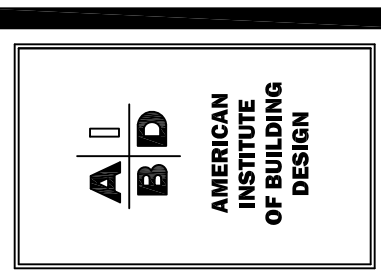


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 405 S. Lakeside Dr, Raleigh, NC 27606 Tel: (919) 852-3500 www.trd-chp.com



Client: TREVEL CONSTRUCTION
 Project: PLAN #1807 (DERIVED FROM #1758)
 Sheet: 1 of 5
 Date: OCTOBER 6, 2022
 Sheet Name: FRONT & REAR ELEVATIONS

Address/Location: 414 YOUNG ROAD, ANGER, NC 27562, WAKE COUNTY

Drawn by: [blank] Revised: [blank]

GENERAL NOTES:
 1) THESE PLANS HAVE BEEN DESIGNED TO MEET THE REQUIREMENTS OF THE NCBC 2018 RESIDENTIAL CODE
 2) THESE PLANS ARE DESIGNED TO BE USED BY A LICENSED GENERAL CONTRACTOR
 3) DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS
 4) ALL PM&E PLANS ARE TO BE HANDLED BY THE GENERAL CONTRACTOR UNLESS NOTED OTHERWISE
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GENERAL CONTRACTOR:
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 2) ANY DISCREPANCY IN THE PLANS IS TO BE BROUGHT TO THE ATTENTION OF TRD FOR CORRECTION PRIOR TO CONSTRUCTION. OTHERWISE IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR
 3) INSURE ALL PHASES OF CONSTRUCTION COMPLY WITH BUILDING CODES IN THE AREA THE HOME IS TO BE BUILT
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MEAN ROOF HEIGHT FROM AVG GRADE

11'-6" EAVE HT. + 25'-4" OVERALL HT. = 36'-10" TOTAL
 36'-10" TOTAL / 2 = 18'-5" MEAN ROOF HT.

NOTES:
 * DISTANCES INDICATED ARE FROM FINISHED GRADE AND ASSUME A FLAT LOT WITH MINIMUM GRADE REQUIREMENTS.
 * DESIGN PRESSURE = 35 PSF

DESIGN LOADS

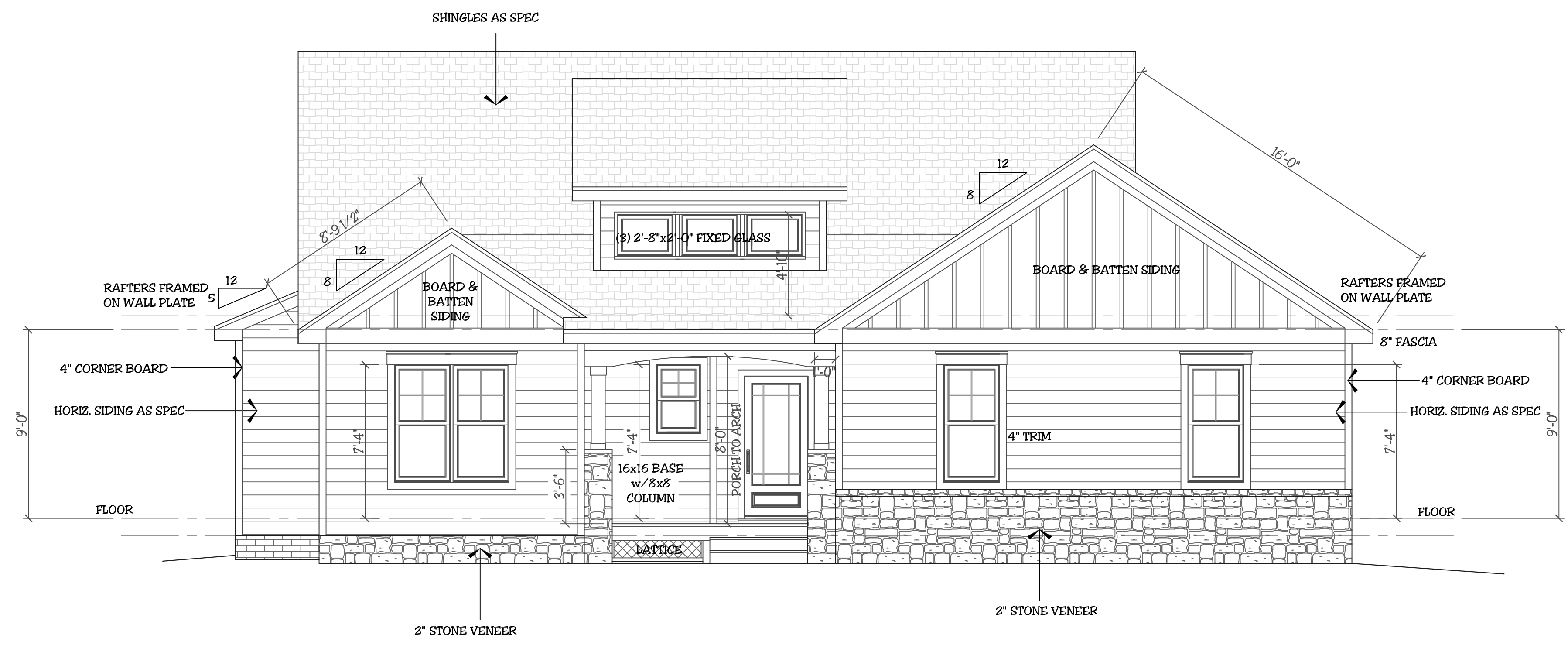
FLOOR LIVE LOAD (SLEEPING): 30 PSF
 FLOOR LIVE LOAD (ALL OTHERS): 40 PSF
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 ATTIC DEAD LOAD (NO STOR): 10 PSF
 ATTIC LIVE LOAD (STORAGE): 20 PSF
 ATTIC W/STAIRS (DEVELOPABLE) 40 PSF

MIN. VALUES FOR ENERGY COMPLIANCE

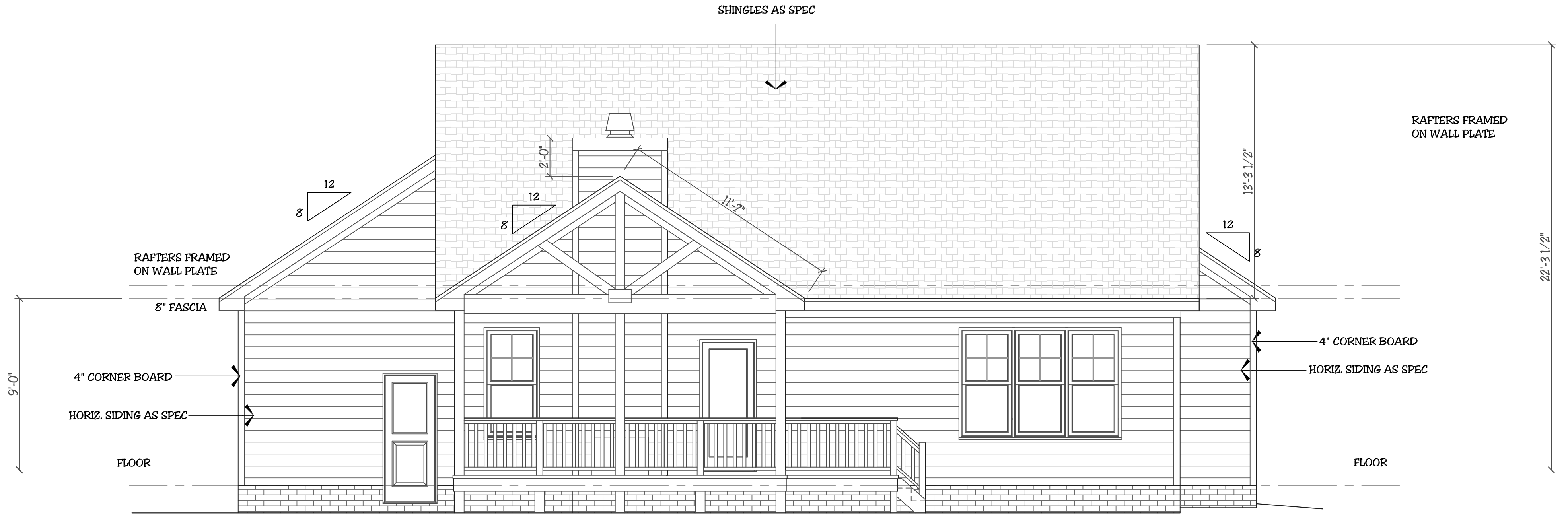
CEILING: R-38
 WALLS: R-15
 FLOORS: R-19
 BASEMENT WALLS: R-7
 CRAWL SPACE WALLS: R-8
 SLAB PERIMETER @ 24" DEEP: R-4
 MAX. GLAZING U-FACTOR = 0.35
 ZONE 4

EXTERIOR MATERIALS

- ROOF SHINGLES
- METAL ROOF
- HORIZONTAL SIDING
- BOARD & BATTEN SIDING
- VERTICAL SIDING
- SHAKE SIDING
- BRICK
- STONE
- STUCCO or PARGING
- SCREEN
- BRICK ROWLOCK or SOLDIER



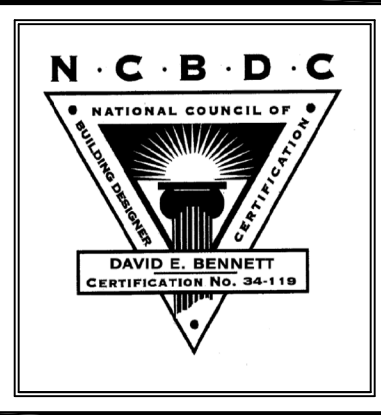
FRONT ELEVATION
 SCALE: 1/4"=1'-0"



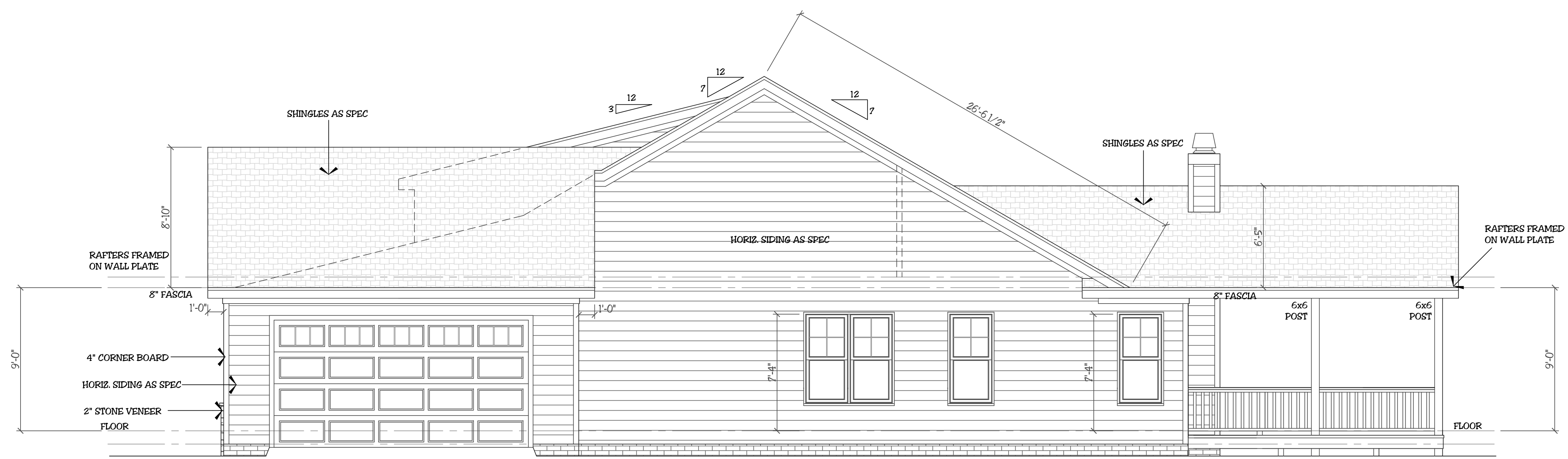
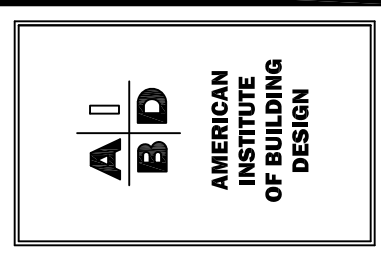
REAR ELEVATION
 SCALE: 1/4"=1'-0"

