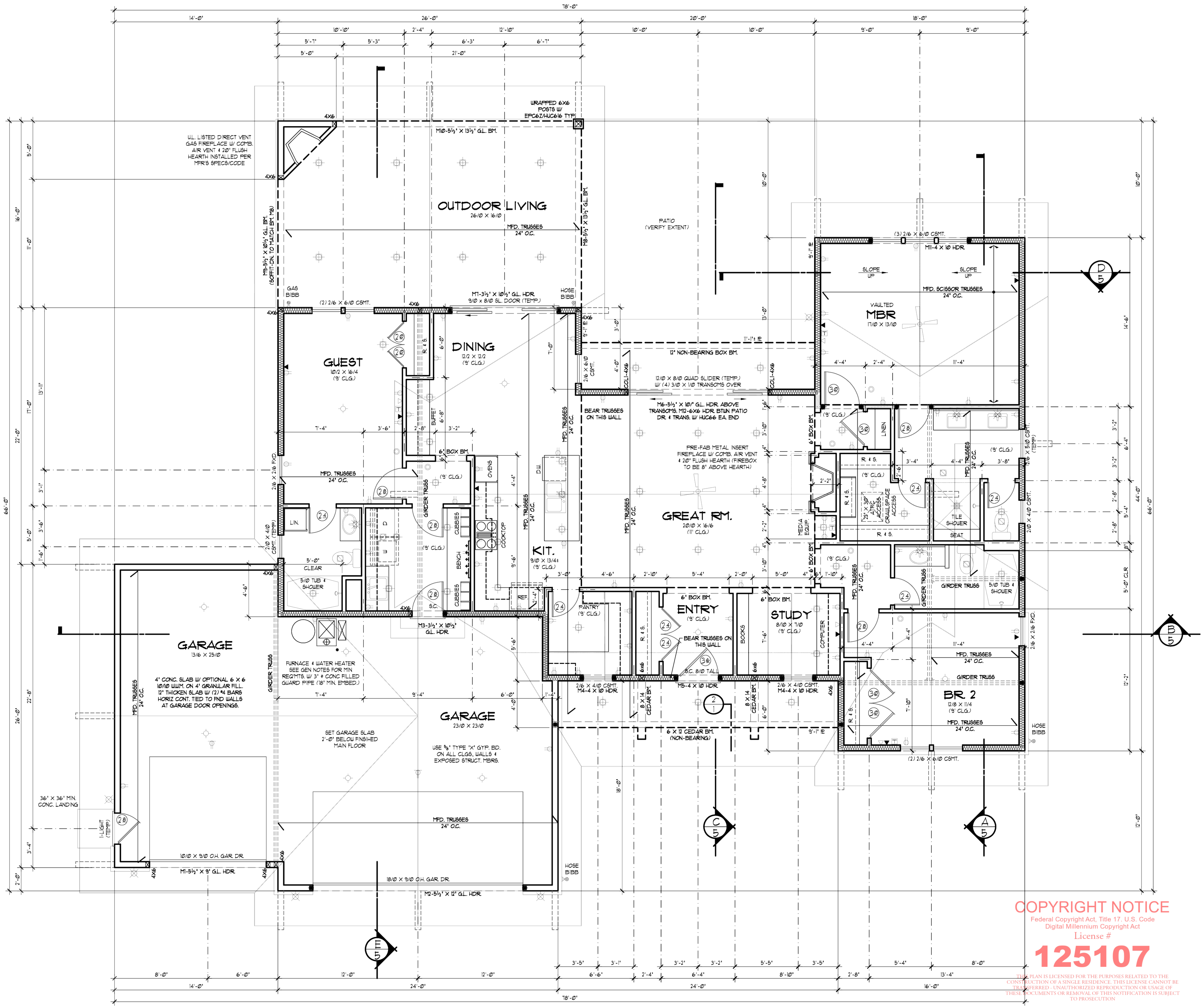
1170-2-BRIARSTONE
PROJECT MANAGER:AEM
DRAWN 04/07/22 LAW

RESIDENCE BY:
BRIARSTONE HOMES
941 EAST MANZANITA DRIVE
UNION, WASHINGTON 98592

25# SNOW LOAD

MAIN FLOOR 1987 SQ. FT.
GARAGE AREA + 921 SQ. FT.

1170
2



MAIN FLOOR PLAN

SCALE : 1/4" = 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
- SPEAKER LOCATION
- SMOKE / CO DETECTOR (SEE 'GENERAL NOTES' FOR OTHER SPECS)
- 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)

REFER TO ENGINEERING SHEETS FOR LATERAL SPECIFICATIONS PRIOR TO CONSTRUCTION

Mascord COLLECTION

ALAN MASCORD DESIGN ASSOCIATES, INC.
2187 NW REED ST SUITE 100 PORTLAND, OR 97210 503/225-9161 FAX 503/225-0933 http://www.mascord.com

1170-3-BRIARSTONE
PROJECT MANAGER: AEM
DRAWN 04/07/22 LAW

RESIDENCE BY
BRIARSTONE HOMES
941 EAST MANZANITA DRIVE
UNION, WASHINGTON 98592

25# SNOW LOAD

MAIN FLOOR 1987 SQ. FT.
GARAGE AREA 921 SQ. FT.

1170

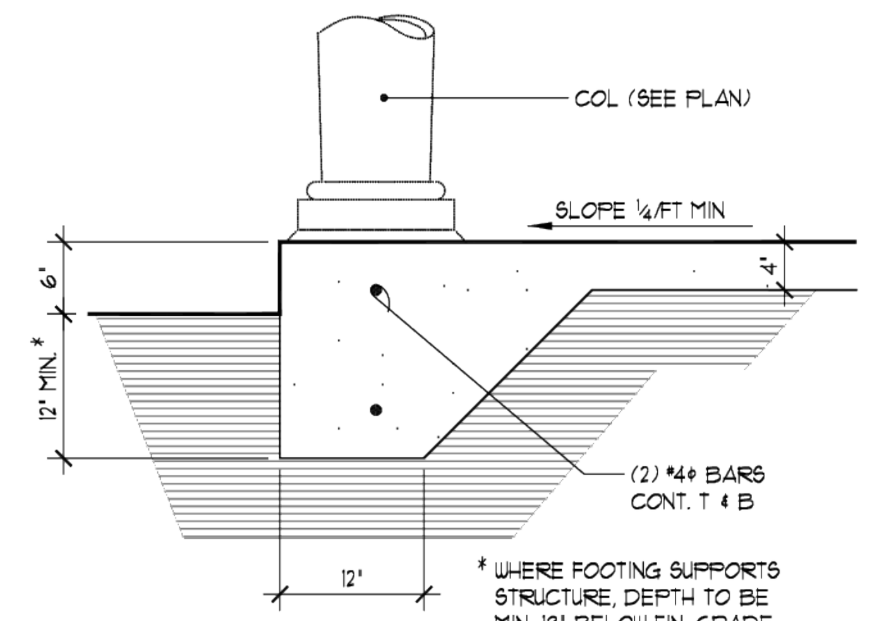
3

FOUNDATION VENTILATION CALCULATIONS (SEE GENERAL NOTES FOR ADDITIONAL INFORMATION)						
DESCRIPTION	UNDER-FLOOR AREA (FT²)	NET AREA (IN²) PER VENT	QTY OF VENTS REQ'D (WITHOUT CLASS-1 VAPOR BARRIER)	QTY. OF VENTS REQ'D (WITH CLASS-1 VAPOR BARRIER)	MECHANICAL VENTILATION RATE (CFM)	DEHUMIDIFICATION RATE (PINTS PER DAY)
AMOUNT/QTY	1513	45	33	4	30.3	105.9
CODE REF.	·	·	R408.1 & R408.2	R408.1 & R408.2	R408.3 & N1102.11	R408.3.2.4
NOTES			1/150 OF UNDER-FLOOR AREA (NO VAPOR BARRIER REQUIRED)	1/1500 OF UNDER-FLOOR AREA (VAPOR BARRIER PERM RATING ≤ 0.1)	MECHANICAL VENT CAPABLE OF 1.0 CFM PER 50 FT² OF UNDER-FLOOR AREA	

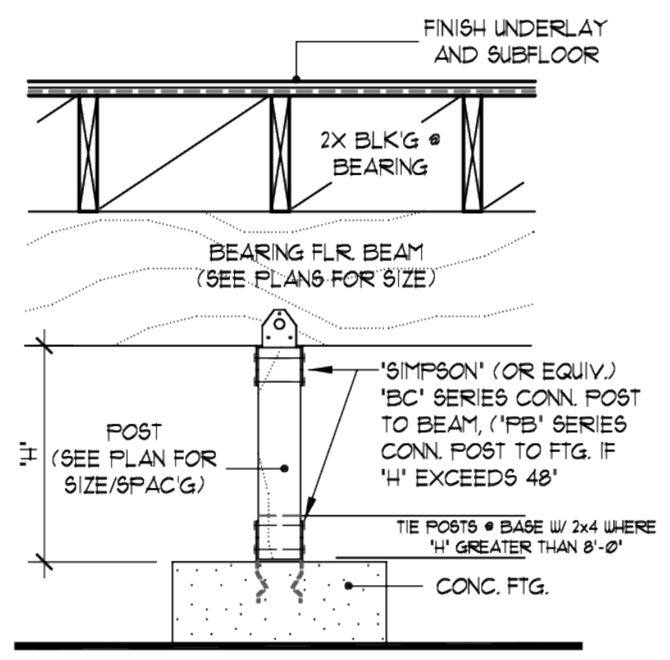
ISOLATED FOOTING SCHEDULE

TAG	PAD SIZE	REINFORCING	MAX. BR'G
-	18' DIA. x 7'	N.A.	2,474 #
F20	20'x20'x10"	N.A.	3,819 #
F24	24"x24"x12"	N.A.	5,400 #
F28	28"x28"x14"	N.A.	7,211 #
F30	30"x30"x15"	N.A.	8,203 #
F36	36'x36'x13"	(4) #4 BARS @ 7' O.C. E/W	12,037 #
F42	* 42'x42'x12'	(5) #4 BARS @ 8' O.C. E/W	16,537 #
F48	** 48'x48'x12'	(6) #4 BARS @ 9' O.C. E/W	21,600 #
F54	*** 54'x54'x12'	(6) #4 BARS @ 9' O.C. E/W	27,337 #
F60	*** 60'x60'x12"	(7) #4 BARS @ 9' O.C. E/W	33,750 #

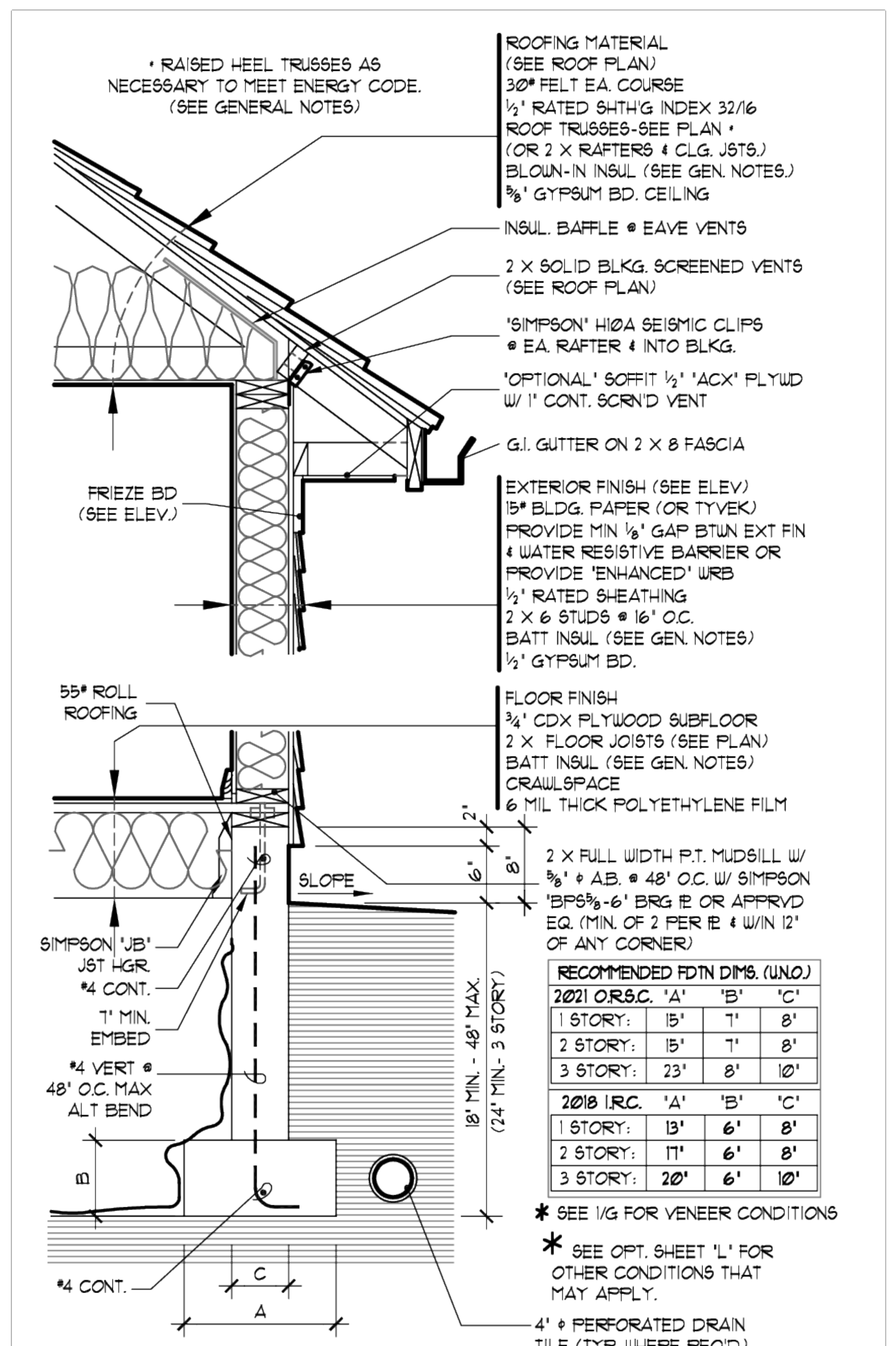
ASSUMED MIN. 4x4 #2 D.F. COLUMN (U.N.O. - SEE PLANS)
* 6x6 #2 D.F. COLUMN FOR MAX. BR'G
** 3½"x3½" PSL COLUMN FOR MAX. BR'G (OR 6x6 TO 18,521 #)
*** 5¼"x5¼" PSL COLUMN FOR MAX. BRG.
(SEE POST-CONN. DETAIL) SOIL B.P.=1,500 PSF



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



JOIST FLR. CONN.
¾" = 1'-0"

