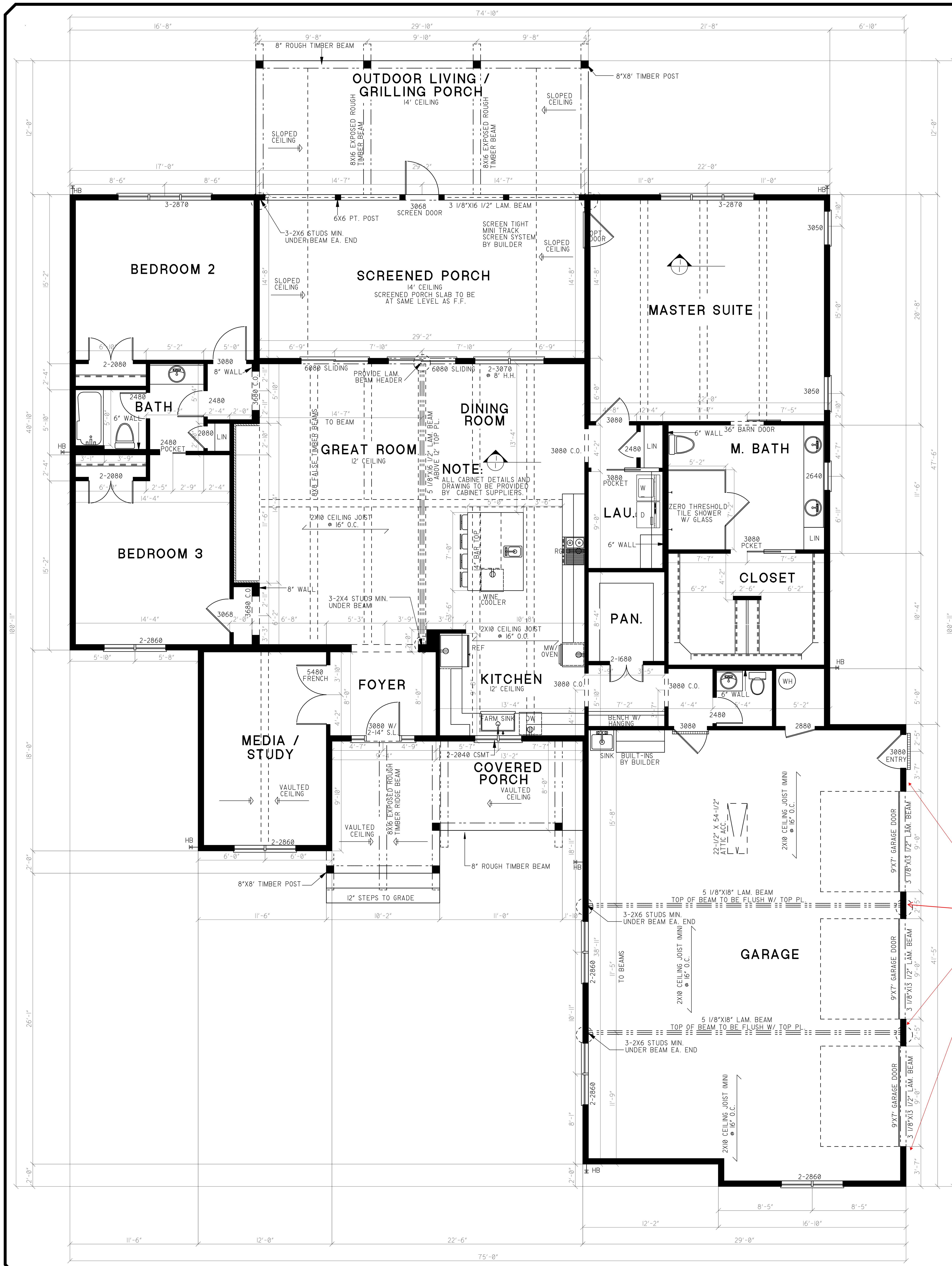

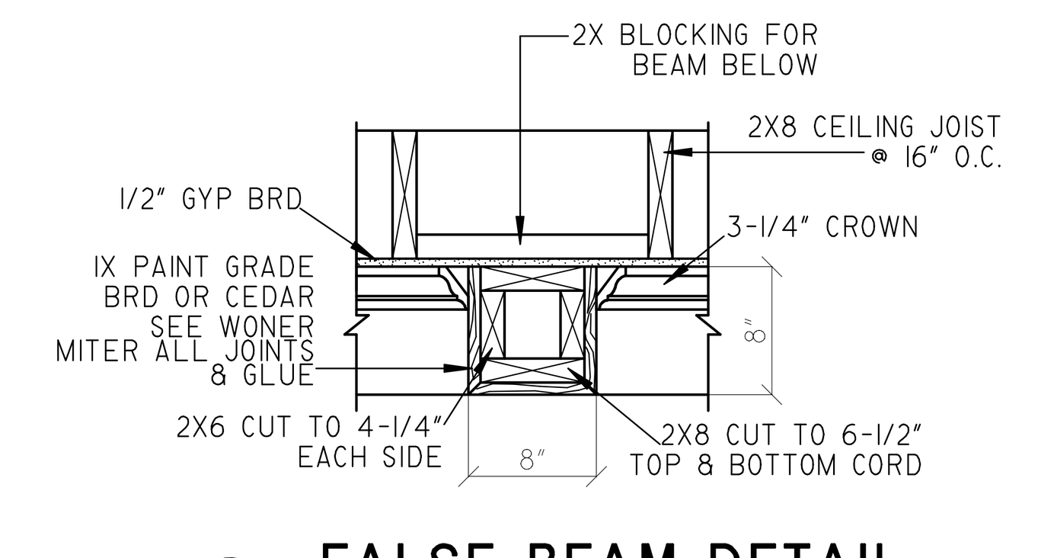

1 FALSE BEAM DETAIL
1" = 1'-0"

NOTICE TO CONTRACTOR
All construction must comply with current NC Building Codes and is subject to field inspection and verification.
APPROVED
Limited building only review
Permit holder responsible for full compliance with the code
05/03/2022
Harnett COUNTY NORTH CAROLINA

FLOOR PLAN NOTES:

1. ALL STRUCTURAL INFORMATION SHOWN FOR REFERENCE PURPOSES ONLY. CONTRACTOR SHALL HAVE LICENSED STRUCTURAL ENGINEER REVIEW AND DESIGN ALL STRUCTURAL ELEMENTS SUCH AS ALL FRAMING WALLS, BEAMS, CONNECTIONS, HEADERS, JOISTS AND RAFTERS.

2. ALL DIMENSIONS ARE FROM FACE OF STUD TO FACE OF STUD UNLESS NOTED OTHERWISE.

3. WINDOW SIZES INDICATED ON PLANS ARE NOTED BY APPROXIMATE ROUGH OPENING SIZE, REFER TO PLANS AND EXTERIOR ELEVATIONS FOR WINDOW TYPES.

4. COORDINATE LOCATION OF UTILITY METERS WITH SITE PLAN AND LOCATE AWAY FROM PUBLIC VIEW. VISUAL IMPACT SHALL BE MINIMIZED, I.E. MOUNT AS LOW AS POSSIBLE.

5. PREFABRICATED FIREPLACE CONSTRUCTION SHALL MEET OR EXCEED ALL APPLICABLE CODES REGARDING USE OF FIRE SEPARATIONS, CLEARANCES, ETC. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL ITEMS AND CONSTRUCTION MEET OR EXCEED CODE. OVERALL FLUE HEIGHT SHALL BE COORDINATED TO MATCH HEIGHT SHOWN ON PLANS AND SHALL NOT EXCEED THE TOP OF CHIMNEY CHASE AS CONSTRUCTED.

6. CONTRACTOR SHALL COORDINATE ALL CLOSET SHELVING REQUIREMENTS.

7. DO NOT SCALE DRAWINGS, FOLLOW DIMENSIONS ONLY.

8. CONTRACTOR SHALL FIELD VERIFY ALL CABINET DIMENSIONS BEFORE FABRICATION.

9. BEDROOM WINDOWS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQ.FT., A MINIMUM NET CLEAR OPENABLE WIDTH OF 20", A MINIMUM NET CLEAR OPENABLE HEIGHT OF 24" AND HAVE A MAXIMUM FINISH SILL HEIGHT OF 43" FROM FINISH FLOOR.

10. ALL GLASS LOCATED WITHIN 18" OF FLOOR, 12" OF A DOOR OR LOCATED WITHIN 60" OF FLOOR AT BATHTUBS, WHIRLPOOLS, SHOWERS, SAUNAS, STEAM ROOMS OR HOT TUBS SHALL BE TEMPERED.

11. ALL EXPOSED INSULATION SHALL HAVE A FLAME SPREAD RATING OF LESS THAN 25 AND A SMOKE DENSITY RATING OF LESS THAN 450.

12. PROVIDE COMBUSTION AIR VENTS, WITH SCREEN AND BACK DAMPER, FOR FIREPLACES, WOOD STOVES AND ANY APPLIANCE WITH AN OPEN FLAME.

13. BATHROOMS AND UTILITY ROOMS SHALL BE VENTED TO THE OUTSIDE WITH A MINIMUM OF A 90 CFM FAN. RANGE HOODS SHALL ALSO BE VENTED TO OUTSIDE.

14. ATTIC HVAC UNITS SHALL BE LOCATED WITHIN 20' OF ITS SERVICE OPENING. RETURN AIR GRILLES SHALL NOT BE LOCATED WITHIN 10 FEET OF A GAS FIRED APPLIANCE.

15. ALL WALLS AND CEILINGS IN GARAGE AND GARAGE STORAGE AREAS TO HAVE 5/8" TYPE-X GYP. BOARD W/ 1-HOUR FIRE RATING. ALL EXT. DOORS IN GARAGE TO BE METAL OR SOLID CORE DOORS INCLUDING DOORS ENTERING HEAT/COOLED PORTION OF RESIDENCE.

16. ALL FIREPLACE CHASE WALLS SHALL BE INSULATED INSIDE AND OUTSIDE. PROVIDE HORIZONTAL "DRAFT STOPS" AT EACH FLOOR LEVEL BY PACKING 6" (R-19) INSULATION BETWEEN 2X4 JOISTS.

17. ALL INTERIOR WALLS SHALL BE COVERED WITH 1/2" GYPSUM BOARD, WITH METAL CORNER REINFORCING, TAPE FLOAT AND SAND. (3 COATS) USE 5/8" GYPSUM BOARD ON CEILINGS WHEN SUPPORTING MEMBERS ARE 24" O.C. OR GREATER. USE 1/2" GYPSUM BOARD ON CEILING MEMBERS LESS THAN 24" O.C.

18. ALL BATH AND TOILET AREA WALLS AND CEILINGS SHALL HAVE WATER RESISTANT GYPSUM BOARD.

FLOOR PLAN SPECIFICATIONS

HEAT/COOLED:	2,888 SQ. FT.
GARAGE, STORAGE:	1,192 SQ. FT.
PORCHES:	1,004 SQ. FT.
TOTAL:	5,084 SQ. FT.

NOTE:

1.- ALL CEILINGS TO BE 10' UNLESS NOTED.
2.- BUILDER TO APPROVE & VERIFY ALL PLANS BEFORE CONSTRUCTION.
3.- VERIFY ALL PLANS W/ LOCAL BUILDING CODES.
4.- HVAC & W.H. TO BE IN ATTIC UNLESS OTHERWISE NOTED.
5.- PROVIDE SHUT-OFF VALVE FOR ALL GAS APPLIANCES. REFERENCE IRC SECTION G2419
6.- ALL GLASS LOCATED WITHIN 18" OF FLOOR, 24" OF A DOOR OR LOCATED WITHIN 60" OF FLOOR AT BATHTUBS, WHIRLPOOLS, SHOWERS, SAUNAS, STEAM ROOMS OR HOT TUBS SHALL BE TEMPERED TO COMPLY WITH IRC SECTION R308.4.8
7.- NARROW WALL SHEARWALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH 2006 IRC SECTION R602.10 BRACED WALL LINES. SAID SHEARWALLS MAY ALSO BE CONTRUCTED USING SIMPSON STRONG TIE PRODUCTS. REFER TO SIMPSON STRONG TIE FOR "STRONGWALL" APPLICATIONS. THIS MAY BE REQUIRED TO MEET ANY CODE REQUIREMENTS FOR NARROW WALLS NEXT TO GARAGE DOORS. CORRECT PRODUCT SELECTION IS SENSITVE TO BOTH SEISMIC AND WIND ZONE PARAMETERS AND SHOULD BE VERIFIED LOCALLY PRIOR TO CONSTRUCTION. ALSO DUE TO THE NATURE OF THE SIMPSON INSTALLATION PROCESS, THE DECISION TO USE THE "STRONG-WALL" SYSTEM SHALL BE MADE PRIOR TO FOUNDATION CONCRETE PLACE-MENT. SINCE THESE PLANS ARE NOT SITE OR LOCATION SPECIFIC THE MECHANICS TO MEET CODE REQUIREMENTS SHALL BE VERIFIED BY QUAL-IFIED PERSON(S) AT THE LOCAL LEVEL PRIOR TO CONSTRUCTION.
SEE DETAILS 1 & 2 ON PAGE SSW2, SHEARWALL "GARAGE WALL OPTIONS".
8.- ALL EXTERIOR WALLS TO BE 2X6 STUDS @ 16" O.C. UNLESS NOTED

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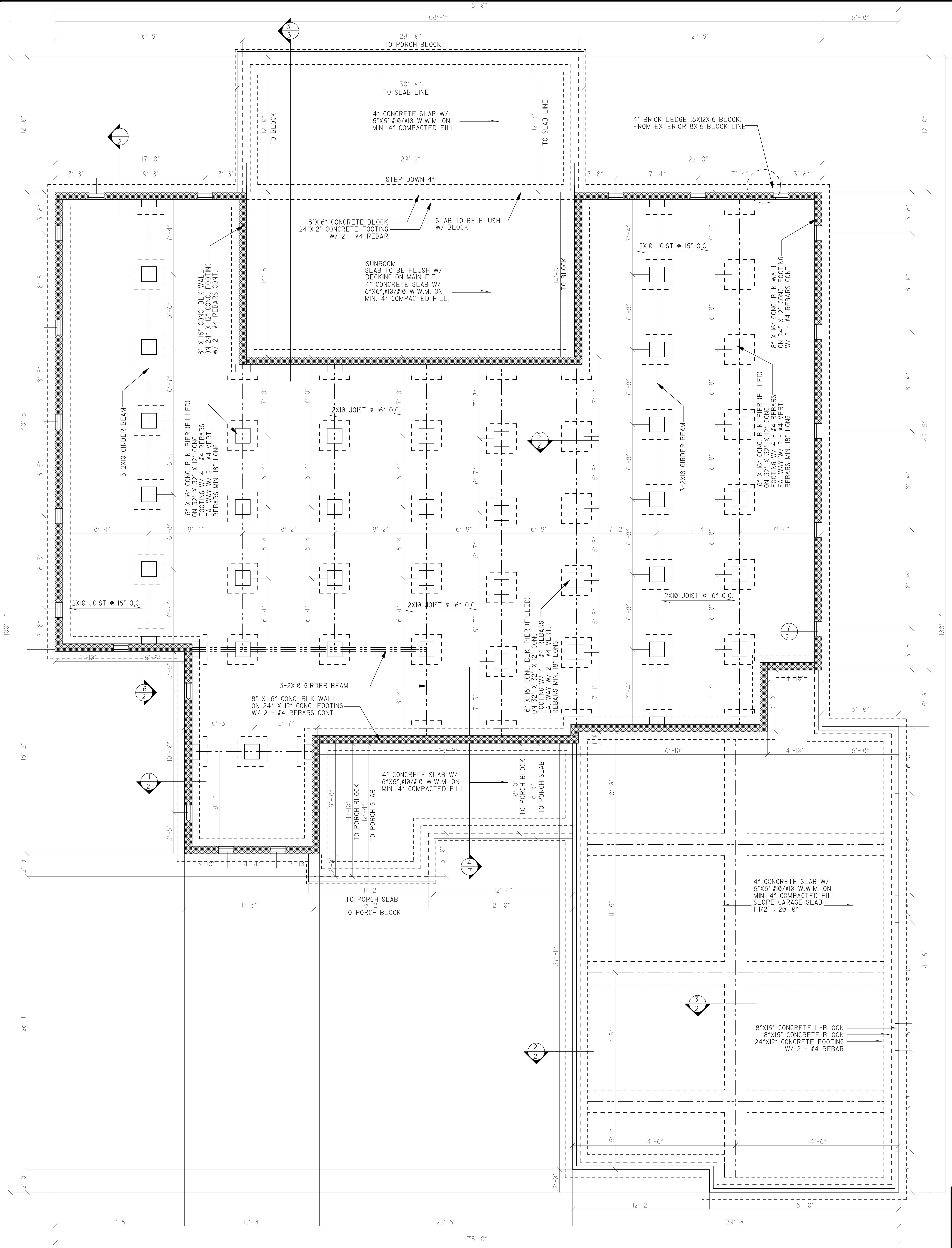
MICHAEL E. NELSON
P.B.D. Cert. No. AR-104