INDEX TO SHEETS

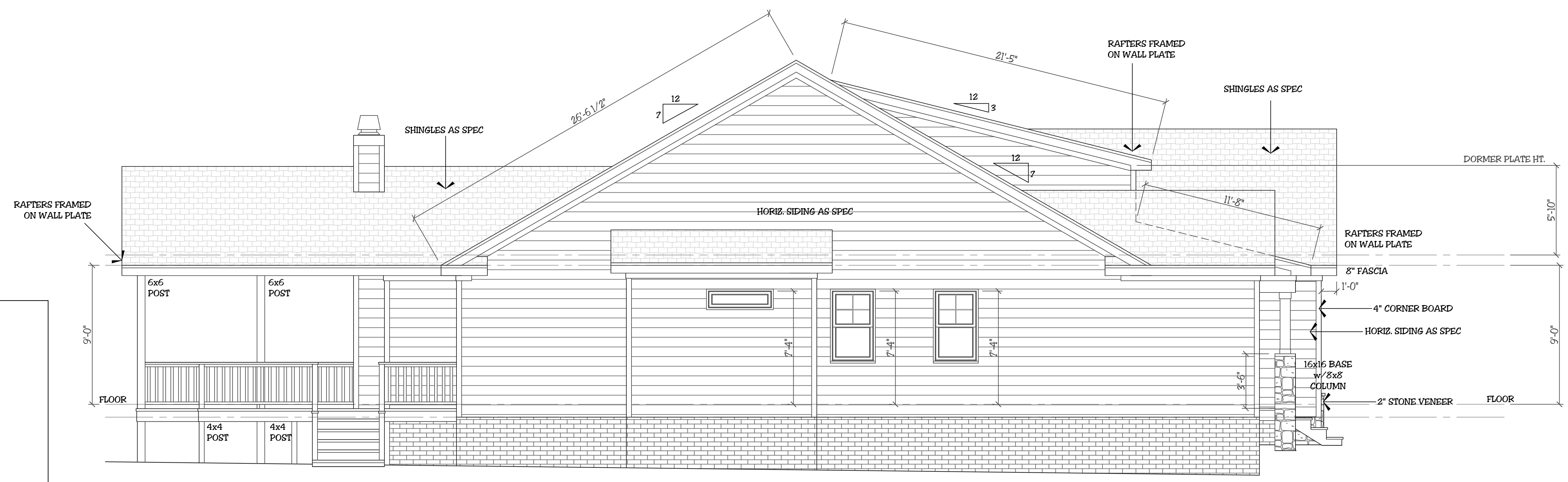
SHEET	NAME
1	FRONT & REAR SIDE ELEVATIONS
2	LEFT & RIGHT SIDE ELEVATIONS
3	FOUNDATION/MASONRY PLAN
4	FLOOR PLAN
5	ROOF PLAN
D1-2	DETAIL SHEETS



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



LEFT SIDE ELEVATION
 SCALE: 1/4"=1'-0"

EXTERIOR MATERIALS

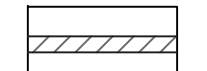
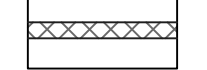
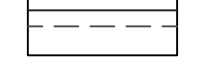

	ROOF SHINGLES
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	BOARD & BATTEN SIDING
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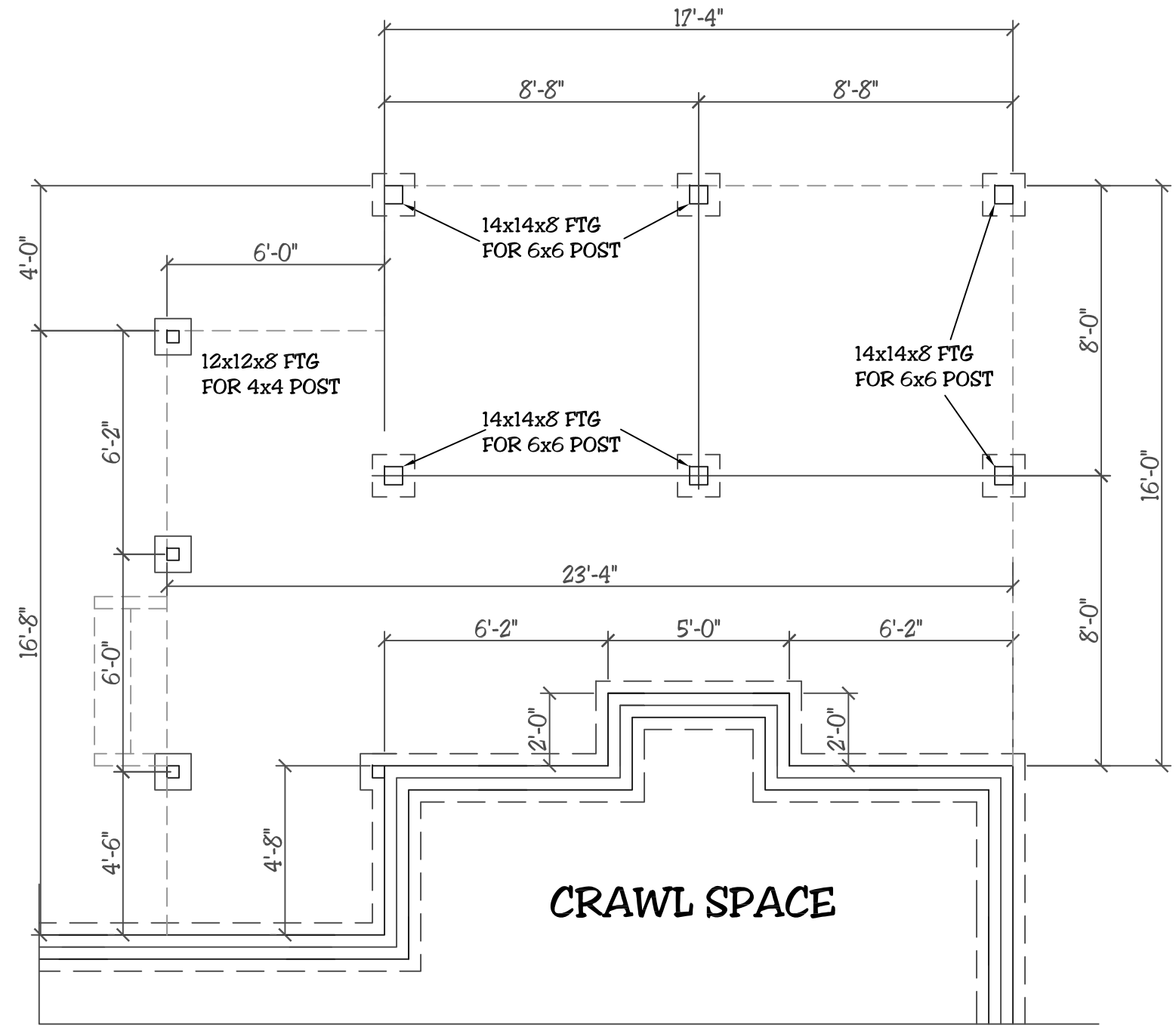
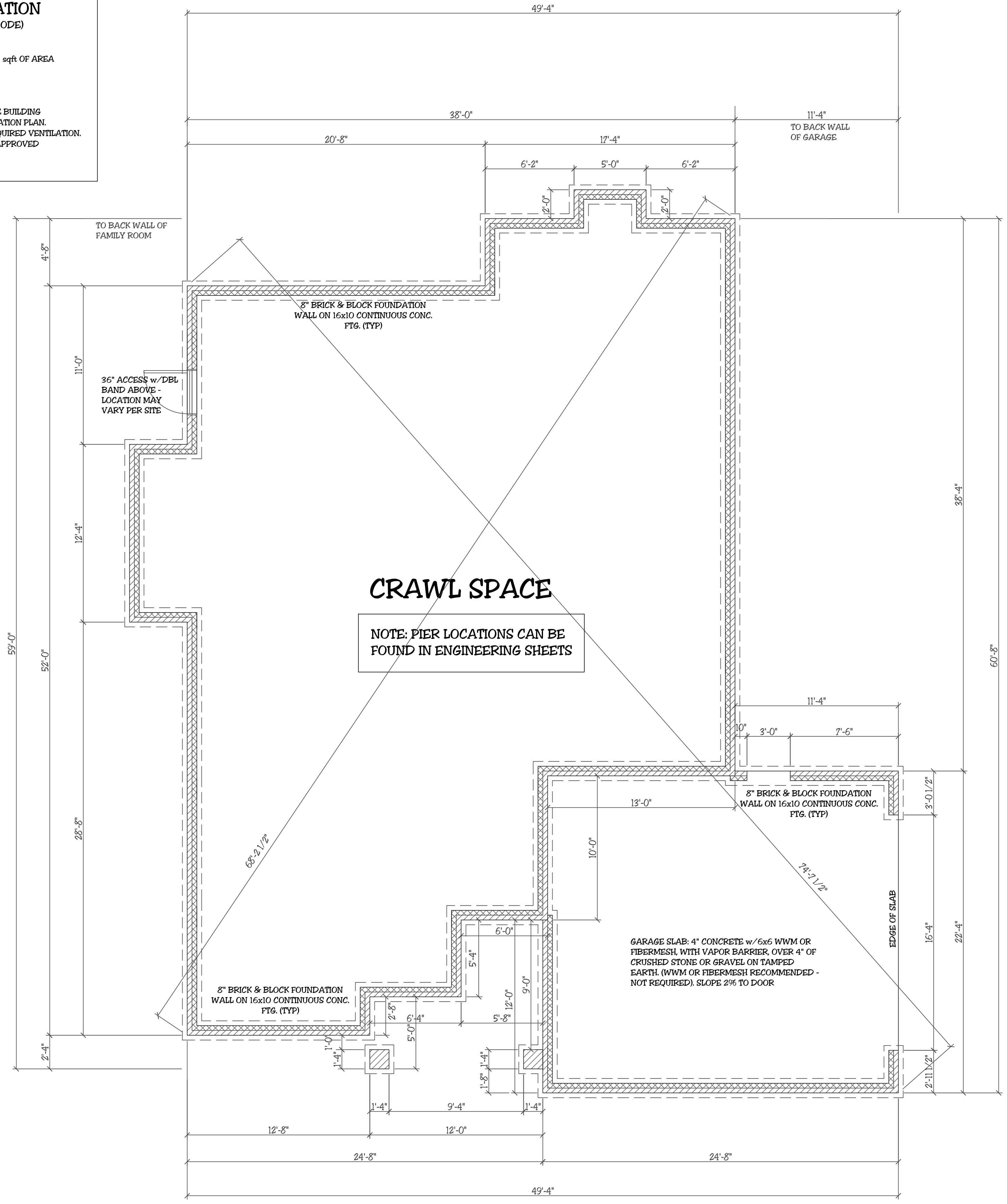
Client:	TREVEL CONSTRUCTION
Project:	PLAN #1807 (DERIVED FROM #1753)
Sheet:	2 of 5
Date:	OCTOBER 6, 2022
Sheet Name:	LEFT AND RIGHT ELEVATIONS
Drawn by:	
Revised:	
Address/Location:	414 YOUNG ROAD ANGLER, NC 27562 WAKE COUNTY

FOUNDATION VENT CALCULATION
(AS PER 2018 NORTH CAROLINA RESIDENTIAL CODE)

MINIMUM REQUIRED:
1684 sqft OF CRAWL SPACE DIVIDED BY 300 EQUALS 5.6 sqft OF AREA SUPPLIED.
(13) 8"x16" VENTS WILL BE REQUIRED

- NOTES:
- * ONE VENT MUST BE WITHIN 3' OF EACH CORNER OF THE BUILDING
 - * POSSIBLE VENT LOCATIONS INDICATED ON THE FOUNDATION PLAN.
 - * ACCESS DOORS MAY BE VENTED FOR ADDITIONAL REQUIRED VENTILATION.
 - * CRAWL SPACE MUST BE CROSS-VENTILATED AND AN APPROVED VAPOR RETARDER COVERS 100% OF THE CRAWL SPACE.