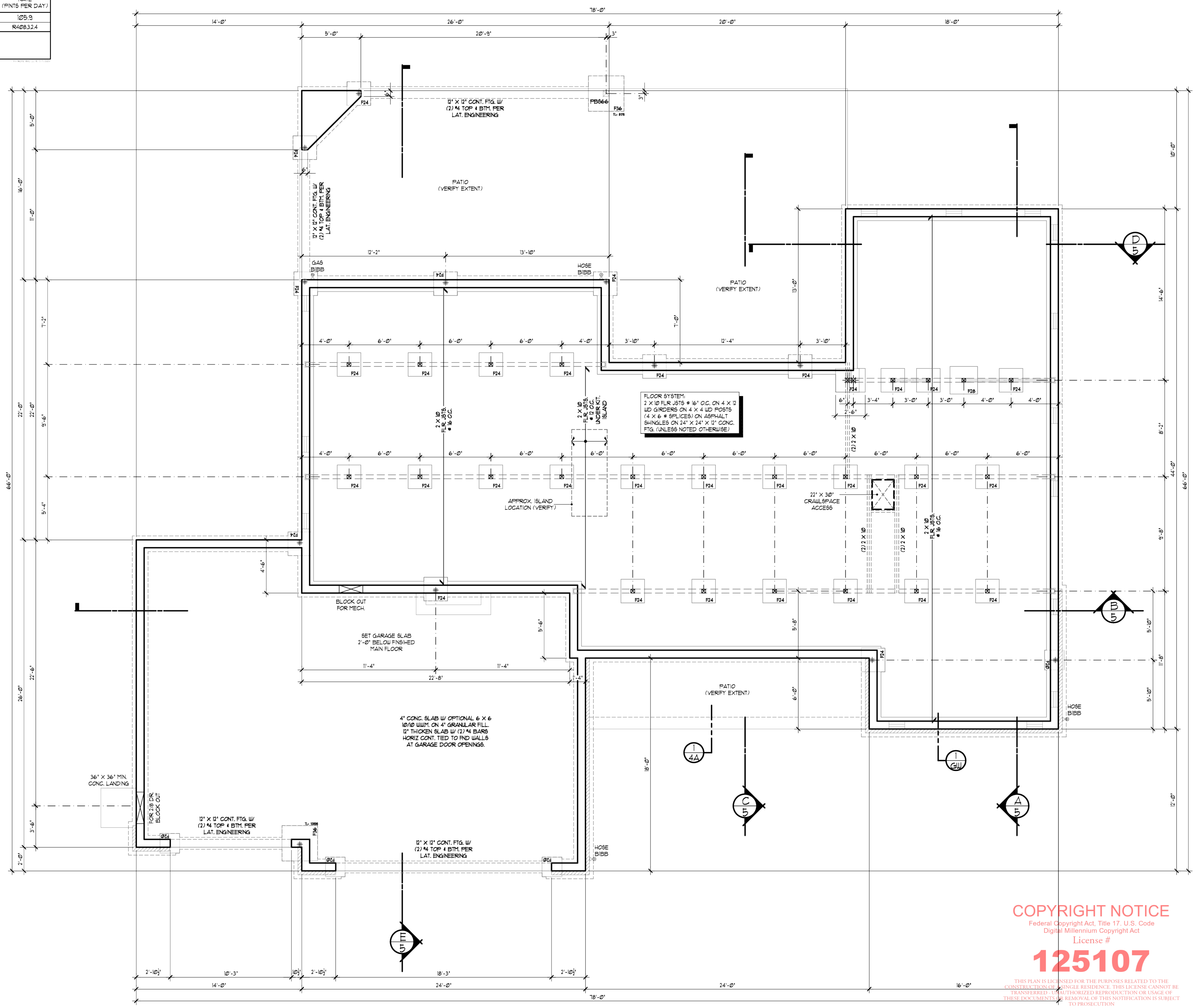


• RAISED HEEL TRUSSES AS NECESSARY TO MEET ENERGY CODE. (SEE GENERAL NOTES)
ROOFING MATERIAL (SEE ROOF PLAN)
30# FELT EA. COURSE
½" RATED SHTH'G INDEX 32/16
ROOF TRUSSES-SEE PLAN •
(OR 2 X RAFTERS & CLG. JSTS.)
BLOWN-IN INSUL (SEE GEN. NOTES)
⅝" GYPSUM BD. CEILING
INSUL. BAFFLE @ EAVE VENTS
2 X SOLID BLKG. SCREENED VENTS (SEE ROOF PLAN)
"SIMPSON" H10A SEISMIC CLIPS @ EA. RAFTER & INTO BLKG.
"OPTIONAL" SOFFIT ½" "ACX" PLYWD W/ 1" CONT. SCRN'D VENT
G.I. GUTTER ON 2 X 8 FASCIA
FRIEZE BD (SEE ELEV.)
EXTERIOR FINISH (SEE ELEV)
15# BLDG. PAPER (OR TYVEK)
PROVIDE MIN ⅛" GAP BTWN EXT FIN & WATER RESISTIVE BARRIER OR PROVIDE "ENHANCED" WRB
½" RATED SHEATHING
2 X 6 STUDS @ 16" O.C.
BATT INSUL (SEE GEN. NOTES)
½" GYPSUM BD.
55# ROLL ROOFING
FLOOR FINISH
¾" CDX PLYWOOD SUBFLOOR
2 X FLOOR JOISTS (SEE PLAN)
BATT INSUL (SEE GEN. NOTES)
CRAWLSPACE
6 MIL THICK POLYETHYLENE FILM
SLOPE
2 X FULL WIDTH P.T. MUDSILL W/ ⅝" Ø A.B. @ 48" O.C. W/ SIMPSON "BPS⅝-6" BRG PL OR APPRVD EQ. (MIN. OF 2 PER PL & W/IN 12" OF ANY CORNER)
SIMPSON "UB" JST HGR
#4 CONT.
7" MIN. EMBED
#4 VERT @ 48" O.C. MAX ALT BEND
18" MIN - 48" MAX. (24" MIN - 3 STORY)
#4 CONT.
4" Ø PERFORATED DRAIN TILE (TYP. WHERE REQ'D)

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. SHEET "L" FOR OTHER CONDITIONS THAT MAY APPLY.

TYP. WALL SECTION
SCALE : 3/4" = 1'-0" REV. 04/20/21 1J6SWS01



PATIO (VERIFY EXTENT)
12" X 12" CONT. FTG. W/ (2) #4 TOP & BTM. PER LAT. ENGINEERING
GAS BIBB
HOSE BIBB
FLOOR SYSTEM: 2 X 10 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)
APPROX. ISLAND LOCATION (VERIFY)
22" X 30" CRAWLSPACE ACCESS
BLOCK OUT FOR MECH.
SET GARAGE SLAB 2'-0" BELOW FINISHED MAIN FLOOR
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.
36" X 36" MIN. CONC. LANDING
78'-0"
66'-0"

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

REFER TO ENGINEERING SHEETS FOR LATERAL SPECIFICATIONS PRIOR TO CONSTRUCTION

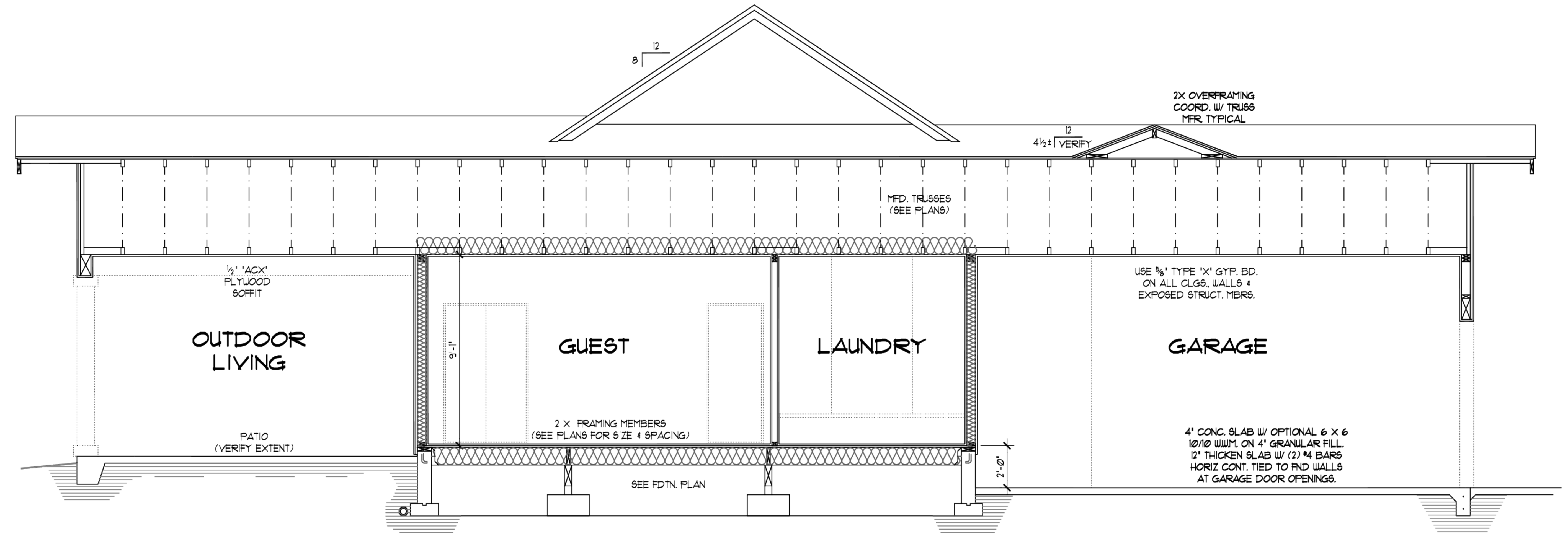
Mascord COLLECTION

1170-4A-BRIARSTONE
PROJECT MANAGER:AEM
DRAWN 04/07/22 LAW

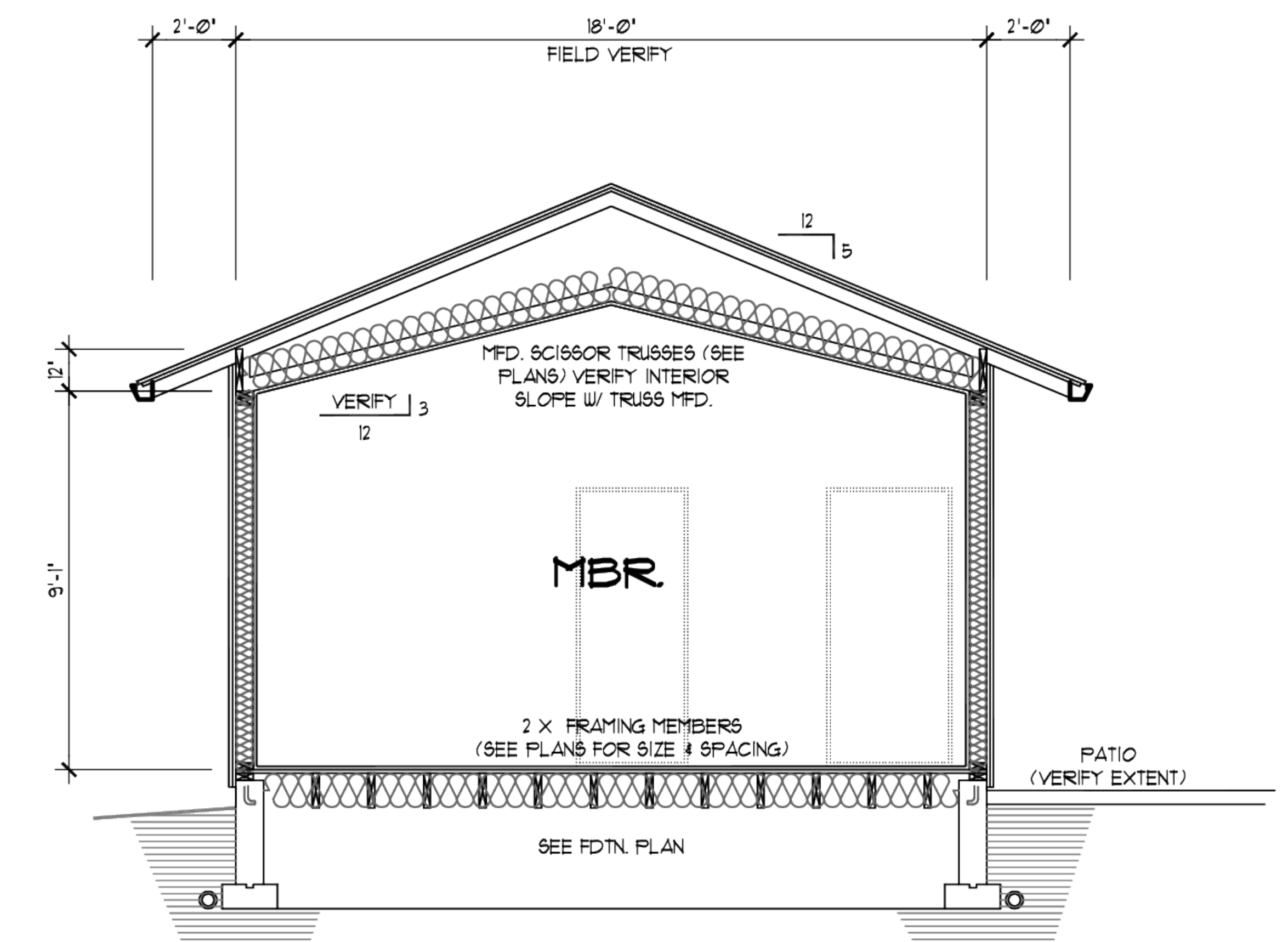
RESIDENCE BY:
BRIARSTONE HOMES
941 EAST MANZANITA DRIVE
UNION, WASHINGTON 98592

25# SNOW LOAD

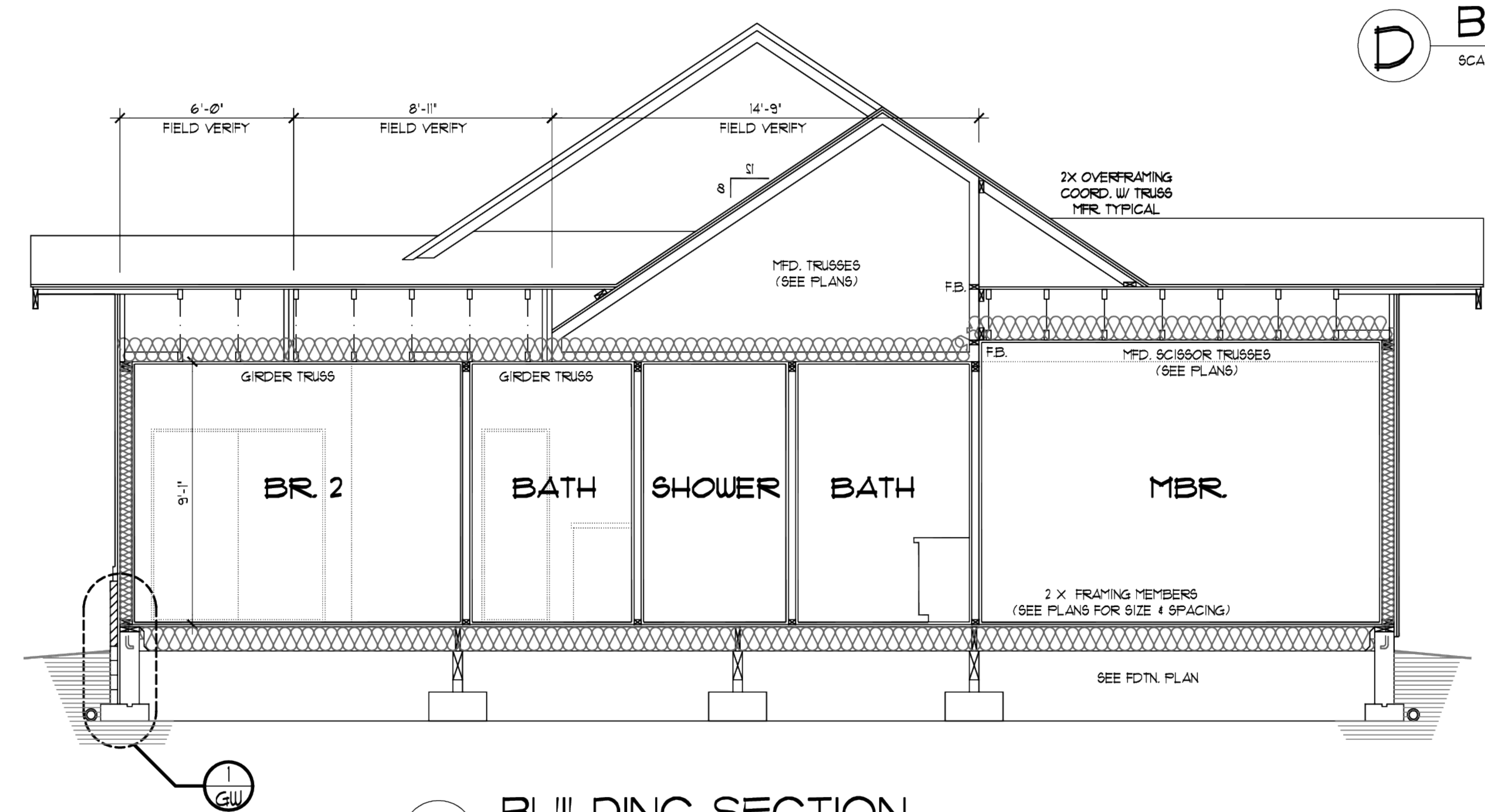
MAIN FLOOR 1987 SQ. FT.
GARAGE AREA + 921 SQ. FT.


