

WEST HAVEN DETACHED VILLAS

PLAN INFORMATION:

FRAMING NOTES:

- ALL EXTERIOR WALLS TO BE 16" O.C. WITH DOUBLE TOP PLATE UNLESS NOTED OTHERWISE. (U.N.O)
- WALL FRAMING SHALL BE S.P.F. STUD GRADE OR BETTER UNLESS OTHERWISE NOTED.
- ALL HEADERS SHALL BE PER PLAN.
- ALL EXTERIOR HEADERS SHALL HAVE (1)2X6 BEARING STUD & (1) 2X6 FULL HEIGHT KING STUD ON EACH SIDE U.N.O. (REVIEW PLANS)
- ALL INTERNAL HEADERS & BEAMS SHALL HAVE (1)2X6 OR (1)2X4 BEARING STUD ON EACH SIDE UNLESS OTHERWISE NOTED.
- EXTERIOR SHEATHING SHALL BE 7/16" MATERIAL CONSISTING OF ORIENTED STRAND BOARD (OSB).-ALL FLOOR AND CEILING SYSTEMS TO BE CHECKED AND DESIGNED BY THE DESIGNATED MANUFACTURER. FLOOR PLANS TO BE ON SITE.
- HEADER SIZES ARE TO BE USED PER PLAN AND DEVIATION FROM ANY SIZE MUST BE APPROVED BY DESIGNERS.
- PRESSURE TREATED WOOD IS TO BE USED WHERE WOOD IS IN CONTACT WITH CONCRETE AND AT 2X6 MUD SILL. TREATED MEMBERS TO BE S.Y.P.#2 OR BETTER.
- FOR OPENINGS IN EXTERIOR WALLS OR WALLS WITH LATERAL LOADING:
 - 0'-0" - 4'-0" = 1 JACK STUD
 - 4'-0" - 8'-0" = 2 JACK STUDS
 - 8'-0" - 12'-0" = 3 JACK STUDS
 - GREATER THAN 12' AT OPENINGS = CONSULT ENGINEERING
- POSTS CALLED OUT ARE NUMBER OF TRIMMER/JACK STUDS REQUIRED PER SIDE OF OPENING.

CONCRETE NOTES:

- ALL CONCRETE FOOTINGS AND FOUNDATION SYSTEMS ARE DESIGNED FOR A 2000 P.S.F.SOIL.
- FOUNDATION WALLS SHALL BE FULL HEIGHT AT UNBALANCED FILL GREATER THAN 3'4".
- 1/2" ANCHOR BOLTS EMBEDDED 7" MINIMUM @ 6' O.C. MAX. 12" MIN FROM EACH END. MINIMUM OF 2 BOLTS IN EACH SILL PLATE (REFER TO STRUCTURAL PAGES).
- PAD FOOTING REINFORCEMENT IS TO BE LOCATED (3") FROM BOTTOM OF FOOTING TYP. (WHEN REQUIRED)REFER TO STRUCTURAL PAGES FOR ADDITIONAL INFORMATION REGARDING RE-BAR/ETC.
- MIN. 5000 PSI CONCRETE @ ALL FOOTINGS

INSULATION:

- ALL EXTERIOR WALLS TO HAVE A MINIMUM RATING OF R-20.
- ALL ATTIC SPACES ARE TO HAVE A MINIMUM RATING OF R-49. ALL FLOOR SPACES OVER UNCONDITIONED SPACE OR CANTILEVERED ARE TO BE INSULATED TO MIN.R30.

SQUARE FOOTAGE CALCULATIONS

BASEMENT:	
FINISHED SQ. FTG.	653 SQ.FT
GARAGE SQ. FTG.	572 SQ. FT.
UNFINISHED SQ. FTG.	117 SQ.FT.
OVERALL BASEMENT SQ. FTG.	1342 SQ.FT.
FIRST FLOOR:	
FINISHED SQ. FTG.	1485 SQ.FT.
SECOND FLOOR:	
FINISHED SQ. FTG.	1146 SQ.FT.
TOTAL FINISHED SQ. FTG:	3284 SQ.FT.
GRAND TOTAL SQ. FTG:	3973 SQ.FT.

SHEETROCK/GYPSUM BOARD:

- CEILINGS ARE TO HAVE 5/8" NON-SAG GYPSUM BOARD UNLESS OTHERWISE NOTED.
- ALL WALLS ARE TO HAVE 1/2" GYPSUM BOARD UNLESS NOTED OTHERWISE.
- GARAGE CEILING AND WALLS THAT ADJOIN HOUSE WALLS ARE TO BE 5/8" GYPSUM BOARD PER CODE.

DOORS & WINDOWS:

- ALL WINDOWS AND DOORS TO BE DOUBLE PANE GLASS PANELS WITH LOW-E RATINGS.
- WINDOWS WITHIN 24" OF A DOOR SWING MUST BE TEMPERED PER CODE.
- ANY WINDOW ABOVE A TUB/WET AREA MUST BE TEMPERED PER CODE.
- ANY WINDOW WITHIN A STAIRWAY MUST BE TEMPERED PER CODE.
- WINDOW GLAZING MUST BE AT LEAST 18" A.F.F. WHEN WINDOW IS ABOVE 6' FROM GRADE. IF WITHIN 18", WINDOW MUST BE TEMPERED.
- ALL BEDROOMS TO HAVE AT LEAST ONE WINDOW THAT HAS A CLEAR EGRESS OPENING OF 5.7 SQ. FT. WITH MIN. DIMENSIONS OF 24" IN HEIGHT & 20" IN WIDTH, SILL HEIGHT NOT TO BE GREATER THAN 44" A.F.F.
- WINDOWS WITH SILLS WITHIN 2' OF THE FLOOR THEY SERVE AND ARE 72" ABOVE GRADE MUST EITHER HAVE A FALL PREVENTION OR OPENING LIMITER DEVICE PER CODE.

MECHANICAL & ELECTRICAL:

- ALL ELECTRICAL AND MECHANICAL EQUIPMENT TO BE VERIFIED AND INSTALLED PER CODE BY APPROVED TRADES AND INSTALLERS.
- HVAC CONTRACTOR TO VERIFY LAYOUT FOR DUCT-RUNS BEFORE INSTALLATION. IF MODIFICATION IS REQUIRED, REPORT INFORMATION/CHANGES TO CONTRACTOR & LITTFIN DESIGN.



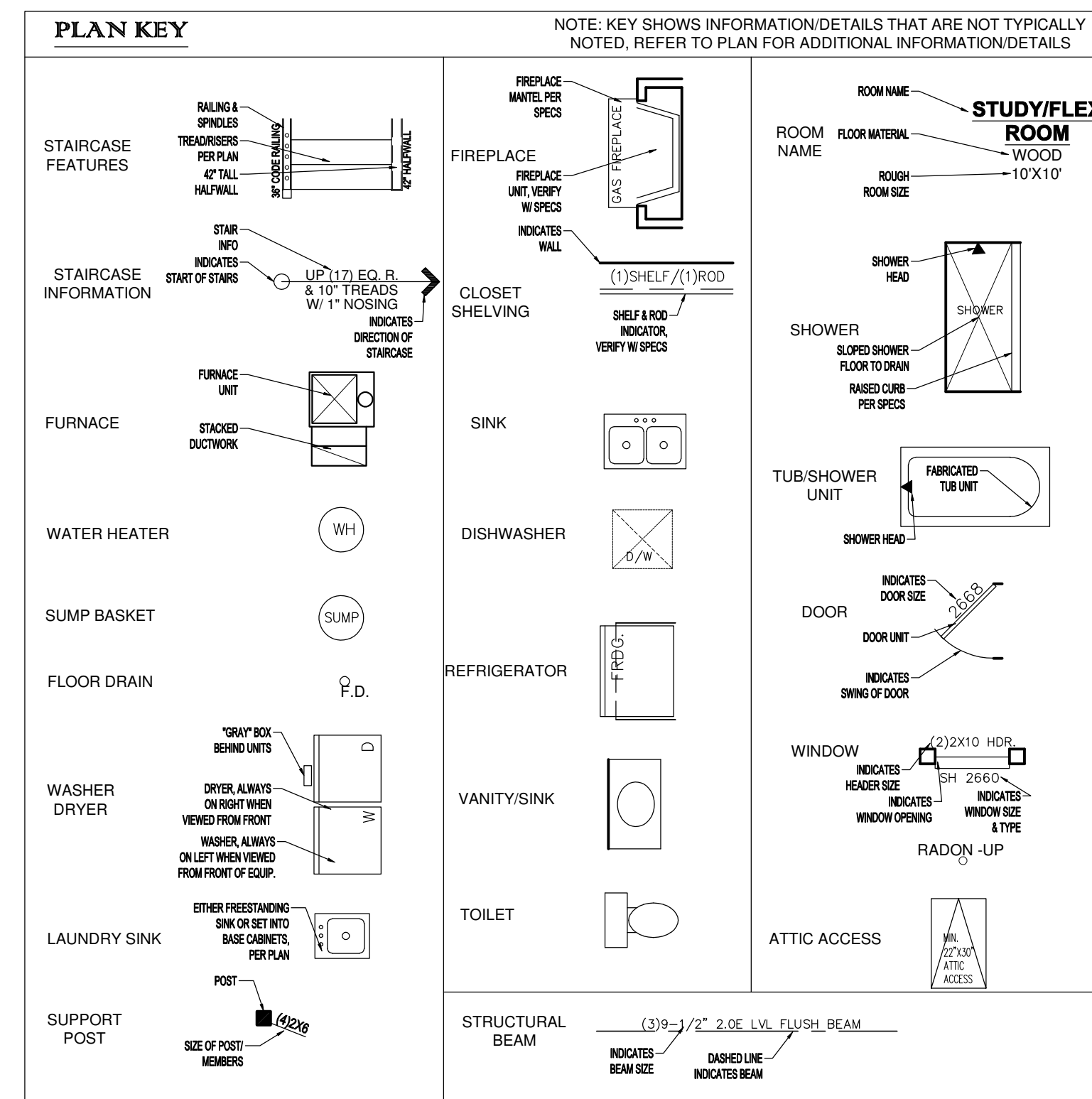
Must meet 2020 MN State Building Code

Any new city sewer connection requires one Met Council SAC charge.

On January 2nd, 2025, the City of Bloomington implemented a City SAC charge. The cost will be \$2,026 per City SAC unit. The amount of SAC charged will mirror the MET Council Determination. This applies to any permits submitted on or after 01/02/25.

SHEET INDEX:

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CODE INFORMATION:

SINGLE FAMILY CONSTRUCTION TYPE IRC-1
 -2020 MINNESOTA STATE RESIDENTIAL CODE
 -2023 NATIONAL ELECTRICAL CODE
 -2020 MINNESOTA STATE MECHANICAL & FUEL GAS CODE
 -2020 MINNESOTA STATE FIRE CODE
 -2020 MINNESOTA PLUMBING CODE

SOIL TYPE:

DESIGNED WITH 2000 PSF SOILS, ALL FOUNDATION CONSTRUCTION MUST FACTOR IN THIS AT A MINIMUM.

WIND EXPOSURE:

DESIGNED WITH "EXPOSURE C" CLASSIFICATIONS AND WIND GUSTS OF 115 MPH PER 2020 MN RESIDENTIAL CODE REGULATIONS.

GENERAL NOTES:

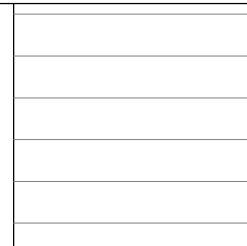
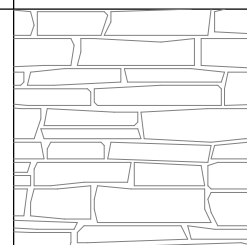
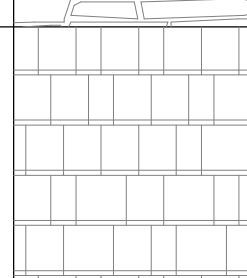
-ALL FOUNDATION WALL STRUCTURAL INFORMATION USED TO CONSTRUCT THE FOUNDATION SYSTEM IS TO BE ON SITE WHEN POURING OR BUILDING WALLS.
 -ALL STRUCTURAL BEAMS, POSTS & TALL WALLS ARE TO BE BUILT PER I-LEVEL SPECIFICATIONS.
 -ALL MANUFACTURED FLOOR & ROOF TRUSSES ARE TO BE INSTALLED PER MANUFACTURERS SPECIFICATIONS.
 -ALL MANUFACTURED FLOOR & ROOF TRUSS SPECIFICATIONS ARE TO BE ON SITE DURING INSTALLATION.


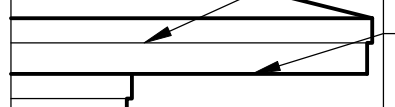


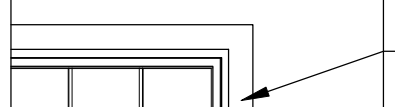

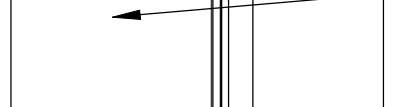



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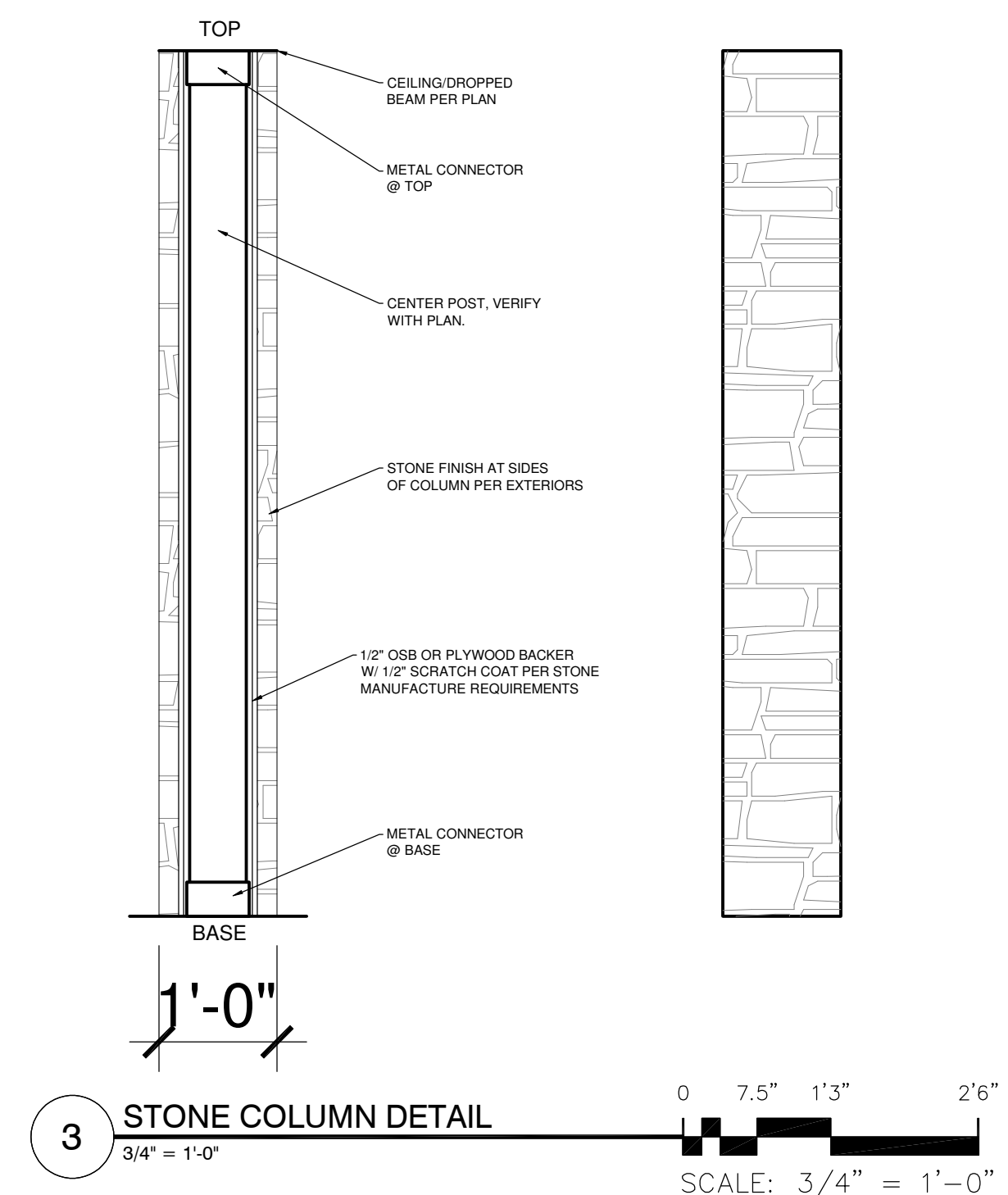
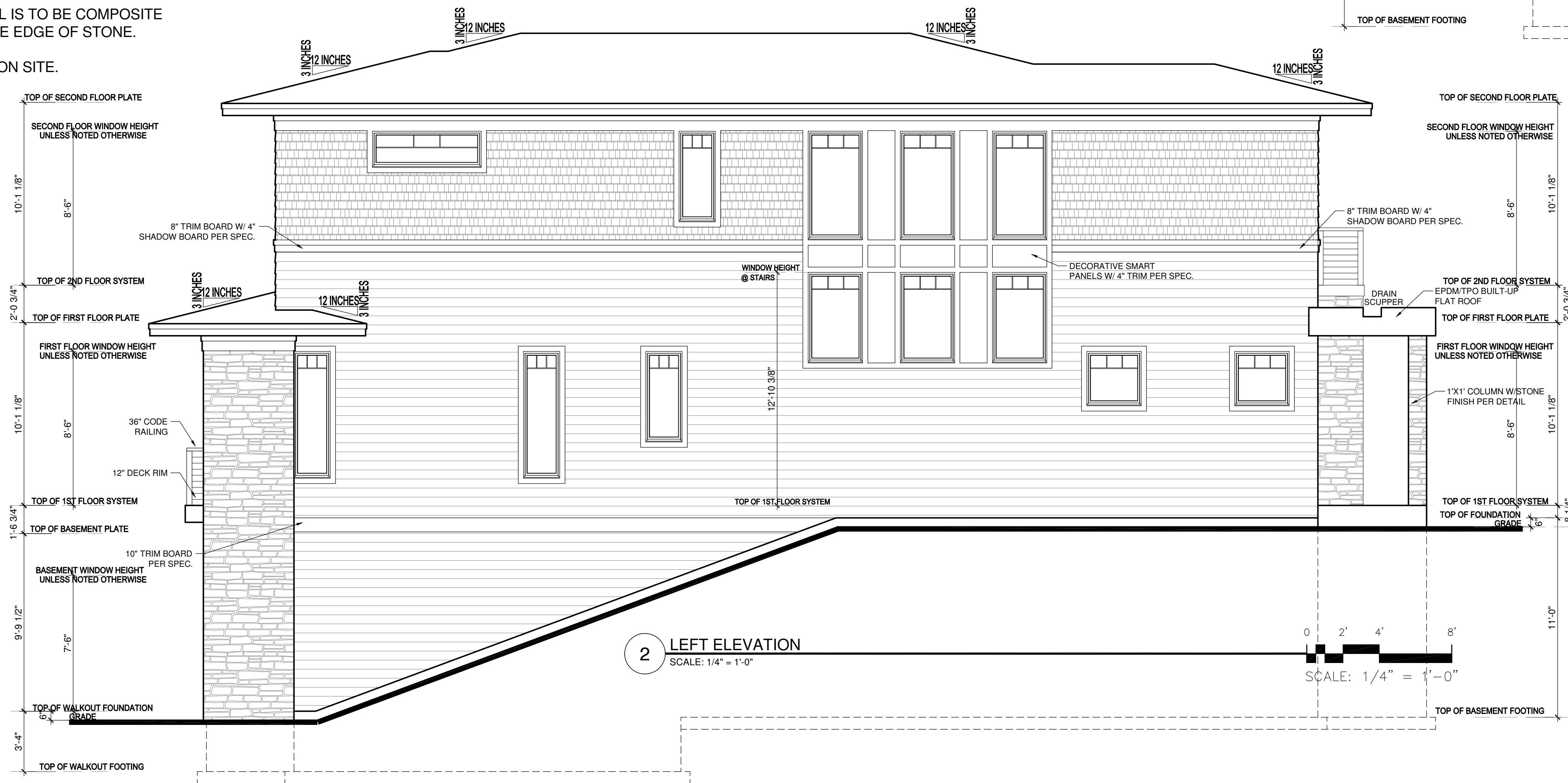
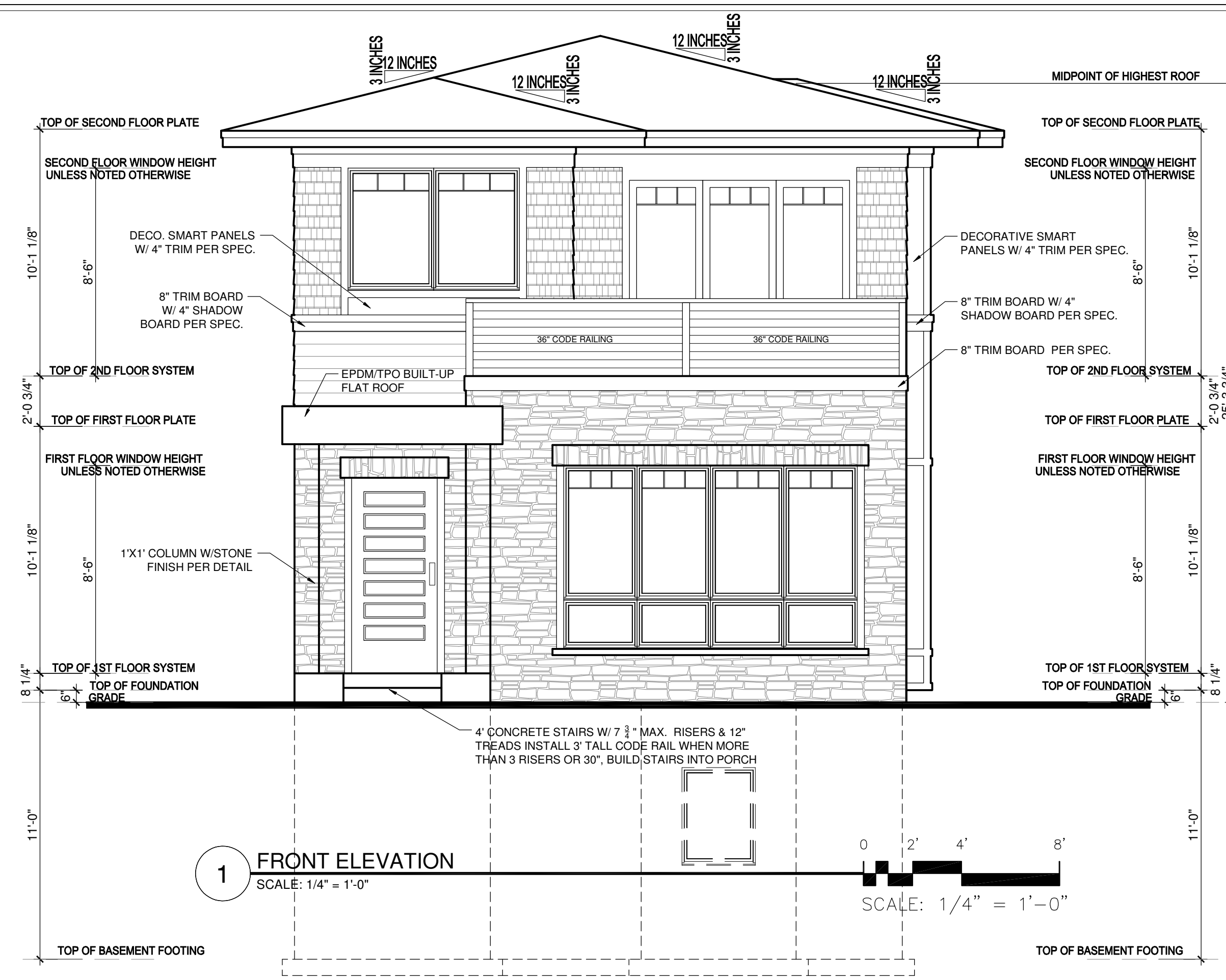
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GENERAL EXTERIOR NOTES:

- ICE AND WATER BARRIER @ BOTTOM 6" OF ALL ROOF LINES, EXTEND BARRIER MIN. 3' ON EACH SIDE OF VALLEY, COVER ENTIRE FACE OF ROOF SADDLES. VERIFY ADDITIONAL LOCATIONS OF ICE AND WATER BARRIER AS NEEDED IN FIELD.
- PROVIDE ROOF AND SOFFIT VENTS PER IRC CODE REGULATIONS.
- ALL FURNACE FLUES, PLUMBING VENTS, FIREPLACE VENTS, AND OTHER PENETRATIONS THROUGH ROOF OR WALLS TO EXTEND THROUGH REAR OF HOME WHENEVER POSSIBLE.
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- SUPPLY AT LEAST 6" OF SPACE BETWEEN BOTTOMS OF WINDOWS AND ROOFS.
- ALL BEAMS HOLDING UP PORCH ROOFS ARE TO BE DROPPED UNLESS OTHERWISE NOTED.
- SUPPLY DRIPCUPS ON ALL WINDOWS AND DOORS.
- ALL EXTERIOR TRIM TO BE FLASHED PER CODE
- SUPPLY SEPARATION BETWEEN WOOD, COMPOSITE WOOD, AND ANY OTHER WOOD MATERIAL PER SPECIFICATIONS.
- HOLD STONE OFF GRADE MINIMUM OF 3" OR PER TRADE SPECIFICATIONS.
- REFER TO MANUFACTURE SPECIFICATIONS FOR STONE.
- GARAGE BUCK BOARD MATERIAL IS TO BE COMPOSITE WOOD AND SIZED TO COVER THE EDGE OF STONE.
- GRADE CONDITIONS MAY VARY ON SITE.

EXTERIOR MATERIAL KEY	
6" HORIZONTAL SIDING -MATERIAL: SMART-SIDING, VERIFY W/ SPEC.	
STONE VENEER -MATERIAL: CAST CONCRETE, VERIFY W/ SPEC.	
SHAKE SIDING -MATERIAL: SMART-SIDING, VERIFY W/ SPEC.	

EXTERIOR DETAIL KEY	
	A.) 8" FASCIA W/ 4" SHADOW BOARD PER SPEC.
	B.) VENTILATED SOFFIT AT OVERHANGS
	C.) 10" FRIEZE W/ 4" SHADOW BOARD PER SPEC.
	D.) SIDING PER PLAN
	A.) 4" TRIM PER SPEC.
	B.) WINDOW PER PLAN
	A.) 10" STONE HEADER EXTENDING 6" EACH WAY PER SPEC.
	B.) 4" TRIM PER SPEC.
	C.) WINDOW PER PLAN
	D.) 3" PRECAST CAP PER SPEC.



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WEST HAVEN DETACHED VILLAS 25
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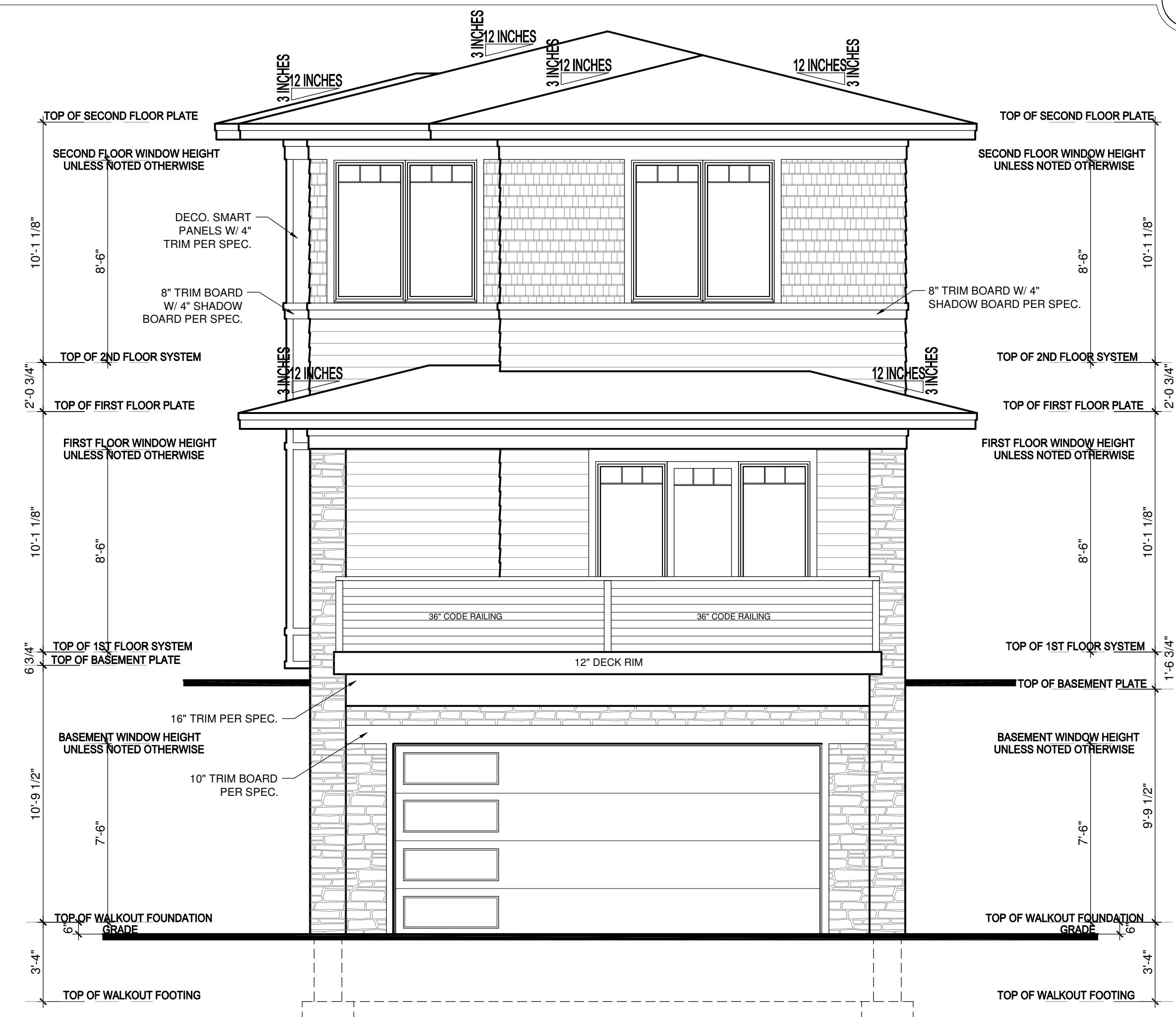
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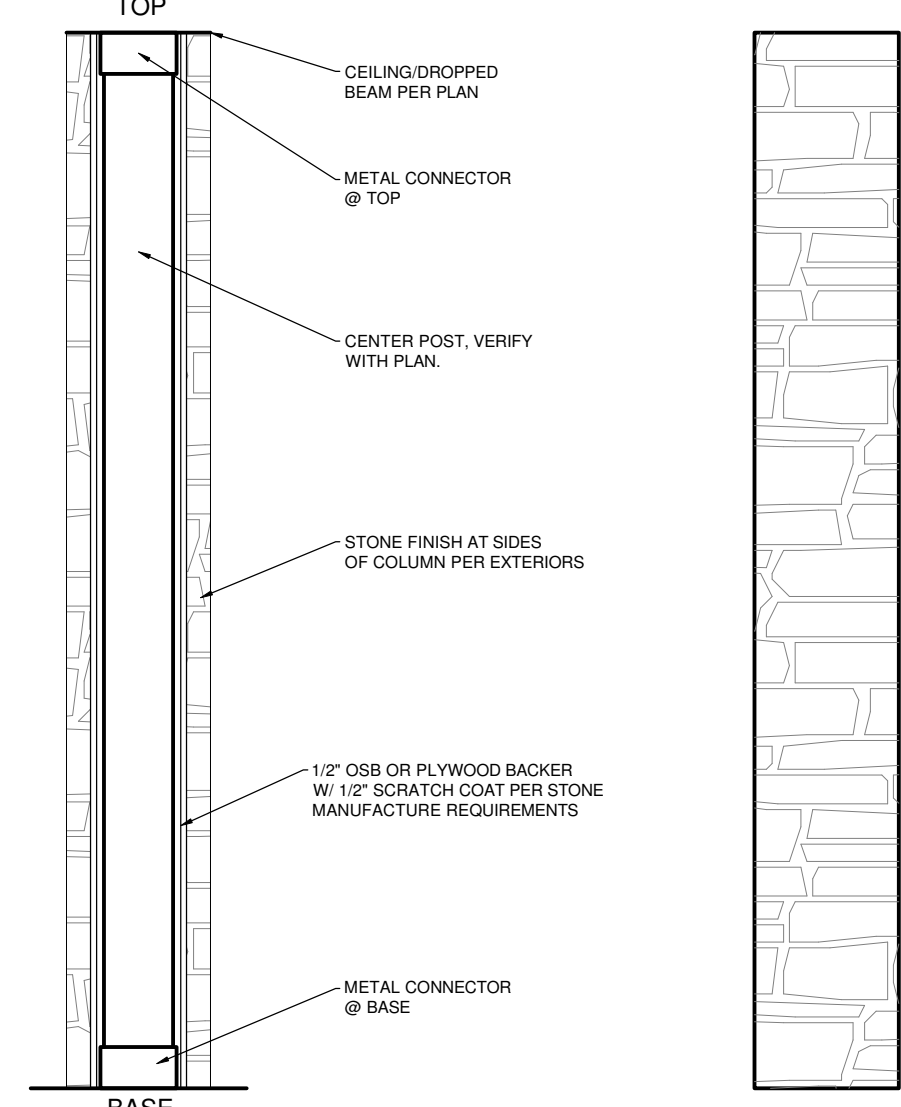
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1 REAR ELEVATION
SCALE: 1/4" = 1'-0"



2 RIGHT ELEVATION
SCALE: 1/4" = 1'-0"



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

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WEST HAVEN DETACHED VILLAS 25

LOCATION:
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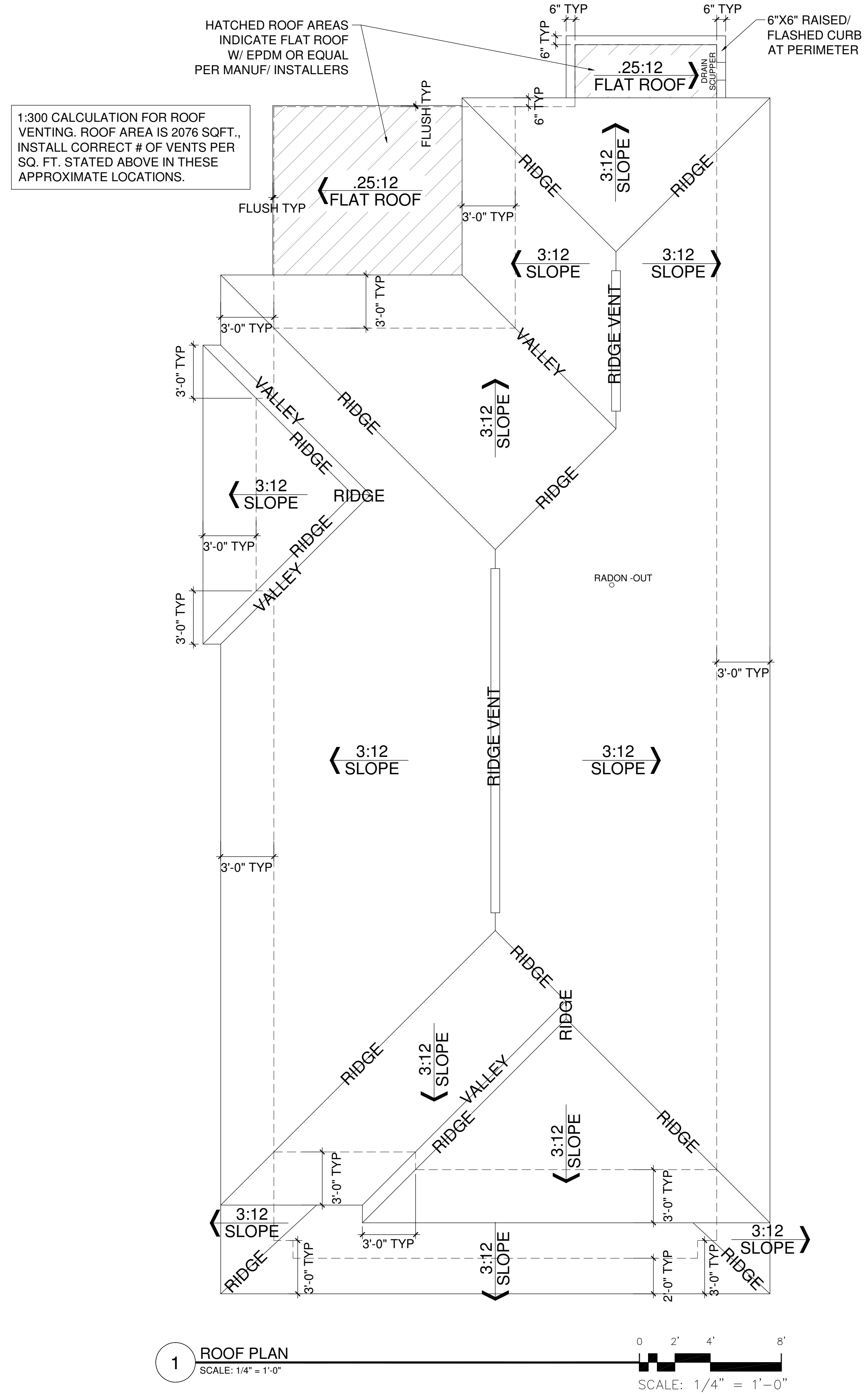
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11. REFER TO MANUFACTURE SPECIFICATIONS FOR STONE.
12. GARAGE BUCK BOARD MATERIAL IS TO BE COMPOSITE WOOD AND SIZED TO COVER THE EDGE OF STONE.
13. GRADE CONDITIONS MAY VARY ON SITE.



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ROOF PLAN
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STRUCTURAL NOTES:

- ALL HEADERS TO BE SUPPORTED BY A MINIMUM OF (1) TRIMMER, (UNLESS NOTED OTHERWISE)
- ALL HEADERS TO HAVE AT LEAST (1) KING STUD (UNLESS NOTED)
- ALL STUD CALLOUTS @ SIDES OF WINDOWS/DOORS ARE TRIMMERS, MINIMUM (1) KING STUDS @ SAID LOCATIONS TO BE INCLUDED AS WELL.
- BLOCKING @ ROOF & FLOOR PLAN PER TRUSS MANUFACTURER.
- POINT LOADS TO BE CARRIED THROUGH FLOOR AREAS AND DOWN TO FOUNDATION FOR SUPPORT. USE SAME MATERIAL AS COLUMN SUPPORTING MEMBER ABOVE. BLOCKING MAY BE "BROKEN" BETWEEN LEVELS U.N.O.
- ALL HANGERS & CONNECTORS PER TRUSS MANUFACTURER, SUPPLIERS & CONTRACTOR.
- ALL EXTERIOR SHEATHING TO BE 7/16" OSB OR PLYWOOD SHEATHING & NAILED PER CODE (MAY BE REFERRED TO AS 1/2" NOMINAL THICKNESS).
- ROOF DECKING TO BE 3/4" NOMINAL (OR 5/8") OSB DECKING W/ CLIPS, NAILED TO ROOF FRAMING W/ MIN. 8d COMMON NAILS, 6" O.C. @ EDGES/12" O.C. @ FIELD. ATL: 16 GA 1-3/8", 3" @ EDGES/ 6" AT FIELD.
- FLOOR DECKING TO BE 3/4" PLYWOOD DECKING, NAILED OR SCREWED TO FLOOR SYSTEM PER CODE W/ ADHESIVE PER SPEC. (OR) MIN. 6d COMMON NAILS 6" O.C. @ EDGES/12" O.C. @ FIELD (CODE MINIMUM).
- REFER TO WALL BRACING PLANS FOR ADDITIONAL FRAMING INFORMATION.

GENERAL FOUNDATION NOTES:

- FOUNDATIONS TO BE POURED PER SITE SOIL CONDITION- VERIFY ON SITE.
- ALL REINFORCING IS TO BE INSTALLED PER IRC REGULATED STRUCTURAL DESIGN BY CONCRETE TRADES.
- PROVIDE 1/2" ANCHOR BOLTS EMBEDDED 7" MIN., SPACED PER CODE AND 12" MAX FROM EACH END OF SILL PLATE, MIN 2 PER SILL. REFER TO COVER SHEET.
- PROVIDE CONTROL JOINTS PER PLAN, JOIST TO CONSIST OF HIDDEN ZIP STRIP EMBEDDED INTO THE SLABS.
- ALL ANGLED WALLS ARE TO BE 45 DEGREES UNLESS NOTED OTHERWISE.
- SLOPE CONCRETE TO FLOOR DRAINS WITHIN 5' OF DRAINS.
- ALL WOOD MATERIAL CONTACTING DIRECTLY TO CONCRETE MUST BE TREATED.
- PROVIDE DRAIN TILE AROUND PERIMETER AS SHOWN. LATERAL SOIL PRESSURE ASSUMED TO BE 30 PSF/FT.
- CONC. CURB OR ADD. P.T. SILL PLATES AT ALL INT. BEARING WALLS TO CONNECT FRAMED WALL TO FOOTING BELOW.