FOUNDATION MATERIALS LEGEND	
	BRICK
	CONCRETE BLOCK
	CONCRETE FOOTING
	CONCRETE

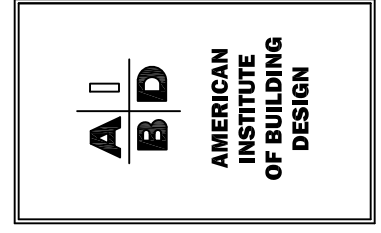


PORCH & DECK FOUNDATION PLAN
SCALE: 1/4"=1'-0"

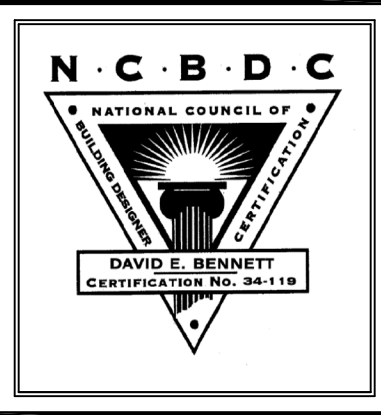
FOUNDATION/MASONRY PLAN
SCALE: 1/4"=1'-0"



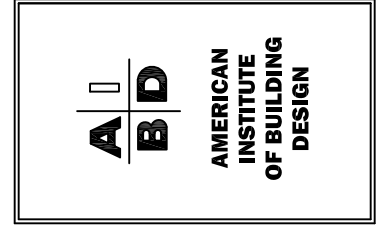
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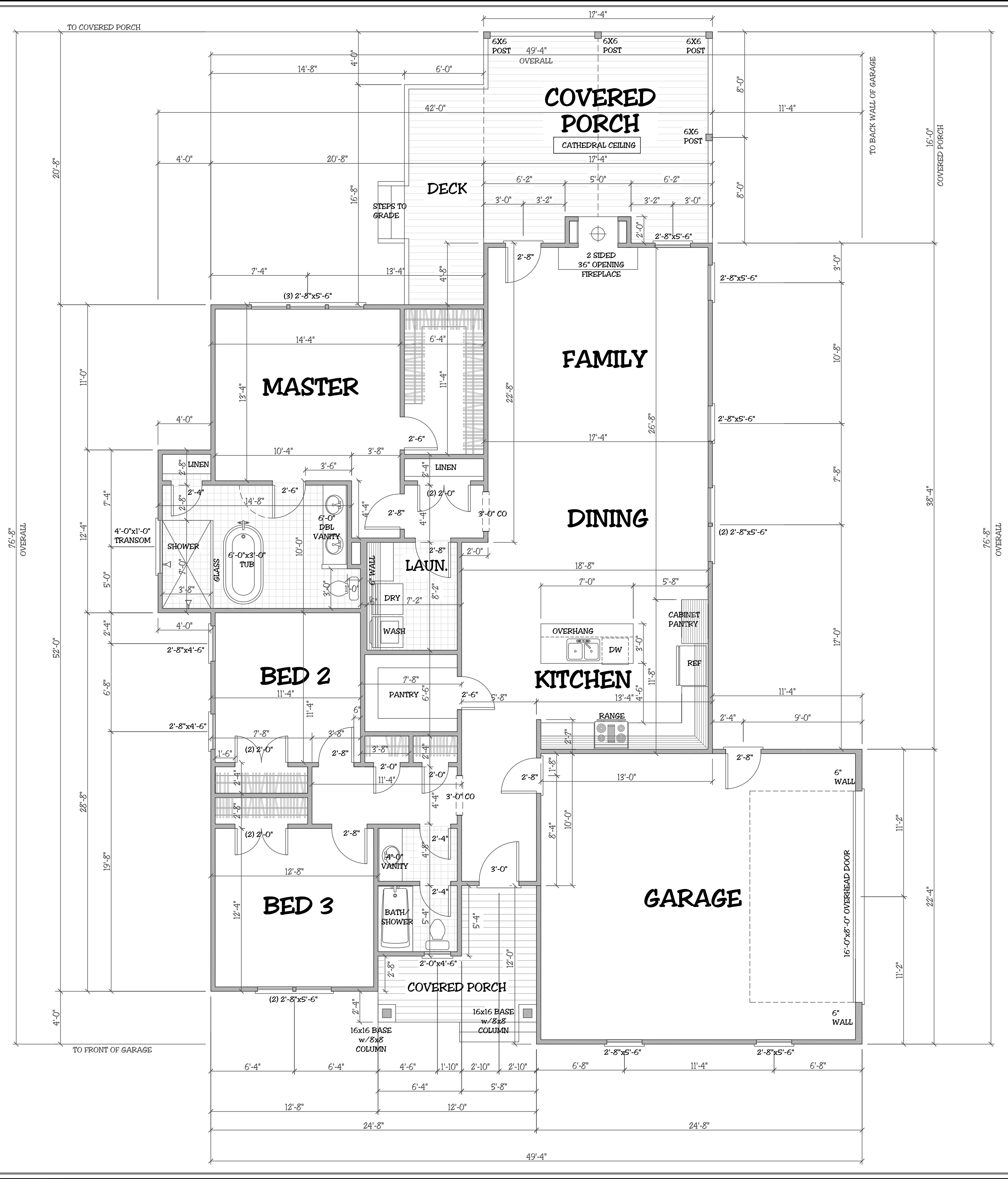
Client:	TREVEL CONSTRUCTION
Project:	PLAN #1807 (DERIVED FROM #1758)
Sheet:	3 of 5
Date:	OCTOBER 6, 2022
Sheet Name:	FOUNDATION PLAN
Drawn by:	
Revised:	
Address/Location:	414 YOUNG ROAD ANGER, NC 27562 WAKE COUNTY



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Client: TREVEL CONSTRUCTION
 Project: PLAN #1807 (DERIVED FROM #1758)
 Sheet: 4 of 5
 Date: OCTOBER 6, 2022
 Sheet Name: FLOOR PLAN



- NOTES:**
- 9'-0" CEILING ON THIS FLOOR UNLESS NOTED OTHERWISE (UNO)
 - ALL ANGLES 45° UNLESS OTHERWISE NOTED
 - ALL DOOR HEIGHTS 6'-8" UNLESS OTHERWISE NOTED
 - ALL DOOR JAMBS ARE 4" UNLESS OTHERWISE NOTED
 - SEE CHAPTER 6 OF THE 2018 NC RESIDENTIAL BUILDING CODE FOR WALL CONSTRUCTION
 - GARAGE WALLS ADJACENT TO HEATED SPACE SHALL BE COVERED WITH FIRE RATED SHEETROCK PER CODE
 - ALL HABITABLE ROOMS SHALL MEET LIGHT, VENTILATION & EGRESS CODES AS REQUIRED
 - ALL WINDOW SIZES & DETAILS TO BE VERIFIED WITH CHOSEN MANUFACTURER
 - PROVIDE SMOKE DETECTORS AS REQUIRED BY CODE

AREA CALCULATION

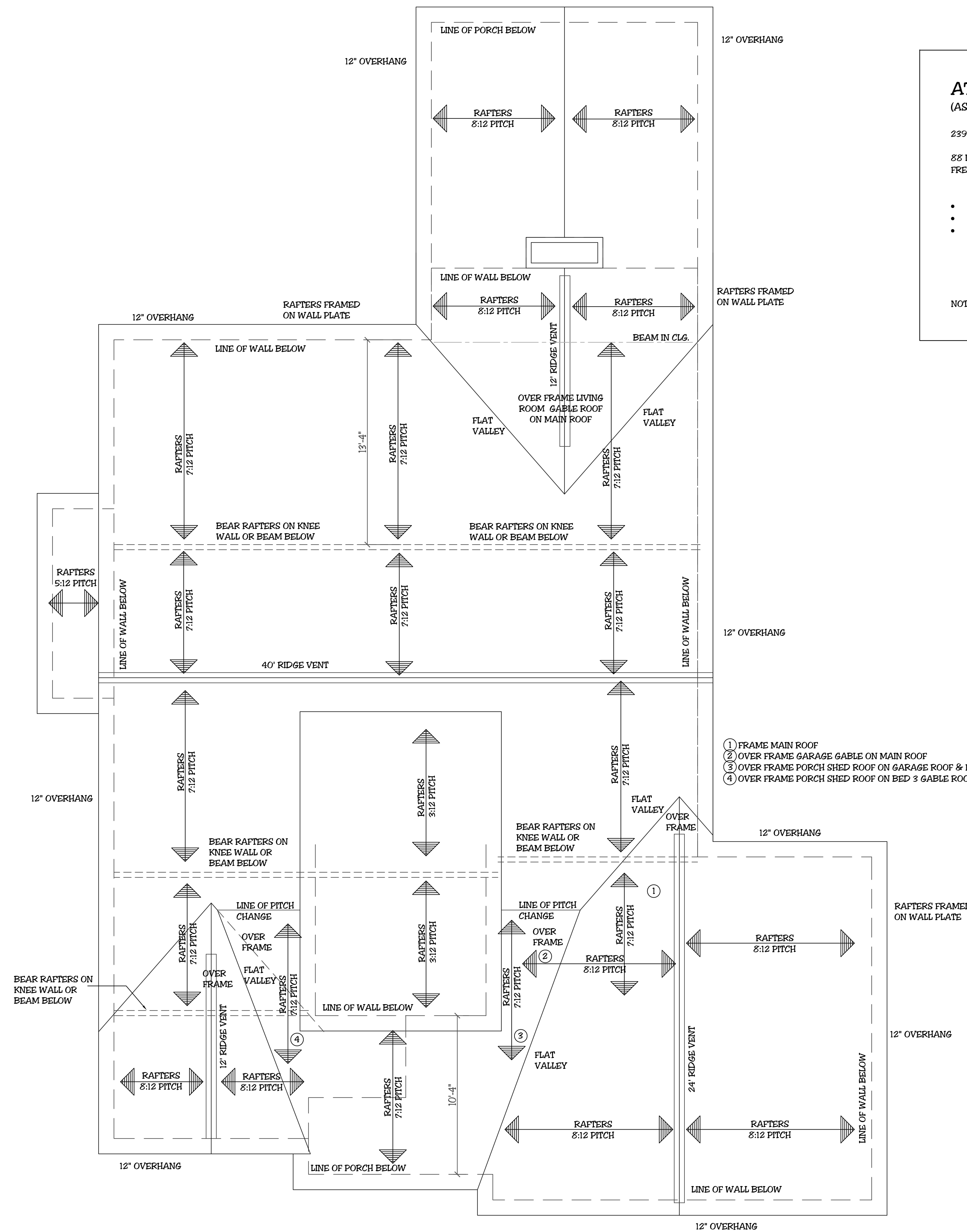
FIRST FLOOR:	1807 sqft
GARAGE:	543 sqft
COV. PORCH:	277 sqft
FRONT PORCH:	90 sqft
TOTAL NON-LIVING:	910 sqft

FLOOR PLAN

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

9'-0" CEILING ON THIS FLOOR

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ATTIC VENTILATION CALCULATION
 (AS PER 2018 NORTH CAROLINA RESIDENTIAL CODE)

2391 sqft. OF ATTIC /150 REQUIRES = 16 sqft. OF FREE VENT = 8 sqft. IN/8 sqft. OUT.

88 LINEAR FT. OF RIDGE VENT AT 18 SQ. IN./FT. DIVIDED BY 144 SQ. IN./SQ. FT. EQUALS 115Q. FT. OF FREE AREA.

- EAVES TO HAVE 2" CONTINUOUS EAVE/SOFT VENT
- IF ROOF VENTING IS INADEQUATE, SUPPLEMENT WITH POWER ROOF VENTILATORS.
- VENTILATION REQUIREMENT MAY BE REDUCED TO 1 SF/300 SF PROVIDED AT LEAST 50% AND NOT MORE THAN 80% OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE SPACE TO BE VENTILATED, ATLEAST THREE (3) FEET ABOVE THE EAVE OR CORNICE VENTS, AND WITH THE BALANCE OF THE VENTILATION TO BE PROVIDED BY THE EAVE AND CORNICE VENTS.

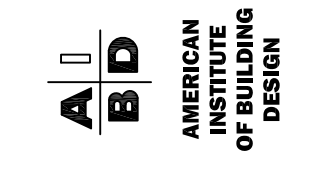
NOTE: REFER TO SECTION 806 (ROOF VENTILATION) OF THE NC STATE RESIDENTIAL CODE

- ① FRAME MAIN ROOF
- ② OVER FRAME GARAGE GABLE ON MAIN ROOF
- ③ OVER FRAME PORCH SHED ROOF ON GARAGE ROOF & MAIN ROOF
- ④ OVER FRAME PORCH SHED ROOF ON BED 3 GABLE ROOF ROOF & MAIN ROOF

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

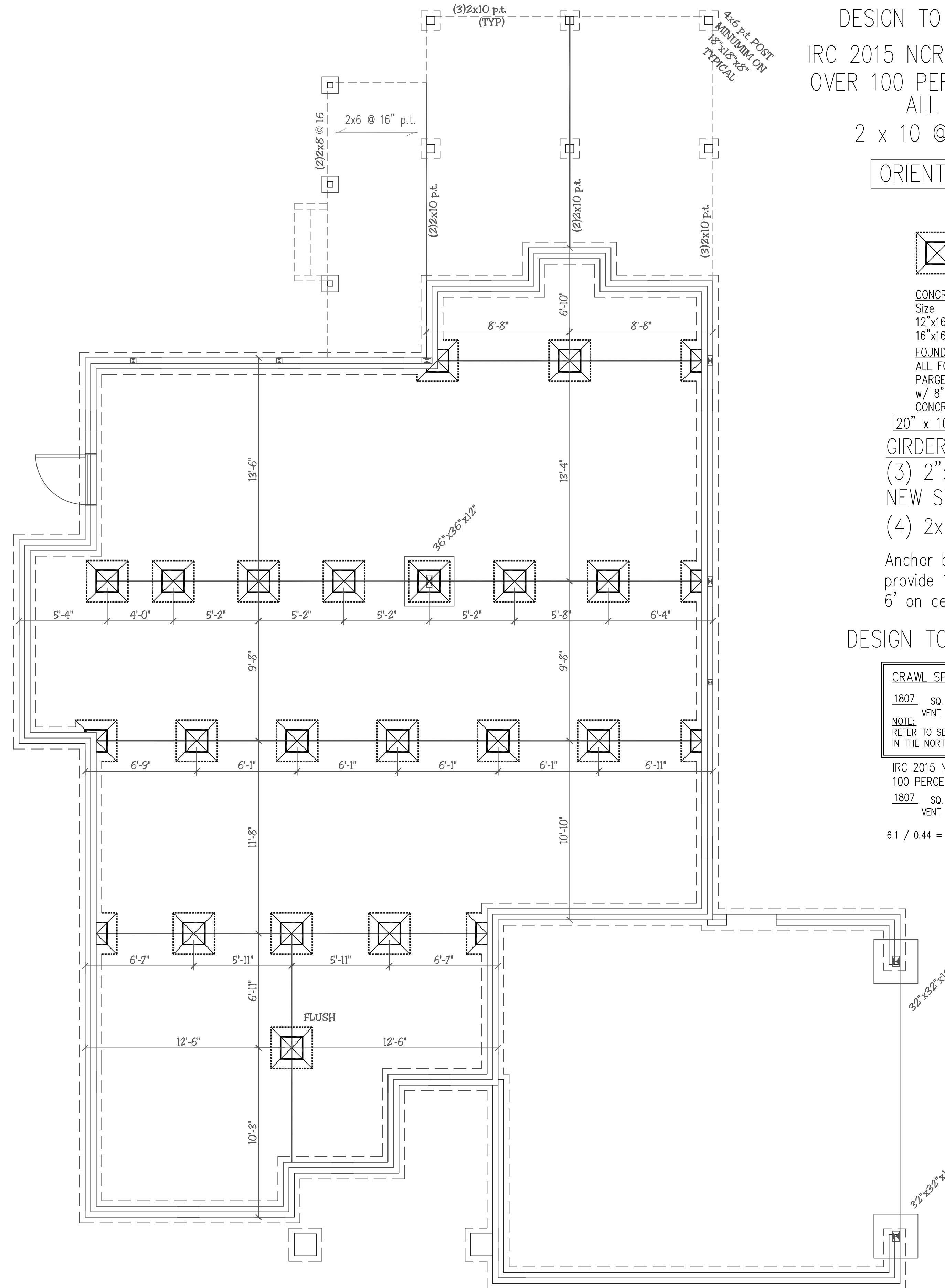


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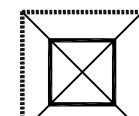


