01 Front Elevation

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

02 Left Side Elevation

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

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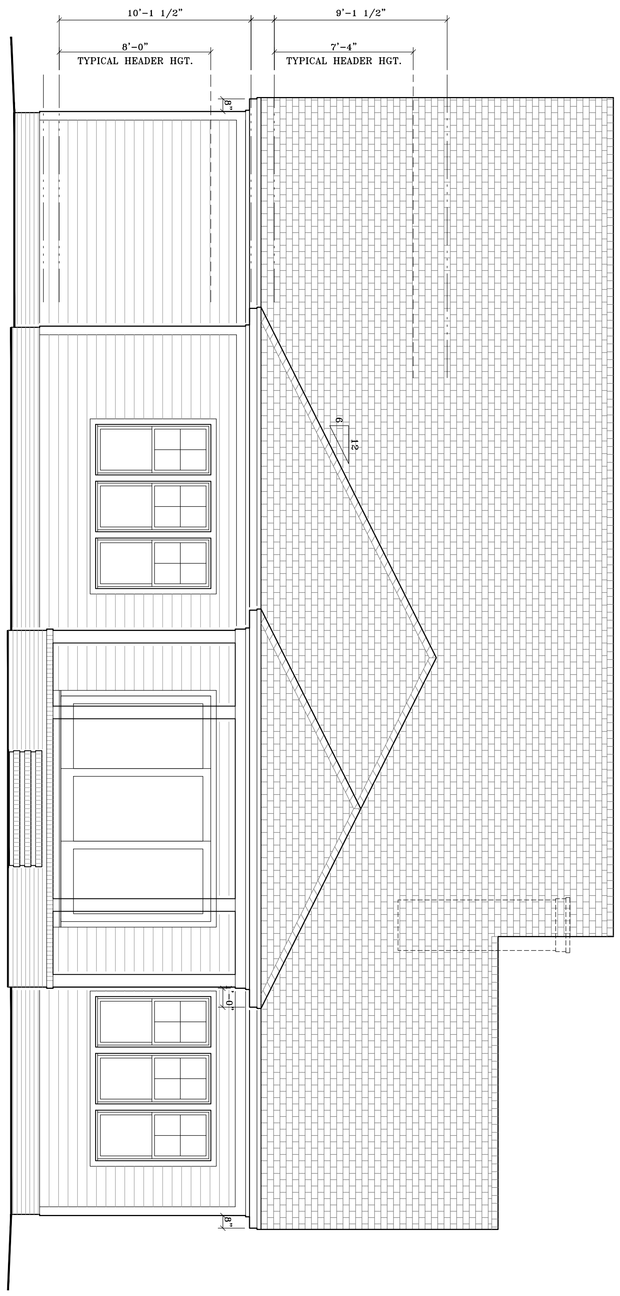
Issue Date: 6 June 2022