WINDOW & DOOR SIZE NOTES

- SH3X5' = SINGLE HUNG 3'0" BY 5'0"
- FX2'6"X2'6" = FIXED 2'6" BY 4'6"
- CASE3'X5' = CASEMENT 3'0" BY 5'0"
- 2'8"X6'8" @ DOOR = 2'8" WIDE BY 6'8" TALL
- 2'8"X8'0" @ DOOR = 2'8" WIDE BY 8'0" TALL

- SD 110V, INTERCONNECTED SMOKE DETECTOR
- SD@ 110V, INTERCONNECTED SMOKE DETECTOR / CARBON MONOXIDE DETECTOR COMBO
- EXHAUST FAN

BASEMENT FLOOR PLAN NOTES:

- FOR EASE OF UNDERSTANDING, GRADE AT FRONT OR FRONT OF GARAGE DOORS IS CONSIDERED 0'0" ON THIS FOUNDATION PLAN
- ALL STAIRWAYS (INTERIOR AND EXTERIOR) ARE TO BE ILLUMINATED AT EACH LANDING PER CODE
- SUPPLY CONTINUOUS HANDRAIL PER CODE AT ALL STAIR LOCATIONS, CODE HANDRAIL IS TO CONTINUE TO LANDINGS/ TOP & BOTTOM OF STAIRS. CONTRACTOR & INSTALLER TO VERIFY IF ADDITIONAL GRASPABLE HANDRAIL IS INSTALLED OR IF DECORATIVE HANDRAIL TO CONTINUE.
- 1/2" GYPSUM BOARD TO BE APPLIED TO UNDERSIDE OF STAIRS PER CODE.
- INDICATES INTERIOR BEARING WALL, 16" O.C. STUDS
- AT BEDROOM EGRESS WINDOW WELLS: PERMANENTLY ATTACHED LADDER PER CODE & MINIMUM 3'X3' EGRESS AREA BUILT PER IRC
- AT ALL EGRESS WINDOW WELLS: FILL EGRESS WELL W/ GRAVEL BACKFILL & INSTALL DRAIN TILE CONNECTION TO DRAIN EGRESS PROPERLY.
- INSTALL DRAFT STOPPING WITHIN FLOOR SYSTEM PER IRC CODE SECTION 302.12, MIN. 1/2" GYPSUM BOARD (OR) 3/8" STRUCTURAL BOARD ADEQUATELY SUPPORTED BY 2X4 MIN. MATERIAL, PARALLEL WITH FLOOR FRAMING, SEPARATING AREAS WITH MAXIMUM SPACE OF 1000 SQ.FT.-SEPARATE INTO EQUAL SPACES.

PERMANENTLY ATTACHED LADDER PER CODE & MINIMUM 3'X3' EGRESS AREA BUILT PER IRC - FILL EGRESS WELL W/ GRAVEL BACKFILL AND INSTALL DRAIN TILE CONNECTION TO DRAIN EGRESS PROPERLY.

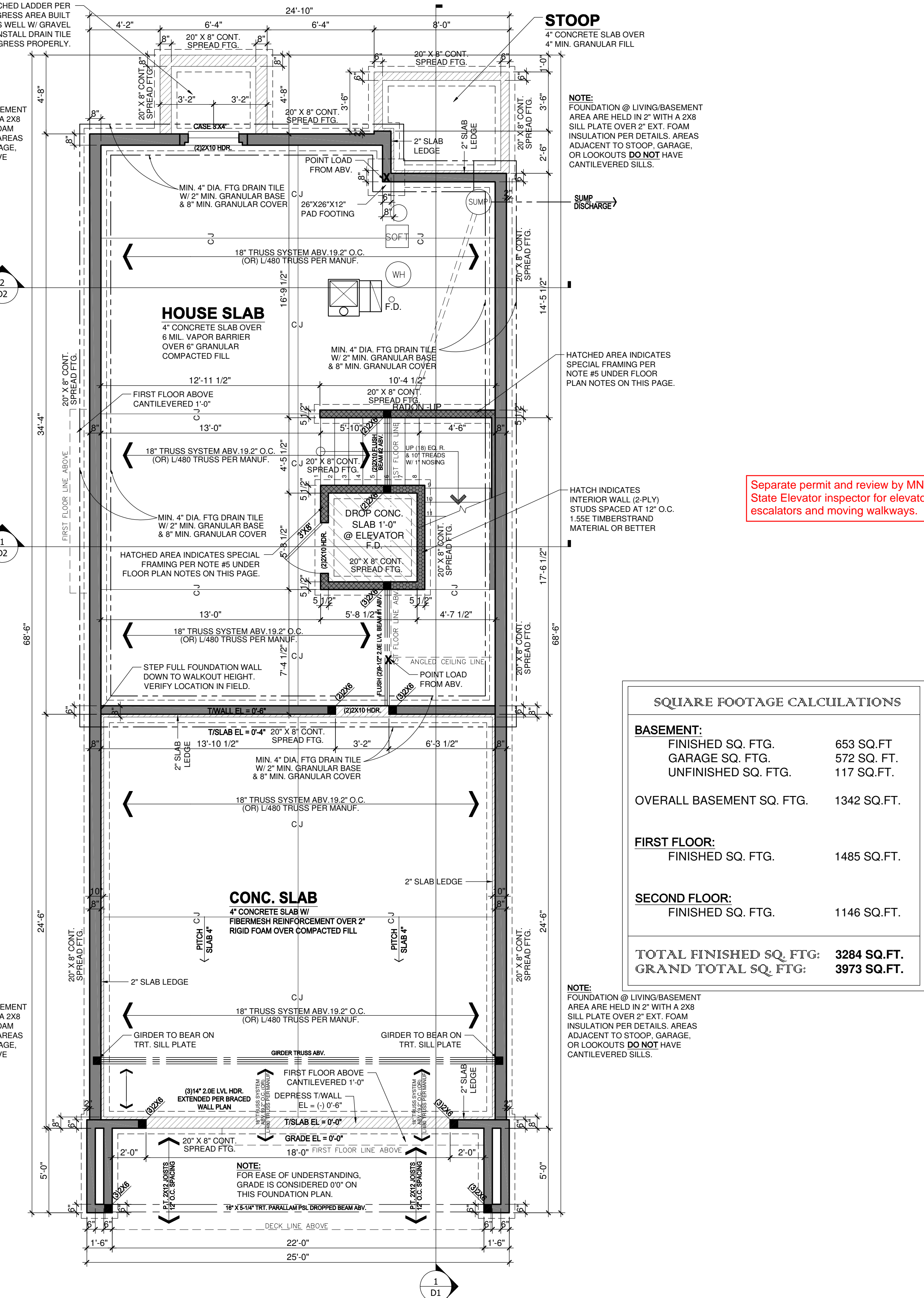
NOTE: FOUNDATION @ LIVING/BASEMENT AREA ARE HELD IN 2" WITH A 2X8 SILL PLATE OVER 2" EXT. FOAM INSULATION PER DETAILS. AREAS ADJACENT TO STOOP, GARAGE, OR LOOKOUTS DO NOT HAVE CANTILEVERED SILLS.

STOOP

4" CONCRETE SLAB OVER 4" MIN. GRANULAR FILL

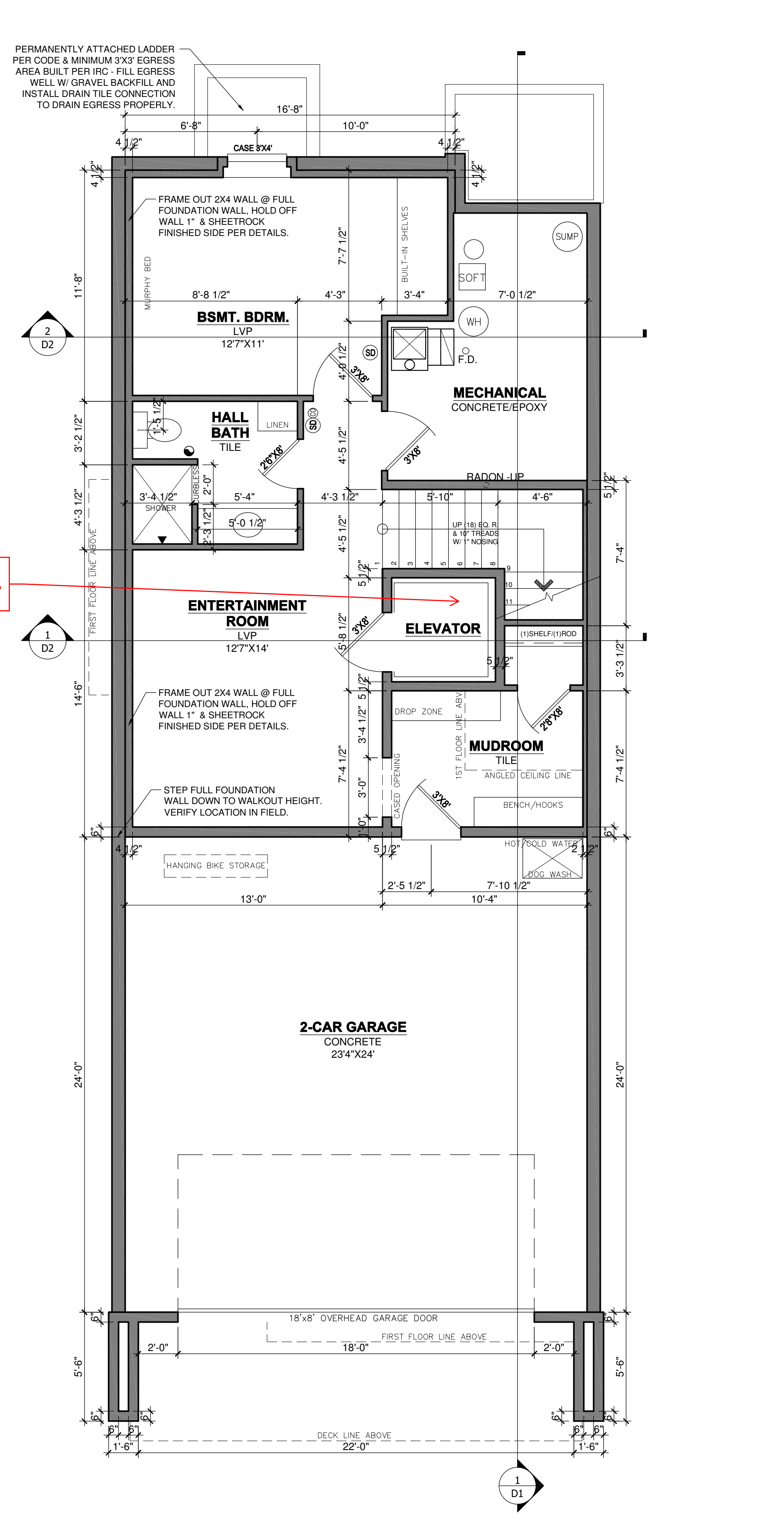
NOTE: FOUNDATION @ LIVING/BASEMENT AREA ARE HELD IN 2" WITH A 2X8 SILL PLATE OVER 2" EXT. FOAM INSULATION PER DETAILS. AREAS ADJACENT TO STOOP, GARAGE, OR LOOKOUTS DO NOT HAVE CANTILEVERED SILLS.

PERMANENTLY ATTACHED LADDER PER CODE & MINIMUM 3'X3' EGRESS AREA BUILT PER IRC - FILL EGRESS WELL W/ GRAVEL BACKFILL AND INSTALL DRAIN TILE CONNECTION TO DRAIN EGRESS PROPERLY.



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

SQUARE FOOTAGE CALCULATIONS	
BASEMENT:	
FINISHED SQ. FTG.	653 SQ. FT.
GARAGE SQ. FTG.	572 SQ. FT.
UNFINISHED SQ. FTG.	117 SQ. FT.
OVERALL BASEMENT SQ. FTG.	1342 SQ. FT.
FIRST FLOOR:	
FINISHED SQ. FTG.	1485 SQ. FT.
SECOND FLOOR:	
FINISHED SQ. FTG.	1146 SQ. FT.
TOTAL FINISHED SQ. FTG:	3284 SQ. FT.
GRAND TOTAL SQ. FTG:	3973 SQ. FT.



2 BASEMENT FLOOR PLAN
SCALE: 1/4" = 1'-0" 653 FINISHED SQUARE FEET / 572 GARAGE SQUARE FEET / 117 UNFINISHED SQUARE FEET

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DRAWING TITLE:
WEST HAVEN DETACHED VILLAS 25
LOCATION:
BLOOMINGTON, MN

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A4

PAGE DESCRIPTION:
FOUNDATION & BASEMENT PLAN
SCALED PRINT @ 24X36

STRUCTURAL NOTES:

- ALL HEADERS TO BE SUPPORTED BY A MINIMUM OF (1) TRIMMER. REFER TO COVER SHEET FOR ADDITIONAL INFO. UNLESS OTHERWISE NOTED.
- ALL HEADERS TO HAVE AT LEAST (1) KING STUD (UNLESS NOTED).
- BLOCKING @ ROOF & FLOOR PLAN PER TRUSS MANUFACTURER.
- POINT LOADS TO BE CARRIED THROUGH FLOOR AREAS AND DOWN TO FOUNDATION FOR SUPPORT. USE SAME MATERIAL AS COLUMN SUPPORTING MEMBER ABOVE.
- ALL HANGERS & CONNECTORS PER TRUSS MANUFACTURER, SUPPLIERS & CONTRACTOR.
- ALL EXTERIOR SHEATHING TO BE 7/16" OSB OR PLYWOOD SHEATHING & NAILED PER CODE (MAY BE REFERRED TO AS 1/2" NOMINAL THICKNESS).
- ROOF DECKING TO BE 3/4" NOMINAL (OR 1/2") OSB DECKING W/ CLIPS, NAILED TO ROOF FRAMING W/ MIN. 8d COMMON NAILS, 6" O.C. @ EDGES/12" O.C. @ FIELD.
- FLOOR DECKING TO BE 3/4" PLYWOOD DECKING, NAILED OR SCREWED TO FLOOR SYSTEM PER CODE W/ ADHESIVE PER SPEC. (OR) MIN. 6d COMMON NAILS 6" O.C. @ EDGES/12" O.C. @ FIELD (CODE MINIMUM).
- REFER TO WALL BRACING PLANS FOR ADDITIONAL FRAMING INFORMATION.

GENERAL FRAMING NOTES:

- ALL NON-BEARING FRAMING IS TO BE 16" O.C. UNLESS OTHERWISE NOTED.
- ALL WALLS TO HAVE A DOUBLE TOP PLATE UNLESS OTHERWISE NOTED.
- ALL EXTERIOR WALLS ARE TO BE 2X6 WOOD STUDS WITH 7/16" OSB SHEATHING, UNLESS NOTED OTHERWISE.
- ALL INTERIOR WALLS ARE TO BE 2X4 WOOD STUDS UNLESS NOTED OTHERWISE.
- ALL COLUMN SIZES ARE TO BE CONTINUED THROUGH FLOOR TRUSS SPACES WHEN SPANNING MORE THAN 1 FLOOR.
- ALL WOOD MATERIALS ARE TO BE PROTECTED PER CODE & MANUF. SPECIFICATIONS WHILE BEING STORED ON SITE.

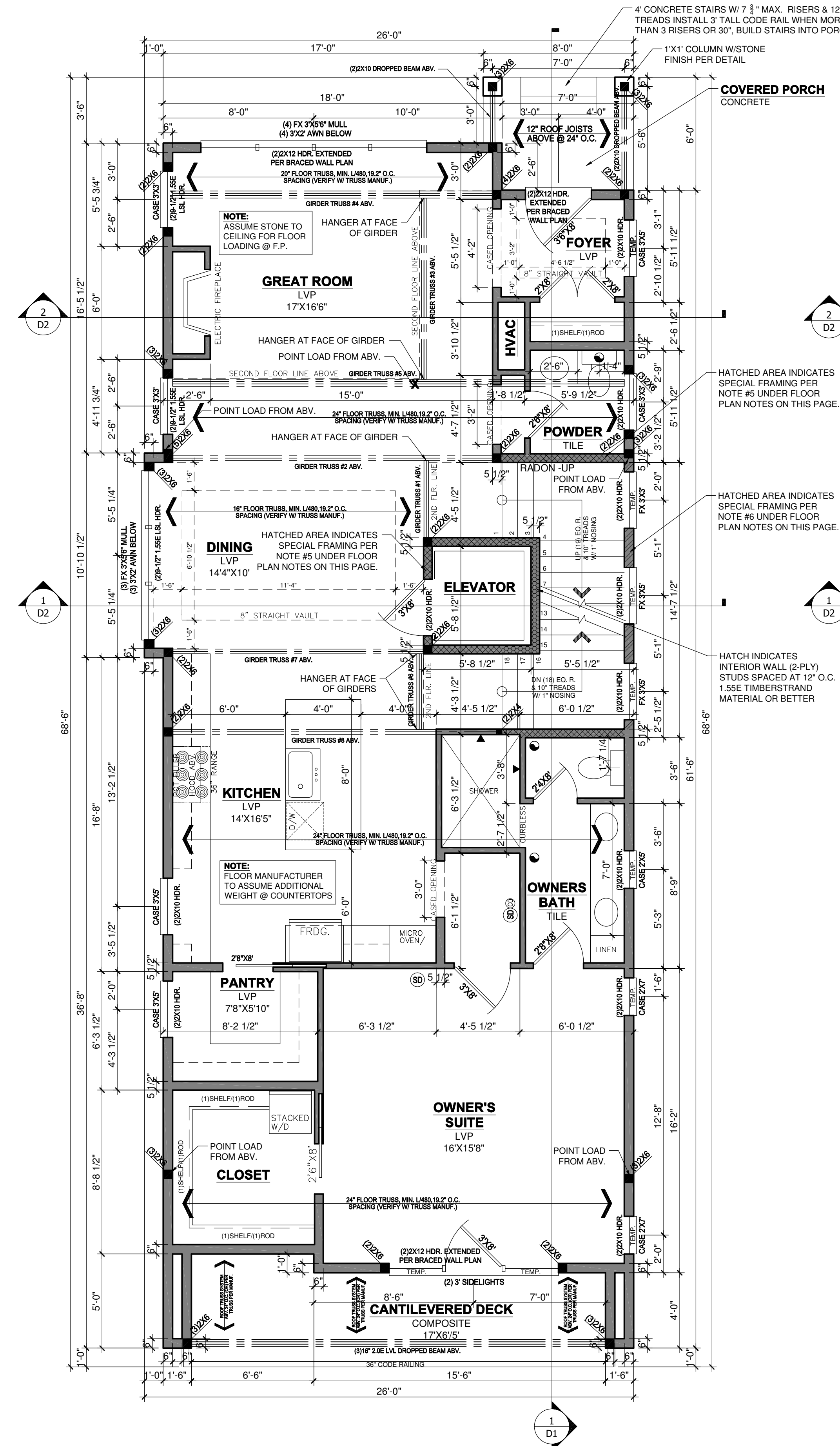
WINDOW & DOOR SIZE NOTES (EXAMPLES)

- SH3'X5" = SINGLE HUNG 3'0" BY 5'0"
- FX2'6"X2'6" = FIXED 2'6" BY 4'6"
- CASE3'X5" = CASEMENT 3'0" BY 5'0"
- 2'8"X6'8" @ DOOR = 2'8" WIDE BY 6'8" TALL
- 2'8"X8'0" @ DOOR = 2'8" WIDE BY 8'0" TALL

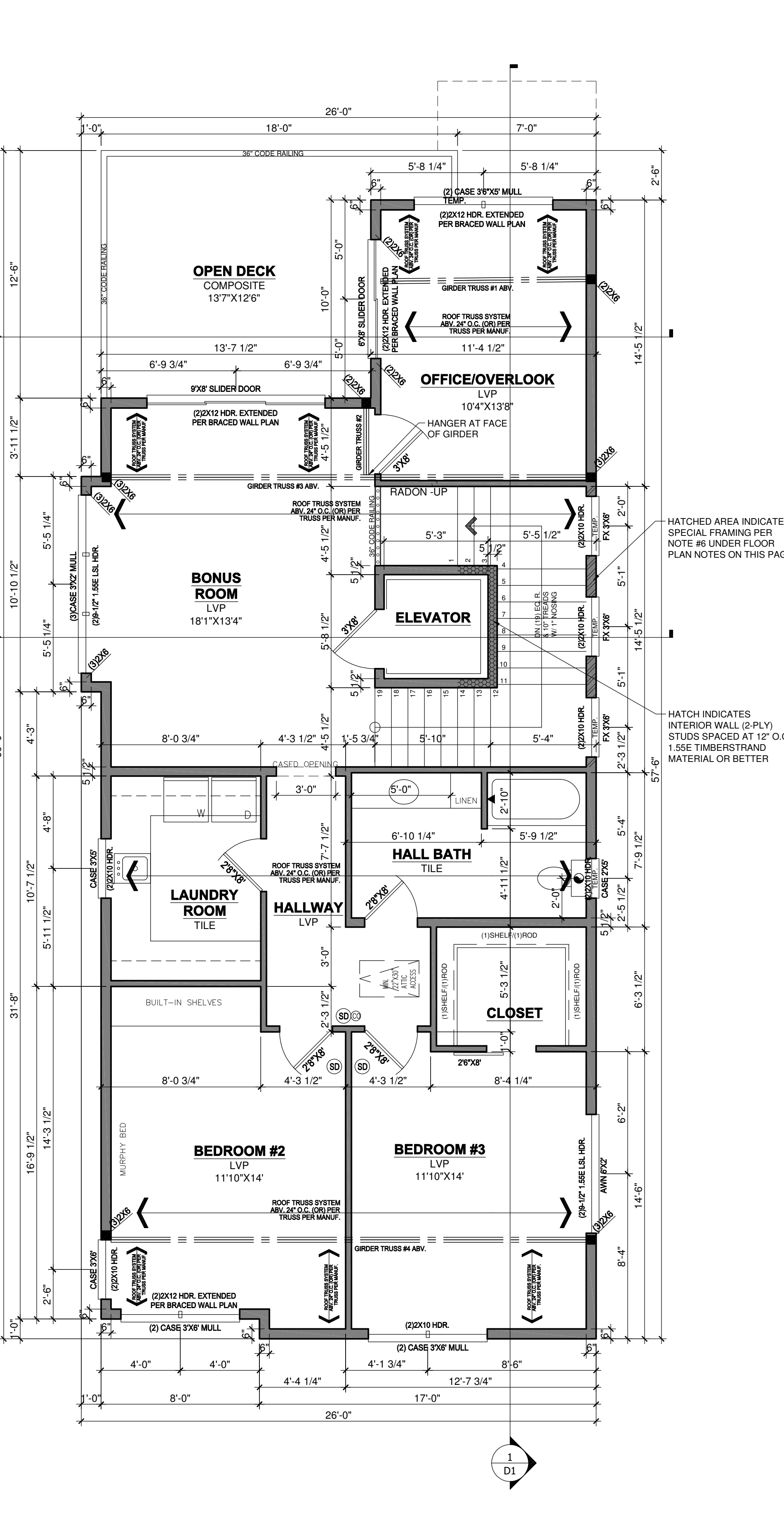
- 110V. INTERCONNECTED SMOKE DETECTOR
- 110V. INTERCONNECTED SMOKE DETECTOR / CARBON MONOXIDE DETECTOR COMBO
- EXHAUST FAN

FRAMING FLOOR PLAN NOTES:

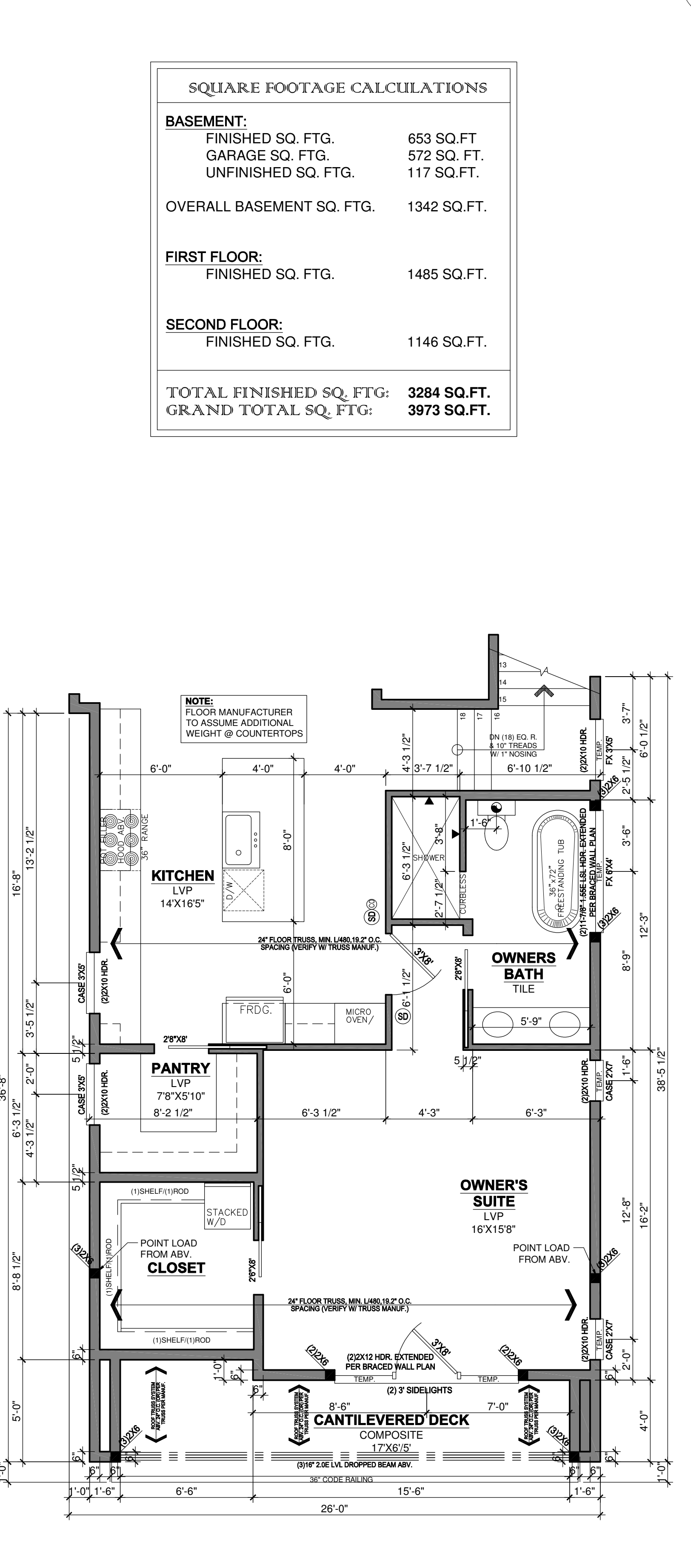
- FOR EASE OF UNDERSTANDING GRADE IS CONSIDERED 0'0" ON THIS FOUNDATION PLAN
- ALL STAIRWAYS (INTERIOR AND EXTERIOR) ARE TO BE ILLUMINATED AT EACH LANDING PER CODE
- SUPPLY CONTINUOUS HANDRAIL PER CODE AT ALL STAIR LOCATIONS, CODE HANDRAIL IS TO CONTINUE TO LANDINGS/ TOP & BOTTOM OF STAIRS. CONTRACTOR & INSTALLER TO VERIFY IF ADDITIONAL GRASPABLE HANDRAIL IS INSTALLED OR IF DECORATIVE HANDRAIL TO CONTINUE.
- 3/4" GYPSUM BOARD TO BE APPLIED TO UNDERSIDE OF STAIRS PER CODE.
- INDICATES INTERIOR BEARING WALL, 16" O.C. STUDS
- INDICATES EXTERIOR WALL STUDS SPACED AT 12" O.C. 1.55E TIMBERSTRAND MATERIAL OR BETTER (2-PLY TIMBER-STRAND KING STUDS @ EACH SIDE OF OPENINGS IN WALL).
- INSTALL DRAFT STOPPING WITHIN FLOOR SYSTEM PER IRC CODE SECTION 302.12, MIN. 3/4" GYPSUM BOARD (OR) 3/8" STRUCTURAL BOARD ADEQUATELY SUPPORTED BY 2X4 MIN. MATERIAL PARALLEL WITH FLOOR FRAMING, SEPARATING AREAS WITH MAXIMUM SPACE OF 1000 SQ.FT.-SEPARATE INTO EQUAL SPACES.



1 FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0" 1485 FINISHED SQUARE FEET



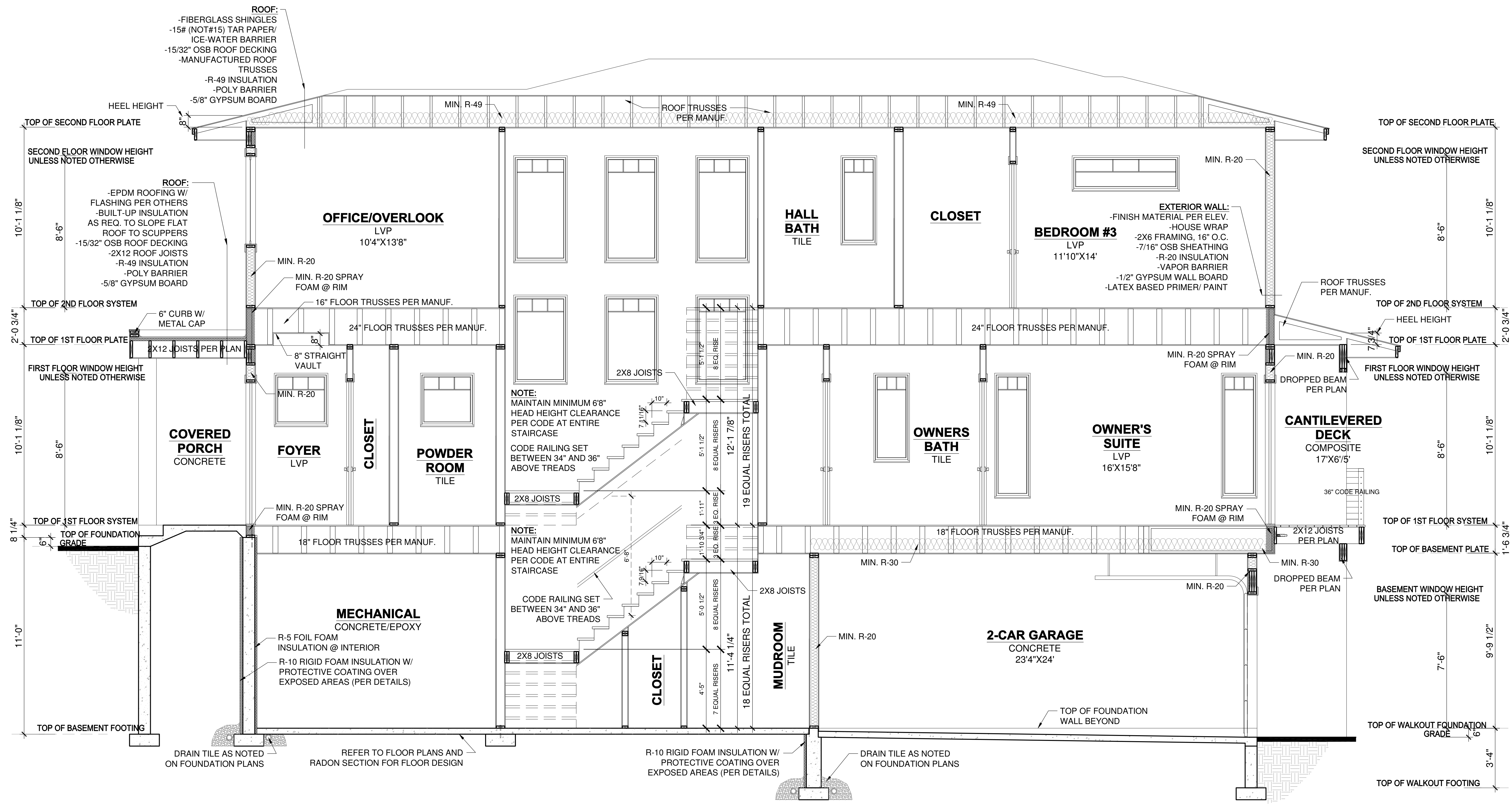
2 SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0" 1146 FINISHED SQUARE FEET



3 OPTIONAL OWNERS BATH WITH TUB
SCALE: 1/4" = 1'-0" 1146 FINISHED SQUARE FEET

SQUARE FOOTAGE CALCULATIONS	
BASEMENT:	
FINISHED SQ. FTG.	653 SQ.FT.
GARAGE SQ. FTG.	572 SQ. FT.
UNFINISHED SQ. FTG.	117 SQ.FT.
OVERALL BASEMENT SQ. FTG.	1342 SQ.FT.
FIRST FLOOR:	
FINISHED SQ. FTG.	1485 SQ.FT.
SECOND FLOOR:	
FINISHED SQ. FTG.	1146 SQ.FT.
TOTAL FINISHED SQ. FTG.:	3284 SQ.FT.
GRAND TOTAL SQ. FTG.:	3973 SQ.FT.

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1 SECTION THROUGH HOUSE, STAIRS, & GARAGE
 SCALE: 3/8" = 1'-0"

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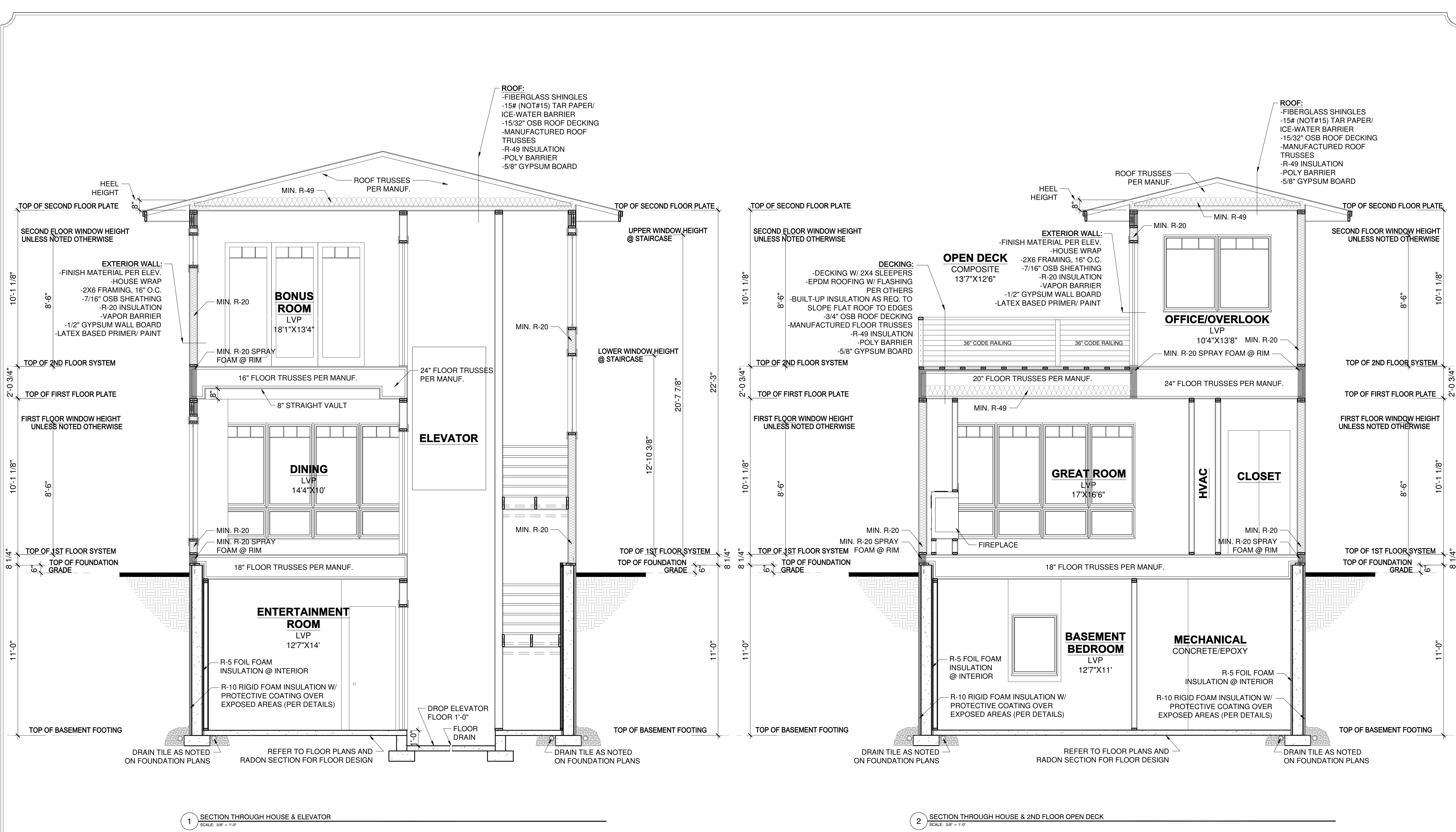


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 BUILDING SECTIONS
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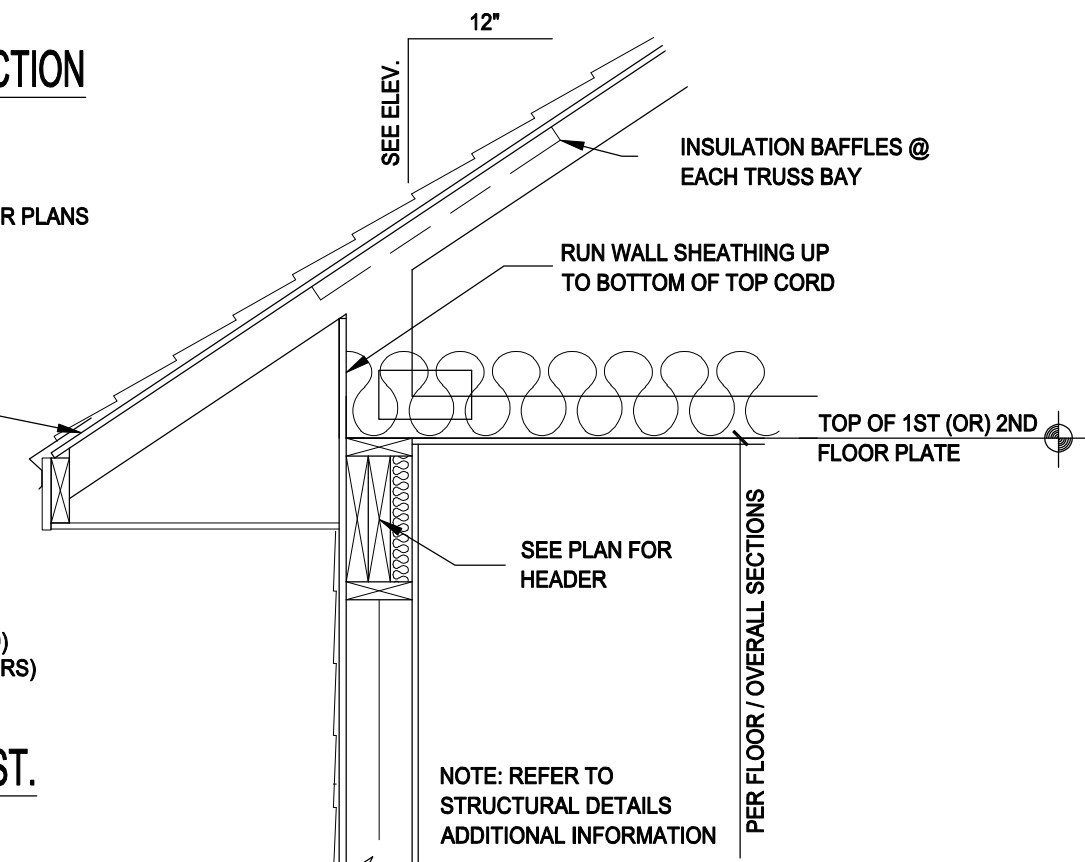


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			LOCATION: BLOOMINGTON, MN			SCALED PRINT @ 24X36			

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TYP. ROOF CONSTRUCTION

- FIBERGLASS SHINGLES
- 15# BUILDING PAPER
- 2 COURES ICE & WATER SHIELD
- 15/32" OSB SHEATHING
- ENGINEERED ROOF TRUSSES PER PLANS
- R-49 MIN. INSULATION
- 6 MIL POLY VAPOR BARRIER
- 5/8" GYPSUM BOARD



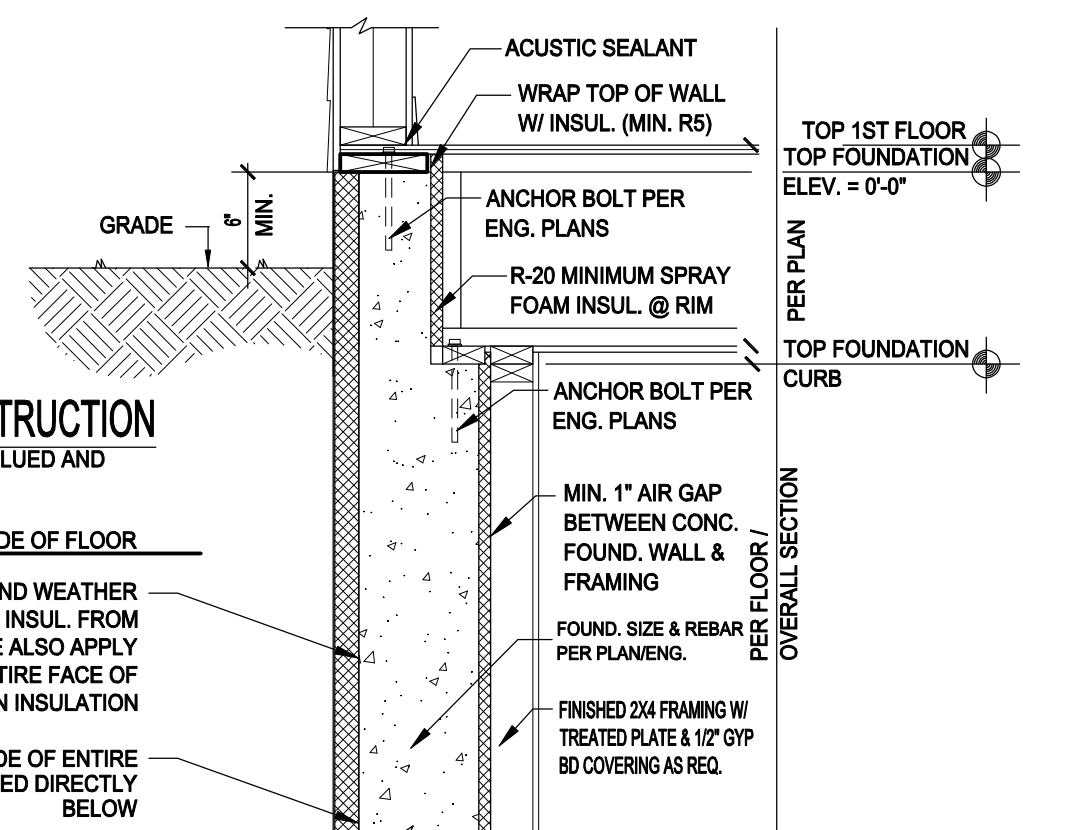
1 TYP. WALL SECTION @ EAVE
3/4" = 1'-0"

FASCIA AND SOFFIT

- SOLID FASCIA
- SOLID MATERIAL SOFFIT (VENTED)
- 2X SUB-FASCIA (REVIEW EXTERIORS)

EXTERIOR WALL CONST.