Client:	TREVEL CONSTRUCTION
Project:	PLAN #1807 (DERIVED FROM #1758)
Sheet:	5 of 5
Date:	OCTOBER 6, 2022
Sheet Name:	ROOF PLAN
Drawn by:	
Revised:	
Address/Location:	414 YOUNG ROAD ANGER, NC 27562 WAKE COUNTY

NOTE TO BUILDER:
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DESIGN TO IRC 2015 NCRC 2018
 IRC 2015 NCRC 2018 REQUIRES VAPOR BARRIER
 OVER 100 PERCENT OF CRAWL AREA
 ALL FLOOR JOISTS
 2 x 10 @ 16 # 2 SPF or Better
 ORIENTED FRONT TO REAR

 DENOTES 12"x16" -or- 16"x16" CMU PIER WITH 8" SOLID CAP ON 30"x30"x10" CONC. FTR.

CONCRETE PIER SIZES

Size	Hollow Masonry	Solid Masonry
12"x16"	Up to 48" High	Up to 9'-0" High
16"x16"	Up to 64" High	Up to 12'-0" High

FOUNDATION WALLS
 ALL FOUNDATION WALLS 8" BLOCK
 PARGED -or- 4" BRICK w/ 4" BLOCK
 w/ 8" SOLID CAP ON 18"x10" CONTINUOUS
 CONCRETE FOOTER
 20" x 10" in areas of brick veneer

GIRDERS
 (3) 2"x10" #2 SYP -or-
 NEW SFGPA SYP Values Used
 (4) 2x 10 # 2 SPF or Better

Anchor bolts required ALL foundation walls provide 1/2" x 10" with 7 inch embedment 6' on center and 12 inches from ends / corners

DESIGN TO IRC 2015 NCRC 2018

CRAWL SPACE VENTILATION

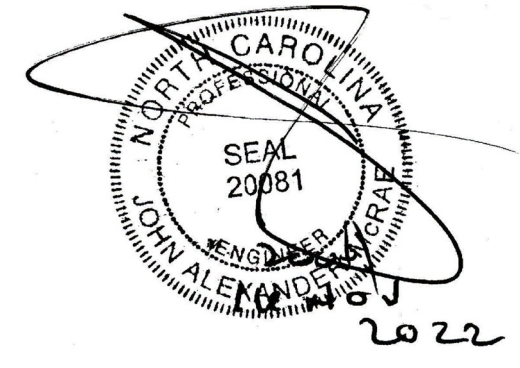
1807 SQ. FT. OF CRAWL / 150 = 12 SQ. FT. OF FREE VENT REQUIRED

NOTE: REFER TO SECTION 409.1 (CRAWL SPACE VENTILATION) IN THE NORTH CAROLINA STATE BUILDING CODE (IRC)

IRC 2015 NCRC 2018 REQUIRES VAPOR BARRIER OVER 100 PERCENT OF CRAWL AREA REDUCING VENTING

1807 SQ. FT. OF CRAWL / 300 = 6 SQ. FT. OF FREE VENT REQUIRED

6.1 / 0.44 = 14 - 8 x 16 vents (64 SQ IN FREE)



Structural Design By:
 John Alexander McRae, PE, Inc
 218 Coley Farm Road
 Fuquay-Varina North Carolina 27526
 jampe@nc.rr.com (919) 210-5749
 P O Box 1466 Apex, NC 27502
 Report deficiencies immediately
 2210-20
 (NC C-2298)

date:
 12 October, 2022

drawn by:
 J A McRae

John Alexander McRae, P.E., Inc.
 Residential and Commercial Engineering
 (NC C-2298)
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 voice 919.662.5531 fax 919.662.8599

Trevel Construction
 414 Young Rd Angier NC

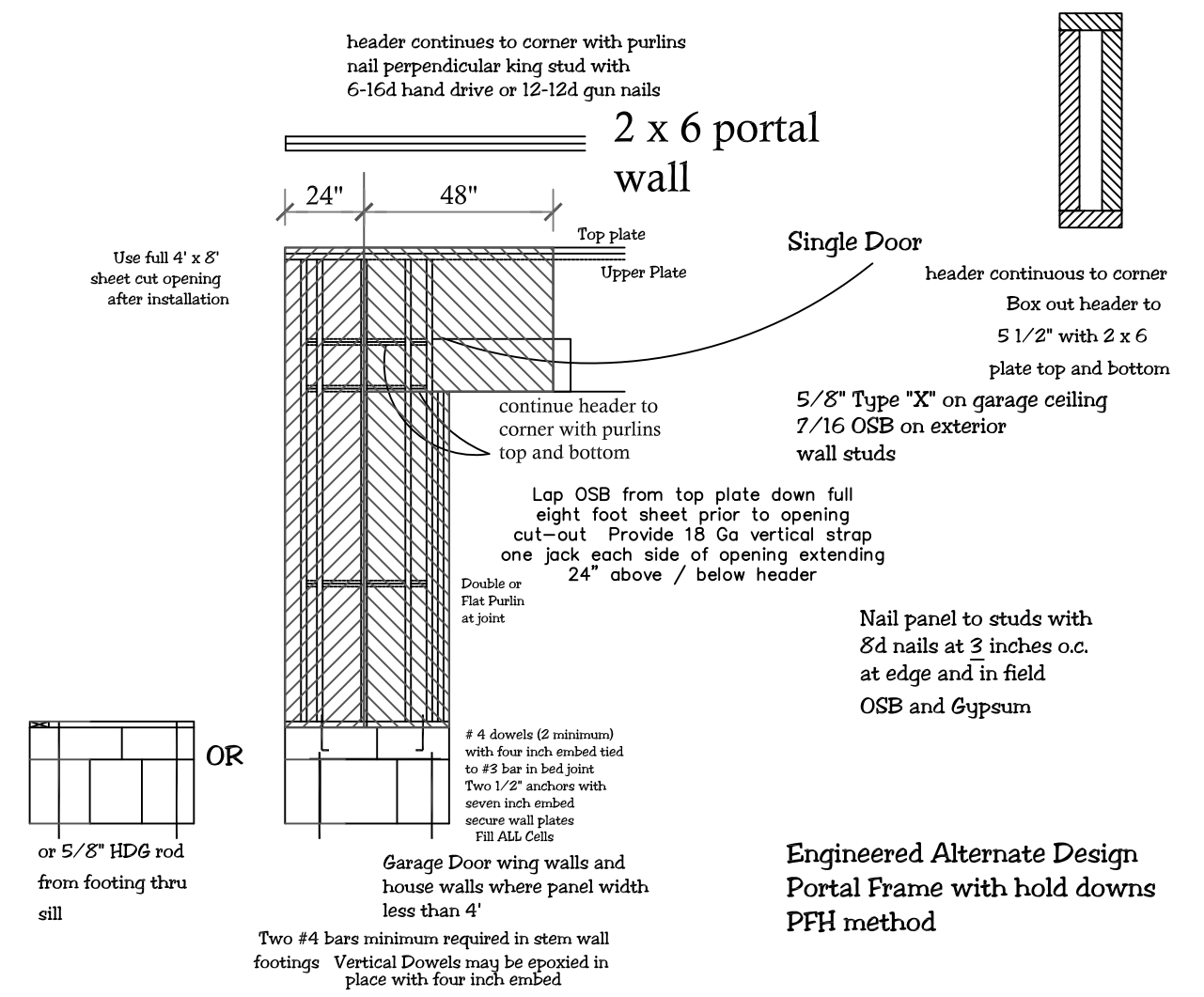
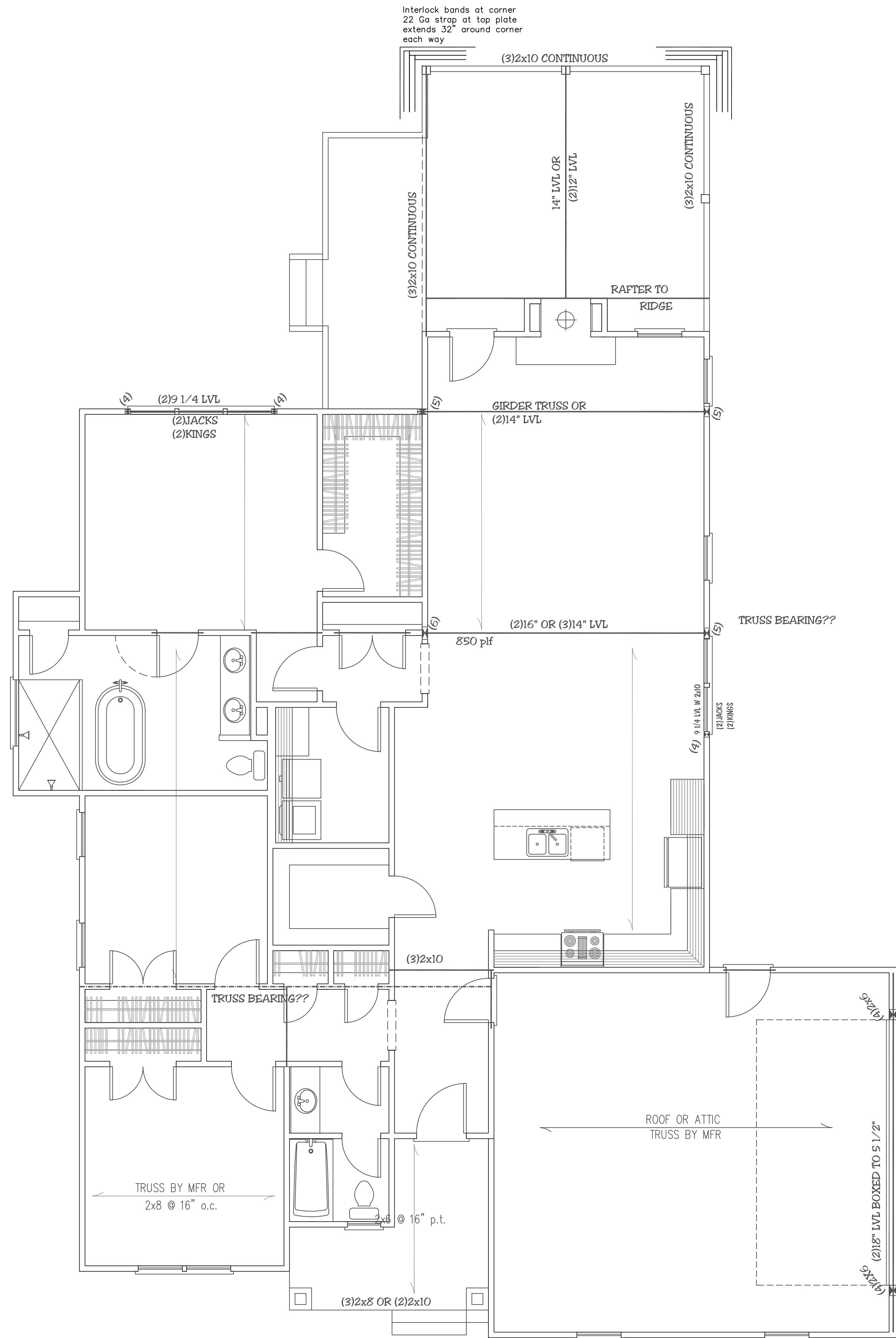
sheet no.
S1 of **S3**

plan no.
 2210-20

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ALL FLOOR JOISTS 2 X 10 @16
#2 SPF OR BETTER
Or 11 7/8 I Joists at 16" or 19.2" By MFR
ALL CEILING JOIST 2 X 8 @ 16 Up To 15'
2 X 6 @ 16 Up To 11'
ALL EXTERIOR AND BEARING HEADER (2) 2"x10" u.n.o.
ALL LVL BEAMS/HEADERS 3 STUD COLUMNS EACH END u.n.o.
ALL FRAMING #2 SPF OR BETTER u.n.o.
ORIENTED FRONT TO REAR

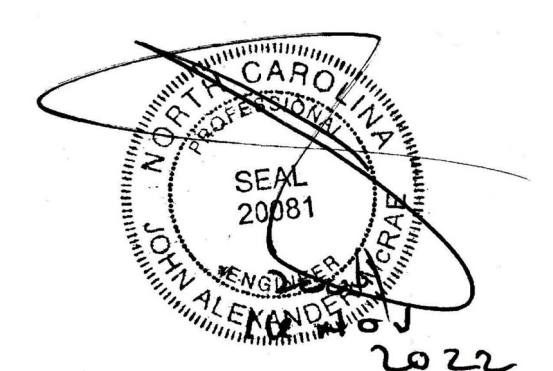
All stories to be sheathed with 7/16" OSB nailed @ six inches on center edges and ends with additional nailing of "braced" panels as noted below:

ALL EXTERIOR BEARING AND NON LOAD BEARING WALLS
Four Foot Panel at Corners and Maximum 12' o.c.

