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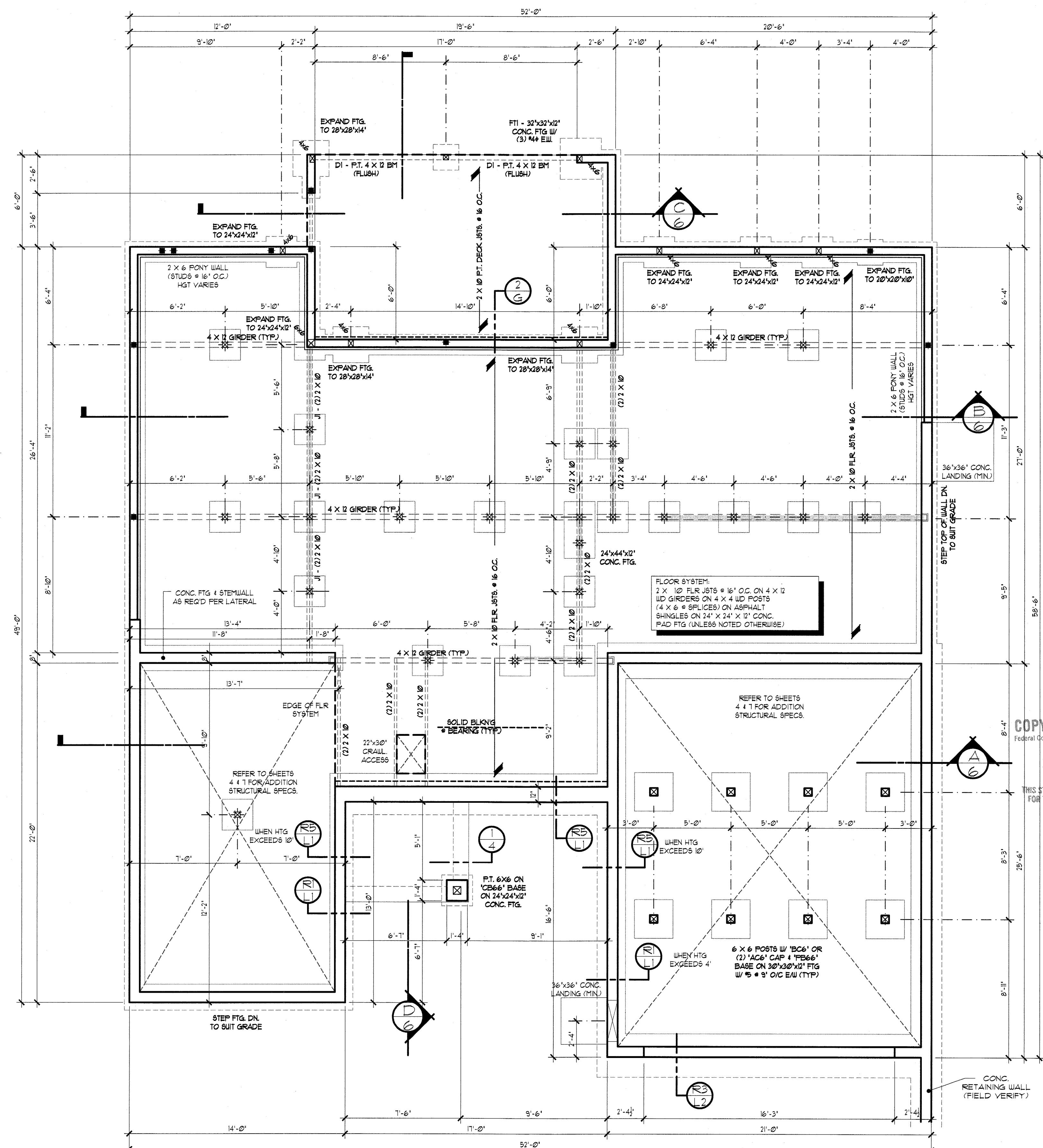
SCALE: 1/4" = 1'-0"

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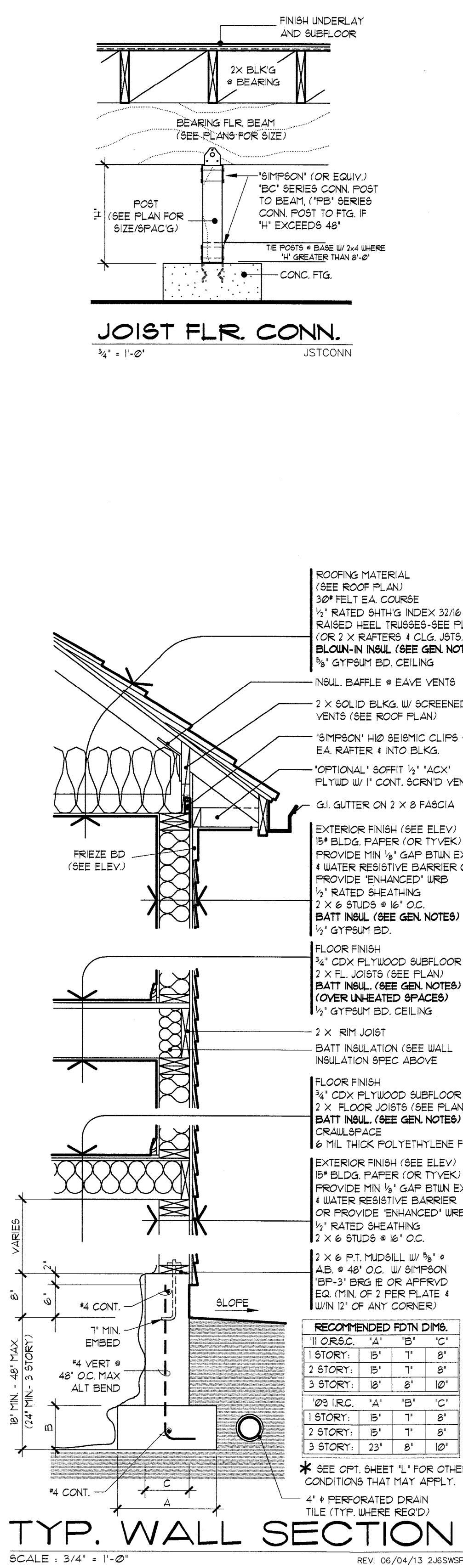
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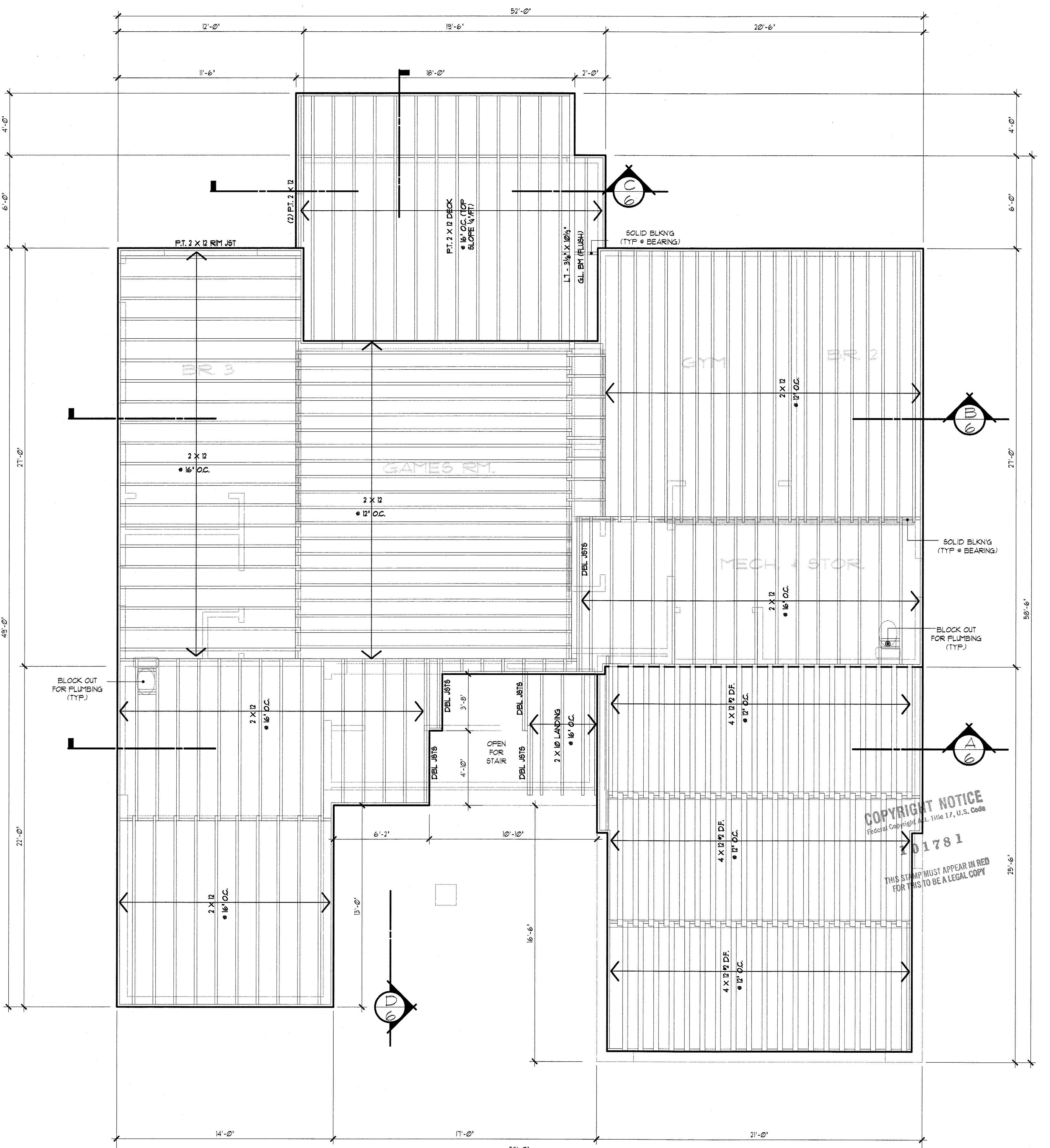




FOUNDATION PLAN



REV. 06/04/13 2J6SWSP0



MAIN FLOOR FRAMING PLAN

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

REFER TO ENGINEERING SHEETS FOR LATERAL
SPECIFICATIONS PRIOR TO CONSTRUCTION

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 ROOFING SYSTEM USED IN THE DESIGN OF THE ROOF STRUCTURE OF THIS BUILDING.

ROOF LIVE LOAD (SNOW)
20' / 325 PSF
FRAMING MATERIALS:
2x 4 PSF
SHEATHING MATERIALS:
15 PSF
MISC MATERIALS:
15 PSF

40.00
PSF TL

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

4x4 WOOD POST FROM RIDGE (HIP OR VALLEY) TO WALL BELOW (1/2" x 4 RECD AT WALL BEARING PLATE. 1/2" PLATES IN HIPS & VALLEY'S CAN ONLY OCCUR IN POST DOWN LOCATIONS)

49 SQ. IN. ROOF VENTS (SEE VENT TABLE FOR QTY. - 50%/50% SHOWN)

2x4 PURLIN WALL TO BM. OR WALL BELOW (FRAMING AT 24" OC.)

SHADeD AREA DENOTES ROOF FRAMED OVER RAFTERS BELOW

DOWNGPOUTS

COMP/SHAKE ROOF

MAXIMUM SPANS

PER 2004 UICPA TBL RR-2B

7' DF L/240
15' LL + 5" DL

SIZE SPACING SPAN

2x6 12' O.C. 14'-0"

16' O.C. 12'-1"

24' O.C. 9'-10"

2x8 12' O.C. 17'-8"

16' O.C. 15'-4"

24' O.C. 12'-6"

2x10 12' O.C. 21'-7"

16' O.C. 18'-9"

24' O.C. 15'-3"

2x12 12' O.C. 25'-1"

16' O.C. 21'-8"

24' O.C. 11'-9"

ROOF VENTS

ROOF AREA (ft²) = 2985

% EAVE AREA (ft²) % ROOF AREA (ft²)

50 621.8 50 622.8

40 498.2 60 747.4

30 373.1 70 871.9

20 249.1 80 936.5

3-VENT 4-VENT 49 ft²

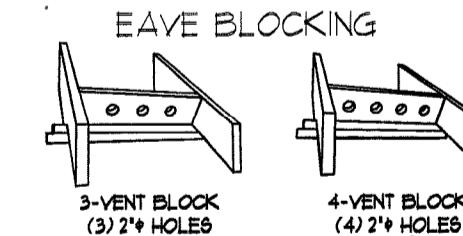
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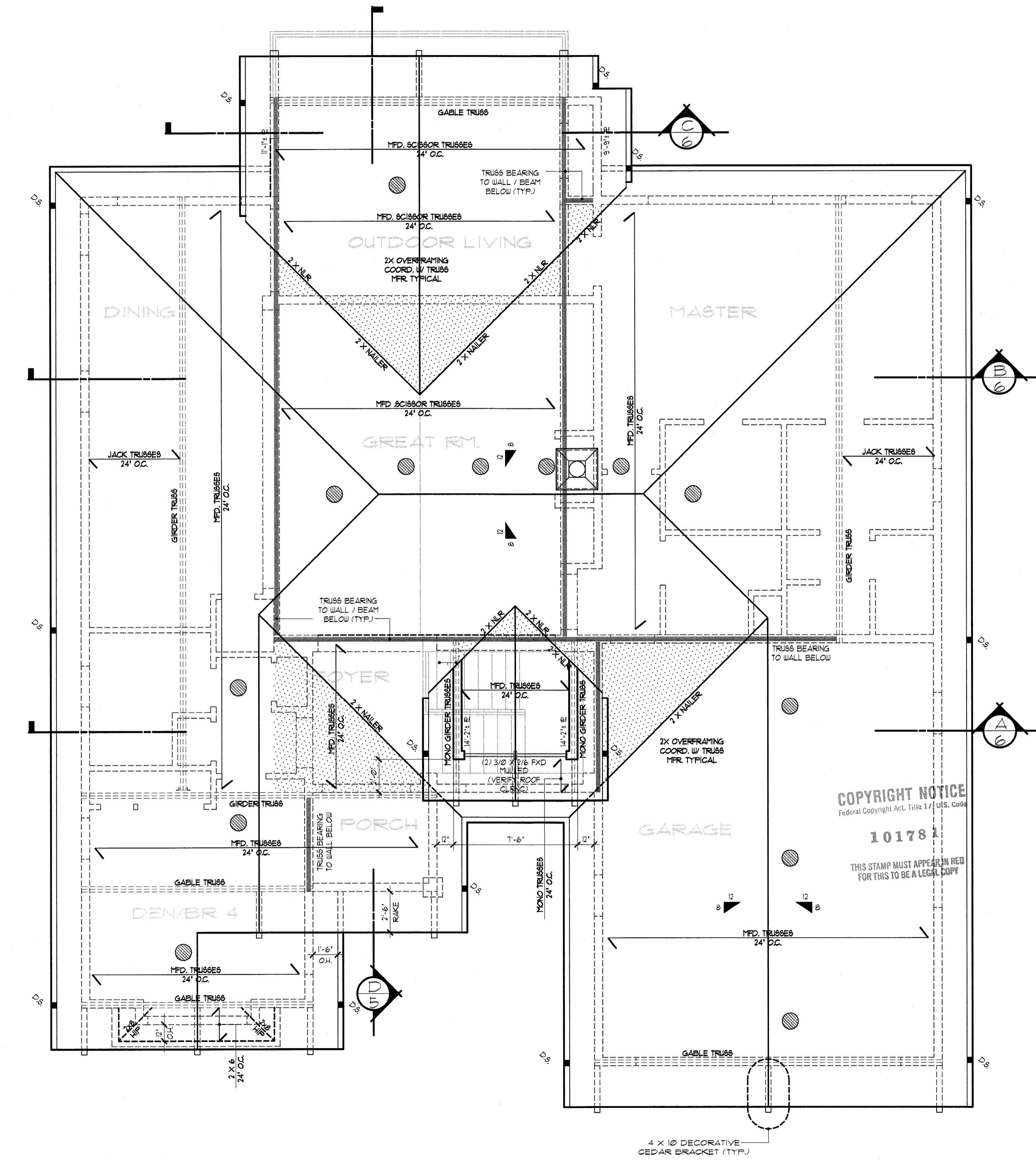
40 30 18