- SIDING (SEE EXTERIOR ELEV.)
- HOUSE WRAP
- 1/2" OSB SHEATHING
- 2X6 STUDS @ (16" O.C.)
- R-20 BATT INSULATION
- 6 MIL POLY VAPOR BARRIER
- 1/2" GYPSUM BOARD



2 TYP. WALL SECT. @ 1ST FLOOR
3/4" = 1'-0"

TYPICAL FLOOR CONSTRUCTION

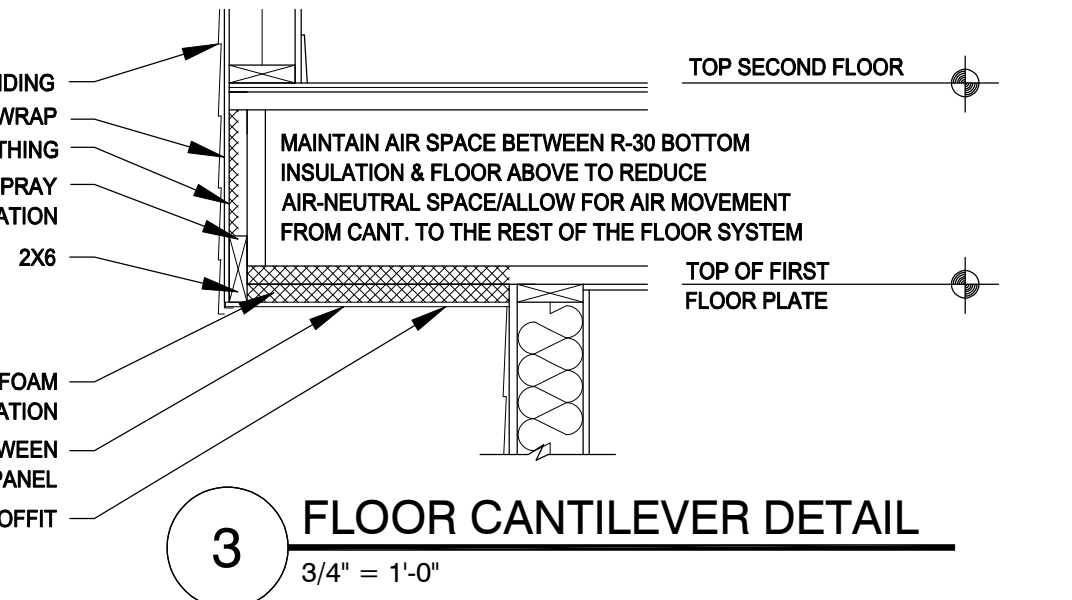
- 23/32" T&G OSB (or) PLYWOOD (GLUED AND NAILED)
- FLOOR SYSTEM PER PLAN
- 5/8" GYPSUM BOARD @ UNDERSIDE OF FLOOR

PROTECTIVE RIGID, OPAQUE AND WEATHER RESISTANT COVERING OVER FOAM INSUL. FROM TOP OF WALL TO 6" BELOW GRADE ALSO APPLY 6-MIL POLY SLIP SHEET OVER ENTIRE FACE OF EXTERIOR RIGID FOUNDATION INSULATION

WATERPROOFING ON EXT. SIDE OF ENTIRE FACE OF FOUND. WALL AS NOTED DIRECTLY BELOW

SILL PLATE

- 2x8 TREATED SILL PLATE
- SILL SEALER ANCHOR BOLTS PER ENG. CANTED 1-1/2" MAXIMUM.



3 FLOOR CANTILEVER DETAIL
3/4" = 1'-0"

TYPICAL FOUND. WALL

R-10 RIGID FOAM INSULATION W/ PROTECTIVE COATING APPLIED TO EXPOSED PORTION OF FOAM W/ FLASHING @ TOP WATERPROOFING MATERIAL ON EXT. SIDE POURED CONC. WALL (PER MASON/PLAN) REINFORCEMENT/ANCHOR BOLTS PER ENG. MIN. R-5 FOIL-FACED THERMAL BARRIER W/ SEALED EDGES AND SEAMS 2X4 STUD WALL, 16" O.C. @ FINISHED COND. 1/2" GYPSUM BD OVER STUDS W/ PAINT

NOTE: REFER TO STRUCTURAL DETAILS FOR REBAR/ADD. INFO.

4 TYP. WALL SECT. @ FOOTING
3/4" = 1'-0"

TYPICAL FLOOR CONSTRUCTION

- 23/32" T&G OSB (or) PLYWOOD (GLUED AND NAILED)
- FLOOR SYSTEM PER PLAN
- 5/8" GYPSUM BOARD @ UNDERSIDE OF FLOOR

PROTECTIVE RIGID, OPAQUE AND WEATHER RESISTANT COVERING OVER FOAM INSUL. FROM TOP OF WALL TO 6" BELOW GRADE ALSO APPLY 6-MIL POLY SLIP SHEET OVER ENTIRE FACE OF EXTERIOR RIGID FOUNDATION INSULATION

SILL PLATE

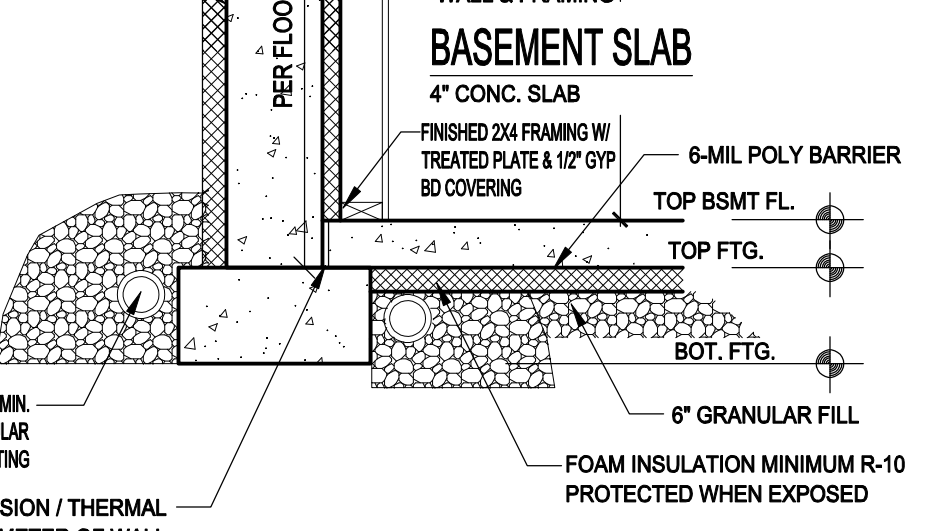
- 2x8 TREATED SILL PLATE CANTED 1-1/2" MAXIMUM.
- SILL SEALER ANCHOR BOLTS PER ENG. (DOUBLE SILL @ WINDOWS)

WATERPROOFING ON EXT. SIDE OF ENTIRE FACE OF FOUND. WALL AS NOTED DIRECTLY BELOW

TYPICAL FOUNDATION WALL

R-10 RIGID FOAM INSULATION W/ PROTECTIVE COATING APPLIED TO EXPOSED PORTION OF FOAM W/ FLASHING @ TOP WATERPROOFING MATERIAL ON EXT. SIDE POURED CONC. WALL (PER MASON/PLAN) REINFORCEMENT/ANCHOR BOLTS PER ENG. MIN. R-5 FOIL-FACED THERMAL BARRIER W/ SEALED EDGES AND SEAMS 2X4 STUD WALL, 16" O.C. @ FINISHED COND. 1/2" GYPSUM BD OVER STUDS W/ PAINT

NOTE: REFER TO STRUCTURAL DETAILS FOR REBAR/ADD. INFO.



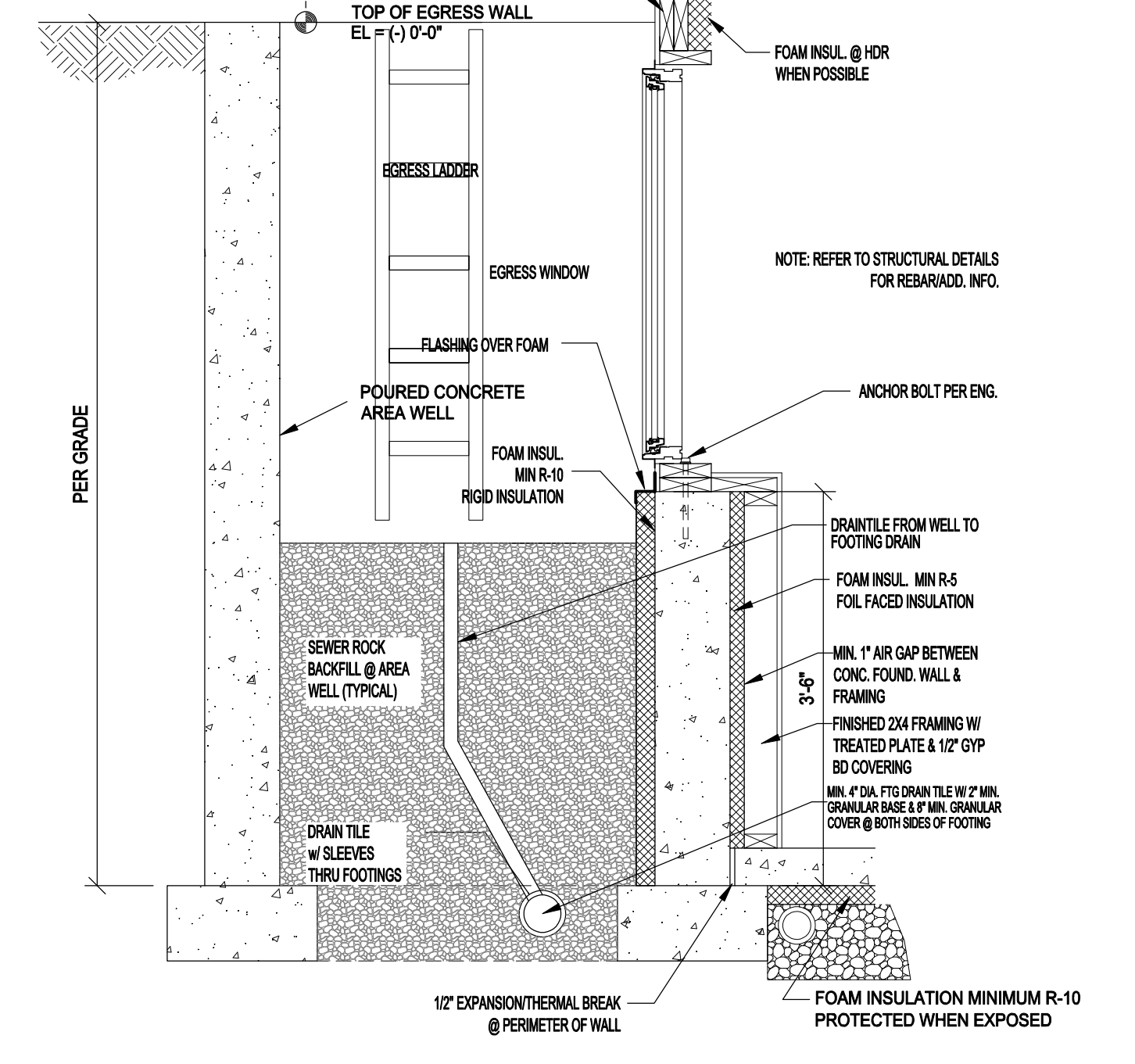
5 LOOKOUT WALL SECTION
3/4" = 1'-0"

PROTECTIVE RIGID, OPAQUE AND WEATHER RESISTANT COVERING OVER FOAM INSUL. FROM TOP OF WALL TO 6" BELOW GRADE ALSO APPLY 6-MIL POLY SLIP SHEET OVER ENTIRE FACE OF EXTERIOR RIGID FOUNDATION INSULATION

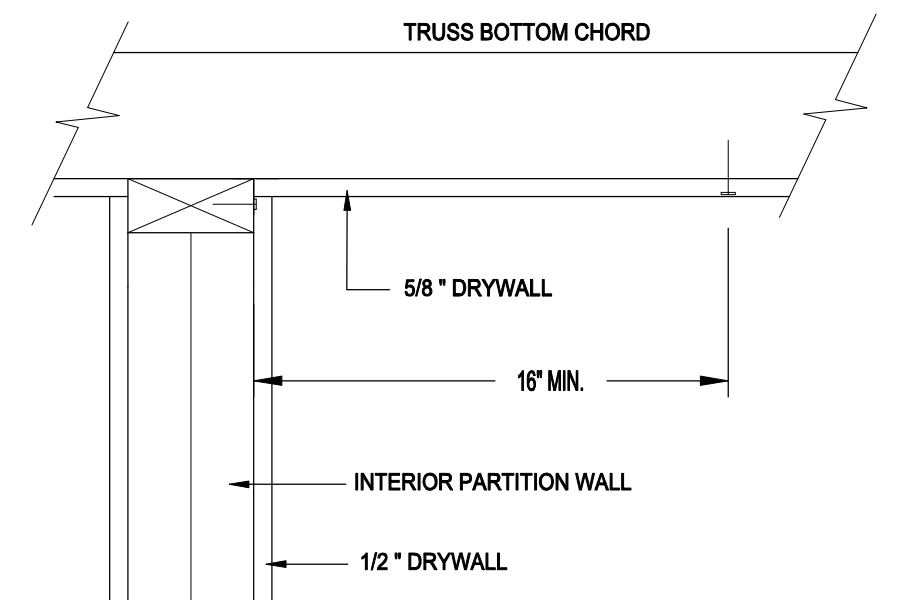
WATERPROOFING ON EXT. SIDE OF ENTIRE FACE OF FOUND. WALL AS NOTED DIRECTLY BELOW

SILL PLATE

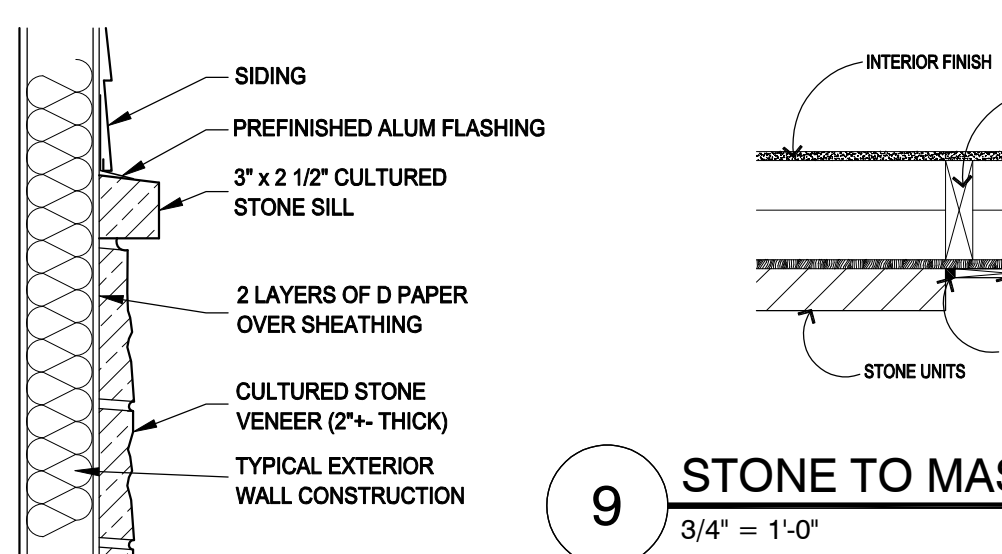
- 2x8 TREATED SILL PLATE
- SILL SEALER ANCHOR BOLTS PER ENG. CANTED 1-1/2" MAXIMUM.



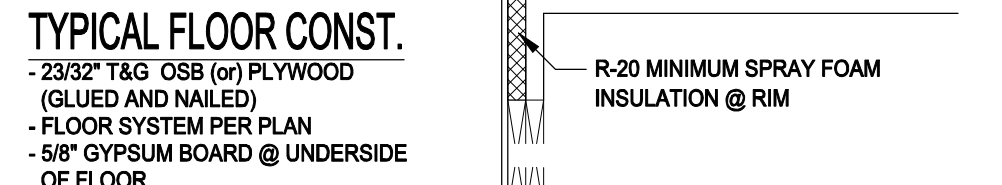
6 EGRESS WELL SECTION
3/4" = 1'-0"



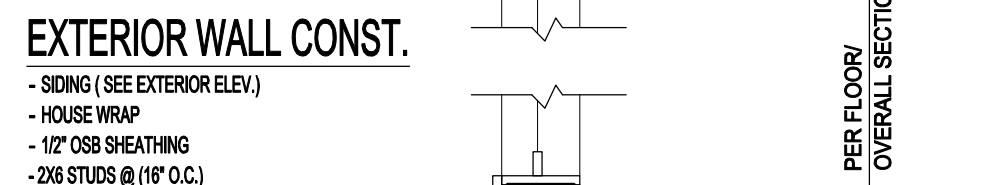
7 ROOF TRUSS CONNECTION DETAIL
3/4" = 1'-0"



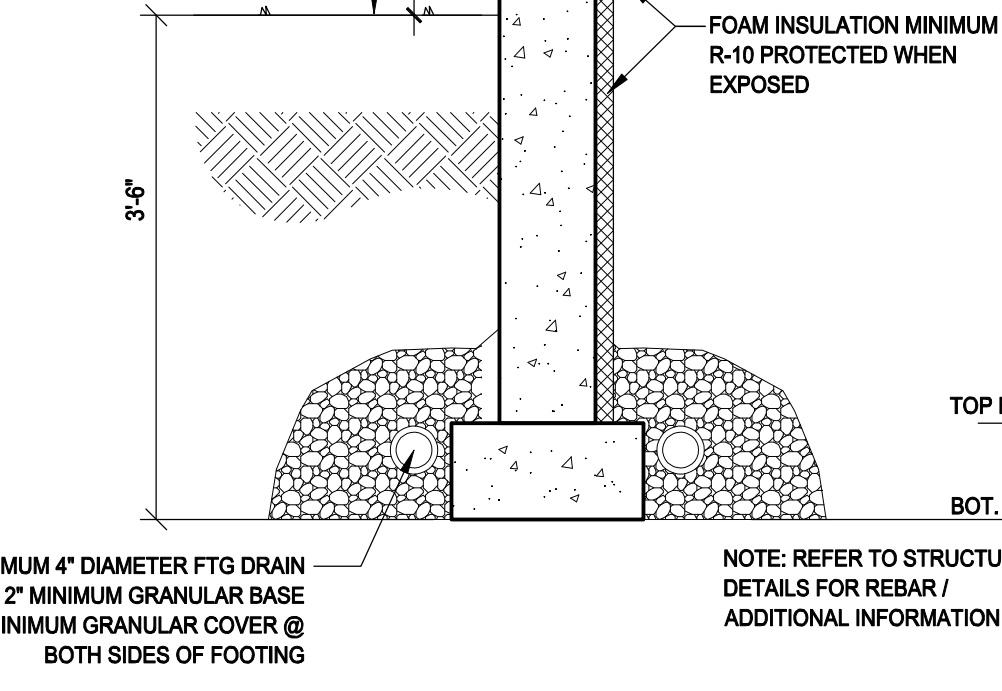
8 STONE VENEER
3/4" = 1'-0"



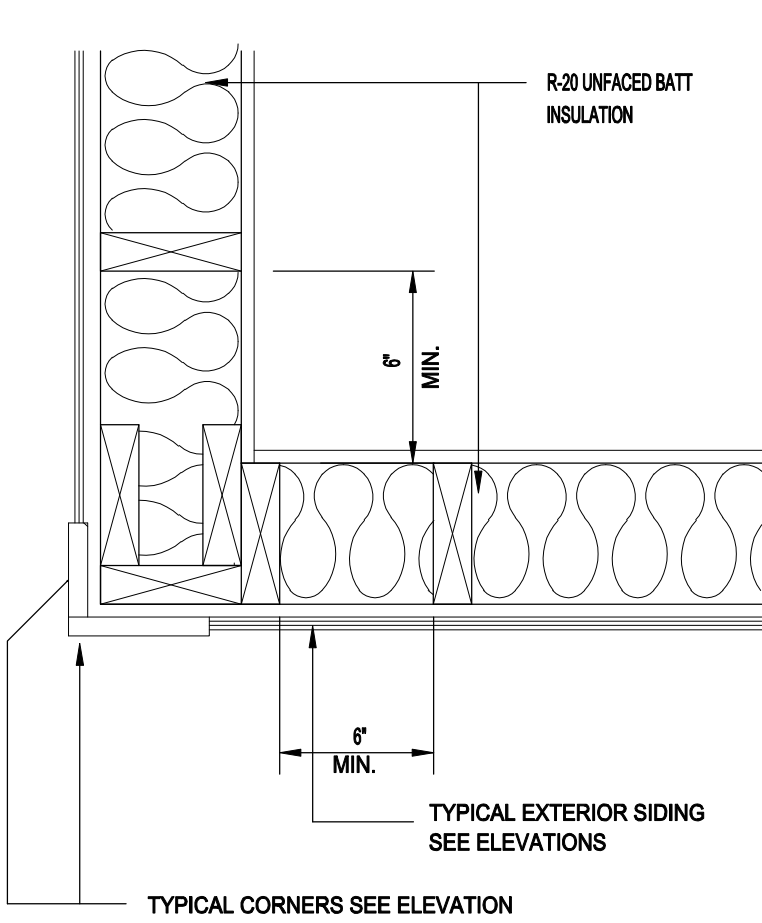
9 STONE TO MASONRY CAULK DETAIL
3/4" = 1'-0"



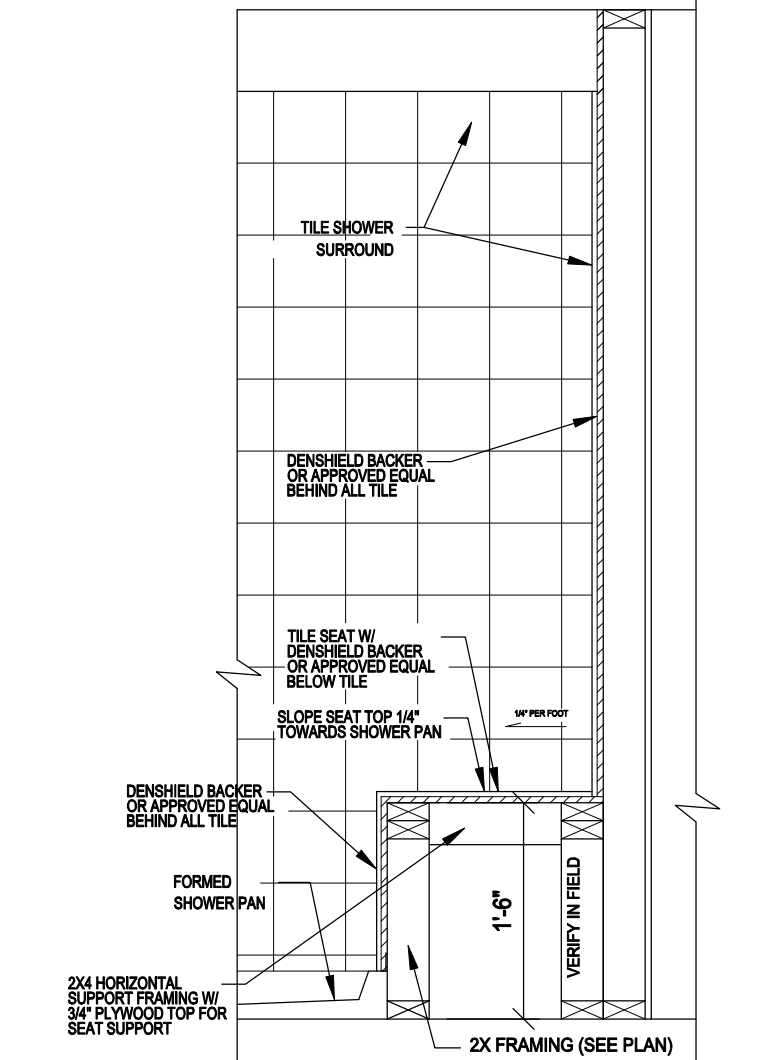
10 WALKOUT WALL SECTION
3/4" = 1'-0"



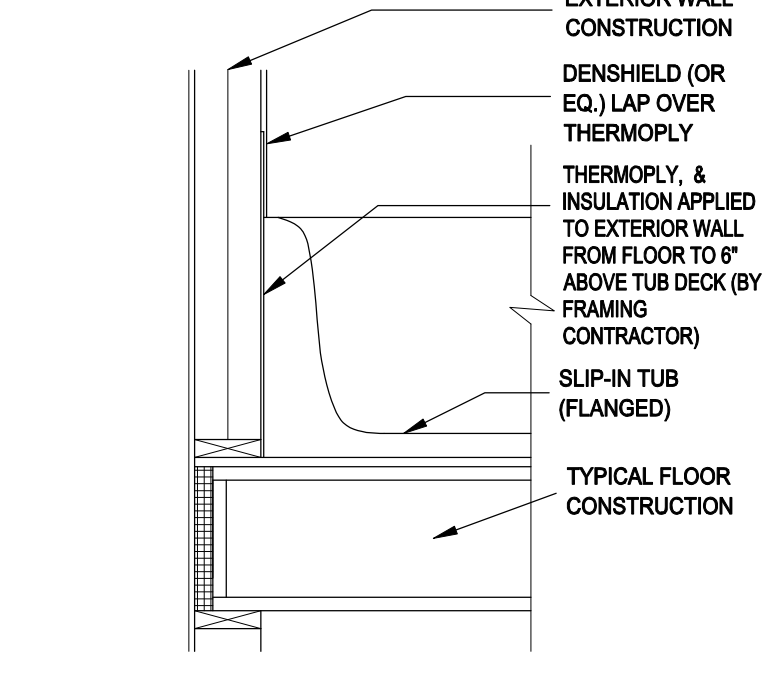
11 OUTSIDE CORNER DETAIL
NONE



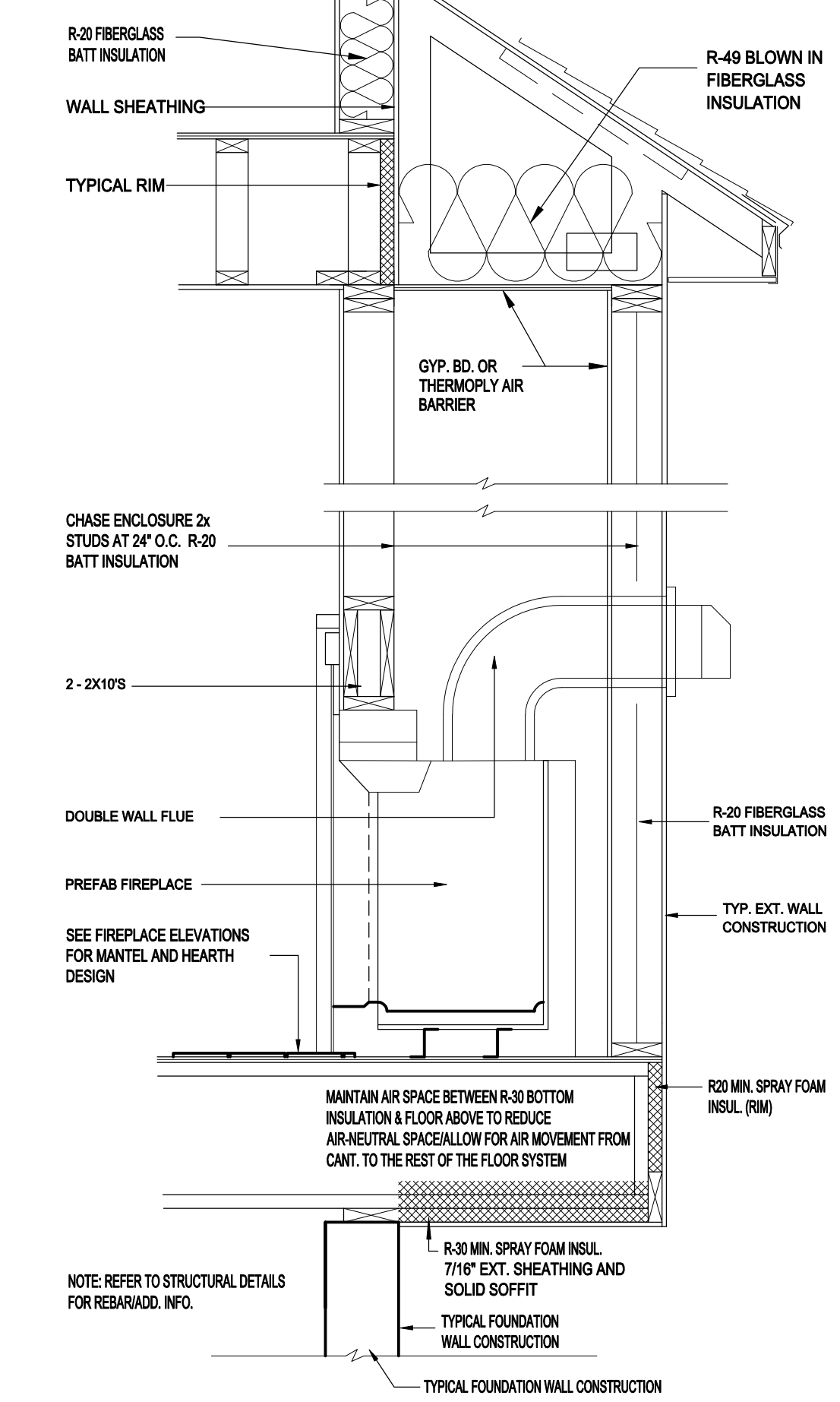
12 TUB/SHOWER 1/2 WALL
3/4" = 1'-0"



13 DRAFTSTOP @ TUB
3/4" = 1'-0"

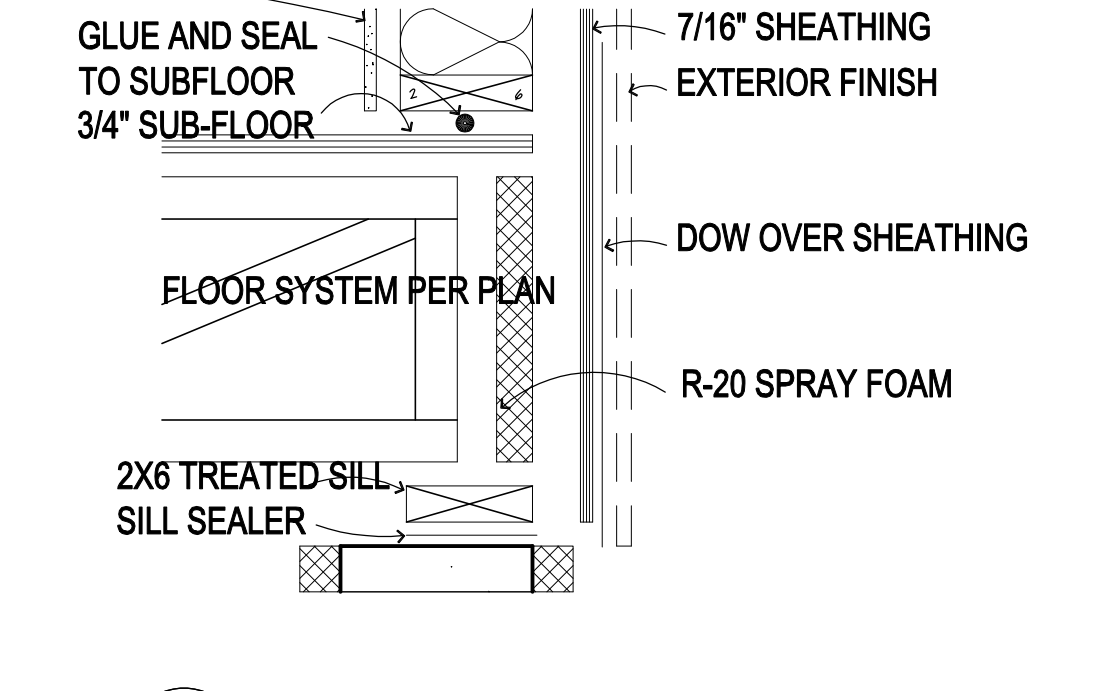


14 FIREPLACE CANTILEVER
3/4" = 1'-0"

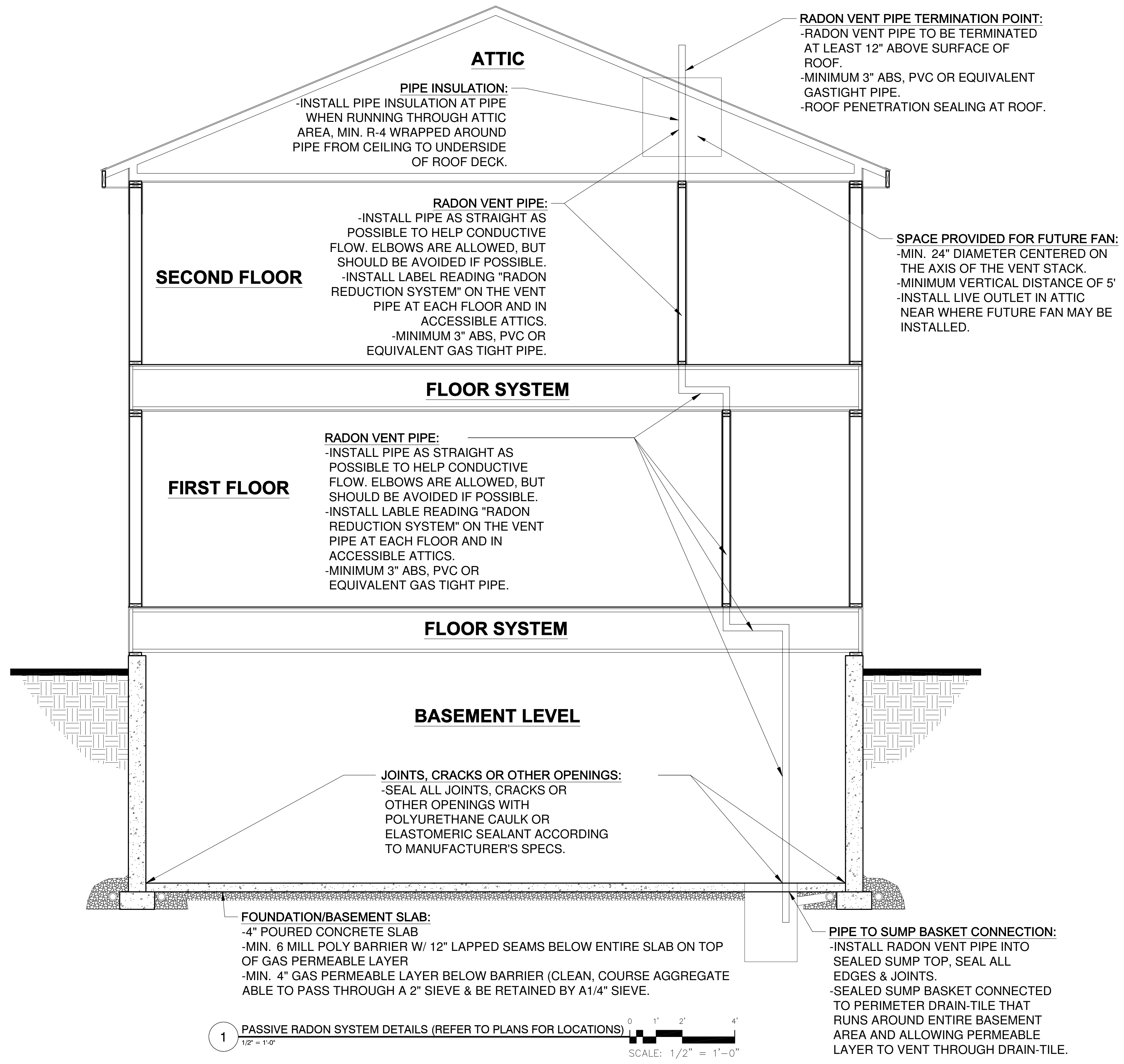


15 ENERGY CODE RIM DETAIL
1-1/2" = 1'-0"

-GLUE AND SEAL THE SUBFLOOR AND PLATES @ EXTERIOR JOINTS -POLY AND SEAL BEHIND ALL WALL, SOFFIT, TIES, AND FIREPLACES WHEN THEY MEET AN EXTERIOR WALL -TAPE AND SEAL THE INTERIOR VAPOR BARRIER -HOUSEWRAP @ RIMS, CORNERS, AND CANTILEVERS SEAMS AND EXTERIOR OPENINGS -LESCO ELECTRICAL BOXES TO BE TAPED AND FOAMED -WINDOW AND DOOR ROUGH OPENINGS TO BE SEALED WITH FOAM -DUCT WORK TO BE TAPED (SUPPLIES AND RETURNS) -MECHANICAL VENTILATION SYSTEM -DIRECT VENT FURNACE AND POWER VENTED WATER HEATER -BACK CAULK ALL WINDOW FLANGES AND THEN TAPE A STRIP OF TYVEC OVER THE TOP -ALL VENDORS MUST SEAL THEIR EXTERIOR PENETRATIONS (INCLUDING PLUMBING, HEATING, AND ELECTRICAL) -CAULK SEAL ALL INTERIOR AND EXTERIOR VERTICAL JOINTS WHERE WALL PANELS MEET OR WALL PANELS MEET THE FND. WALL



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1 PASSIVE RADON SYSTEM DETAILS (REFER TO PLANS FOR LOCATIONS) SCALE: 1/2" = 1'-0"

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REVISION:	REV. DATE:
WALL BRACING UPDATED PER STRUCTURAL ENGINEER	1-9-26

DRAWING TITLE:
WEST HAVEN DETACHED VILLAS 25'

LOCATION:
 BLOOMINGTON, MN

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PAGE DESCRIPTION:
 RADON DETAILS
 SCALED PRINT @ 24X36

BRACED WALL NOTES:

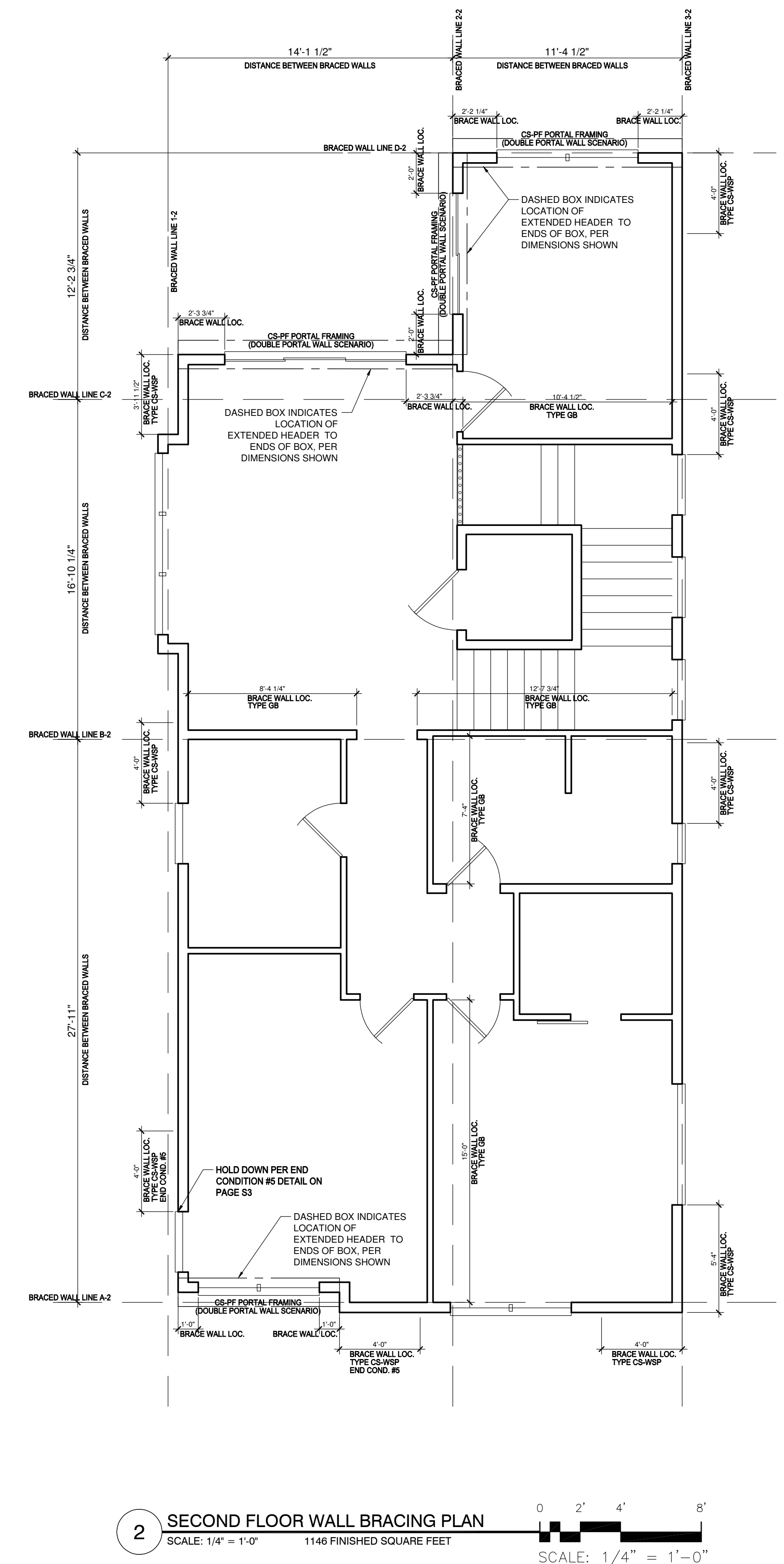
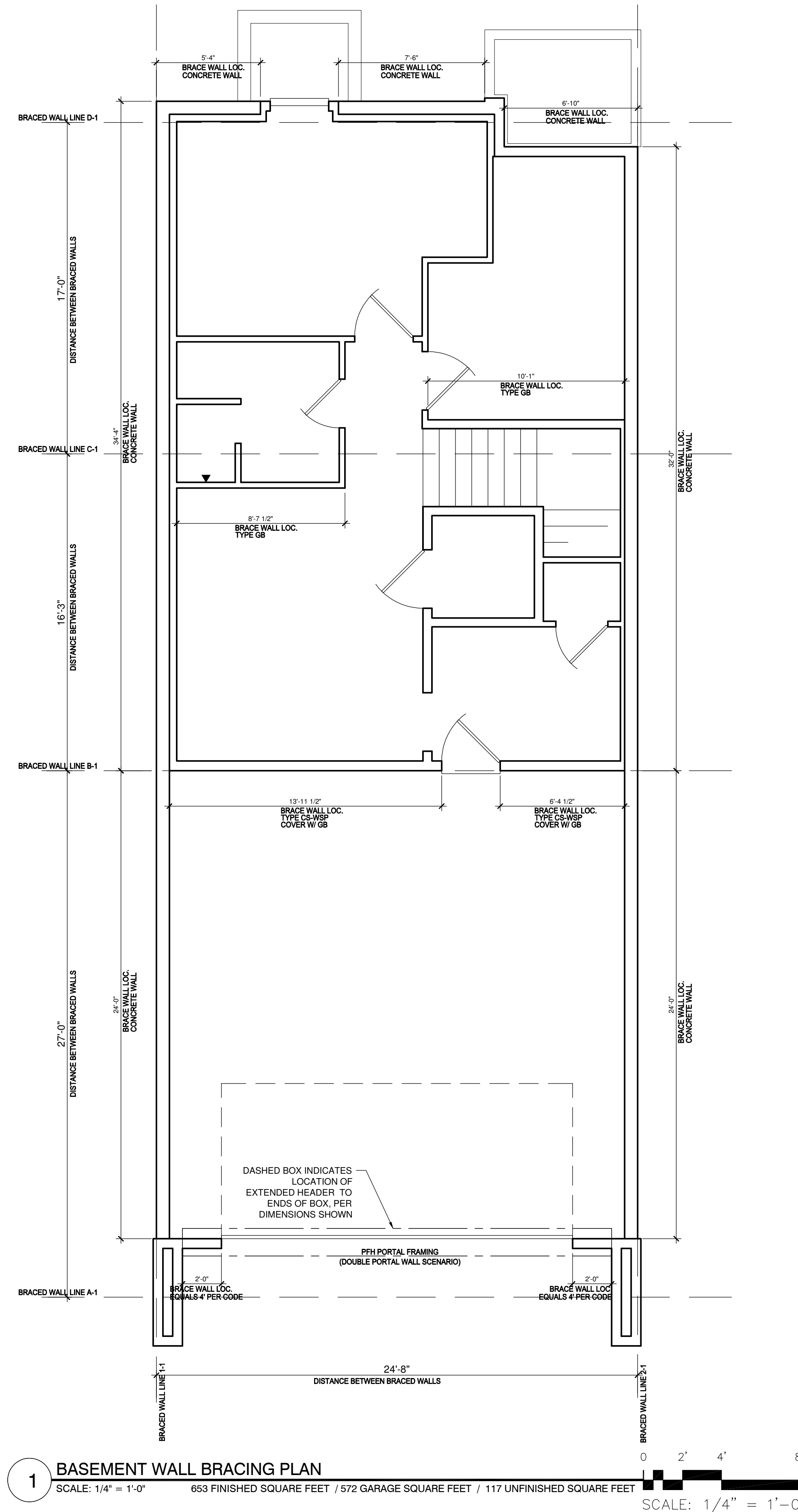
- ALL WALLS DESIGNED PER METHOD CS-WSP OF THE 2020 MN CODE.
- ALL EXTERIOR WALLS ARE TO BE CONTINUOUSLY SHEATHED WITH A MINIMUM 3/8" THICK WOOD PANEL.
- CONNECTION OF WOOD PANEL TO STUDS SHALL BE MIN. 8d COMMON NAILS, 6" O.C. AT EDGES & 12" O.C. AT FIELD OF WOOD PANEL.
- STRUCTURAL PANELS (BRACED WALLS) SHALL BE LOCATED AT EACH END & AT LEAST EVERY 20' BETWEEN PANELS.
- EXTERIOR BRACED WALL LINES SHALL HAVE A BRACED WALL PANEL AT EACH END OF THE BRACED WALL LINE, EXCEPT FOR:
 - BRACED WALL PANELS ARE PERMITTED TO BEGIN NO MORE THAN 10' FROM EACH END OF THE BRACED WALL LINE PROVIDED THAT A 24" PANEL MATCHING TABLE R602.10.7 IS APPLIED.
 - THE END OF EACH BRACED WALL PANEL CLOSEST TO THE CORNER SHALL HAVE A TIE-DOWN DEVICE FASTENED TO THE STUD AT THE EDGE OF THE BRACED WALL PANEL CLOSEST TO THE CORNER AND TO THE FOUNDATION OR FRAMING BELOW. THE TIE-DOWN DEVICE SHALL BE CAPABLE OF PROVIDING AN UPLIFT ALLOWABLE DESIGN VALUE OF AT LEAST 1800 LBS. THE TIE-DOWN DEVICE SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- INTERIOR BRACED WALL LINES SHALL BE DESIGNED/BUILT PER INTERMITTENT METHOD "GB".
 - MINIMUM 1/2" GYPSUM BOARD APPLIED TO EACH SIDE OF 2X4 (OR) 2X6 STUD WALL @ 16" O.C. SPACING OF STUDS W/ DOUBLE TOP PLATE AND SINGLE BTM.
 - ATTACH GYPSUM TO STUDS W/ 1-1/4" SCREWS (TYPE W OR S), 6" O.C. AT EDGE & 6" O.C. AT FIELD.
 - ALL GYPSUM BOARD JOINTS TO BE SOLID BLOCKED W/ 2X MATERIAL
- (PERPENDICULAR WALL/FLOOR) ALL FLOOR SYSTEMS BETWEEN BRACED WALL PANELS TO HAVE A MIN. 2X4 TOP & BOTTOM BLOCKING BOARD PARALLEL TO BRACED WALL PANELS W/ MIN. (3) 16d NAILS ATTACHING BOTTOM/TOP OF BRACED PANEL PLATE TO FLOOR SYSTEM AT BRACED PANEL WIDTH ONLY. 2X4 BLOCKING TO BE SET BETWEEN FLOOR SYSTEM MEMBERS. SOLID RIM MAY BE USED (FIG. 5 & 6).
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- NOTE:** NOTES 7 & 8 ABOVE APPLY TO PERPENDICULAR FRAMING. WHEN PARALLEL FLOORS/ROOF SYSTEMS ARE PRESENT, THE FLOOR/ROOF SYSTEM IS TO HAVE BLOCKING MATERIAL ALLOWING FOR NAILING OF BRACED WALL PANEL INTO SYSTEM ABOVE/BELOW SAID WALL (FIGURE 6).

BRACED WALL PANEL UPLIFT LOAD PATH:

BRACED WALL PANELS LOCATED AT EXTERIOR WALLS THAT SUPPORT ROOF RAFTERS OR TRUSSES (INCLUDING STORIES BELOW TOP STORY) SHALL HAVE THE FRAMING MEMBERS CONNECTED IN ACCORDANCE WITH:

- WHERE THE NET UPLIFT VALUE AT THE TOP OF A WALL EXCEEDS 100 PLF, INSTALLING APPROVED UPLIFT FRAMING CONNECTORS TO PROVIDE A CONTINUOUS LOAD PATH FROM THE TOP OF THE WALL TO THE FOUNDATION OR TO A POINT WHERE THE UPLIFT FORCE IS 100 PLF OR LESS. THE NET UPLIFT VALUE SHALL BE AS DETERMINED BY ONE OF THE FOLLOWING:
 - THE BASIC WIND SPEED DOES NOT EXCEED 115 MPH, THE WIND EXPOSURE CATEGORY IS B, THE ROOF PITCH IS 5:12 OR GREATER, AND THE ROOF SPAN IS 32' OR LESS
(OR)
 - THE NET UPLIFT VALUE AT THE TOP OF A WALL DOES NOT EXCEED 100 PLF. THE NET UPLIFT VALUE SHALL BE DETERMINED IN ACCORDANCE WITH SECTION R802.11 AND SHALL BE PERMITTED TO BE REDUCED BY 60 PLF FOR EACH FULL WALL ABOVE.
- WHERE THE UPLIFT FORCE DOES NOT EXCEED 200 POUNDS, RAFTERS AND TRUSSES SPACED NOT MORE THAN 24 INCHES ON CENTER SHALL BE PERMITTED TO BE ATTACHED TO THEIR SUPPORTING WALL ASSEMBLIES IN ACCORDANCE WITH TABLE R602.3(1)
 - RAFTER OR ROOF TRUSS TO PLATE, TOE NAIL:** MINIMUM (3) 16d BOX NAILS OR (3) 10d COMMON NAILS. (2) TOE NAILS ON ONE SIDE AND (1) TOE NAIL ON OPPOSITE SIDE OF EACH RAFTER OR TRUSS. (MANUF. METAL CONNECTOR MAY BE SUBSTITUTED, VERIFY W/ MANUF. DETAILS).
 - WALL PANEL TO STUDS:** CONNECTION OF WOOD PANEL TO STUDS SHALL BE MIN. 6d COMMON NAILS, 6" O.C. AT EDGES & 12" O.C. AT FIELD OF WOOD PANEL.

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 SIGNED: *Robbie Hyland*
 PRINTED: ROBBIE HYLAND
 DATE: 1/9/2026 LICENSE NO.: 49580



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REVISION:	REV. DATE:
WALL BRACING UPDATED PER STRUCTURAL ENGINEER	1-9-26

DRAWING TITLE:
WEST HAVEN DETACHED VILLAS 25
LOCATION:
 BLOOMINGTON, MN

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PAGE DESCRIPTION:
 BASEMENT & 2ND FLOOR WALL BRACING PLANS
 SCALED PRINT @ 24X36

BRACED WALL NOTES:

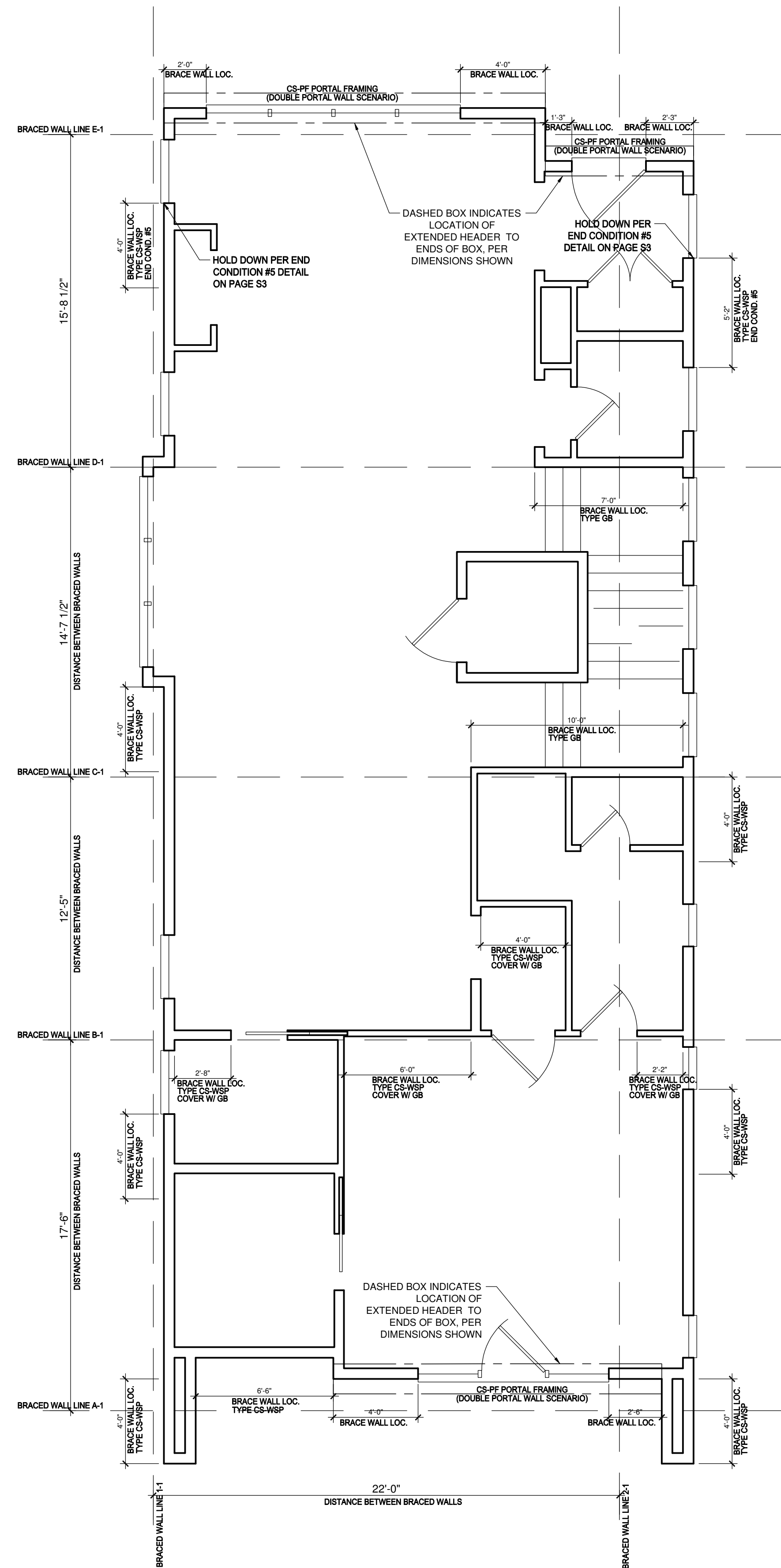
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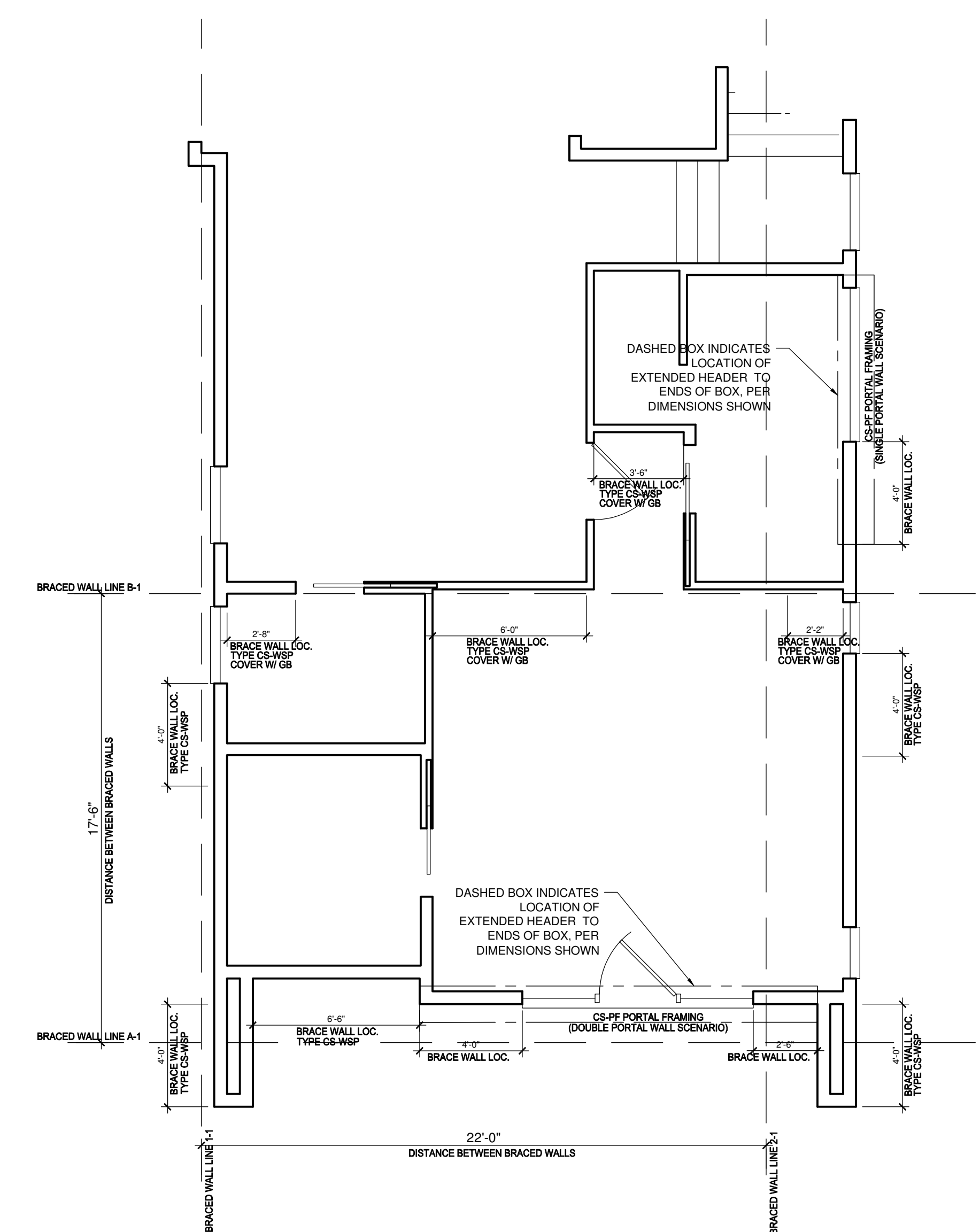
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1 FIRST FLOOR WALL BRACING PLAN
 SCALE: 1/4" = 1'-0" 1485 FINISHED SQUARE FEET



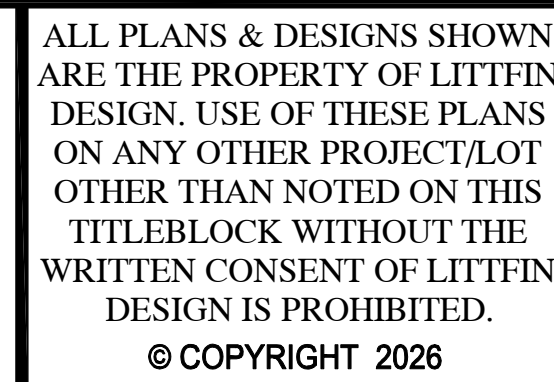
2 OPTIONAL TUB WALL BRACING PLAN
 SCALE: 1/4" = 1'-0" 1146 FINISHED SQUARE FEET

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1-9-26	S2	1ST FLOOR WALL BRACING PLANS

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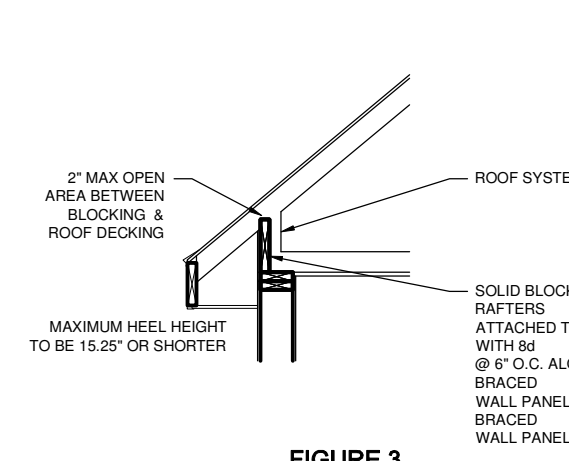


FIGURE 3
BRACED WALL PANEL CONNECTION
TO PERPENDICULAR ROOF SYSTEM

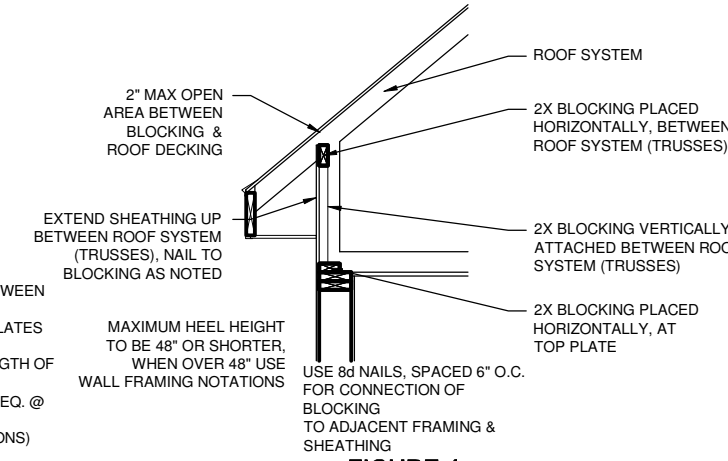


FIGURE 4
BRACED WALL PANEL CONNECTION
TO PERPENDICULAR ROOF SYSTEM
(WHEN OVER 15.25')

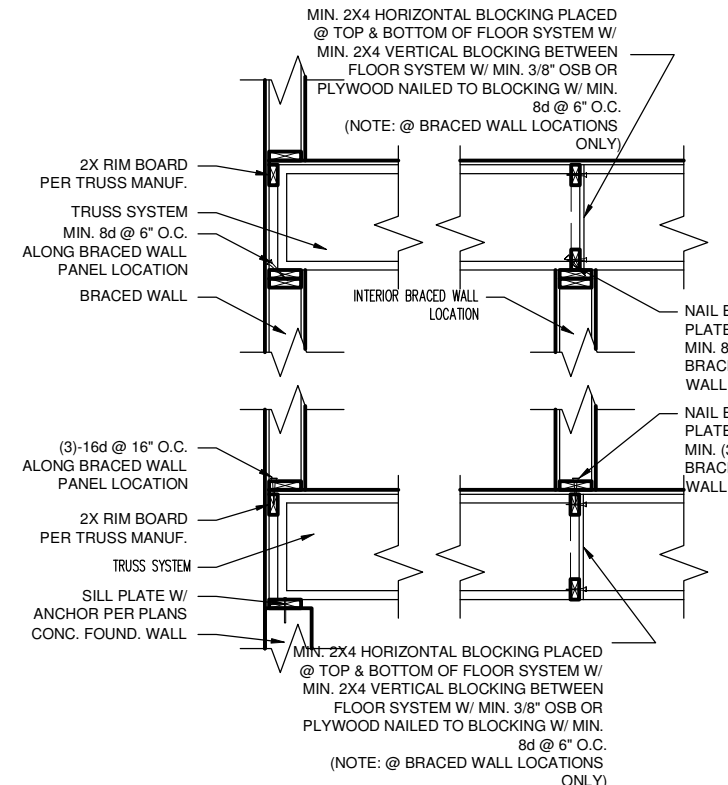


FIGURE 5
BRACED WALL PANEL CONNECTION
WHEN PERPENDICULAR TO FLOOR/CEILING FRAMING

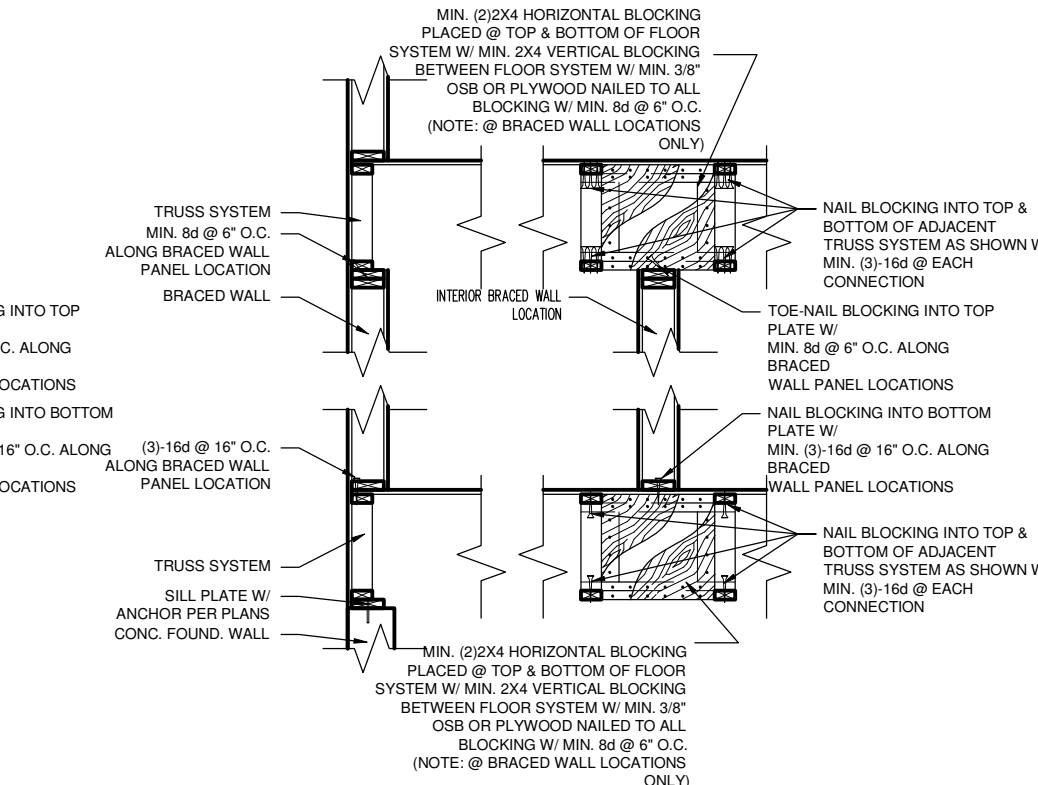
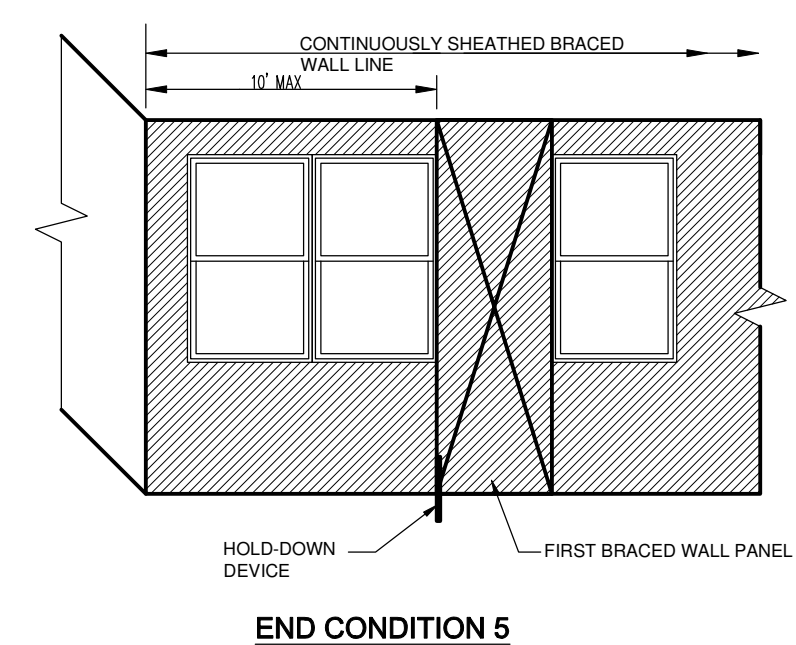
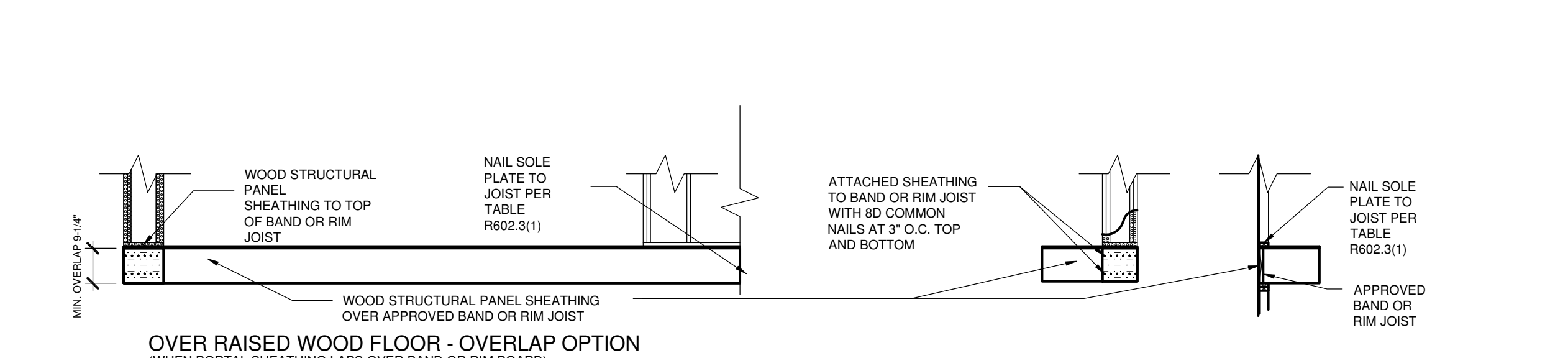
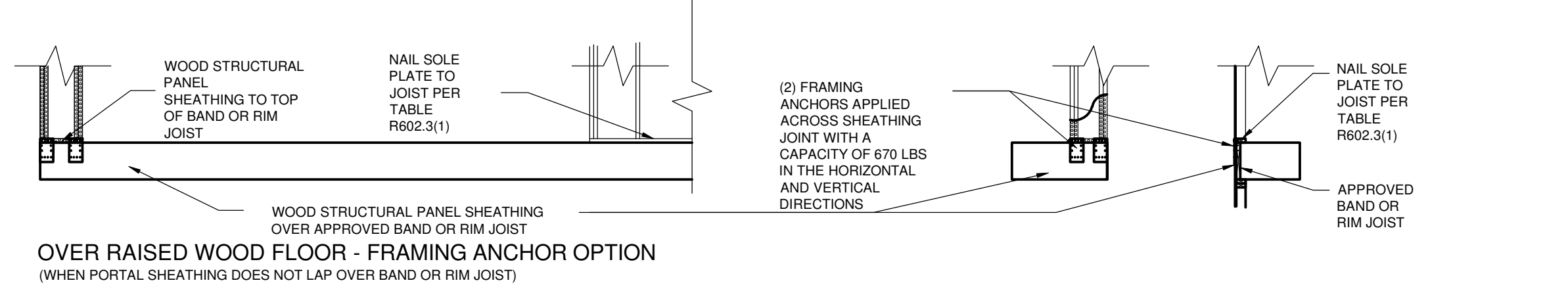
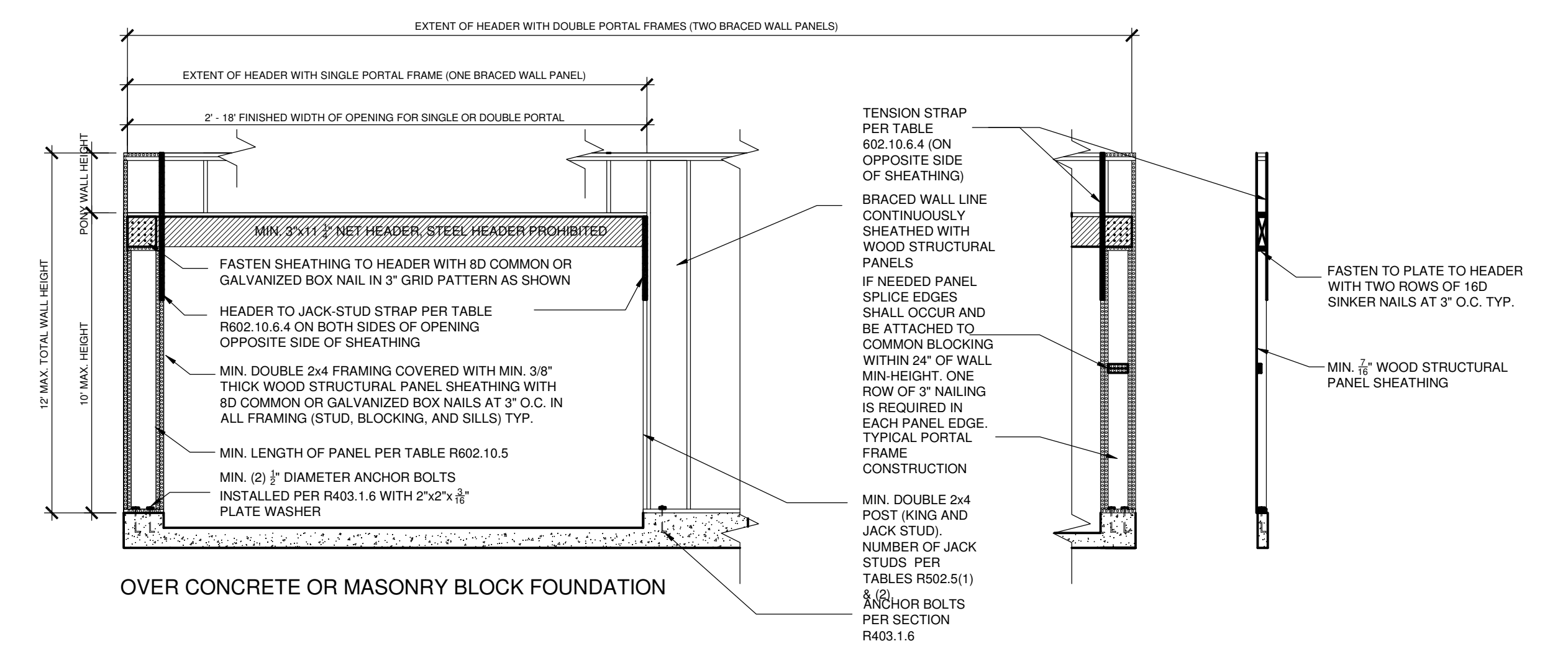


FIGURE 6
BRACED WALL PANEL CONNECTION
WHEN PARALLEL TO FLOOR/CEILING FRAMING



END CONDITION 5
HOLD DOWN DEVICE: 800 LBS CAPACITY FASTENED TO THE EDGE OF THE BRACED WALL PANEL CLOSEST TO THE CORNER AND TO THE FOUNDATION OR FLOOR FRAMING BELOW

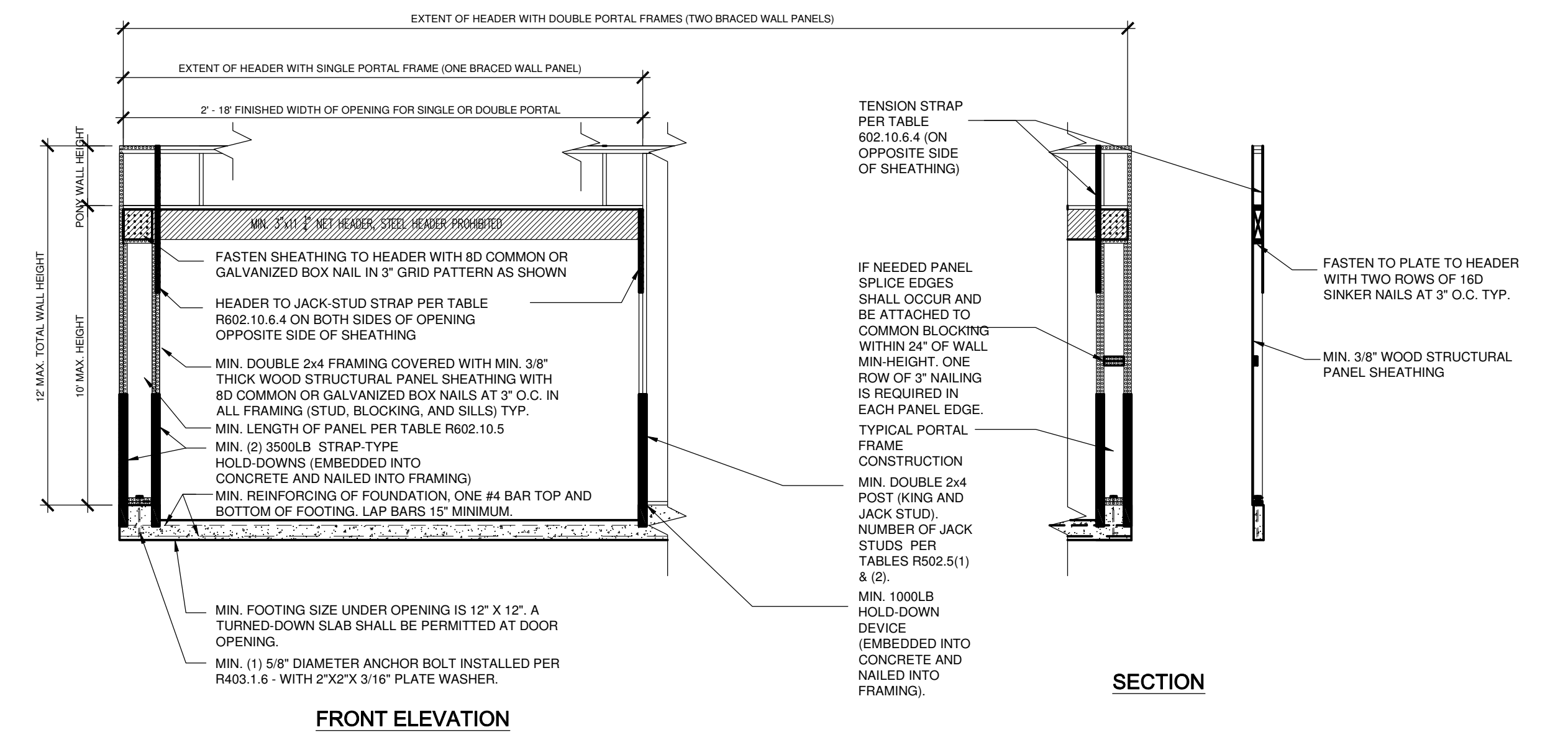


FRONT ELEVATION

SECTION

FOR S1: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

FIGURE BRACED WALL PANEL 1
METHOD CS-PF-CONTINUOUSLY SHEATHED PORTAL FRAME PANEL CONSTRUCTION



FRONT ELEVATION

SECTION

FIGURE BRACED WALL PANEL 2
METHOD PFH-PORTAL FRAME PANEL WITH HOLD-DOWNS

REVISION: WALL BRACING UPDATED PER STRUCTURAL ENGINEER		REV. DATE: 1-9-26	DRAWING TITLE: WEST HAVEN DETACHED VILLAS 25'	LOCATION: BLOOMINGTON, MN	ALL PLANS & DESIGNS SHOWN ARE THE PROPERTY OF LITTFIN DESIGN. USE OF THESE PLANS ON ANY OTHER PROJECT/LOT OTHER THAN NOTED ON THIS TITLEBLOCK WITHOUT THE WRITTEN CONSENT OF LITTFIN DESIGN IS PROHIBITED. © COPYRIGHT 2026		LITTFINDESIGN.COM MLITTFIN@HOTMAIL.COM 320-224-7844 WINSTED, MN	CURRENT DATE: 1-9-26	PAGE L S3 D	PAGE DESCRIPTION: BRACED WALL DETAILS SCALED PRINT @ 24X36
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WEST HAVEN DETACHED VILLAS

PLAN INFORMATION:

FRAMING NOTES:

- ALL EXTERIOR WALLS TO BE 16" O.C. WITH DOUBLE TOP PLATE UNLESS NOTED OTHERWISE. (U.N.O)
- WALL FRAMING SHALL BE S.P.F. STUD GRADE OR BETTER UNLESS OTHERWISE NOTED.
- ALL HEADERS SHALL BE PER PLAN.
- ALL EXTERIOR HEADERS SHALL HAVE (1)2X6 BEARING STUD & (1) 2X6 FULL HEIGHT KING STUD ON EACH SIDE U.N.O. (REVIEW PLANS)
- ALL INTERNAL HEADERS & BEAMS SHALL HAVE (1)2X6 OR (1)2X4 BEARING STUD ON EACH SIDE UNLESS OTHERWISE NOTED.
- EXTERIOR SHEATHING SHALL BE 7/16" MATERIAL CONSISTING OF ORIENTED STRAND BOARD (OSB).-ALL FLOOR AND CEILING SYSTEMS TO BE CHECKED AND DESIGNED BY THE DESIGNATED MANUFACTURER. FLOOR PLANS TO BE ON SITE.
- HEADER SIZES ARE TO BE USED PER PLAN AND DEVIATION FROM ANY SIZE MUST BE APPROVED BY DESIGNERS.
- PRESSURE TREATED WOOD IS TO BE USED WHERE WOOD IS IN CONTACT WITH CONCRETE AND AT 2X6 MUD SILL. TREATED MEMBERS TO BE S.Y.P.#2 OR BETTER.
- FOR OPENINGS IN EXTERIOR WALLS OR WALLS WITH LATERAL LOADING:
 - 0'-0" - 4'-0" = 1 JACK STUD
 - 4'-0" - 8'-0" = 2 JACK STUDS
 - 8'-0" - 12'-0" = 3 JACK STUDS
 - GREATER THAN 12' AT OPENINGS = CONSULT ENGINEERING
- POSTS CALLED OUT ARE NUMBER OF TRIMMER/JACK STUDS REQUIRED PER SIDE OF OPENING.