Wall Bracing 7/16" OSB Lap OSB from top plate down full eight foot sheet prior to opening cut-out. Nail with 8d nails at THREE inches on center edges/ends six inches in field. Purlins at panel

Minimum Panel Width 48" u.n.o.

LIMITED LENGTH OF WING WALLS WILL REQUIRE 7/16" OSB SHEATHING BOTH SIDES OF WALL LAP OSB FROM TOP PLATE DOWN FULL EIGHT FOOT SHEET PRIOR TO OPENING CUT-OUT



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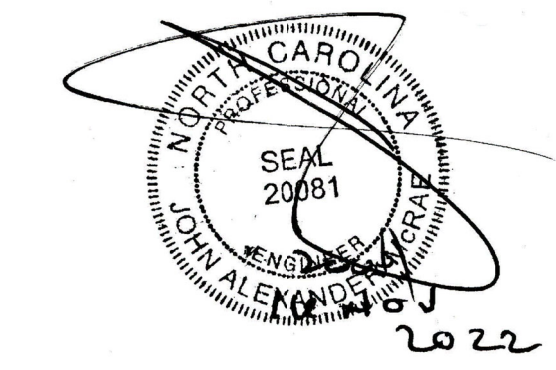
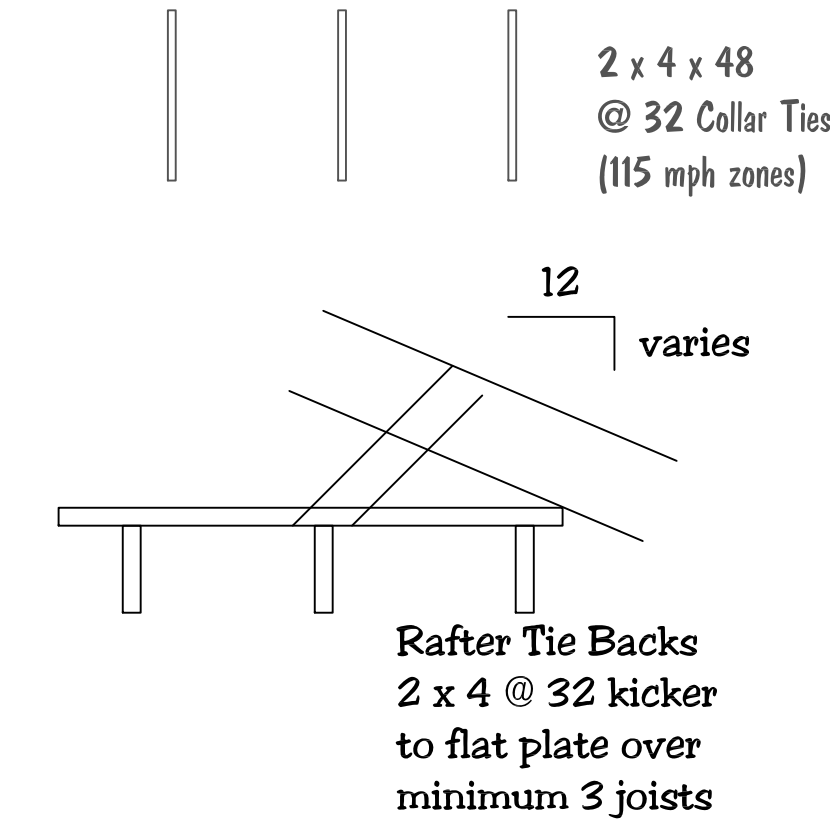
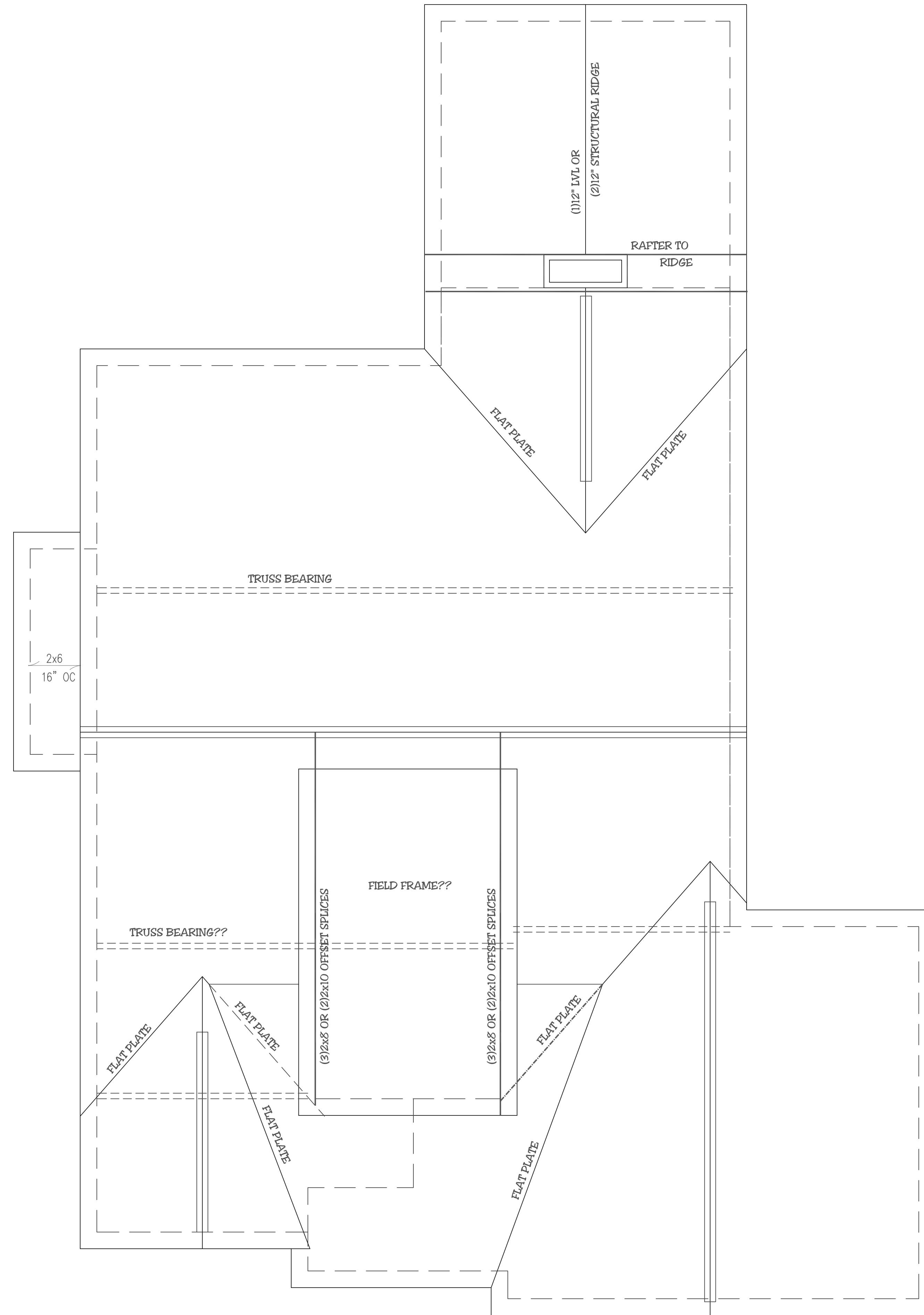
sheet no. S2 of S3

plan no. 2210-20

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MEAN ROOF HEIGHT FROM AVG GRADE

11'-6" EAVE HT. + 25'-4" OVERALL HT. = 36'-10" TOTAL
 36'-10" TOTAL / 2 = 18'-5" MEAN ROOF HT.

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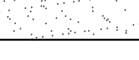

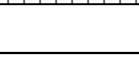
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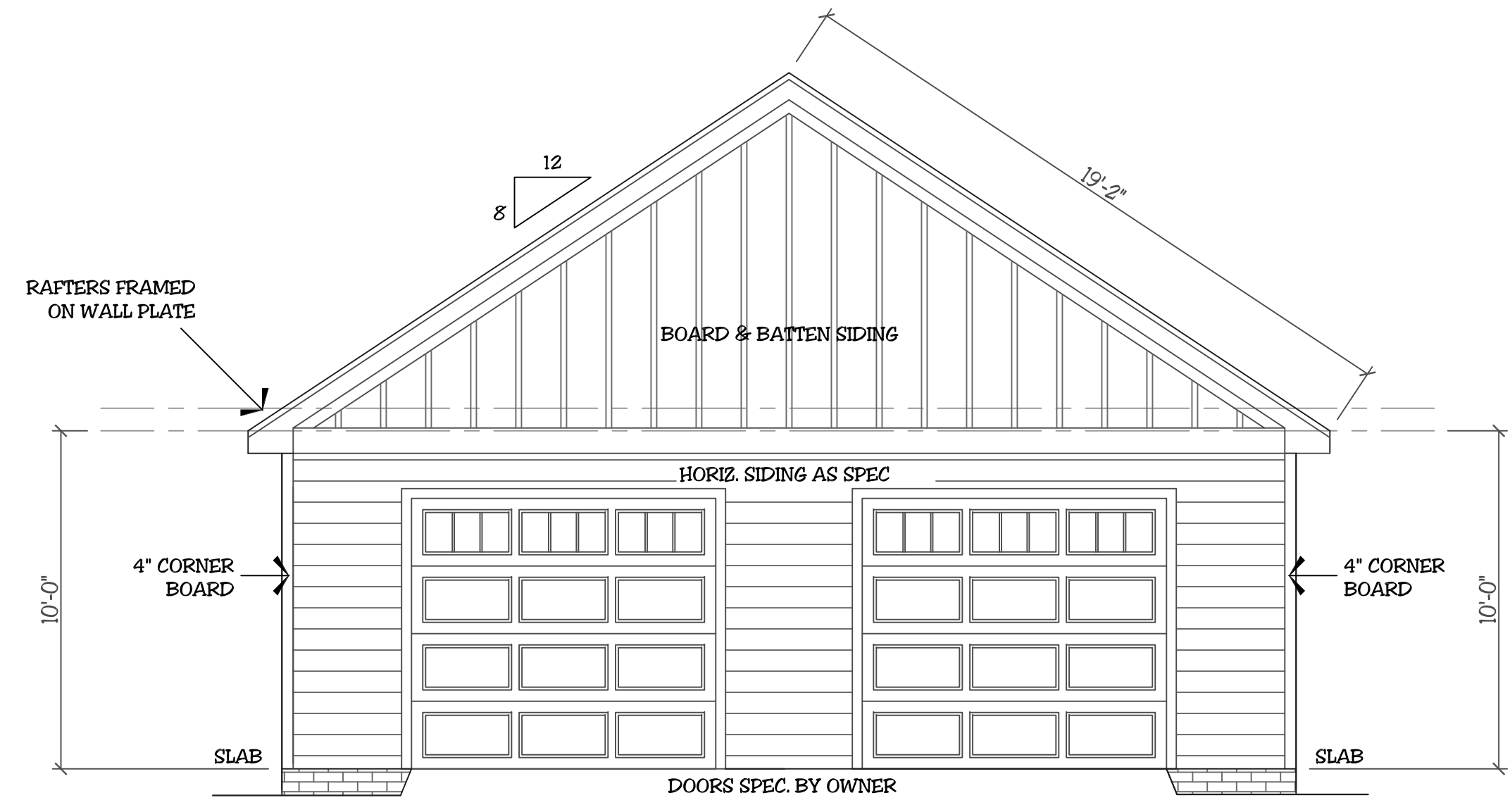
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 ATTIC W/STAIRS (DEVELOPABLE) 40 PSF