A1

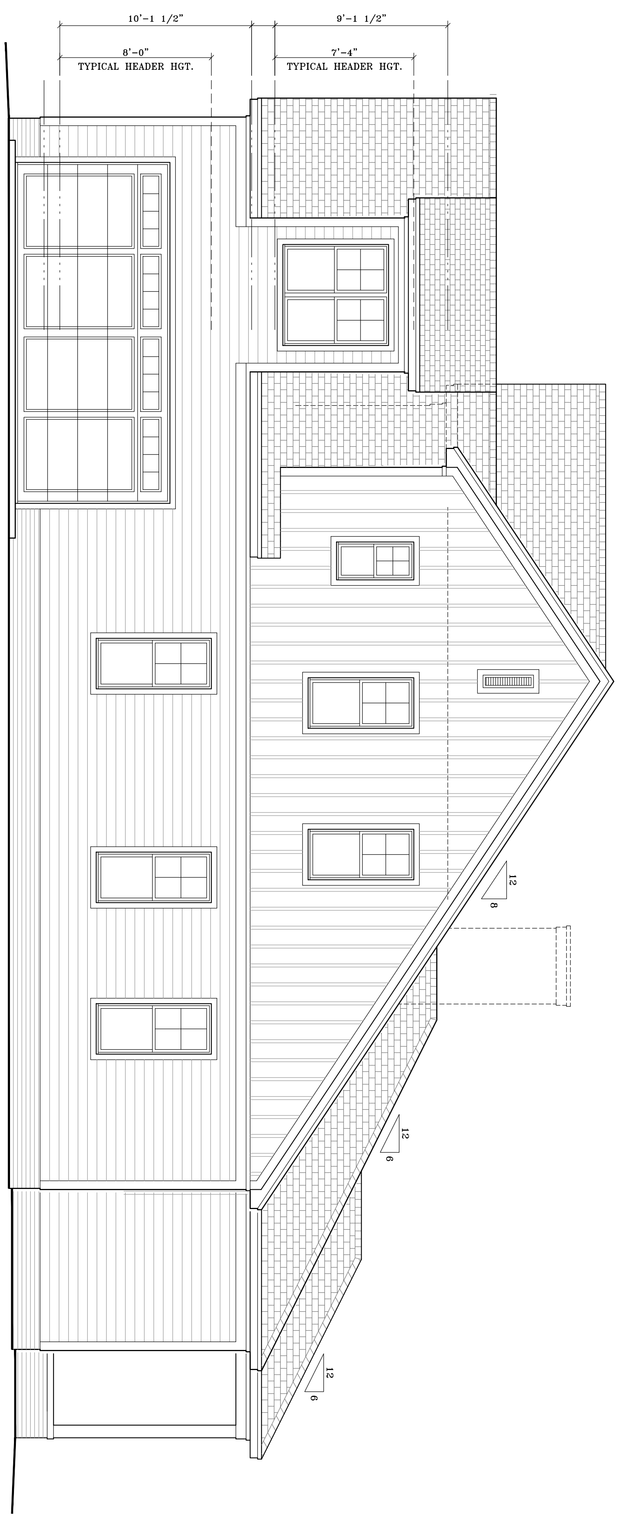
01 Rear Elevation

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



02 Right Side Elevation

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



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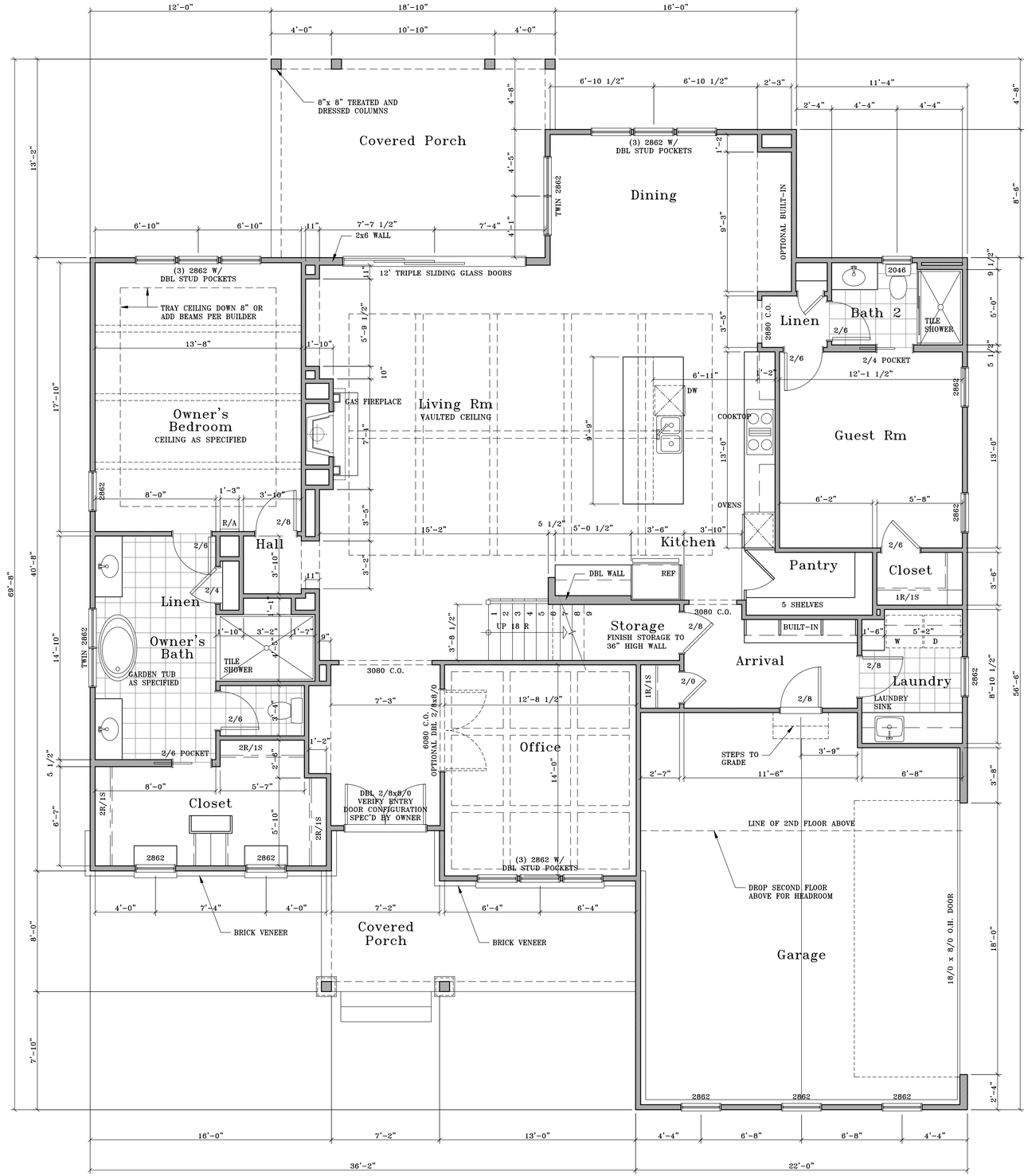