2X OVERFRAMING COORD. W/ TRUSS MFR. TYPICAL
MFD. TRUSSES (SEE PLANS)
½" "ACX" PLYWOOD SOFFIT
USE ⅝" TYPE "X" GYP. BD. ON ALL CLGS., WALLS & EXPOSED STRUCT. MBRS.
OUTDOOR LIVING
GUEST
LAUNDRY
GARAGE
PATIO (VERIFY EXTENT)
2 X FRAMING MEMBERS (SEE PLANS FOR SIZE & SPACING)
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.
SEE FDTN. PLAN

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

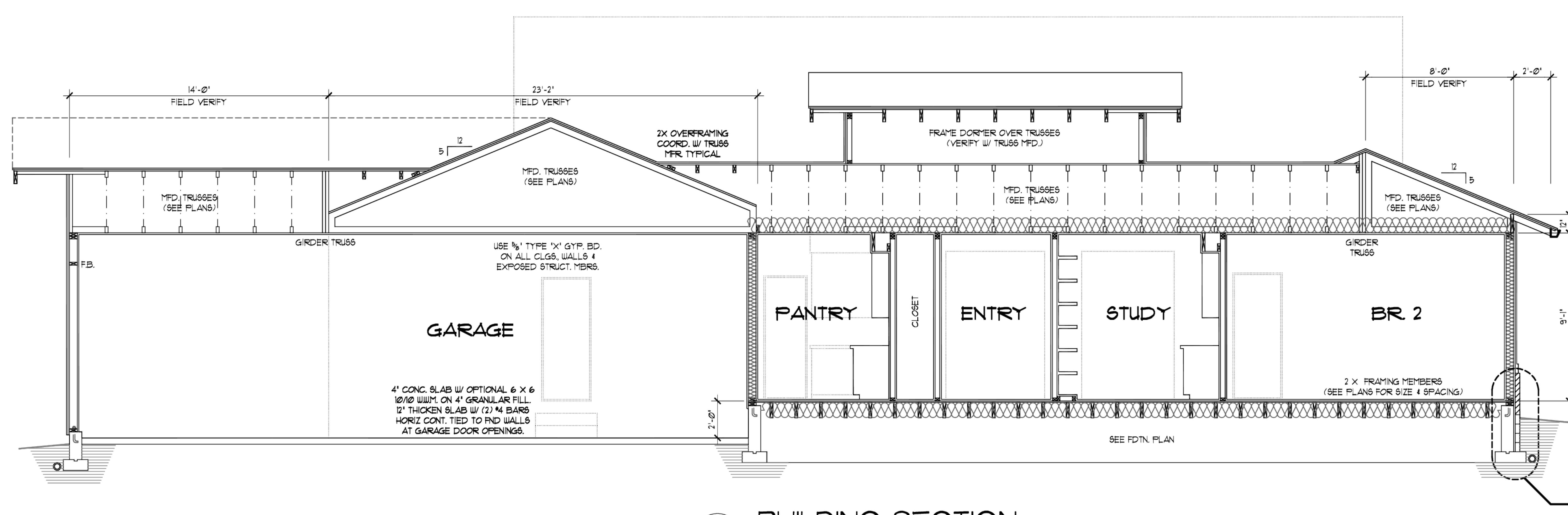


D BUILDING SECTION
SCALE : 1/4" = 1'-0"

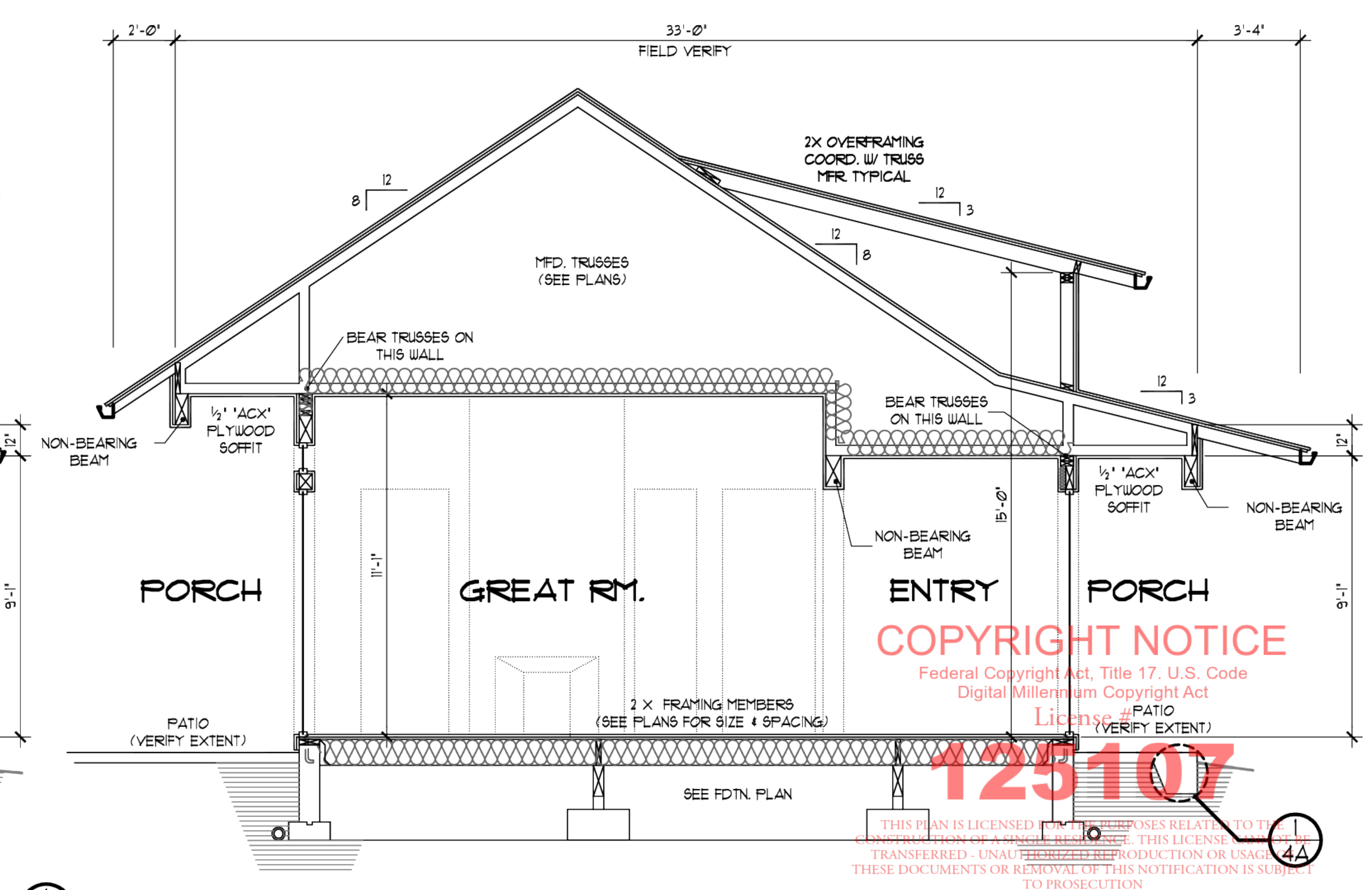

6'-0" FIELD VERIFY
8'-11" FIELD VERIFY
14'-9" FIELD VERIFY
2X OVERFRAMING COORD. W/ TRUSS MFR. TYPICAL
MFD. TRUSSES (SEE PLANS)
GIRDER TRUSS
GIRDER TRUSS
MFD. SCISSOR TRUSSES (SEE PLANS)
BR. 2
BATH
SHOWER
BATH
MBR
2 X FRAMING MEMBERS (SEE PLANS FOR SIZE & SPACING)
SEE FDTN. PLAN

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

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


14'-0" FIELD VERIFY
23'-2" FIELD VERIFY
8'-0" FIELD VERIFY
2'-0"
2X OVERFRAMING COORD. W/ TRUSS MFR. TYPICAL
FRAME DORMER OVER TRUSSES (VERIFY W/ TRUSS MFD.)
MFD. TRUSSES (SEE PLANS)
GIRDER TRUSS
USE ⅝" TYPE "X" GYP. BD. ON ALL CLGS., WALLS & EXPOSED STRUCT. MBRS.
GARAGE
PANTRY
CLOSET
ENTRY
STUDY
BR. 2
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.
2 X FRAMING MEMBERS (SEE PLANS FOR SIZE & SPACING)
SEE FDTN. PLAN

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


2'-0"
33'-0" FIELD VERIFY
3'-4"
2X OVERFRAMING COORD. W/ TRUSS MFR. TYPICAL
MFD. TRUSSES (SEE PLANS)
BEAR TRUSSES ON THIS WALL
NON-BEARING BEAM
½" "ACX" PLYWOOD SOFFIT
PORCH
GREAT RM.
ENTRY
PORCH
2 X FRAMING MEMBERS (SEE PLANS FOR SIZE & SPACING)
PATIO (VERIFY EXTENT)
SEE FDTN. PLAN

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

Mascord COLLECTION
ALAN MASCORD DESIGN ASSOCIATES, INC.
1170-5-BRIARSTONE
PROJECT MANAGER: AEM
DRAWN 04/07/22 LAW

RESIDENCE BY:
BRIARSTONE HOMES
941 EAST MANZANITA DRIVE
UNION, WASHINGTON 98592

25# SNOW LOAD

MAIN FLOOR 1987 SQ. FT.
GARAGE AREA 921 SQ. FT.

1170
5

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

ROOF VENTS						
ROOF AREA (ft^2) = 3500				EAVE-BLOCK'G		ROOF VENTS
% EAVE	AREA (in^2)	% ROOF	AREA (in^2)	3-VENT	4-VENT	49 in^2
60	1008.0	40	672.0	107	80	14
56.7	952.6	43.3	727.4	101	76	15
53.3	895.4	46.7	784.6	95	71	16
50	840.0	50	840.0	89	67	17

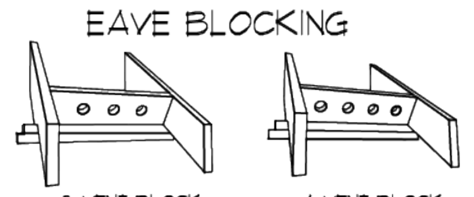
11-07-14 S-LOADS

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:

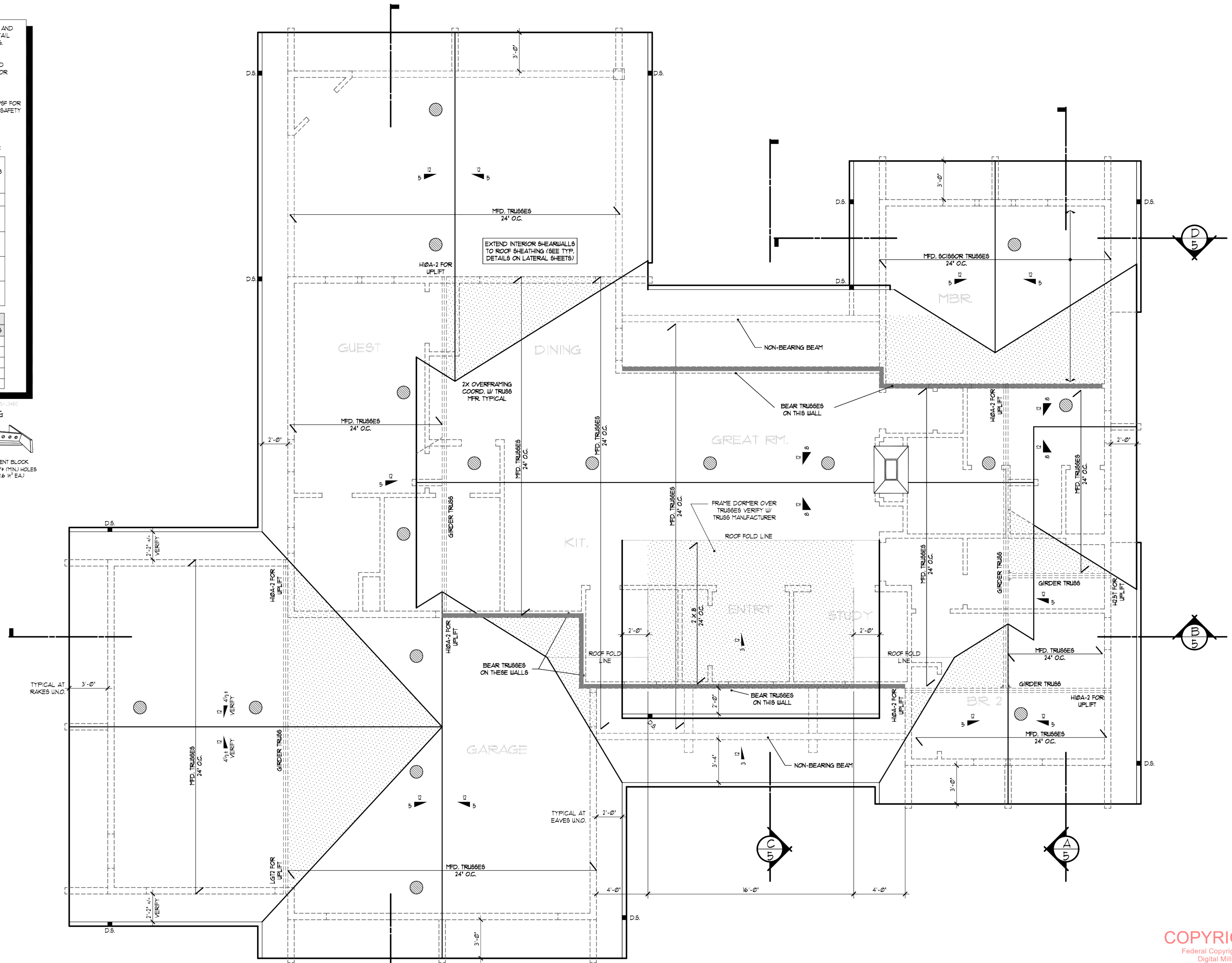
IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING.
NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS 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.)