MIN. VALUES FOR ENERGY COMPLIANCE

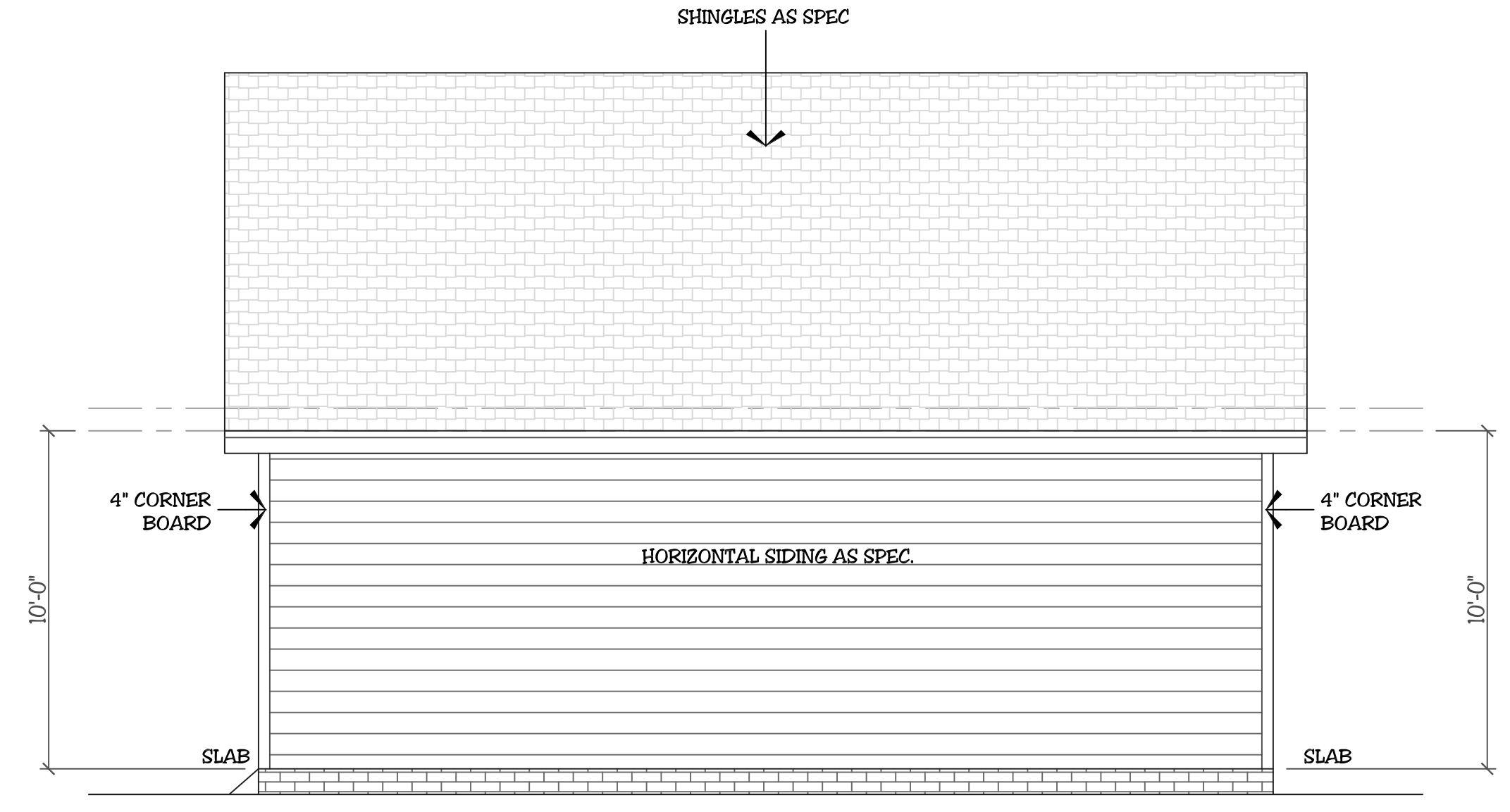
CEILING: R-38
 WALLS: R-15
 FLOORS: R-19
 BASEMENT WALLS: R-7
 CRAWL SPACE WALLS: R-8
 SLAB PERIMETER @ 24" DEEP: R-4
 MAX. GLAZING U-FACTOR = 0.35
 ZONE 4

EXTERIOR MATERIALS

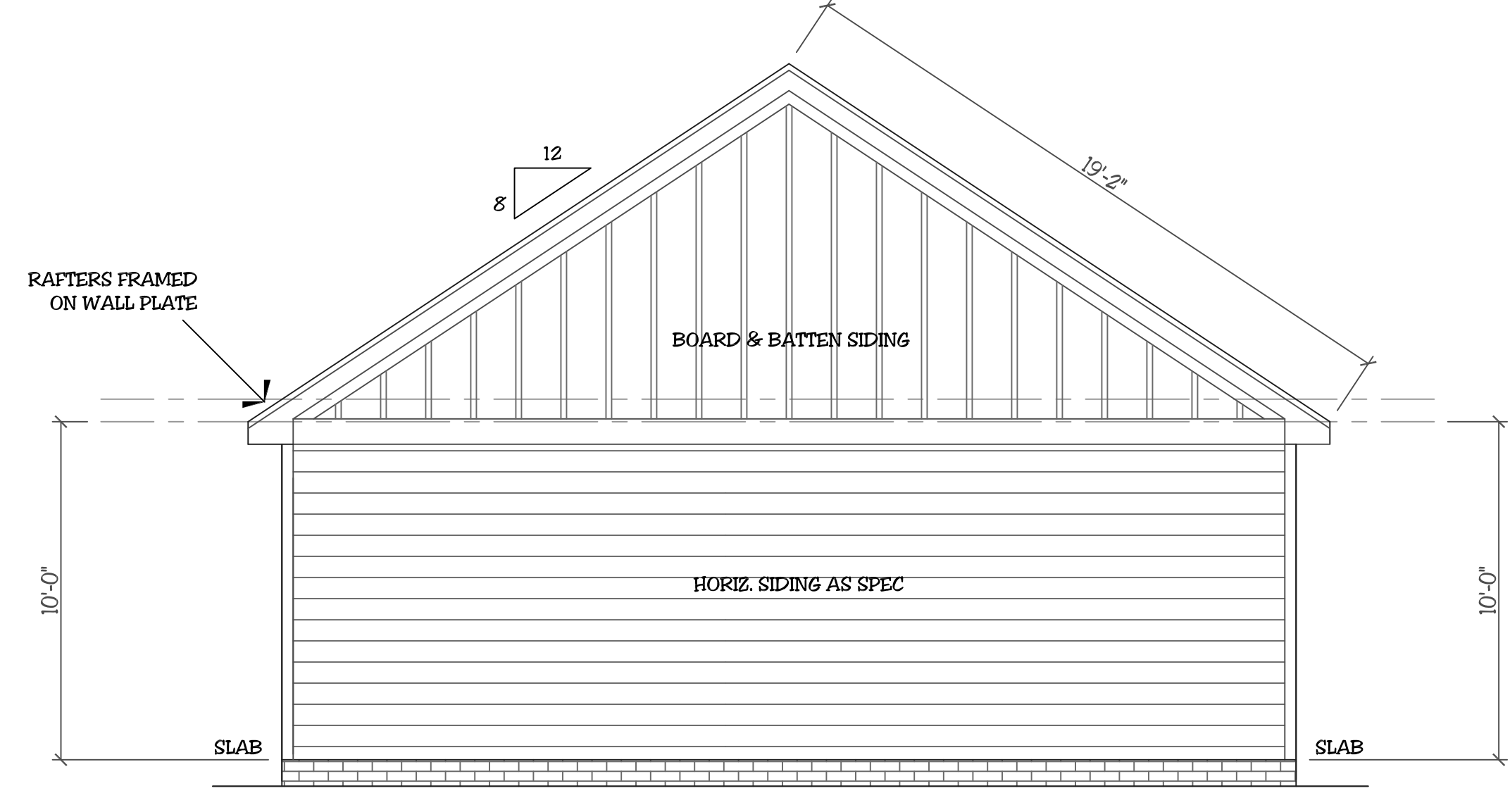
-  ROOF SHINGLES
-  METAL ROOF
-  HORIZONTAL SIDING
-  BOARD & BATTEN SIDING
-  VERTICAL SIDING
-  SHAKE SIDING
-  BRICK
-  STONE
-  STUCCO or PARGING
-  SCREEN
-  BRICK ROWLOCK or SOLDIER



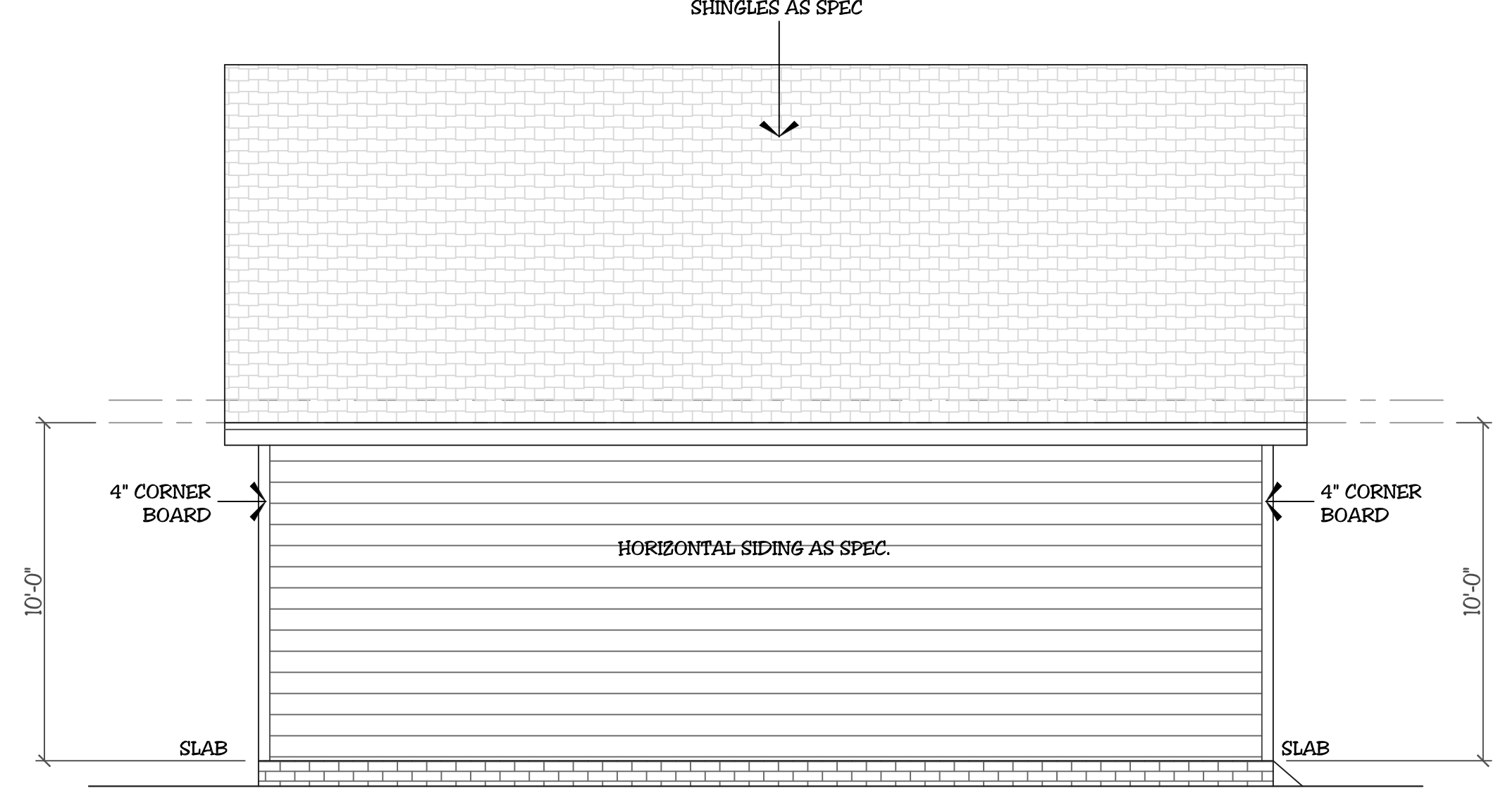
FRONT ELEVATION
 SCALE: 1/4"=1'-0"



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



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



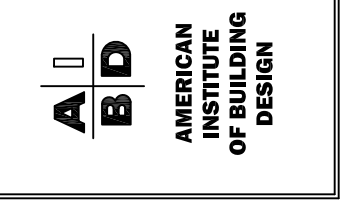
LEFT ELEVATION
 SCALE: 1/4"=1'-0"

INDEX TO SHEETS

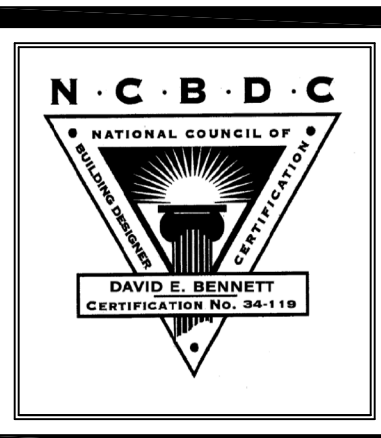
SHEET	NAME
1	ELEVATIONS
2	FOUNDATION AND FLOOR PLANS
3	ROOF PLANS



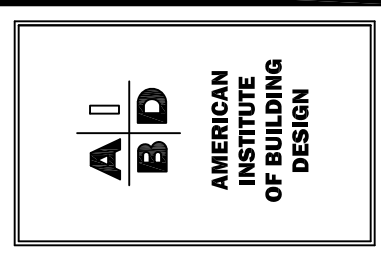
Triangle Residential Designs Inc
 405 S. Lakeside Dr, Raleigh, NC 27606 Tel: (919) 852-3500 www.trd-chn.com