MAIN FLOOR PLAN / NOTES
W/ 2X6 EXT. WALLS
The Gallaher Home

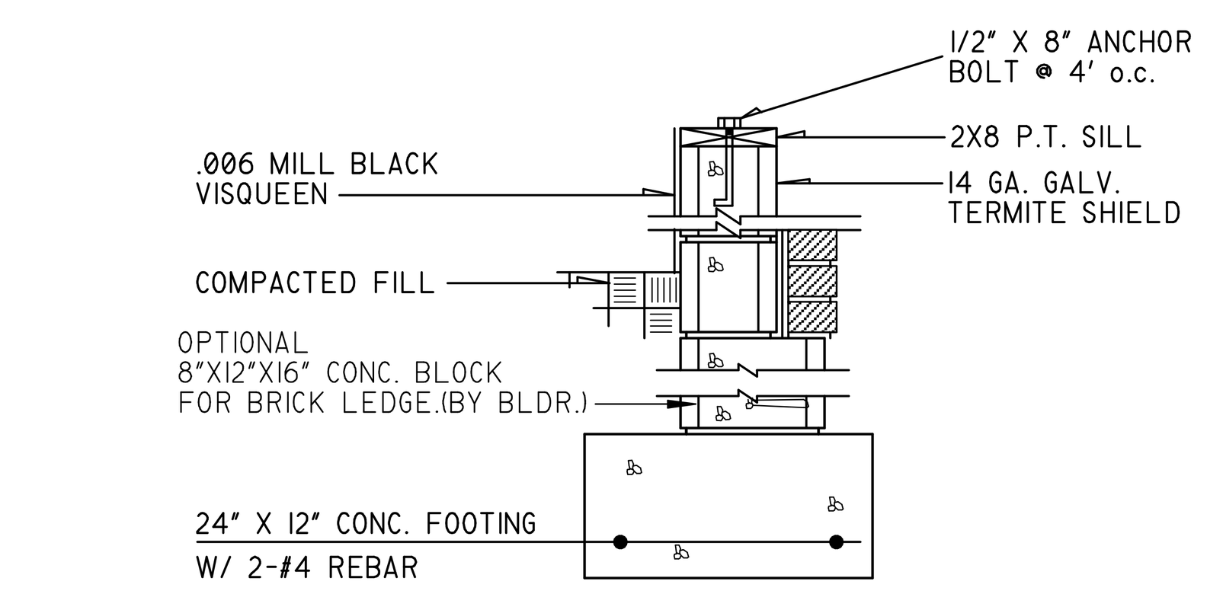
CAD DESIGNED

DATE	1-13-2022
SCALE	1/4" = 1'-0"
BUILDER	
JOB	MENC245-21
DRAWN BY	SMN

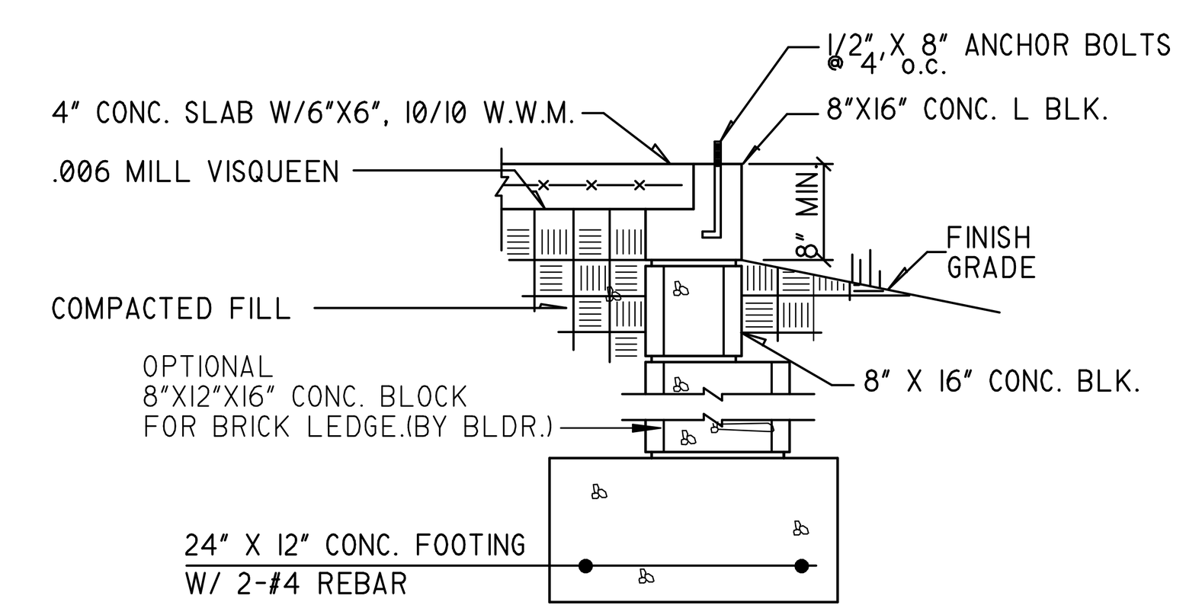


NOTE:

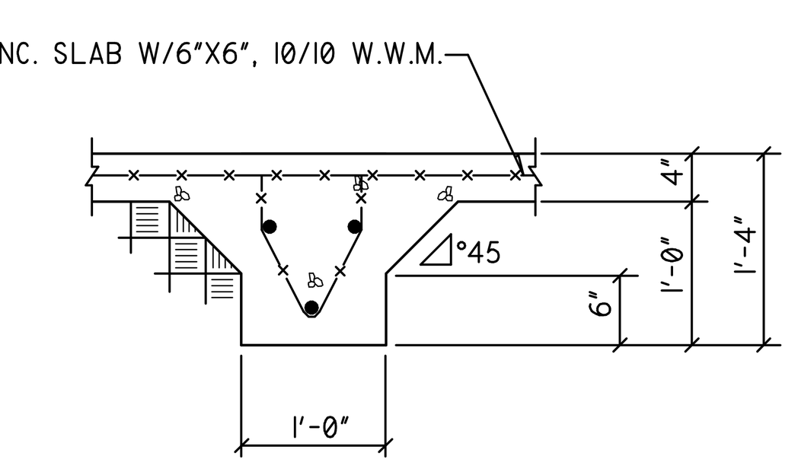
1.- BUILDER TO VERIFY ALL SOIL CONDITIONS BEFORE CONSTRUCTING FOUNDATION. IF POOR CONDITIONS EXIST CONSULT A STRUCTURAL ENGINEER.
2.- BUILDER TO VERIFY FOUNDATIONS DETAILS W/ LOCAL BUILDING CODES.
3. VERIFY ALL FLOOR OUTLETS, RANGE & DRYER VENTS IN SLAB.
4.- BUILDER TO LOCATE FOUNDATION ACCESS LOCATION. VERIFY W/ SITE ELEVATIONS.
5.- VERIFY 4" PERF. MIN. FRENCH DRAIN LOCATIONS IF NEED. VERIFY W/ SITE.
6.- CRAWL SPACE DESIGN & PIER LOCATIONS ARE BASED ON A STRUCTURAL CONFIGURATION WHICH ALLOWS A MAXIMUM POINT LOAD (DEAD OR LIVE) AT ANY GIVING POINT ON THE FINISHED FLOOR. THIS INSURES MAXIMUM SUPPORT AND STABILITY.
7.- USE DOUBLE & IF ALLOWED, TRIPLE FLOOR JOIST UNDER ALL PARALLEL BEARING WALLS.
8.- BUILDER TO PROVIDE CROSS MEMBER BRIDGING BETWEEN JOISTS BY USING EITHER METAL BRIDGES OR 1X4 CROSS BRACING MEMBERS @ 6' SPACING MAX. VERIFY ALL APPLICATIONS WITH LOCAL CODE.
9.- BUILDER TO VERIFY USE OF POWER VENTS IN CRAWL SPACE AREAS WHERE EXTRA VENTILATION MAY BE NEEDED. (VERIFY W/ LOCAL CODE.)



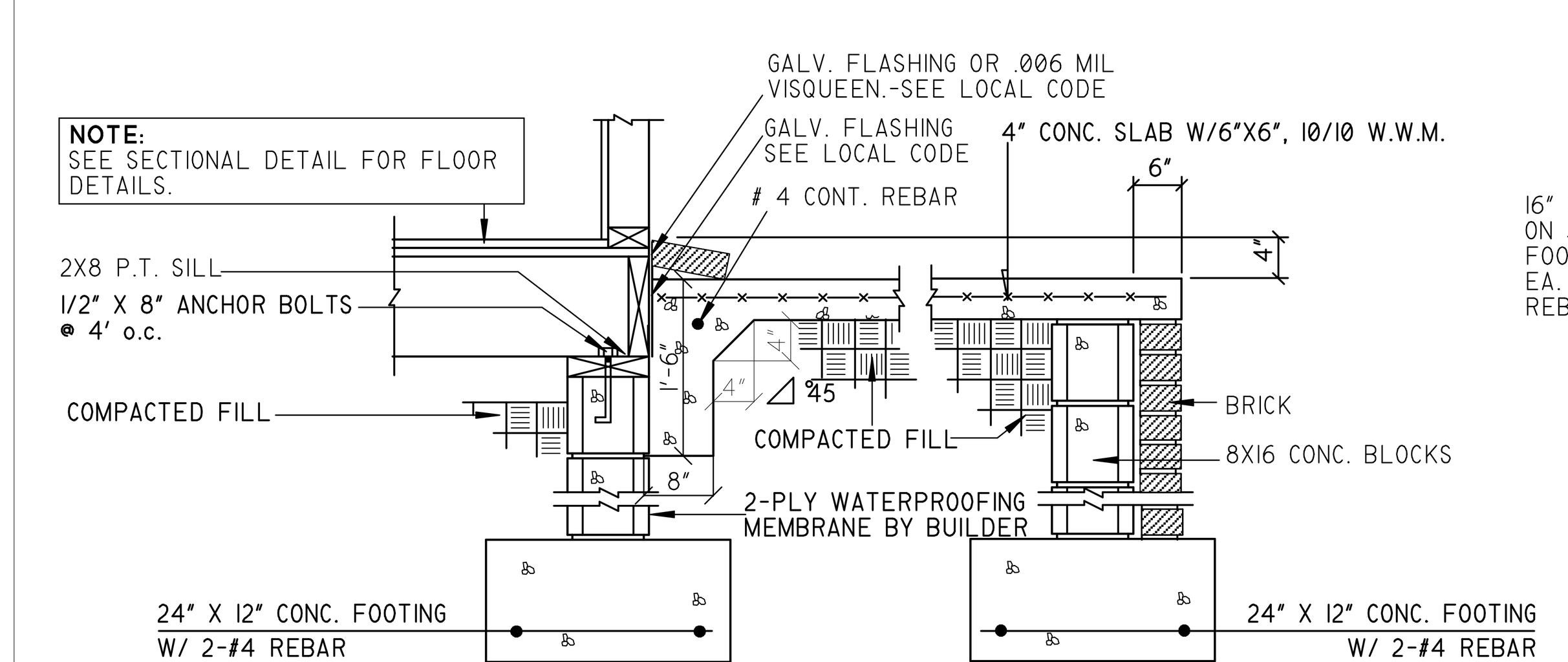
(1) FOUNDATION DETAIL
3/4" = 1'-0"



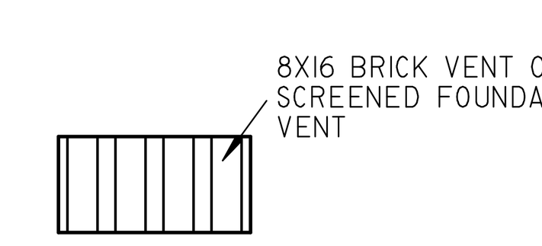
(2) GARAGE FOUNDATION DETAIL
3/4" = 1'-0"



(3) BEARING FTG DETAIL
3/4" = 1'-0"



(4) STEP DOWN DETAIL
3/4" = 1'-0"



(7) BRICK VENT DETAIL
3/4"=1'-0"

NOTE:
ALL DIMENSIONS ARE FROM EXTERIOR STUD WALL. WHEN LAYING 8"X12"X16" COURSES, ALLOW 4" TO ALL EXTERIOR DIMENSIONS FOR OPTIONAL BRICK LEDGE.

GENERAL NOTES:

In case of conflict between the General Notes below and the specifications the more rigid requirement shall govern unless amended in writing by the Engineer.

DESIGN DATA

1. Design Codes - (All latest editions unless noted)
   -American Concrete Institute (ACI)
   -American Institute of Steel Construction (AISC)
   -American Welding Society (AWS)
   -Southern Standard Building Code (SSBC)
   -American National Standards Institute, Inc. (ANSI A58.1-1982) Minimum Design Loads for Buildings and Other Structures
2. Material Specifications and Design Stresses
   -Anchor Bolts and Embedded Steel............Fy = 36,000 psi (ASTM A36)
   -Structural Steel UNO..................................Fy = 36,000 psi (ASTM A36)
   -Cast-in-place Concrete
   -Footings...F'c = 3,000 psi at 28-days.
   -Interior slabs-on-grade..............................f'c = 3,000 psi at 28-days.
   -Ext. exposed concrete)air entrained)......F'c = 4,000 psi at 28-days.
   -Reinforcing Steel
   -#2 and #3 bar3 only...................................Fy = 40,000 psi (ASTM A615, Grade 40)
   -#4 and larger bars.....................................Fy = 60,000 psi (ASTM A615, Grade 60)
3. Design Soil Bearing Pressures
   -Reference Soil and Foundation Investigation by Grubbs, Garner, & Hoskyn, Inc. Consulting Engineers, Little Rock, AR.
   -Footings on natural soils are designed for a maximum soil bearing pressure of 2,000 psf.
   -Footings on compacted engineered fill are designed for maximum soil bearing pressure of 2,000 psf.
   -If the soil at the footing bearing elevations shown is of questionable bearing value, the Engineer or Architect shall be notified immediately.
   -After footing excavations are completed and before placing concrete, the excavated area shall be inspected and approved by the Owner selected independent testing laboratory as specified.

GENERAL INFORMATION

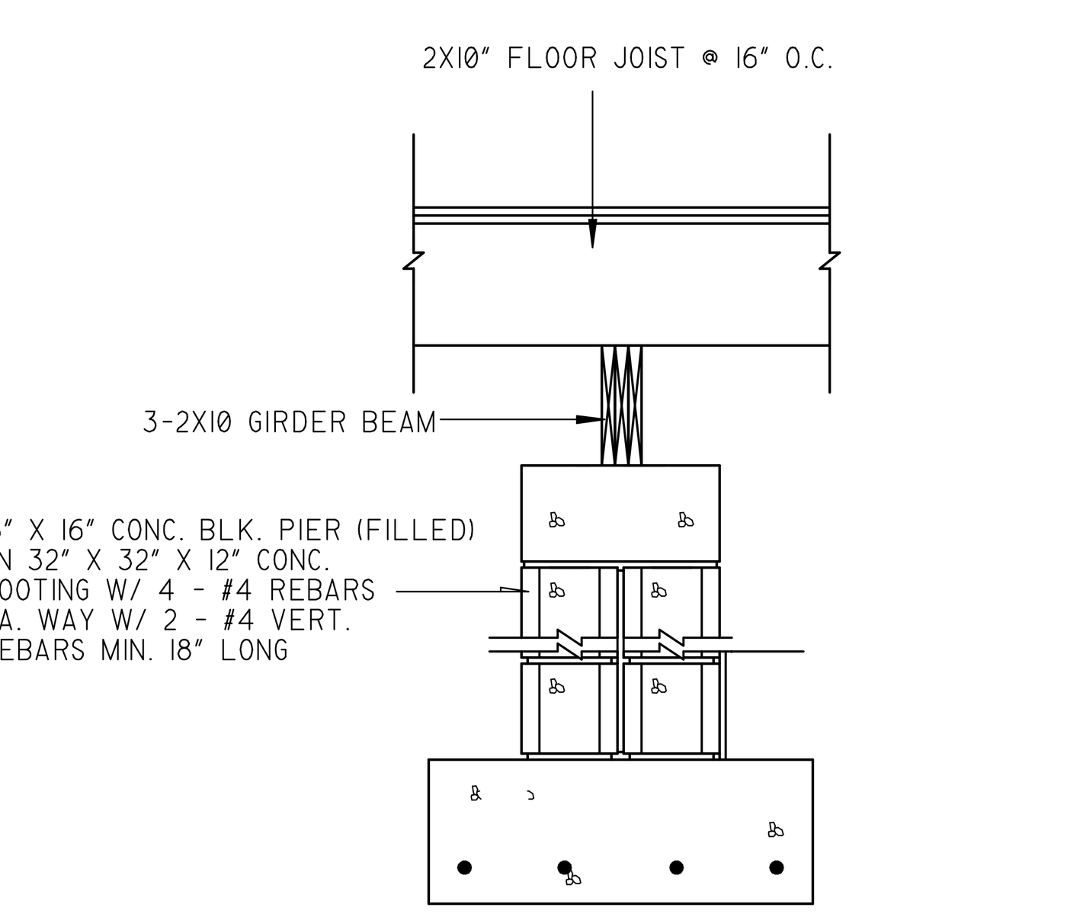
1. All columns shall be centered on grid lines unless noted otherwise.
2. All column footings shall be centered on columns unless noted otherwise.
3. All wall footings shall be centered on walls unless noted otherwise.
4. For concrete reinforcing at corners, see typical corner bar detail.
5. For slab-on-grade construction joint detail, see typical slab-on-grade detail.
6. All fill material under structure shall be sandy clay or clayey sand exhibiting a liquid limit less than 35. Fill material shall be placed in loose lifts not to exceed 8" and compacted to a density of not less than 95% of Modified Proctor Maximum Dry Density (ASTM D-1557) at or slightly wet of optimum moisture content. In place moisture and density of each lift shall be determined by in-situ field tests prior to placing additional fill.
7. Where noted C.J. on plan, provide Keyed Joint in floor slab.
8. A 6-mil polyethylene film vapor barrier shall be placed below all interior slabs-on-grade.
9. Provide a 4-inch clean medium to coarse sand or gravel compacted drainage fill below all interior slabs-on-grade.