THIS ROOF REFLECTS TRUSS LAYOUT AND DESIGN BY the TRUSS CO. - JOB #1112908. SEE MANUF. LAYOUT, TRUSS DRAWINGS AND ENGINEERING FOR ADDITIONAL SPECIFICATIONS AND INSTALLATION REQUIREMENTS.

ROOF FRAMING PLAN

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

REFERI TO ENGINEERING SHEETS FOR LATERAL SPECIFICATIONS PRIOR TO CONSTRUCTION

MASCORD COLLECTION
ALAN MASCORD DESIGN ASSOCIATES, INC.
2187 NW REED ST
1170-6S-BRIARSTONE
PROJECT MANAGER:AEM
DRAWN 04/07/22 LAW

RESIDENCE BY:
BRIARSTONE HOMES
941 EAST MANZANITA DRIVE
UNION, WASHINGTON 98592

25# SNOW LOAD

MAIN FLOOR	1987 SQ. FT.
GARAGE AREA	+ 921 SQ. FT.

1170
6 S

DISCLAIMER

07/10/13

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GENERAL NOTES:

07/10/13

1. WORK SHALL COMPLY WITH THE LATEST ADOPTED VERSION OF THE 2018 INTERNATIONAL RESIDENTIAL CODE (I.R.C.) AND/OR ANY APPLICABLE 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 DIMS. SHALL HAVE PRECEDENCE OVER SCALED DIMS. DO NOT SCALE THE DWGS.

4. DESIGN LOADS: (IN P.S.F.)

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	60	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

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(IF YOUR LOCAL AREA REQUIRES DIFFERENT DESIGN LOADS CONSULT WITH A LOCAL QUALIFIED PROFESSIONAL TO DETERMINE THE APPROPRIATE REVISIONS.) FOR ROOF LOADS, SEE ROOF PLAN.

5. THIS PLAN IS DESIGNED TO MEET 2018 WASHINGTON STATE ENERGY CODE CHAPTER 51-11C WAC. UNDER PRESCRIPTIVE COMPLIANCE, TABLE R402.1.1. CONTACT LOCAL BUILDING JURISDICTION FOR YOUR CLIMATE ZONE.

TABLE R402.1.1 INSUL. & FENSTRATION REQ'MTS BY COMPONENT [a]
CLIMATE ZONE 5 & MARINE 4

FENESTRATION U-FACTOR [b]	0.30	
SKYLIGHT [b] U-FACTOR	0.50	
CEILING R-VALUE [e]	49	(U=0.026)
WOOD FRAME WALL [h] R-VALUE	21 INT	(U=0.056)
FLOOR R-VALUE	30	(U=0.029)
BELOW-GRADE [c, h] WALL R-VALUE	10/15/21 INT + 5TB	(U=0.042)
SLAB [d, f] R-VALUE & DEPTH	10, 2 FT.	(U=0.054)

ci = continuous insulation
int = intermediate framing
UP TO 15 ft² GLAZED FENESTRATION & (1) SIDE HINGED SOLID DR UP TO 24 ft² IS PERMITTED TO BE EXEMPTED FROM THE U-FACTOR REQ'MT OF TABLE R402.1.1
DUCTS TO BE INSULATED TO MIN OF R-8

a. R-values are minimums. U-factors and SHGC are maximums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the compressed R-value of the insulation from Appendix Table A101.4 shall not be less than the R-value specified in the table.
b. The fenestration U-factor column excludes skylights.
c. "10/15/21 +5TB" means R-10 continuous insulation on the exterior of the wall, or R-15 continuous insulation on the interior of the wall, or R-21 cavity insulation plus a thermal break between the slab and the basement wall at the interior of the basement wall. "10/15/21 +5TB" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the "5TB" means R-5 thermal break between floor slab and basement wall.
d. R-10 continuous insulation is required under heated slab on grade floors. See Section R402.2.9.1.
e. For single rafter- or joist-vaulted ceilings, the insulation may be reduced to R-38 if the full insulation depth extends over the top plate of the exterior wall.
f. R-7.5 continuous insulation installed over an existing slab is deemed to be equivalent to the required perimeter slab insulation when applied to existing slabs complying with Section R503.1.1. If foam plastic is used, it shall meet the requirements for thermal barriers protecting foam plastics.
h. Int. (intermediate framing) denotes framing and insulation as described in Section A103.2.2 including standard framing 16 inches on center, 78 percent of the wall cavity insulated and headers insulated with a minimum of R-10 insulation.

ACCESS HATCHES AND DOORS FROM CONDITIONED SPACES SHALL BE WEATHERSTRIPPED AND INSULATED TO THE EQUIVALENT INSULATION VALUE ON THE SURROUNDING SURFACES.
EXCEPTION: VERTICAL ACCESS DOORS TO UNCONDITIONED SPACE SHALL BE PERMITTED TO MEET THE FENESTRATION REQUIREMENTS.

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

- 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 W/IN WALL CORNERS & HDRS. TO BE FULLY INSULATED TO R3/in FLOORS, INCLUDING ABOVE GARAGE AND CANTILEVERED FLOORS - INSUL. SHALL BE INSTALLED TO MAINTAIN PERMANENT CONTACT W/ UNDERSIDE OF SUBFLOOR DECKING. (EXCEPTIONS PER R402.2.7 1-3) THE AIR BARRIER SHALL BE INSTALLED AT ANY EXPOSED EDGE OF INSUL. RIM JOIST SHALL BE INSULATED & INCLUDE AIR BARRIER.

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.

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.

TESTING: DWELLING SHALL BE TESTED TO VERIFY LEAKAGE RATE DOES NOT EXCEED 5 AIR CHANGES PER HOUR BY BLOWER DR. TEST AT A PRESSURE OF 0.2 IN W.G. (50 PASCALS). CODE OFFICIAL MAY REQUIRE TESTING TO BE COMPLETED BY APPROVED THIRD PARTY. SEE R402.4.1.2 FOR PROCEDURES AND DOCUMENTATION REQ'MTS.

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 INSULATION IS TO HAVE A FLAME SPREAD RATING NOT TO EXCEED 25. A SMOKE-DEVELOPED INDEX NOT TO EXCEED 450, WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 723, AND CRITICAL RADIANT FLUX NOT LESS THAN 0.12 WATTS PER SQUARE CENTIMETER @ EXPOSED ATTIC INSUL.

7. ALL WINDOWS W/IN A 24" ARC OF EITHER VERTICAL EDGE OF ANY DR. IN A CLOSED POSITION, WITH BOTTOM EXPOSED EDGE LESS THAN 60" ABOVE FLR. OR WALKING SURFACE SHALL HAVE TEMPERED GLAZING. WINDOWS WITH AN EXPOSED AREA LARGER THAN 9 SQ. FT. AND THE BOTTOM EDGE OF GLAZING IS LESS THAN 18 INCHES ABOVE THE FLOOR SHALL HAVE TEMPERED GLAZING.

8. SKYLIGHTS ARE ASSUMED TO BE PRE-MANUFACTURED UNIT SKYLIGHTS. UNIT SKYLIGHTS SHALL BE COMPLIANT WITH THE REQUIREMENTS OF AAMA/WDMA/CSA 101/I.S.2/A440

9. ALL EXT. WINDOWS ARE TO BE DBL. GLAZED AND ALL EXT. DRS. ARE TO BE SOLID CORE W/ WEATHERSTRIPPING. PROVIDE 1/2" IN. DEAD BOLT LOCKS ON ALL EXT. DRS., AND LOCKING DEVICES ON ALL DRS. AND WINDOWS W/IN 10 FT. (VERTICAL) OF GRADE. PROVIDE PEEPHOLE 54" - 66" ABOVE FIN. FLR. ON EXT. ENTRY DRS.

10. 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.

11. 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. 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. (R312.2.1) GLAZING BETWEEN FINISHED 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. 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. PROVIDE AN NFPA72 COMPLIANT HEAT ALARM SENSOR CENTRALLY LOCATED WITHIN THE GARAGE. ALL SMOKE DETECTORS, COMBINATION SMOKE/CARBON MONOXIDE ALARMS AND/OR HEAT ALARM SENSORS SHALL BE INTERCONNECTED SUCH THAT THE ACTUATION OF ONE ALARM/SENSOR 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.

13. 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. A MIN. OF 90% OF THE LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH EFFICACY LAMPS.

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

15. 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.

16. BATHROOMS, 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. THE EQUIVALENT LENGTH OF THE DRYER EXHAUST DUCT SHALL BE IDENTIFIED ON A PERMANENT LABEL OR TAG, WHERE IT EXCEEDS 35', LOCATED WITHIN 6 FEET OF THE EXHAUST DUCT CONNECTION.

17. 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 OFFICAILS PRIOR TO INSTALLATION/SUBSTITUTION.

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

ADDITIONAL ENERGY EFFICIENCY REQUIREMENTS (MANDATORY)
This dwelling shall comply w/ sufficient options from table R406.2 so as to achieve the following min number of credits (choose applicable dwelling unit)

☐ 1. Small Dwelling Unit: .... 1.5 credits
Dwelling units less than 1500 square feet in conditioned floor area with less than 300 square feet of fenestration area.

☐ 2. Medium Dwelling Unit: .... 6 credits
All dwellings units that are not in included in #1 or #3

☐ 3. Large Dwelling Unit: .... 7 credits
Dwelling units exceeding 5000 sq. ft. of conditioned floor area.

Select opts from Table R406.3 below by placing mark to left of opt number to achieve specified credit requirements.

TABLE 406.2

SYSTEM TYPE	DESCRIPTION OF PRIMARY HEATING SOURCE	CREDITS
☐ 1	Combustion heating equipment meeting minimum federal efficiency standards for the equipment listed in Table C403.3.2(4) or C403.3.2(5)	0
☐ 2	For an initial heating system using a heat pump that meets federal standards for the equipment listed in Table C403.3.2(1)C or C403.3.2(2) or Air to water heat pump units that are configured to provide both heating and cooling and are rated in accordance with AHRI 550/590	1.0
☐ 3	For heating system based on electric resistance only (either forced air or Zonal)	- 1.0
☐ 4	For heating system based on electric resistance with a ductless mini-split heat pump system in accordance with Section R403.7.1 including the exception	N/A
☐ 5	All other heating systems	-0.5

TABLE 406.3

OPTION	DESCRIPTION: 1. EFFICIENT BUILDING ENVELOPE OPTIONS — Only one option from item 1.1 - 1.7 in this category may be selected.	CREDITS
☐ 1.1	Prescriptive compliance is based on Table R402.1.1 with the following modifications: Vertical fenestration U = 0.24.	0.5
☐ 1.2	Prescriptive compliance is based on Table R402.1.1 with the following modifications: Vertical fenestration U = 0.20.	1.0
☐ 1.3	Prescriptive compliance is based on Table R402.1.1 with the following modifications: Vertical fenestration U = 0.28; Floor R-38; Slab-on-grade R-10 perimeter and under entire slab; Below-grade slab R-10 perimeter and under entire slab; or Compliance based on Section R402.1.4: Reduce the Total conductive UA by 5%.	0.5
☐ 1.4	Prescriptive compliance is based on Table R402.1.1 with the following modifications: Vertical fenestration U = 0.25; Wall R-21 plus R-4 ci; Floor R-38; Basement wall R-21 int plus R-5 ci; Slab-on-grade R-10 perimeter and under entire slab; Below-grade slab R-10 perimeter and under entire slab; or Compliance based on Section R402.1.4: Reduce the Total conductive UA by 15%.	1.0
☐ 1.5	Prescriptive compliance is based on Table R402.1.1 with the following modifications: Vertical fenestration U = 0.22; Ceiling and single-rafter or joist-vaulted R-49 advanced; Wood frame wall R-21 int plus R-12 ci; Floor R-38; Basement wall R-21 int plus R-12 ci; Slab-on-grade R-10 perimeter and under entire slab; Below-grade slab R-10 perimeter and under entire slab; or Compliance based on Section R402.1.4: Reduce the Total conductive UA by 30%.	2.0
☐ 1.6	Prescriptive compliance is based on Table R402.1.1 with the following modifications: Vertical fenestration U = 0.18; Ceiling and single-rafter or joist-vaulted R-60 advanced; Wood frame wall R-21 int plus R-16 ci; Floor R-48; Basement wall R-21 int plus R-16 ci; Slab-on-grade R-20 perimeter and under entire slab; Below-grade slab R-20 perimeter and under entire slab; or Compliance based on Section R402.1.4: Reduce the Total conductive UA by 40%.	3.0
☐ 1.7	Advanced framing and raised heel trusses or rafters; Vertical Glazing U-0.28; R-49 Advanced (U-0.020) as listed in Section A102.2.1, Ceilings below a vented attic and R-49 vaulted ceilings with full height of uncompressed insulation extending over the wall top plate at the eaves.	0.5

OPTION	2. AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION OPTIONS — Only one option from items 2.1 through 2.4 may be selected in this category.	CREDITS
☐ 2.1	Compliance based on Section R402.4.1.2: Reduce the tested air leakage to 3.0 air changes per hour maximum at 50 Pascals and All whole-house ventilation requirements as determined by Section M1507.3 of the International Residential Code or Section 403.8 of the International Mechanical Code shall be met with a high efficiency fan(s) (maximum 0.35 watts/cfm), not interlocked with the furnace fan (if present). Ventilation systems using a furnace including an ECM motor are allowed, provided that they are controlled to operate at low speed in ventilation only mode. To qualify to claim this credit, the building permit drawings shall specify the option being selected, the maximum tested building air leakage, and shall show the qualifying ventilation system and its control sequence of operation.	0.5
☐ 2.2	Compliance based on Section R402.4.1.2: Reduce the tested air leakage to 2.0 air changes per hour maximum at 50 Pascals and All whole-house ventilation requirements as determined by Section M1507.3 of the International Residential Code or Section 403.8 of the International Mechanical Code shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of 0.65. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum tested building air leakage and shall show the heat recovery ventilation system.	1.0
☐ 2.3	Compliance based on Section R402.4.1.2: Reduce the tested air leakage to 1.5 air changes per hour maximum at 50 Pascals and All whole-house ventilation requirements as determined by Section M1507.3 of the International Residential Code or Section 403.8 of the International Mechanical Code shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of 0.75. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum tested building air leakage and shall show the heat recovery ventilation system.	1.5
☐ 2.4	Compliance based on Section R402.4.1.2: Reduce the tested air leakage to 0.6 air changes per hour maximum at 50 Pascals and All whole-house ventilation requirements as determined by Section M1507.3 of the International Residential Code or Section 403.8 of the International Mechanical Code shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of 0.80. Duct installation shall comply with Section R403.3.7. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum tested building air leakage and shall show the heat recovery ventilation system.	2.0

OPTION	3. HIGH-EFFICIENCY HVAC EQUIPMENT OPTIONS — Only one option from items 3.1 through 3.6 may be selected in this category.	CREDITS
☐ 3.1[a]	Energy Star rated (U.S. North) Gas or propane furnace with minimum AFUE of 95% or Energy Star rated (U.S. North) Gas or propane boiler with minimum AFUE of 90%. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.	1.0
☐ 3.2[a]	Air-source centrally ducted heat pump with minimum HSPF of 9.5. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.	1.0
☐ 3.3[a]	Closed-loop ground source heat pump‡ with a minimum COP of 3.3 or Open loop water source heat pump with a maximum pumping hydraulic head of 150 feet and minimum COP of 3.6. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.	1.5
☐ 3.4	Ductless mini-split heat pump system, zonal control: In homes where the primary space heating system is zonal electric heating, a ductless mini-split heat pump system with a minimum HSPF of 10.0 shall be installed and provide heating to the largest zone of the housing unit. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.	1.5
☐ 3.5[a]	Air-source, centrally ducted heat pump with minimum HSPF of 11.0. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.	1.5
☐ 3.6[a]	Ductless split system heat pumps with no electric resistance heating in the primary living areas. A ductless heat pump system with a minimum HSPF of 10 shall be sized and installed to provide heat to entire dwelling unit at the design outdoor air temperature. To qualify to claim this credit, the building permit drawings shall specify the option being selected, the heated floor area calculation, the heating equipment type(s), the minimum equipment efficiency, and total installed heat capacity (by equipment type).	2.0
	a. An alternative heating source sized at a maximum of 0.5 Watts/ft2 (equivalent) of heated floor area or 500 Watts, whichever is bigger, may be installed in the dwelling unit.	