01 First Floor Plan Scale: 1/4" = 1'-0"

Area Data

2ND FLOOR	926
1ST FLOOR	2,286
TOTAL HEATED	3,212
GARAGE	558
FRONT PORCH	177
BACK PORCH	242
–	–

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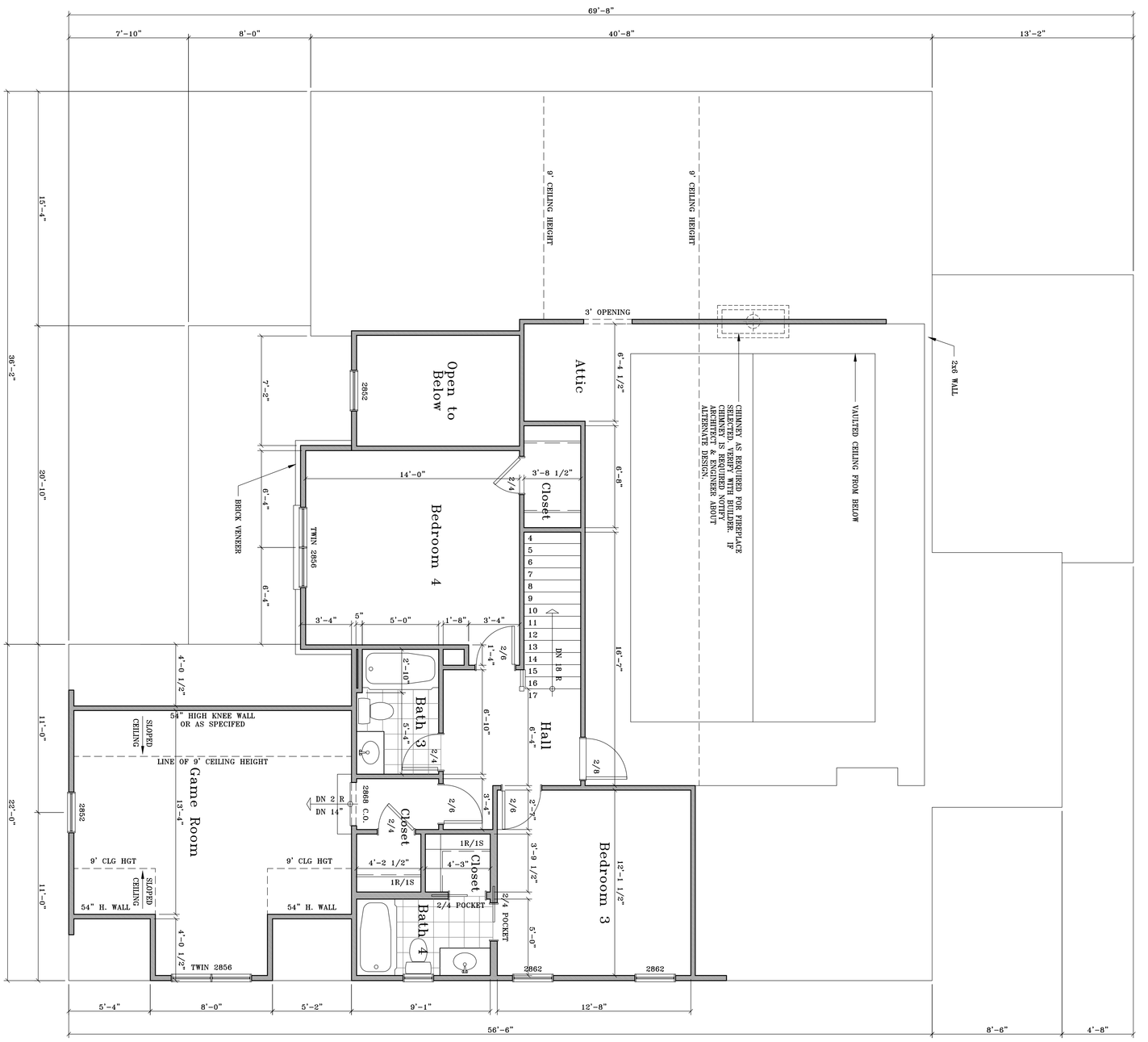
A3

01 Second Floor Plan



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

A4

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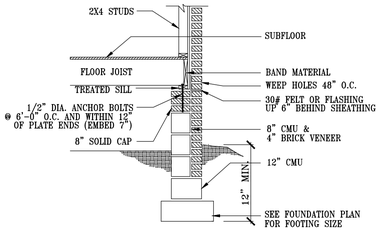
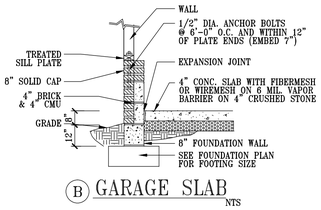
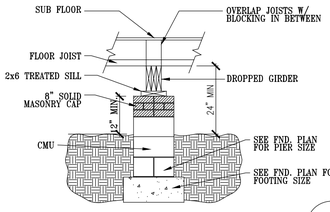


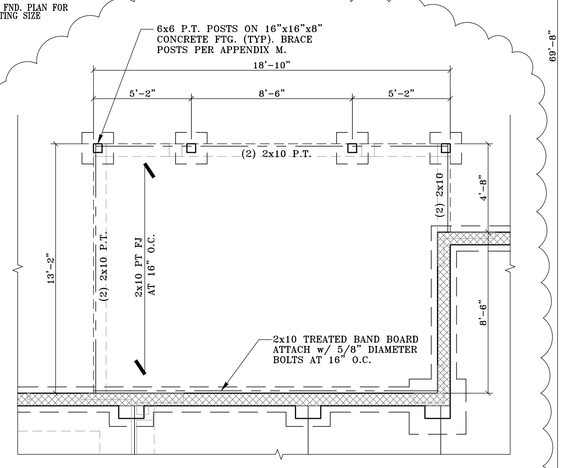
A CRAWL SECTION
NTS



B GARAGE SLAB
NTS



C DROPPED GIRDER
NTS



02 Alternate Framed Porch

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

NOTES:

ALL FRAMING MEMBERS (JOISTS, GIRDERS AND HEADERS) ARE # 2 S.P.F. UNLESS NOTED

PROVIDE 36" W. x 24" H. (MIN.) ACCESS DOOR. LOCATE AS REQUIRED BY FINISHED GRADE.