26 20 20

EAVE BLOCKING



PER 2008IRC - R806.2 MINIMUM AREA. THE TOTAL NET FREE VENTILATING AREA SHALL NOT BE LESS THAN 1/200 OF THE AREA OF THE SPACE VENTILATED. PROVIDED, LEADERS AND DOWNSPOUTS MORE THAN 50% OF THE REQUIRED VENTILATING AREA IS PROVIDED WITH VENT OPENINGS LOCATED ON THE UPPER PORTION OF THE ROOF TO BE VENTILATED AT LEAST 3 FEET ABOVE THE EAVE OR CORNICE VENTS WITH THE BALANCE OF THE REQUIRED VENTILATION PROVIDED BY EAVE OR CORNICE VENTS.



ROOF FRAMING PLAN

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

REFER TO ENGINEERING SHEETS FOR LATERAL
SPECIFICATIONS PRIOR TO CONSTRUCTION

DISCLAIMER

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

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GENERAL NOTES:

1. ALL WORK IS TO COMPLY WITH THE LATEST ADOPTED VERSION OF THE OREGON RESIDENTIAL SPECIALTY CODE (OSRC) 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 DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE THE DRAWINGS.

4. DESIGN LOADS:

ROOF (LL.)	25 PSF
ROOF (LL.+DL.) (SHAKE/COMP)	40 PSF
FLOOR (LL.+DL.) (TILE MATERIAL)	49 PSF
STAIRS (LL.+DL.)	50 PSF
GARAGE FLOOR (LL.) (2000 POINT)	50 PSF
DECKS (LL.+DL.)	50 PSF
BALCONIES (EXT. LL.+DL.)	10 PSF
ATTIC STORAGE (CLG JST) (LL.+DL.)	30 PSF

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

5. THIS PLAN IS DESIGNED TO MEET 2011 OREGON RESIDENTIAL SPECIALTY CODE UNDER PRESCRIBED ENVELOPE REQUIREMENTS FOR RESIDENTIAL BLDGS. TABLE NI01(2). IN ADDITION TO PRESCRIBED ENVELOPE REQUIREMENTS THIS PLAN IS ALSO DESIGNED WITH THE ENVELOPE ENHANCEMENT MEASURE (2) AND CONSERVATION MEASURE (A) OF THE ADDITIONAL MEASURES TABLE NI01(2).

*FOR ADDITIONAL MEASURE OPTIONS SEE [HTTP://HOUSEPLANS.COM/ARTICLES/OSR2011](http://HOUSEPLANS.COM/ARTICLES/OSR2011)

PRESCRIPTIVE ENVELOPE REQUIREMENTS

INSULATION:	
ROOF (VAULTED CEILING)	R-38
ROOF (FLAT CEILING)	R-38
EXTERIOR WALLS	R-21
UNDER SLAB INSULATION	R-30
WALLS & FLOOR GRADE	R-15
SLAB EDGES & HEATED AREAS	R-15
FORCED AIR DUCT (AT UNHEATED AREA)	R-8

GLAZING/DOORS	
MAXIMUM WINDOW AREA	NO LIMIT
WINDOW CLASS / SLIDING GLASS DOORS	U+.35
ENTRY DOOR CLASS (MAX 20 SQ FT)	U+.54
EXT. DOORS W/ GREATER THAN 25% GLAZING	U+.40
OTHER DOORS (%)	U+.20
SKYLIGHT CLASS (MAX % OF HEATED SPACE)	U+.00

(*) USE INSULATED METAL DOOR BETWEEN HOUSE & GARAGE) TBL-2

TABLE NI01(2) ADDITIONAL MEASURES

ENVELOPE ENHANCEMENT MEASURE

HIGH EFFICIENCY ENVELOPE	
Replace corresponding Table NI01(1) components w/ all of the following:	Exterior walls - 2x6 intermediate framing, and vaulted ceiling - U-3023 (R-30A1)*, and
Flat ceilings - U-2025 / R-49, and	Framed floors - U-2025 R-38, and windows - U-320, and
Doors - all doors U-020, or	Additional 15% of permanently installed lighting fixtures as high efficacy lamps

CONSERVATION MEASURE

A HIGH EFFICIENCY HVAC SYSTEM	
Gas-fired furnace or boiler w/ min. AFUE of 80%, or Air-source heat pump w/ min. HSPF of 8.5, or Closed-loop ground source heat pump w/ min COP of 3.0	

- a. Furnace located within the building envelope shall have sealed combustion air installed. Combustion air shall be ducted directly from the outdoors.
- b. See intermediate framing details this sheet
- c. Advanced frame construction, which shall provide full required ceiling insulation value to the outside of exterior walls.
- d. The max. vaulted ceiling surface area shall not be greater than 80% of the total heated space floor area unless vaulted area has a U-factor no greater than U-0.06.

INFILTRATION: ALL OPENINGS IN THE EXTERIOR BUILDING ENVELOPE SHALL BE SEALED AGAINST AIR INFILTRATION. THE FOLLOWING AREAS MUST BE SEALED:

- JOINTS AROUND WINDOW AND DOOR FRAMES
- JOINTS BETWEEN WALL CAVITY WINDOW/DOOR FRAMES
- JOINTS BETWEEN WALL AND FOUNDATION
- JOINTS BETWEEN WALL AND ROOF
- JOINTS BETWEEN WALL PANELS
- UTILITY PENETRATIONS THROUGH EXTERIOR WALLS, FLOORS AND ROOF
- ALL OTHER OPENINGS IN THE EXTERIOR ENVELOPE

6. A MIN. OF 65% OF THE PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH EFFICIENCY LAMPS. SCREW-IN COMPACT FLUORESCENT LAMPS COMPLY WITH THIS REQUIREMENT. (TO BE VERIFIED IN WRITING & FINAL INSPECTION)

7. 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 24, OR UL 723, AND CRITICAL RADIANT FLUX NOT LESS THAN 0.1 WATTS PER SQUARE CENTIMETER.

8. INSULATE ALL ACCESS DOOR/HATCHES TO CRAWLSPACES AND ATTICS TO THE EQUIVALENT RATING OF THE WALL, FLOOR, OR CEILING THROUGH WHICH THEY PENETRATE.

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

10. SKYLIGHTS ARE ASSUMED TO BE PRE-MANUFACTURED UNIT SKYLIGHTS. UNIT SKYLIGHTS SHALL BE COMPLIANT WITH THE REQUIREMENTS OF OSRC, SEC. NI01(2).

11. ALL EXTERIOR WINDOWS ARE TO BE DOUBLE GLAZED AND ALL EXTERIOR DOORS ARE TO BE SOLID CORE WITH WEATHERSTRIPPING. PROVIDE 1/2" IN. DEAD BOLT LOCKS ON ALL EXTERIOR DOORS, AND LOCKING DEVICES ON ALL DOORS AND WINDOWS WITHIN 10' (VERTICAL) OF GRADE. PROVIDE PEEL/POLE 5/8" - 66" IN. ABOVE FIN FLOOR ON EXTERIOR ENTRY DOORS, OPENING INDOORS LOCATED MORE THAN 10' FROM THE FINISHED GRADE OR SURFACE SHALL HAVE COUNTERTOPS OF CLEAR GLASS AT A MIN. OF 24" ABOVE FINISHED FLOOR. 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.

FRAMING NOTES:

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12. 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, USE 4" X 2" HEADERS UNLESS OTHERWISE NOTED ON THE PLAN.

13. BASEMENTS AND EVERY SLEEPING ROOM TO HAVE MIN. WINDOW OPENING OF 1/4 SQ. FT. WITH A MIN. WIDTH OF 20" IN. AND A SILL HGT. NOT MORE THAN 44" IN. ABOVE FIN FLOOR.

14. SMOKE DETECTORS SHALL BE INSTALLED IN EA. SLEEPING ROOM, OUTSIDE THE IMMEDIATE VICINITY OF EACH SLEEPING AREA AND ON EACH STORY OF THE DUELING CARBON MONOXIDE ALARMS SHALL BE LOCATED IN EA. BEDROOM OR BATH. CARBON MONOXIDE ALARMS SHALL BE LOCATED IN EA. KITCHEN, SEPARATE FLR LEVELS IN STRUCTURE OF TWO OR MORE STOREYS SHALL HAVE SEPARATE CARBON MONOXIDE ALARMS SERVING EA. STORY. ALL SMOKE DETECTORS AND/OR COMBINATION SMOKE/CARBON MONOXIDE ALARMS SHALL BE INTERCONNECTED SUCH THAT THE ACTUATION OF ONE ALARM WILL ACTIVATE ALL THE ALARMS AND BE AUDIBLE IN ALL SLEEPING AREAS OVER BACKWARD NOISE LEVELS WITH ALL INTERVENING DOORS CLOSED. SINGLE STATION CARBON MONOXIDE ALARMS THAT ARE HARD WIRED SHALL BE EQUIPPED W/ BATTERY BACKUP.

15. ELECTRICAL RECEPTACLES IN BATHROOMS, KITCHENS, EXTERIOR ROOMS AND GARAGES SHALL BE GFI, OR GFCI, PER NATIONAL ELECTRICAL CODE (NEC) REQUIREMENTS.

16. INTERIOR 4 EXTERIOR STAIRS SHALL HAVE A MEANS TO ILLUMINATE THE STAIRS INCLUDING LANDINGS & TREADS. INTERIOR STAIRS & STAIRS 4' OR LESS SHALL HAVE THE REQUIRED LIGHTING IN THE IMMEDIATE VICINITY OF THE TOP & BOTTOM OF THE STAIRS. EXTERIOR STAIRS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE TOP LANDING OF STAIR. EXTERIOR STAIRS LEADING FROM GRADE TO BASEMENT SHALL HAVE AN ARTIFICIAL LIGHT SOURCE IN THE IMMEDIATE VICINITY OF THE BOTTOM LANDING OF STAIRS. LIGHTING FOR INTERIOR STAIRS SHALL BE CONTROLLED FROM TOP & BOTTOM OF EA. STAIR. SEE OSRC 303.6

17. PROVIDE FIRE BLOCKING, DRAFT STOPS, 4 FIRE STOPS AS PER OREGON RESIDENTIAL SPECIALTY CODE SEC. R-020.8

18. HIPS, VALLEYS AND RIDGES SHALL NOT BE LESS IN DEPTH THAN THE END CUT OF THE RAFTER.

19. UNLESS NOTED OTHERWISE, POST TO BEAM CONNECTIONS REQUIRE "SIMPSON" BC SERIES CAP-BASE (OR APPROVED EQUAL) CONNECTORS. EXTERIOR APPLICATIONS REQUIRE "SIMPSON" EFB SERIES BASES UNO, AND INTERIOR GARAGE POSTS REQUIRE "SIMPSON" CB SERIES BASES. "USP" CONNECTORS CONSIDERED APPROVED EQUAL.

20. PROVIDE COMBUSTION AIR VENTS (W/ SCREEN AND BACK DAMPER) FOR FIREPLACES, WOOD STOVES, AND ANY APPLIANCES WITH AN OPEN FLAME.

21. BATHROOMS AND UTILITY ROOMS ARE TO BE VENTED TO THE OUTSIDE WITH A FAIRLY EASY PROOF OF PROVIDING A MIN. 80 CFM INTERMITTENT ROOMS W/ BATHING OR SPA FACILITY. VENTING CAN BE CONTROLLED BY A DEHUMIDISTAT, TIMER OR SIMILAR MEANS OF AUTOMATIC CONTROL. DRYER & RANGE HOODS ARE ALSO TO BE PROVIDED TO EXTERIOR.

22. SPECIFIC MANUFACTURES AND MATERIALS DEPICTED ON THESE PLANS ARE AN INDICATION OF QUALITY & STRENGTH. VARIOUS CONSTRUCTION MATERIALS SUBSTITUTIONS WITH CURRENT APPROVED BUILDING CODES AND LOCAL BUILDING OFFICIALS PRIOR TO INSTALLATION/SUBSTITUTION.

23. THIS DESIGN, UNLESS PURCHASED WITH IT'S SPECIFIC ENGINEERED ANALYSIS, HAS NOT BEEN REVIEWED FOR ANY SPECIFIC LATERAL DESIGN REQUIREMENTS.

FOUNDATION NOTES:

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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. SOIL BEARING PRESSURE ASSUMED TO BE 1500 PSF.

3. MAXIMUM SLOPE OF CUTS AND FILLS TO BE TWO (2) HORIZONTAL TO ONE (1) VERTICAL FOR BUILDINGS, STRUCTURES, AND FOUNDATIONS.