CONCRETE NOTES:

- ALL CONCRETE FOOTINGS AND FOUNDATION SYSTEMS ARE DESIGNED FOR A 2000 P.S.F.SOIL.
- FOUNDATION WALLS SHALL BE FULL HEIGHT AT UNBALANCED FILL GREATER THAN 3'4".
- 1/2" ANCHOR BOLTS EMBEDDED 7" MINIMUM @ 6' O.C. MAX. 12" MIN FROM EACH END. MINIMUM OF 2 BOLTS IN EACH SILL PLATE (REFER TO STRUCTURAL PAGES).
- PAD FOOTING REINFORCEMENT IS TO BE LOCATED (3") FROM BOTTOM OF FOOTING TYP. (WHEN REQUIRED)REFER TO STRUCTURAL PAGES FOR ADDITIONAL INFORMATION REGARDING RE-BAR/ETC.
- MIN. 5000 PSI CONCRETE @ ALL FOOTINGS

INSULATION:

- ALL EXTERIOR WALLS TO HAVE A MINIMUM RATING OF R-20.
- ALL ATTIC SPACES ARE TO HAVE A MINIMUM RATING OF R-49. ALL FLOOR SPACES OVER UNCONDITIONED SPACE OR CANTILEVERED ARE TO BE INSULATED TO MIN.R30.

SQUARE FOOTAGE CALCULATIONS	
BASEMENT:	
FINISHED SQ. FTG.	1720 SQ.FT
UNFINISHED SQ. FTG.	125 SQ.FT.
OVERALL BASEMENT SQ. FTG.	1845 SQ.FT.
FIRST FLOOR:	
FINISHED SQ. FTG.	1893 SQ.FT.
GARAGE SQ. FTG.	702 SQ.FT.
OVERALL FIRST FLOOR SQ. FTG.	2595 SQ.FT.
TOTAL FINISHED SQ. FTG:	3613 SQ.FT.
GRAND TOTAL SQ. FTG:	4440 SQ.FT.

SHEETROCK/GYPSUM BOARD:

- CEILINGS ARE TO HAVE 5/8" NON-SAG GYPSUM BOARD UNLESS OTHERWISE NOTED.
- ALL WALLS ARE TO HAVE 1/2" GYPSUM BOARD UNLESS NOTED OTHERWISE.
- GARAGE CEILING AND WALLS THAT ADJOIN HOUSE WALLS ARE TO BE 5/8" GYPSUM BOARD PER CODE.

DOORS & WINDOWS:

- ALL WINDOWS AND DOORS TO BE DOUBLE PANE GLASS PANELS WITH LOW-E RATINGS.
- WINDOWS WITHIN 24" OF A DOOR SWING MUST BE TEMPERED PER CODE.
- ANY WINDOW ABOVE A TUB/WET AREA MUST BE TEMPERED PER CODE.
- ANY WINDOW WITHIN A STAIRWAY MUST BE TEMPERED PER CODE.
- WINDOW GLAZING MUST BE AT LEAST 18" A.F.F. WHEN WINDOW IS ABOVE 6' FROM GRADE. IF WITHIN 18", WINDOW MUST BE TEMPERED.
- ALL BEDROOMS TO HAVE AT LEAST ONE WINDOW THAT HAS A CLEAR EGRESS OPENING OF 5.7 SQ. FT. WITH MIN. DIMENSIONS OF 24" IN HEIGHT & 20" IN WIDTH, SILL HEIGHT NOT TO BE GREATER THAN 44" A.F.F.
- WINDOWS WITH SILLS WITHIN 2' OF THE FLOOR THEY SERVE AND ARE 72" ABOVE GRADE MUST EITHER HAVE A FALL PREVENTION OR OPENING LIMITER DEVICE PER CODE.

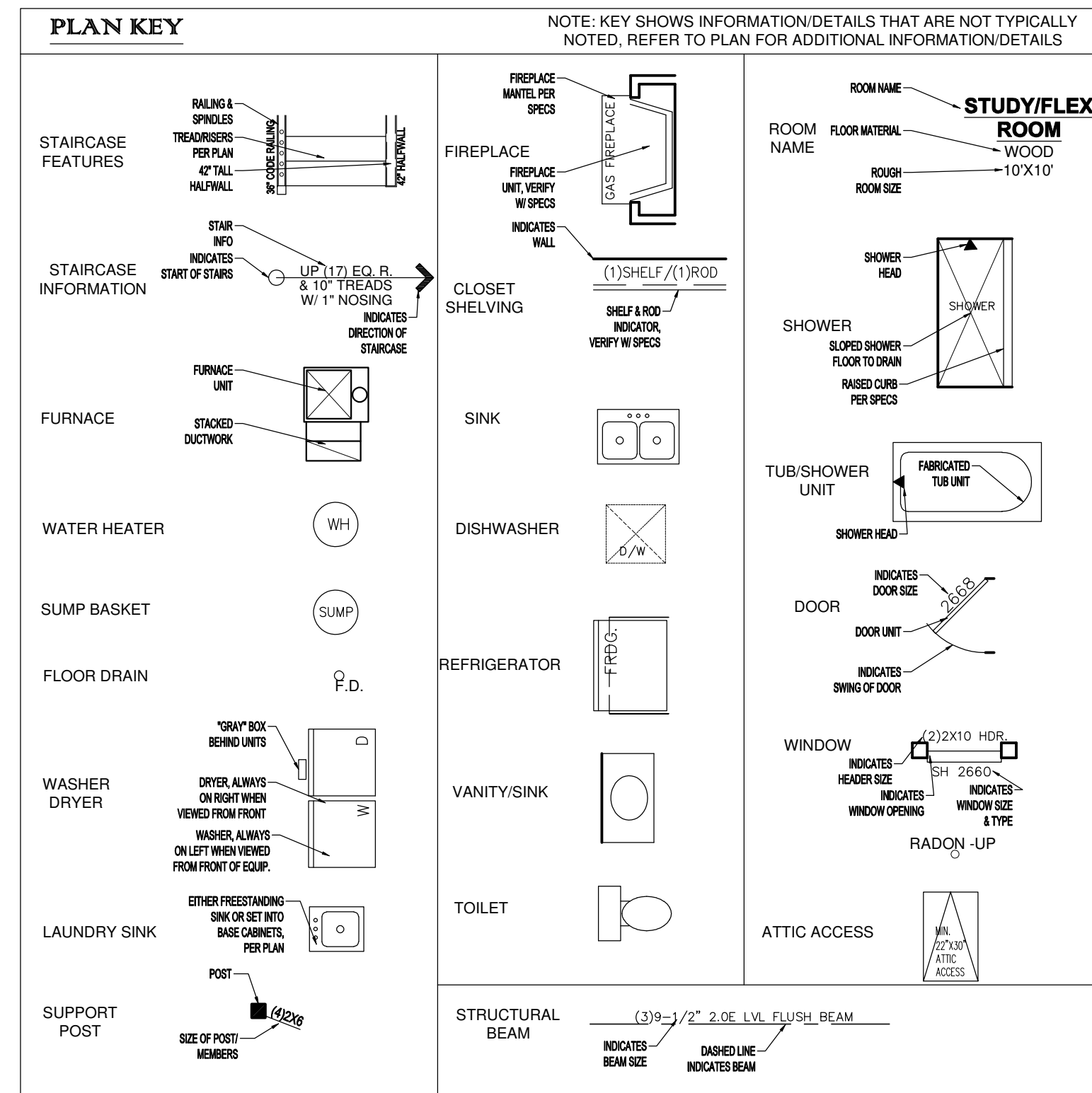
MECHANICAL & ELECTRICAL:

- ALL ELECTRICAL AND MECHANICAL EQUIPMENT TO BE VERIFIED AND INSTALLED PER CODE BY APPROVED TRADES AND INSTALLERS.
- HVAC CONTRACTOR TO VERIFY LAYOUT FOR DUCT-RUNS BEFORE INSTALLATION. IF MODIFICATION IS REQUIRED, REPORT INFORMATION/CHANGES TO CONTRACTOR & LITTFIN DESIGN.



SHEET INDEX:

C	COVER
A1	FRONT & LEFT ELEVATION
A2	REAR & RIGHT ELEVATION
A3	ROOF PLAN
A4	FOUNDATION PLAN
A5	FINISHED BASEMENT
A6	FIRST FLOOR PLAN
D1	BUILDING SECTION
D2	BUILDING SECTION
D3	DETAILS
R1	RADON DETAILS
S1	BSMT. WALL BRACING
S2	1ST FLOOR WALL BRACING
S3	WALL BRACING DETAILS



CODE INFORMATION:

SINGLE FAMILY CONSTRUCTION TYPE IRC-1
 -2020 MINNESOTA STATE RESIDENTIAL CODE
 -2023 NATIONAL ELECTRICAL CODE
 -2020 MINNESOTA STATE MECHANICAL & FUEL GAS CODE
 -2020 MINNESOTA STATE FIRE CODE
 -2020 MINNESOTA PLUMBING CODE

SOIL TYPE:

DESIGNED WITH 2000 PSF SOILS, ALL FOUNDATION CONSTRUCTION MUST FACTOR IN THIS AT A MINIMUM.

WIND EXPOSURE:

DESIGNED WITH "EXPOSURE C" CLASSIFICATIONS AND WIND GUSTS OF 115 MPH PER 2020 MN RESIDENTIAL CODE REGULATIONS.

GENERAL NOTES:

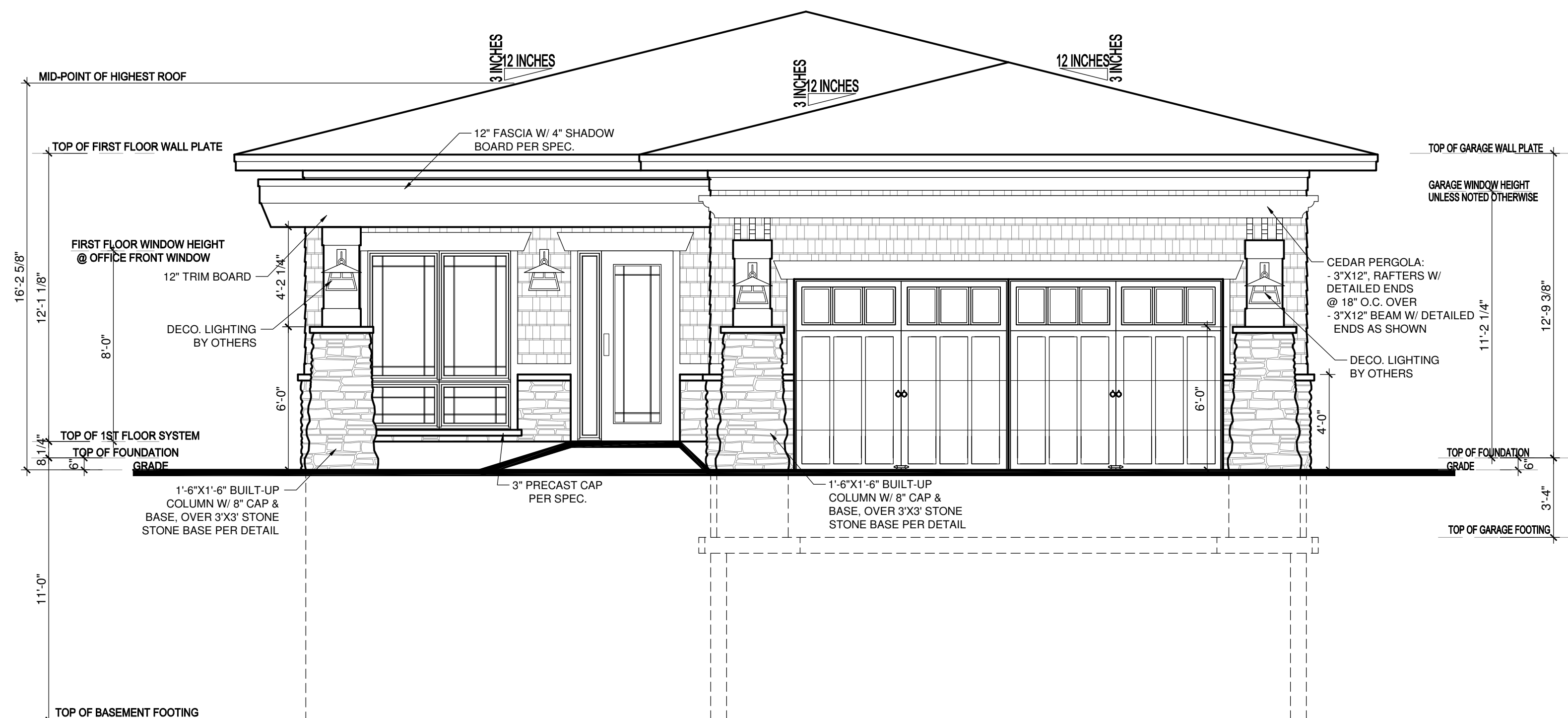
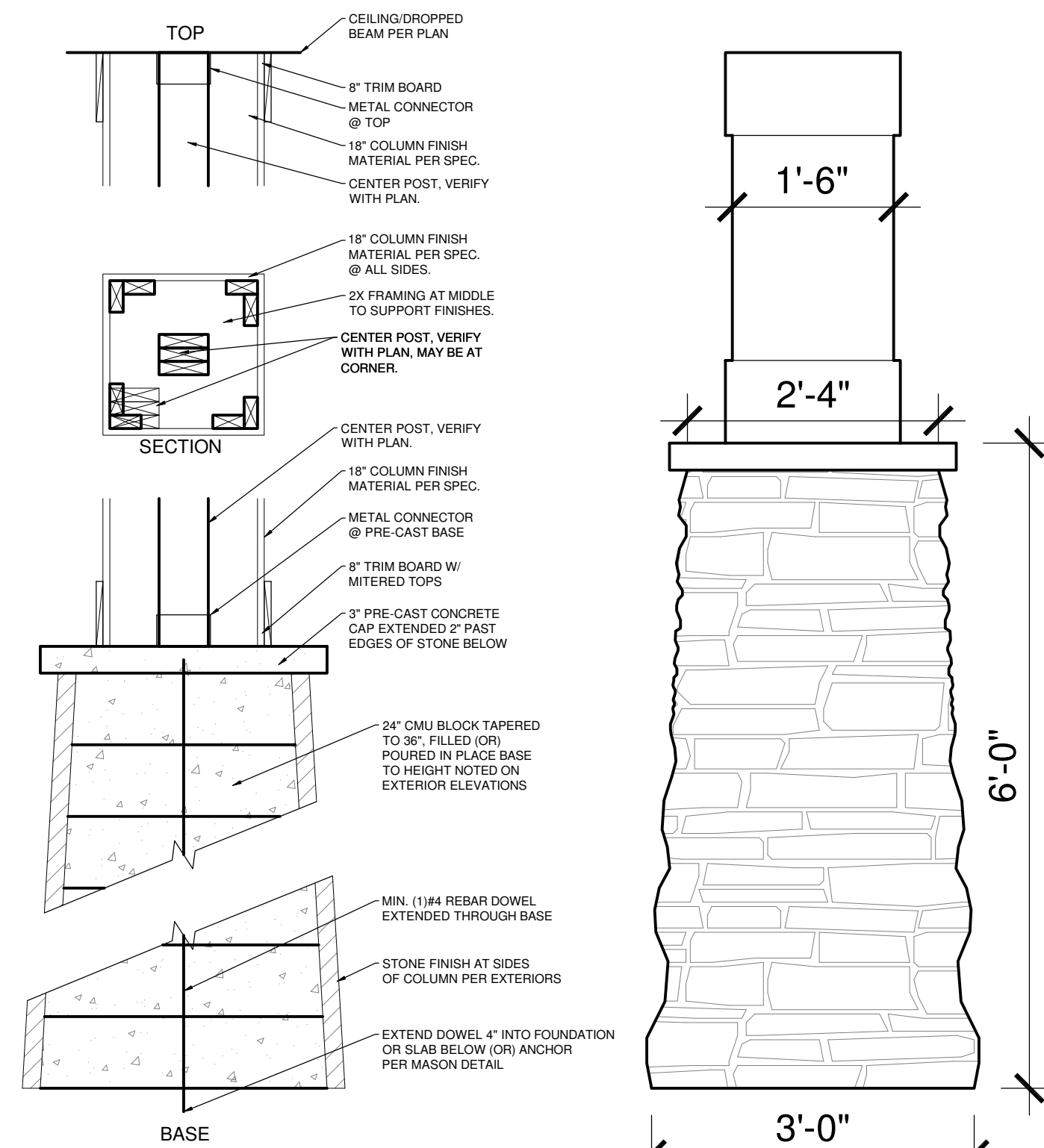
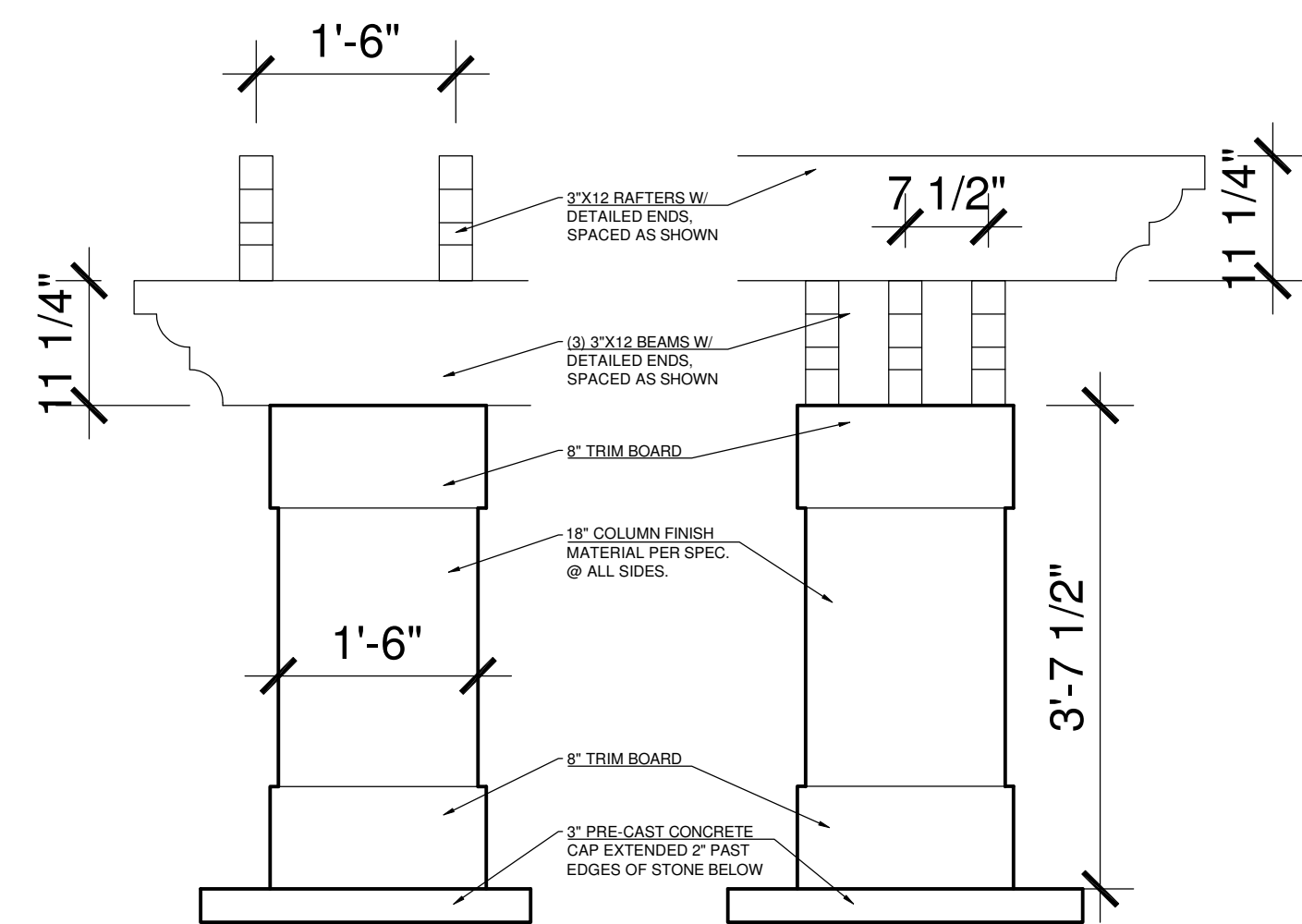
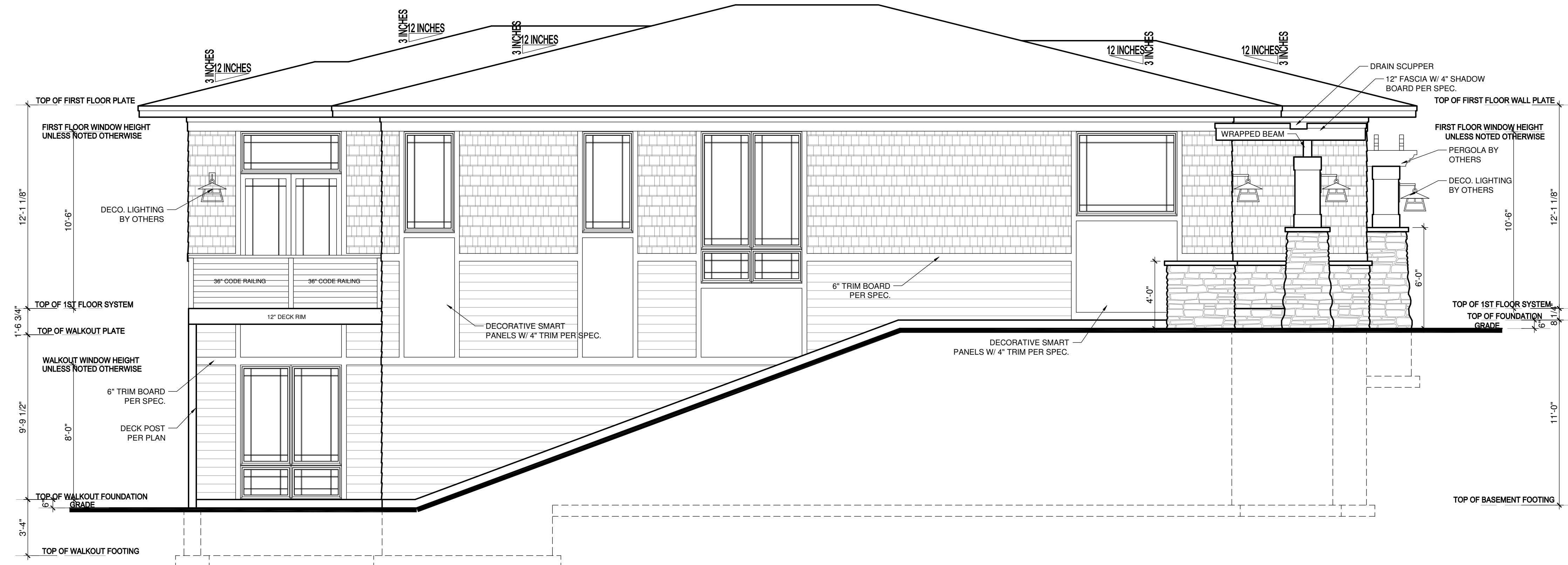
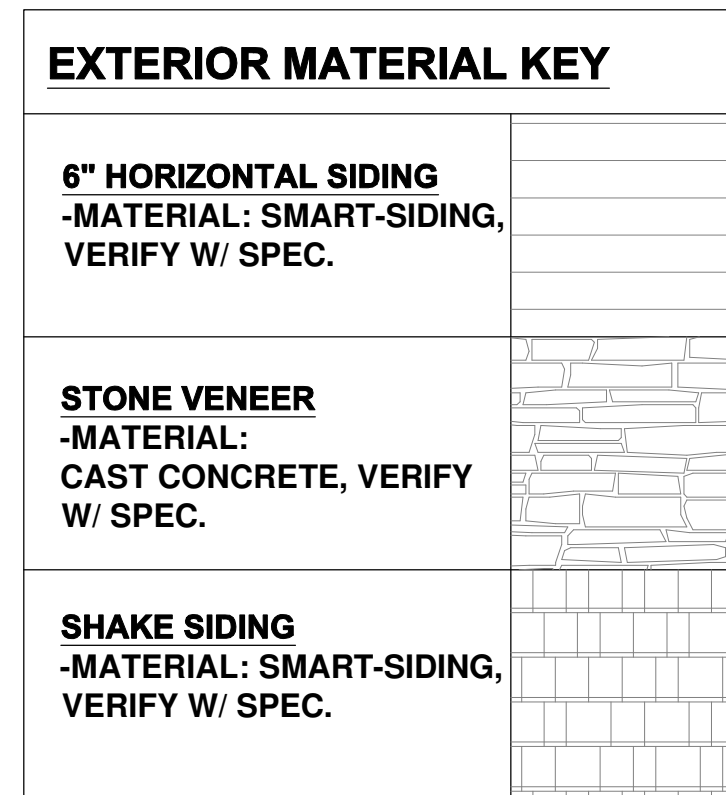
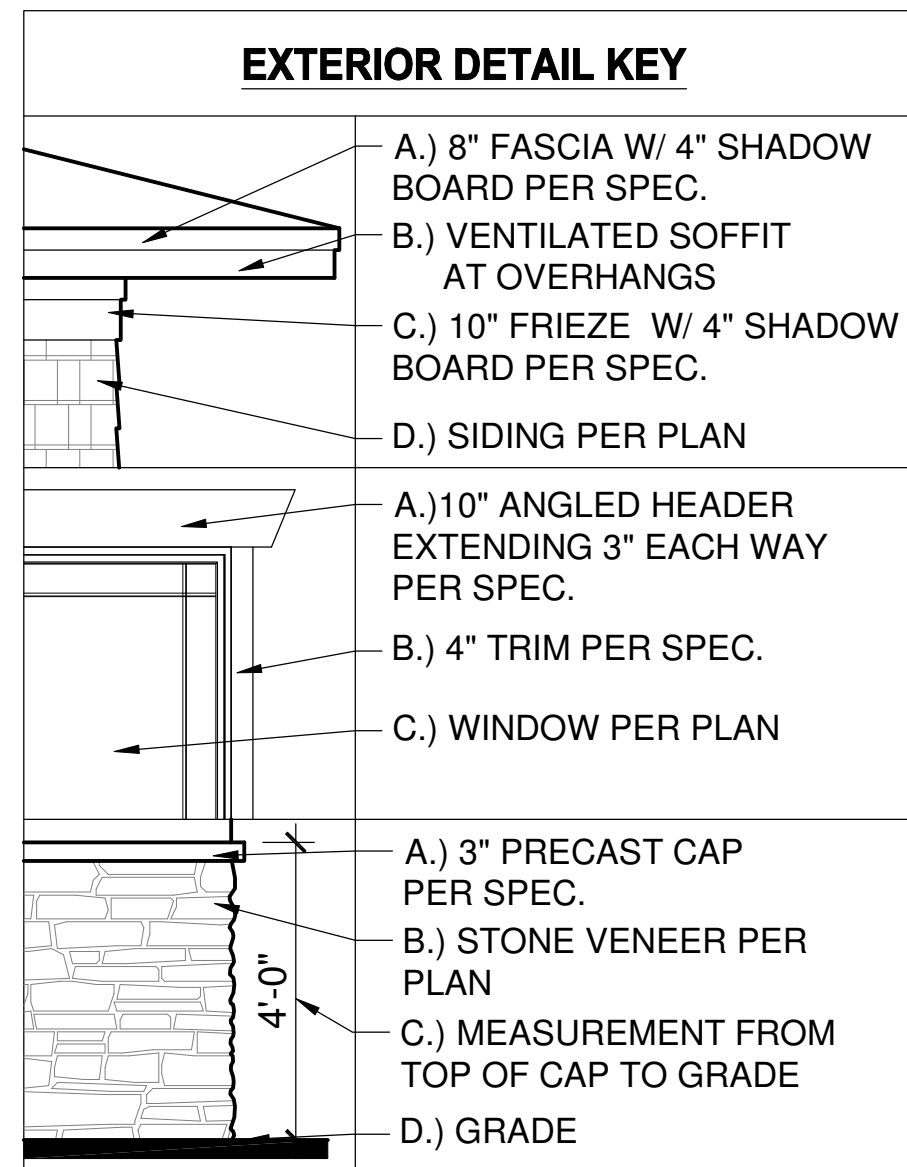
-ALL FOUNDATION WALL STRUCTURAL INFORMATION USED TO CONSTRUCT THE FOUNDATION SYSTEM IS TO BE ON SITE WHEN POURING OR BUILDING WALLS.
 -ALL STRUCTURAL BEAMS, POSTS & TALL WALLS ARE TO BE BUILT PER I-LEVEL SPECIFICATIONS.
 -ALL MANUFACTURED FLOOR & ROOF TRUSSES ARE TO BE INSTALLED PER MANUFACTURERS SPECIFICATIONS.
 -ALL MANUFACTURED FLOOR & ROOF TRUSS SPECIFICATIONS ARE TO BE ON SITE DURING INSTALLATION.

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		WEST HAVEN DETACHED VILLAS 42'				12-23-25	C	COVER SHEET
		LOCATION: ADDRESS TBD, BLOOMINGTON, MN						SCALED PRINT @ 24X36

GENERAL EXTERIOR NOTES:

- ICE AND WATER BARRIER @ BOTTOM 6" OF ALL ROOF LINES, EXTEND BARRIER MIN. 3" ON EACH SIDE OF VALLEY, COVER ENTIRE FACE OF ROOF SADDLES. VERIFY ADDITIONAL LOCATIONS OF ICE AND WATER BARRIER AS NEEDED IN FIELD.
- PROVIDE ROOF AND SOFFIT VENTS PER IRC CODE REGULATIONS.
- ALL FURNACE FLUES, PLUMBING VENTS, FIREPLACE VENTS, AND OTHER PENETRATIONS THROUGH ROOF OR WALLS TO EXTEND THROUGH REAR OF HOME WHENEVER POSSIBLE.
- ALL PENETRATIONS THROUGH EXTERIOR WALLS OR ROOFING MUST BE SEALED AND FLASHED PER MANUFACTURE. SPECIFICATIONS AND IRC CODE REGULATIONS.
- SUPPLY AT LEAST 6" OF SPACE BETWEEN BOTTOMS OF WINDOWS AND ROOFS.
- ALL BEAMS HOLDING UP PORCH ROOFS ARE TO BE DROPPED UNLESS OTHERWISE NOTED.
- SUPPLY DRIPCUPS ON ALL WINDOWS AND DOORS.
- ALL EXTERIOR TRIM TO BE FLASHED PER CODE
- SUPPLY SEPARATION BETWEEN WOOD, COMPOSITE WOOD, AND ANY OTHER WOOD MATERIAL PER SPECIFICATIONS.
- HOLD STONE OFF GRADE MINIMUM OF 3" OR PER TRADE SPECIFICATIONS.
- REFER TO MANUFACTURE SPECIFICATIONS FOR STONE.
- GARAGE BUCK BOARD MATERIAL IS TO BE COMPOSITE WOOD AND SIZED TO COVER THE EDGE OF STONE.
- GRADE CONDITIONS MAY VARY ON SITE.



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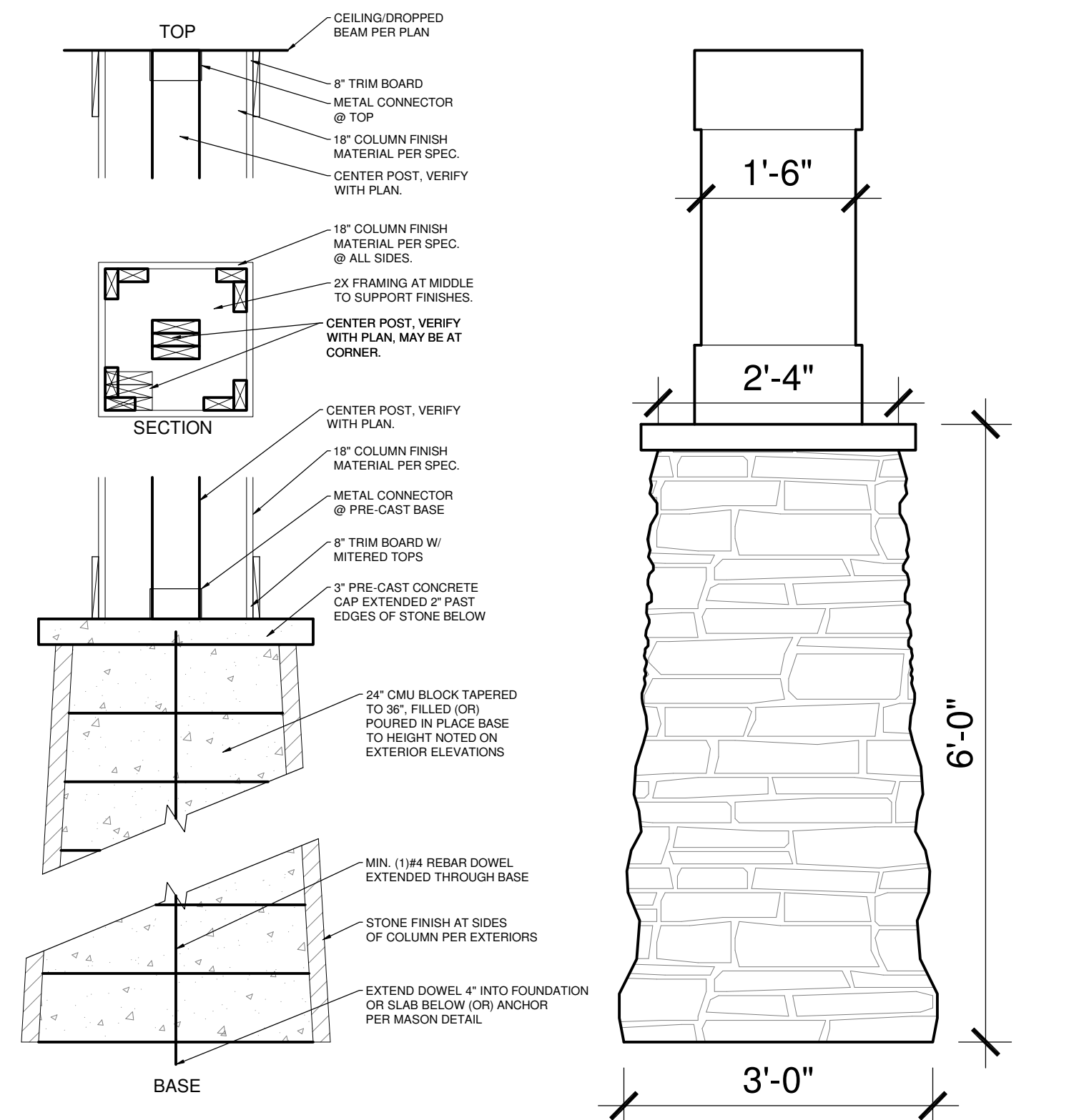
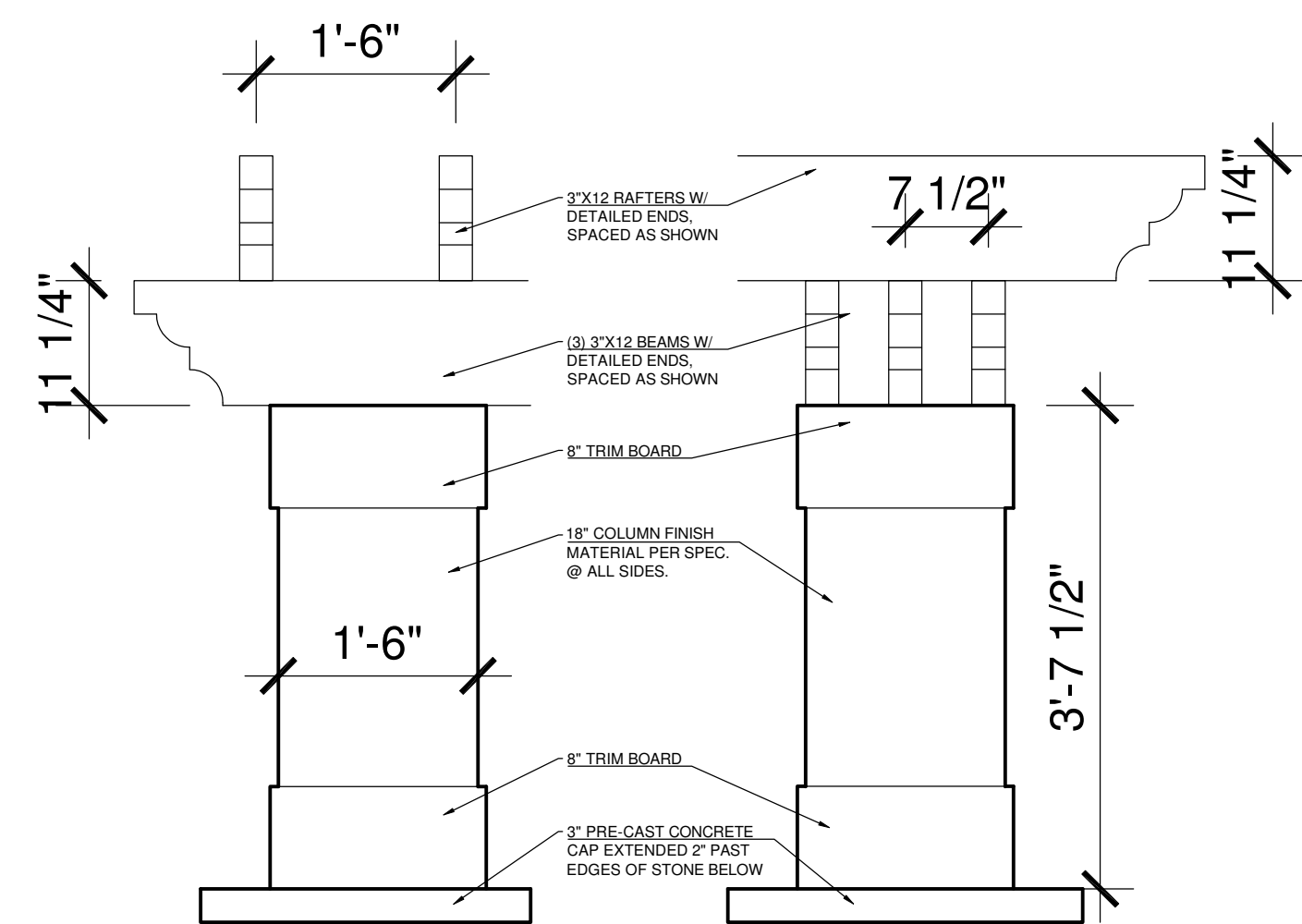
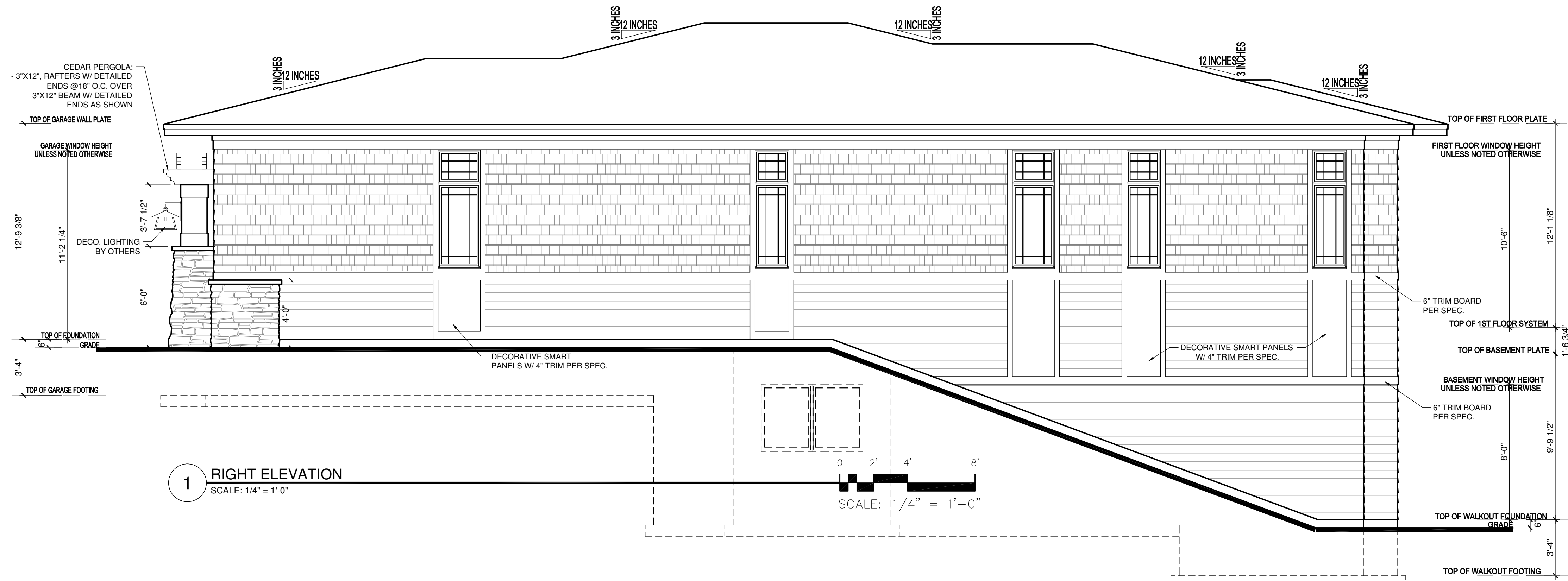
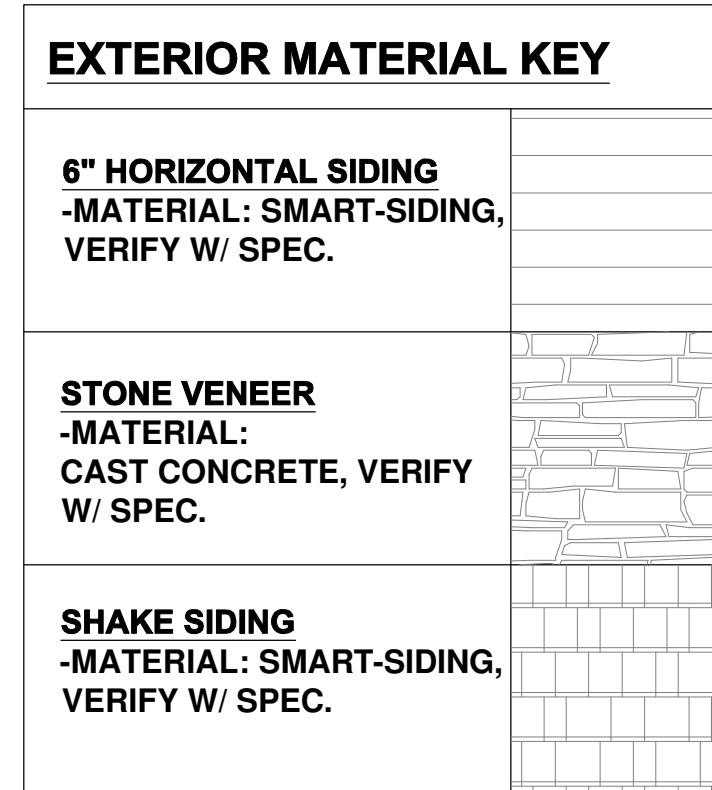
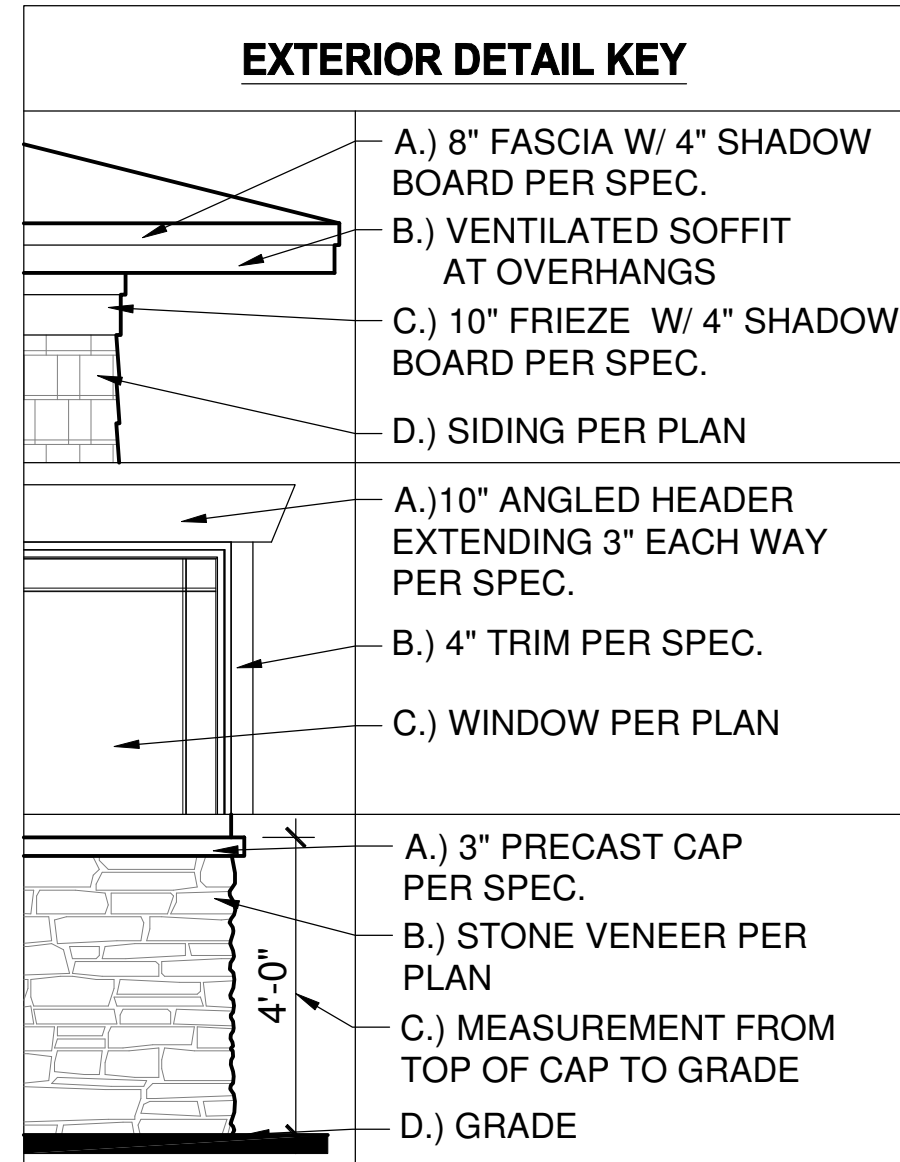
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12-23-25