FOOTING SIZES BASED ON 2,000 psf ALLOWABLE SOIL BEARING PRESSURE.

FOUNDATION STRUCTURAL NOTES:

(115 MPH WIND ZONE)

1. (4) 2 X 10 SPF #2 GIRDER, TYPICAL UNO.
2. CONCRETE BLOCK PIER SIZE SHALL BE:

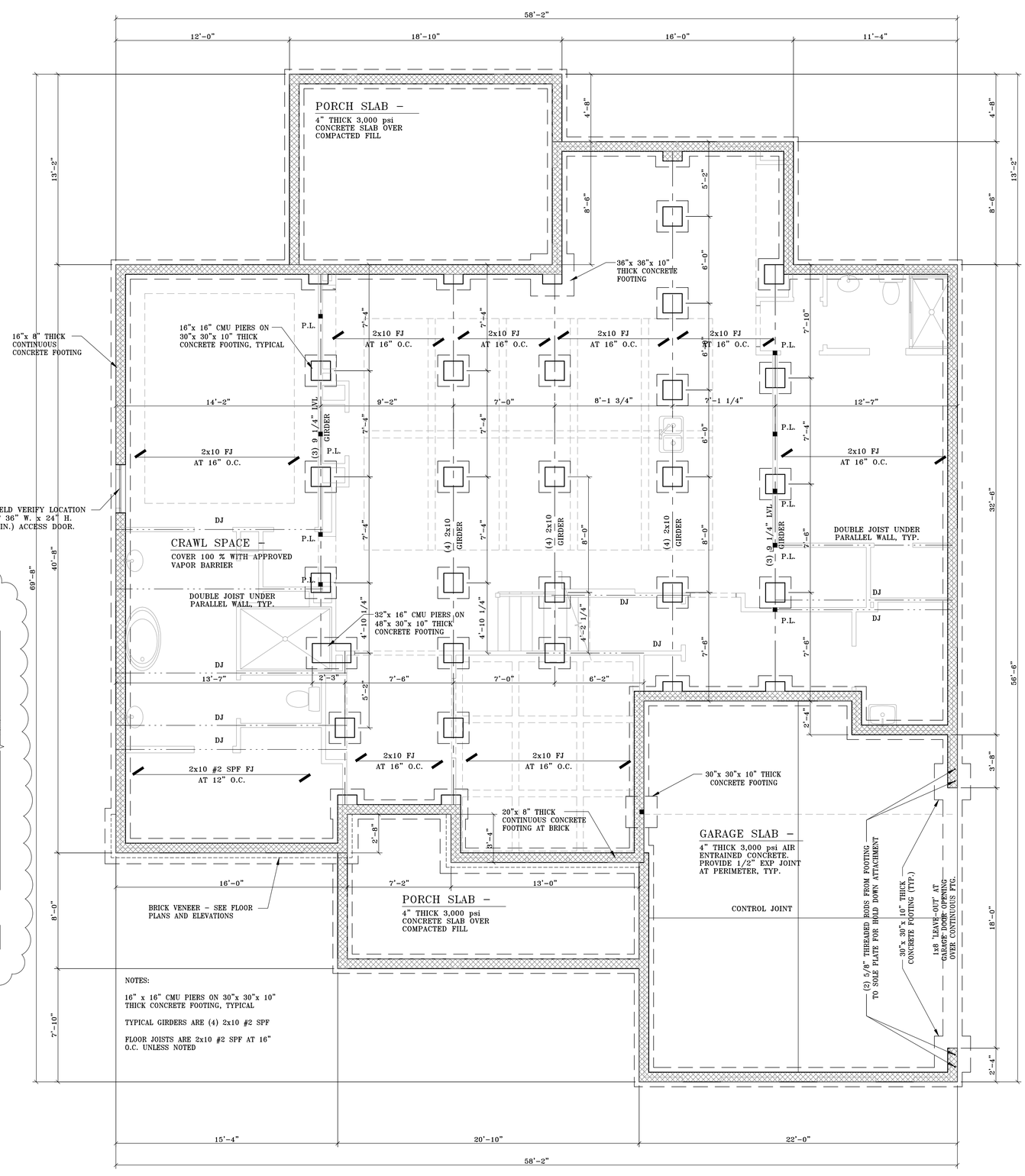
SIZE	HOLLOW MASONRY	SOLID MASONRY
8X16	UP TO 32" HIGH	UP TO 5'-0" HIGH
12 X 16	UP TO 48" HIGH	UP TO 9'-0" HIGH
16 X 16	UP TO 64" HIGH	UP TO 12'-0" HIGH
24 X 24	UP TO 96" HIGH	

WITH 30" X 30" X 10" CONCRETE FOOTING, UNO.