CAST-IN-PLACE CONCRETE

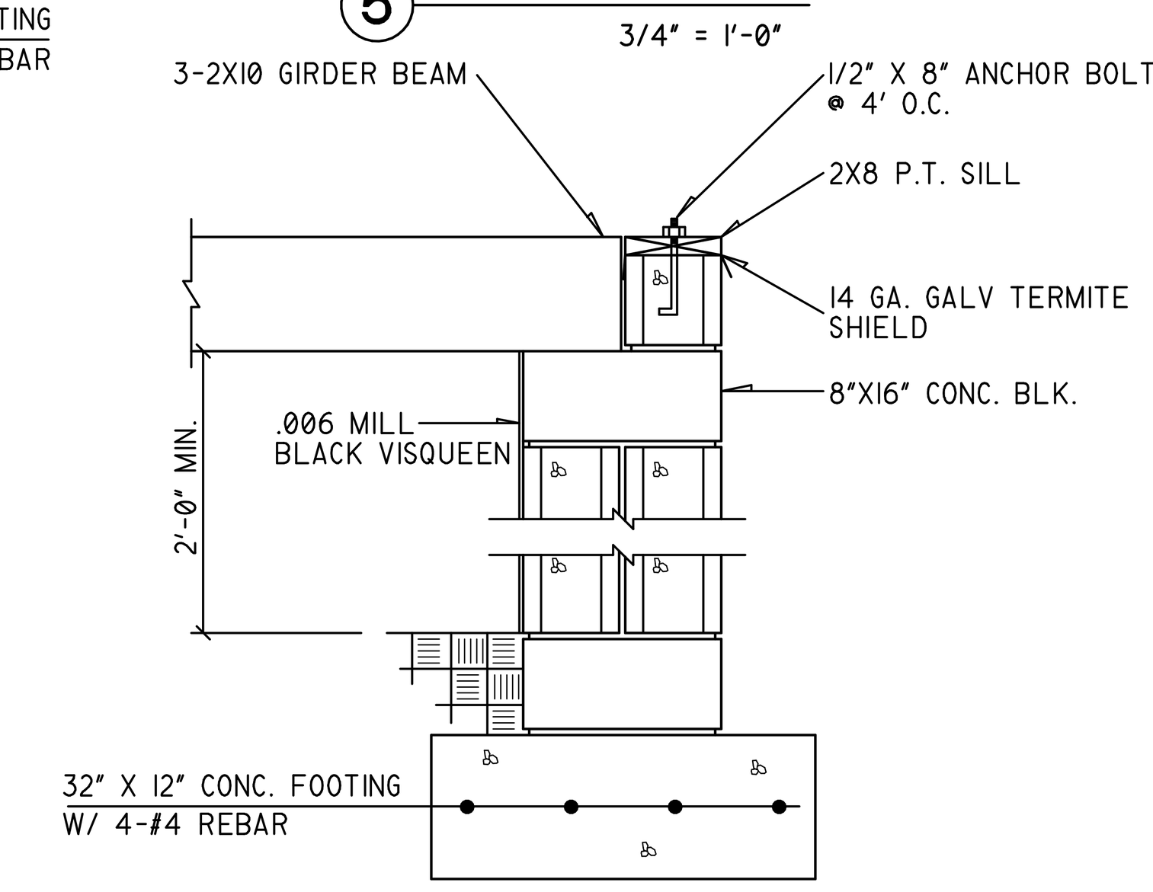
1. Arrangement and bending of reinforcing steel shall be in accordance with ACI detailing manual, latest edition.
2. Reinforcing steel shall be new and all bars over #2 shall be deformed.
3. Where reinforcing bars are shown continuous, lap bars 36-bar diameters or 24-bar diameters at tension or compression splices respectively (12" minimum).
4. Provide suitable wire spacers, chairs, ties, etc., for supporting reinforcing steel in the proper position while placing concrete.
5. Concrete protective covering for reinforcement at surfaces not exposed directly to the ground shall be 3/4" for slabs, joists, and walls and 1-1/2" for beam stirrups and column ties or spirals.
6. Concrete protective covering for reinforcement at surfaces which will be exposed to the weather or be in contact with the ground shall be 2" for bars larger than #5 and 1-1/2" for #5 bars or smaller. Provide 3" cover below and at ends of footing bars.
7. Location and sizes of openings, sleeve, etc., required for other trades must be verified by these trades before placing concrete.

CONCRETE MASONRY UNITS

1. Place vertical reinforcing bars at corners, jambs of openings, below beam bearing, and in walls as indicated on the drawings.
2. Dowell vertical reinforcing bars out of the structure below with bars of the same size and spacing above.
3. Lap splice bars in masonry 40 bar diameters.
4. Place horizontal bars in 8" deep bond beam units at top of wall.
5. Continue bond beam units and reinforcing uninterrupted around corners and across wall intersections.
6. Metal masonry-course reinforcing shall be truss type conforming to ASTM A82, not less than 9 gauge, galvanized at exterior walls. Furnish material with prefabricated corners and tees. Reinforcing shall be used in all partitions, spaced 16" o.c., vertically, joints lapped 6". Place reinforcing in first bed joint above and below all concrete slabs and wall openings.
7. Load bearing concrete masonry units shall conform to ASTM C90, Grade N, Type 1, with minimum average compressive strength on net area of 1,100 psi and minimum net area compressive strength of individual units shall be 1,500 psi.
8. Non-loan bearing concrete masonry units shall conform to ASTM C129, Type 1.
9. Mortar shall be Type N conforming to property or protection requirements of ASTM C476.
10. All masonry fill concrete shall have a minimim strength at 28-days f'c = 3,000 psi, maximum aggregate shall be 3/8" and shall be placed in maximum lifts of 4'-0".
11. All grout shall conform to ASTM C476, Fine Grout.



(5) PIER DETAIL
3/4" = 1'-0"



(6) PILASTER DETAIL
3/4" = 1'-0"

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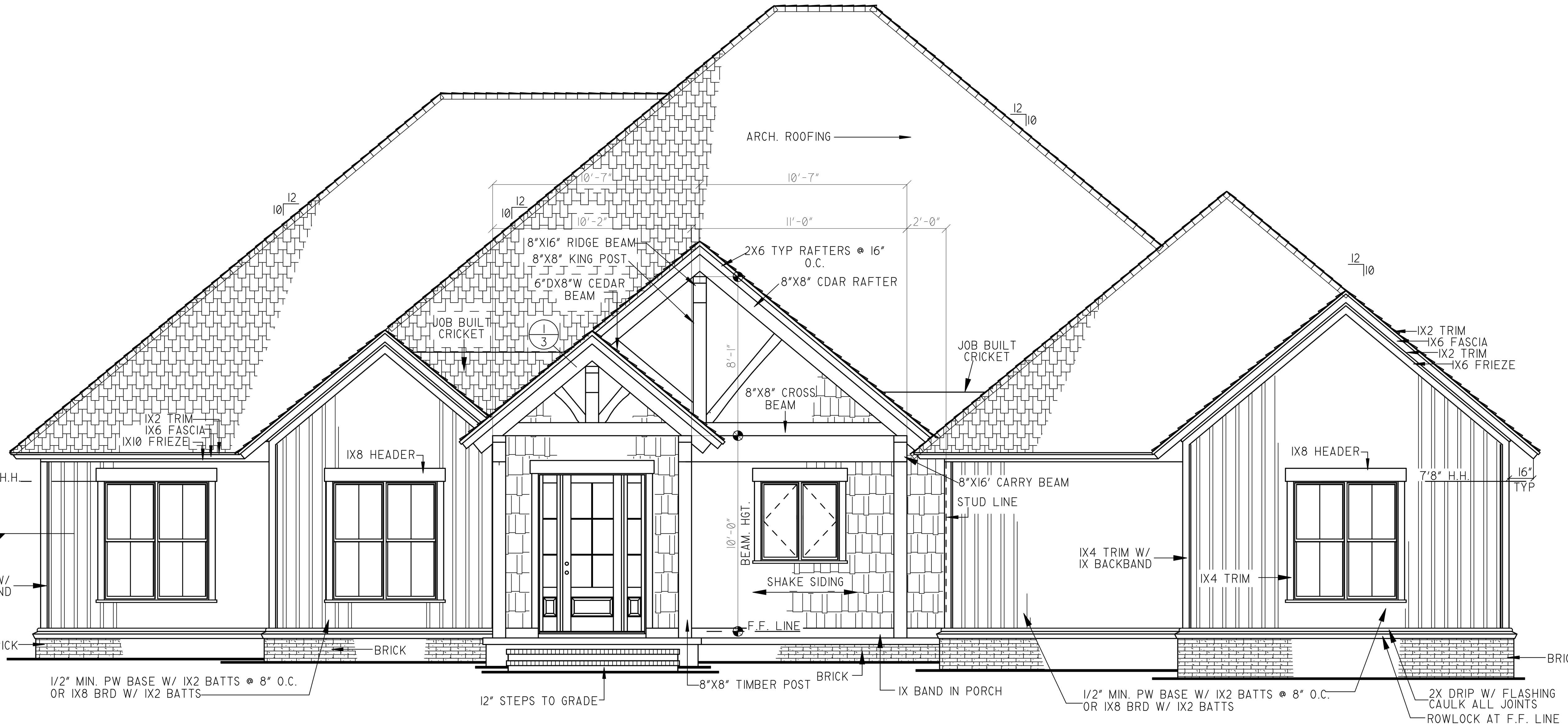
AMERICAN INSTITUTE OF BUILDING DESIGN ARKANSAS
MICHAEL E. NELSON
P.B.D. Cert. No. AR-104

DATE	1-13-2022
SCALE	1/4" = 1'-0"
BUILDER	
JOB	MENC245-21
DRAWN BY	SMN

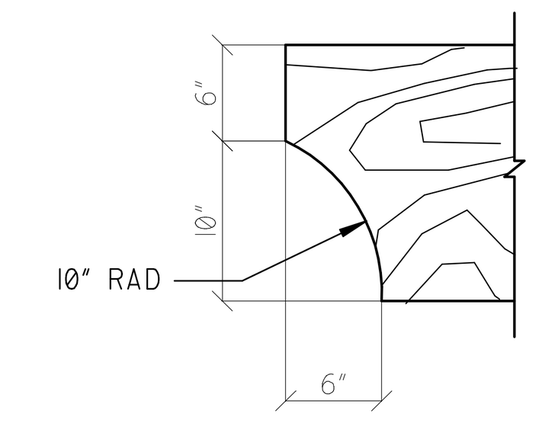
FOUNDATION (SLAB) PLAN / NOTES

The Gallaher Home

CAD DESIGNED

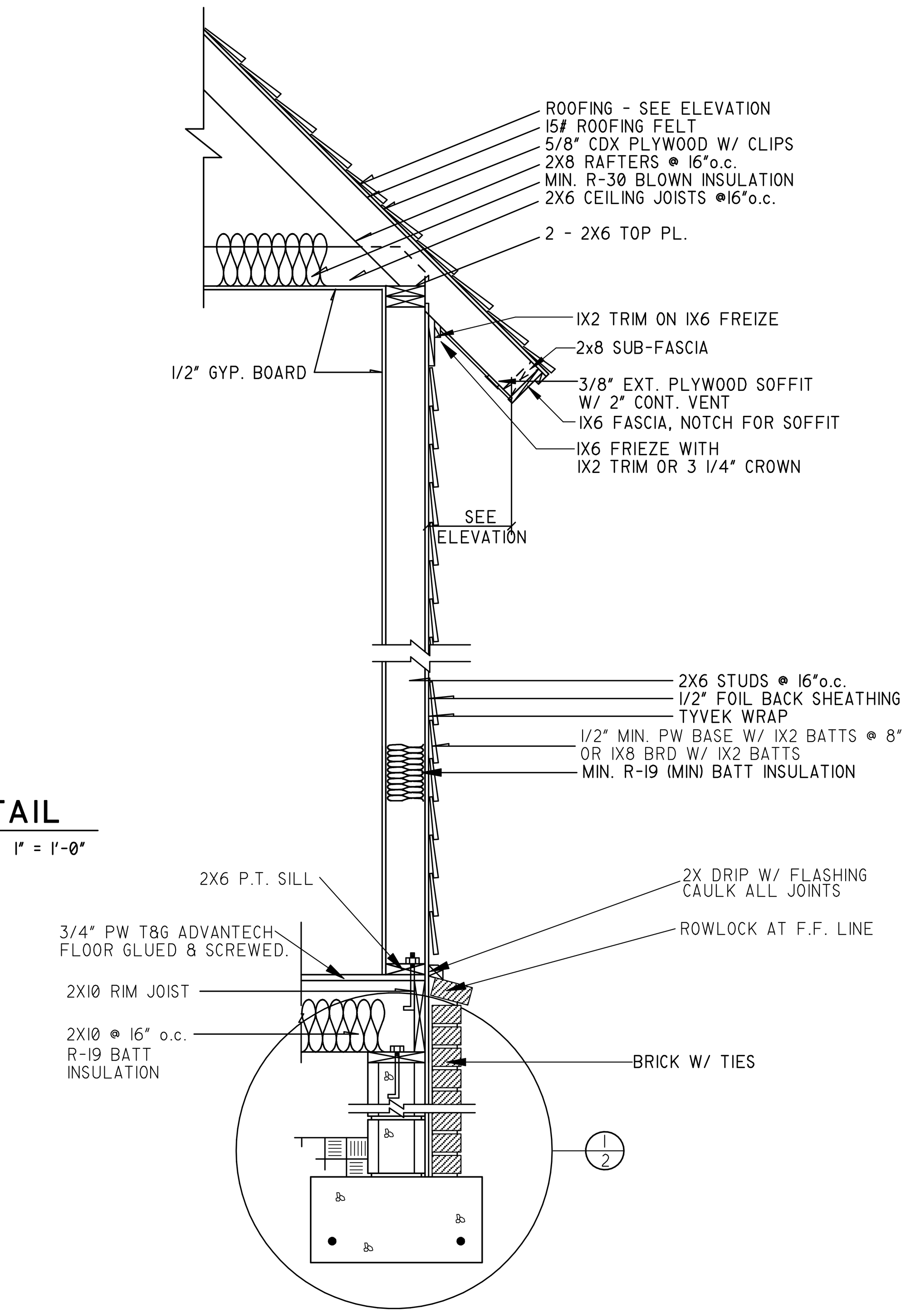

ARCH. ROOFING
10'-7"
11'-0"
2'-0"
2X6 TYP RAFTERS @ 16" O.C.
8"X8" CDAR RAFTER
8"X16" RIDGE BEAM
8"X8" KING POST
6"DX8"W CEDAR BEAM
JOB BUILT CRICKET
8"X8" CROSS BEAM
JOB BUILT CRICKET
1X2 TRIM
1X6 FASCIA
1X2 TRIM
1X6 FRIEZE
1X2 TRIM
1X6 FASCIA
1X10 FRIEZE
7'8" H.H.
1X8 HEADER
1X8 HEADER
7'8" H.H.
8"X16" CARRY BEAM
STUD LINE
1X4 TRIM W/ 1X BACKBAND
1X4 TRIM
1X4 TRIM W/ 1X BACKBAND
SHAKE SIDING
F.F. LINE
BRICK
BRICK
BRICK
BRICK
1/2" MIN. PW BASE W/ 1X2 BATTS @ 8" O.C. OR 1X8 BRD W/ 1X2 BATTS
8"X8" TIMBER POST
12" STEPS TO GRADE
1X BAND IN PORCH
1/2" MIN. PW BASE W/ 1X2 BATTS @ 8" O.C. OR 1X8 BRD W/ 1X2 BATTS
2X DRIP W/ FLASHING CAULK ALL JOINTS
ROWLOCK AT F.F. LINE