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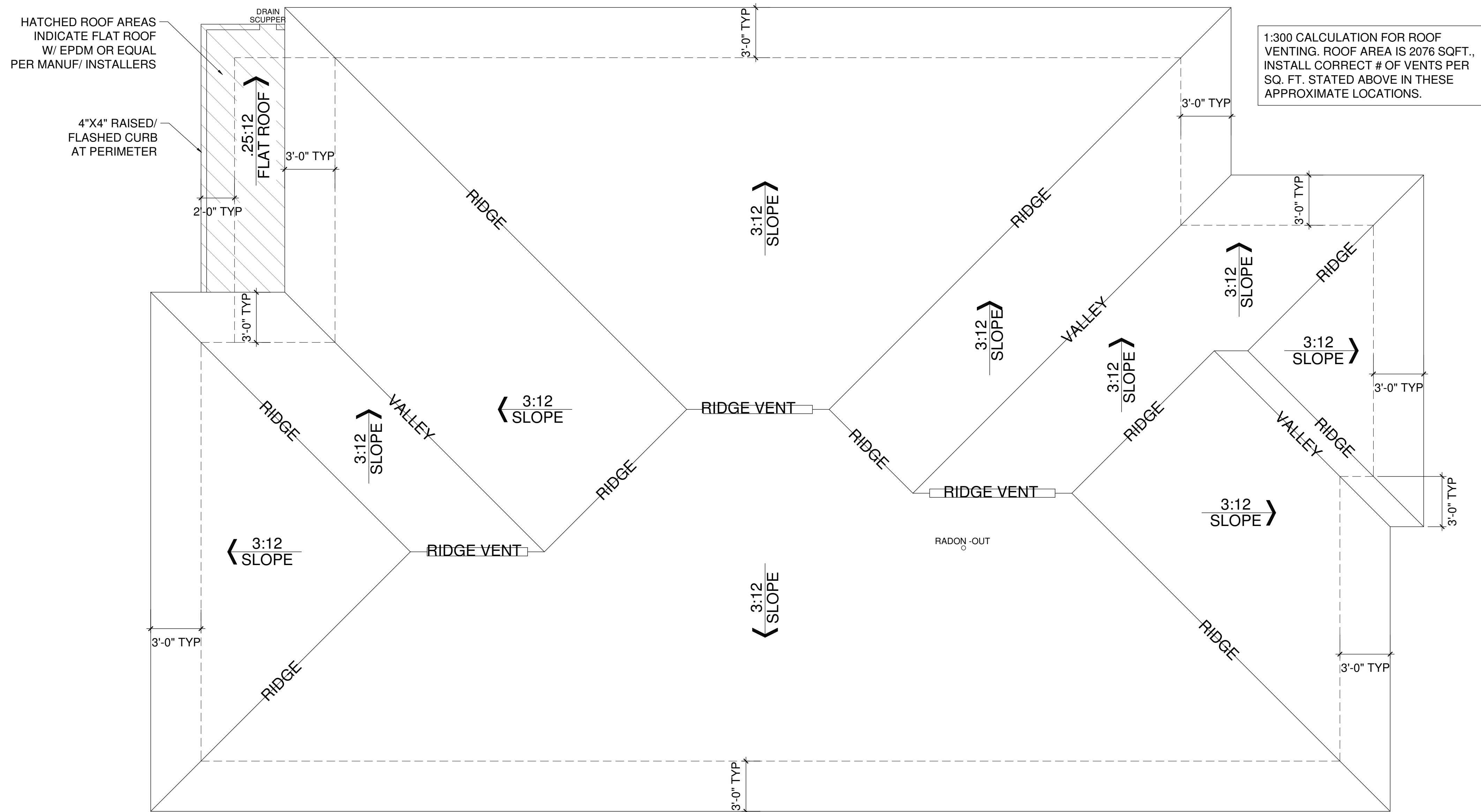
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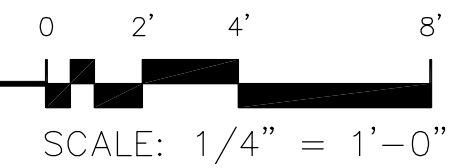
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GENERAL EXTERIOR NOTES:

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7. SUPPLY DRIPCAPS ON ALL WINDOWS AND DOORS.
8. ALL EXTERIOR TRIM TO BE FLASHED PER CODE
9. SUPPLY SEPARATION BETWEEN WOOD, COMPOSITE WOOD, AND ANY OTHER WOOD MATERIAL PER SPECIFICATIONS.
10. HOLD STONE OFF GRADE MINIMUM OF 3" OR PER TRADE SPECIFICATIONS.
11. REFER TO MANUFACTURE SPECIFICATIONS FOR STONE.
12. GARAGE BUCK BOARD MATERIAL IS TO BE COMPOSITE WOOD AND SIZED TO COVER THE EDGE OF STONE.
13. GRADE CONDITIONS MAY VARY ON SITE.



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



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		WEST HAVEN DETACHED VILLAS 42'	© COPYRIGHT 2025			12-23-25	A3	ROOF PLAN
		LOCATION: ADDRESS TBD, BLOOMINGTON, MN						SCALED PRINT @ 24X36

STRUCTURAL NOTES:

1. ALL HEADERS TO BE SUPPORTED BY A MINIMUM OF (1) TRIMMER, (UNLESS NOTED OTHERWISE)
2. ALL HEADERS TO HAVE AT LEAST (1) KING STUD (UNLESS NOTED).
3. ALL STUD CALLOUTS @ SIDES OF WINDOWS/DOORS ARE TRIMMERS, MINIMUM (1) KING STUDS @ SAID LOCATIONS TO BE INCLUDED AS WELL.
4. BLOCKING @ ROOF & FLOOR PLAN PER TRUSS MANUFACTURER.
5. POINT LOADS TO BE CARRIED THROUGH FLOOR AREAS AND DOWN TO FOUNDATION FOR SUPPORT. USE SAME MATERIAL AS COLUMN SUPPORTING MEMBER ABOVE. BLOCKING MAY BE "BROKEN" BETWEEN LEVELS U.N.O.
6. ALL HANGERS & CONNECTORS PER TRUSS MANUFACTURER, SUPPLIERS & CONTRACTOR.
7. ALL EXTERIOR SHEATHING TO BE 7/16" OSB OR PLYWOOD SHEATHING & NAILED PER CODE (MAY BE REFERRED TO AS 1/2" NOMINAL THICKNESS).
8. ROOF DECKING TO BE 1/2" NOMINAL (OR 15/32") OSB DECKING W/ CLIPS, NAILED TO ROOF FRAMING W/ MIN. 8d COMMON NAILS, 6" O.C. @ EDGES/12" O.C. @ FIELD. ATL: 16 GA 1-3/4", 3" @ EDGES/ 6" AT FIELD.
9. FLOOR DECKING TO BE 3/4" PLYWOOD DECKING, NAILED OR SCREWED TO FLOOR SYSTEM PER CODE W/ ADHESIVE PER SPEC. (OR) MIN. 6d COMMON NAILS 6" O.C. @ EDGES/12" O.C. @ FIELD (CODE MINIMUM).
10. REFER TO WALL BRACING PLANS FOR ADDITIONAL FRAMING INFORMATION.

GENERAL FOUNDATION NOTES:

1. FOUNDATIONS TO BE POURED PER SITE SOIL CONDITION- VERIFY ON SITE.
2. ALL REINFORCING IS TO BE INSTALLED PER IRC REGULATED STRUCTURAL DESIGN BY CONCRETE TRADES.
3. PROVIDE 1/2" ANCHOR BOLTS EMBEDDED 7" MIN., SPACED PER CODE AND 12" MAX FROM EACH END OF SILL PLATE, MIN 2 PER SILL. REFER TO COVER SHEET.
4. PROVIDE CONTROL JOINTS PER PLAN. JOIST TO CONSIST OF HIDDEN ZIP STRIP EMBEDDED INTO THE SLABS.
5. ALL ANGLED WALLS ARE TO BE 45 DEGREES UNLESS NOTED OTHERWISE.
6. SLOPE CONCRETE TO FLOOR DRAINS WITHIN 5' OF DRAINS.
7. ALL WOOD MATERIAL CONTACTING DIRECTLY TO CONCRETE MUST BE TREATED.
8. PROVIDE DRAIN TILE AROUND PERIMETER AS SHOWN. LATERAL SOIL PRESSURE ASSUMED TO BE 30 PSFF/FT.
9. CONC. CURB OR ADD. P.T. SILL PLATES AT ALL INT. BEARING WALLS TO CONNECT FRAMED WALL TO FOOTING BELOW.

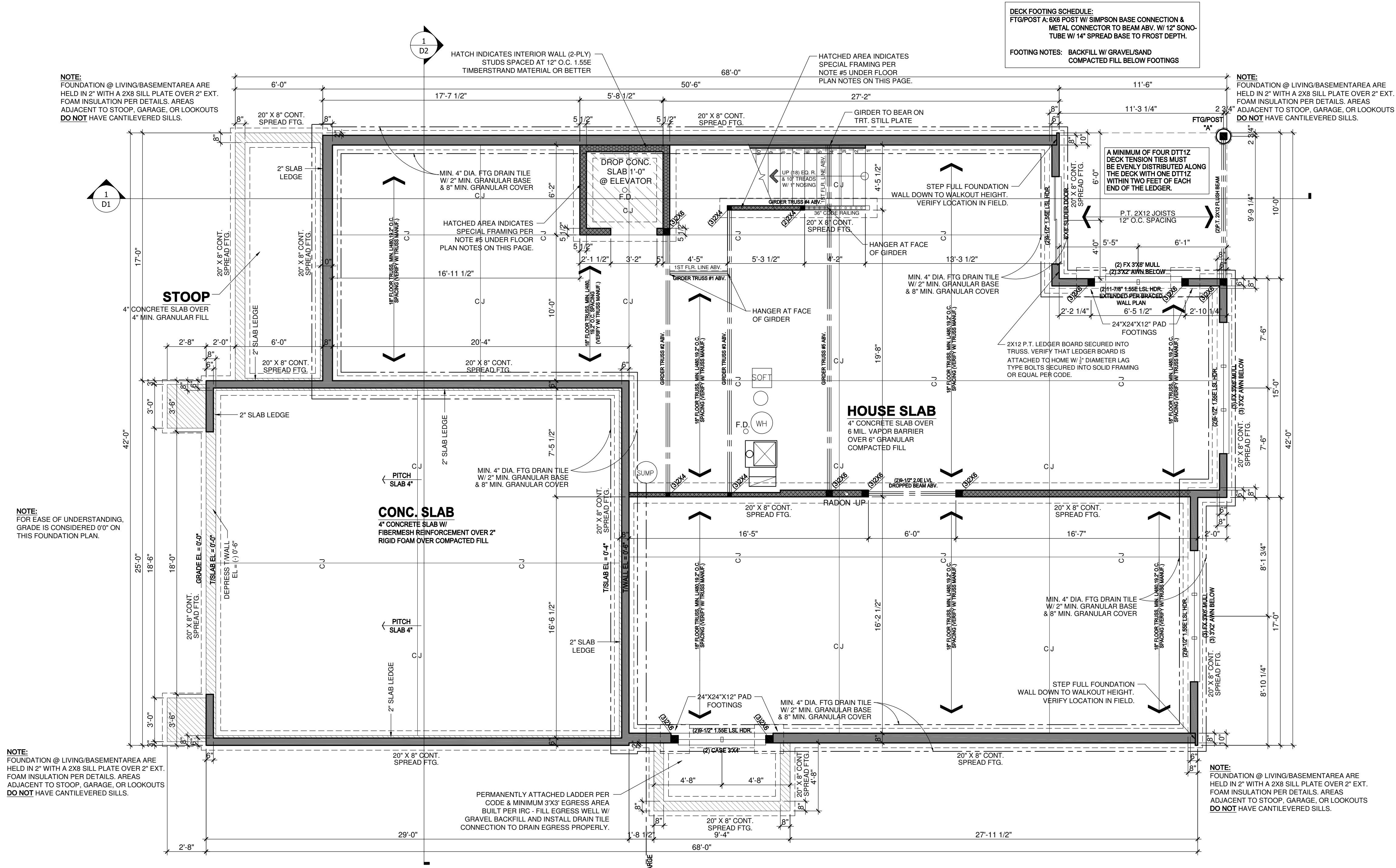
WINDOW & DOOR SIZE NOTES

- SH3X5' = SINGLE HUNG 3'0" BY 5'0"
- FX2'6"X2'6" = FIXED 2'6" BY 4'6"
- CASE3'X5' = CASEMENT 3'0" BY 5'0"
- 2'8"X6'8" @ DOOR = 2'8" WIDE BY 6'8" TALL
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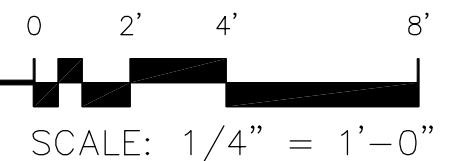
- (SD) 110V, INTERCONNECTED SMOKE DETECTOR
- (SD) 110V, INTERCONNECTED SMOKE DETECTOR / CARBON MONOXIDE DETECTOR COMBO
- (E) EXHAUST FAN

BASEMENT FLOOR PLAN NOTES:

1. FOR EASE OF UNDERSTANDING, GRADE AT FRONT OR FRONT OF GARAGE DOORS IS CONSIDERED 0'0" ON THIS FOUNDATION PLAN
2. ALL STAIRWAYS (INTERIOR AND EXTERIOR) ARE TO BE ILLUMINATED AT EACH LANDING PER CODE
3. SUPPLY CONTINUOUS HANDRAIL PER CODE AT ALL STAIR LOCATIONS, CODE HANDRAIL IS TO CONTINUE TO LANDINGS/ TOP & BOTTOM OF STAIRS. CONTRACTOR & INSTALLER TO VERIFY IF ADDITIONAL GRASPABLE HANDRAIL IS INSTALLED OR IF DECORATIVE HANDRAIL TO CONTINUE.
4. 1/2" GYPSUM BOARD TO BE APPLIED TO UNDERSIDE OF STAIRS PER CODE.
5. [Hatched Pattern] INDICATES INTERIOR BEARING WALL, 16" O.C. STUDS
6. AT BEDROOM EGRESS WINDOW WELLS: PERMANENTLY ATTACHED LADDER PER CODE & MINIMUM 3'X3' EGRESS AREA BUILT PER IRC
7. AT ALL EGRESS WINDOW WELLS: FILL EGRESS WELL W/ GRAVEL BACKFILL & INSTALL DRAIN TILE CONNECTION TO DRAIN EGRESS PROPERLY.
8. INSTALL DRAFT STOPPING WITHIN FLOOR SYSTEM PER IRC CODE SECTION 302.12, MIN. 1/2" GYPSUM BOARD (OR) 3/8" STRUCTURAL BOARD ADEQUATELY SUPPORTED BY 2X4 MIN. MATERIAL, PARALLEL WITH FLOOR FRAMING, SEPARATING AREAS WITH MAXIMUM SPACE OF 1000 SQ.FT.-SEPARATE INTO EQUAL SPACES.



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



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		WEST HAVEN DETACHED VILLAS 42' LOCATION: ADDRESS TBD, BLOOMINGTON, MN				12-23-25	A4	FOUNDATION PLAN SCALED PRINT @ 24X36

STRUCTURAL NOTES:

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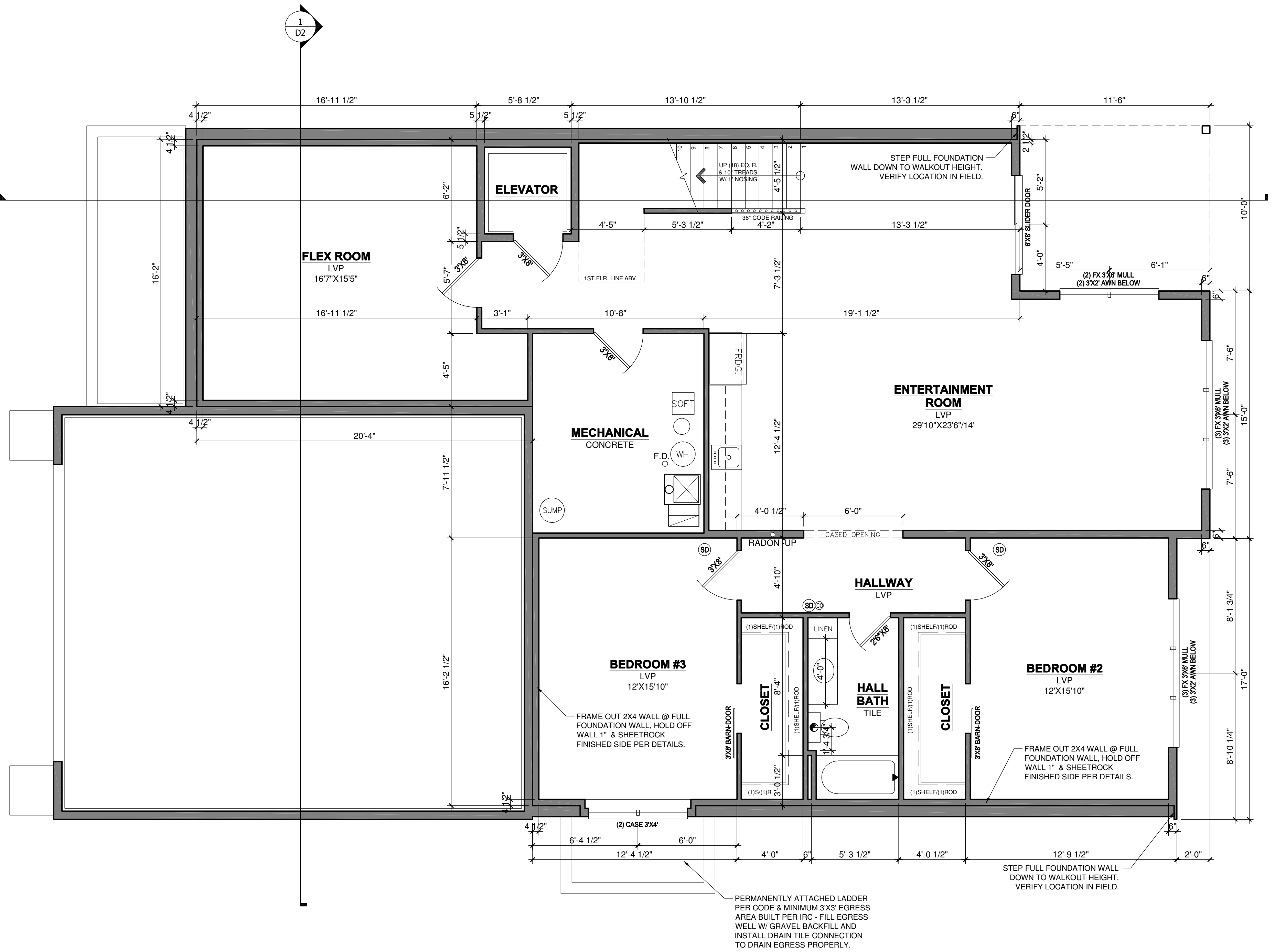
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1 BASEMENT FLOOR PLAN
SCALE: 1/4" = 1'-0"

0 2' 4' 8'
SCALE: 1/4" = 1'-0"

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		LOCATION: ADDRESS TBD, BLOOMINGTON, MN	© COPYRIGHT 2025					

STRUCTURAL NOTES:

- ALL HEADERS TO BE SUPPORTED BY A MINIMUM OF (1) TRIMMER. REFER TO COVER SHEET FOR ADDITIONAL INFO.
- ALL HEADERS TO HAVE AT LEAST (1) KING STUD (UNLESS NOTED).
- BLOCKING @ ROOF & FLOOR PLAN PER TRUSS MANUFACTURER.
- POINT LOADS TO BE CARRIED THROUGH FLOOR AREAS AND DOWN TO FOUNDATION FOR SUPPORT. USE SAME MATERIAL AS COLUMN SUPPORTING MEMBER ABOVE.
- ALL HANGERS & CONNECTORS PER TRUSS MANUFACTURER, SUPPLIERS & CONTRACTOR.
- ALL EXTERIOR SHEATHING TO BE 7/16" OSB OR PLYWOOD SHEATHING & NAILED PER CODE (MAY BE REFERRED TO AS 1/2" NOMINAL THICKNESS).
- ROOF DECKING TO BE 3/4" NOMINAL (OR 1/2") OSB DECKING W/ CLIPS, NAILED TO ROOF FRAMING W/ MIN. 8d COMMON NAILS, 6" O.C. @ EDGES/12" O.C. @ FIELD.
- FLOOR DECKING TO BE 3/4" PLYWOOD DECKING, NAILED OR SCREWED TO FLOOR SYSTEM PER CODE W/ ADHESIVE PER SPEC. (OR) MIN. 6d COMMON NAILS 6" O.C. @ EDGES/12" O.C. @ FIELD (CODE MINIMUM).
- REFER TO WALL BRACING PLANS FOR ADDITIONAL FRAMING INFORMATION.

GENERAL FRAMING NOTES:

- ALL NON-BEARING FRAMING IS TO BE 16" O.C. UNLESS OTHERWISE NOTED.
- ALL WALLS TO HAVE A DOUBLE TOP PLATE UNLESS OTHERWISE NOTED.
- ALL EXTERIOR WALLS ARE TO BE 2X6 WOOD STUDS WITH 7/16" OSB SHEATHING, UNLESS NOTED OTHERWISE.
- ALL INTERIOR WALLS ARE TO BE 2X4 WOOD STUDS UNLESS NOTED OTHERWISE.
- ALL COLUMN SIZES ARE TO BE CONTINUED THROUGH FLOOR TRUSS SPACES WHEN SPANNING MORE THAN 1 FLOOR.
- ALL WOOD MATERIALS ARE TO BE PROTECTED PER CODE & MANUF. SPECIFICATIONS WHILE BEING STORED ON SITE.

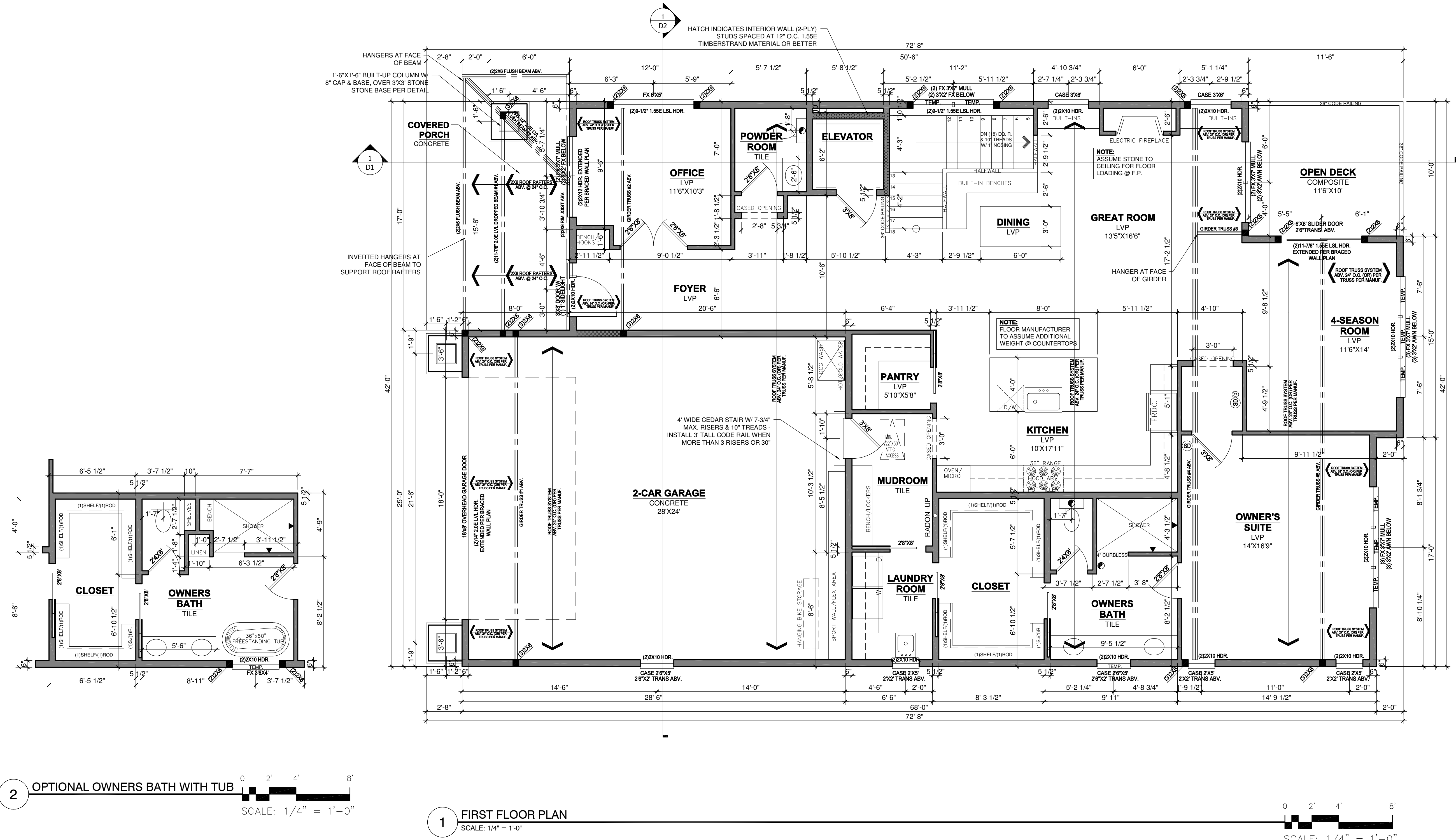
WINDOW & DOOR SIZE NOTES (EXAMPLES)

- SH3'X5" = SINGLE HUNG 3'0" BY 5'0"
- FX2'6"X2'6" = FIXED 2'6" BY 4'6"
- CASE3'X5" = CASEMENT 3'0" BY 5'0"
- 2'8"X6'8" @ DOOR = 2'8" WIDE BY 6'8" TALL
- 2'8"X8'0" @ DOOR = 2'8" WIDE BY 8'0" TALL

- SD 110V, INTERCONNECTED SMOKE DETECTOR
- SD@ 110V, INTERCONNECTED SMOKE DETECTOR / CARBON MONOXIDE DETECTOR COMBO
- EXHAUST FAN

FRAMING FLOOR PLAN NOTES:

- FOR EASE OF UNDERSTANDING GRADE IS CONSIDERED 0'0" ON THIS FOUNDATION PLAN
- ALL STAIRWAYS (INTERIOR AND EXTERIOR) ARE TO BE ILLUMINATED AT EACH LANDING PER CODE
- SUPPLY CONTINUOUS HANDRAIL PER CODE AT ALL STAIR LOCATIONS. CODE HANDRAIL IS TO CONTINUE TO LANDINGS/ TOP & BOTTOM OF STAIRS. CONTRACTOR & INSTALLER TO VERIFY IF ADDITIONAL GRASPABLE HANDRAIL IS INSTALLED OR IF DECORATIVE HANDRAIL TO CONTINUE.
- 3/8" GYPSUM BOARD TO BE APPLIED TO UNDERSIDE OF STAIRS PER CODE.
- INDICATES INTERIOR BEARING WALL, 16" O.C. STUDS
- INDICATES EXTERIOR WALL STUDS SPACED AT 12" O.C. 1.55E TIMBERSTRAND MATERIAL OR BETTER (2-PLY TIMBER-STRAND KING STUDS @ EACH SIDE OF OPENINGS IN WALL).
- INSTALL DRAFT STOPPING WITHIN FLOOR SYSTEM PER IRC CODE SECTION 302.12, MIN. 3/8" GYPSUM BOARD (OR) 3/8" STRUCTURAL BOARD ADEQUATELY SUPPORTED BY 2X4 MIN. MATERIAL, PARALLEL WITH FLOOR FRAMING, SEPARATING AREAS WITH MAXIMUM SPACE OF 1000 SQ.FT.-SEPARATE INTO EQUAL SPACES.

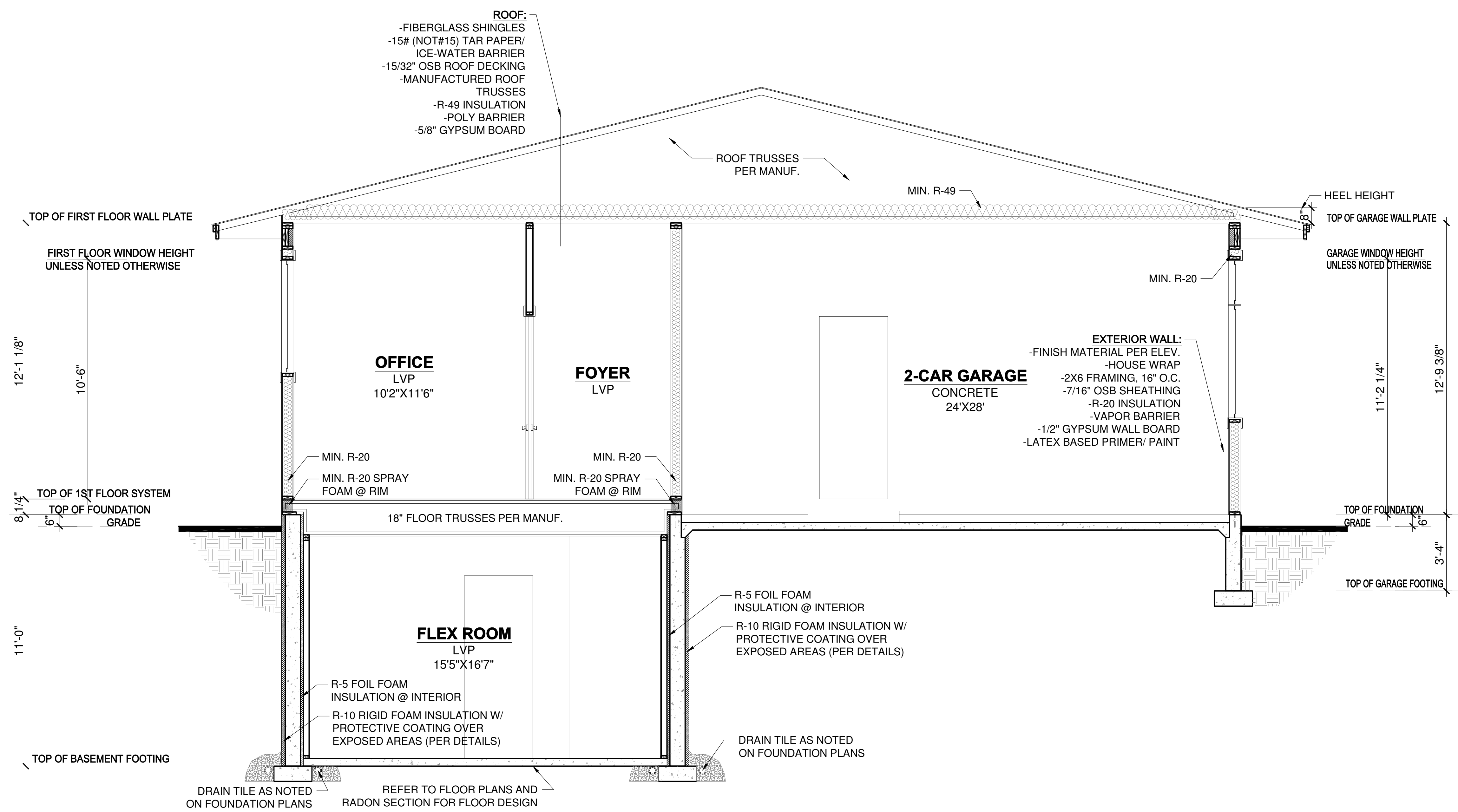


2 OPTIONAL OWNERS BATH WITH TUB
SCALE: 1/4" = 1'-0"

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

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		WEST HAVEN DETACHED VILLAS 42'				12-23-25	A6	FIRST FLOOR PLAN
		LOCATION: ADDRESS TBD, BLOOMINGTON, MN	© COPYRIGHT 2025					SCALED PRINT @ 24X36



1 SECTION THROUGH HOUSE & GARAGE
SCALE: 3/8" = 1'-0"

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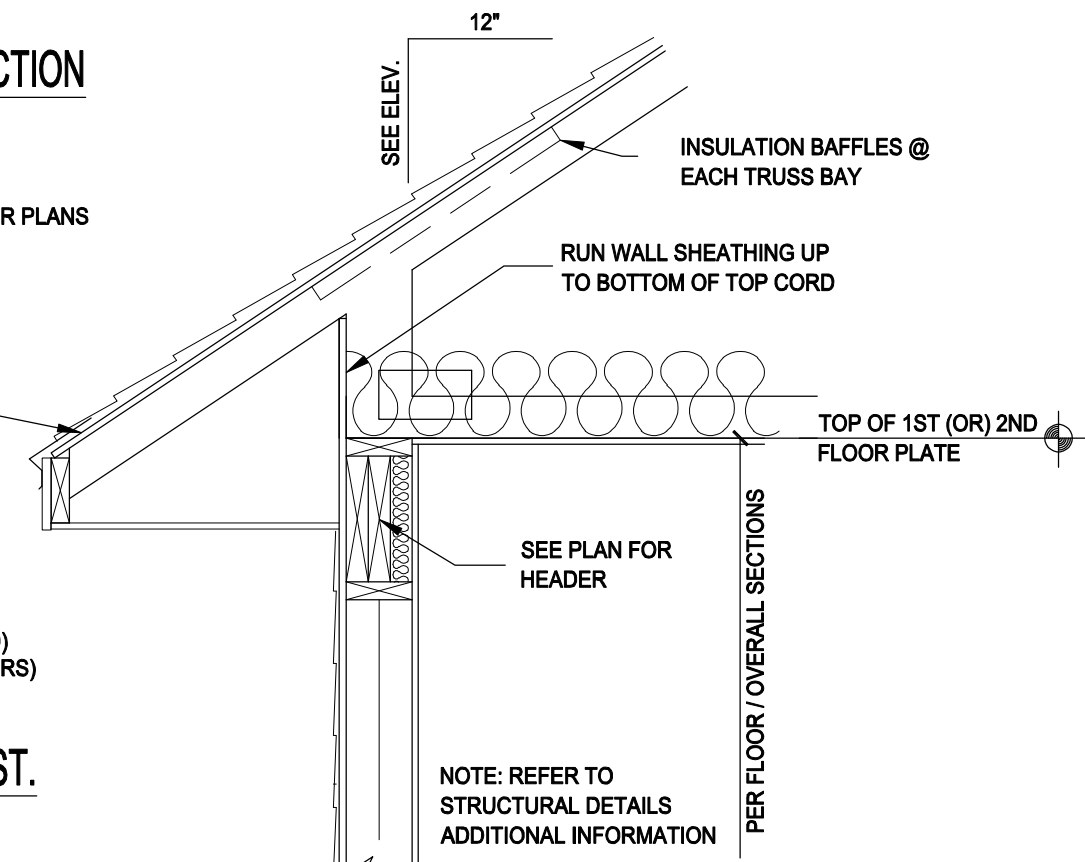
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TYP. ROOF CONSTRUCTION

- FIBERGLASS SHINGLES
- 15# BUILDING PAPER
- 2 COURES ICE & WATER SHIELD
- 15/32" OSB SHEATHING
- ENGINEERED ROOF TRUSSES PER PLANS
- R-49 MIN. INSULATION
- 6 MIL POLY VAPOR BARRIER
- 5/8" GYPSUM BOARD



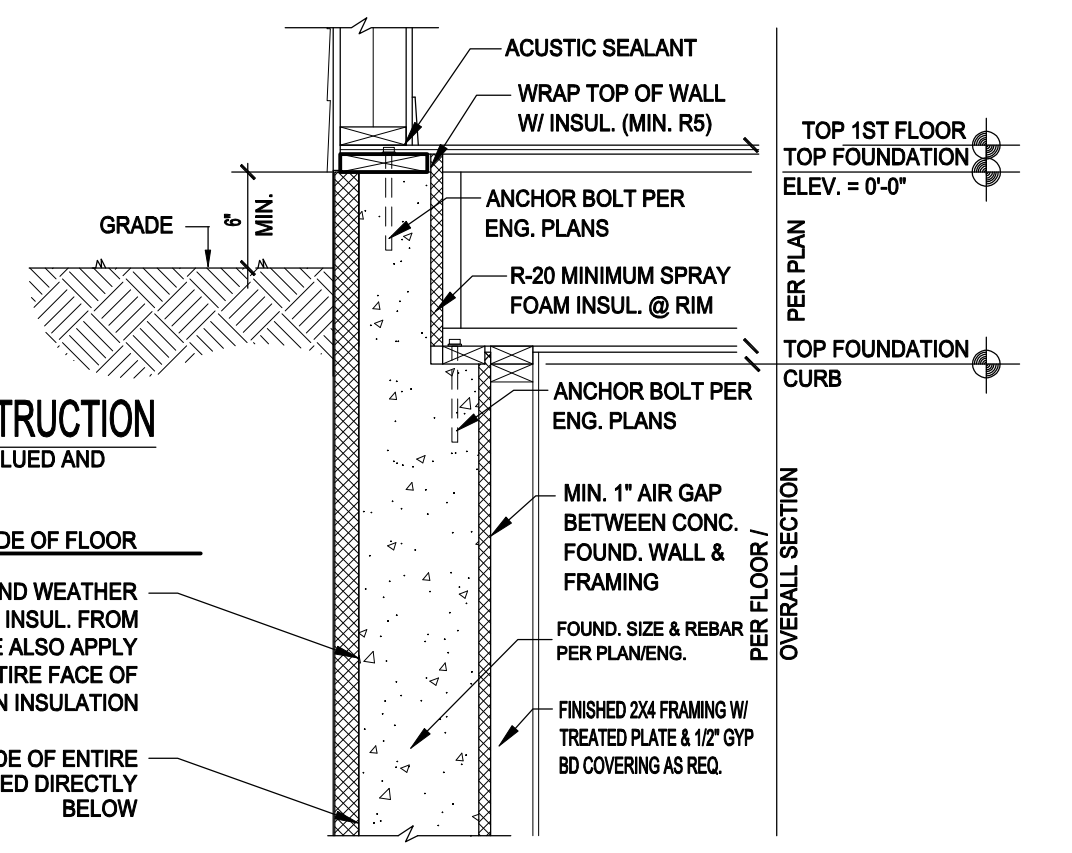
1 TYP. WALL SECTION @ EAVE
3/4" = 1'-0"

FASCIA AND SOFFIT

- SOLID FASCIA
- SOLID MATERIAL SOFFIT (VENTED)
- 2X SUB-FASCIA (REVIEW EXTERIORS)

EXTERIOR WALL CONST.