3. WALL FOOTING AS FOLLOWS:
   DEPTH: 8" – UP TO 2-1/2 STORY
   10" – 3 STORY
   WIDTH: SIDING (OR EQUAL) – 16" UP TO 2 1/2 STORY
   – 18" UP TO 3 STORY
   BRICK – 16" – 1 STORY
   – 20" – 2 STORY
   – 24" – 3 STORY
   FOR FOUNDATION WALL HEIGHT AND BACKFILL REQUIREMENTS, REFER TO NORTH CAROLINA RESIDENTIAL CODE TABLE R404.1.1A AND 404.1.1 (1 THRU 4).
   ASSUMED SOIL BEARING CAPACITY = 2000 PSF.
   CONTRACTOR MUST VERIFY SITE CONDITIONS AND CONTACT SOILS ENGINEER IF MARGINAL OR UNSTABLE SOILS ARE ENCOUNTERED.
   ATTACH SILL PLATE WITH 1/2" DIA. ANCHOR BOLTS AT 6'–0" CENTERS (7" EMBEDMENT) AND 12 " FROM EACH CORNER. (SECTION R403.1.6)
4. ■ DESIGNATES A SIGNIFICANT POINT LOAD TO HAVE SOLID BLOCKING TO PIER. SOLID BLOCK ALL BEAM BEARING POINTS NOTED TO HAVE THREE OR MORE STUDS TO FOUNDATION, TYPICAL.
5. ABBREVIATIONS:
   SJ = SINGLE JOIST
   DJ = DOUBLE JOIST
   TJ = TRIPLE JOIST

CRAWL SPACE VENTS

2,033 SQ. FT. OF CRAWL SPACE
(2,033/ 150) x 144 = 1,952 SQ. IN. OF VENTS REQ'D.
CRAWL SPACE VENT AREA MAY BE REDUCED TO 1/10th OF THE REQ'D AREA (195.2 SQ. IN.) IF PROVIDED WITHIN 3 FEET OF EACH CORNER OF THE BUILDING. (VENT–ILATION OPENINGS MAY BE OMITTED ON ONE SIDE.)



NOTES:

16" x 16" CMU PIERS ON 30"x 30"x 10" THICK CONCRETE FOOTING, TYPICAL

TYPICAL GIRDERS ARE (4) 2x10 #2 SPF

FLOOR JOISTS ARE 2x10 #2 SPF AT 16" O.C. UNLESS NOTED

01 Foundation Plan

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

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S1

STRUCTURAL NOTES

1) ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS INCLUDING ROOF RAFTERS, HIPS, VALLEYS, RIDGES, FLOORS, WALLS, BEAMS AND HEADERS, COLUMNS, CANTILEVERS, OFFSET LOAD BEARING WALLS, PIER & GIRDER SYSTEM AND FOOTING. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF SYSTEM.

2) ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE NORTH CAROLINA STATE RESIDENTIAL CODE – 2018 EDITION, PLUS ALL LOCAL CODES AND REGULATIONS. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR, AND WILL NOT HAVE CONTROL OF, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION WORK; NOR WILL THE ENGINEER BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

3) DESIGN LOADS (R301.4)

	LIVE LOAD (PSF)	DEAD LOAD (PSF)
ROOMS (other than sleeping)	40	10
SLEEPING ROOMS	30	--
ATTIC WITH STORAGE	20	10
ATTIC WITHOUT STORAGE	10	10
STAIRS	40	10
EXTERIOR BALCONIES	60	10
DECKS	40	10
GUARDRAILS & HANDRAILS	200	--
PASSENGER VEHICLE GARAGES	50	10
FIRE ESCAPES	40	10
SNOW	15	--
WIND LOAD	(BASED ON 115 MPH WIND VELOCITY)	

4) FOR WALL BRACING REQUIREMENTS, REFER TO SECTION R602.10 OF THE NORTH CAROLINA STATE RESIDENTIAL CODE – 2018 EDITION

5) CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 3000 PSI AND A MAXIMUM SLUMP OF 5 INCHES UNLESS NOTED OTHERWISE (UNO).

6) ALL FRAMING LUMBER SHALL BE SPF #2 (Fb = 1000 PSI) UNLESS NOTED OTHERWISE (UNO).