OPTION	4. HIGH-EFFICIENCY HVAC DISTRIBUTION SYSTEM OPTIONS	CREDITS
☐ 4.1	All supply and return ducts located in an unconditioned attic shall be deeply buried in ceiling insulation in accordance with Section R403.3.7. For mechanical equipment located outside the conditioned space, a maximum of 10 linear feet of return duct and 5 linear feet of supply duct connections to the equipment may be outside the deeply buried insulation. All metallic ducts located outside the conditioned space must have both transverse and longitudinal joints sealed with mastic. If flex ducts are used, they cannot contain splices. Duct leakage shall be limited to 3 cfm per 100 square feet of conditioned floor area. Air handler(s) shall be located within the conditioned space.	0.5
☐ 4.2	HVAC equipment and associated duct system(s) installation shall comply with the requirements of Section R403.3.7. Locating system components in conditioned crawl spaces is not permitted under this option. Electric resistance heat and ductless heat pumps are not permitted under this option. Direct combustion heating equipment with AFUE less than 80% is not permitted under this option. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and shall show the location of the heating and cooling equipment and all the ductwork.	1.0

TABLE 406.3 (CONT.)

OPTION	5. EFFICIENT WATER HEATING OPTIONS — Only one option from items 5.2 through 5.6 may be selected in this category. Item 5.1 may be combined with any option.	CREDITS
☐ 5.1	A drain water heat recovery unit(s) shall be installed, which captures waste water heat from all and only the showers, and has a minimum efficiency of 40% if installed for equal flow or a minimum efficiency of 54% if installed for unequal flow. Such units shall be rated in accordance with CSA B55.1 or IAPMO IGC 346-2017 and be so labeled. To qualify to claim this credit, the building permit drawings shall include a plumbing diagram that specifies the drain water heat recovery units and the plumbing layout needed to install it. Labels or other documentation shall be provided that demonstrates that the unit complies with the standard.	0.5
☐ 5.2	Water heating system shall include one of the following: Energy Star rated gas or propane water heater with a minimum UEF of 0.80. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency.	0.5
☐ 5.3	Water heating system shall include one of the following: Energy Star rated gas or propane water heater with a minimum UEF of 0.91 or Solar water heating supplementing a minimum standard water heater. Solar water heating will provide a rated minimum savings of 85 therms or 2000 kWh based on the Solar Rating and Certification Corporation (SRCC) Annual Performance of OG-300 Certified Solar Water Heating Systems or Water heater heated by ground source heat pump meeting the requirements of Option 3.3. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency and, for solar water heating systems, the calculation of the minimum energy savings.	1.0
☐ 5.4	Water heating system shall include one of the following: Electric heat pump water heater meeting the standards for Tier I of NEEA's advanced water heating specification or For R-2 occupancy, electric heat pump water heater(s), meeting the standards for Tier I of NEEA's advanced water heating specification, shall supply domestic hot water to all units. If one water heater is serving more than one dwelling unit, all hot water supply and recirculation piping shall be insulated with R-8 minimum pipe insulation. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency.	1.5
☐ 5.5	Water heating system shall include one of the following: Electric heat pump water heater meeting the standards for Tier III of NEEA's advanced water heating specification.	2.0
☐ 5.6	Water heating system shall include one of the following: Electric heat pump water heater with a minimum UEF of 2.9 and utilizing a split system configuration with the air-to-refrigerant heat exchanger located outdoors. Equipment shall meet Section 4, requirements for all units, of the NEEA standard Advanced Water Heating Specification with the UEF noted above.	2.5

OPTION	6. RENEWABLE ELECTRIC ENERGY OPTION	CREDITS
☐ 6.1	For each 1200 kWh of electrical generation per housing unit provided annually by on-site wind or solar equipment a 1.0 credit shall be allowed, up to 3 credits. Generation shall be calculated as follows: For solar electric systems, the design shall be demonstrated to meet this requirement using the National Renewable Energy Laboratory calculator PVWATTs or approved alternate by the code official. Documentation noting solar access shall be included on the plans. For wind generation projects, designs shall document annual power generation based on the following factors: The wind turbine power curve‡ average annual wind speed at the site‡ frequency distribution of the wind speed at the site and height of the tower. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall show the photovoltaic or wind turbine equipment type, provide documentation of solar and wind access, and include a calculation of the minimum annual energy power production.	1.0

OPTION	7. APPLIANCE PACKAGE OPTION	CREDITS
☐ 7.1	All of the following appliances shall be new and installed in the dwelling unit and shall meet the following standards: Dishwasher — Energy Star rated; Refrigerator (if provided) — Energy Star rated; Washing machine — Energy Star rated; Dryer — Energy Star rated, ventless dryer with a minimum CEF rating of 5.2. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall show the appliance type and provide documentation of Energy Star compliance. At the time of inspection, all appliances shall be installed and connected to utilities. Dryer ducts and exterior dryer vent caps are not permitted to be installed in the dwelling unit.	1.0

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 • / LVL MATERIALS •• / LSL MATERIALS •••	Fb = 2900 E = 2.0 Fv = 290; Fb = 2900 E = 2.0 Fv = 285; Fb = 2600 E = 1.9 Fv = 285; 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 GALVANIZED.

TBL-4

11. FASTENING SCHEDULE:

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

TBL-5

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

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

MORTAR & GROUT TO BE MIXED PER MFR REQ'MTS

TBL-3

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. THE MINIMUM NET AREA OF VENTILATION OPENINGS SHALL BE NOT LESS THAN 1 SQ. FT. FOR EACH 300 SQUARE FEET OF UNDER-FLOOR AREA. (PER IRC R408.1) PROVIDE FOUNDATION VENTS WITH 73 SQ. IN. NET FREE AREA FOR EVERY 150 SQ. FT OF CRAWL SPACE AREA. SPACE EVENLY TO PROVIDE CROSS-VENTILATION. ONE SIDE OF BUILDING SHALL BE PERMITTED TO HAVE NO VENTILATION OPENINGS. EXCEPTION: THE TOTAL AREA OF VENTILATION OPENINGS SHALL BE PERMITTED TO BE REDUCED TO 1/1,500 OF THE UNDER-FLOOR AREA WHERE THE GROUND SURFACE IS COVERED WITH AN APPROVED CLASS I VAPOR RETARDER MATERIAL AND THE REQUIRED OPENINGS ARE PLACED TO PROVIDE CROSS VENTILATION OF THE SPACE.

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).

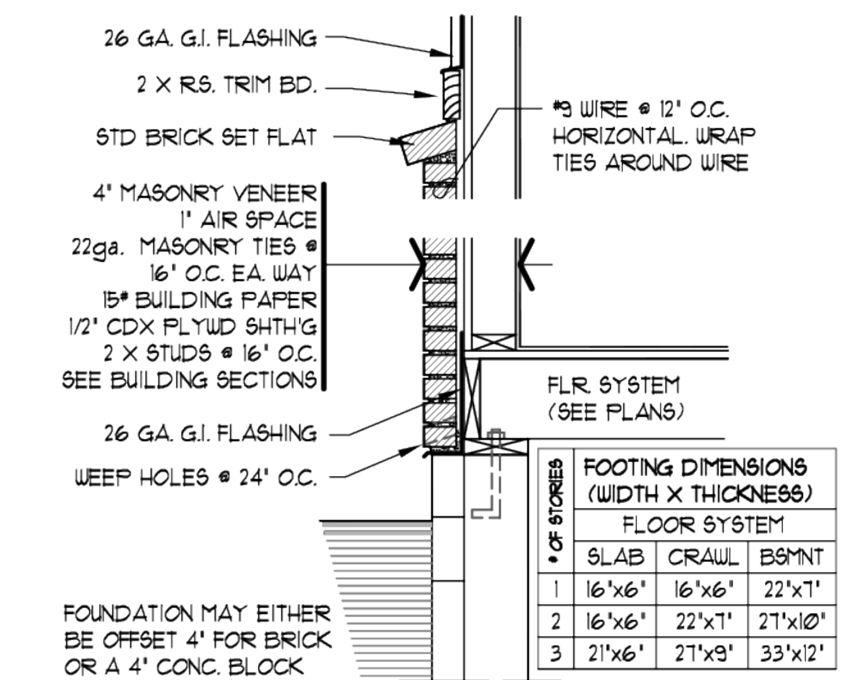
15. PROVIDE MIN. 18" X 24" CRAWLSPACE ACCESS THROUGH FLOOR OR MIN. 16" X 24" CRAWLSPACE ACCESS THROUGH WALL.

SPAN TABLES

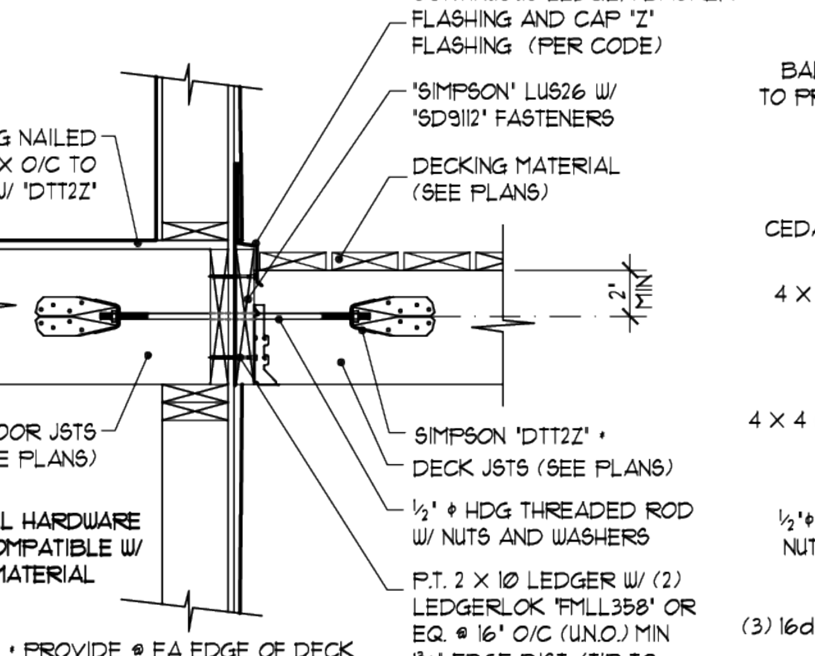
BASED ON 2018 I.R.C. TABLE R502.3.1(1), R502.3.1(2), R802.5(1), AND R802.5(2)

JOISTS D.F. #2	SPAC'G O.C.	FLOOR (40# LL/10# DL) (L/360) MAX. SPAN	FLOOR (30# LL/10# DL) (L/360) MAX. SPAN	JOISTS D.F. #2	SPAC'G O.C.	CEILING (20# LL/10# DL) (L/240) MAX. SPAN	CEILING (10# LL/5# DL) (L/240) 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"

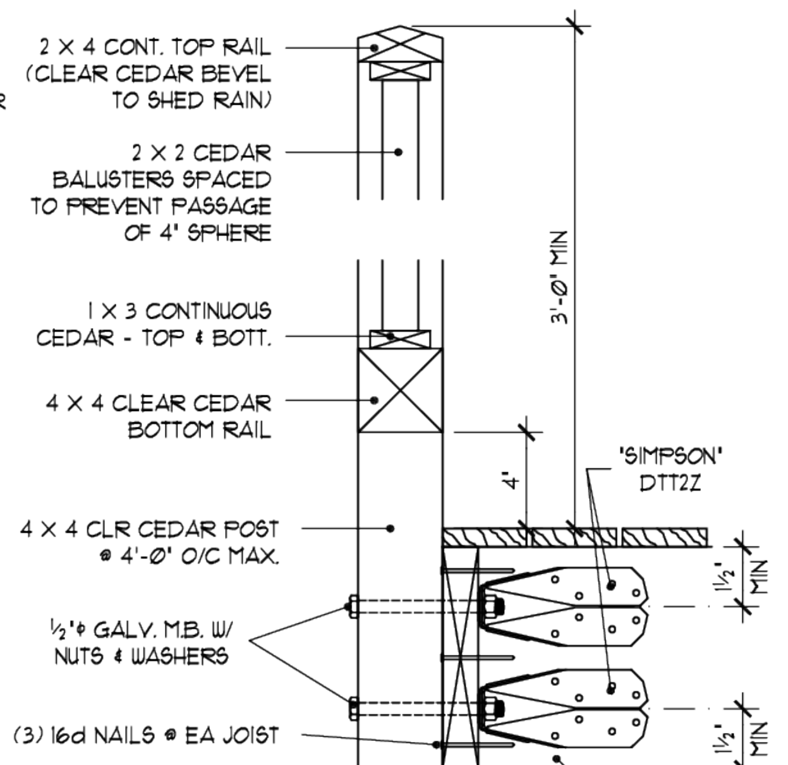
TBL-6



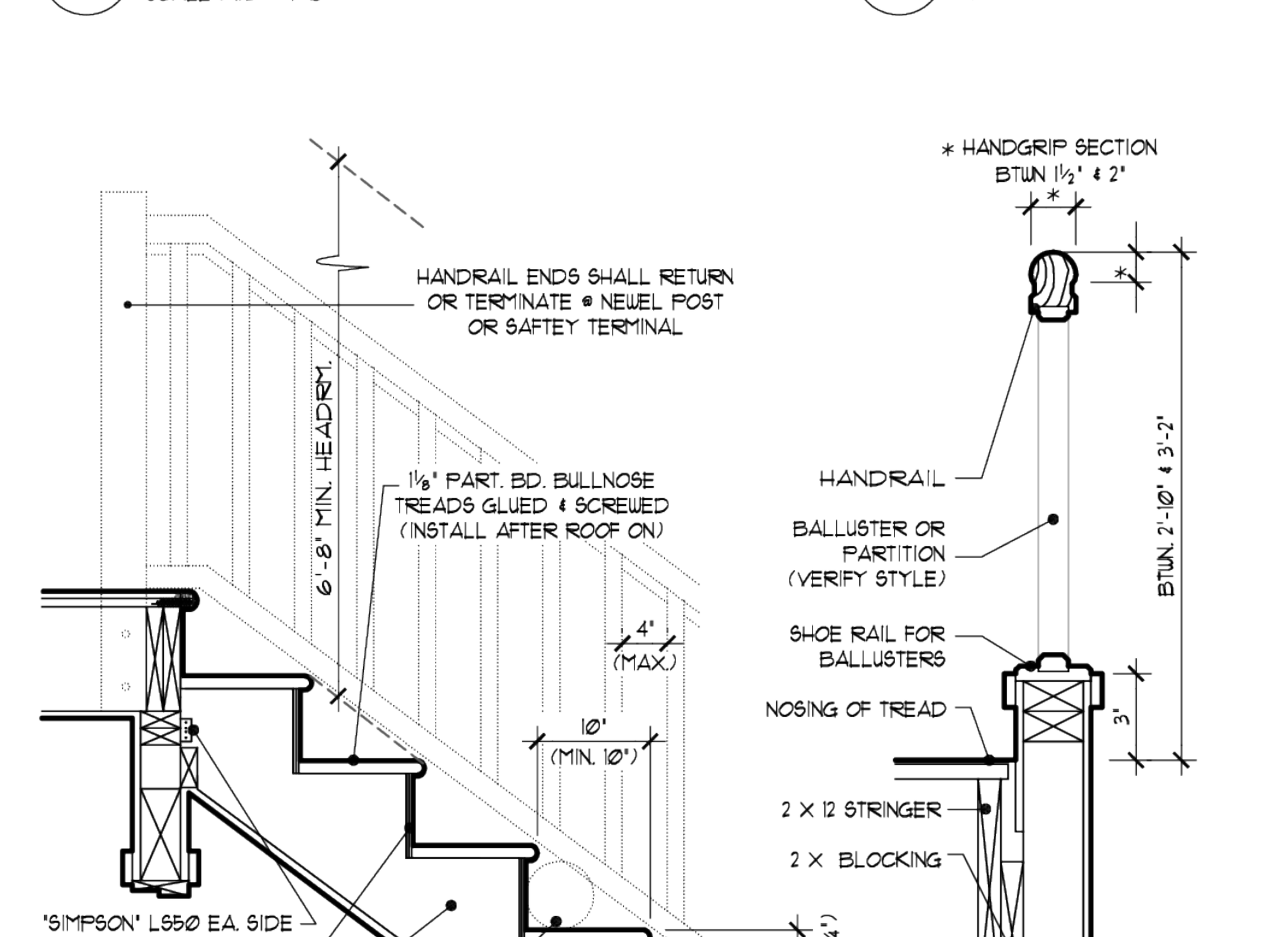
1 MASONRY VENEER DTL
SCALE : 1/2" = 1'-0" M-BRKDET 7/01/16