- SIDING (SEE EXTERIOR ELEV.)
- HOUSE WRAP
- 1/2" OSB SHEATHING
- 2X6 STUDS @ (16" O.C.)
- R-20 BATT INSULATION
- 6 MIL POLY VAPOR BARRIER
- 1/2" GYPSUM BOARD



2 TYP. WALL SECT. @ 1ST FLOOR
3/4" = 1'-0"

TYPICAL FLOOR CONSTRUCTION

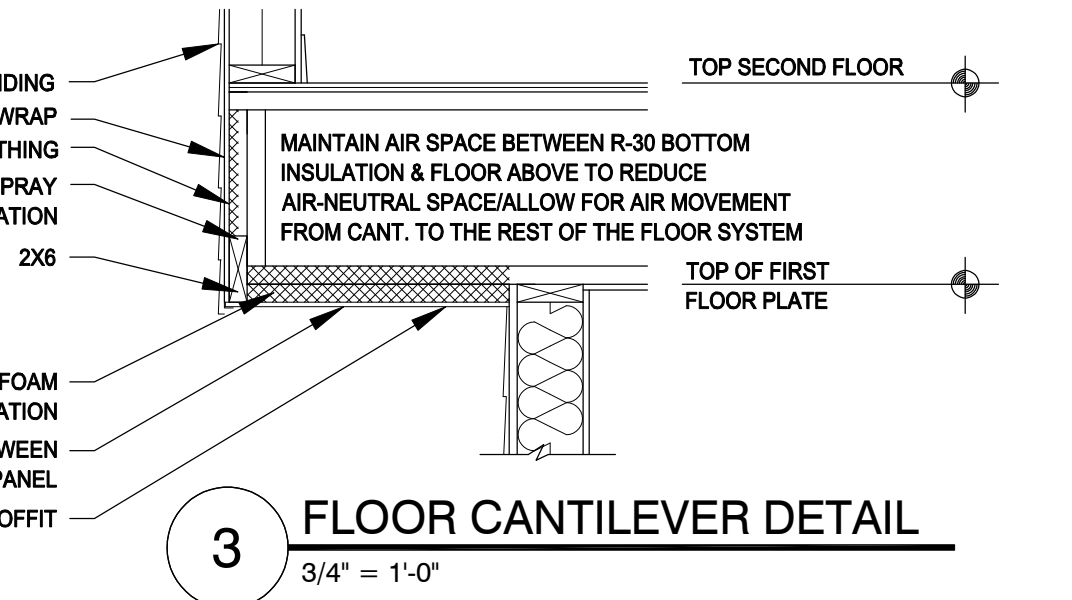
- 23/32" T&G OSB (or) PLYWOOD (GLUED AND NAILED)
- FLOOR SYSTEM PER PLAN
- 5/8" GYPSUM BOARD @ UNDERSIDE OF FLOOR

PROTECTIVE RIGID, OPAQUE AND WEATHER RESISTANT COVERING OVER FOAM INSUL. FROM TOP OF WALL TO 6" BELOW GRADE ALSO APPLY 6-MIL POLY SLIP SHEET OVER ENTIRE FACE OF EXTERIOR RIGID FOUNDATION INSULATION

WATERPROOFING ON EXT. SIDE OF ENTIRE FACE OF FOUND. WALL AS NOTED DIRECTLY BELOW

SILL PLATE

- 2x8 TREATED SILL PLATE
- SILL SEALER ANCHOR BOLTS PER ENG. CANTED 1-1/2" MAXIMUM.



3 FLOOR CANTILEVER DETAIL
3/4" = 1'-0"

TYPICAL FOUND. WALL

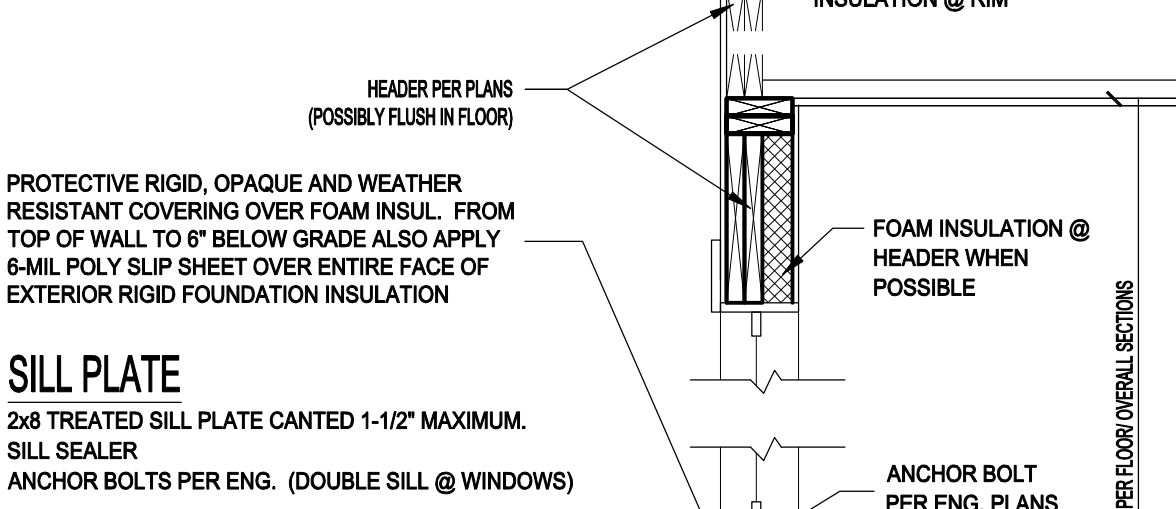
R-10 RIGID FOAM INSULATION W/ PROTECTIVE COATING APPLIED TO EXPOSED PORTION OF FOAM W/ FLASHING @ TOP WATERPROOFING MATERIAL ON EXT. SIDE POURED CONC. WALL (PER MASON/PLAN) REINFORCEMENT/ANCHOR BOLTS PER ENG. MIN. R-5 FOIL-FACED THERMAL BARRIER W/ SEALED EDGES AND SEAMS 2X4 STUD WALL, 16" O.C. @ FINISHED COND. 1/2" GYPSUM BD OVER STUDS W/ PAINT

NOTE: REFER TO STRUCTURAL DETAILS FOR REBAR/ADD. INFO.

4 TYP. WALL SECT. @ FOOTING
3/4" = 1'-0"

TYPICAL FLOOR CONSTRUCTION

- 23/32" T&G OSB (or) PLYWOOD (GLUED AND NAILED)
- FLOOR SYSTEM PER PLAN
- 5/8" GYPSUM BOARD @ UNDERSIDE OF FLOOR



SILL PLATE

- 2x8 TREATED SILL PLATE CANTED 1-1/2" MAXIMUM.
- SILL SEALER ANCHOR BOLTS PER ENG. (DOUBLE SILL @ WINDOWS)

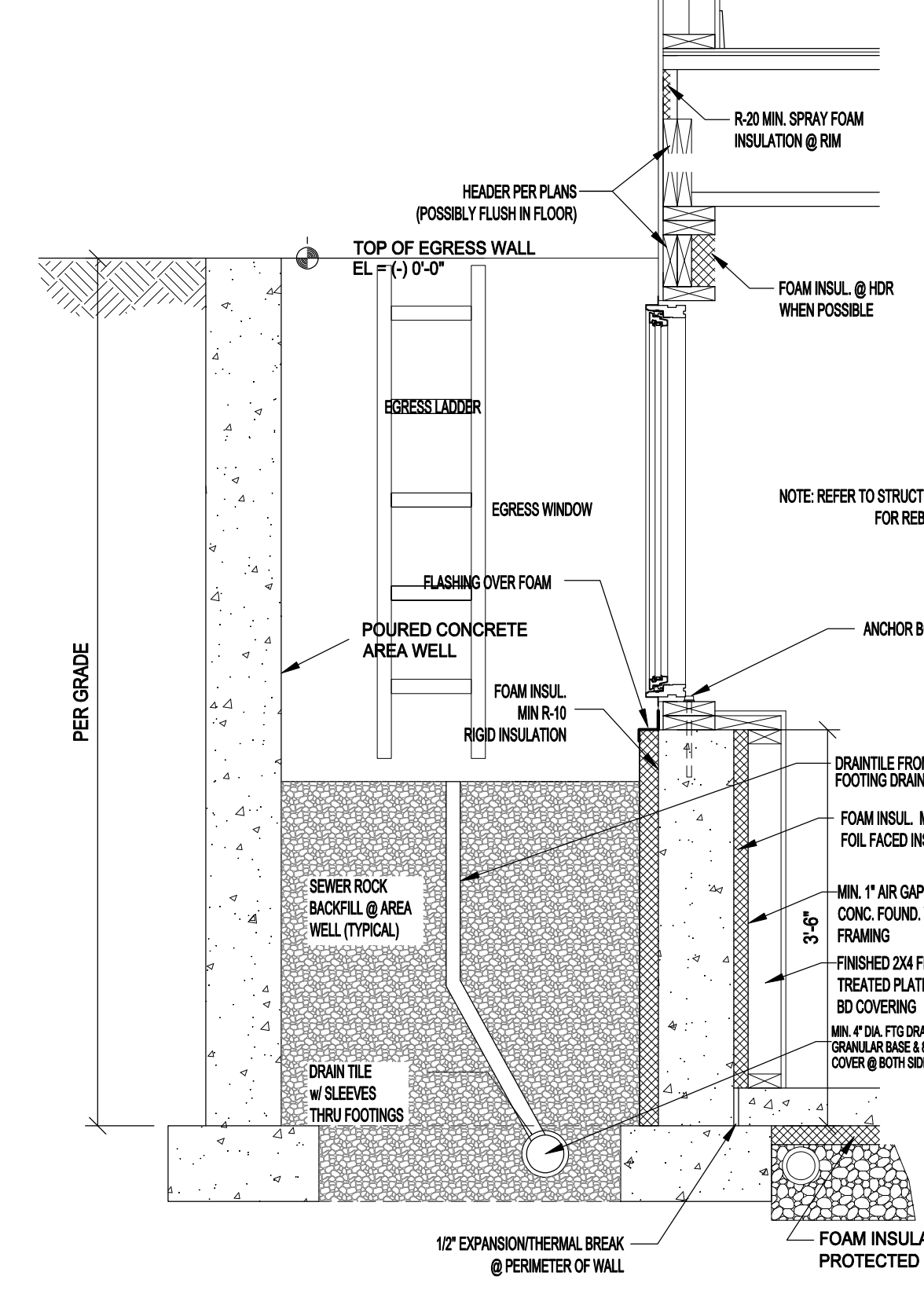
WATERPROOFING ON EXT. SIDE OF ENTIRE FACE OF FOUND. WALL AS NOTED DIRECTLY BELOW

TYPICAL FOUNDATION WALL

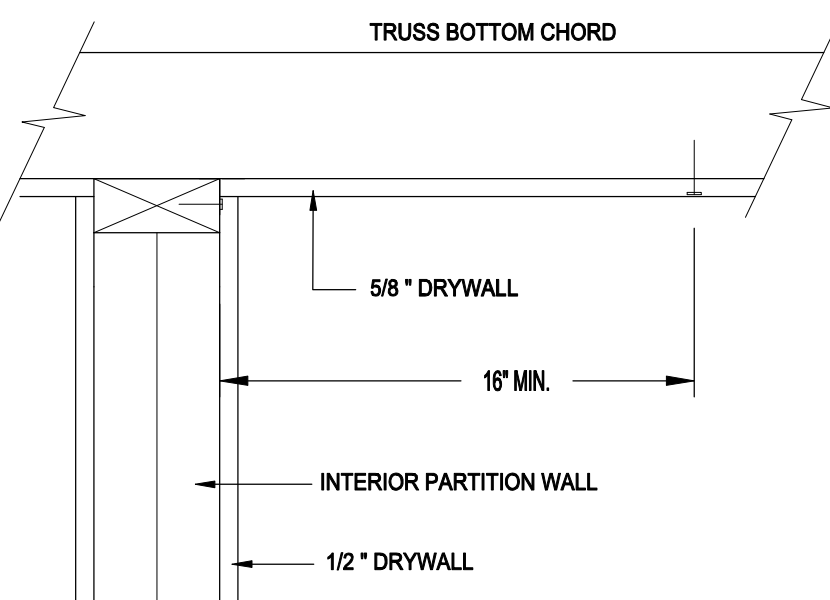
R-10 RIGID FOAM INSULATION W/ PROTECTIVE COATING APPLIED TO EXPOSED PORTION OF FOAM W/ FLASHING @ TOP WATERPROOFING MATERIAL ON EXT. SIDE POURED CONC. WALL (PER MASON/PLAN) REINFORCEMENT/ANCHOR BOLTS PER ENG. MIN. R-5 FOIL-FACED THERMAL BARRIER W/ SEALED EDGES AND SEAMS 2X4 STUD WALL, 16" O.C. @ FINISHED COND. 1/2" GYPSUM BD OVER STUDS W/ PAINT

NOTE: REFER TO STRUCTURAL DETAILS FOR REBAR/ADD. INFO.

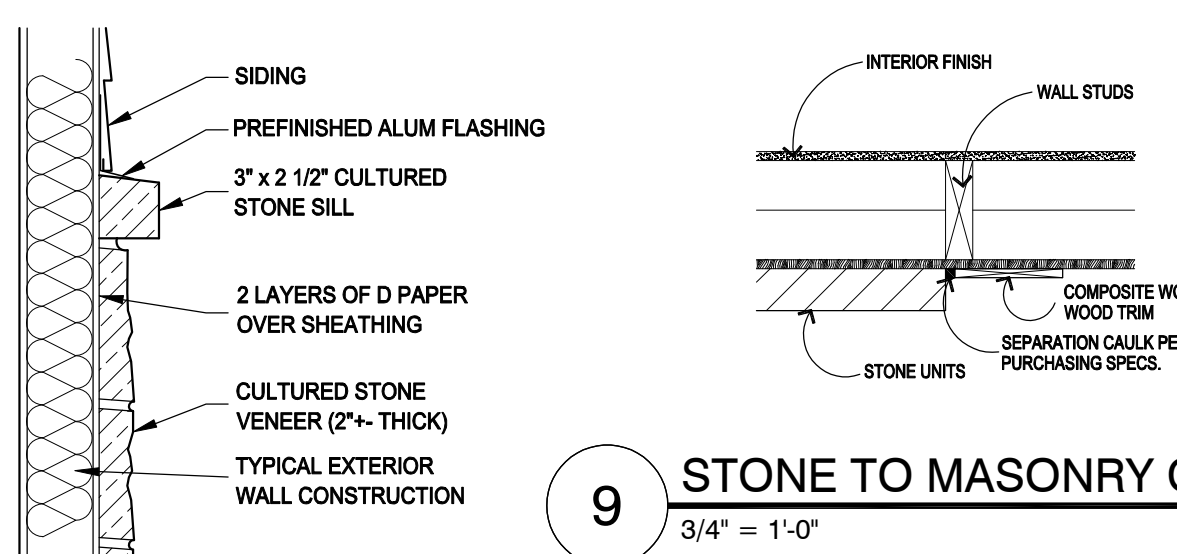
5 LOOKOUT WALL SECTION
3/4" = 1'-0"



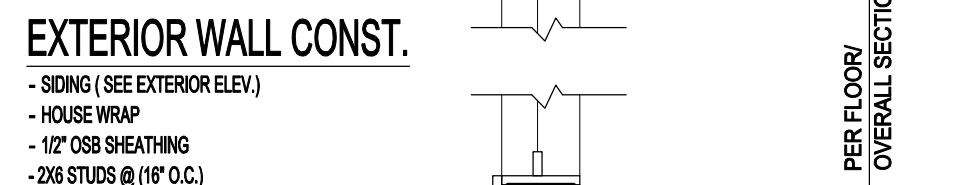
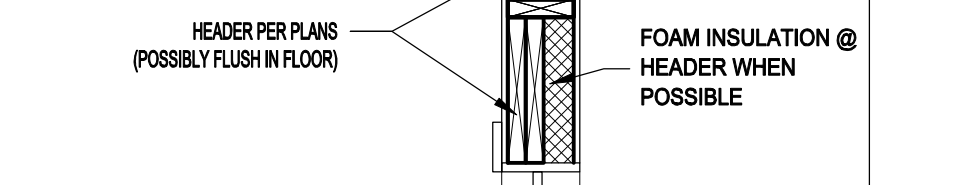
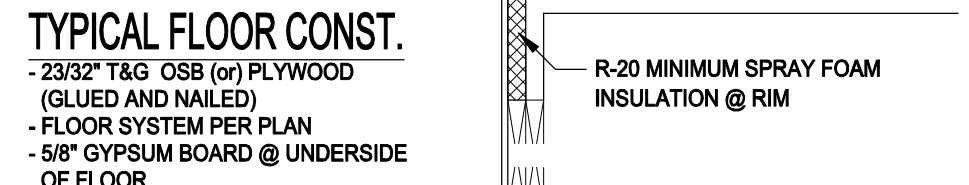
6 EGRESS WELL SECTION
3/4" = 1'-0"



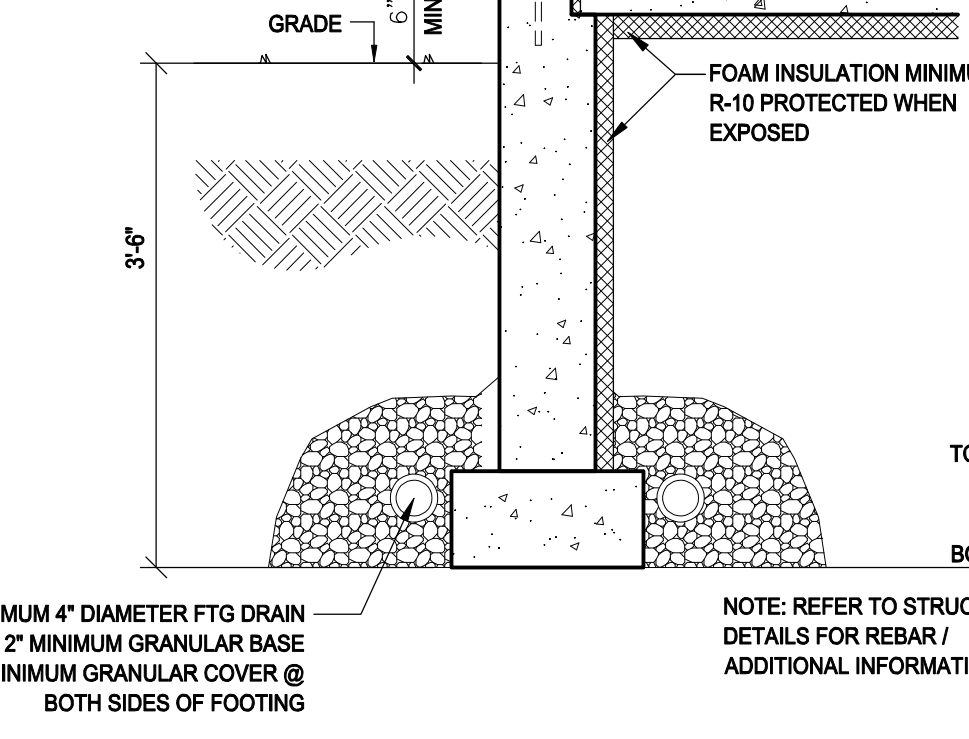
7 ROOF TRUSS CONNECTION DETAIL
3/4" = 1'-0"



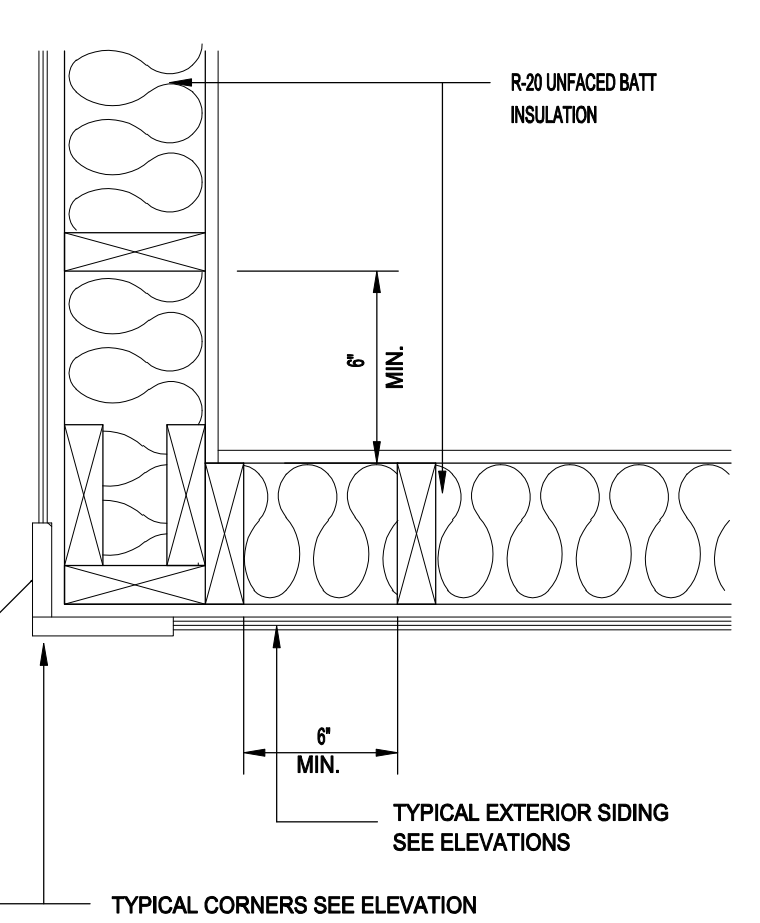
8 STONE VENEER
3/4" = 1'-0"



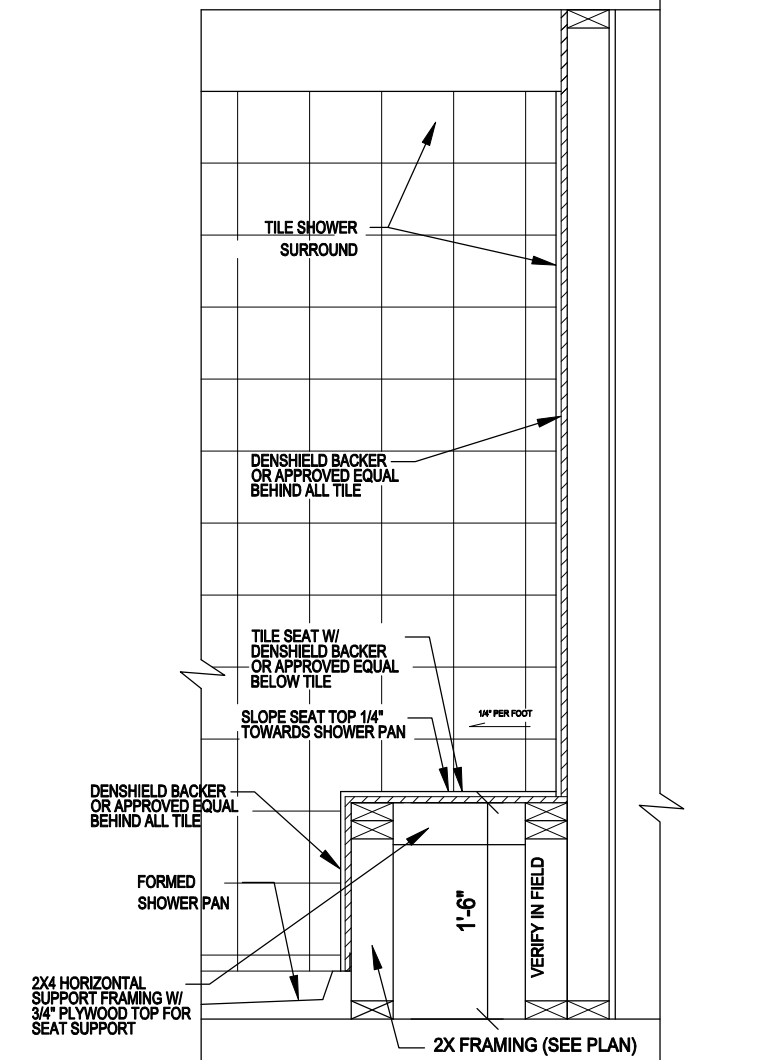
10 WALKOUT WALL SECTION
3/4" = 1'-0"



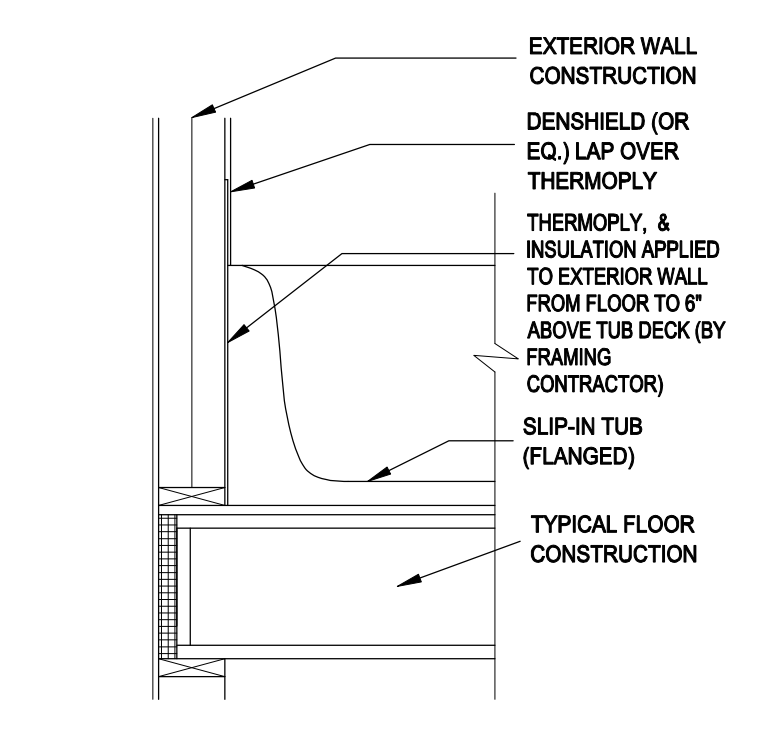
13 DRAFTSTOP @ TUB
3/4" = 1'-0"



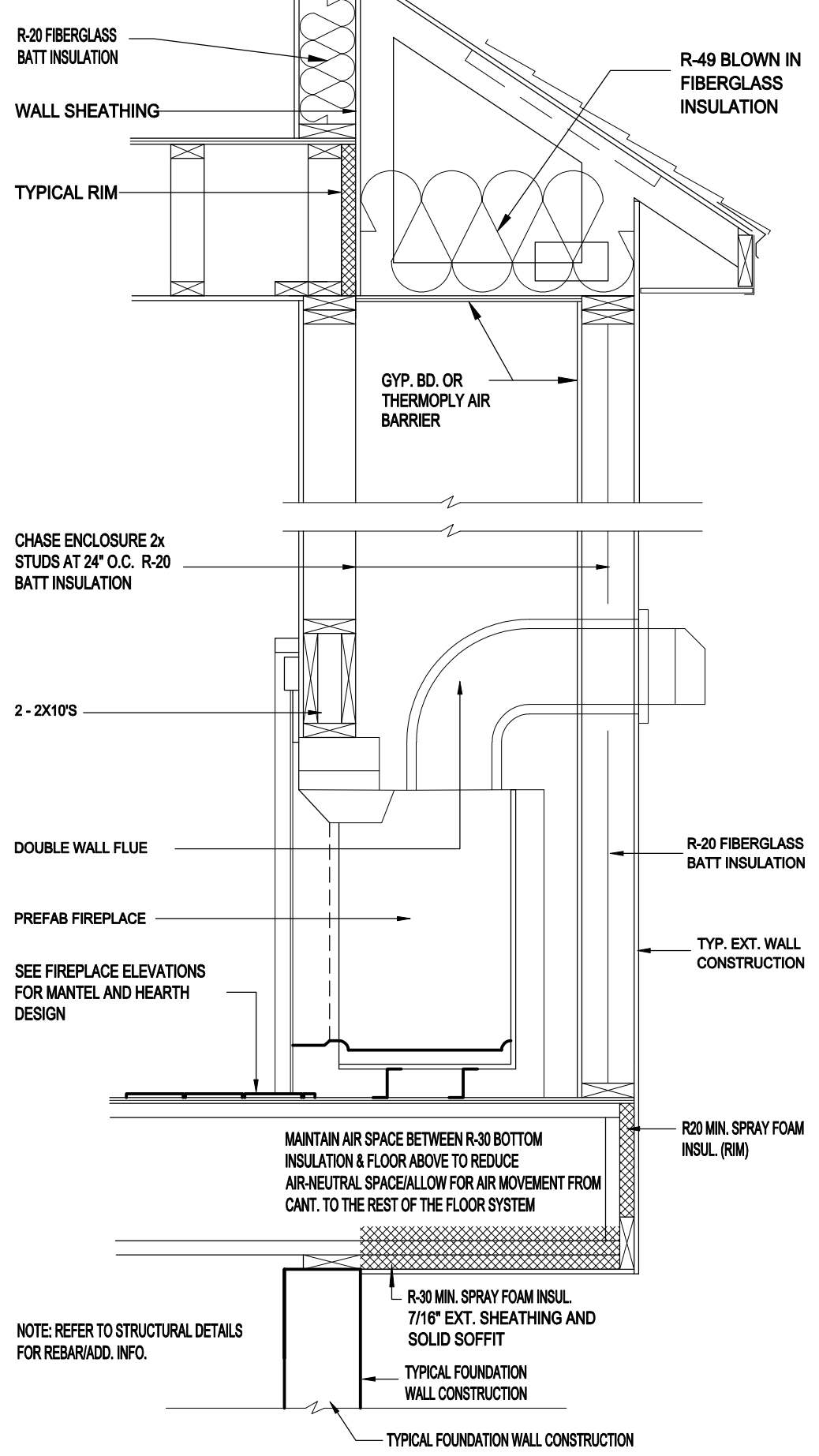
11 OUTSIDE CORNER DETAIL
NONE



14 FIREPLACE CANTILEVER
3/4" = 1'-0"

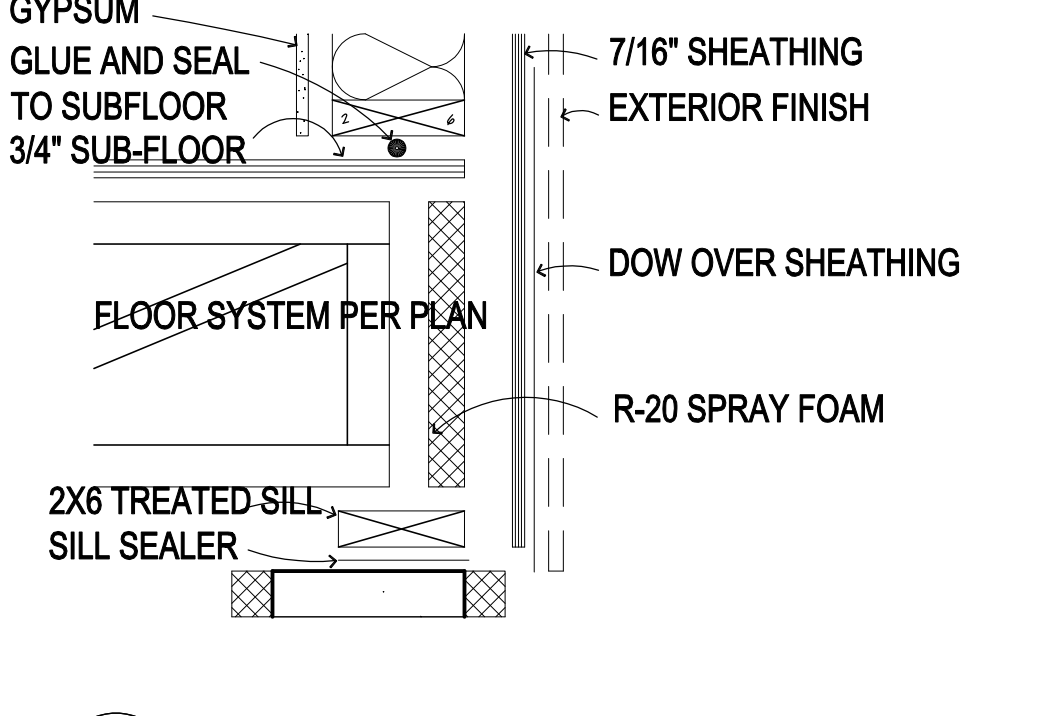


15 ENERGY CODE RIM DETAIL
1-1/2" = 1'-0"



14 FIREPLACE CANTILEVER
3/4" = 1'-0"

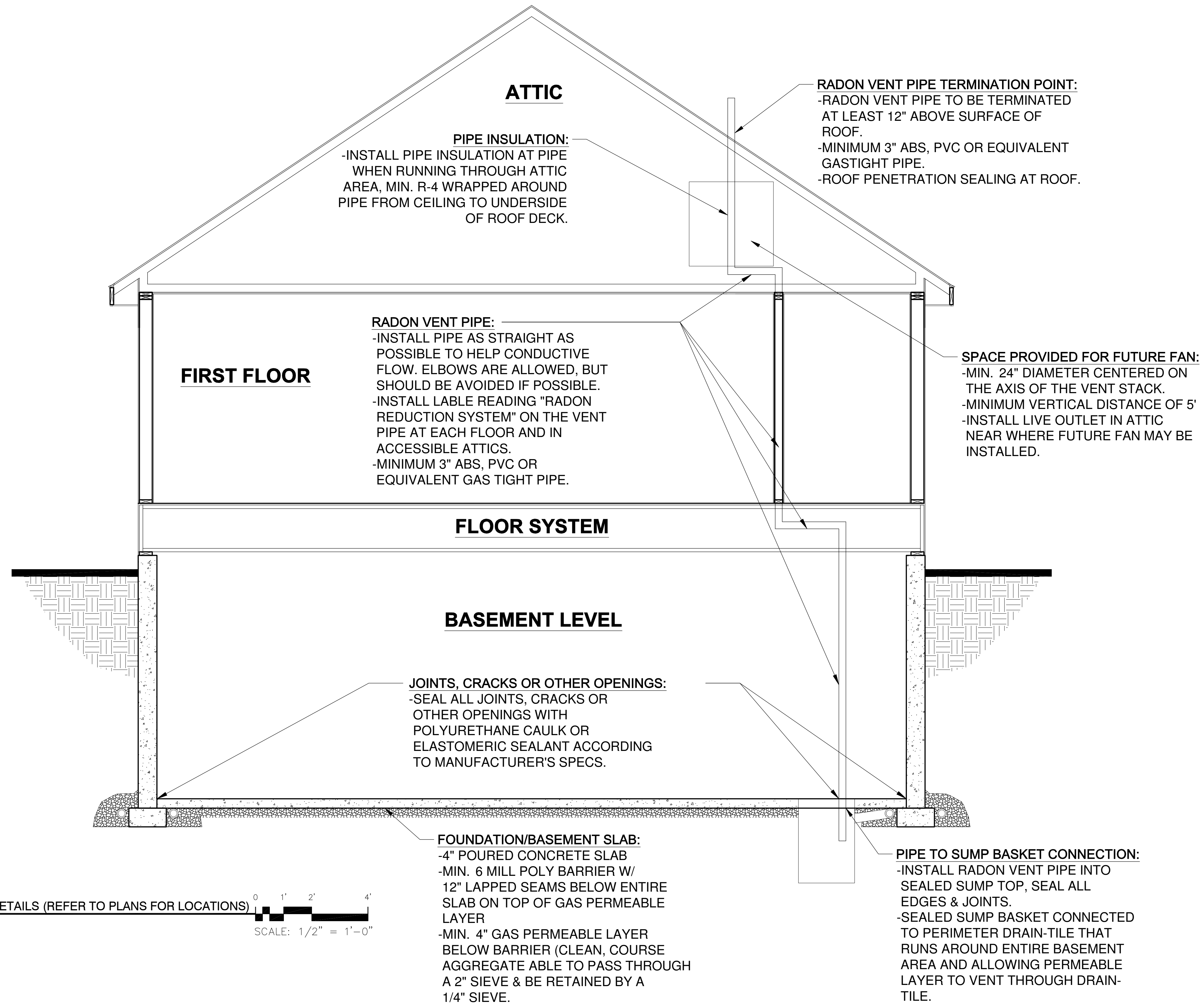
-GLUE AND SEAL THE SUBFLOOR AND PLATES @ EXTERIOR JOINTS -POLY AND SEAL BEHIND ALL WALL, SOFFIT, TIES, AND FIREPLACES WHEN THEY MEET AN EXTERIOR WALL -TAPE AND SEAL THE INTERIOR VAPOR BARRIER -HOUSEWRAP @ RIMS, CORNERS, AND CANTILEVERS SEAMS AND EXTERIOR OPENINGS -LESCO ELECTRICAL BOXES TO BE TAPED AND FOAMED -WINDOW AND DOOR ROUGH OPENINGS TO BE SEALED WITH FOAM -DUCT WORK TO BE TAPED (SUPPLIES AND RETURNS) -MECHANICAL VENTILATION SYSTEM -DIRECT VENT FURNACE AND POWER VENTED WATER HEATER -BACK CAULK ALL WINDOW FLANGES AND THEN TAPE A STRIP OF TYVEC OVER THE TOP -ALL VENDORS MUST SEAL THEIR EXTERIOR PENETRATIONS (INCLUDING PLUMBING, HEATING, AND ELECTRICAL) -CAULK SEAL ALL INTERIOR AND EXTERIOR VERTICAL JOINTS WHERE WALL PANELS MEET OR WALL PANELS MEET THE FND. WALL



15 ENERGY CODE RIM DETAIL
1-1/2" = 1'-0"

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1 PASSIVE RADON SYSTEM DETAILS (REFER TO PLANS FOR LOCATIONS)
1/2" = 1'-0"
SCALE: 1/2" = 1'-0"

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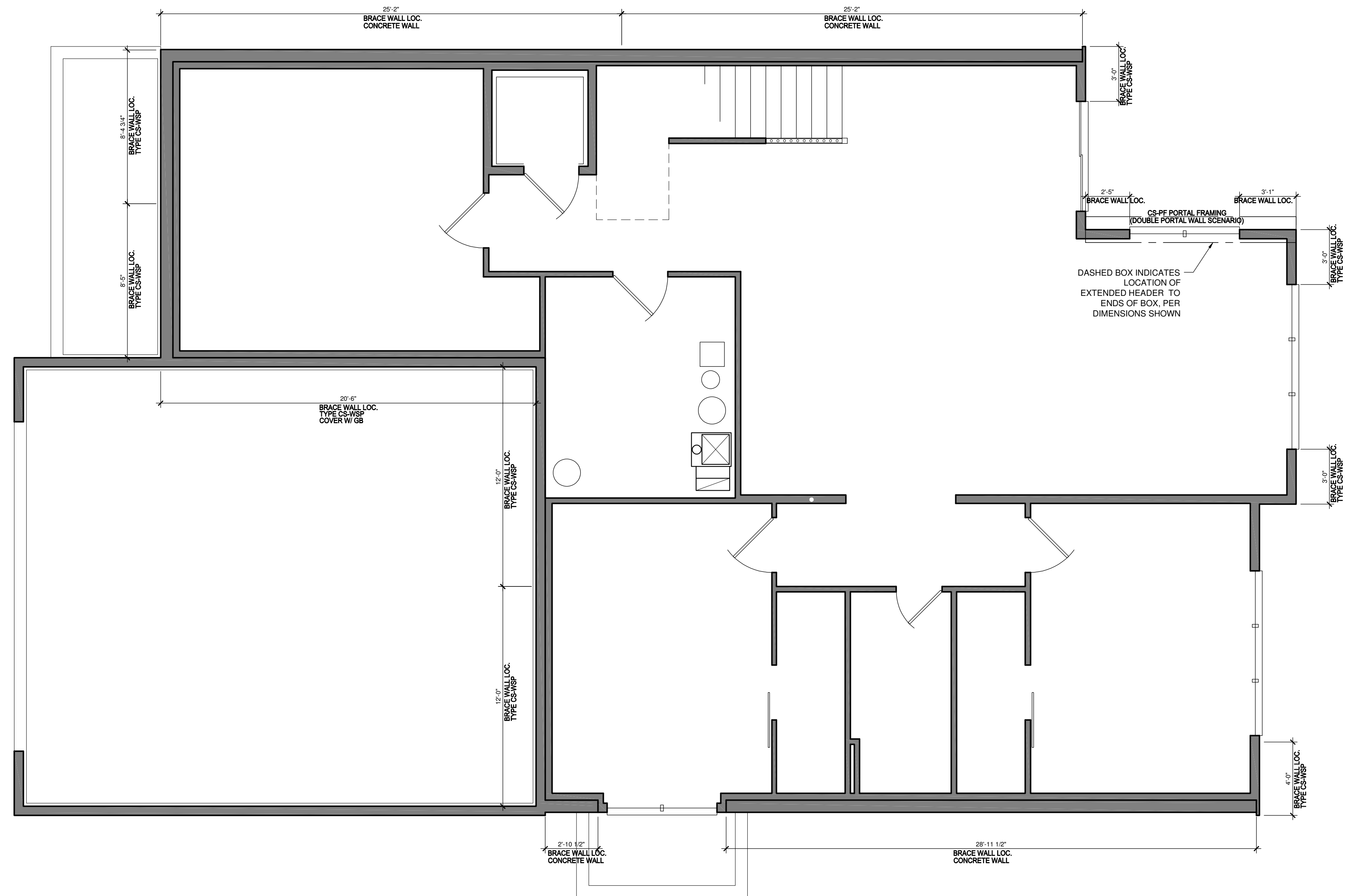
BRACED WALL NOTES:

- ALL WALLS DESIGNED PER METHOD CS-WSP OF THE 2020 MN CODE.
- ALL EXTERIOR WALLS ARE TO BE CONTINUOUSLY SHEATHED WITH A MINIMUM 3/8" THICK WOOD PANEL.
- CONNECTION OF WOOD PANEL TO STUDS SHALL BE MIN. 8d COMMON NAILS, 6" O.C. AT EDGES & 12" O.C. AT FIELD OF WOOD PANEL.
- STRUCTURAL PANELS (BRACED WALLS) SHALL BE LOCATED AT EACH END & AT LEAST EVERY 20' BETWEEN PANELS.
- EXTERIOR BRACED WALL LINES SHALL HAVE A BRACED WALL PANEL AT EACH END OF THE BRACED WALL LINE, EXCEPT FOR:
 - BRACED WALL PANELS ARE PERMITTED TO BEGIN NO MORE THAN 10' FROM EACH END OF THE BRACED WALL LINE PROVIDED THAT A 24" PANEL MATCHING TABLE R602.10.7 IS APPLIED.
 - THE END OF EACH BRACED WALL PANEL CLOSEST TO THE CORNER SHALL HAVE A TIE-DOWN DEVICE FASTENED TO THE STUD AT THE EDGE OF THE BRACED WALL PANEL CLOSEST TO THE CORNER AND TO THE FOUNDATION OR FRAMING BELOW. THE TIE-DOWN DEVICE SHALL BE CAPABLE OF PROVIDING AN UPLIFT ALLOWABLE DESIGN VALUE OF AT LEAST 1800 LBS. THE TIE-DOWN DEVICE SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- INTERIOR BRACED WALL LINES SHALL BE DESIGNED/BUILT PER INTERMITTENT METHOD "GB".
 - MINIMUM 1/2" GYPSUM BOARD APPLIED TO EACH SIDE OF 2X4 (OR) 2X6 STUD WALL @ 16" O.C. SPACING OF STUDS W/ DOUBLE TOP PLATE AND SINGLE BTM.
 - ATTACH GYPSUM TO STUDS W/ 1-1/4" SCREWS (TYPE W OR S), 6" O.C. AT EDGE & 6" O.C. AT FIELD.
 - ALL GYPSUM BOARD JOINTS TO BE SOLID BLOCKED W/ 2X MATERIAL
- (PERPENDICULAR WALL/FLOOR) ALL FLOOR SYSTEMS BETWEEN BRACED WALL PANELS TO HAVE A MIN. 2X4 TOP & BOTTOM BLOCKING BOARD PARALLEL TO BRACED WALL PANELS W/ MIN. (3) 16d NAILS ATTACHING BOTTOM/TOP OF BRACED PANEL PLATE TO FLOOR SYSTEM AT BRACED PANEL WIDTH ONLY. 2X4 BLOCKING TO BE SET BETWEEN FLOOR SYSTEM MEMBERS. SOLID RIM MAY BE USED (FIG. 5 & 6).
- (PERPENDICULAR WALL/ROOF) APPLY 2X SOLID BLOCKING BETWEEN ROOF SYSTEM MEMBERS OVER BRACED WALL PANELS W/ 8d NAILS AT 6" O.C. ALONG LENGTH OF BRACED WALL PANELS WHEN HEEL IS 15.25" OR LESS (FIGURE 3, REFER TO FIG. #4 WHEN OVER 15.25").
- NOTE:** NOTES 7 & 8 ABOVE APPLY TO PERPENDICULAR FRAMING. WHEN PARALLEL FLOORS/ROOF SYSTEMS ARE PRESENT, THE FLOOR/ROOF SYSTEM IS TO HAVE BLOCKING MATERIAL ALLOWING FOR NAILING OF BRACED WALL PANEL INTO SYSTEM ABOVE/BELOW SAID WALL (FIGURE 6).