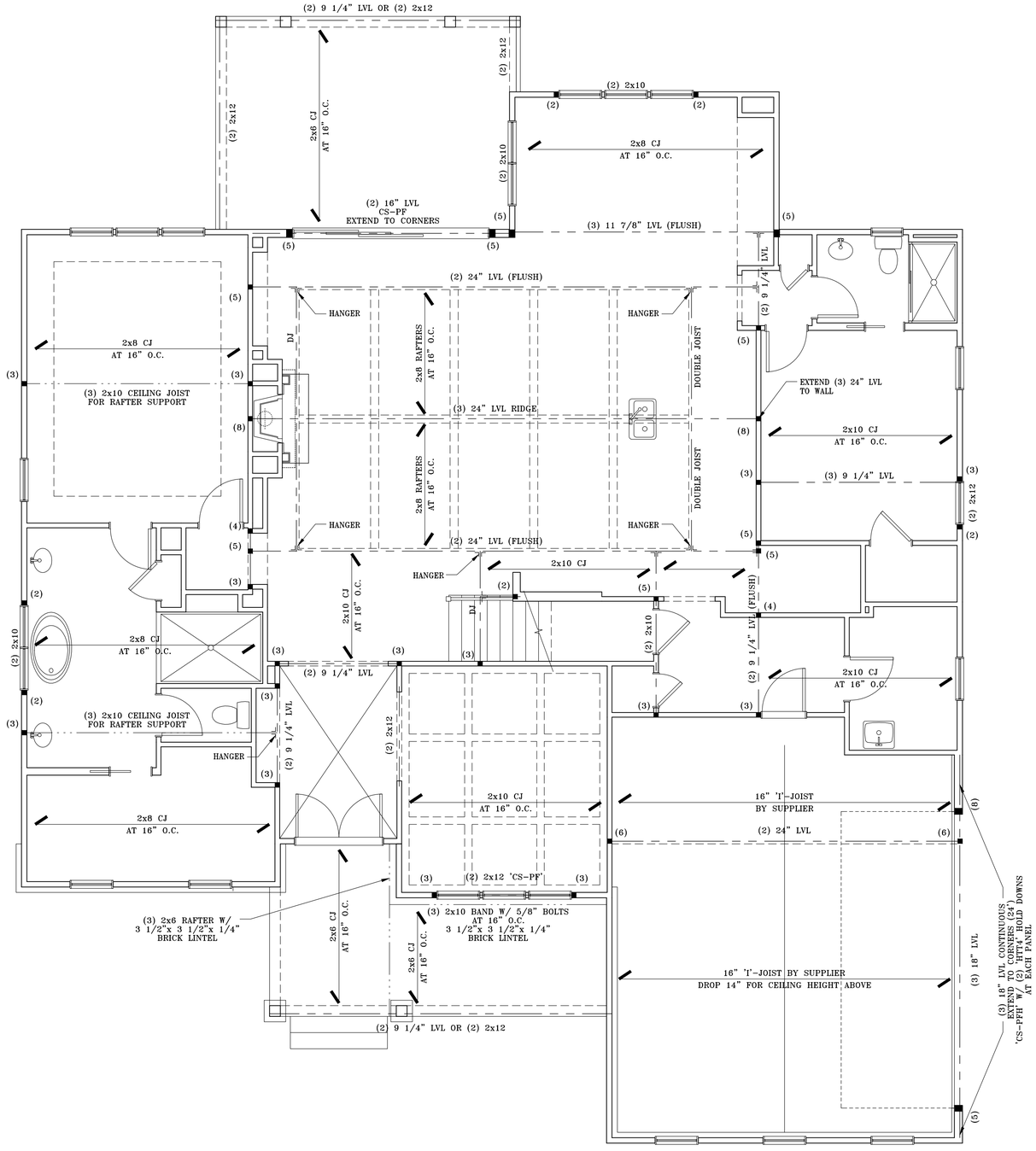
7) ALL WOODEN BEAMS AND HEADERS SHALL HAVE THE FOLLOWING END SUPPORTS: (1) 2x4 STUD COLUMN FOR 6'-0" MAX. BEAM SPAN, (2) STUDS FOR BEAM SPAN GREATER THAN 6'-0" (UNO). ALL BEARING HEADERS AND HEADERS OVER 6'-0" IN LENGTH SHALL BE (2) 2x10's (UNO).

8) L.V.L. SHALL BE LAMINATED VENEER LUMBER OR PARRALLEL STRAND LUMBER (PSL) WITH THE FOLLOWING PROPERTIES: Fb = 2800 PSI, Fv = 285 PSI, E = 1,900,000 PSI.
INSTALL ALL CONNECTIONS PER MANUFACTURERS INSTRUCTIONS.

8) ALL STRUCTURAL STEEL SHALL BE ASTM A-36. STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2" INCHES AND FULL FLANGE WIDTH. PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO LAG SCREWS (1/2" DIAMETER x 4" LONG). LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDING THE JOIST ARE TOE NAILED TO THE SOLE PLATE, AND SOLE PLATE IS NAILED OR BOLTED TO THE BEAM FLANGE @ 48" O.C. .

9) FLITCH BEAMS SHALL BE BOLTED TOGETHER USING 1/2" DIAMETER BOLTS (ASTM A307) WITH WASHERS PLACED UNDER THHREADED END OF BOLT. BOLTS SHALL BE SPACED AT 24" CENTERS (MAXIMUM), AND STAGGERED TOP AND AT BOTTOM OF BEAM (2" EDGE DISTANCE), WITH 2 BOLTS LOCATED AT 6" FROM EACH END.

10) BRICK LINTELS SHALL BE 3 1/2"x3 1/2"x1/4" STEEL ANGLE FOR UP TO 6'-0" SPAN AND 6"x4"x5/16" STEEL ANGLE WITH 6" LEG VERTICAL FOR SPANS GREATER THAN 6'-0" (UNO).