FRONT ELEVATION



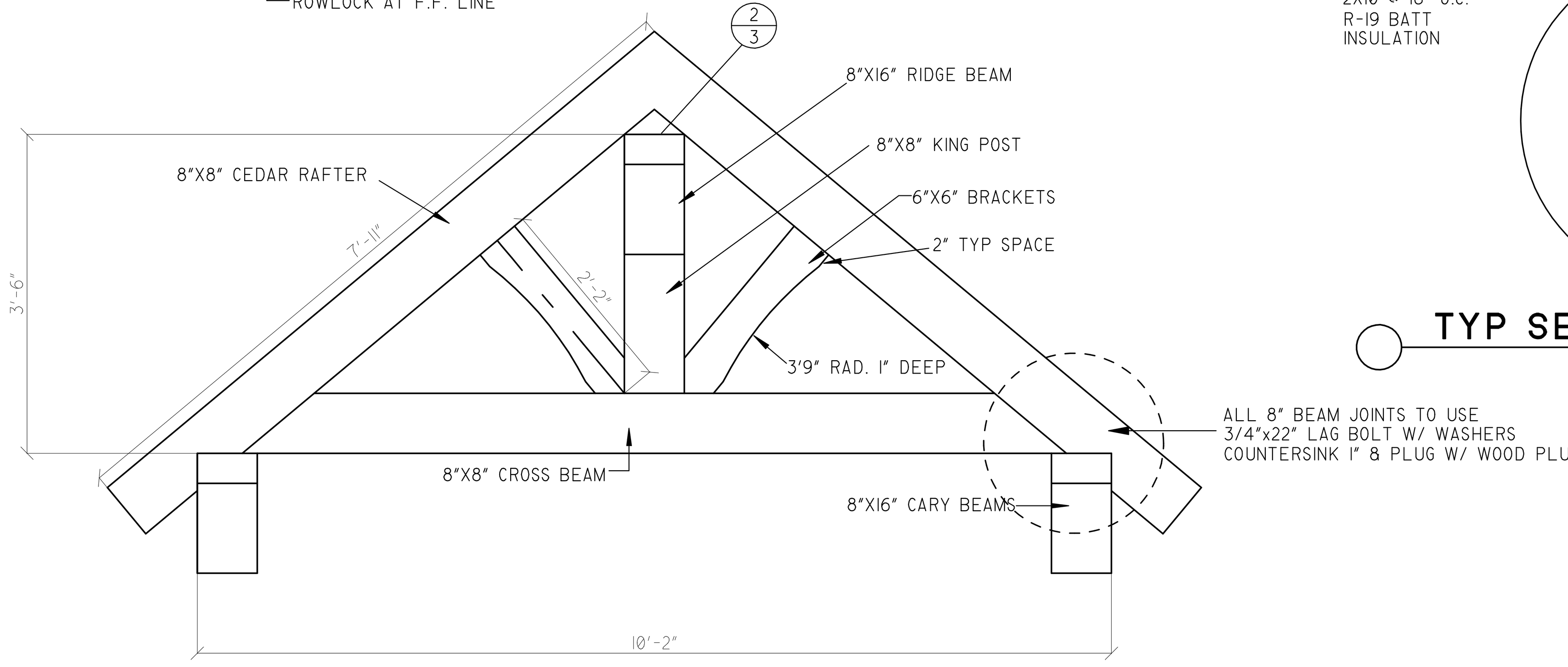
2 ENTRY TIMBER RIDGE CUT DETAIL

1" = 1'-0"


ROOFING - SEE ELEVATION
15# ROOFING FELT
5/8" CDX PLYWOOD W/ CLIPS
2X8 RAFTERS @ 16"o.c.
MIN. R-30 BLOWN INSULATION
2X6 CEILING JOISTS @16"o.c.
2 - 2X6 TOP PL.
1X2 TRIM ON 1X6 FRIEZE
2x8 SUB-FASCIA
1/2" GYP. BOARD
3/8" EXT. PLYWOOD SOFFIT W/ 2" CONT. VENT
1X6 FASCIA, NOTCH FOR SOFFIT
1X6 FRIEZE WITH 1X2 TRIM OR 3 1/4" CROWN
SEE ELEVATION
2X6 STUDS @ 16"o.c.
1/2" FOIL BACK SHEATHING
TYVEK WRAP
1/2" MIN. PW BASE W/ 1X2 BATTS @ 8" O.C. OR 1X8 BRD W/ 1X2 BATTS
MIN. R-19 (MIN) BATT INSULATION
2X6 P.T. SILL
2X DRIP W/ FLASHING CAULK ALL JOINTS
ROWLOCK AT F.F. LINE
3/4" PW T&G ADVANTECH FLOOR GLUED & SCREWED.
2X10 RIM JOIST
2X10 @ 16" o.c. R-19 BATT INSULATION
BRICK W/ TIES

TYP SECTIONAL DETAIL

3/4" = 1'-0"

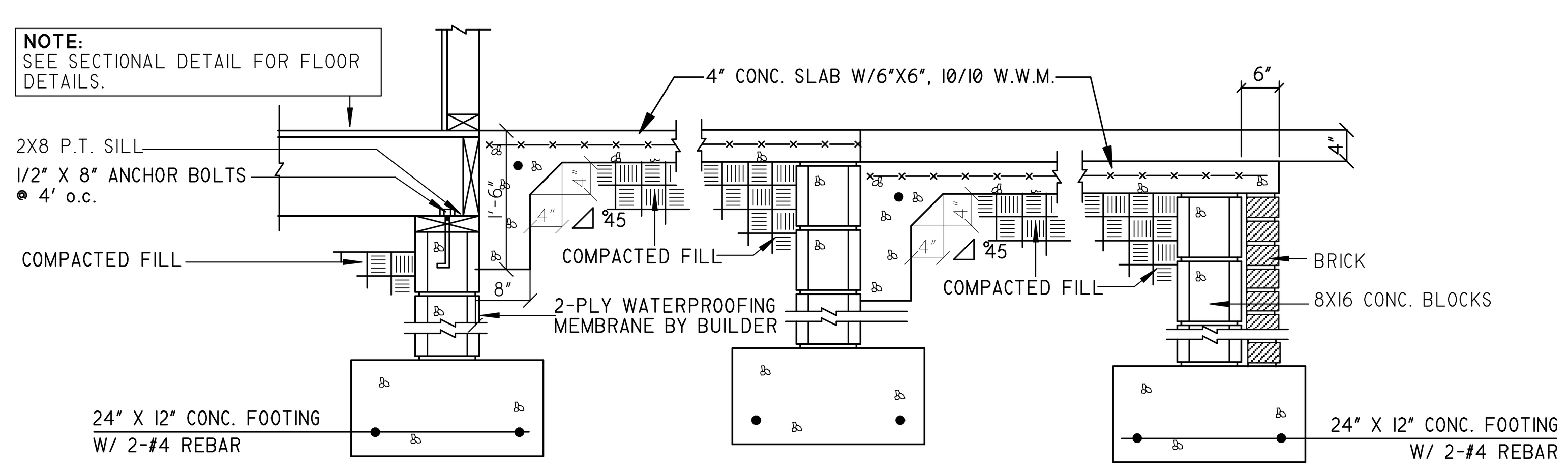


1 ENTRY BEAM DETAIL

3/4" = 1'-0"

NOTE:

1.- ALL BEAMS TO BE CEDAR UNLESS OTHERWISE BY OWNER.


NOTE:
SEE SECTIONAL DETAIL FOR FLOOR DETAILS.
4" CONC. SLAB W/6"X6", 10/10 W.W.M.
6"
2X8 P.T. SILL
1/2" X 8" ANCHOR BOLTS @ 4' o.c.
COMPACTED FILL
COMPACTED FILL
COMPACTED FILL
2-PLY WATERPROOFING MEMBRANE BY BUILDER
BRICK
8X16 CONC. BLOCKS
24" X 12" CONC. FOOTING W/ 2-#4 REBAR
24" X 12" CONC. FOOTING W/ 2-#4 REBAR

3 STEP DOWN DETAIL

3/4" = 1'-0"

ELEVATION NOTES:

1. GUTTERS AND DOWNSPOUTS ARE NOT SHOWN FOR CLARITY. DOWNSPOUTS SHALL BE LOCATED TOWARDS THE FRONT AND REAR OF THE HOUSE. LOCATE DOWNSPOUTS IN NON-VISUALLY OFFENSIVE LOCATIONS, FOR EXAMPLE, FRONT WALL OF HOUSE, BESIDE PORCH COLUMNS, ETC. GENERAL CONTRACTOR SHALL VERIFY EXISTING GRADES AND COORDINATE ANY NECESSARY ADJUSTMENTS TO HOUSE WITH OWNER.

2. PLUMBING AND HVAC VENTS SHALL BE GROUPED IN ATTIC TO LIMIT ROOF PENETRATIONS AND TO BE LOCATED AWAY FROM PUBLIC VIEW, I.E. AT THE REAR OF THE HOUSE AND SHALL BE PRIMED AND PAINTED TO MATCH ROOF COLOR.

3. PROVIDE ATTIC VENTILATION PER LOCAL CODE REQUIREMENTS.

4. EXTERIOR FLASHING SHALL BE CORRECTLY INSTALLED AT ALL CONNECTIONS BETWEEN ROOFS, WALLS, CHIMNEYS, PROJECTIONS AND PENETRATIONS AS REQUIRED BY APPROVED CONSTRUCTION PRACTICES.

5. CONTRACTOR SHALL PROVIDE ADEQUATE ATTIC VENTILATIONS / ROOF VENTS PER LOCAL GOVERNING CODE. INSTALL CONTINUOUS RIDGE VENTILATION AND PAINT TO MATCH ROOF. PROVIDE APPROPRIATE SOFFIT VENTILATION AT OVERHANGS.


ROOF BEYOND
ARCH. ROOFING
ARCH. ROOFING
14'-0" P.L.
MAIN ROOF SPAN TO START AT FRONT KITCHEN WALL AT 12' PL. LINE
1X2 TRIM
1X6 FASCIA
1X10 FRIEZE
1X8 HEADER
1X4 TRIM W/ 1X BACKBAND
1X4 TRIM
BEAM HIGHT
1/2" MIN. PW BASE W/ 1X2 BATTS @ 8" O.C. OR 1X8 BRD W/ 1X2 BATTS
F.F. LINE
F.F. LINE
BRICK
BRICK
BRICK
2X DRIP W/ FLASHING CAULK ALL JOINTS
ROWLOCK AT F.F. LINE
8"X8" TIMBER POST

RIGHT ELEVATION

ELEVATIONS / NOTES

The Gallaher Home

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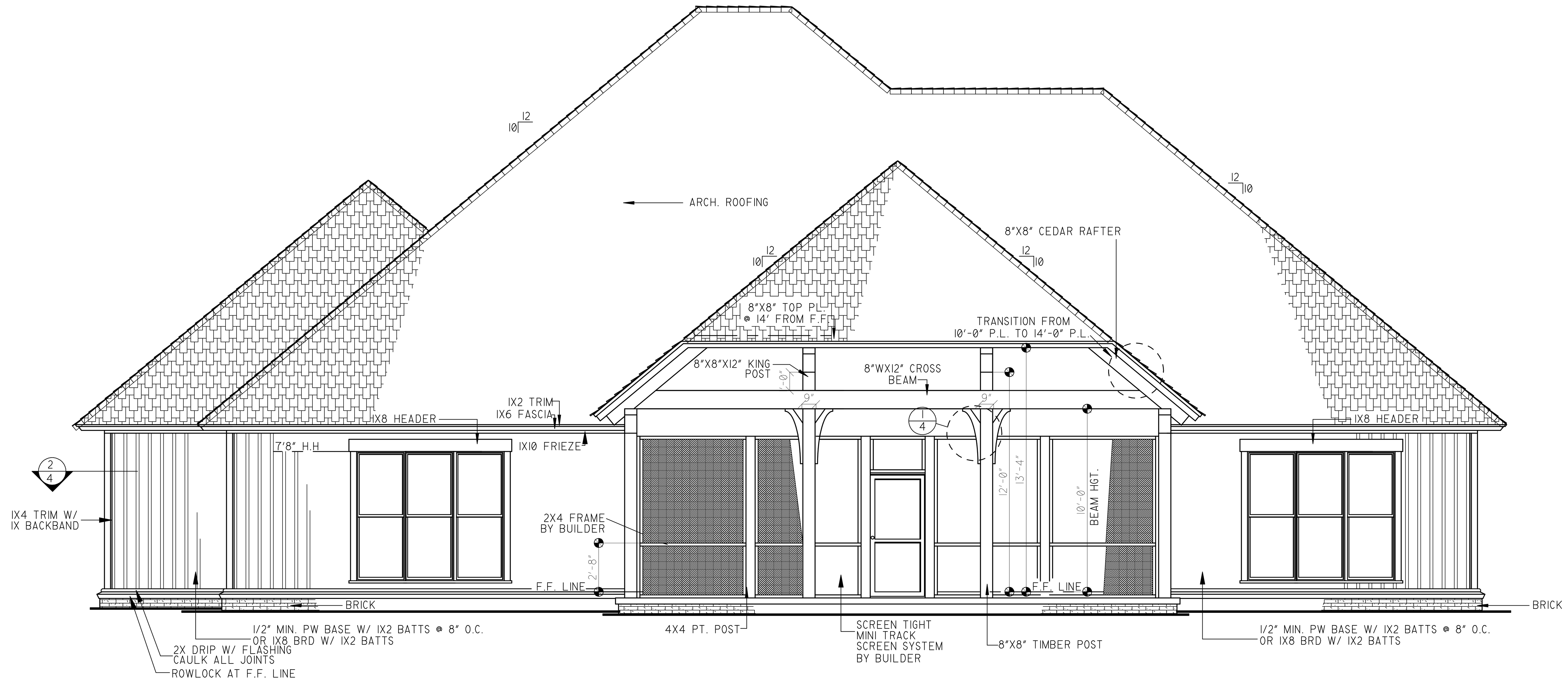
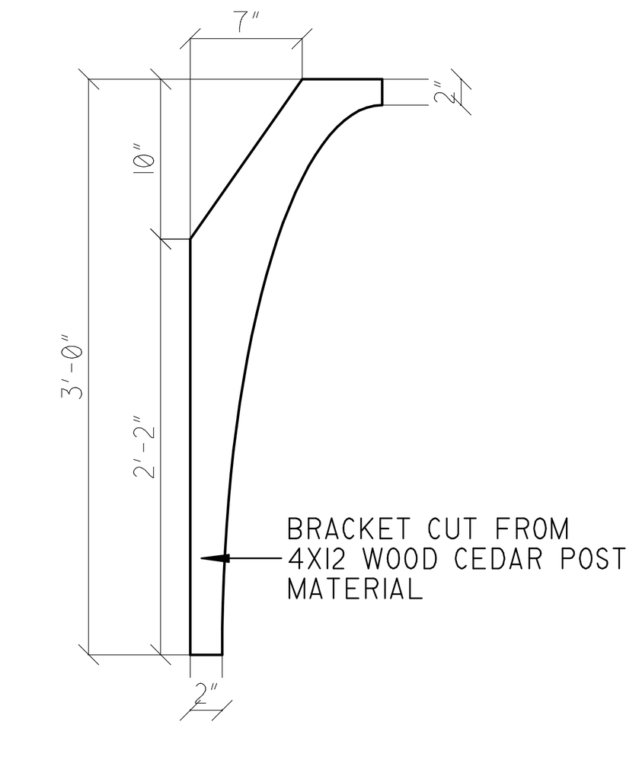
P.B.D. Cert. No. AR-104

CAD DESIGNED

DATE	1-13-2022
SCALE	1/4" = 1'-0"
BUILDER	
JOB	MENC245-21
DRAWN BY	SMN

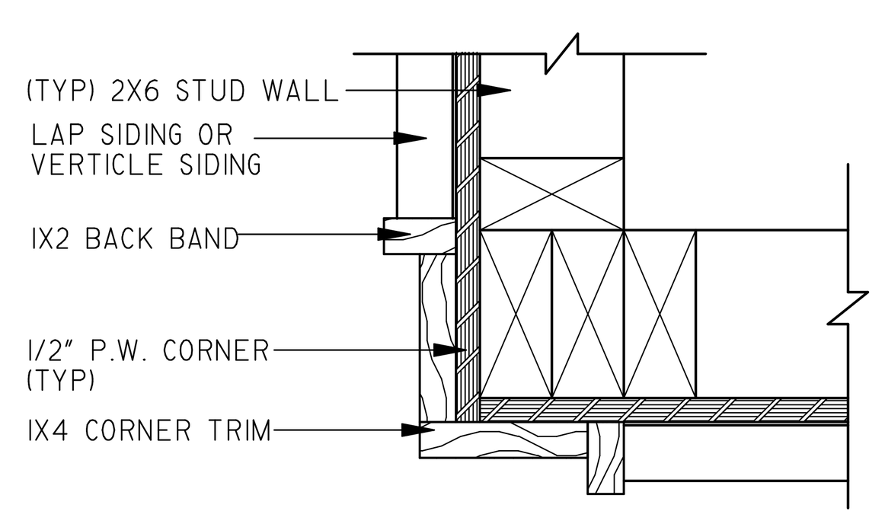


REAR ELEVATION



1 36" BRACKET DETAIL

1" = 1'-0"



2 CORNER 1X4 TRIM DETAIL

3" = 1'-0"

INSULATION NOTES:

1. PROVIDE R-19 BATT INSULATION IN 2X6 WALLS, R-13 IN 2X4 WALLS, MINIMUM R-30 INSULATION IN FLAT CEILINGS AND R-30 MINUMUM BLANKET INSULATION IN VAULTED CEILINGS, ALLOW 1/2" MINIMUM AIRSPACE BETWEEN SHEATHING AND INSULATION, FACE FOIL DOWN TO WARM SIDE.