Client:	TYREVEL CONSTRUCTION
Project:	GARAGE FOR PLAN #1807
Address/Location:	414 YOUNG ROAD ANGIER, NC 27562 WAKE COUNTY
Sheet:	1 of 3
Date:	OCTOBER 6, 2022
Sheet Name:	ELEVATIONS
Drawn by:	
Revised:	



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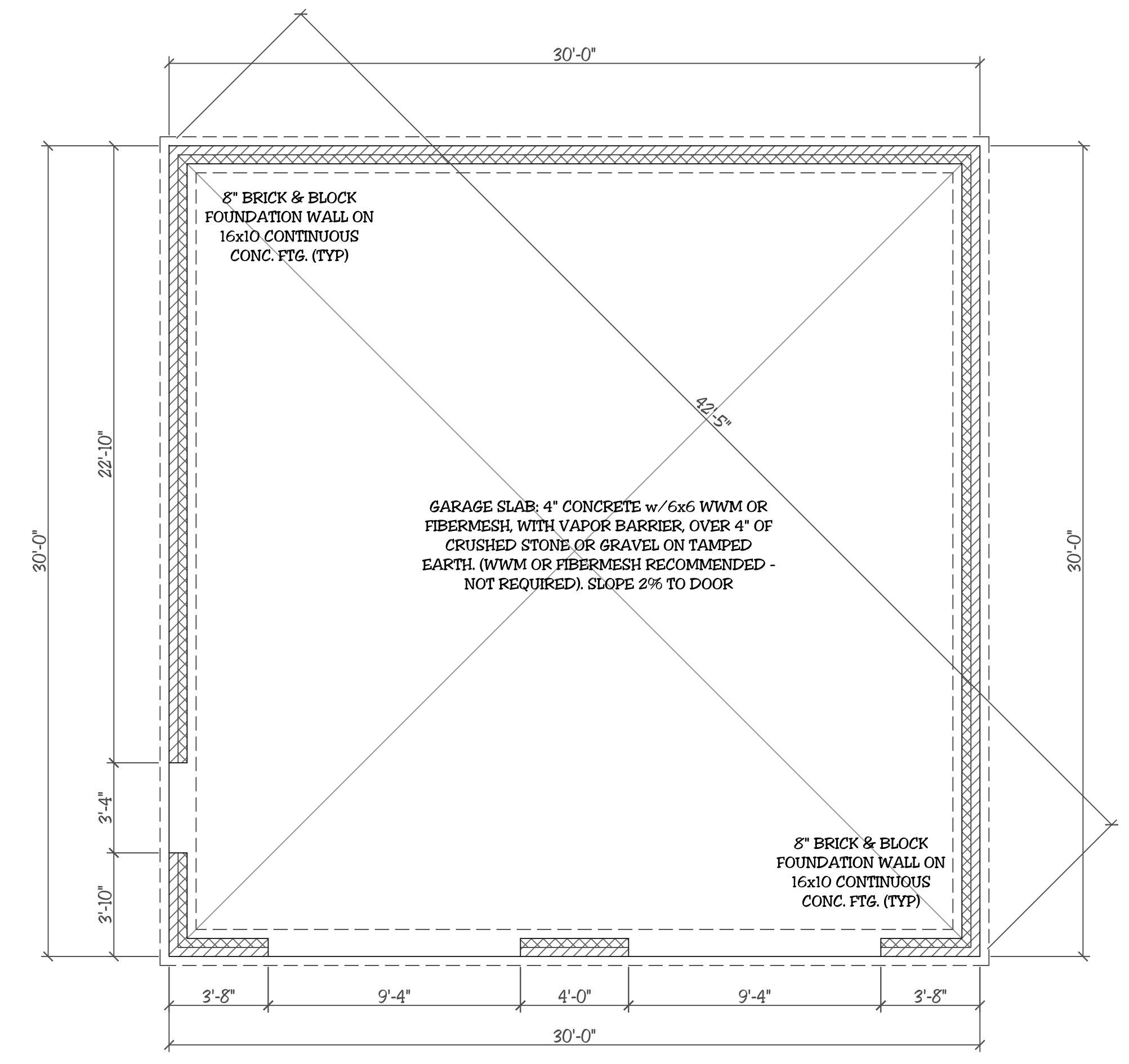


GARAGE DOOR WALL CONSTRUCTION

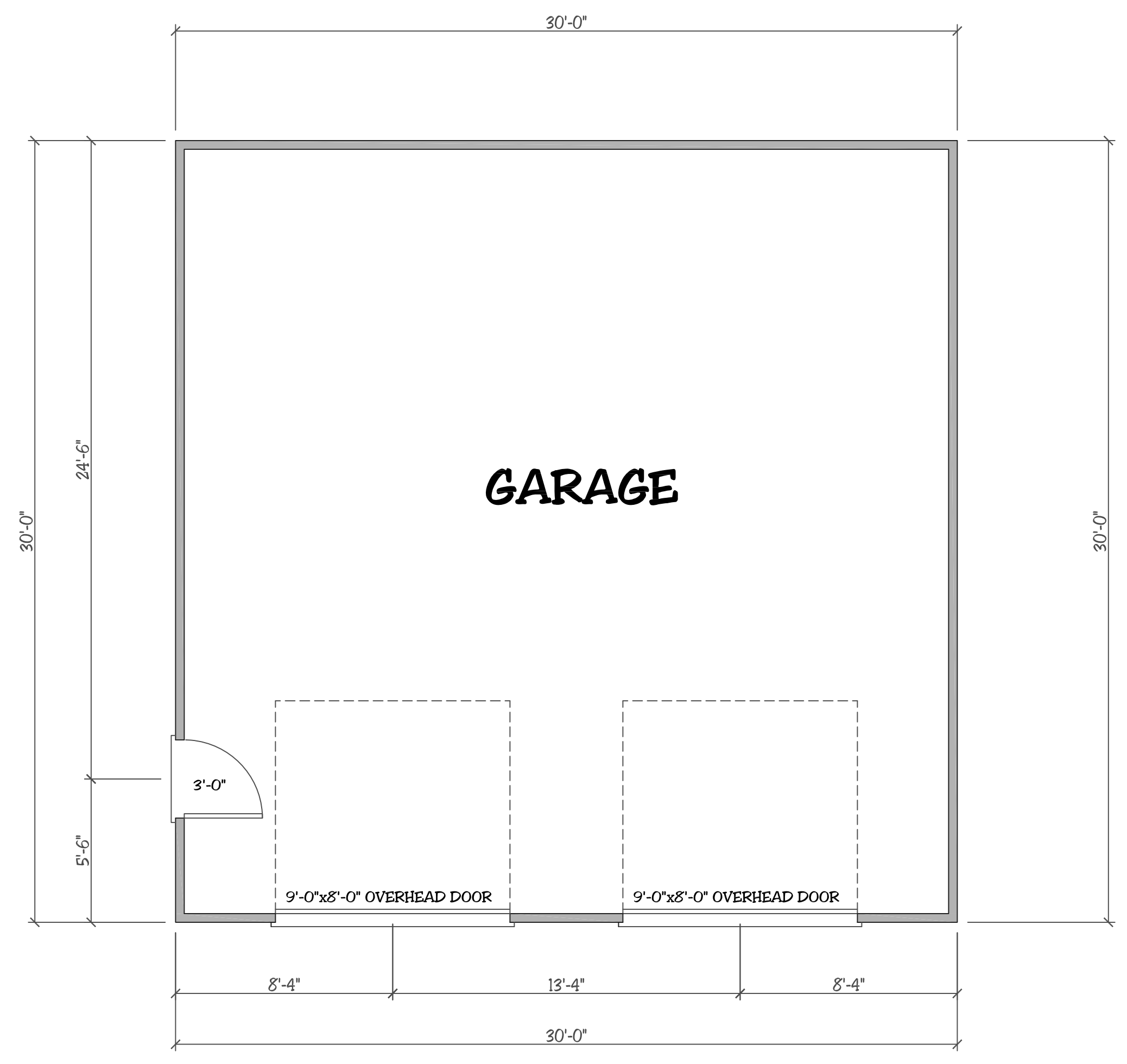
ONLY FOR GARAGE DOOR WALLS THAT DO NOT MEET BRACING REQUIREMENTS OF THE NC 2002 RESIDENTIAL BUILDING CODE:

1) PLACE (2)-1/2" DIAM. ANCHOR BOLTS AT OUTSIDE QUARTER OF THESE PANELS. EXTEND #4 STEEL REINFORCING VERTICALLY, LAPPING THE ANCHOR BOLT A MINIMUM OF 6" AND EXTENDING TO THE FOOTING WITH A 4" MINIMUM HORIZONTAL LEG INTO THE FOOTING. THE FOOTING MUST BE REINFORCED WITH (1) #4 BAR TOP AND BOTTOM IN THIS AREA. SECURE WALL TO ANCHOR BOLTS WITH SIMPSON 'STRONG TIE' LTT131, HTT16, HTT22, MTT22B OR TENSION TIE WITH 1800# MINIMUM CAPACITY.

2) FULLY FACE GARAGE WALL WITH 7/16" OSB OR 1/2" CDX, NAILED PER TABLE R602.3(1) AND BLOCKED AT ALL WOOD STRUCTURAL PANEL SHEATHING EDGES.



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



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

10'-0" CEILING ON THIS FLOOR

AREA CALCULATION
GARAGE: 900 SQFT

FOUNDATION MATERIALS LEGEND	
	BRICK
	CONCRETE BLOCK
	CONCRETE FOOTING
	CONCRETE

- NOTES:**
- 10'-0" CEILING ON THIS FLOOR UNLESS NOTED OTHERWISE (UNO)
 - ALL DOOR HEIGHTS 6'-8" UNLESS OTHERWISE NOTED
 - ALL DOOR JAMBS ARE 4" UNLESS OTHERWISE NOTED
 - SEE CHAPTER 6 OF THE 2018 NC RESIDENTIAL BUILDING CODE FOR WALL CONSTRUCTION
 - GARAGE WALLS ADJACENT TO HEATED SPACE SHALL BE COVERED WITH FIRE RATED SHEETROCK PER CODE
 - ALL HABITABLE ROOMS SHALL MEET LIGHT, VENTILATION & EGRESS CODES AS REQUIRED
 - ALL WINDOW SIZES & DETAILS TO BE VERIFIED WITH CHOSEN MANUFACTURER
 - PROVIDE SMOKE DETECTORS AS REQUIRED BY CODE

Client:	TREVEL CONSTRUCTION
Project:	GARAGE FOR PLAN #1807
Sheet:	2 of 3
Date:	OCTOBER 6, 2022
Sheet Name:	FOUNDATION AND FLOOR PLANS
Drawn by:	
Revised:	
Address/Location:	414 YOUNG ROAD ANGER, NC 27562 WAKE COUNTY

ATTIC VENTILATION CALCULATION
(AS PER 2018 NORTH CAROLINA RESIDENTIAL CODE)

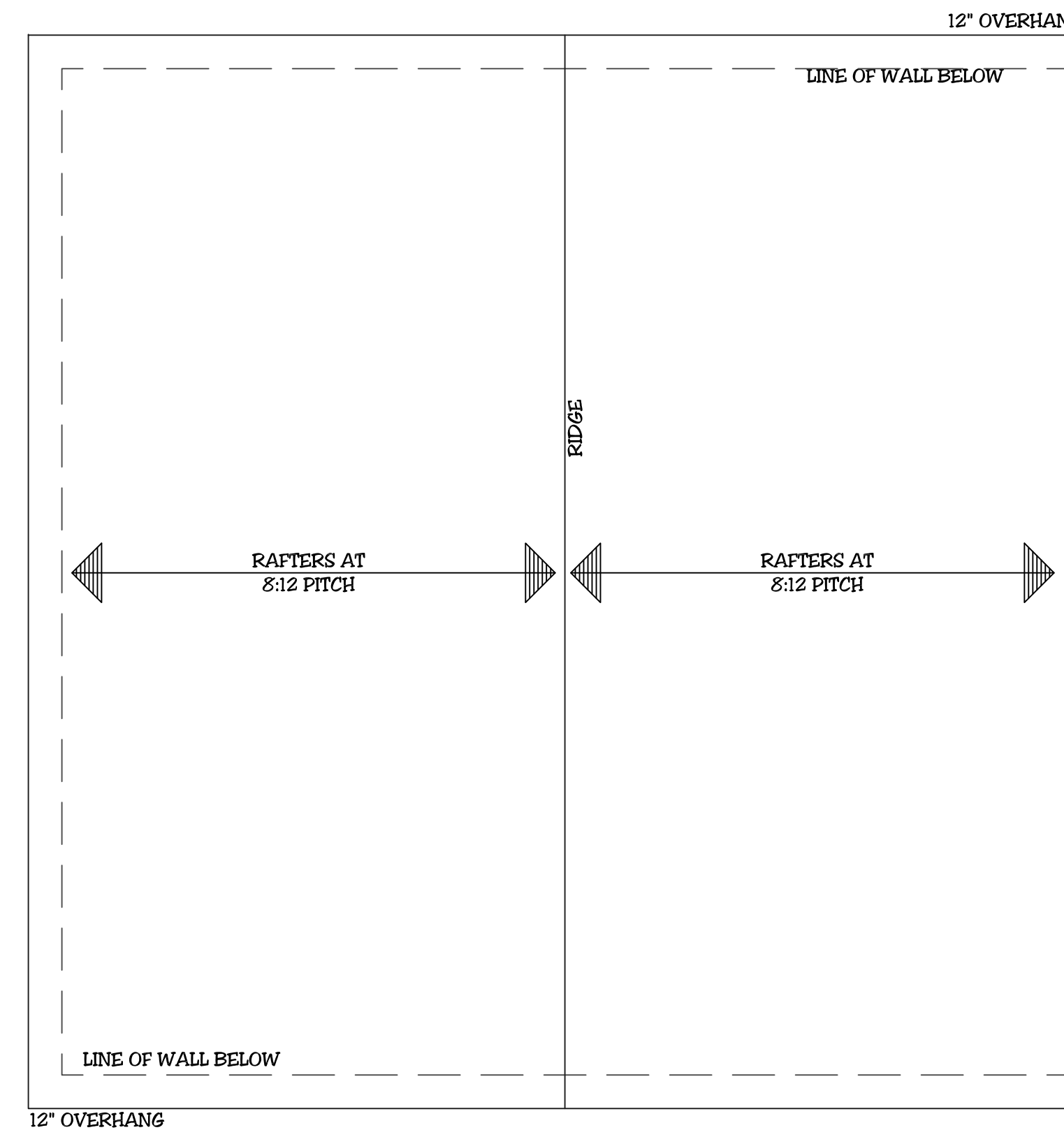
900 sqft. OF ATTIC/150 REQUIRES = 6 sqft. OF FREE VENT = 3 sqft. IN/3 sqft. OUT.