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

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

- BASEMENT WALLS & FOUNDATIONS NOT EXPOSED TO WEATHER: 2500 PSI

- BASEMENT & EXTERIOR SLABS ON GRADE: 2500 PSI

- BASEMENT WALLS & FOUNDATIONS EXPOSED TO THE WEATHER, AND GARAGE SLABS: 3000 PSI

- PORCHES, STEPS & CARPORT SLABS EXPOSED TO WEATHER: 3500 PSI

6. MORTAR & GROUT TO BE MIXED PER FIR REQUIREMENTS.

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. YR. SLABS ARE TO BE 5'-7" MAX.

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. WELDED OPTIONAL WIRE MESH TO BE A-165.

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

10. COVER ENTIRE CRAWL SPACE WITH 6 MIL POLYETHYLENE FILM AND EXTEND UP FOUNDATION WALLS TO PT. MUDSILL.

11. PROVIDE A MIN. OF 160 SF. OF VENTILATION AREA FOR EACH 160 SQ. FT. OF CRAWL SPACE AREA. VENTS ARE TO BE COVERED WITH 1/2" IN. MEAS CORROSION RESISTANT SCREEN. ONE VENT REQUIRED WITHIN 3' FT. OF EACH CORNER. POST NOTICE RE: OPENING VENTS AT THE ELECTRICAL PANEL.

12. ALL WOOD IN CONTACT WITH CONCRETE TO BE PRESSURE TREATED OR PROTECTED BY 50# 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 SECTION).

15. JOINTS AROUND WINDOW AND DOOR FRAMES

• JOINTS BETWEEN WALL CAVITY WINDOW/DOOR FRAMES

• JOINTS BETWEEN WALL AND FOUNDATION

• JOINTS BETWEEN WALL AND ROOF

• JOINTS BETWEEN WALL PANELS

• UTILITY PENETRATIONS THROUGH EXTERIOR WALLS, FLOORS AND ROOF

• ALL OTHER OPENINGS IN THE EXTERIOR ENVELOPE

16. A MIN. OF 65% OF THE PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH EFFICIENCY LAMPS. SCREW-IN COMPACT FLUORESCENT LAMPS COMPLY WITH THIS REQUIREMENT. (TO BE VERIFIED IN WRITING & FINAL INSPECTION)</

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, as of April 1, 2002, the state of Oregon, counties of Multnomah, Washington, Clackamas, Linn, Yamhill, Hood River and Baker require radon mitigation. Following the U.S. EPA's 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
- POLES AND JOINTS IN CONCRETE BLOCKS
- FLOOR-TO-WALL CRACK OR FRENCH DRAIN
- EXPOSED SOIL, AIR IN A SUMP
- KEEPING TILE (MIN. 12") IF DRAINED TO OPEN SUMP
- 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 SUMPS WHICH ARE NOT SERVED BY A DRAIN TILE, SHALL BE FITTED WITH A GASKETED OR SEALED LID, WHERE THE SUMP IS USED AS THE SUCTION POINT IN A SUB-SLAB DEPRESSURIZATION SYSTEM, THE LID MUST BE DESIGNED TO ACCOMMODATE THE VENT PIPE, WHERE USED AS A FLOOR DRAWDOWN, THE SUMP PIT LID SHALL HAVE A TRAPPED INLET.

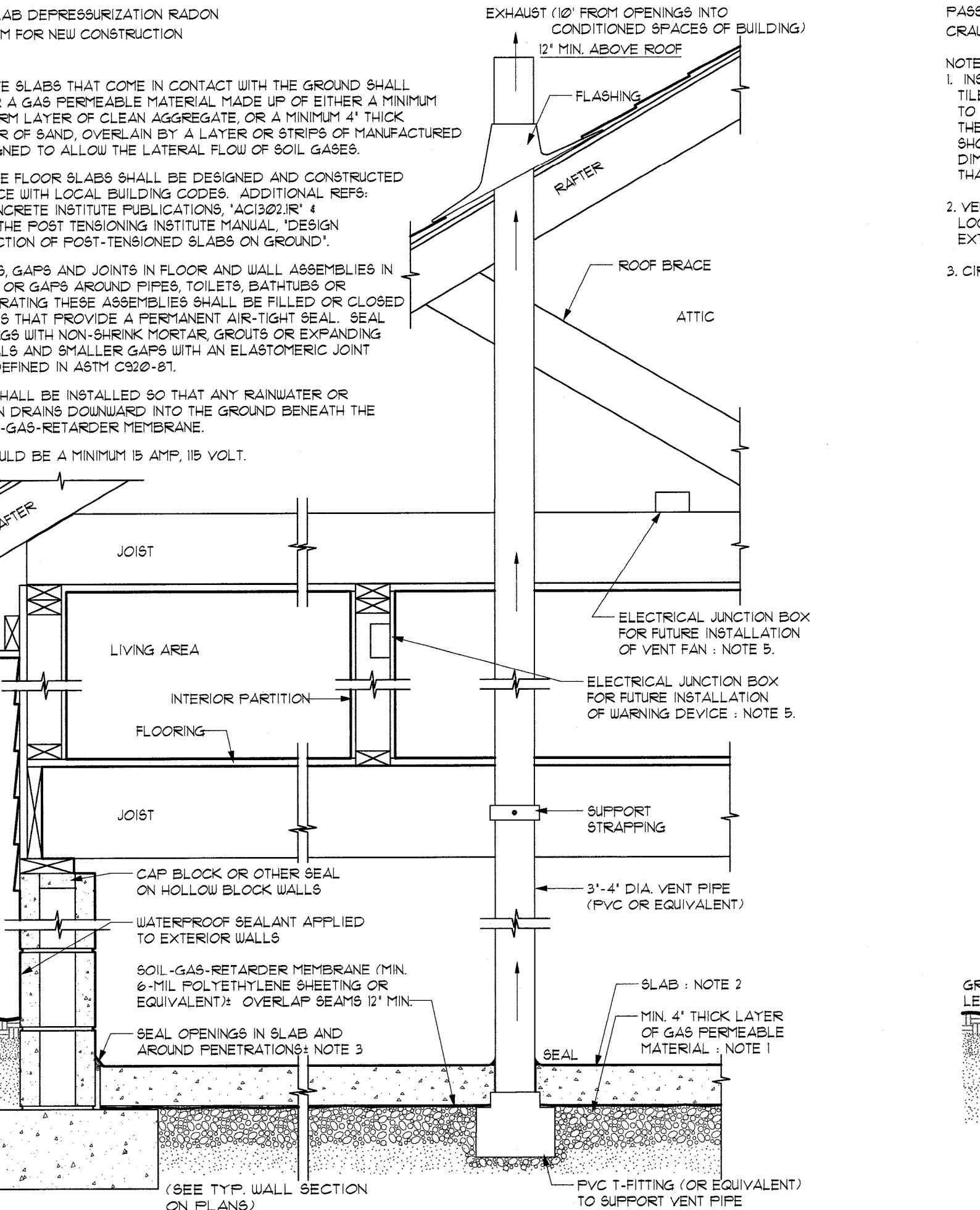
DUCTWORK WHICH PASSES THROUGH OR BEHIND A CONCRETE FLOOR SLAB SHALL BE FREE OF SEAMS AND MUST BE PERFORMANCE TESTED.

DUCTWORK PASSING THROUGH A CRAWL SPACE MUST HAVE ALL SEAMS AND JOINTS SEALED. THE 1/4" MINIMUM OF DUCT SYSTEMS USED FOR HEATING OR COOLING OF A CONDITIONED SPACE SHALL BE SEALED BY MEANS OF TAPE, 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.

CRAWL SPACE 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.

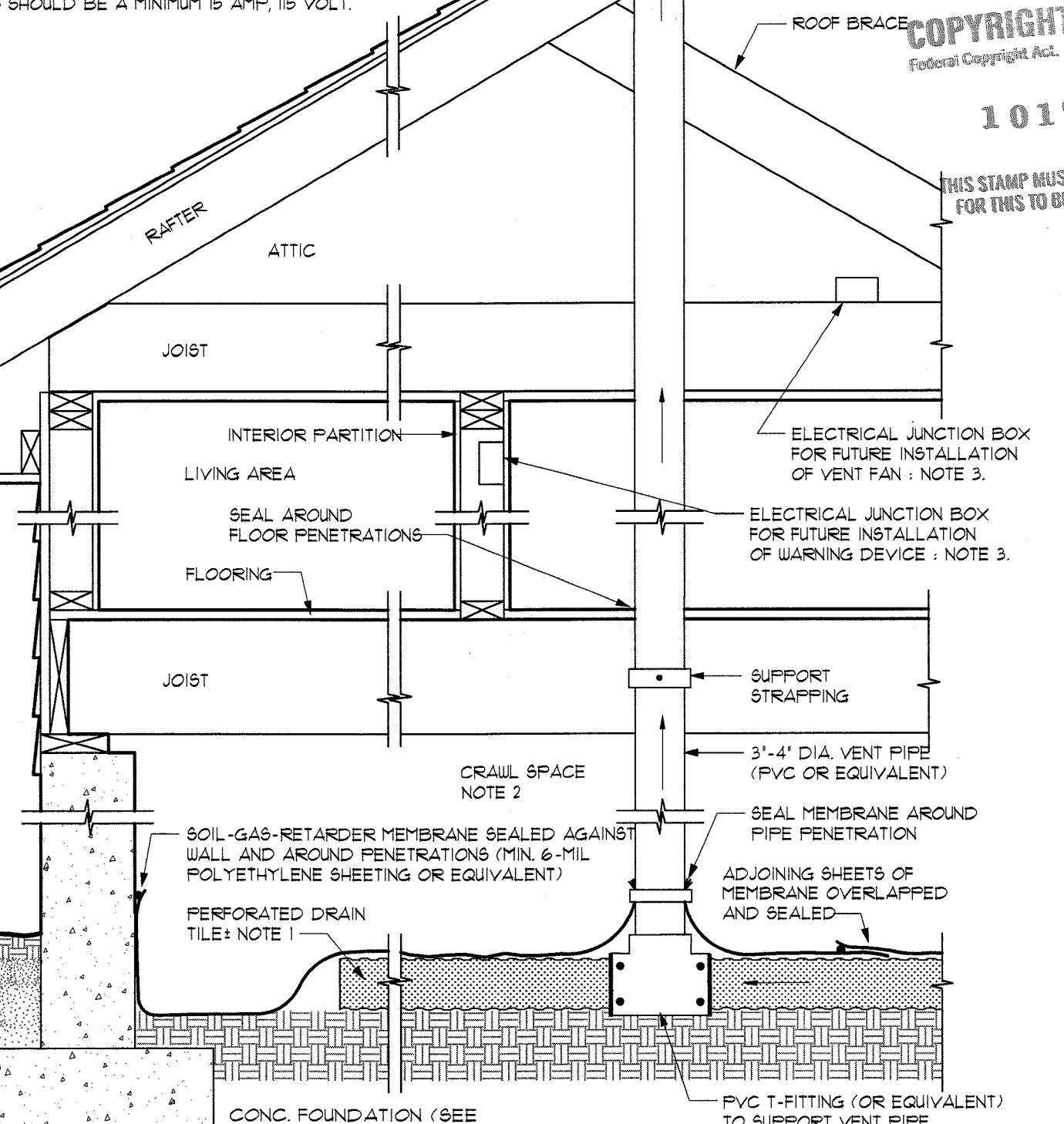
PASSIVE SUB-SLAB DEPRESSURIZATION RADON CONTROL SYSTEM FOR NEW CONSTRUCTION



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

PASSIVE RADON CONTROL SYSTEM IN CRAWL SPACE FOR NEW CONSTRUCTION

NOTE:
 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, OVERLAYN BY A LAYER OR STRIPS OF MANUFACTURED MATTING DESIGNED TO ALLOW THE LATENT 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 PUBLICATION ACI 318.2, ACI 318.2R, OR THE POST-TENSIONING INSTITUTE DESIGN AND CONSTRUCTION OF POST-TENSIONED SLABS ON GROUND.
 3. ALL OPENINGS AND JOINTS IN FLOOR AND WALL ASSEMBLIES IN CONTACT WITH THE GROUND, FLOOR, AND FLOORING, WHETHER DRAINS OR PENETRATING THESE ASSEMBLIES SHALL BE FILLED OR CLOSED WITH MATERIALS THAT PROVIDE A PERMANENT AIR-TIGHT SEAL. SEAL LARGER 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 DOWNTOWARD INTO THE GROUND BENEATH THE SLAB OR SOIL-GAS-RETARDER MEMBRANE.
 5. CIRCUITS SHOULD BE A MINIMUM 15 AMP, 15 VOL.



CRAWLSPACE SUB-MEMBRANE DEPRESSURIZATION SYSTEM

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 (AFI 035, EXCEPTION)

• PROVIDE AN APPROVED MECHANICAL CRAWL SPACE VENTILATION SYSTEM DESIGNED FOR CONTINUOUS OPERATION WITH THE CAPACITY TO EXHAUST A MIN. OF 10 CFM FOR EACH 50 SQ. FT. OF UNDER-FLOOR AREA.

METHOD #2 - PASSIVE SUB-MEMBRANE DEPRESSURIZATION SYSTEM (AFI 035)

- 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).
- OVERFLOWS, DRAWDOWNS, OR OTHER DRAGS 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, pressurizing the dwelling to 50 pascals from ambient conditions and found to exhibit no more than 50 air changes per hour.
- INSTALL A MECHANICAL EXHAUST SUPPLY OR COMBINATION VENTILATION SYSTEM PROVIDING WHOLE-BUILDING VENTILATION RATES AS PER TABLE NI101(3).

WHOLE-HOUSE VENTILATION REQMT. (cfm)

FLOOR AREA (FT ²)	NUMBER OF BEDROOMS	0-1	2-3	4-5	6-7
<1500	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	90
>15,000	105	120	135	160	125

TABLE NI101(3)

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 WHICH DIRECTLY CONTACT THE GROUND, AND ARE WITHIN THE WALLS OF THE HABITABLE 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 MAX. 3/4" SIZE MATERIAL TO PASS THROUGH A 2" SIEVE, AND BE RETAINED BY A 1/4" SIEVE.
2. A UNIFORM LAYER OF SAND (NATIVE OR FILL), A MINIMUM OF 4 INCHES THICK, OVERLAIN BY A LAYER OR STRIPS OF GEO-TEXTILE DRAINAGE MATTING DESIGNED TO ALLOW THE LATENT FLOW OF SOIL GASES.