2. INSTALL SIDE WALL AND CEILING INSULATION IN CONTINUOUS BLANKETS WITHOUT HOLES FOR ELECTRICAL BOXES, LIGHT FIXTURES OR HEATING DUCTWORK. CAULK ALL OPENINGS IN EXTERIOR WALL CONSTRUCTION.

3. INSTALL 6 MIL POLYETHYLENE VAPOR BARRIER AGAINST INSIDE OF ALL INSULATION. LAP JOINTS 18" MINIMUM.

4. FLOORS OVER UNHEATED SPACE SHALL HAVE R-25 FOIL BACK INSULATION BETWEEN JOISTS.

5. SLAB EDGE INSULATION R-5.

6. HVAC DUCTS LOCATED IN UNHEATED SPACES SHALL BE INSULATED WITH R-8.

PLUMBING NOTES:

1. PLUMBING SHALL MEET ALL LOCAL CODES.

2. IF WATER HEATER IS LOCATED ANYWHERE, EXCEPT GARAGE OR BASEMENT, PROVIDE METAL DRAIN PAN WITH AUXILLARY DRAIN TO EXTERIOR.

3. ALL GAS WATER HEATERS SHALL BE VENTED AT TOPOUT.

4. PROVIDE INSIDE MAIN WATER CUT-OFF.

5. PROVIDE BLOCKING IF WALL PLATES OR JOISTS ARE CUT INTO.

SECTION NOTES:

1. PROVIDE INSULATION BAFFLES AT EAVE VENTS BETWEEN RAFTERS / TRUSSES.

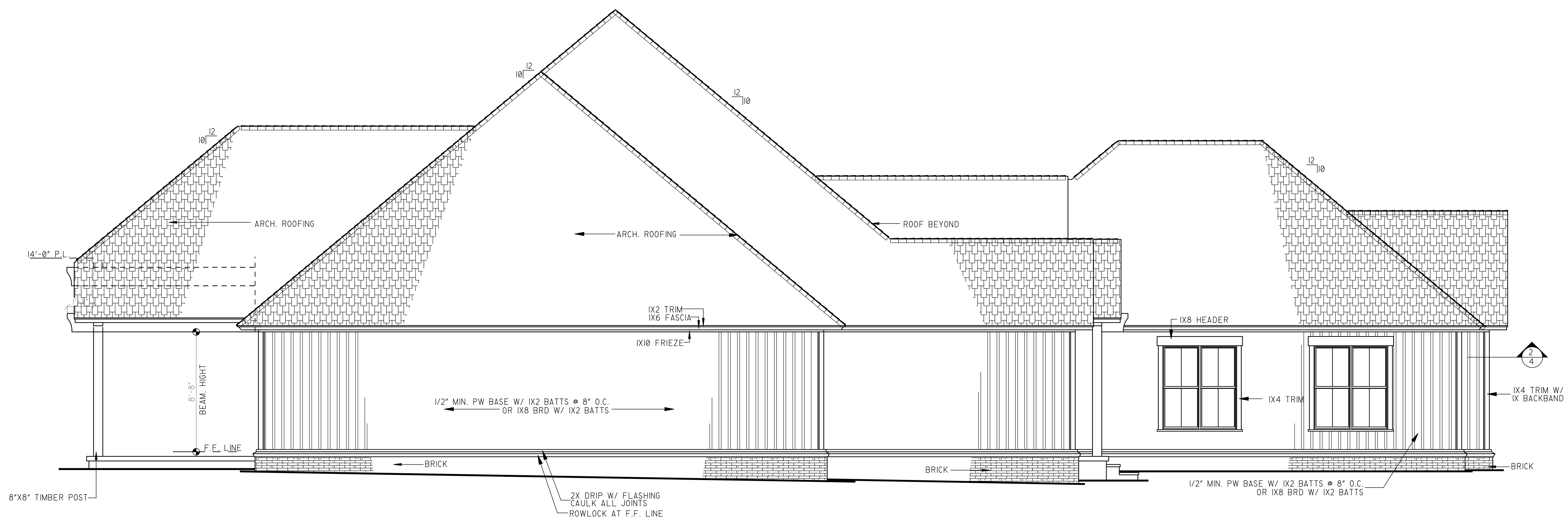
2. RIDGES, VALLEY AND HIP MEMBERS SHALL BE FULL VERTICAL DEPTH OF FRAMING MEMBERS

3. PROVIDE 2X6 COLLAR TIES AT 48" O.C.

4. PROVIDE CONTINUOUS 2X6 PURLINS AT MID-SPAN OF RAFTERS, SPACE AT 8'-6" MAX.

5. PROVIDE 2X4 STRUTS AT 48" O.C. FROM PURLINS TO BEARING WALLS AT 45 MINIMUM ANGLE.

6. HANDRAILS SHALL BE MOUNTED 34" ABOVE NOSING OF STAIRS. GUARDRAILS SHALL BE MOUNTED AT 36".



LEFT ELEVATION

ELEVATIONS / NOTES

The Gallaher Home

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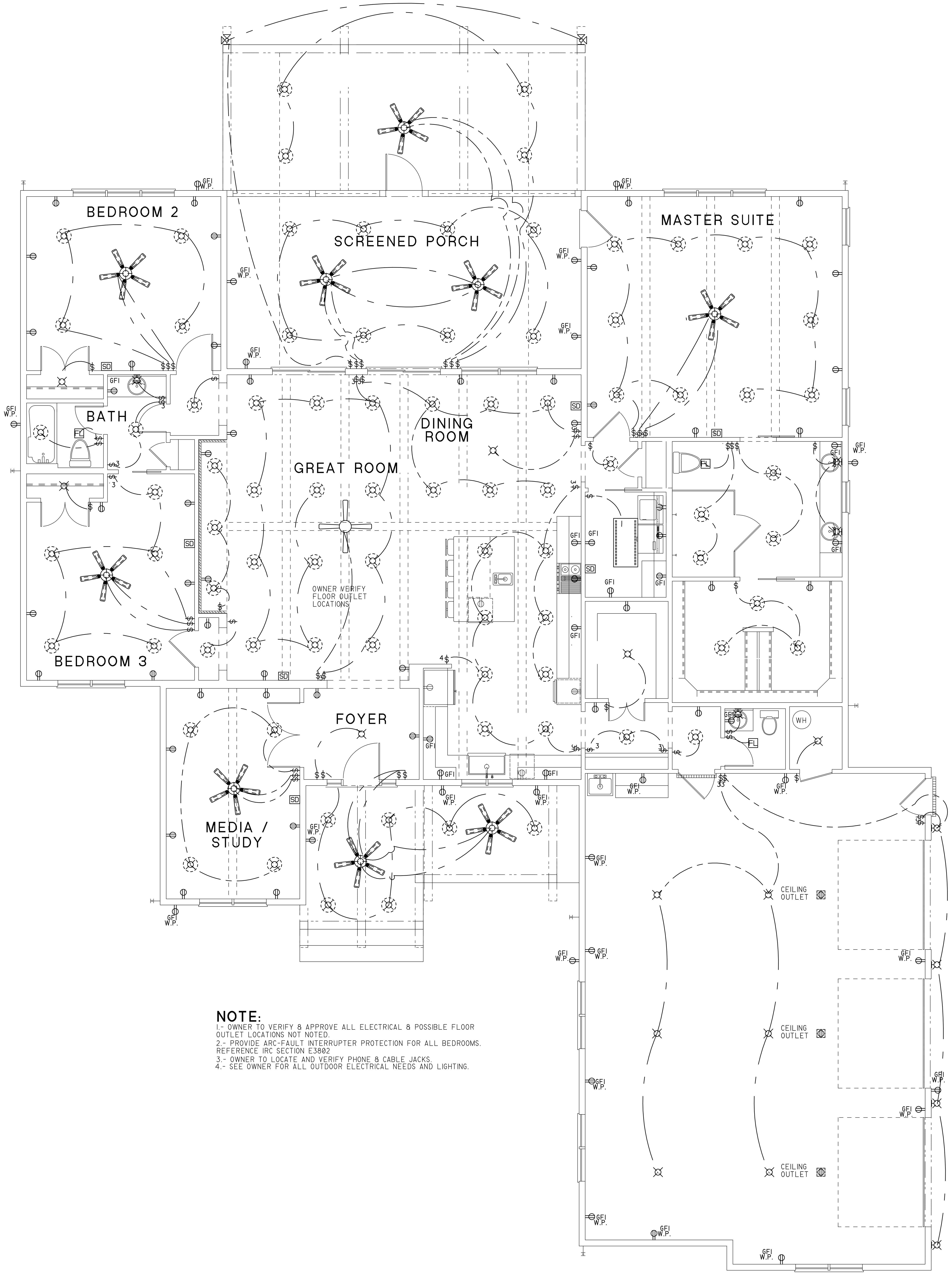
MICHAEL E. NELSON
P.B.D. Cert. No. AR-104

CAD DESIGNED

REVISIONS	BY
	30x42

DATE	1-13-2022
SCALE	1/4" = 1'-0"
BUILDER	
JOB	MENC245-21
DRAWN BY	SMN



NOTE:

1.- OWNER TO VERIFY & APPROVE ALL ELECTRICAL & POSSIBLE FLOOR OUTLET LOCATIONS NOT NOTED.
2.- PROVIDE ARC-FAULT INTERRUPTER PROTECTION FOR ALL BEDROOMS. REFERENCE IRC SECTION E3802
3.- OWNER TO LOCATE AND VERIFY PHONE & CABLE JACKS.
4.- SEE OWNER FOR ALL OUTDOOR ELECTRICAL NEEDS AND LIGHTING.

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	EXHAUST FAN
	CEILING FAN
	CEILING FAN W/ LIGHT
FL	EXHAUST FAN W/ LIGHT
HLV	HEAT, LIGHT AND VENT
	LIGHT
	4' FLORESCENT LIGHT
	2' X 4' FLORESCENT LIGHT
	6" RECESSED CAN LIGHT
	3" RECESSED CAN LIGHT
	FLOOD LIGHT
	WALL MOUNTED LIGHT
	ELECTRICAL OUTLET
	220V ELECTRICAL OUTLET
	CEILING MOUNTED OUTLET
	FLOOR MOUNTED OUTLET
	HIDDEN OUTLET
	SWITCHED OUTLET
	BREAKER BOX
	PHONE
SD	SMOKE DETECTOR
$	SWITCH
	STACKED SWITCHES
3	THREE WAY
4	FOUR WAY
GFI	GROUND FAULT INTERRUPTER
W.P.	WATERPROOF
	ELECTRICAL WIRE
C	CABLE TV
	TRACK LIGHTING

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AMERICAN INSTITUTE OF BUILDING DESIGN — AIBD — ARKANSAS

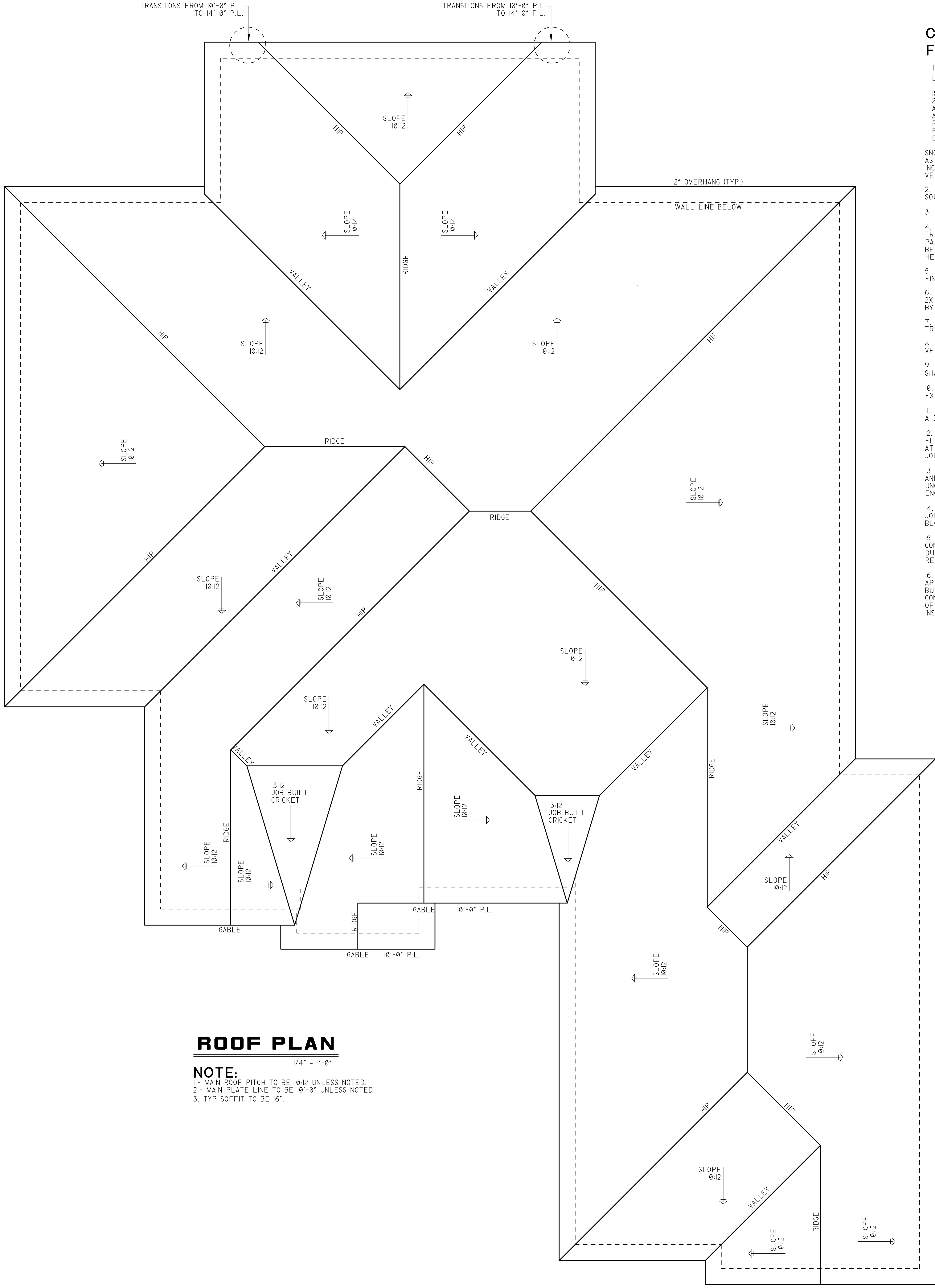
MICHAEL E. NELSON
P.B.D. Cert. No. AR-104

ELECTRICAL PLAN / NOTES

The Gallaher Home

CAD DESIGNED

DATE	1-13-2022
SCALE	1/4" = 1'-0"
BUILDER	
JOB	MENC245-2I
DRAWN BY	SMN



ROOF PLAN

1/4" = 1'-0"

NOTE:

1.- MAIN ROOF PITCH TO BE 10:12 UNLESS NOTED.
2.- MAIN PLATE LINE TO BE 10'-0" UNLESS NOTED.
3.-TYP SOFFIT TO BE 16".

CONSTRUCTION AND FRAMING NOTES:

1. DESIGN LOADS ARE AS FOLLOWS PER SQ FT:

LOCATION	LIVE	DEAD	DEFLECT LIMIT
1ST FLOOR	40 LB	10 LB	L/360
2ND FLOOR (SLEEPING AREAS)	30 LB	10 LB	L/360
ATTIC (NON STORAGE)	10 LB	5 LB	L/240
ATTIC (STORAGE)	20 LB	10 LB	L/240
ROOF (WITH FINISHED CEILING)	30 LB SNOW	15 LB	L/240
ROOF (NO FINISHED CEILING)	30 LB	7 LB	L/180
DECKS	60 LB	10 LB	L/360

SNOW LOADS HAVE BEEN ADJUSTED TO REFLECT THE SLIDEOFF FACTOR, AS A FUNCTION OF ROOF PITCH. RAFTER SIZES MAY HAVE TO BE INCREASED TO ACCOMADATE HIGHER SNOW LOADS. VERIFY WITH LOCAL CODES.

2. LUMBER SHALL BE DOUGLAS-FIR-LARCH, HEM-FIR OR SOUTHERN-YELLOW-PINE WITH FB=1450 AND E=1.6 MINIMUM.

3. ALL HEADERS SHALL BE FREE FROM ALL SPLITS, CHECKS OR SHAKES.

4. UNLESS NOTED OTHERWISE, PROVIDE DOUBLE HEADER JOISTS AND TRIMMERS AT ALL FLOOR OPENINGS, DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS, DOUBLE 2X12 HEADERS WITH 1/2" PLYWOOD,GLUED BETWEEN AND NAILED, FOR ALL OPENINGS IN 2X6 WALLS, DOUBLE 2X12 HEADERS NAILED TOGETHER FOR ALL OPENINGS IN 2X4 WALLS.