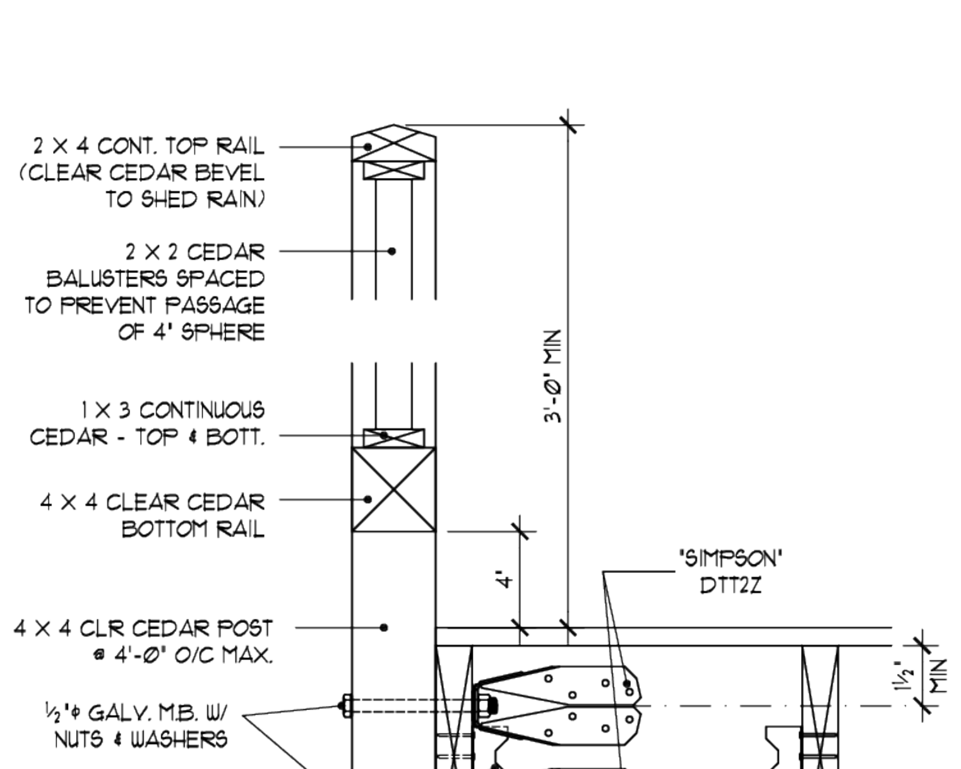
2 DECK LEDGER (TYP U.N.O.)
¾" = 1'-0" DECKLATCONN



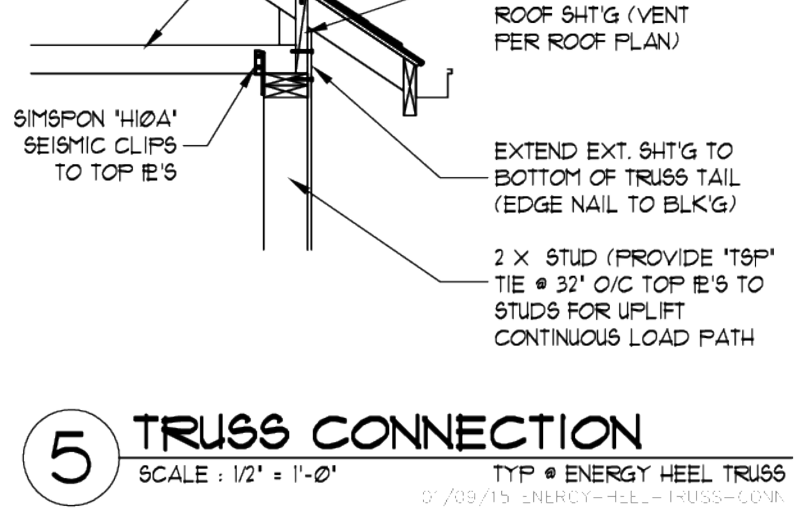
3 DECK RAILING
SCALE : 1 1/2" = 1'-0" M-DRAIL5 REV. 01/04/18



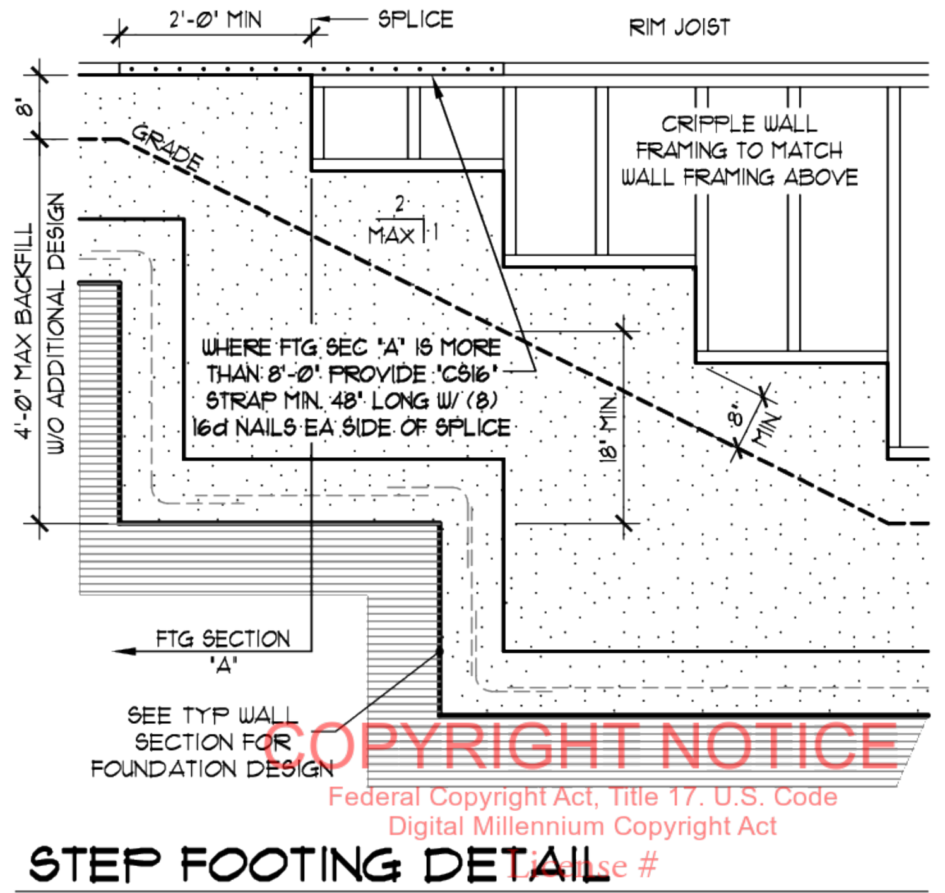
STAIR DETAIL
SCALE : 3/4" = 1'-0" M-STAIR1 07/15/08



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
07/09/15 ENERGY-HEEL-TRUSS-CONN



STEP FOOTING DETAIL
½" = 1'-0" STEPFTG

MASCORD GENERAL NOTES—WASH STATE 10/19/21

Mascord COLLECTION

ALAN MASCORD DESIGN ASSOCIATES, INC. http://www.mascord.com
2187 NW REED ST, SUITE 100 PORTLAND, OR 97210 503/225-9161 FAX 503/961-1961

1170-GW-BRIARSTONE
PROJECT MANAGER:AEM
DRAWN 04/07/22 LAW

RESIDENCE BY:
BRIARSTONE HOMES
941 EAST MANZANITA DRIVE
UNION, WASHINGTON 98592

25# SNOW LOAD

MAIN FLOOR	1987 SQ. FT.
GARAGE AREA	± 921 SQ. FT.

1170
G W

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 2014 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 M1601.3.1). 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 WHOE-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)

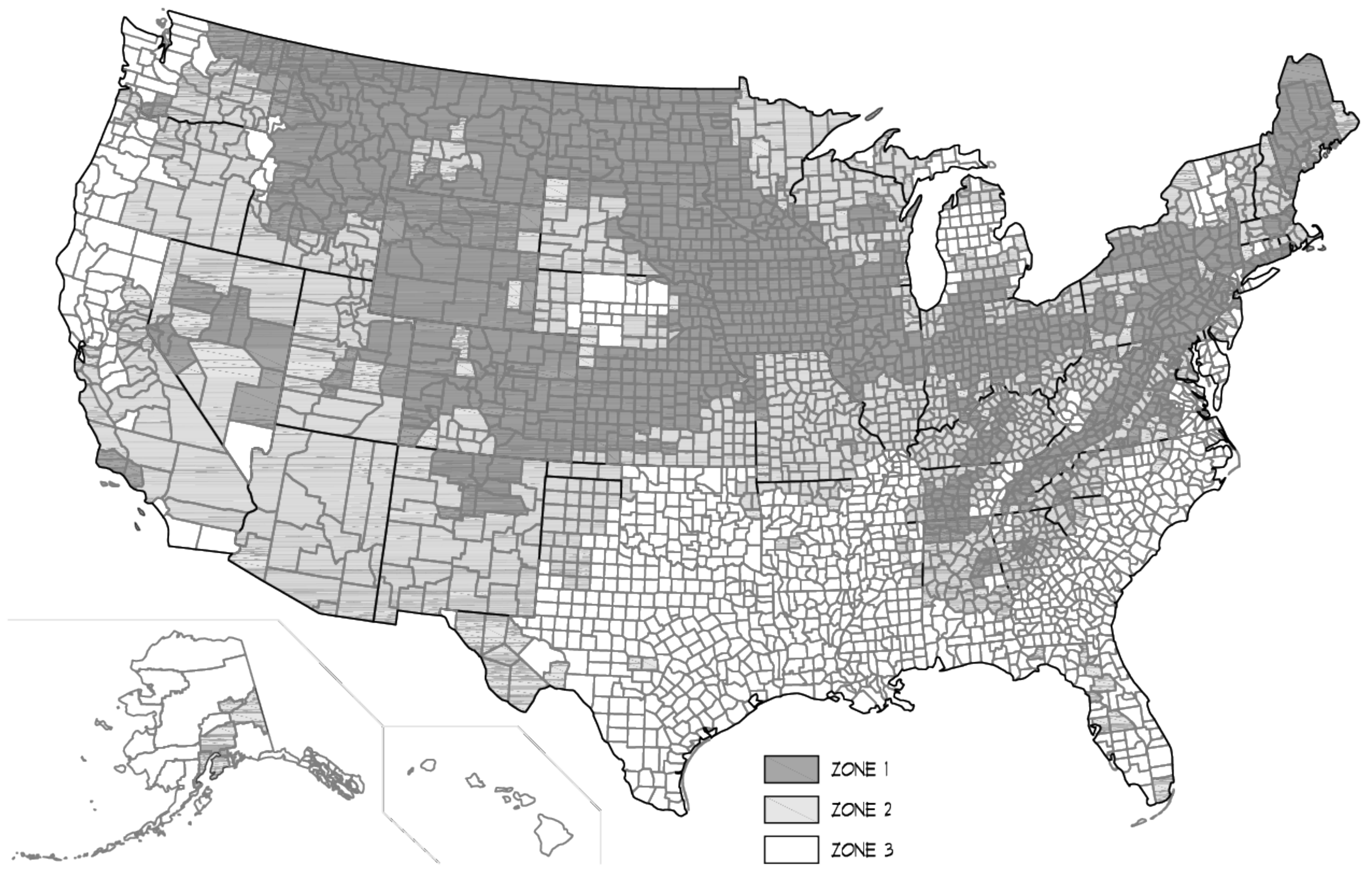
- A PLUMBING TEE OR OTHER APPROVED CONNECTION SHALL BE INSTERED HORIZONTALLY BENEATH THE SOIL-GAS-RETARDER SHEETING AND CONNECTED TO A 3' OR 4' DIAMETER FITTING WITH A VERTICAL VENT PIPE INSTALLED THROUGH THE SHEETING.
- THE VENT PIPE SHALL BE EXTENDED UP THROUGH THE BUILDING FLOORS TO TERMINATE AT LEAST 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 CONINUE TO TERMINATE ABOVE THE ROOF (SEE VENT PIPE NOTES).