01 Second Floor Framing Plan Scale: 1/4" = 1'-0"

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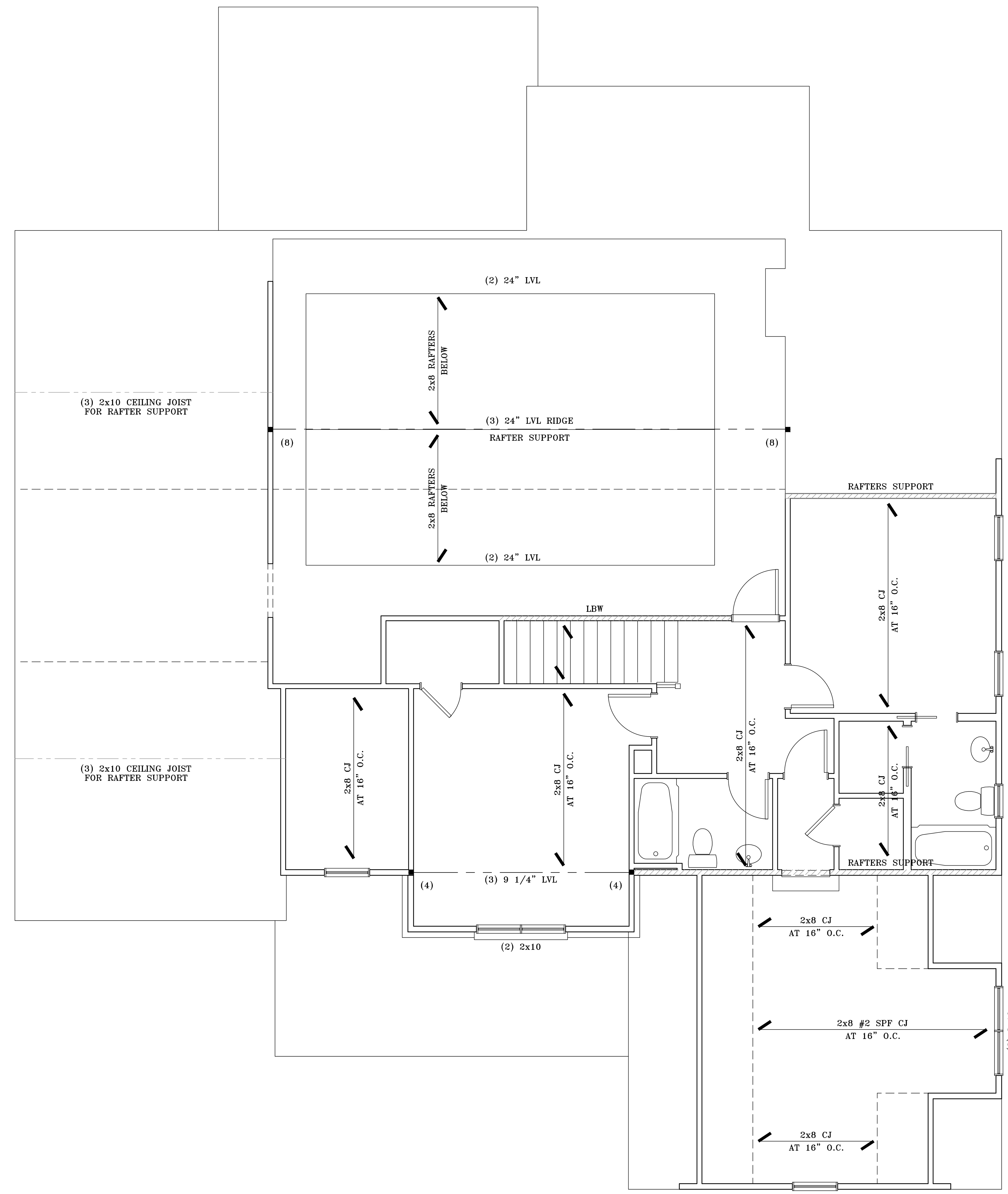