5. FLOOR CONSTRUCTION: 3/4" TONGUE AND GROOVE SUBFLOOR WITH FINISH MATERIAL OVER.

6. STAIR CONSTRUCTION SHALL CONSIST OF (3)2X12 STRINGERS,5/4" OR 2X THICK TREADS AND 3/4" THICK RISERS OR MATERIALS FABRICATED BY A COMPONENT MANUFACTURER.

7. ALL WOOD PLATES IN CONTACT WITH CONCRETE SHALL BE "PRESSURE TREATED" & SILICONE SEALED.

8. "MICRO-LAM" BEAMS SHALL HAVE BENDING STRESS: FB=2,800 PSI. VERIFY WITH LOCAL CODES.

9. SPECIAL UPLIFT CONNECTORS AS INDICATED AT CANTILEVERED JOISTS SHALL BE "SIMPSON STRONG TIE" ANCHORS OR EQUAL.

10. MINIMUM HEADER SIZE SHALL BE (2)2"X6" UNLESS NOTED OTHERWISE EXTERIOR WALLS SHALL BE (2) 2X12 WITH 1/2" PLYWOOD.

11. ALL STRUCTURAL STEEL SHALL CONFORM WITH ASTM SPECIFICATION A-36.

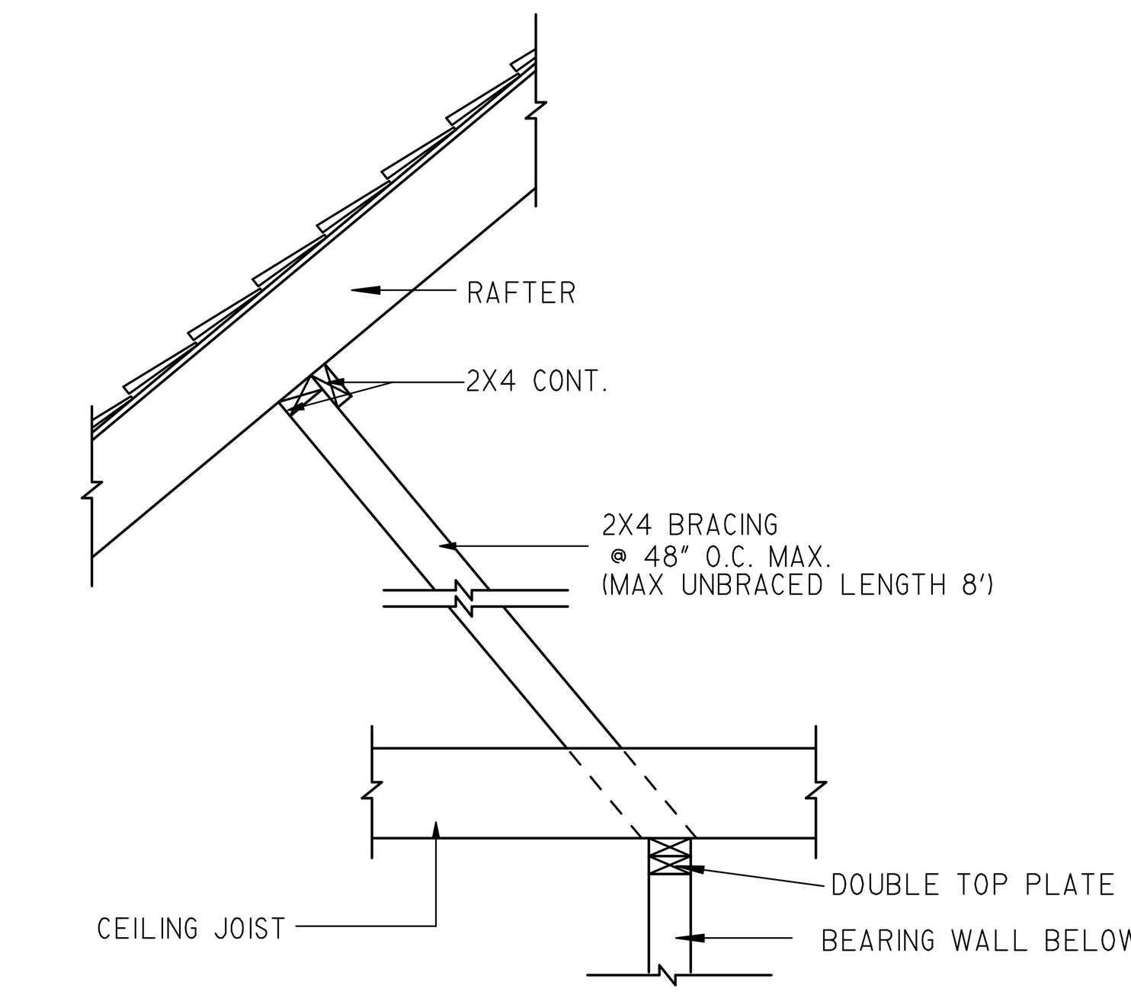
12. UNLESS OTHERWISE NOTED, PROVIDE A 2X PLATE BOLTED TO THE TOP FLANGE OF ALL STEEL BEAMS WITH 3/8" DIAMETER BOLTS STAGGERED AT 24" ON CENTER. RIGIDLY FASTEN ALL CONNECTING RAFTERS AND JOISTS AS APPROVED BY GOVERNING CODES, UNLESS OTHERWISE NOTED.

13. FLOOR FRAMING LAYOUT SHALL BE COORDINATED WITH THE GENERAL AND HVAC CONTRACTORS TO PROVIDE ACCESS CHASES AND UNOBSTRUCTED RUNS FOR HVAC DUCT WORK. FLOOR TRUSS LAYOUT TO BE ENGINEERED BY TRUSS MANUFACTURE.

14. PROVIDE BRIDGING OR BLOCKING AT MIDSPAN OF JOISTS/RAFTERS/TRUSSES, MAXIMUM SPACING BETWEEN BEARING WALL AND BLOCKING IS 8'-0".

15. THESE FRAMING PLANS WERE DESIGNED USING STANDARD CONSTRUCTION PRACTICES. THEY CONFORM TO STANDARD BUILDING CODES. DUE TO VARIATIONS IN LOCAL CODES AND GEOLOGICAL CONDITIONS REVISIONS MAY BE REQUIRED TO THESE PLANS.

16. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LOCAL CODES, REGULATIONS, AND FHA/VA MPS. THE BUILDER SHALL VERIFY ALL CONDITIONS BEFORE BEGINNING CONSTRUCTION. CONSULT WITH LOCAL STRUCTURAL ENGINEERS AND CODE OFFICIALS PRIOR TO USING THE FRAMING MATERIALS PROVIDED TO INSURE COMPLIANCE WITH CODES AND STRUCTURAL INTEGRITY.

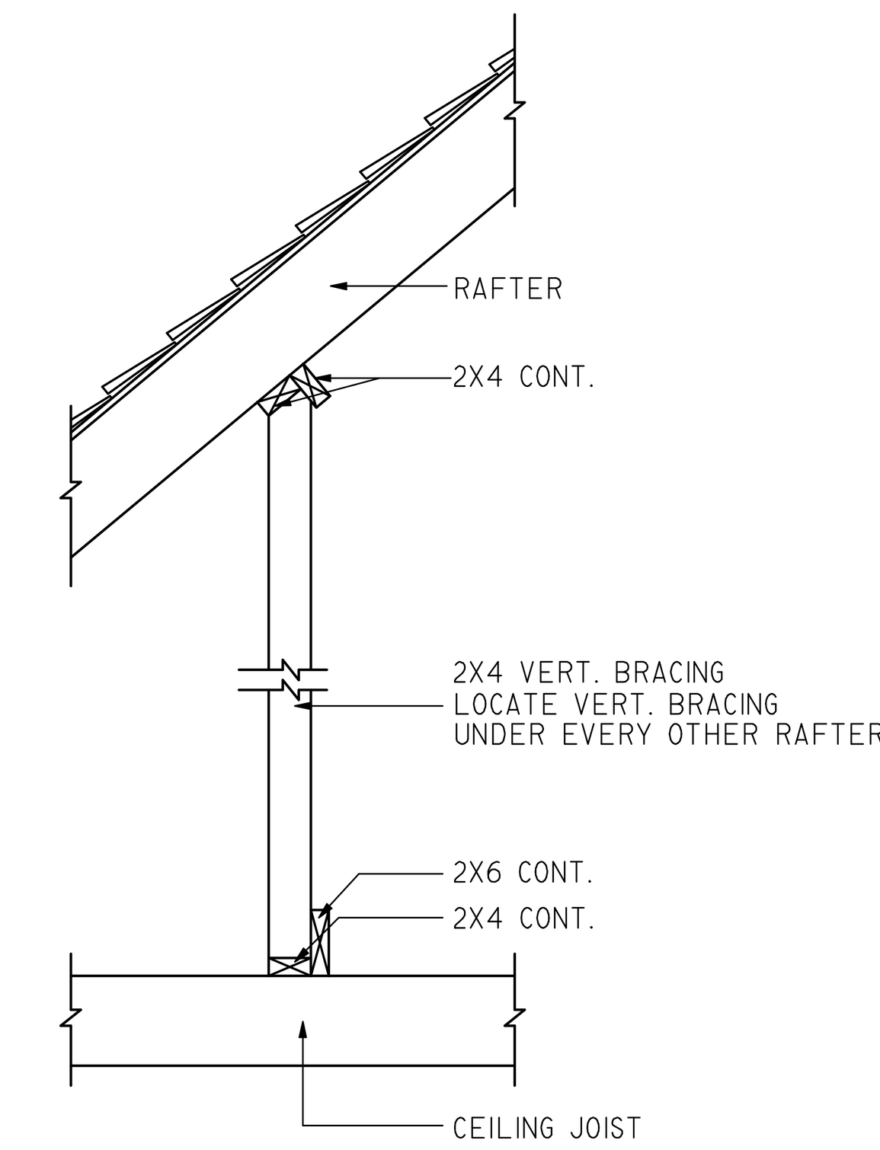


OPT. RAFTER BRACING DETAIL (PURLIN)

3/4" = 1'-0"

NOTE:

PURLINS ARE PERMITTED TO BE INSTALLED TO REDUCE THE SPAN OF RAFTERS. PURLINS SHALL BE SUPPORTED BY 2-INCH BY 4-INCH BRACES INSTALLED TO BEARING WALLS AT A SLOPE OF NOT LESS THAN 45 DEGREES. THE BRACES SHALL NOT BE SPACED MORE THAN 48" APART ON CENTER AND THE UNBRACED LENGTH OF BRACES SHALL NOT EXCEED 8 FT. PULINS SHALL BE CONTINUOUS. (REFER IRC R802.5.1)



RAFTER BRACING DETAIL

3/4" = 1'-0"

FRAMING NOTES:

1.- RAFTERS TO BE SUPPORTED BY CONT. BRACING FOR HORIZONTAL SPANS OF 15'-0" OR GREATER.
2.- SUPPORT ALL HIP, VALLEY, AND RIDGES @ 8'-0" O.C. MAX.
3.- ALL RAFTERS TO BEAR ON SECOND FLOOR WALLS WHERE APPLICABLE.
4.- RAFTERS MAY BE SPLICED ONLY @ CONT. BRACING OR SECOND FLOOR WALLS.
5.- RAFTERS TO BE PLACED IN COMPLIANCE WITH ALL LOCAL CODES.
EXAMPLES:
A.- 2X6 RAFTERS @ 16" O.C. MAX. WITH 1/2" P.W. DECKING.
B.- 2X6 RAFTERS @ 24" O.C. MAX. WITH 5/8" P.W. DECKING.
C.- 2X8 RAFTERS @ 24" O.C. MAX. WITH 5/8" P.W. DECKING.
D.- 2X8 RAFTERS @ 16" O.C. MAX. WITH 1/2" P.W. DECKING.
6.- FASCIA OVERHANG TO BE 12" (TYP.) UNLESS NOTED ON ELEVATIONS.
7.- ALL HIP / VALLEY RAFTERS TO BE 2X10 UNLESS NOTED.

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P.B.D. Cert. No. AR-104

ROOF PLAN / NOTES

The Gallaher Home

CAD DESIGNED

DATE	1-13-2022
SCALE	1/4" = 1'-0"
BUILDER	
JOB	MENC245-21
DRAWN BY	SMN

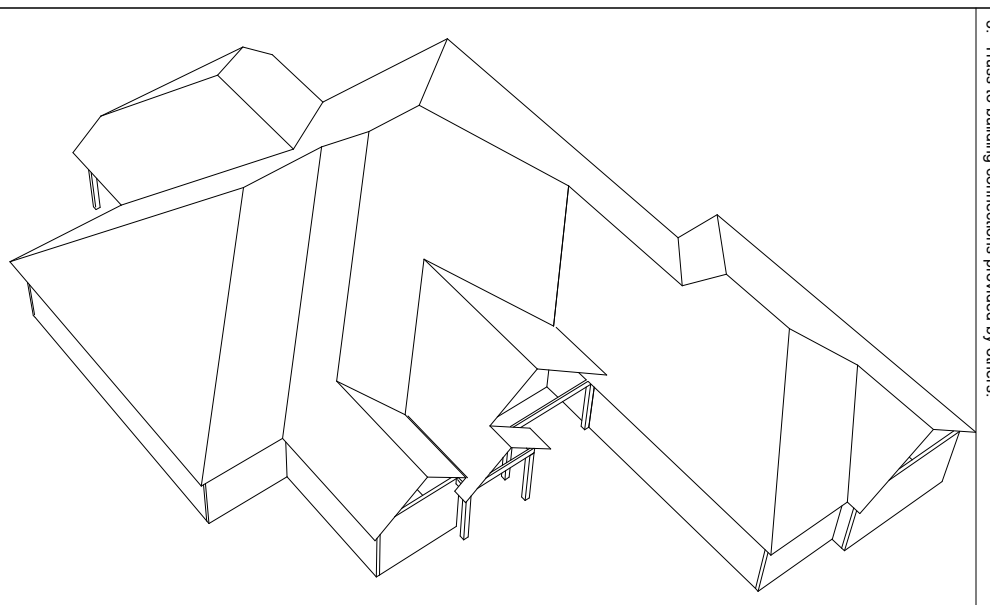
Truss Connector Total List		
Manuf	Product	Qty
Simpson	LUS26	9

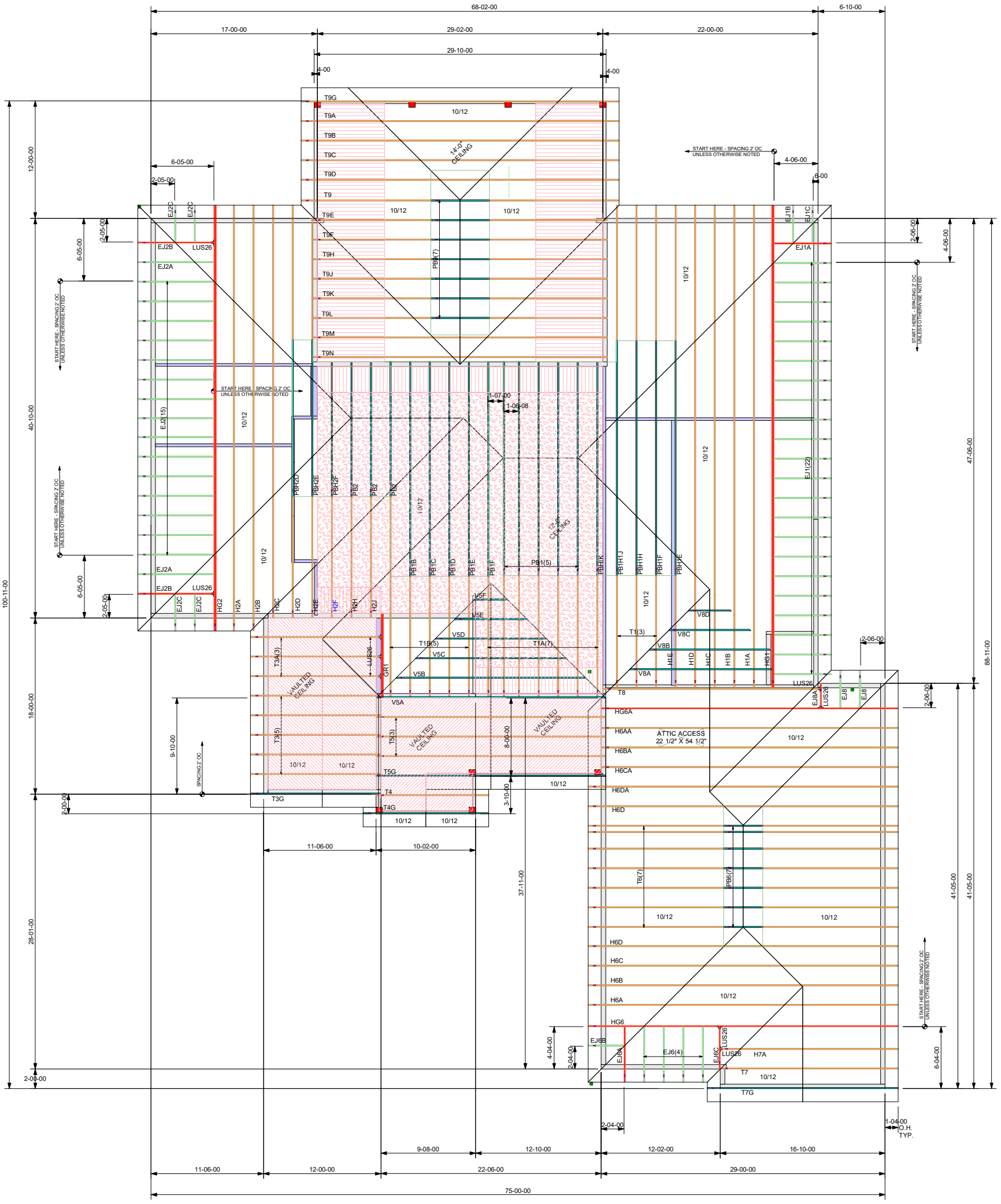
PLEASE VERIFY:

- ALL DIMENSIONS
- ALL EXTERIOR WALL DIMENSIONS ARE TO STUD FRAMING
- TRUSS DIMENSIONS ARE FROM STUD TO STUD
- 2 X 6 EXTERIOR WALLS
- 1'-4" OVERHANG (TYP.)
- ALL PITCHES ARE 10/12
- ALL CEILINGS HEIGHTS ARE 10'-0" (U.N.O.)
- GARAGE IS 29'-0" WIDE

IF APPLICABLE, PLEASE FURNISH

- RAISED PLATFORM AND / OR LIGHT ATTIC STORAGE LOCATIONS
- ATTIC ACCESS SIZE AND LOCATION





1. All bracing, blocking, beams, purlins @ 20" o.c., ledger, etc. provided by others.
2. Roof truss to roof truss connections provided by Riverside Roof Truss.
3. Truss to building connections provided by others.