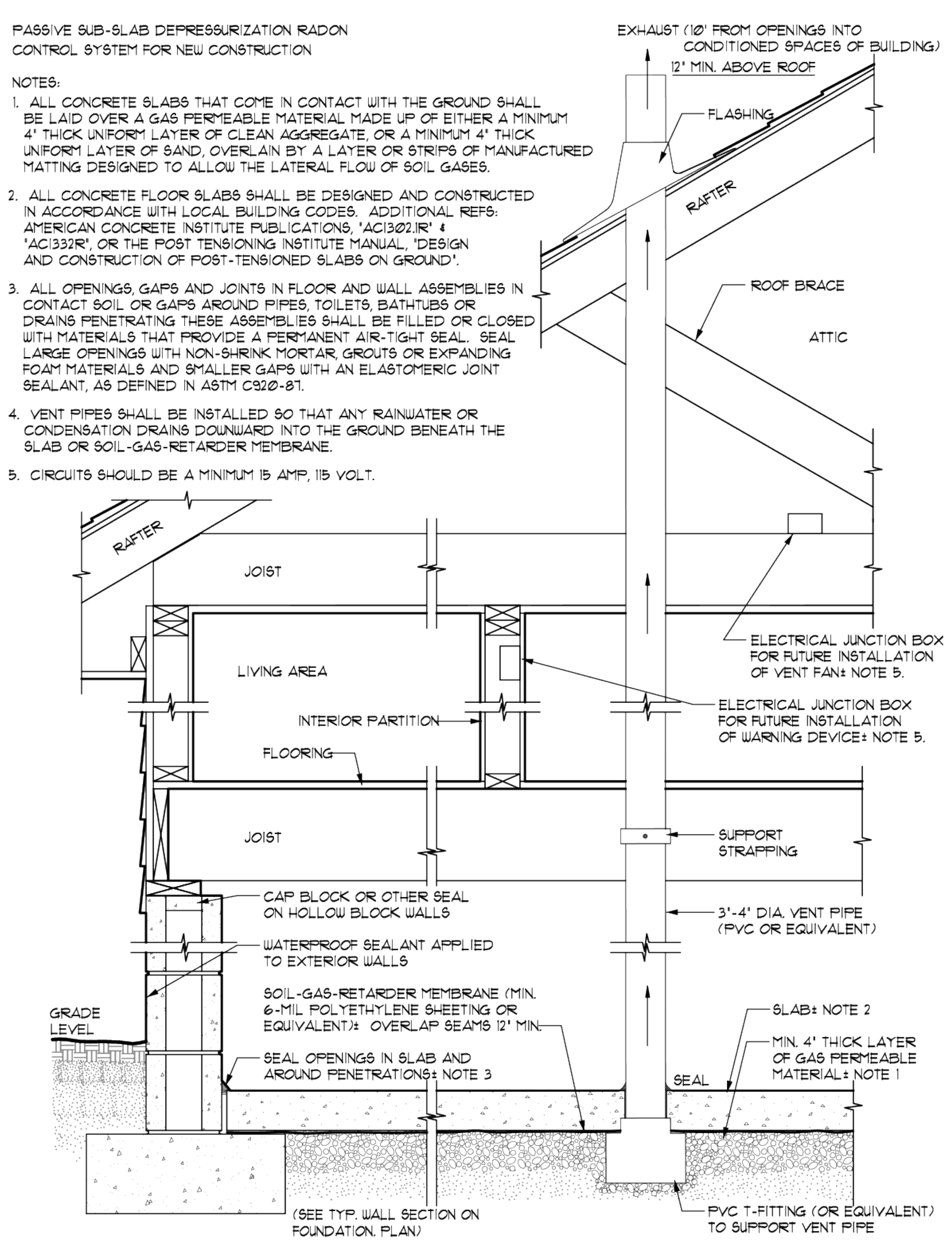
DISCLAIMER: THE PURPOSE OF THIS MAP IS TO ASSIST NATIONAL, STATE AND LOCAL ORGANIZATIONS TO TARGET THEIR RESOURCES AND TO IMPLEMENT RADON-RESISTANT BUILDING CODES. ALL HOMES SHOULD BE TESTED REGARDLESS OF GEOGRAPHIC LOCATION. EPA RECOMMENDS THAT THIS MAP BE SUPPLEMENTED WITH ANY AVAILABLE LOCAL DATA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

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, '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.

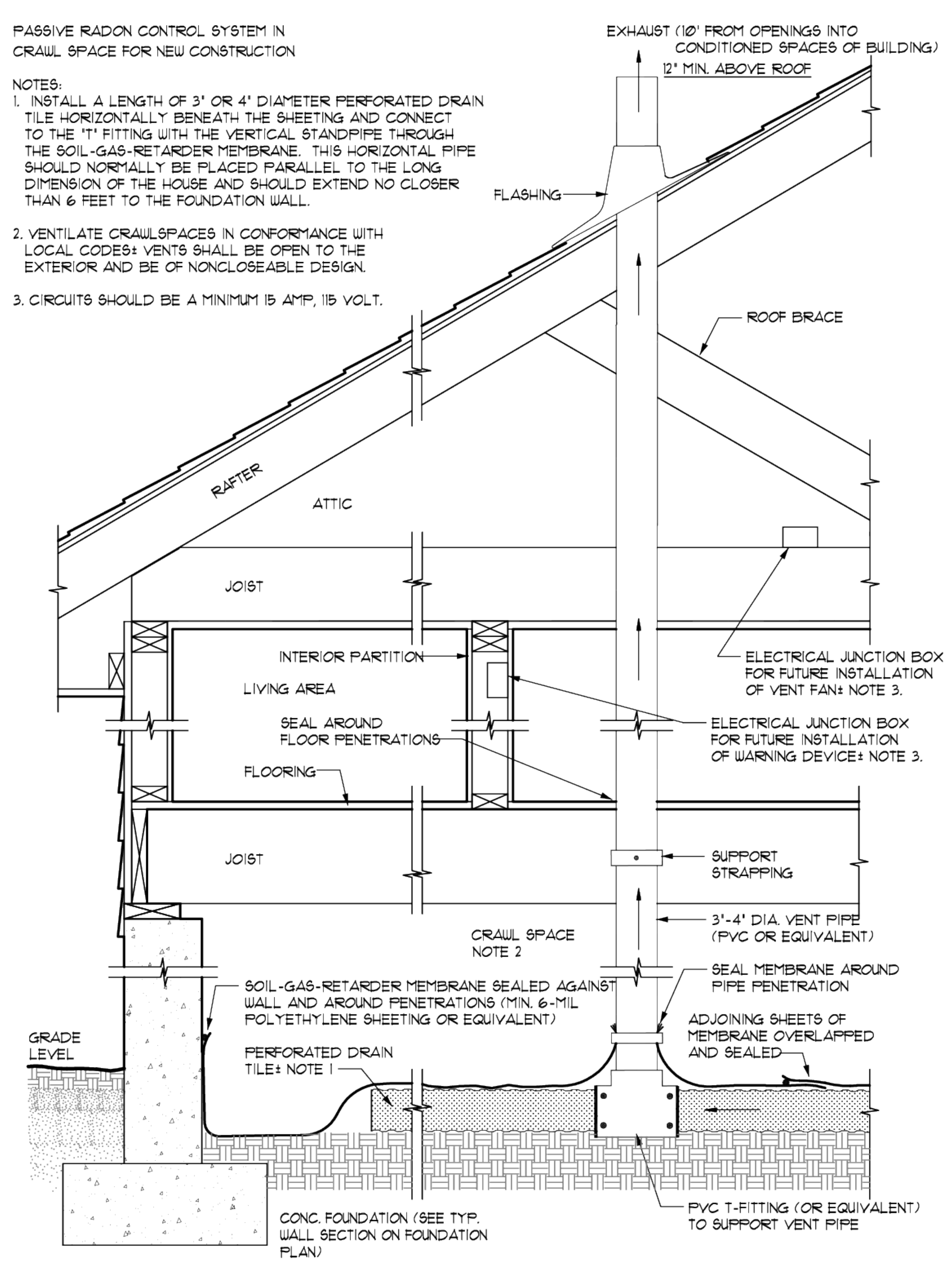

EXHAUST (10' FROM OPENINGS INTO CONDITIONED SPACES OF BUILDING)
12" MIN. ABOVE ROOF
FLASHING
RAFTER
ROOF BRACE
ATTIC
JOIST
LIVING AREA
INTERIOR PARTITION
FLOORING
ELECTRICAL JUNCTION BOX FOR FUTURE INSTALLATION OF VENT FAN; NOTE 5.
ELECTRICAL JUNCTION BOX FOR FUTURE INSTALLATION OF WARNING DEVICE; NOTE 5.
SUPPORT STRAPPING
CAP BLOCK OR OTHER SEAL ON HOLLOW BLOCK WALLS
WATERPROOF SEALANT APPLIED TO EXTERIOR WALLS
3"-4" DIA. VENT PIPE (PVC OR EQUIVALENT)
SOIL-GAS-RETARDER MEMBRANE (MIN. 6-MIL POLYETHYLENE SHEETING OR EQUIVALENT); OVERLAP SEAMS 12" MIN.
GRADE LEVEL
SEAL OPENINGS IN SLAB AND AROUND PENETRATIONS; NOTE 3
SLAB; NOTE 2
MIN. 4" THICK LAYER OF GAS PERMEABLE MATERIAL; NOTE 1
SEAL
(SEE TYP. WALL SECTION ON FOUNDATION PLAN)
PVC T-FITTING (OR EQUIVALENT) TO SUPPORT VENT PIPE

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.


EXHAUST (10' FROM OPENINGS INTO CONDITIONED SPACES OF BUILDING)
12" MIN. ABOVE ROOF
FLASHING
ROOF BRACE
RAFTER
ATTIC
JOIST
INTERIOR PARTITION
LIVING AREA
SEAL AROUND FLOOR PENETRATIONS
FLOORING
ELECTRICAL JUNCTION BOX FOR FUTURE INSTALLATION OF VENT FAN; NOTE 3.
ELECTRICAL JUNCTION BOX FOR FUTURE INSTALLATION OF WARNING DEVICE; NOTE 3.
SUPPORT STRAPPING
CRAWL SPACE NOTE 2
3"-4" DIA. VENT PIPE (PVC OR EQUIVALENT)
SOIL-GAS-RETARDER MEMBRANE SEALED AGAINST WALL AND AROUND PENETRATIONS (MIN. 6-MIL POLYETHYLENE SHEETING OR EQUIVALENT)
SEAL MEMBRANE AROUND PIPE PENETRATION
ADJOINING SHEETS OF MEMBRANE OVERLAPPED AND SEALED
GRADE LEVEL
PERFORATED DRAIN TILE; NOTE 1
CONC. FOUNDATION (SEE TYP. WALL SECTION ON FOUNDATION PLAN)
PVC T-FITTING (OR EQUIVALENT) TO SUPPORT VENT PIPE

CRAWLSPACE SUB-MEMBRANE DEPRESSURIZATION SYSTEM

MASCORD COLLECTION

1170-R-BRIARSTONE
PROJECT MANAGER:AEM
DRAWN 04/07/22 LAW

RESIDENCE BY:
BRIARSTONE HOMES
941 EAST MANZANITA DRIVE
UNION, WASHINGTON 98592

25# SNOW LOAD

MAIN FLOOR 1987 SQ. FT.
GARAGE AREA + 921 SQ. FT.

1170
R

◆ FRAMING CLIP SPACING SCHEDULE O.C. ◆

LTPF,A35: 8d COMMON X 1½"LONG NAILS.
LS50, L50: 10d COMMON X 3"LONG NAILS.

SHEAR WALL	FRAMING CLIP OPTIONS			
	LTP4	A35	LS50	L50
S	18"	20"	27"	20"
A	14"	15"	20"	15"
B	8"	9"	12"	8"
C	5.5"	6"	8"	6"
D *	10"	11"	14"	10"
E *	8"	8"	11	8"
F *	6.5"	7"	9"	7"

*SPACING OF THESE CLIPS IS REQUIRED ON BOTH SIDES OF SHEATHING.

GENERAL NOTES

(1) All fasteners exposed to weather shall be galvanized.

(2) All exterior walls shall be built to "S" shearwall requirements as a minimum.

(3) Sheathing on shearwalls shall not be interrupted by any wall butting into shearwall.

(4) Builder to verify installation requirements for all hardware connections per manufacturer.

(5) All floor system lumber to be installed with maximum moisture content of 16%.

(6) All hardware & fasteners in contact with P.T. lumber shall be stainless steel, Z-max or hot dip galvanized.

(7) Nail dimensions:
8d common = 0.131x2.5
10d common = 0.148x3
16d sinker = 0.148x3.25
16d common = 0.162x3.5

LEGEND

- APPROX. HOLDOWN LOCATIONS
- SHEAR WALL LOCATIONS
- 3X (2.2X) 3X SILL PLATE REQUIRED
- DBL. 2X SILL PLATE REQUIRED
- XX SHEAR WALL LINE
- LOAD FROM ABOVE
- DOUBLE 2x6 U.N.O.

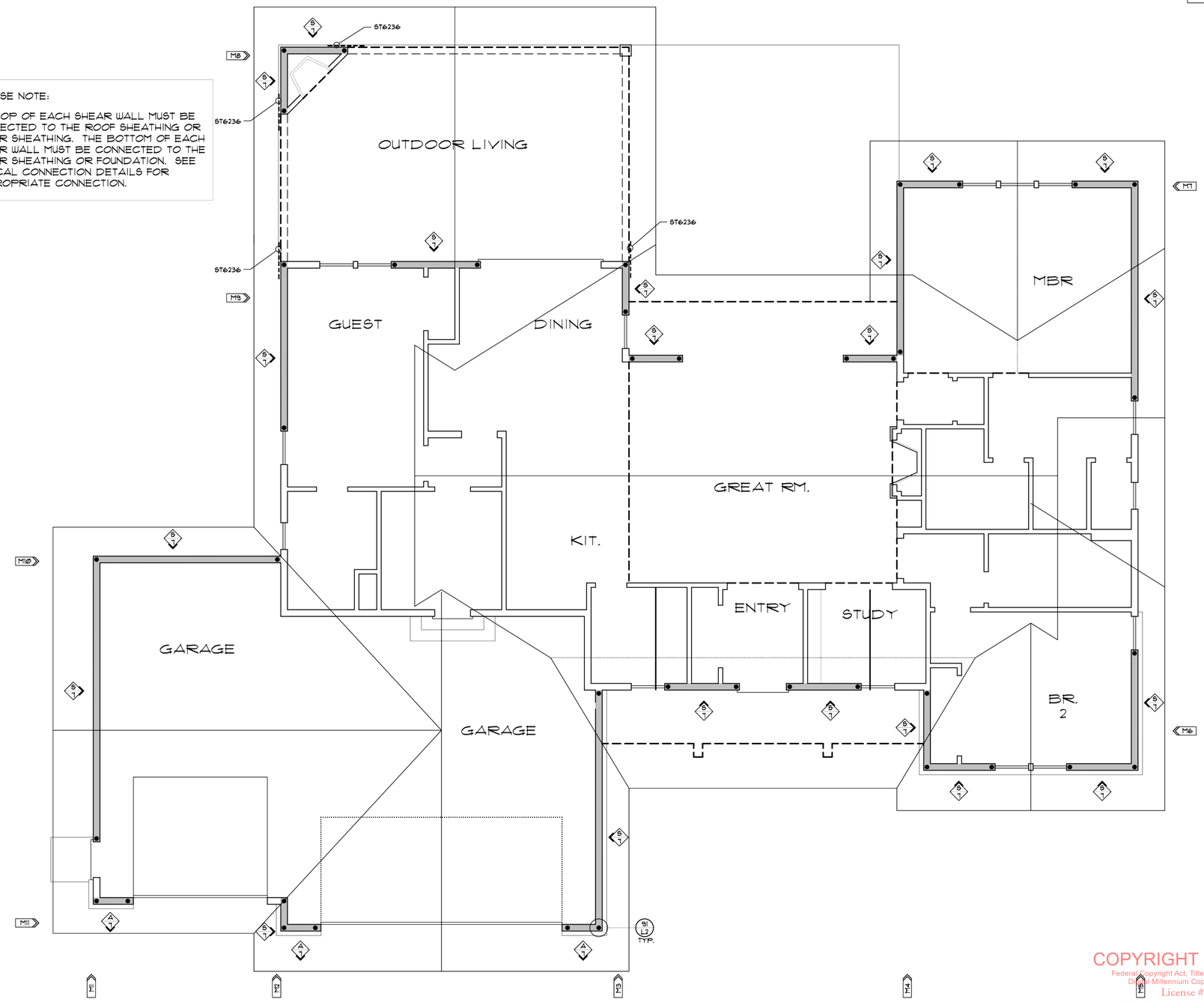
PLEASE NOTE:

THE TOP OF EACH SHEAR WALL MUST BE CONNECTED TO THE ROOF SHEATHING OR FLOOR SHEATHING. THE BOTTOM OF EACH SHEAR WALL MUST BE CONNECTED TO THE FLOOR SHEATHING OR FOUNDATION. SEE TYPICAL CONNECTION DETAILS FOR APPROPRIATE CONNECTION.