01 Second Floor Ceiling Framing Scale: 1/4" = 1'-0"

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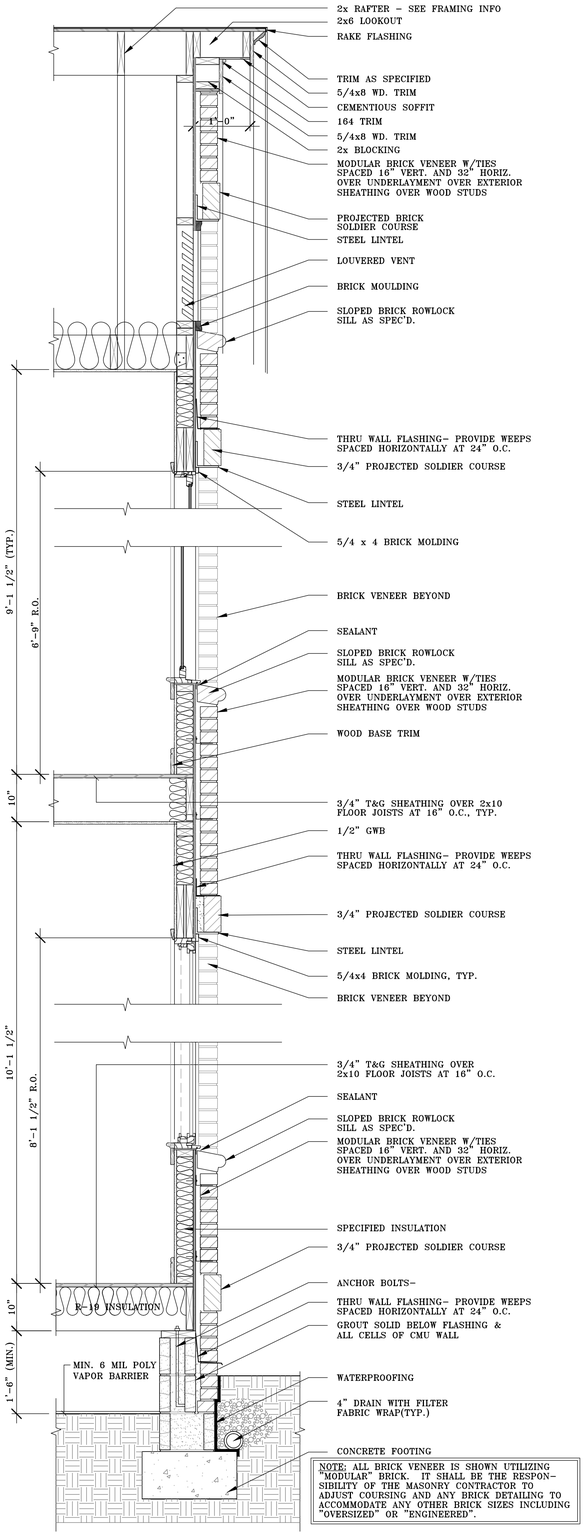
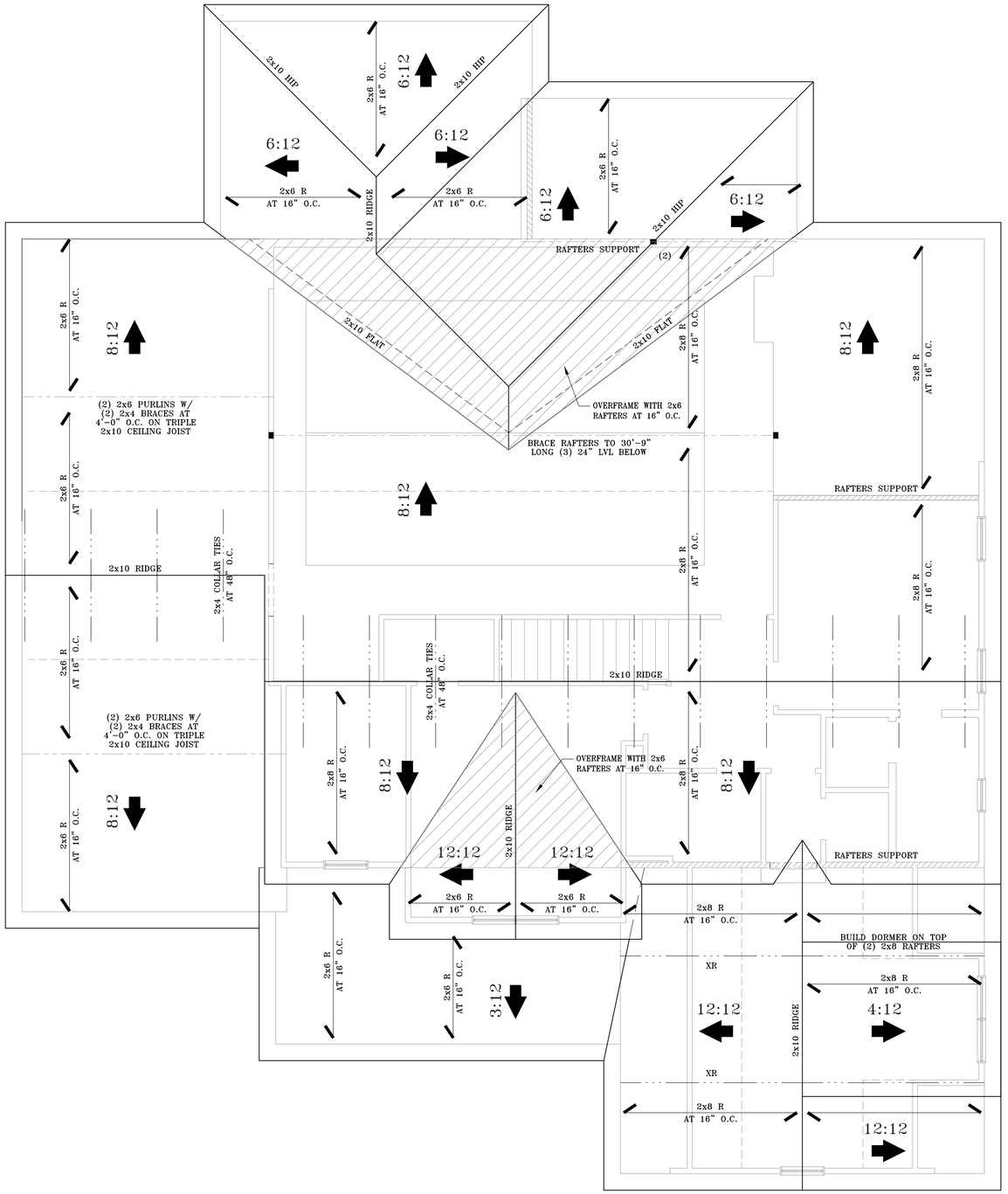


NOTE: ALL BRICK VENEER IS SHOWN UTILIZING "MODULAR" BRICK. IT SHALL BE THE RESPONSIBILITY OF THE MASONRY CONTRACTOR TO ADJUST COURSING AND ANY BRICK DETAILING TO ACCOMMODATE ANY OTHER BRICK SIZES INCLUDING "OVERSIZED" OR "ENGINEERED".

02 Wall Section at Front Gable

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



01 Roof Plan

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

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