SOIL-GAS-RETARDER

- THE SOIL IN CRAWL SPACES SHALL BE COVERED WITH A SOIL-GAS-RETARDER SHEET. 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 OPENING, AND ON THE MATERIAL, WHERE THERE ARE FRACTURES OR TEARS IN THE MATERIAL, SHALL BE SEALED OR COVERED WITH ADDITIONAL SHEETING.
- A PLUMBING TEE OR OTHER APPROVED CONNECTION SHALL BE INSERTED HORIZONTALLY BENEATH THE SOIL-GAS-RETARDER SHEETING AND CONNECTED TO A 3" OR 4" DIAMETER FITTING WITH A VERTICAL VENT PIPE. 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 HABITABLE SPACES OF THE BUILDING THAT IS LESS THAN 2 FEET BELOW THE VENT POINT, AND 10 FEET FROM ANY OPENING 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 CAN BE CONNECTED 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 ON THE GROUND BENEATH THE SLAB OR CONCRETE FLOOR.
- RADON VENT PIPES SHALL BE ACCESSIBLE FOR FUTURE 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 POWERED RADON VENT FANS.
- ALL VENTS AND RADON VENT PIPES SHALL BE IDENTIFIED WITH AT LEAST ONE LABEL ON EACH FLOOR AND IN ACCESSIBLE ATTICS. THE LABEL SHALL READ: "RADON REDUCTION SYSTEM".

POWER SOURCE REQUIREMENT

- TO ACCOMMODATE FUTURE INSTALLATION OF AN ACTIVE SUB-MEMBRANE OR SUB-SLAB DEPRESSURIZATION SYSTEM, AN ELECTRICAL CIRCUIT TERMINATED IN AN APPROVED ROOF TOP ELECTRICAL SUPPLY MAY BE PROVIDED FOR FUTURE USE FOR POWERED RADON VENT FANS.
- ALL VENTS AND 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".

COMBINATION FOUNDATIONS

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

WIND & SEISMIC
ANALYSIS
2009 IBC
ROWELL
MPN: 100
EXP: D
SER. CAT: D
ZIP: 97206

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CONTINUE HEADER
TO BLDG. CORNER &
NAIL SHEATHING TO
HEADER W/ 1/4" X
2 1/2" F. RH. P-NAILS &
3" O.C. BOTH WAYS

HEADER (CONTINUOUS)
SIMPSON "MSTA30"
EA. SIDE, 42-TOTAL
BLOCK ALL PANEL EDGES
PER SHEAR SCHEDULE
SPECIFICATIONS & NOTES
SEE SHEAR SCHEDULE AND
NOTES FOR HOLDOWN SPECS

15/32" APA-RATED SHING
FROM SINGLE SHEET,
FASTENED PER SHEAR
SCHEDULE SPECIFICATIONS
AND NOTES

SEE SHEAR SCHEDULE AND
NOTES FOR HOLDOWN SPECS

MAIN FLOOR 1666 SQ. FT.
LOWER FLOOR 1431 SQ. FT.
TOTAL AREA 3097 SQ. FT.

GARAGE AREA + 535 SQ. FT.

25# SNOW LOAD

1236
L1
100B

MAIN FLOOR 1666 SQ. FT.
LOWER FLOOR 1431 SQ. FT.
TOTAL AREA 3097 SQ. FT.

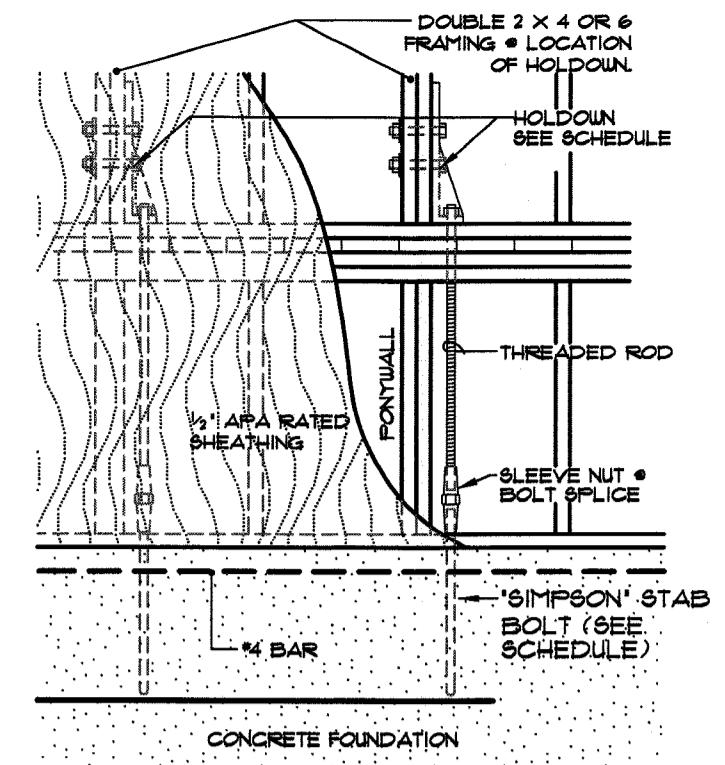
GARAGE AREA + 535 SQ. FT.

25# SNOW LOAD

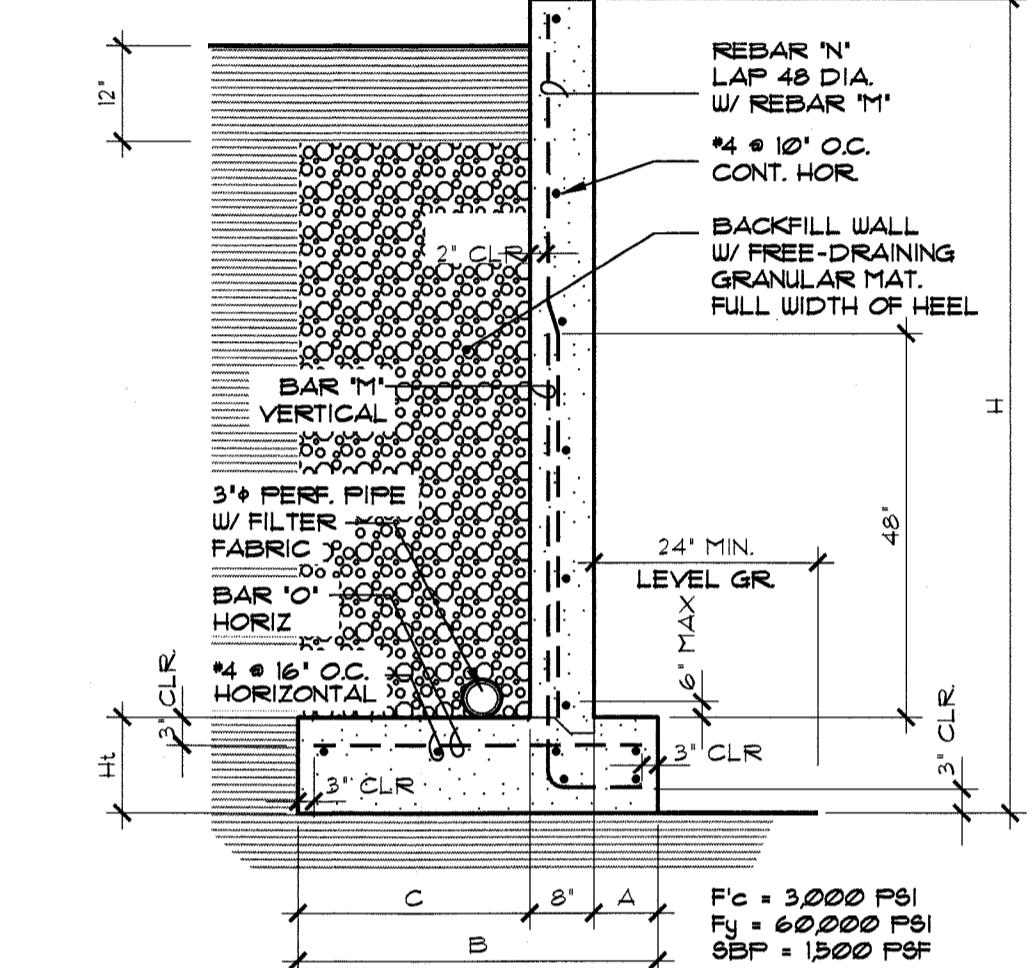
MAIN FLOOR 1666 SQ. FT.
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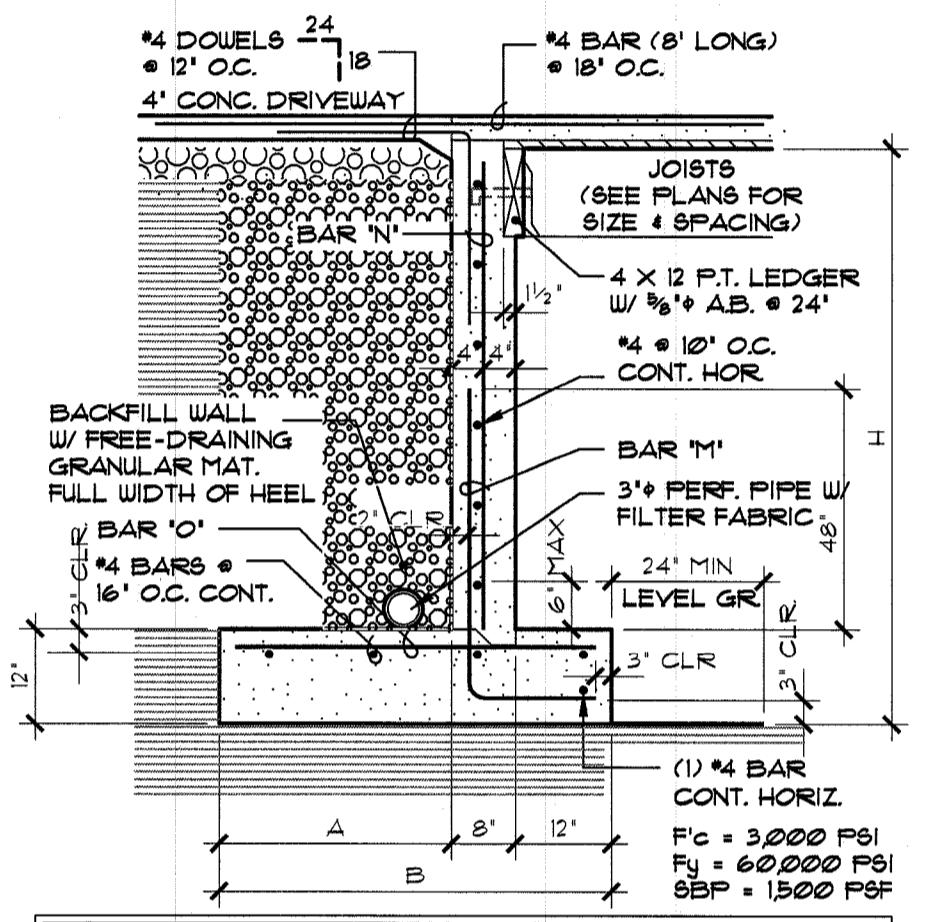
25# SNOW LOAD



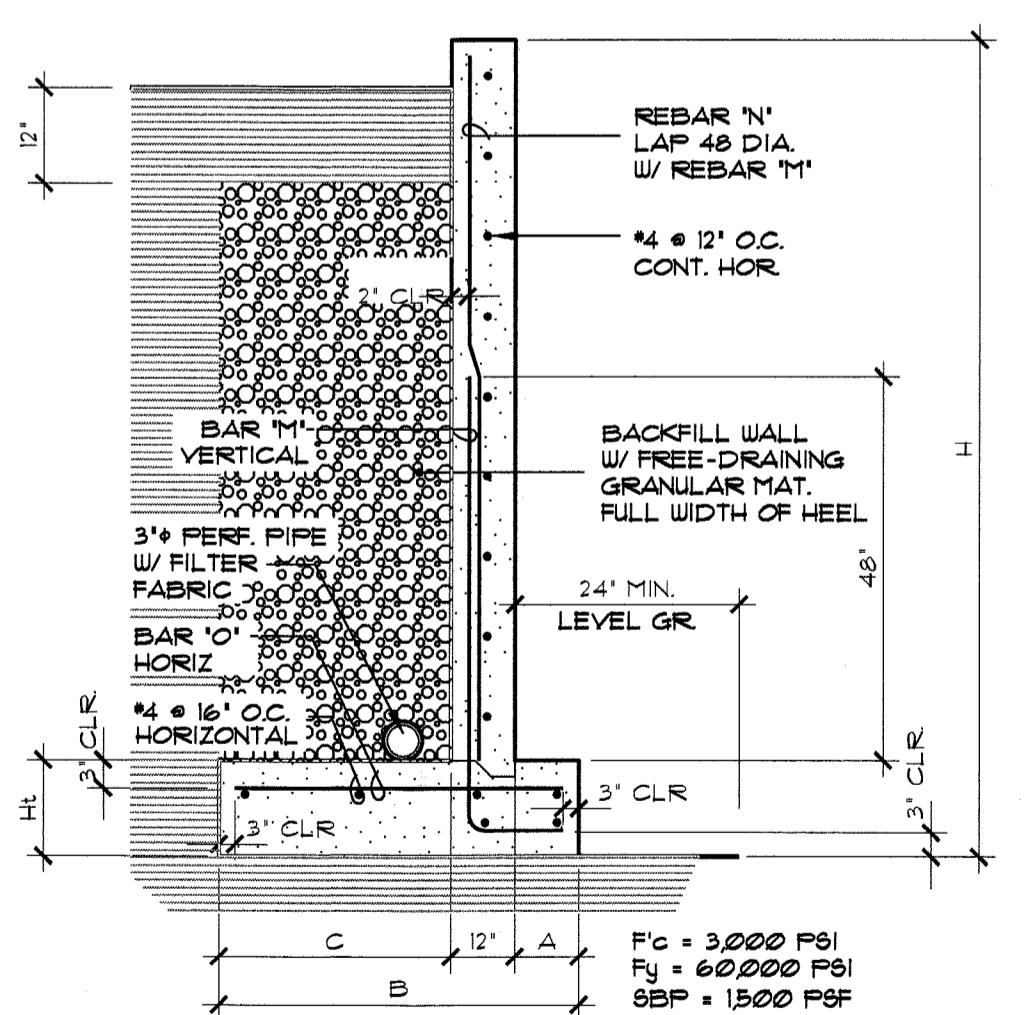
11 HOLDOWN EXTN.
SCALE: 3/4" = 1'-0" HD-EXTN