Refer to Sealed drawings for connection detail of multiple ply trusses.

NOT ALL TRUSSES ARE SYMMETRICAL AND MAY NOT PERFORM CORRECTLY IF INSTALLED BACKWARDS. PLEASE REFER TO SEALS WHILE SETTING TRUSSES TO ENSURE TRUSSES ARE ORIENTED CORRECTLY

△ =THIS SYMBOL INDICATES THE LEFT END OF TRUSS - REFER TO SEALED TRUSS DRAWINGS TO AVOID SETTING TRUSSES BACKWARDS!

THIS IS A TRUSS PLACEMENT DIAGRAM ONLY. These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor system and for the overall structure. The design of the truss support structure including headers, beams, walls, columns, and sufficient blocking in floor cavity under point loads is the responsibility of the building designer. For general guidance regarding bracing, consult "Bracing of Wood Trusses" available from the Truss Plate Institute, 583 D'Onifrio Drive; Madison, WI 53179.

SHOP DRAWING APPROVAL

THIS LAYOUT IS THE SOLE SOURCE FOR FABRICATION OF TRUSSES AND VOIDS ALL PREVIOUS ARCHITECTURAL OR OTHER TRUSS LAYOUTS. REVIEW AND APPROVAL OF THIS LAYOUT MUST BE RECEIVED BEFORE ANY TRUSSES WILL BE BUILT. VERIFY ALL CONDITIONS TO INSURE AGAINST CHANGES THAT WILL RESULT IN EXTRA CHARGES TO YOU.

REVIEWED BY:_____ APPROVED BY:_____ DATE:_____

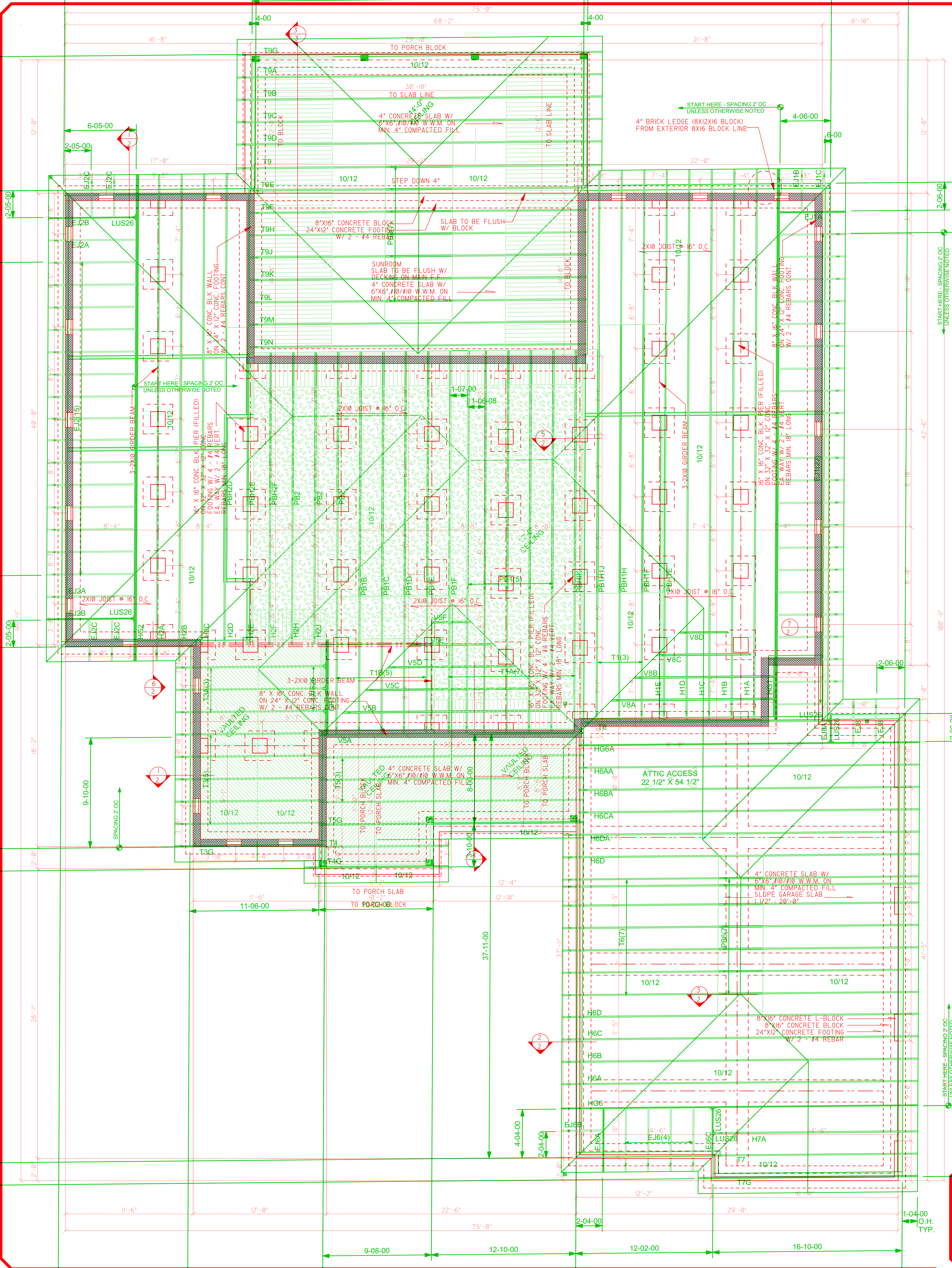
RIVERSIDE ROOF TRUSS, LLC

Roof Surface Area: 7454 Sq. Ft.
Floor Surface Area: 0 Sq. Ft.

733 RIVER PARK DRIVE
DANVILLE, VA 24540
(434) 793-0217
FAX: (434) 799-8767

Hanger Conversion Chart	
USP	Simpson
JUS26	LUS26
THD26	HUS26
THD26-2	HHUS26-2
HJC26	THJA26
MSH422	THA422

Client: PARKS BUILDING SUPPLY			
Job Name: POSTON PLAN ROOF			
Model:			
Lot #:	Subdivision:		
Order #: 21-6297-A	Sales Rep: C Smiley	Designer: D L	Date: 4/29/2022

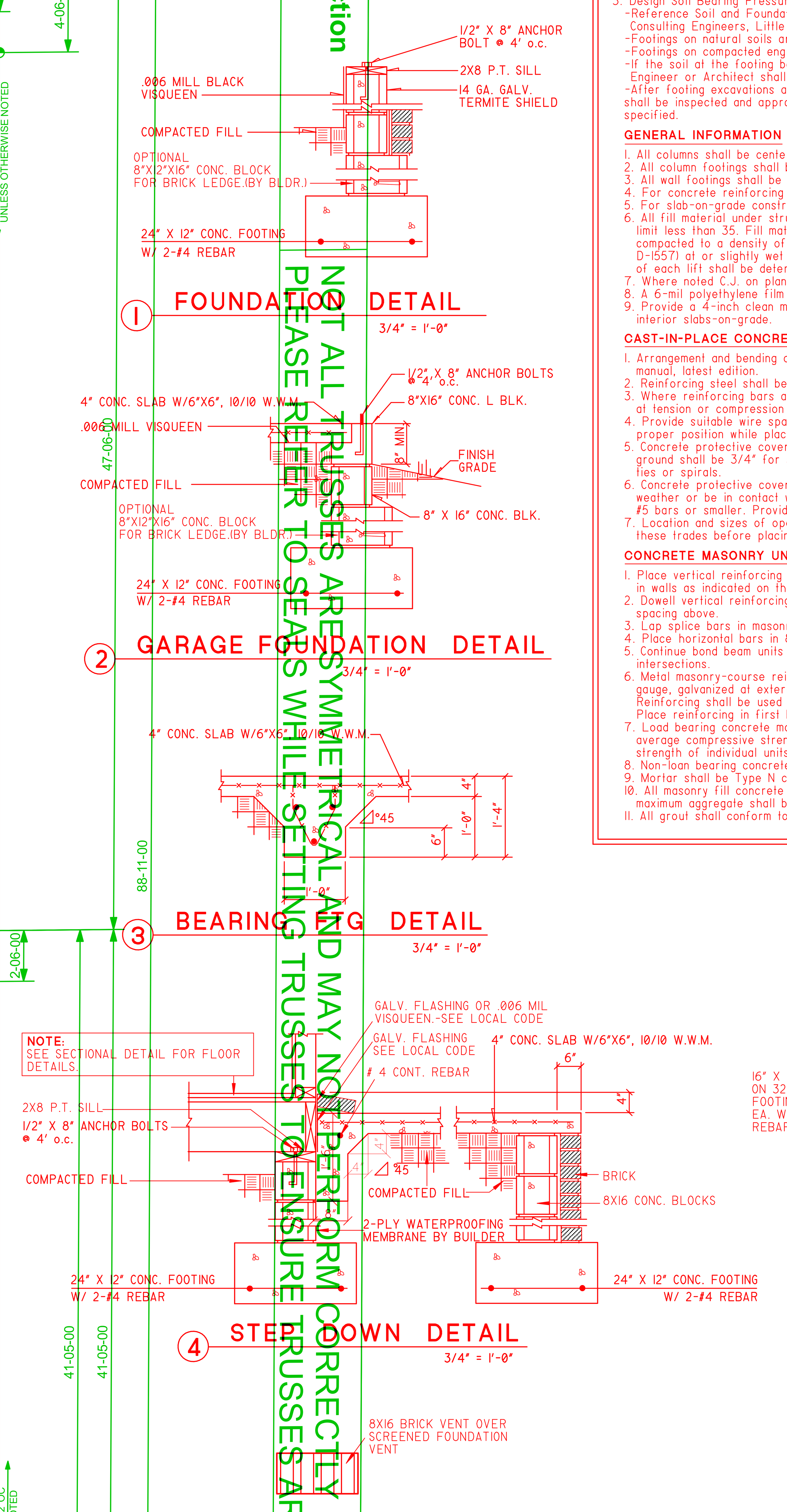


REFER TO SEALED DRAWINGS FOR CONNECTION DETAIL OF MULTIPLE TRUSSES.

NOT ALL TRUSSES ARE SYMMETRICAL AND MAY NOT PERFORM CORRECTLY IF INSTALLED BACKWARDS. PLEASE REFER TO SEAS WHILE SETTING TRUSSES TO ENSURE TRUSSES ARE ORIENTED CORRECTLY

NOTE:

1.- BUILDER TO VERIFY ALL SOIL CONDITIONS BEFORE CONSTRUCTING FOUNDATION. IF POOR CONDITIONS EXIST CONSULT A STRUCTURAL ENGINEER.
2.- BUILDER TO VERIFY FOUNDATIONS DETAILS W/ LOCAL BUILDING CODES.
3. VERIFY ALL FLOOR OUTLETS, RANGE & DRYER VENTS IN SLAB.
4.- BUILDER TO LOCATE FOUNDATION ACCESS LOCATION. VERIFY W/ SITE ELEVATIONS.
5.- VERIFY 4" PERF. MIN. FRENCH DRAIN LOCATIONS IF NEED. VERIFY W/ SITE.
6.- CRAWL SPACE DESIGN & PIER LOCATIONS ARE BASED ON A STRUCTURAL CONFIGURATION WHICH ALLOWS A MAXIMUM POINT LOAD (DEAD OR LIVE) AT ANY GIVING POINT ON THE FINISHED FLOOR. THIS INSURES MAXIMUM SUPPORT AND STABILITY.
7.- USE DOUBLE & IF ALLOWED, TRIPLE FLOOR JOIST UNDER ALL PARALLEL BEARING WALLS.
8.- BUILDER TO PROVIDE CROSS MEMBER BRIDGING BETWEEN JOISTS BY USING EITHER METAL BRIDGES OR 1X4 CROSS BRACING MEMBERS @ 6' SPACING MAX. VERIFY ALL APPLICATIONS WITH LOCAL CODE.
9.- BUILDER TO VERIFY USE OF POWER VENTS IN CRAWL SPACE AREAS WHERE EXTRA VENTILATION MAY BE NEEDED. (VERIFY W/ LOCAL CODE.)



NOTE:
ALL DIMENSIONS ARE FROM EXTERIOR STUD WALL. WHEN LAYING 8"X12"X16" COURSES, ALLOW 4" TO ALL EXTERIOR DIMENSIONS FOR OPTIONAL BRICK LEDGE.

GENERAL NOTES:

In case of conflict between the General Notes below and the specifications the more rigid requirement shall govern unless amended in writing by the Engineer.

DESIGN DATA

1. Design Codes - (All latest editions unless noted)
 -American Concrete Institute (ACI)
 -American Institute of Steel Construction (AISC)
 -American Welding Society (AWS)
 -Southern Standard Building Code (SSBC)
 -American National Standards Institute, Inc. (ANSI A58.1-1982)
 Minimum Design Loads for Buildings and Other Structures
2. Material Specifications and Design Stresses
 -Anchor Bolts and Embedded Steel.............Fy = 36,000 psi (ASTM A36)
 -Structural Steel UNO..................................Fy = 36,000 psi (ASTM A36)
 -Cast-in-place Concrete
 -Footings...F'c = 3,000 psi at 28-days.
 -Interior slabs-on-grade.............................f'c = 3,000 psi at 28-days.
 -Ext. exposed concrete)air entrained)......F'c = 4,000 psi at 28-days.
 -Reinforcing Steel
 -#2 and #3 bar3 only...................................Fy = 40,000 psi (ASTM A615, Grade 40)
 -#4 and larger bars....................................Fy = 60,000 psi (ASTM A615, Grade 60)
3. Design Soil Bearing Pressures
 -Reference Soil and Foundation Investigation by Grubbs, Garner, & Hoskyn, Inc. Consulting Engineers, Little Rock, AR.
 -Footings on natural soils are designed for a maximum soil bearing pressure of 2,000 psf.
 -Footings on compacted engineered fill are designed for maximum soil bearing pressure of 2,000 psf.
 -If the soil at the footing bearing elevations shown is of questionable bearing value, the Engineer or Architect shall be notified immediately.
 -After footing excavations are completed and before placing concrete, the excavated area shall be inspected and approved by the Owner selected independent testing laboratory as specified.