WIND & SEISMIC ANALYSIS
2018 IBC
ROWELL

MPH: 110
EXP.: C
SEIS. CAT.: D
ZIP: 98592

TODD T. ROWELL — STATE OF WASHINGTON — 43817 — REGISTERED PROFESSIONAL ENGINEER



MAIN FLOOR PLAN

SCALE/4" = 1'-0"

◆ SHEAR WALL SCHEDULE ◆

SEISMIC ZONE D

APA RATED PLYWOOD OR ORIENTED STRAND BOARD (1)

MARK	PANEL THICKNESS	FASTENERS (3),(5),(6),(7) TYPE	FASTENERS (3),(5),(6),(7) @ PANEL EDGES	SOLE @ NAILING 16d SINKER	SILL PLATE SIZE (14)	SILL PLATE AB SPACING (2)	NOTES	ALLOW LOAD WIND / SEIS
S	7/16" or 15/32"	0.131 ø x 2½" F. RH. P-NAIL	6" O.C.	6" O.C.	2X	48" O.C.		348 / 260
A	7/16" or 15/32"	0.131 ø x 2½" F. RH. P-NAIL	4" O.C.	4" O.C.	2X	32" O.C.		523 / 380
B	7/16" or 15/32"	0.131 ø x 2½" F. RH. P-NAIL	3" O.C.	3" O.C.	2X	26" O.C.	see (15)	679 / 490
C	7/16" or 15/32"	0.131 ø x 2½" F. RH. P-NAIL	2" O.C.	2" O.C.	2X	22" O.C.	see (4), (15)	802 / 640
D	7/16" or 15/32" EA. SIDE	0.131 ø x 2½" F. RH. P-NAIL	3" O.C.	3" O.C.	3X	20" O.C.	see (4), (15), (16)	1123 / 980
E	7/16" or 15/32" EA. SIDE	0.131 ø x 2½" F. RH. P-NAIL	2" O.C.	2.5" O.C.	3X	16" O.C.	see (4), (8), (15), (16)	1404 / 1280
F	15/32" EA. SIDE	0.148 ø x 3" F. RH. P-NAIL	2" O.C.	2" O.C.	3X	13" O.C.	see (4), (8), (15), (16)	1728 / 1540

NOTES

(1) 2X D.F. studs max. 16" O.C.

(2) Anchor bolts to be ⅝"ø j-bolts w/min. 7" embedment into concrete. Secure with BP ⅝"-6 or BPS ⅝"-6. BPS ⅝"-6 requires an additional std. cut washer.

(3) Intermediate studs nailed @ 12" O.C.

(4) Framing @ adjoining panels to be 3x nominal or wider, w/nailing staggered.

(5) 0.131"ø X 2½" F. RH P-nail may be replaced with 0.131"ø X 2½" common nail or 0.113"ø X 2½"hot dip or tumbled galvanized box nail.

(6) 0.148"ø X 3" F. RH P-nail may be replaced with 0.148ø X 3" common nail or 0.128 ø X 3" hot dip or tumbled galvanized box nail.

(7) "F. RH. P-nail"- designates a full round-head power nail.

(8) Minimum 4X6 post @ each end.

(9) Holdowns occur @ each end of each shearwall & fasten to min. double 2X studs. Wall sht'g. shall be edge nailed to each holdown stud.

(14) 3X plate required where shown on foundation plan.

(15) USE 2 ROWS FOR SILL PLATE NAILING W/ 1 ½" THICK RIM JOIST OR BLOCKING

(16) SILL PLATE NAILING PER EACH SIDE OF SHEATHING.

1/17/20

◆ HOLDOWN SCHEDULE ◆

MARK (9)	SIMPSON MODEL#	FASTENERS	CAPACITY (LBS.)	NOTES
0	No holdown required	Connect btm. plate to floor jst/rim/bm/blkg. w/16d @ 4" O.C.	500	
1	CMST12 x 36" Long	(7) 16d common nails at each end.	1,740	
2	CMST12 x 48" Long	(16) 16d common nails at each end.	3,950	
3	CMST12 x 60" Long	(22) 16d common nails at each end.	5,470	
4	CMST12 x 72" Long	(29) 16d common nails at each end.	7,220	
5	CMST12 x 90" Long	(39) 16d common nails at each end.	9,710	
7	HTT5	(26) 16d sinkers SB⅝x24	5,090	
8	HDU-8	(20) SDS¼" x 2½" screws, SB ⅝x24 EMBED 18" MIN.	7,855	Min. 4X6 OR (3) 2x6 STITCHED together w/16d sinker @ 6" O.C. MIDWALL AND CORNER ONLY
9	HDU-11	(30) SDS ¼" X 2½" screws, SB 1X30 EMBED 24" MIN.	9,335	4X6 post req'd.
10	HDU-14	(36) SDS ¼" X 2½" screws, PABB ANCHOR. 11" EMBED INTO FOOTING MIN.	14,445	6X6 post req'd. Heavy hex nut req'd. 36X36X14" deep min. ftg. req'd. @ ea. anchor bolt.

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FAX:(503) 254-6761

Maxwell COLLECTION

PROJECT: 220065

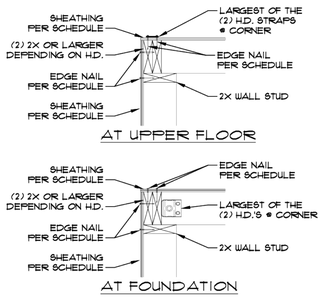
DRAWN 03/28/22 JLY

RESIDENCE BY:
BRIARSTONE HOMES
941 EAST MANZANITA DRIVE
UNION, WASHINGTON 98592

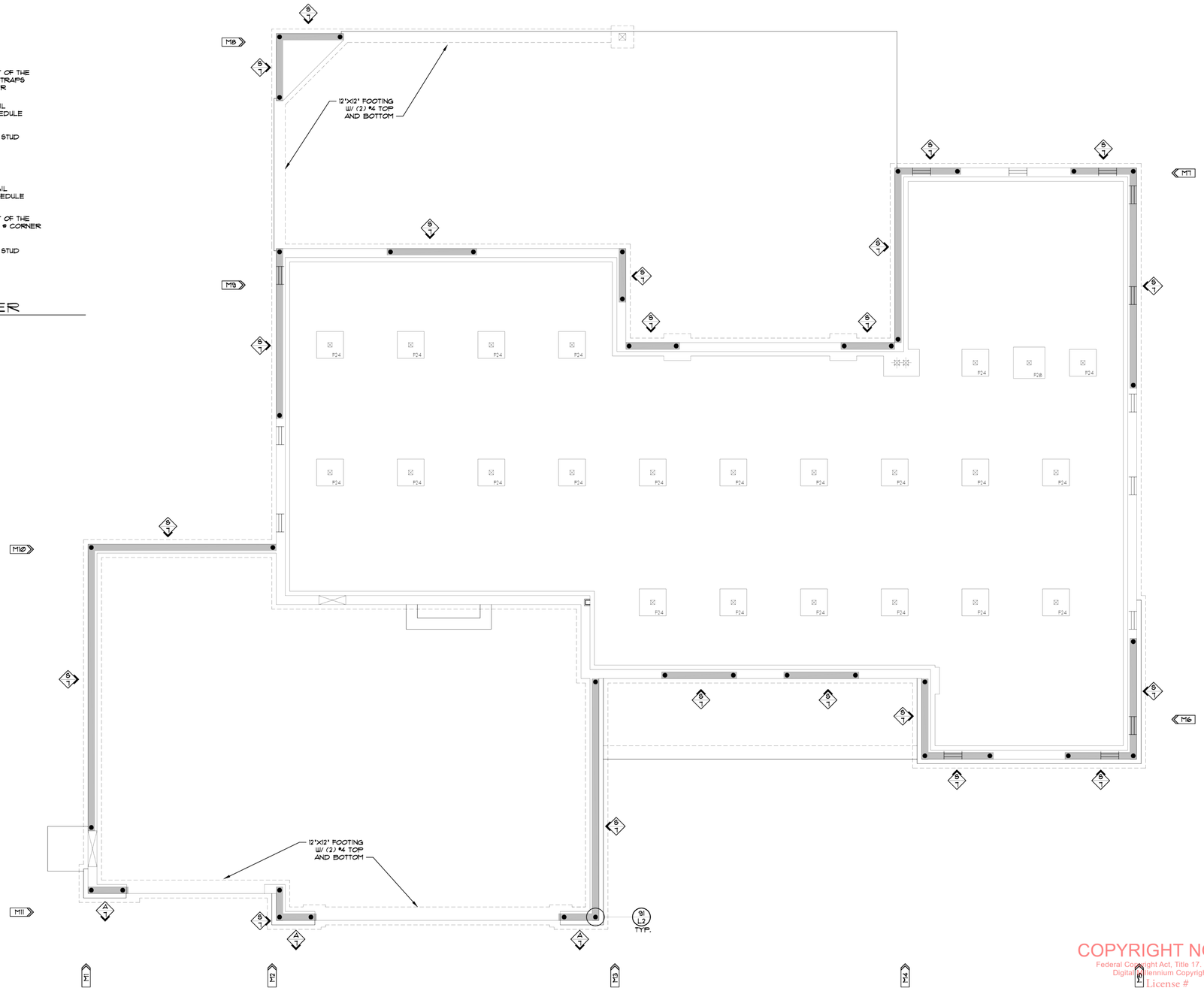
25# SNOW LOAD

MAIN FLOOR 1987 SQ. FT.
GARAGE AREA + 921 SQ. FT.

1170
L1
110C



31 COMBINED H.D. @ CORNER
1" = 1'-0"



FOUNDATION PLAN

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

TODD T. ROWELL STATE OF WASHINGTON 33817 REGISTERED PROFESSIONAL ENGINEER

ROWELL ENGINEERING, LLC
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Maynard COLLECTION

PROJECT: 220065

DRAWN 03/28/22 JLY

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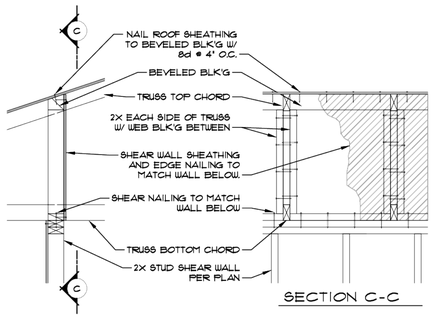
UNION, WASHINGTON 98592

25# SNOW LOAD

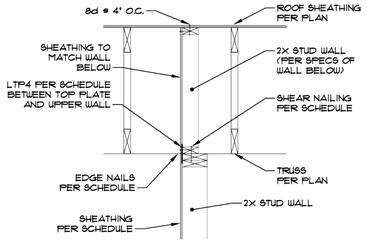
MAIN FLOOR 1987 SQ. FT.
GARAGE AREA + 921 SQ. FT.

1170
L2
110C



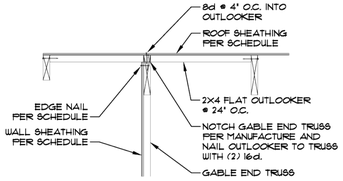
INTERIOR SHEAR WALL TO ROOF

¾" = 1'-0" PERPENDICULAR ROOF TRUSSES



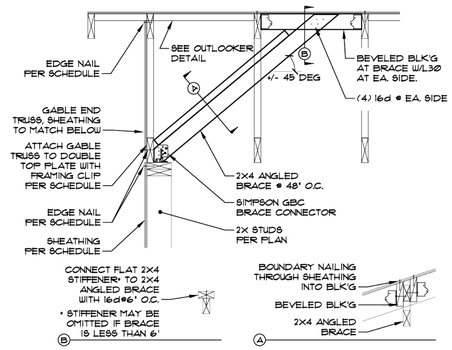
INTERIOR SHEAR WALL EXTENSION

¾" = 1'-0" PARALLEL TO ROOF TRUSSES



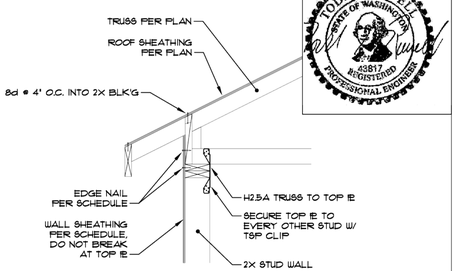
OUTLOOKER DETAIL

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



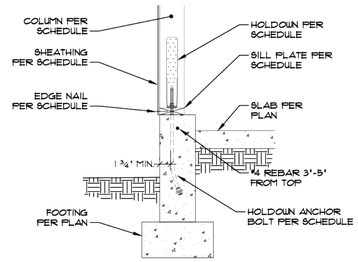
GABLE END TRUSS

¾" = 1'-0"



RAISED HEEL TRUSS AT EAVE

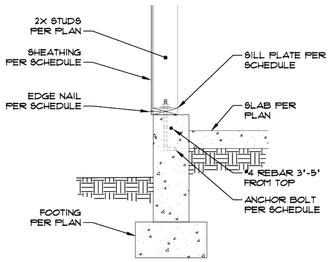
¾" = 1'-0"



GARAGE SLAB

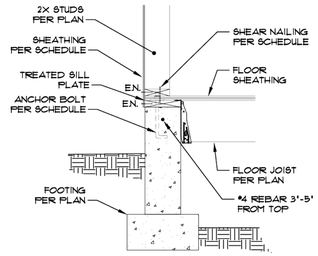
SB ANCHOR BOLT

¾" = 1'-0"



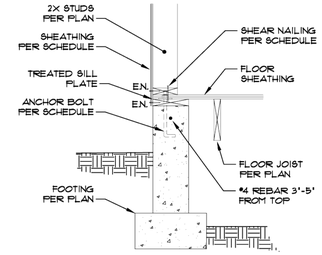
GARAGE SLAB SHEAR WALL

¾" = 1'-0"



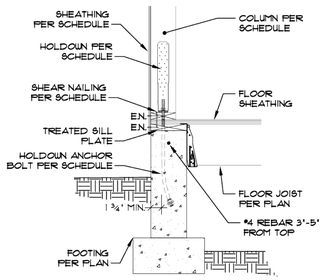
EXTERIOR SHEAR WALL

¾" = 1'-0" PERPENDICULAR FLOOR JOISTS



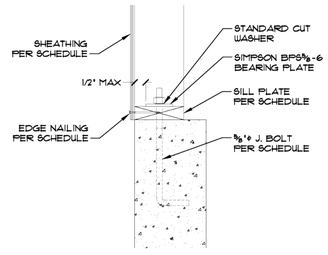
EXTERIOR SHEAR WALL

¾" = 1'-0" PARALLEL FLOOR JOISTS



EXTERIOR SB ANCHOR BOLT

¾" = 1'-0"



STANDARD A.B. DETAIL

1 1/2" = 1'-0"

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25# SNOW LOAD

MAIN FLOOR	GARAGE AREA
1987 SQ. FT.	+ 921 SQ. FT.

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