R1 RETAINING WALL
SCALE: 1/2" = 1'-0" RWNSV



R3 RETAINING WALL
SCALE: 1/2" = 1'-0" JGRWV



R5 RETAINING WALL
SCALE: 1/2" = 1'-0" RWNSV-12

PLEASE DIRECT ALL INQUIRIES TO THE CONTACT INFORMATION PROVIDED ON THE ATTACHED RETAINING WALL DESIGN CALCULATIONS

R5 RETAINING WALL
SCALE: 1/2" = 1'-0" RWNSV-12

FRAMING CLIP SPACING SCHEDULE O.C.♦					
LTPF-A35:8d COMMON X 1 1/2" LONG NAILS. LS50:10d COMMON X 3" LONG NAILS.					
SHEAR WALL FRAMING CLIP OPTIONS					
LTP4	A35	LS50	L50		
18"	20"	27"	20"		
14"	15"	20"	15"		
8"	9"	12"	8"		
5.5"	6"	8"	6"		
10"	11"	14"	10"		
8"	8"	11	8"		
6.5"	7"	9"	7"		

GENERAL NOTES

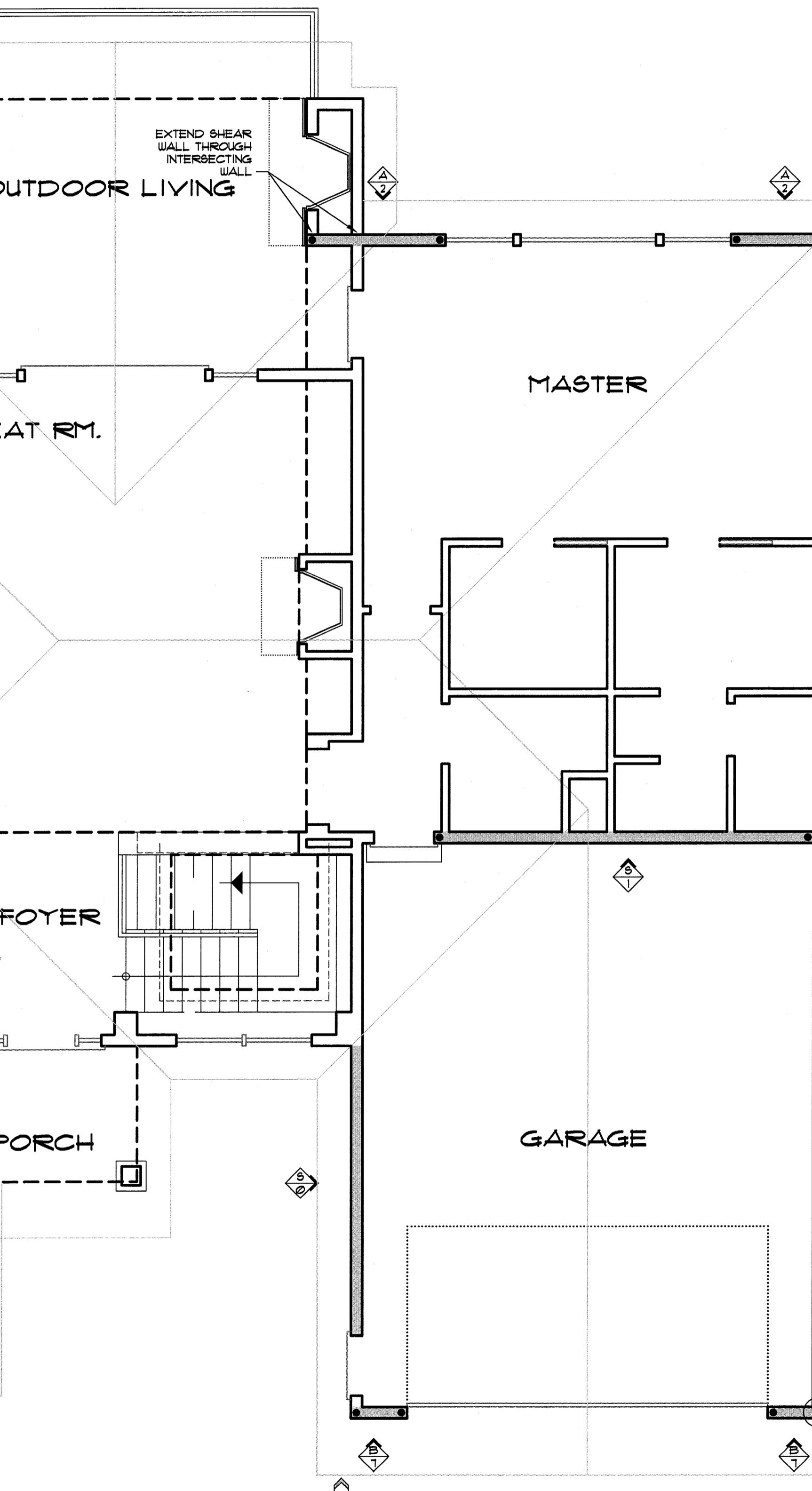
- (1) All fasteners exposed to weather shall be galvanized.
- (2) All exterior walls shall be built to "S" shear wall requirements as a minimum.
- (3) Sheathing or shearwalls shall not be interrupted by any wall butting into shearwall.
- (4) Builder to verify installation requirements for all hardware 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.

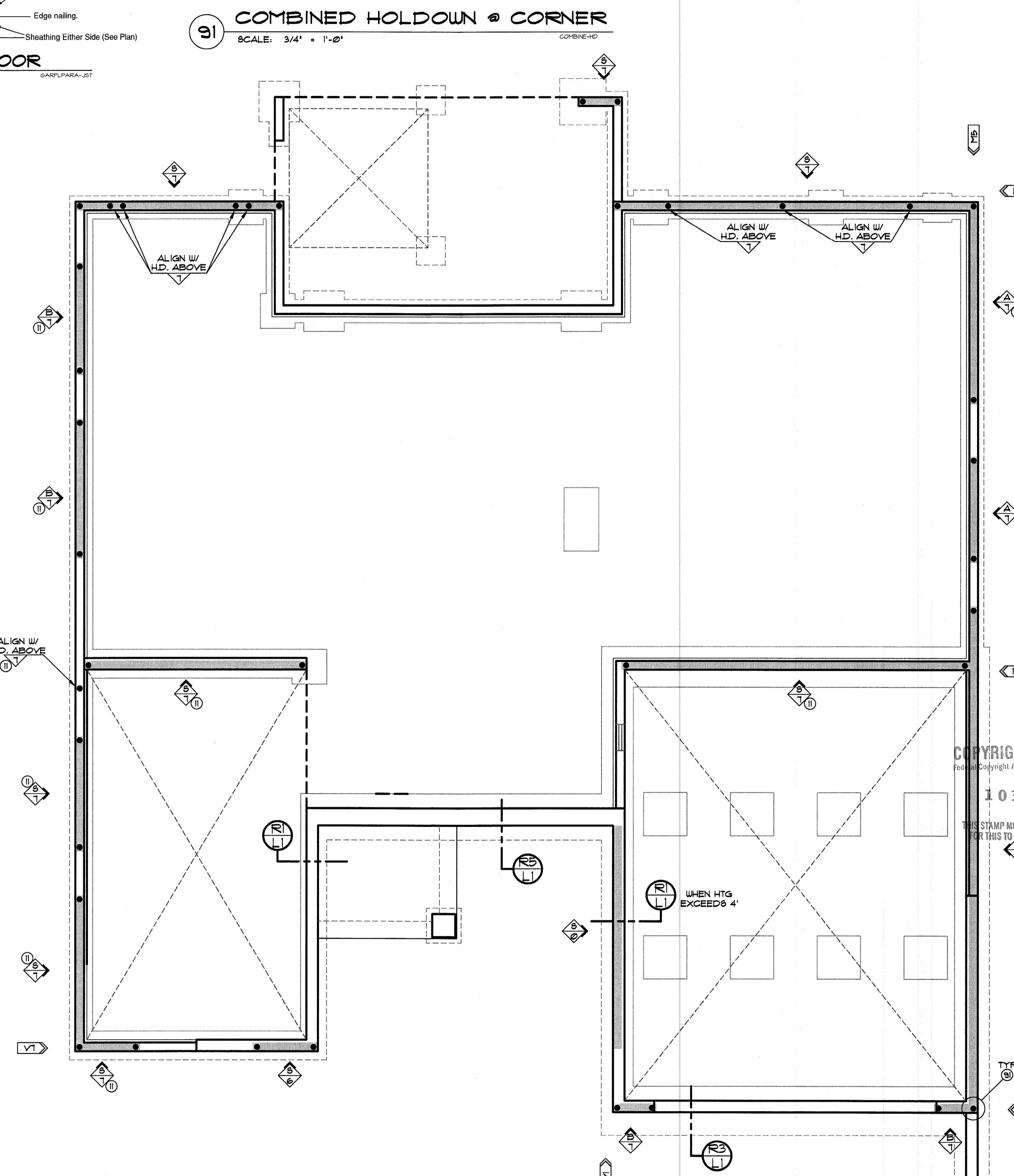
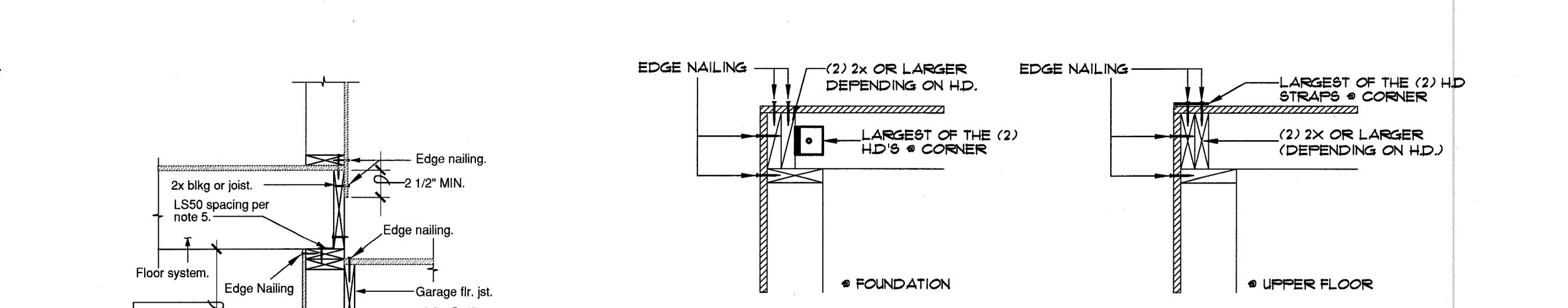
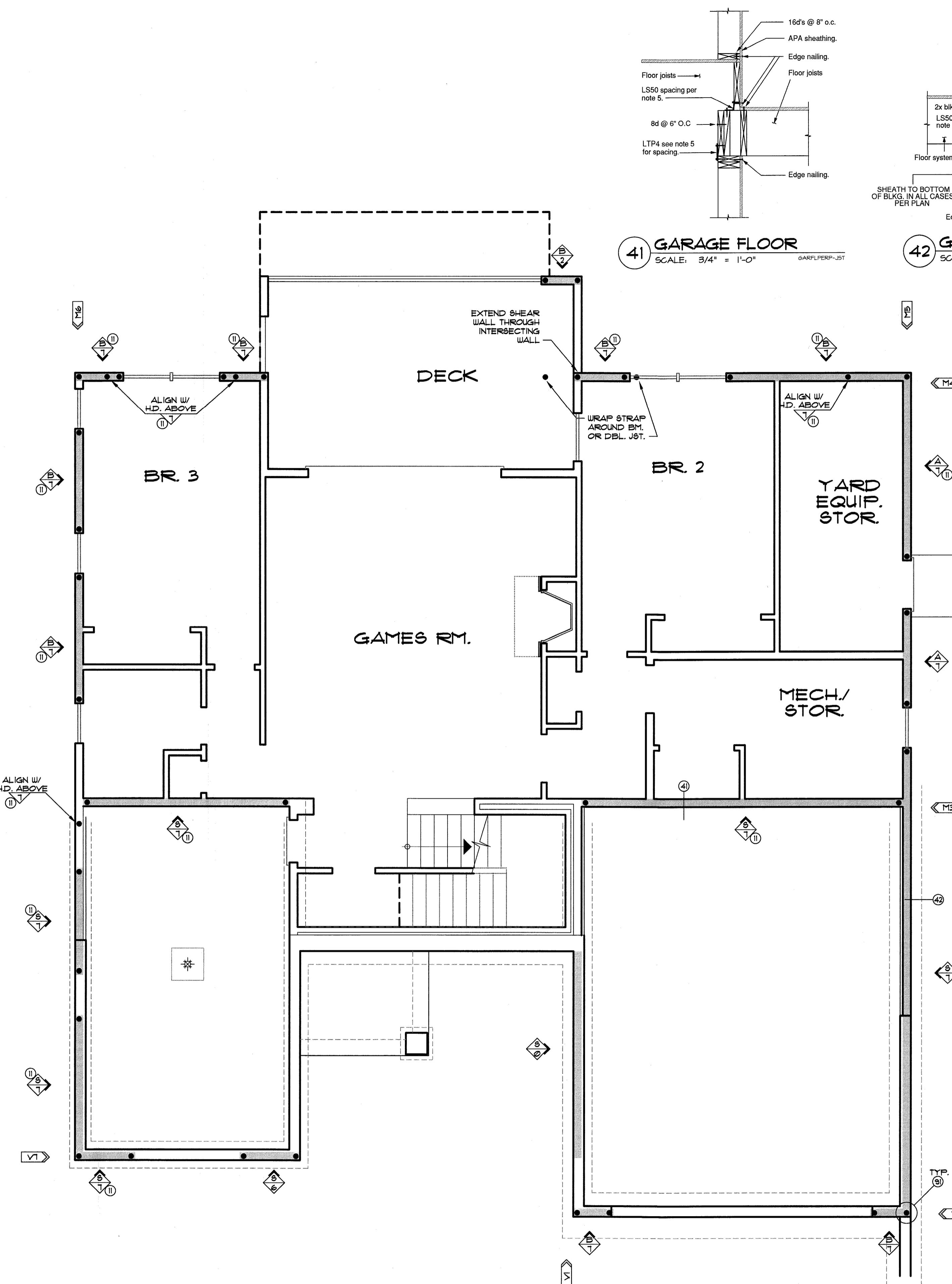
LEGEND

- APPROX. HOLDOWN LOCATIONS
- SHEAR WALL LOCATIONS
- ③ DETAIL REFERENCE TAG
- 3X SILL PLATE REQUIRED
- 2X DEL. 2X SILL PLATE REQUIRED
- XX SHEAR WALL LINE
- LOAD FROM ABOVE
- DOUBLE 2x6 U.N.O.