GENERAL INFORMATION

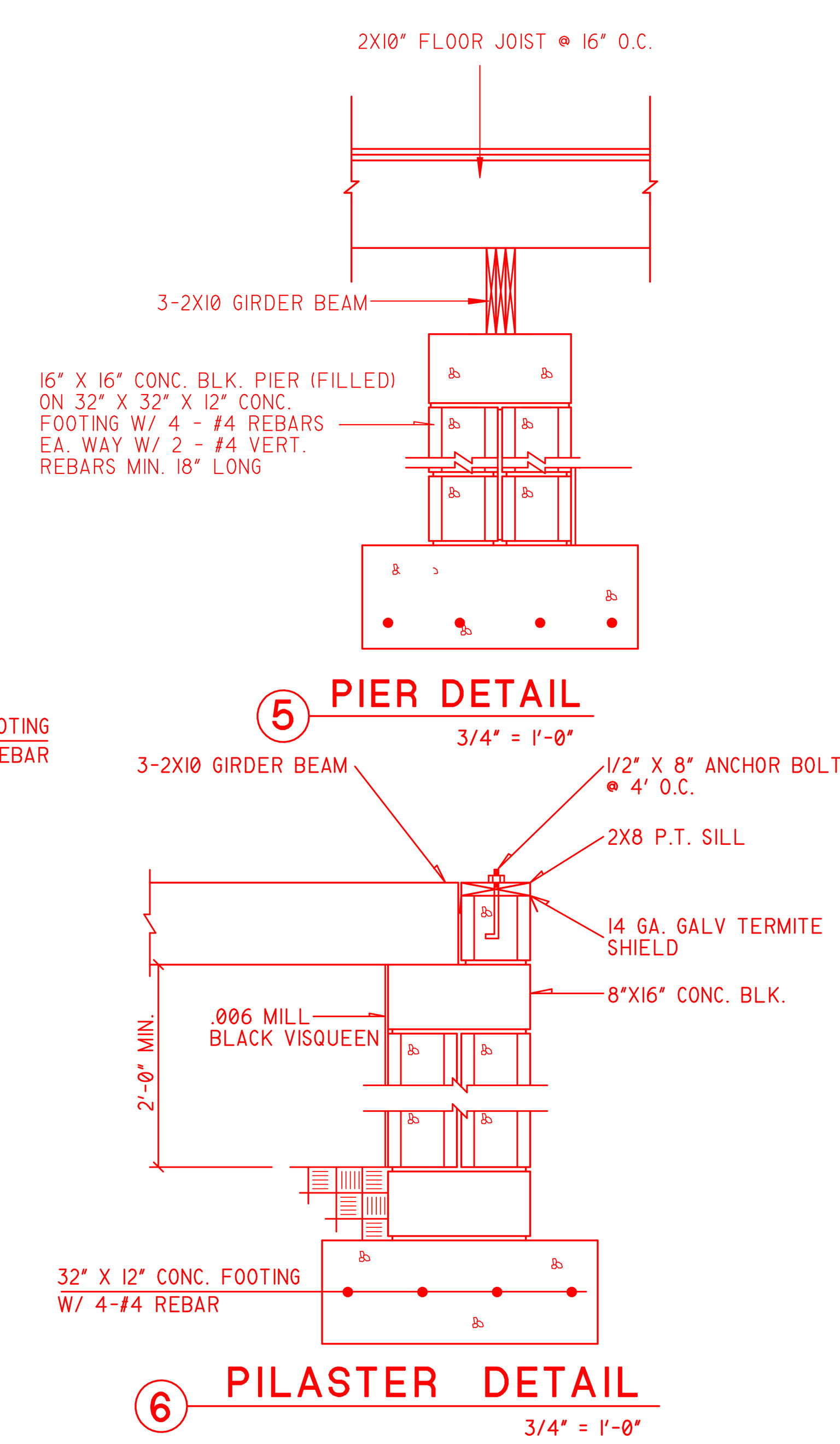
1. All columns shall be centered on grid lines unless noted otherwise.
2. All column footings shall be centered on columns unless noted otherwise.
3. All wall footings shall be centered on walls unless noted otherwise.
4. For concrete reinforcing at corners, see typical corner bar detail.
5. For slab-on-grade construction joint detail, see typical slab-on-grade detail.
6. All fill material under structure shall be sandy clay or clayey sand exhibiting a liquid limit less than 35. Fill material shall be placed in loose lifts not to exceed 8" and compacted to a density of not less than 95% of Modified Proctor Maximum Dry Density (ASTM D-1557) at or slightly wet of optimum moisture content. In place moisture and density of each lift shall be determined by in-situ field tests prior to placing additional fill.
7. Where noted C.J. on plan, provide Keyed Joint in floor slab.
8. A 6-mil polyethylene film vapor barrier shall be placed below all interior slabs-on-grade.
9. Provide a 4-inch clean medium to coarse sand or gravel compacted drainage fill below all interior slabs-on-grade.

CAST-IN-PLACE CONCRETE

1. Arrangement and bending of reinforcing steel shall be in accordance with ACI detailing manual, latest edition.
2. Reinforcing steel shall be new and all bars over #2 shall be deformed.
3. Where reinforcing bars are shown continuous, lap bars 36-bar diameters or 24-bar diameters at tension or compression splices respectively (12" minimum).
4. Provide suitable wire spacers, chairs, ties, etc., for supporting reinforcing steel in the proper position while placing concrete.
5. Concrete protective covering for reinforcement at surfaces not exposed directly to the ground shall be 3/4" for slabs, joists, and walls and 1-1/2" for beam stirrups and column ties or spirals.
6. Concrete protective covering for reinforcement at surfaces which will be exposed to the weather or be in contact with the ground shall be 2" for bars larger than #5 and 1-1/2" for #5 bars or smaller. Provide 3" cover below and at ends of footing bars.
7. Location and sizes of openings, sleeve, etc., required for other trades must be verified by these trades before placing concrete.

CONCRETE MASONRY UNITS

1. Place vertical reinforcing bars at corners, jambs of openings, below beam bearing, and in walls as indicated on the drawings.
2. Dowell vertical reinforcing bars out of the structure below with bars of the same size and spacing above.
3. Lap splice bars in masonry 40 bar diameters.
4. Place horizontal bars in 8" deep bond beam units at top of wall.
5. Continue bond beam units and reinforcing uninterrupted around corners and across wall intersections.
6. Metal masonry-course reinforcing shall be truss type conforming to ASTM A82, not less than 9 gauge, galvanized at exterior walls. Furnish material with prefabricated corners and tees. Reinforcing shall be used in all partitions, spaced 16" o.c., vertically, joints lapped 6". Place reinforcing in first bed joint above and below all concrete slabs and wall openings.
7. Load bearing concrete masonry units shall conform to ASTM C90, Grade N, Type I, with minimum average compressive strength on net area of 1,100 psi and minimum net area compressive strength of individual units shall be 1,500 psi.
8. Non-loan bearing concrete masonry units shall conform to ASTM C129, Type I.
9. Mortar shall be Type N conforming to property or protection requirements of ASTM C476.
10. All masonry fill concrete shall have a minimim strength at 28-days f'c = 3,000 psi, maximum aggregate shall be 3/8" and shall be placed in maximum lifts of 4'-0".
11. All grout shall conform to ASTM C476, Fine Grout.



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MICHAEL E. NELSON
P.B.D. Cert. No. AR-104

FOUNDATION (SLAB) PLAN / NOTES

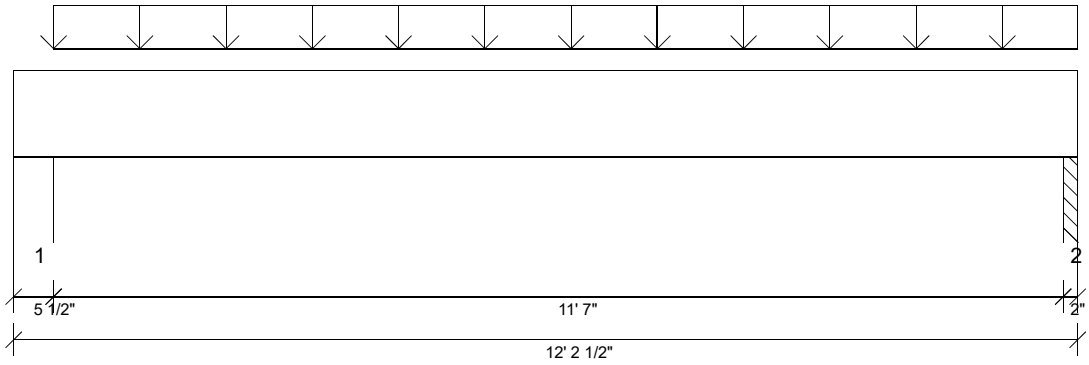
The Gallaher Home

CAD DESIGNED

DATE	1-13-2022
SCALE	1/4" = 1'-0"
BUILDER	
JOB	MENC245-21
DRAWN BY	SMN

MiTek	Customer: Street 1: City: Customer P...	Job Name: **3049952** Level: **1st Floor** Label: **BM2-2 -** Type: **Beam**	**2 Ply Member** **1 3/4" x 11 7/8" (2.0E 3100) LVL**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12 | Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update2.20 | Report Version: 2021.03.26 03/23/2022 16:47



DESIGN INFORMATION

Building Code:	IBC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
LL Deflection Limit:	L/360, 0.75" (absolute)
TL Deflection Limit:	L/240, 1.00" (absolute)

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 11'- 9" Bottom: 11'- 9"

Bearing Stress of Support Material:

- 725 psi Wall @ 0'- 4 1/2"
- 725 psi Column @ 12'- 1 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	6'- 3"	D + S	1.15	11252 lb ft	23737 lb ft	Passed - 47%
Max Shear:	1'- 5 3/8"	D + S	1.15	3132 lb	9081 lb	Passed - 34%
Live Load (LL) Pos. Defl.:	6'- 3"	S		0.145"	L/360	Passed - L/960
Total Load (TL) Pos. Defl.:	6'- 3"	D + S		0.295"	L/240	Passed - L/471

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	5 1/2"	D + S	1.15	3782 lb		14437 lb	13956 lb	Passed - 27%
2	2"	D + S	1.15	3885 lb		5250 lb	5075 lb	Passed - 77%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	12'- 2 1/2"	Self Weight	Top	12 lb/ft	-	-	-	-
Uniform	0'- 5 1/2"	12'- 2 1/2"	User Load	Top	320 lb/ft	-	320 lb/ft	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 5 1/2"	E4(i12)	1942 lb	-	1867 lb	-	-
2	12'- 1/2"	12'- 2 1/2"	PBO1(i236)	1965 lb	-	1893 lb	-	-

DESIGN NOTES

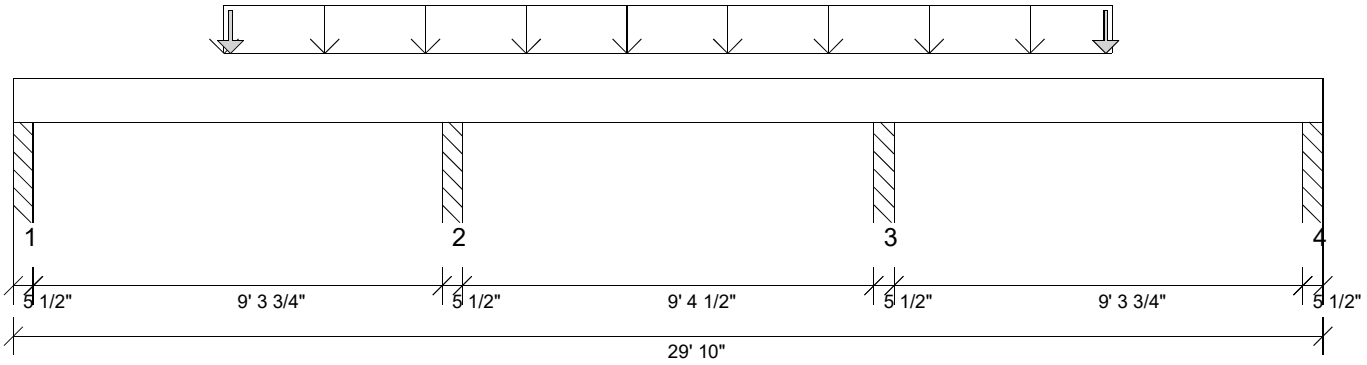
- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Lateral stability factor (CL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.

PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

Customer: Street 1: City: Customer P...	Job Name: **3049952** Level: **1st Floor** Label: **BM1-2 -** Type: **Beam**	**2 Ply Member** **1 3/4" x 11 7/8" (2.0E 3100) LVL**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12 — Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update2.20 — Report Version: 2021.03.26 03/23/2022 16:48



DESIGN INFORMATION

Building Code:	IBC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
LL Deflection Limit:	L/360, 0.75" (absolute)
TL Deflection Limit:	L/240, 1.00" (absolute)

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 29'- 3" Bottom: 29'- 3"

Bearing Stress of Support Material:

- 725 psi Column @ 0'- 4 1/2"
- 725 psi Column @ 10'
- 725 psi Column @ 19'- 10"
- 725 psi Column @ 29'- 5 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	14'- 11"	D + S	1.15	1890 lb ft	20650 lb ft	Passed - 9%
Max Neg. Moment:	19'- 10"	D + S	1.15	3817 lb ft	20650 lb ft	Passed - 18%
Max Shear:	11'- 2 5/8"	D + S	1.15	1746 lb	9081 lb	Passed - 19%
Live Load (LL) Pos. Defl.:	24'- 11 1/16"	S		0.012"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	24'- 11 1/4"	D + S		0.022"	L/240	Passed - L/999

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	5 1/2"	D + S	1.15	426 lb		14438 lb	13957 lb	Passed - 3%
2	5 1/2"	D + S	1.15	4624 lb		15422 lb	13957 lb	Passed - 33%
3	5 1/2"	D + S	1.15	4624 lb		15422 lb	13957 lb	Passed - 33%
4	5 1/2"	D + S	1.15	426 lb		14438 lb	13956 lb	Passed - 3%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	29'- 10"	Self Weight	Top	12 lb/ft	-	-	-	-
Uniform	4'- 9 5/8"	25'- 3/8"	User Load	Top	230 lb/ft	-	230 lb/ft	-	-
Point	4'- 11 3/8"	4'- 11 3/8"	User Load	Top	72 lb	-	144 lb	-	-
Point	24'- 10 5/8"	24'- 10 5/8"	User Load	Top	72 lb	-	144 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 5 1/2"	PBO1(i236)	223 lb	-	206 lb	-	-
2	9'- 9 1/4"	10'- 2 3/4"	PBO3(i238)	2357 lb	-	2265 lb	-	-
3	19'- 7 1/4"	20'- 3/4"	PBO4(i239)	2365 lb	-	2275 lb	-	-
4	29'- 4 1/2"	29'- 10"	PBO2(i237)	214 lb	-	195 lb	-	-

DESIGN NOTES

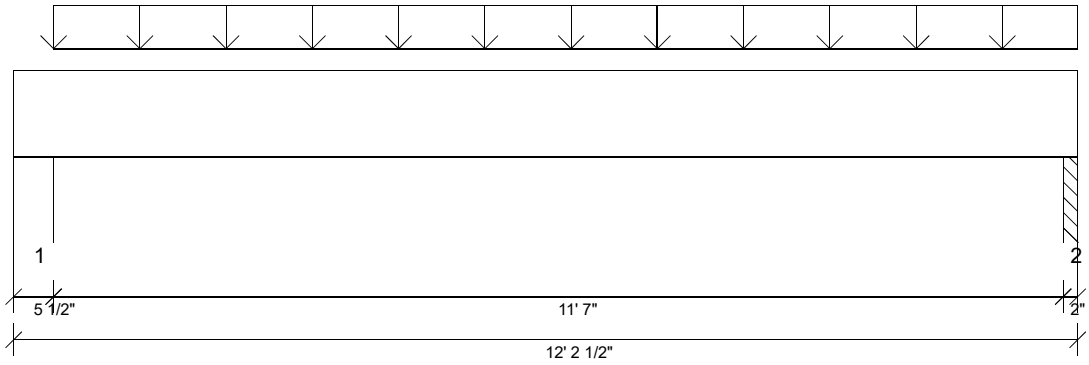
- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Lateral stability factor (CL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.

PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

MiTek	Customer: Street 1: City: Customer P...	Job Name: **3049952** Level: **1st Floor** Label: **BM2-2 -** Type: **Beam**	**2 Ply Member** **1 3/4" x 11 7/8" (2.0E 3100) LVL**	Status: **Design Passed**

Illustration Not to Scale. Pitch: 0/12 | Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update2.20 | Report Version: 2021.03.26 03/23/2022 16:49



DESIGN INFORMATION

Building Code:	IBC 2018
Design Methodology:	ASD
Risk Category:	II (General Construction) Residential
Service Condition:	Dry
LL Deflection Limit:	L/360, 0.75" (absolute)
TL Deflection Limit:	L/240, 1.00" (absolute)

Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 11'- 9" Bottom: 11'- 9"

Bearing Stress of Support Material:

- 725 psi Wall @ 0'- 4 1/2"
- 725 psi Column @ 12'- 1 1/2"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Max Pos. Moment:	6'- 3"	D + S	1.15	11252 lb ft	23737 lb ft	Passed - 47%
Max Shear:	1'- 5 3/8"	D + S	1.15	3132 lb	9081 lb	Passed - 34%
Live Load (LL) Pos. Defl.:	6'- 3"	S		0.145"	L/360	Passed - L/960
Total Load (TL) Pos. Defl.:	6'- 3"	D + S		0.295"	L/240	Passed - L/471

SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Downward Reaction	Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	5 1/2"	D + S	1.15	3782 lb		14437 lb	13956 lb	Passed - 27%
2	2"	D + S	1.15	3885 lb		5250 lb	5075 lb	Passed - 77%

LOADING

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
Self Weight	0'	12'- 2 1/2"	Self Weight	Top	12 lb/ft	-	-	-	-
Uniform	0'- 5 1/2"	12'- 2 1/2"	User Load	Top	320 lb/ft	-	320 lb/ft	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Roof Live (Lr)	Wind (W)
1	0'	0'- 5 1/2"	E8(i17)	1942 lb	-	1867 lb	-	-
2	12'- 1/2"	12'- 2 1/2"	PBO2(i237)	1965 lb	-	1893 lb	-	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
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