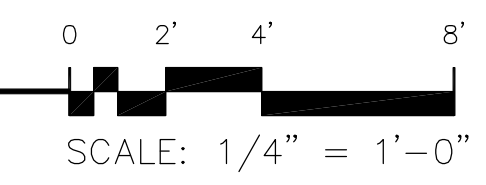
BRACED WALL PANEL UPLIFT LOAD PATH:

BRACED WALL PANELS LOCATED AT EXTERIOR WALLS THAT SUPPORT ROOF RAFTERS OR TRUSSES (INCLUDING STORIES BELOW TOP STORY) SHALL HAVE THE FRAMING MEMBERS CONNECTED IN ACCORDANCE WITH:

- WHERE THE NET UPLIFT VALUE AT THE TOP OF A WALL EXCEEDS 100 PLF, INSTALLING APPROVED UPLIFT FRAMING CONNECTORS TO PROVIDE A CONTINUOUS LOAD PATH FROM THE TOP OF THE WALL TO THE FOUNDATION OR TO A POINT WHERE THE UPLIFT FORCE IS 100 PLF OR LESS. THE NET UPLIFT VALUE SHALL BE AS DETERMINED BY ONE OF THE FOLLOWING:
 - THE BASIC WIND SPEED DOES NOT EXCEED 115 MPH, THE WIND EXPOSURE CATEGORY IS B, THE ROOF PITCH IS 5:12 OR GREATER, AND THE ROOF SPAN IS 32' OR LESS
(OR)
 - THE NET UPLIFT VALUE AT THE TOP OF A WALL DOES NOT EXCEED 100 PLF. THE NET UPLIFT VALUE SHALL BE DETERMINED IN ACCORDANCE WITH SECTION R802.11 AND SHALL BE PERMITTED TO BE REDUCED BY 60 PLF FOR EACH FULL WALL ABOVE.
- WHERE THE UPLIFT FORCE DOES NOT EXCEED 200 POUNDS, RAFTERS AND TRUSSES SPACED NOT MORE THAN 24 INCHES ON CENTER SHALL BE PERMITTED TO BE ATTACHED TO THEIR SUPPORTING WALL ASSEMBLIES IN ACCORDANCE WITH TABLE R602.3(1)
 - RAFTER OR ROOF TRUSS TO PLATE, TOE NAIL:** MINIMUM (3) 16d BOX NAILS OR (3) 10d COMMON NAILS. (2) TOE NAILS ON ONE SIDE AND (1) TOE NAIL ON OPPOSITE SIDE OF EACH RAFTER OR TRUSS. (MANUF. METAL CONNECTOR MAY BE SUBSTITUTED, VERIFY W/ MANUF. DETAILS).
 - WALL PANEL TO STUDS:** CONNECTION OF WOOD PANEL TO STUDS SHALL BE MIN. 6d COMMON NAILS, 6" O.C. AT EDGES & 12" O.C. AT FIELD OF WOOD PANEL.



1 BASEMENT WALL BRACING PLAN
SCALE: 1/4" = 1'-0"



THIS PLAN PROVIDES BUILDING DETAILS FOR A PROJECT TO BE BUILT IN ACCORDANCE WITH INTERNATIONAL BUILDING CODES AS WELL AS ANY LOCAL CODES. CONTRACTOR, OWNER, AND/OR TRADES ARE RESPONSIBLE FOR ANY FINES, PENALTIES FOR CODE, ORDINANCE, REGULATION OR BUILDING PROCESS VIOLATIONS. LITTFIN DESIGN IS NOT RESPONSIBLE FOR OMISSIONS OR ERRORS MADE DURING DESIGN, BIDDING, OR CONSTRUCTION PHASES. ANY AND ALL SITE REVIEW IS TO BE PERFORMED BY OTHERS SUCH AS THE CONTRACTOR, OWNER, SURVEYOR, OR OTHER TRADES RESPONSIBLE FOR SITE CONDITIONS. LITTFIN DESIGN IS NOT RESPONSIBLE FOR CONTRACTOR/TRADE ERRORS, UNKNOWN CODE ADJUSTMENTS AT THE TIME OF PLAN CREATION OR CONSTRUCTION.

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		LOCATION: ADDRESS TBD, BLOOMINGTON, MN						SCALED PRINT @ 24X36

BRACED WALL NOTES:

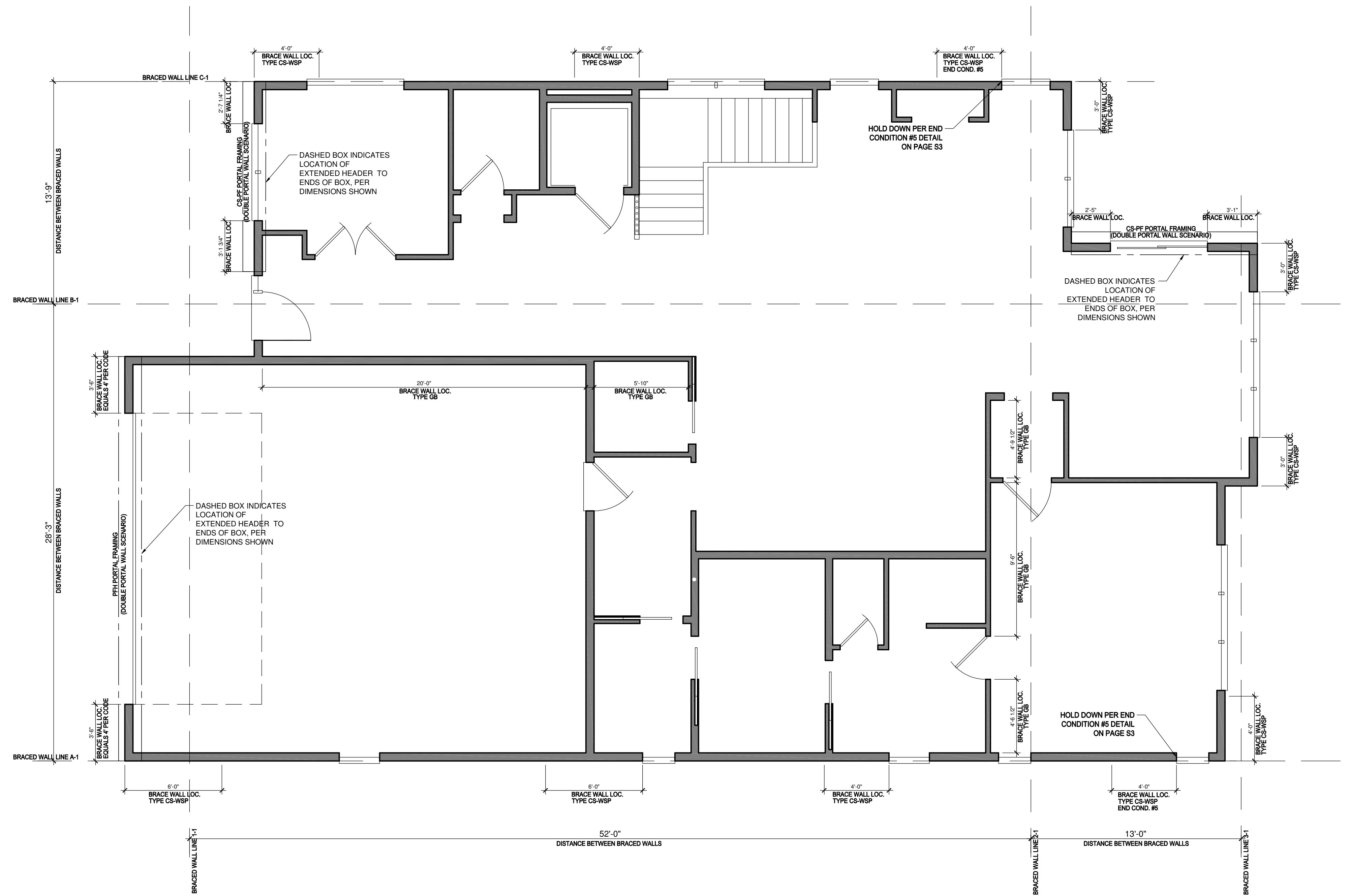
- ALL WALLS DESIGNED PER METHOD CS-WSP OF THE 2020 MN CODE.
- ALL EXTERIOR WALLS ARE TO BE CONTINUOUSLY SHEATHED WITH A MINIMUM 3/8" THICK WOOD PANEL.
- CONNECTION OF WOOD PANEL TO STUDS SHALL BE MIN. 8d COMMON NAILS, 6" O.C. AT EDGES & 12" O.C. AT FIELD OF WOOD PANEL.
- STRUCTURAL PANELS (BRACED WALLS) SHALL BE LOCATED AT EACH END & AT LEAST EVERY 20' BETWEEN PANELS.
- EXTERIOR BRACED WALL LINES SHALL HAVE A BRACED WALL PANEL AT EACH END OF THE BRACED WALL LINE, EXCEPT FOR:
 - BRACED WALL PANELS ARE PERMITTED TO BEGIN NO MORE THAN 10' FROM EACH END OF THE BRACED WALL LINE PROVIDED THAT A 24" PANEL MATCHING TABLE R602.10.7 IS APPLIED.
 - THE END OF EACH BRACED WALL PANEL CLOSEST TO THE CORNER SHALL HAVE A TIE-DOWN DEVICE FASTENED TO THE STUD AT THE EDGE OF THE BRACED WALL PANEL CLOSEST TO THE CORNER AND TO THE FOUNDATION OR FRAMING BELOW. THE TIE-DOWN DEVICE SHALL BE CAPABLE OF PROVIDING AN UPLIFT ALLOWABLE DESIGN VALUE OF AT LEAST 1800 LBS. THE TIE-DOWN DEVICE SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- INTERIOR BRACED WALL LINES SHALL BE DESIGNED/BUILT PER INTERMITTENT METHOD "GB".
 - MINIMUM 1/2" GYPSUM BOARD APPLIED TO EACH SIDE OF 2X4 (OR) 2X6 STUD WALL @ 16" O.C.
 - SPACING OF STUDS W/ DOUBLE TOP PLATE AND SINGLE BTM.
 - ATTACH GYPSUM TO STUDS W/ 1-1/4" SCREWS (TYPE W OR S), 6" O.C. AT EDGE & 6" O.C. AT FIELD.
 - ALL GYPSUM BOARD JOINTS TO BE SOLID BLOCKED W/ 2X MATERIAL
- (PERPENDICULAR WALL/FLOOR) ALL FLOOR SYSTEMS BETWEEN BRACED WALL PANELS TO HAVE A MIN. 2X4 TOP & BOTTOM BLOCKING BOARD PARALLEL TO BRACED WALL PANELS W/ MIN. (3)16d NAILS ATTACHING BOTTOM/TOP OF BRACED PANEL PLATE TO FLOOR SYSTEM AT BRACED PANEL WIDTH ONLY. 2X4 BLOCKING TO BE SET BETWEEN FLOOR SYSTEM MEMBERS. SOLID RIM MAY BE USED (FIG. 5 & 6).
- (PERPENDICULAR WALL/ROOF) APPLY 2X SOLID BLOCKING BETWEEN ROOF SYSTEM MEMBERS OVER BRACED WALL PANELS W/ 8d NAILS AT 6" O.C. ALONG LENGTH OF BRACED WALL PANELS WHEN HEEL IS 15.25" OR LESS (FIGURE 3, REFER TO FIG. #4 WHEN OVER 15.25").
- NOTE:** NOTES 7 & 8 ABOVE APPLY TO PERPENDICULAR FRAMING, WHEN PARALLEL FLOORS/ROOF SYSTEMS ARE PRESENT, THE FLOOR/ROOF SYSTEM IS TO HAVE BLOCKING MATERIAL ALLOWING FOR NAILING OF BRACED WALL PANEL INTO SYSTEM ABOVE/BELOW SAID WALL (FIGURE 6).

BRACED WALL PANEL UPLIFT LOAD PATH:

BRACED WALL PANELS LOCATED AT EXTERIOR WALLS THAT SUPPORT ROOF RAFTERS OR TRUSSES (INCLUDING STORIES BELOW TOP STORY) SHALL HAVE THE FRAMING MEMBERS CONNECTED IN ACCORDANCE WITH:

- WHERE THE NET UPLIFT VALUE AT THE TOP OF A WALL EXCEEDS 100 PLF, INSTALLING APPROVED UPLIFT FRAMING CONNECTORS TO PROVIDE A CONTINUOUS LOAD PATH FROM THE TOP OF THE WALL TO THE FOUNDATION OR TO A POINT WHERE THE UPLIFT FORCE IS 100 PLF OR LESS. THE NET UPLIFT VALUE SHALL BE AS DETERMINED BY ONE OF THE FOLLOWING:
 - THE BASIC WIND SPEED DOES NOT EXCEED 115 MPH, THE WIND EXPOSURE CATEGORY IS B, THE ROOF PITCH IS 5:12 OR GREATER, AND THE ROOF SPAN IS 32' OR LESS

(OR)
 - THE NET UPLIFT VALUE AT THE TOP OF A WALL DOES NOT EXCEED 100 PLF. THE NET UPLIFT VALUE SHALL BE DETERMINED IN ACCORDANCE WITH SECTION R802.11 AND SHALL BE PERMITTED TO BE REDUCED BY 60 PLF FOR EACH FULL WALL ABOVE.
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1 FIRST FLOOR WALL BRACING PLAN
SCALE: 1/4" = 1'-0"

0 2' 4' 8'
SCALE: 1/4" = 1'-0"

THIS PLAN PROVIDES BUILDING DETAILS FOR A PROJECT TO BE BUILT IN ACCORDANCE WITH INTERNATIONAL BUILDING CODES AS WELL AS ANY LOCAL CODES. CONTRACTOR, OWNER, AND/OR TRADES ARE RESPONSIBLE FOR ANY FINES, PENALTIES FOR CODE, ORDINANCE, REGULATION OR BUILDING PROCESS VIOLATIONS. LITTFIN DESIGN IS NOT RESPONSIBLE FOR OMISSIONS OR ERRORS MADE DURING DESIGN, BIDDING, OR CONSTRUCTION PHASES. ANY AND ALL SITE REVIEW IS TO BE PERFORMED BY OTHERS SUCH AS THE CONTRACTOR, OWNER, SURVEYOR, OR OTHER TRADES RESPONSIBLE FOR SITE CONDITIONS. LITTFIN DESIGN IS NOT RESPONSIBLE FOR CONTRACTOR/TRADE ERRORS, UNKNOWN CODE ADJUSTMENTS AT THE TIME OF PLAN CREATION OR CONSTRUCTION.

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		WEST HAVEN DETACHED VILLAS 42' LOCATION: ADDRESS TBD, BLOOMINGTON, MN	© COPYRIGHT 2025					

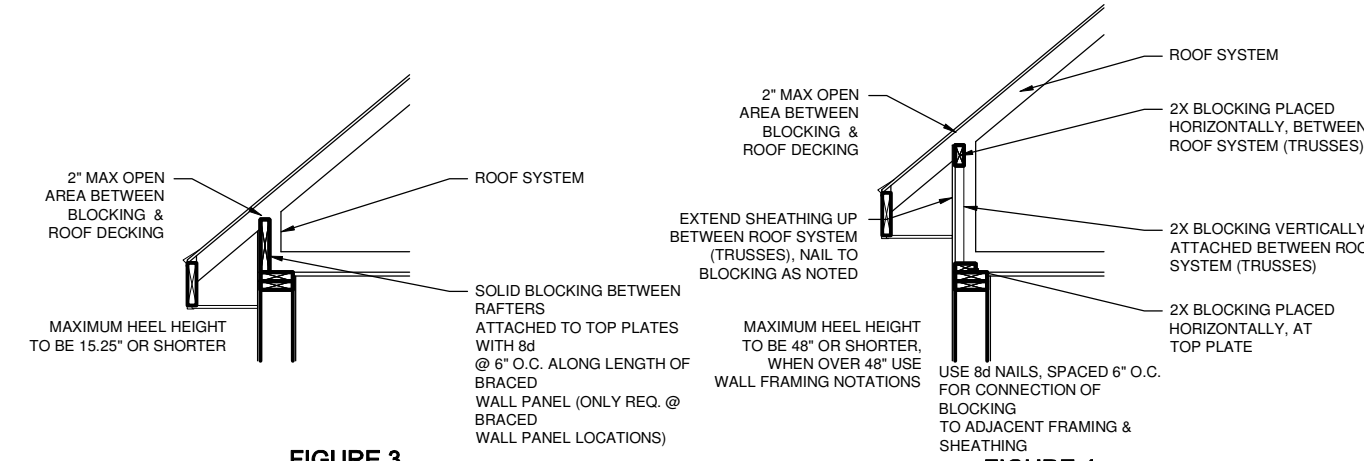


FIGURE 3
BRACED WALL PANEL CONNECTION TO PERPENDICULAR ROOF SYSTEM

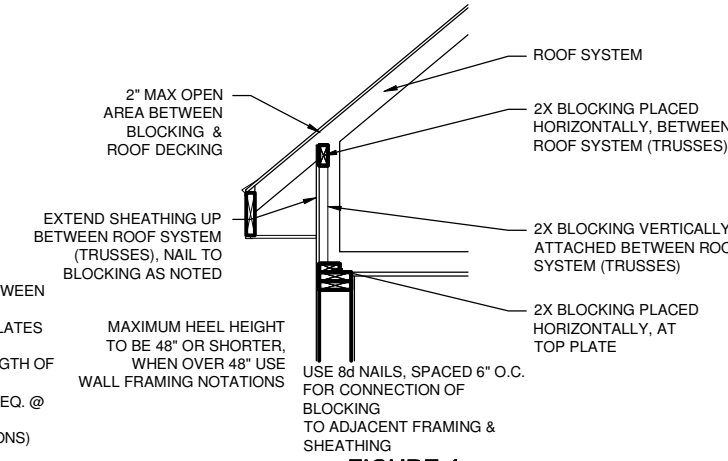


FIGURE 4
BRACED WALL PANEL CONNECTION TO PERPENDICULAR ROOF SYSTEM (WHEN OVER 15.25')

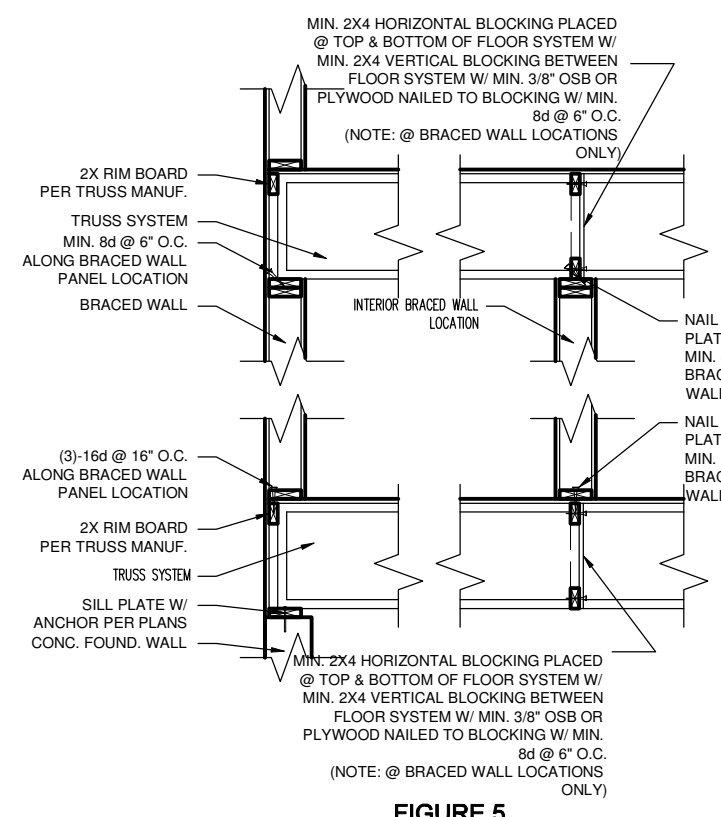


FIGURE 5
BRACED WALL PANEL CONNECTION WHEN PERPENDICULAR TO FLOOR/CEILING FRAMING

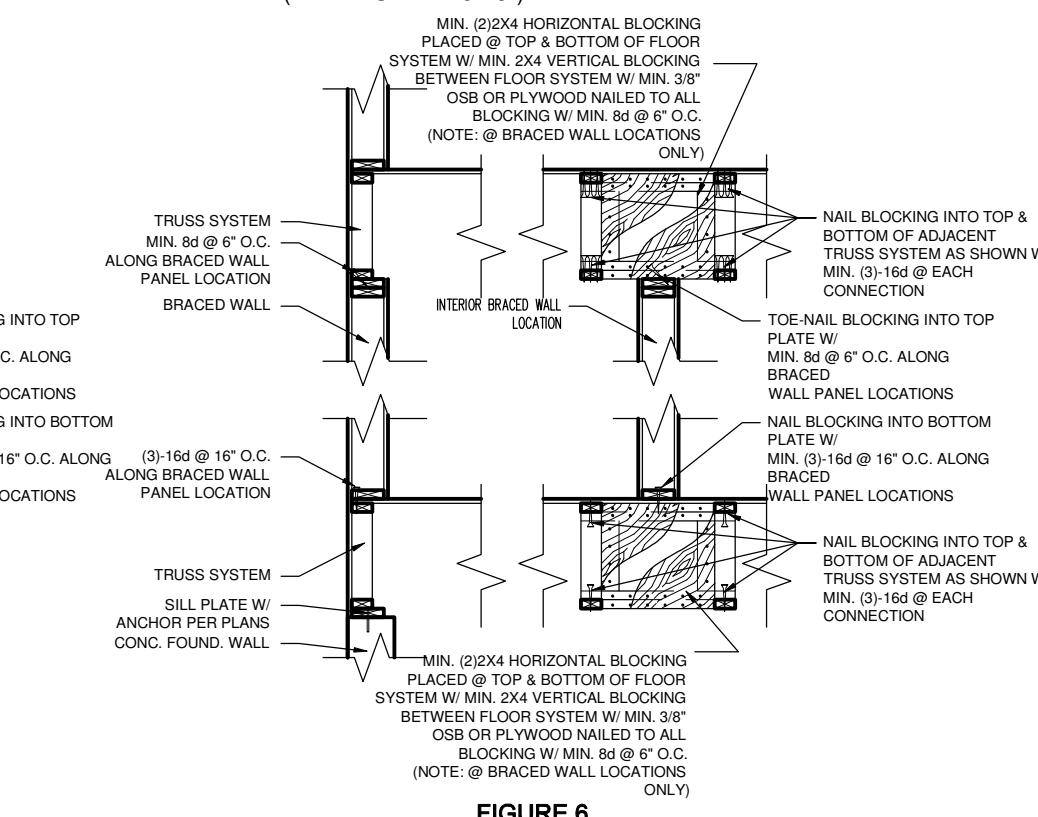
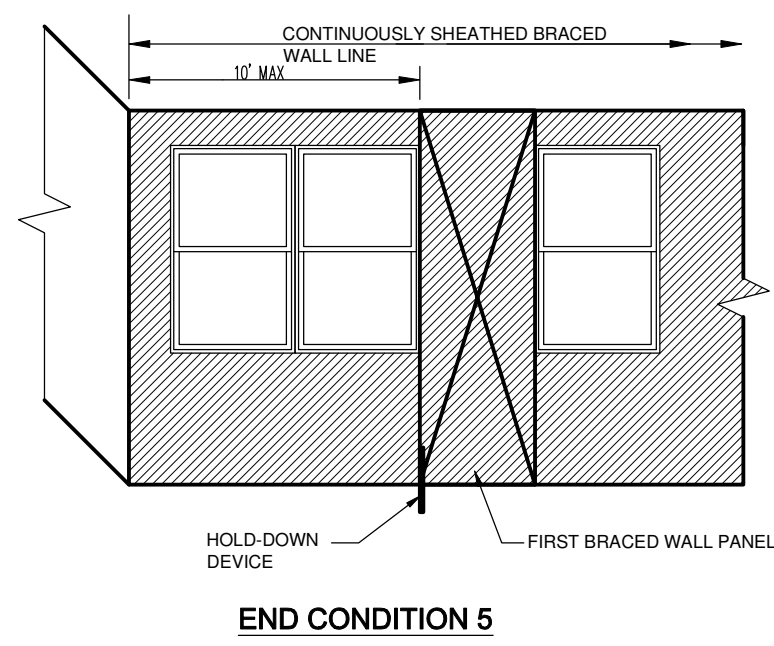
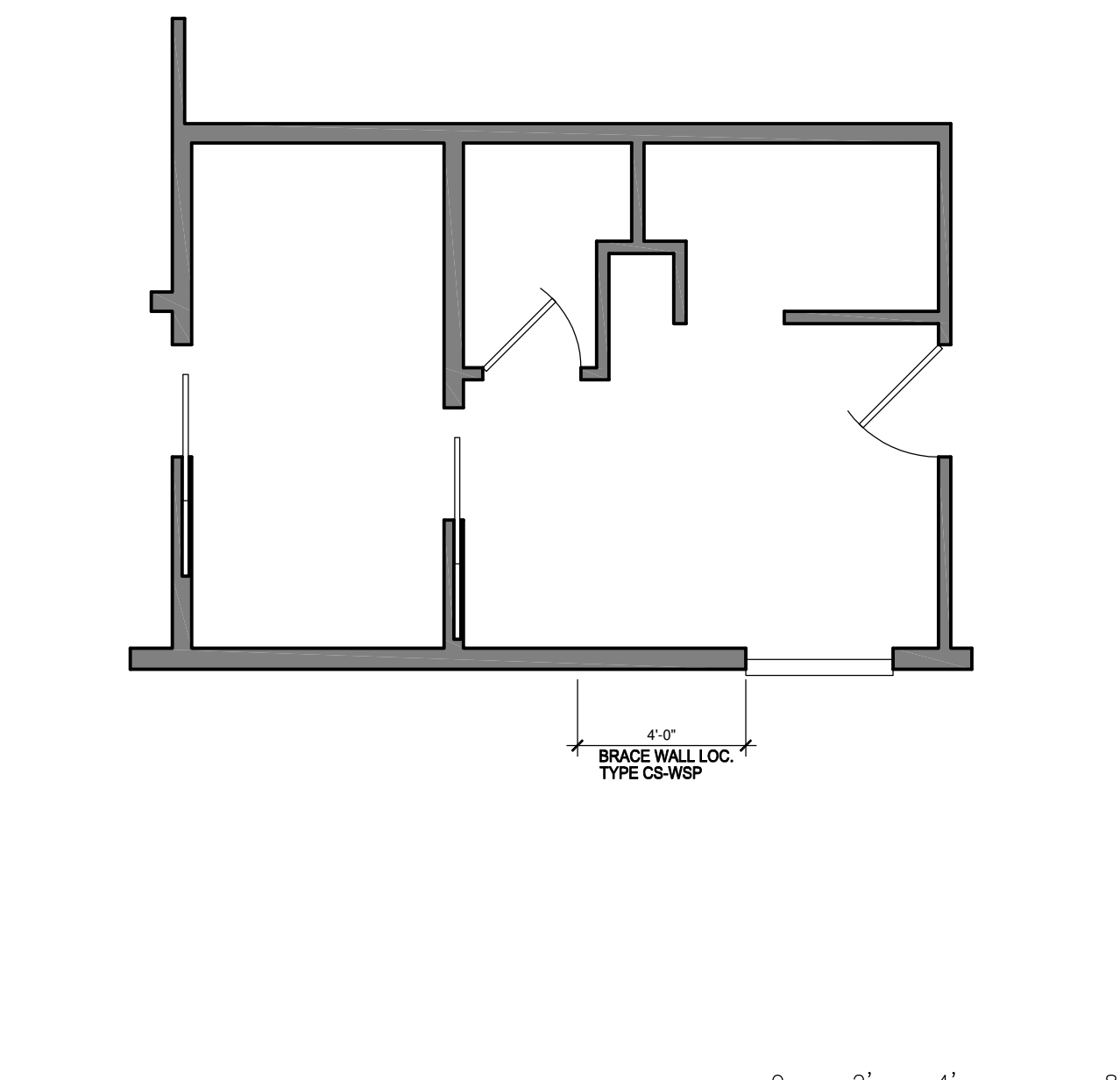


FIGURE 6
BRACED WALL PANEL CONNECTION WHEN PARALLEL TO FLOOR/CEILING FRAMING

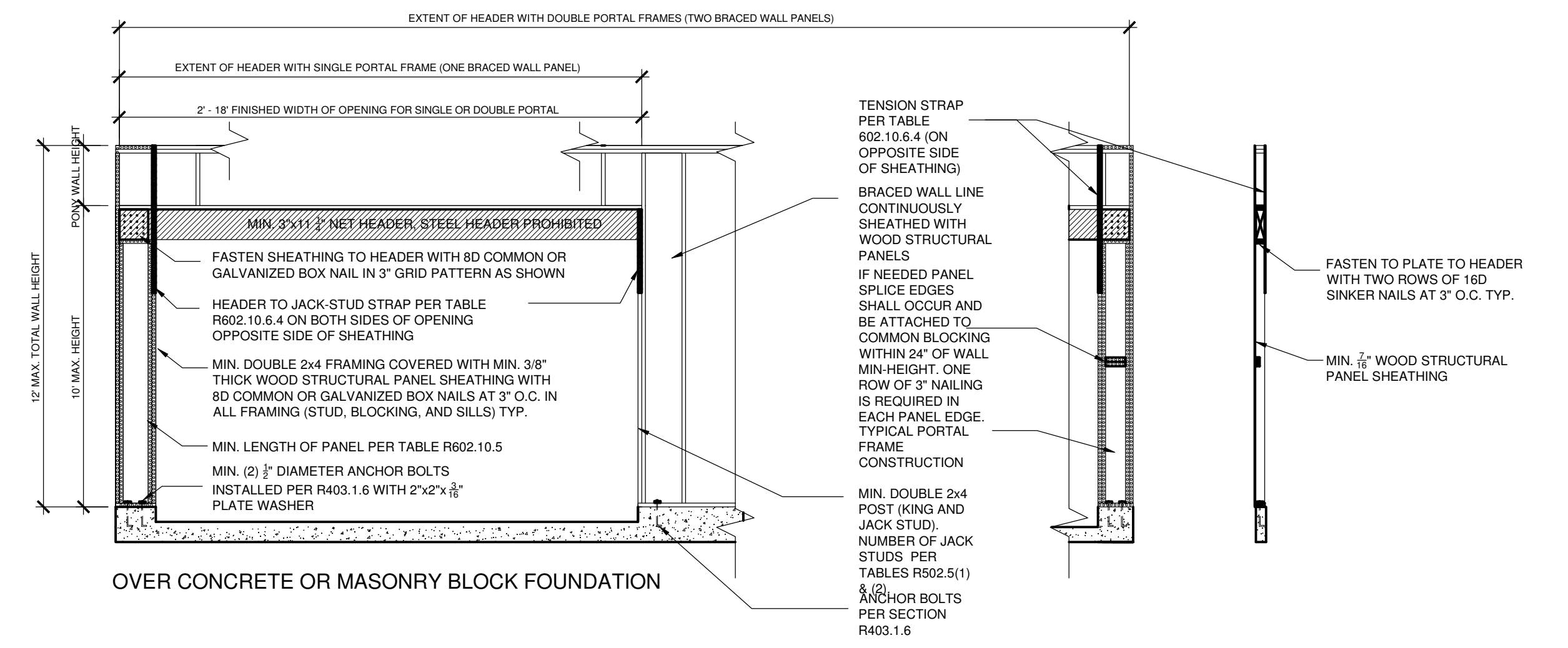


END CONDITION 5

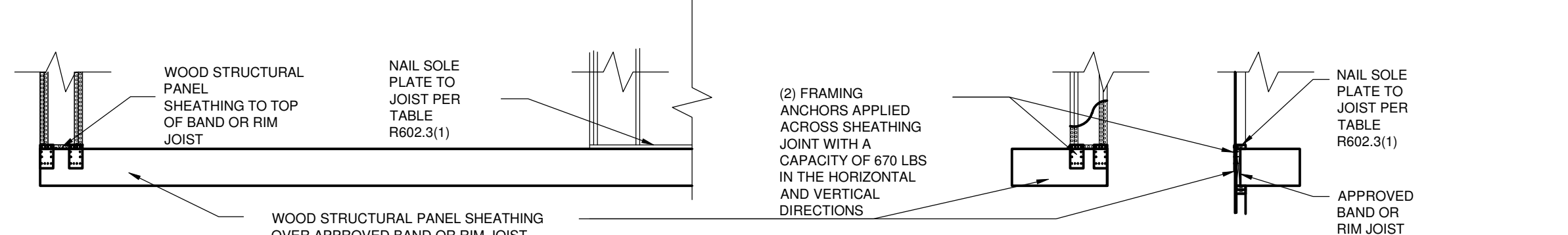
HOLD DOWN DEVICE: 800 LBS CAPACITY FASTENED TO THE EDGE OF THE BRACED WALL PANEL CLOSEST TO THE CORNER AND TO THE FOUNDATION OR FLOOR FRAMING BELOW



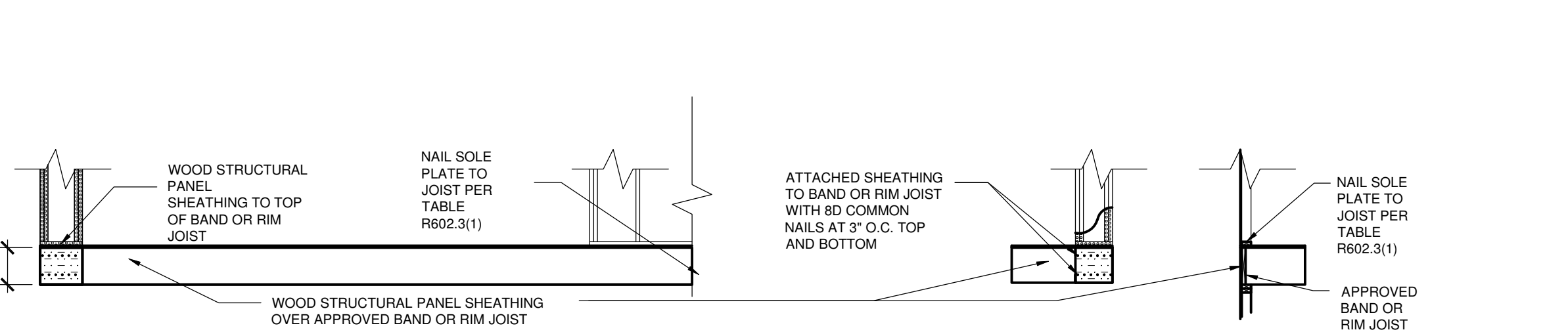
1 OPTIONAL TUB WALL BRACING PLAN
SCALE: 1/4" = 1'-0"



FRONT ELEVATION



SECTION

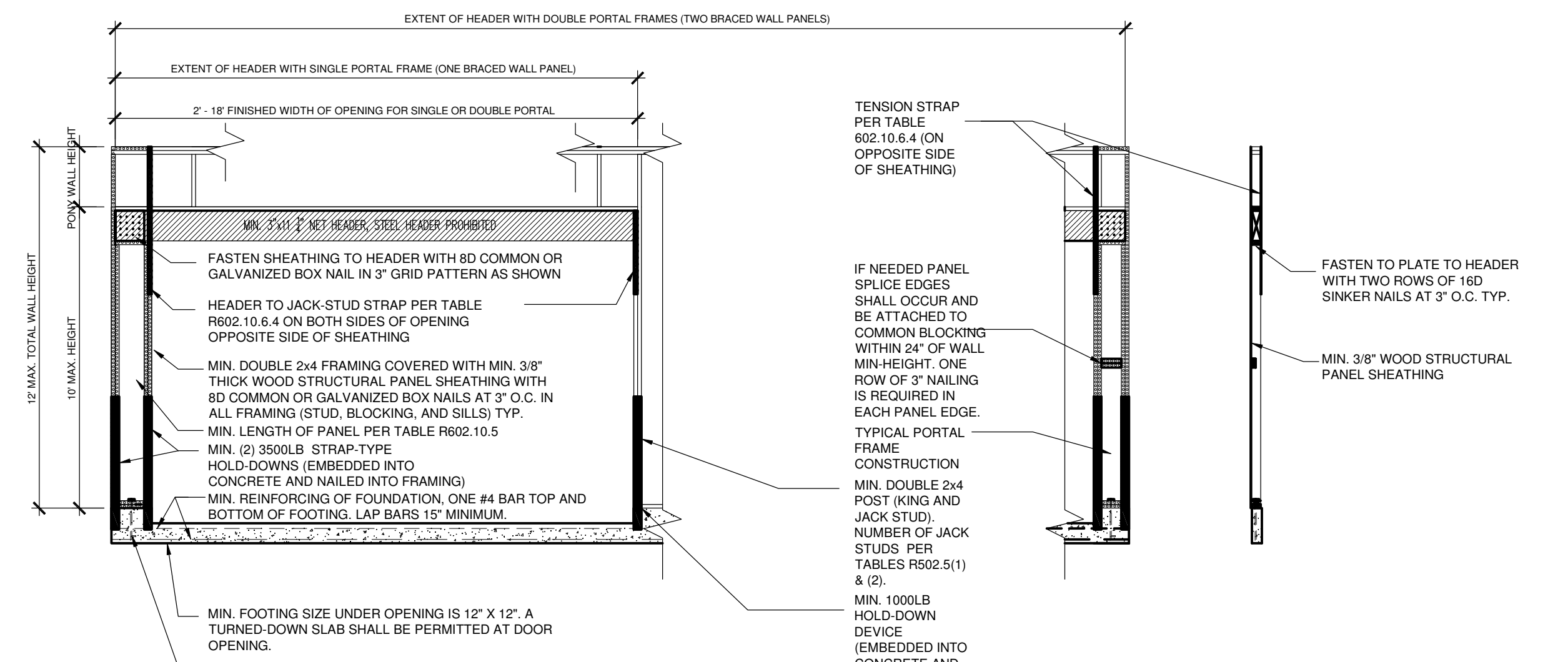


SECTION

FOR SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

FRONT ELEVATION

FIGURE BRACED WALL PANEL 1
METHOD CS-PF-CONTINUOUSLY SHEATHED PORTAL FRAME PANEL CONSTRUCTION



FRONT ELEVATION

SECTION

FIGURE BRACED WALL PANEL 2
METHOD PFH-PORTAL FRAME PANEL WITH HOLD-DOWNS

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