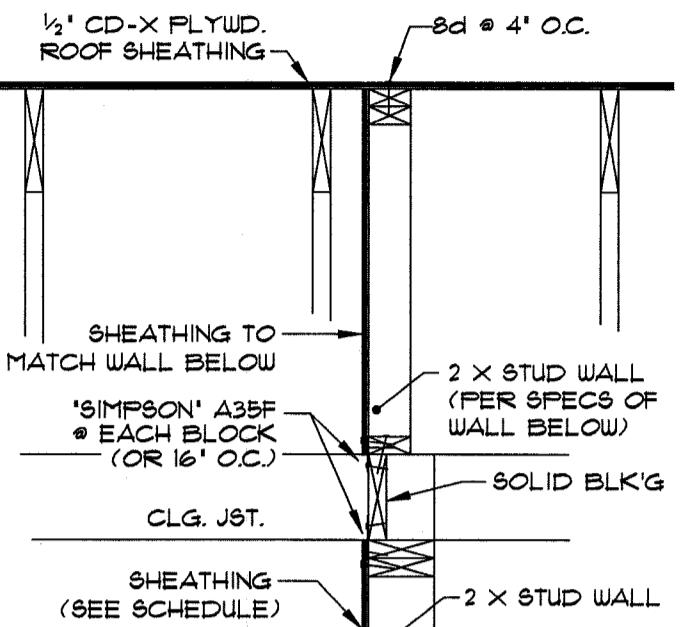
PLEASE NOTE:

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.



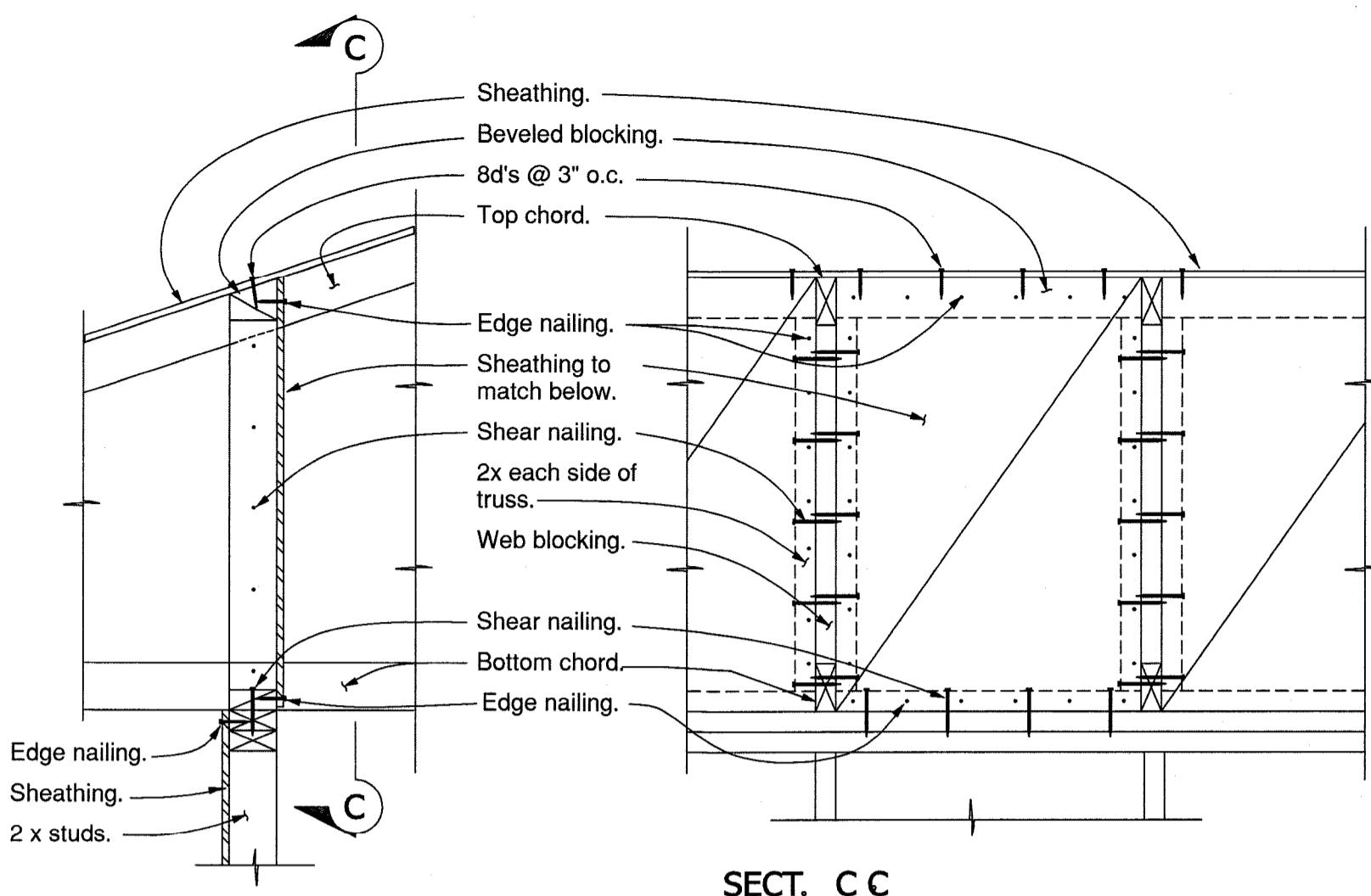


TYPICAL SHEAR WALL DETAILS



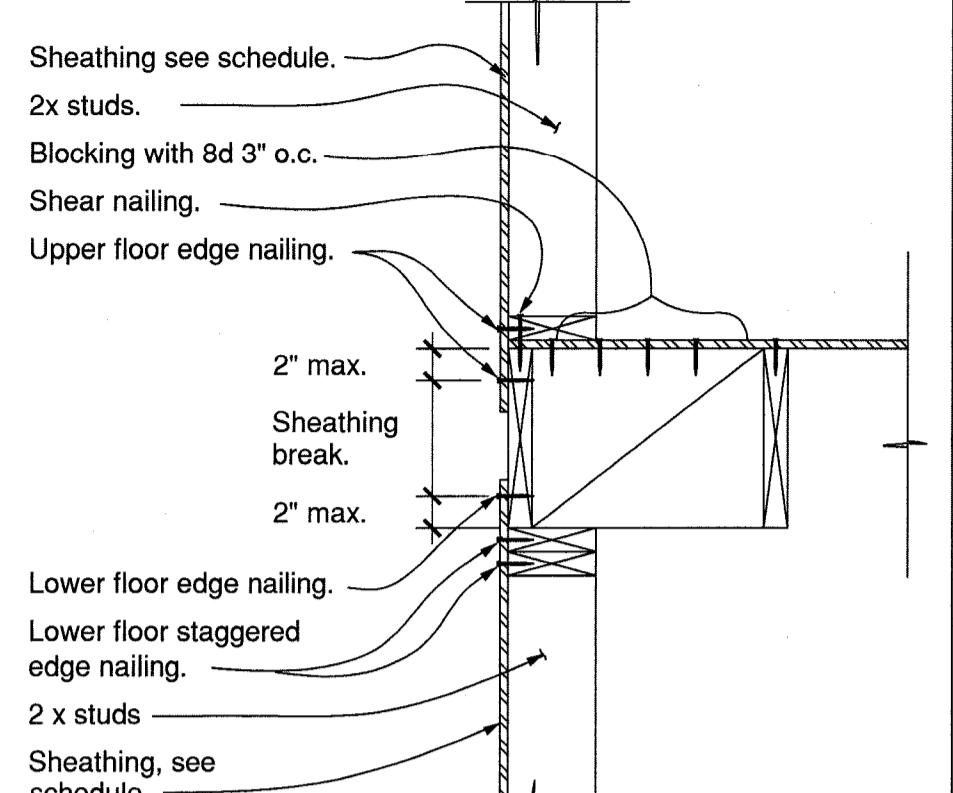
Interior shearwall parallel to trusses

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



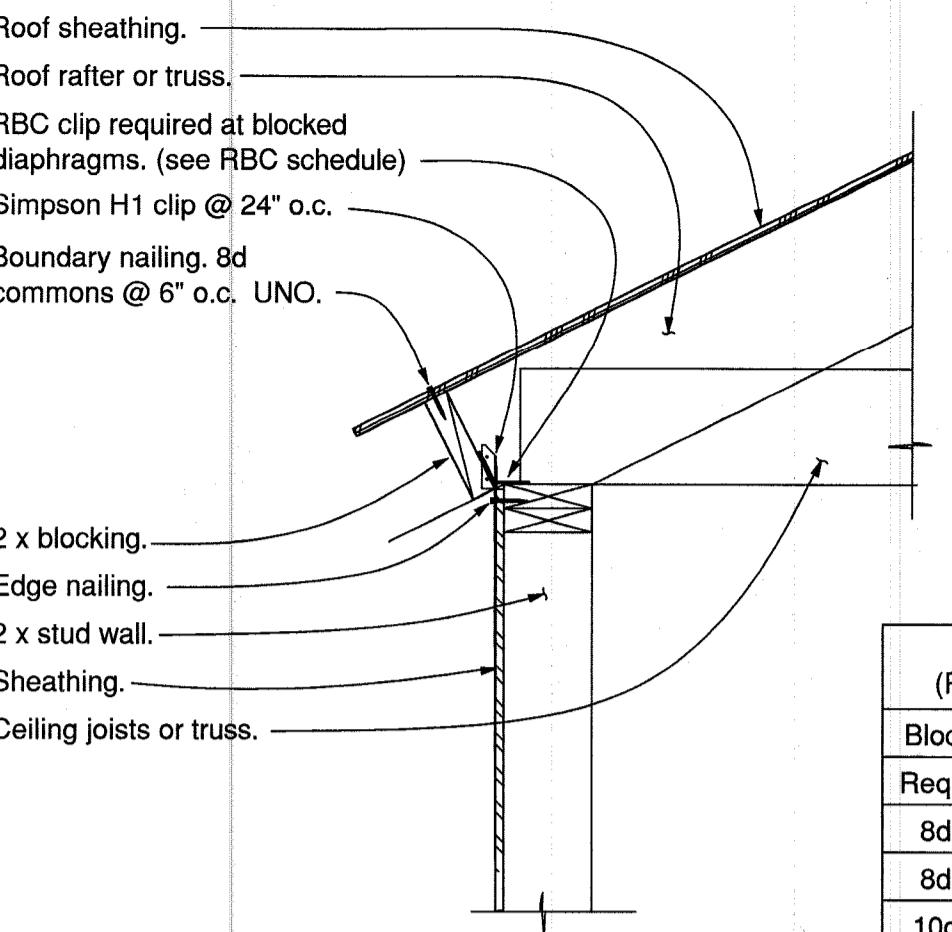
Interior shearwall perpendicular to trusses

Scale: 1" = 1'-0"



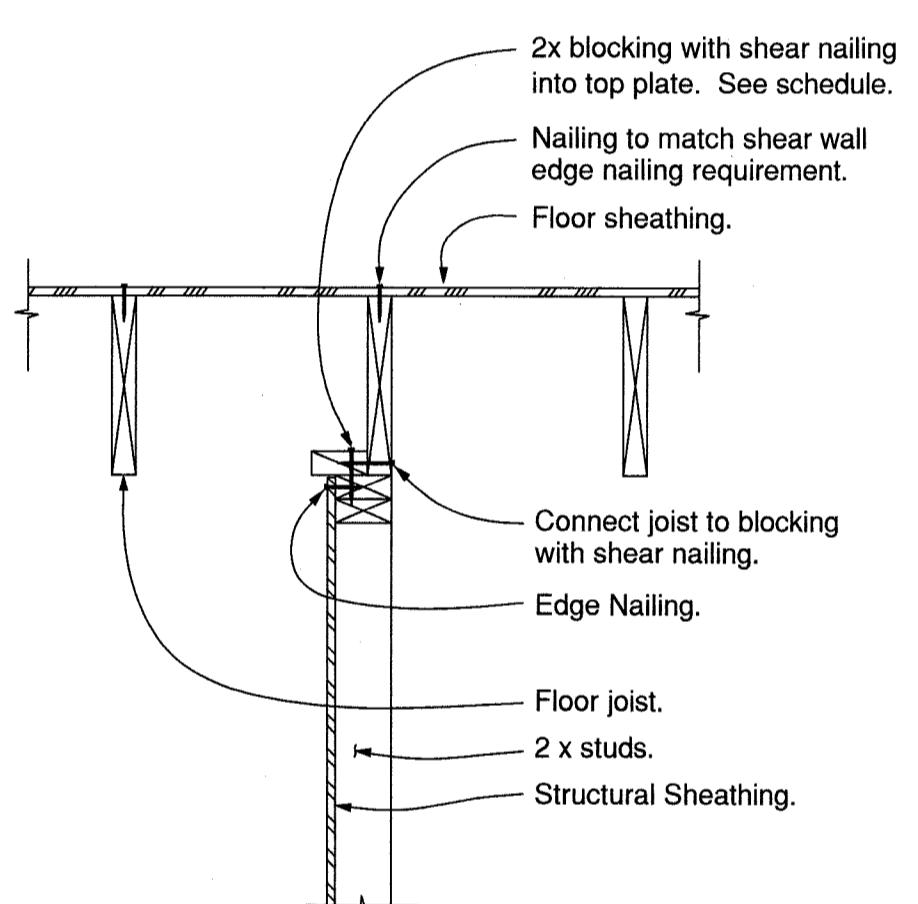
Floor joists parallel

Scale: 1" = 1'-0"



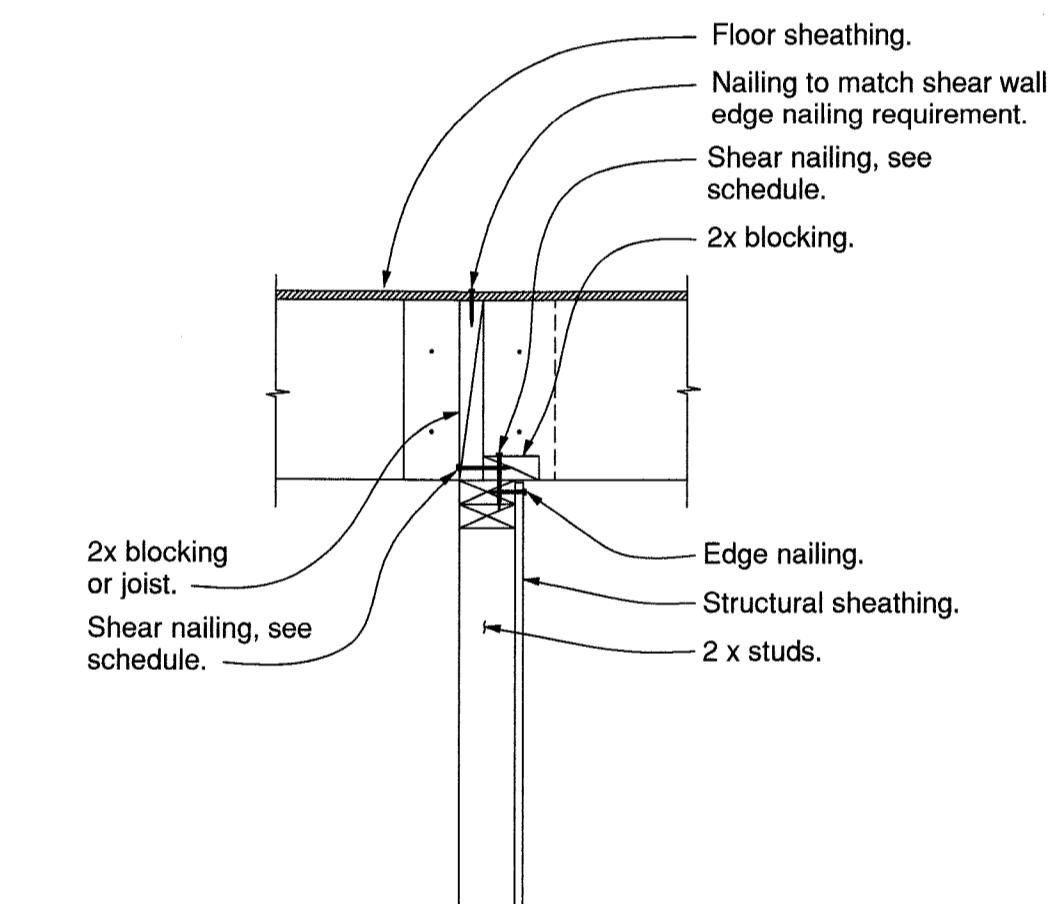
Rafter / Truss at eaves

Scale: 1" = 1'-0"



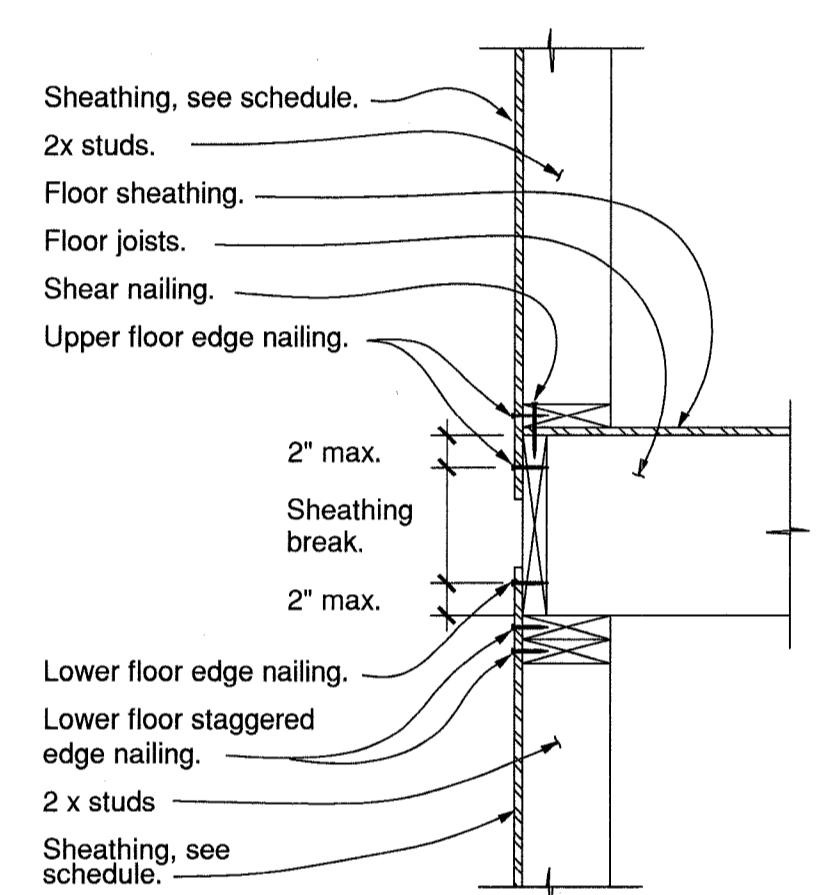
Parallel to joists Wall below

Scale: 1" = 1'-0"



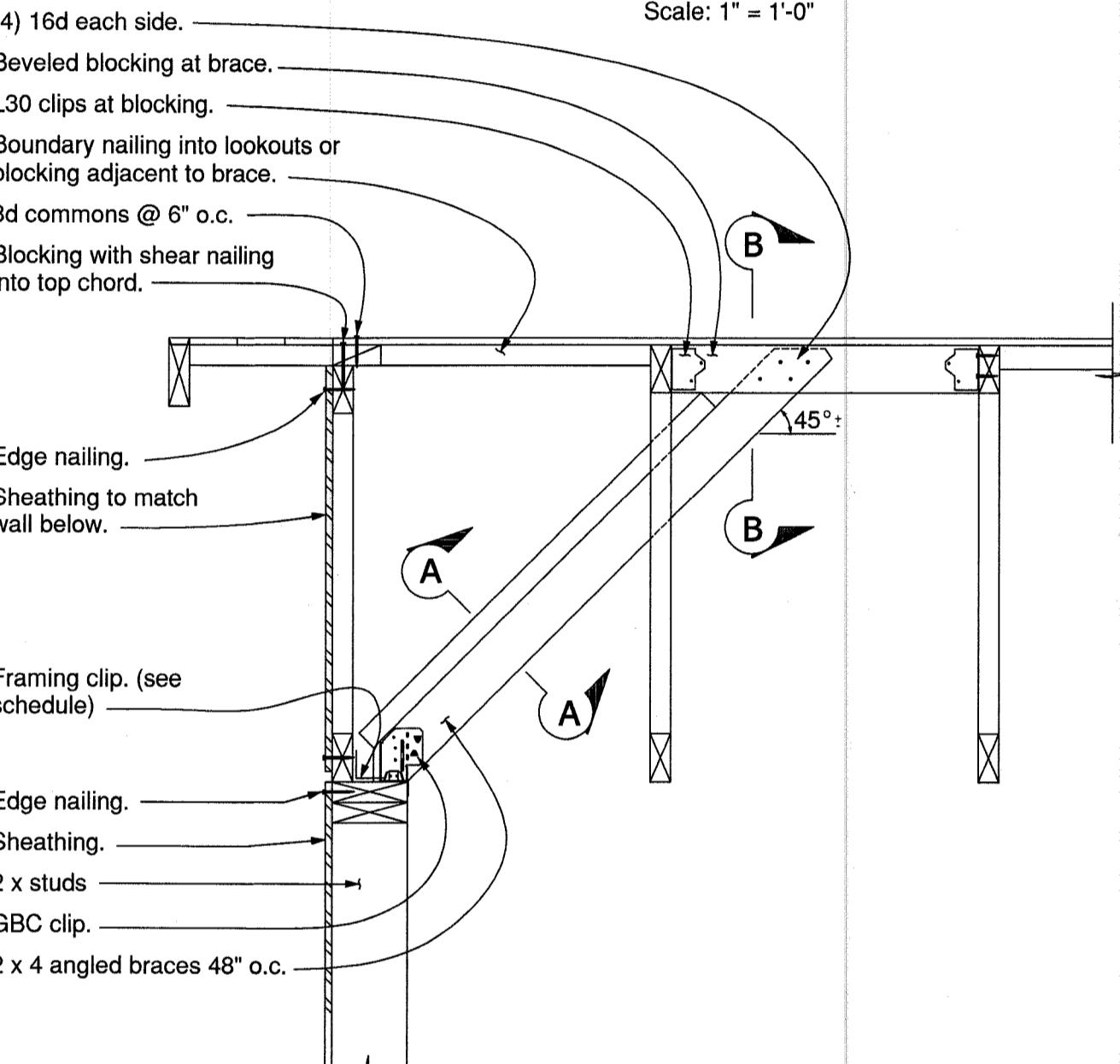
Perpendicular to joists Wall below

Scale: 1" = 1'-0"



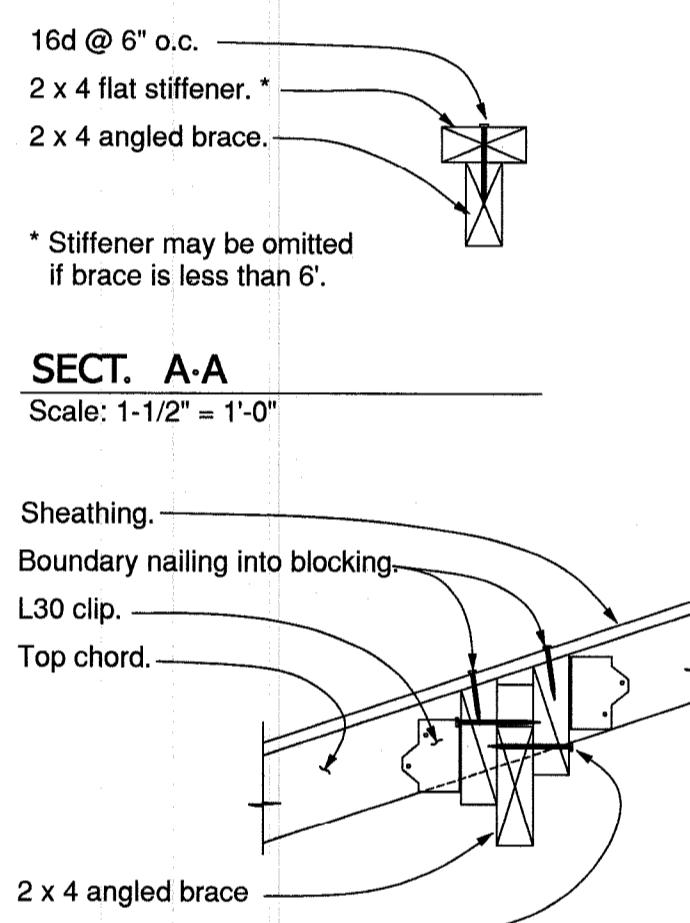
Floor joists perpendicular

Scale: 1" = 1'-0"



Gable end truss

Scale: 1" = 1'-0"



SECT. B-B

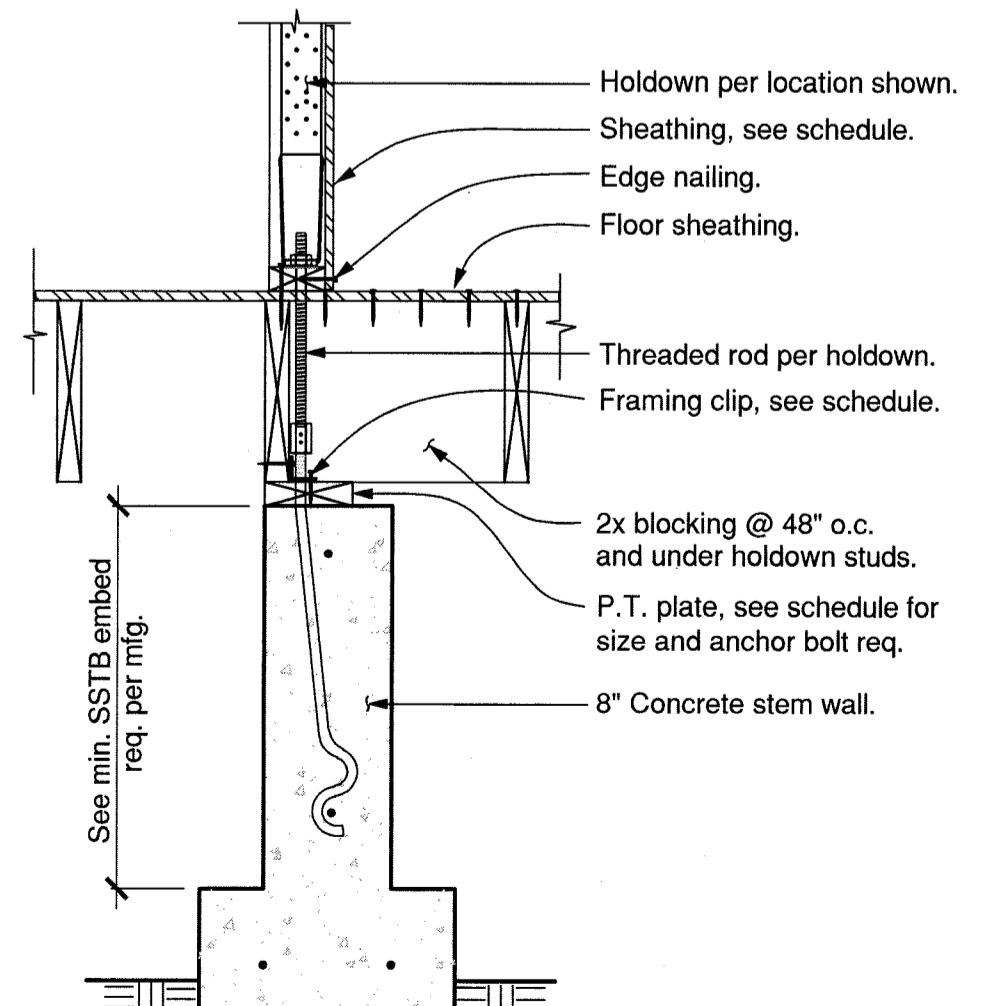
Scale: 1-1/2" = 1'-0"

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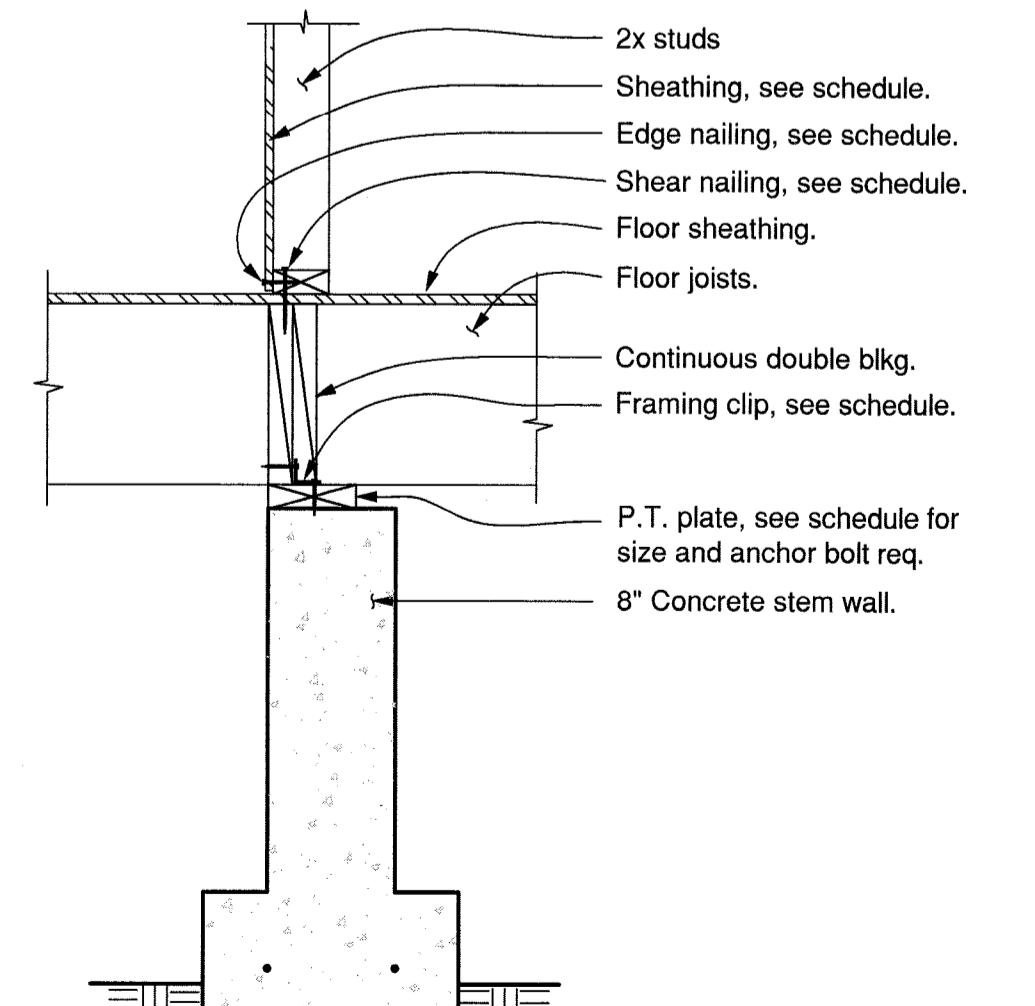
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INTERIOR UPPER FLOOR DETAILS



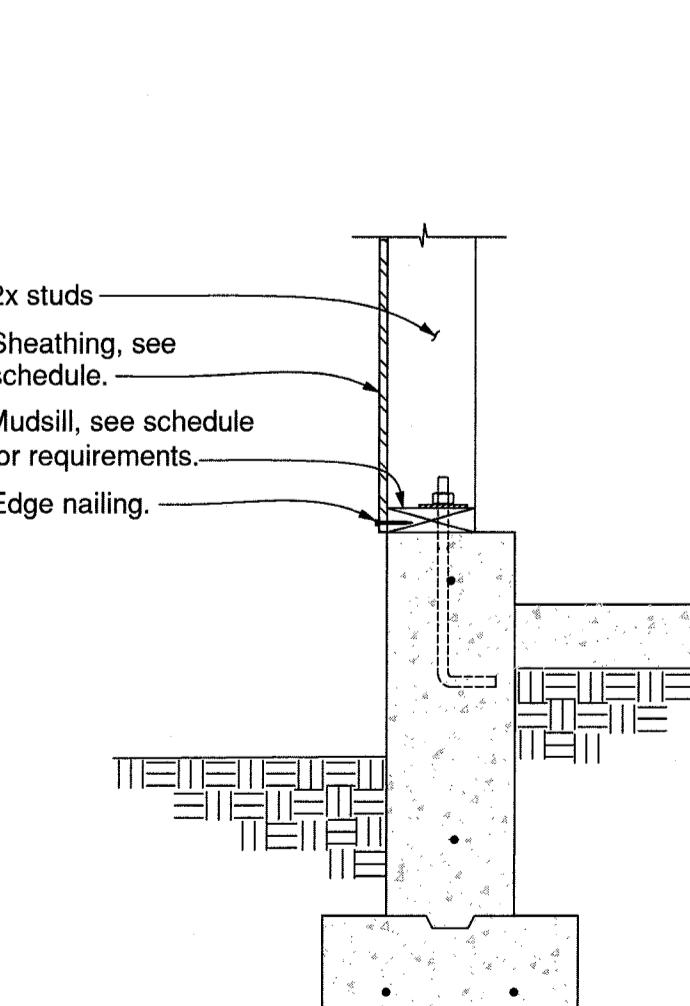
Shear wall @ parallel joists

Scale: 1" = 1'-0"



Shear wall @ perpendicular joists

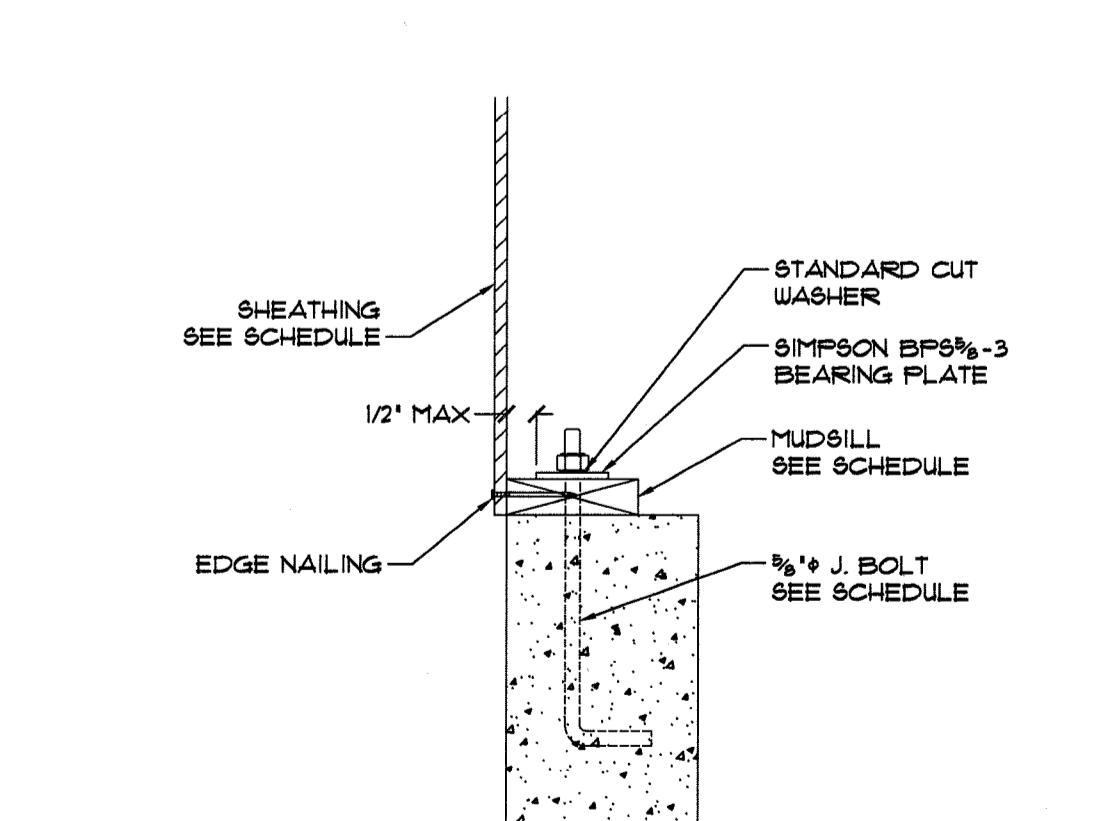
Scale: 1" = 1'-0"



Garage slab

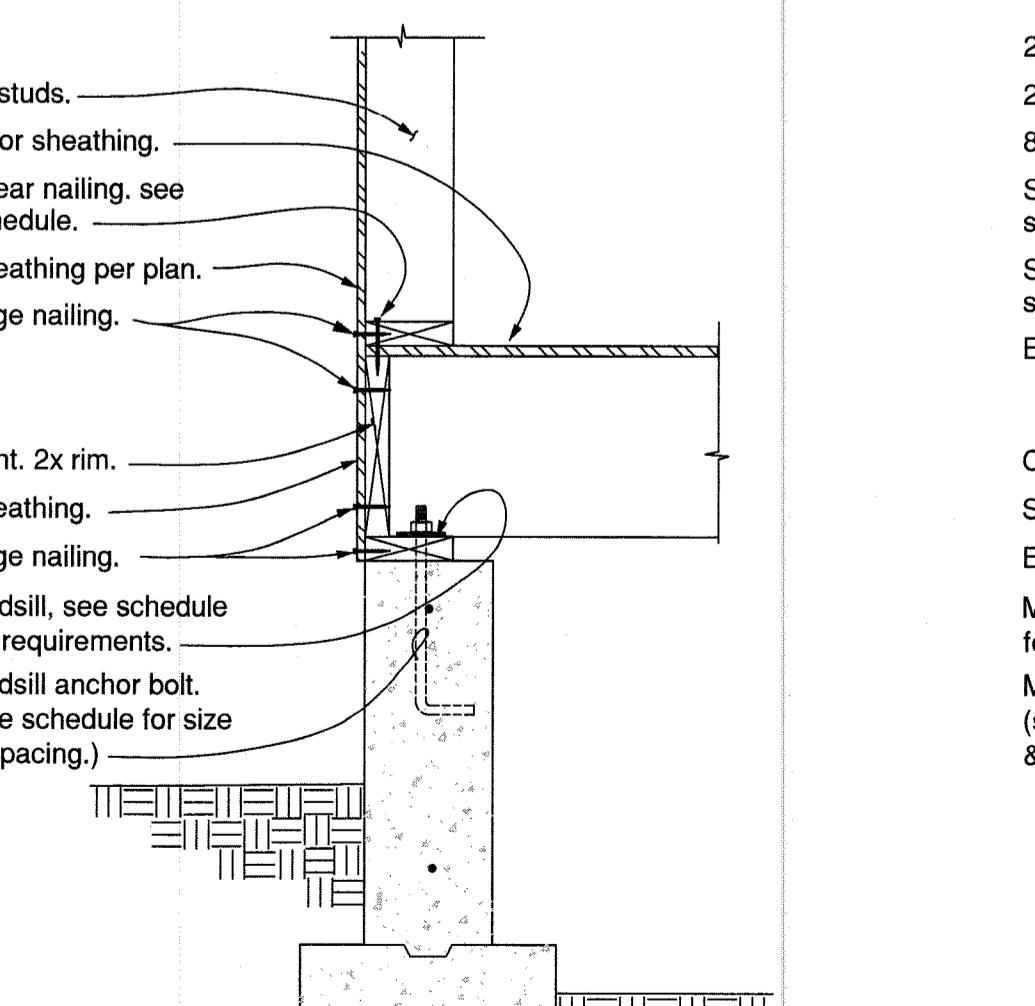
Scale: 1" = 1'-0"

EXTERIOR UPPER FLOOR DETAILS



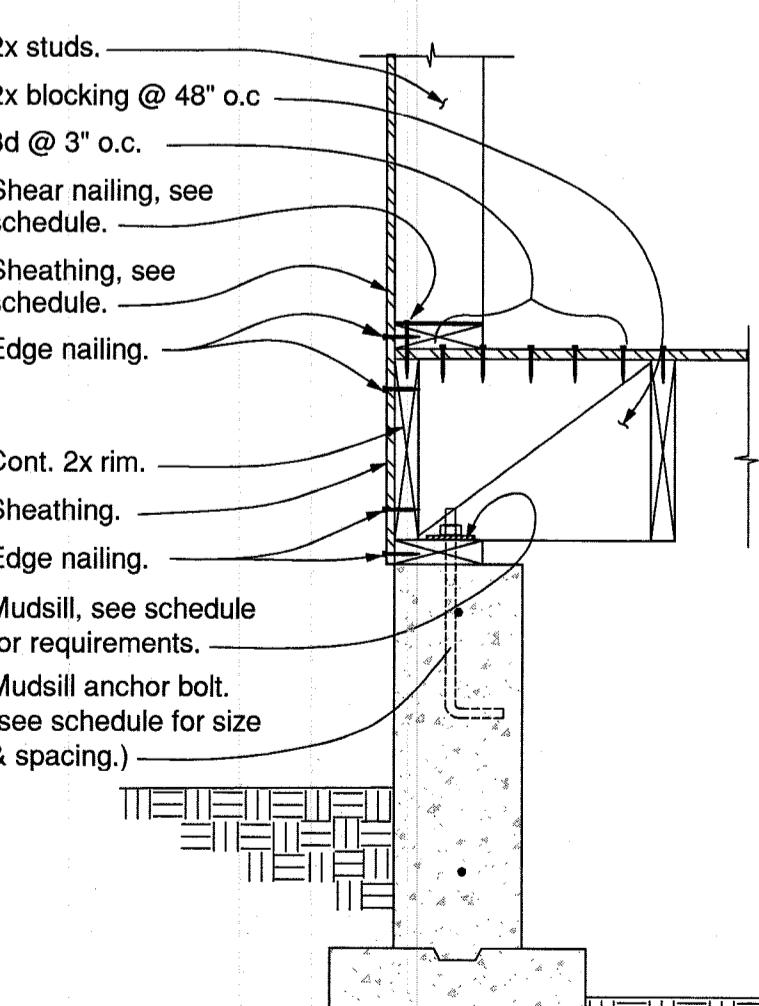
Standard A.B. Detail

Scale: 1.5" = 1'-0"



Floor joists perpendicular

Scale: 1" = 1'-0"



Floor joists parallel

Scale: 1" = 1'-0"

INTERIOR FOUNDATION DETAILS

EXTERIOR FOUNDATION DETAILS