- EAVES TO HAVE 2' CONTINUOUS EAVE/SOFFIT VENT
- IF ROOF VENTING IS INADEQUATE, SUPPLEMENT WITH POWER ROOF VENTILATORS.
- VENTILATION REQUIREMENT MAY BE REDUCED TO 1 SF/300 SF PROVIDED AT LEAST 50% AND NOT MORE THAN 80% OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE SPACE TO BE VENTILATED, AT LEAST THREE (3) FEET ABOVE THE EAVE OR CORNICE VENTS, AND WITH THE BALANCE OF THE VENTILATION TO BE PROVIDED BY THE EAVE AND CORNICE VENTS.

NOTE: REFER TO SECTION 806 (ROOF VENTILATION) OF THE NC STATE RESIDENTIAL CODE

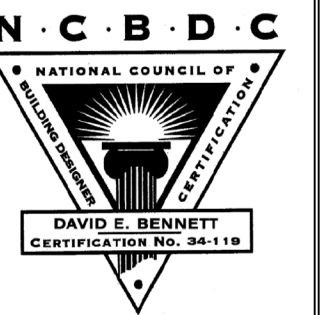
ROOF NOTES

- 1) RAFTER SIZES ARE SHOWN AT MINIMUM STRUCTURAL REQUIREMENTS. SIZES MAY BE INCREASED TO PROVIDE MINIMUM INSULATION VALUES OR AIR PASSAGES.
- 2) RAFTER SPANS ARE CALCULATED ON #2 GRADE SPRUCE PINE FIR.
- 3) RAFTERS SHALL BE FRAMED TO RIDGE BOARD OR TO EACH OTHER WITH A GUSSET PLATE.
- 4) RIDGE BOARDS SHALL BE AT LEAST 1" NOMINAL THICKNESS AND NOT LESS IN DEPTH THAN THE CUT END OF THE RAFTER.
- 5) OPPOSING RAFTERS AT THE RIDGE MUST ALIGN WITHIN THE THICKNESS OF THE RIDGE.
- 6) IF CLG JSTS ARE NOT PARALLEL TO RAFTERS, SUBFLOORING OR METAL TIES SHALL BE ATTACHED TO RAFTERS ENDS TO SUPPLY A CONTINUOUS TIE ACROSS THE BUILDING OR RAFTERS SHALL BE ATTACHED TO 1"x 4" CROSSTIES.
- 7) ATTACH 1"x6" OR 2"x4" COLLAR TIES IN THE UPPER THIRD OF THE ROOF TO EVERY THIRD PAIR OF RAFTERS, NOT TO EXCEED 4'-0" O.C.
- 8) ALL DORMERS SHALL HAVE DOUBLE HEADERS AND TRIMMERS.
- 9) TRUSS ROOF DRAWINGS SHALL BE PREPARED BY A REGISTERED DESIGN PROFESSIONAL.
- 10) SHINGLED ROOFS WITH PITCHES 2/12 TO 4/12 SHALL HAVE DOUBLE UNDERLAYMENT.
- 11) A CRICKET OR SADDLE IS REQUIRED FOR CHIMNEYS OVER 30" WIDE. THE COVERING SHALL BE METAL OR THE SAME MATERIAL AS THE ROOF COVERING.

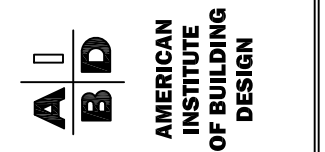


ROOF PLAN
SCALE: 1/4"=1'-0"

10'-0" CEILING ON THIS FLOOR



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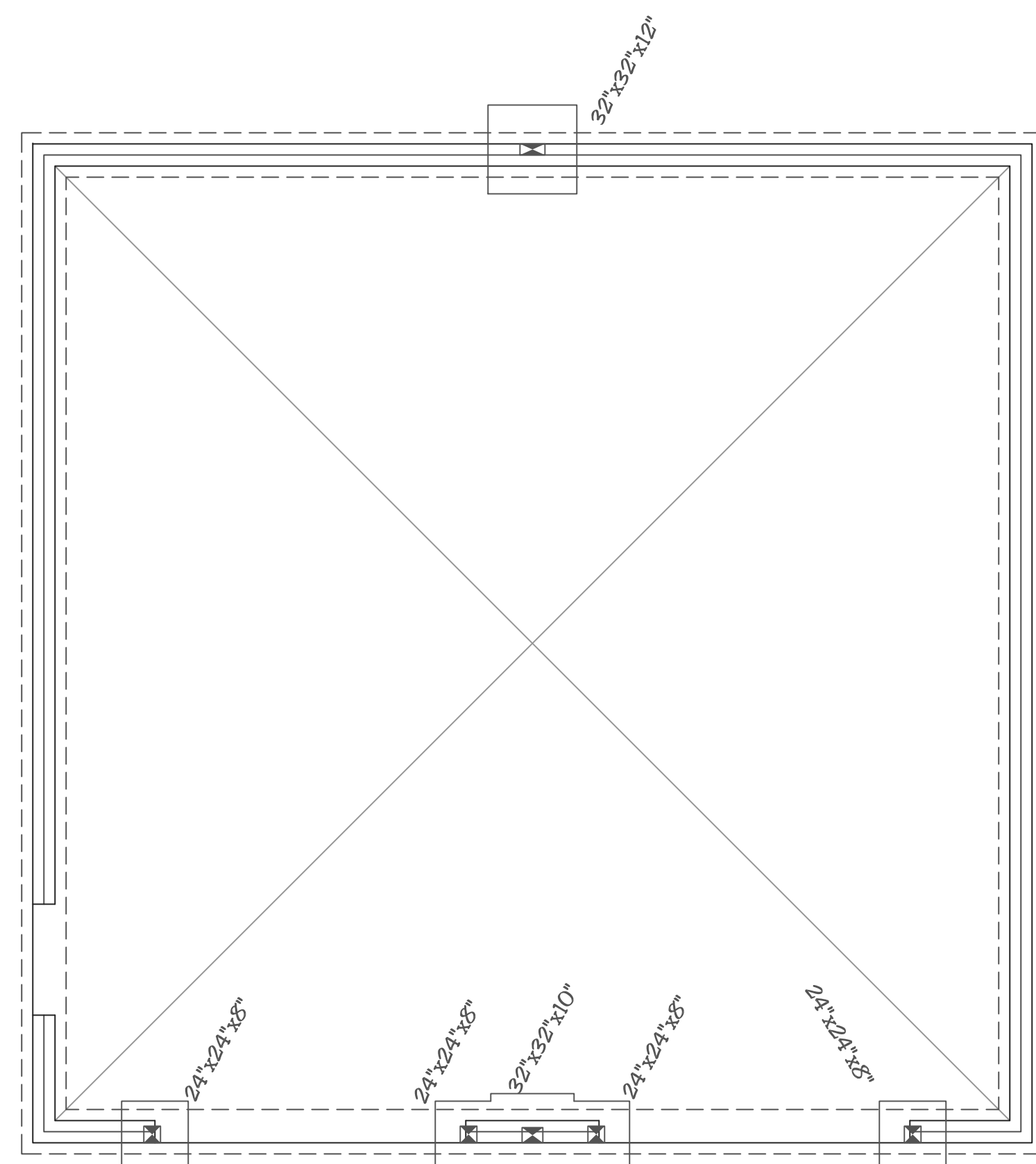


Drawn by: _____
Revised: _____

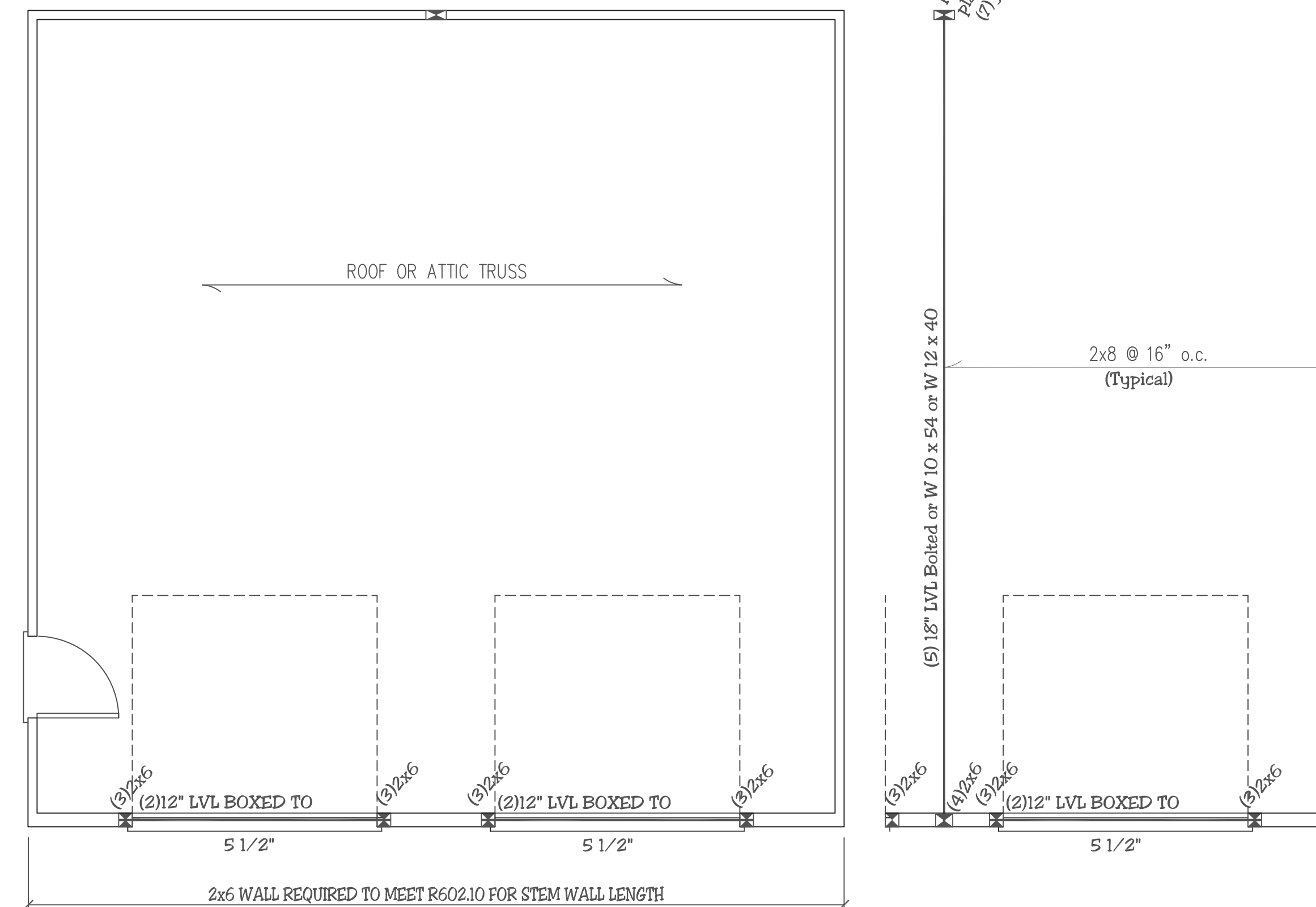
Address/Location:
414 YOUNG ROAD
ANGIER, NC 27562
WAKE COUNTY

Client: TREVEL CONSTRUCTION
Project: GARAGE FOR PLAN #1807
Sheet: 3 of 3
Date: OCTOBER 6, 2022
Sheet Name: ROOF PLAN

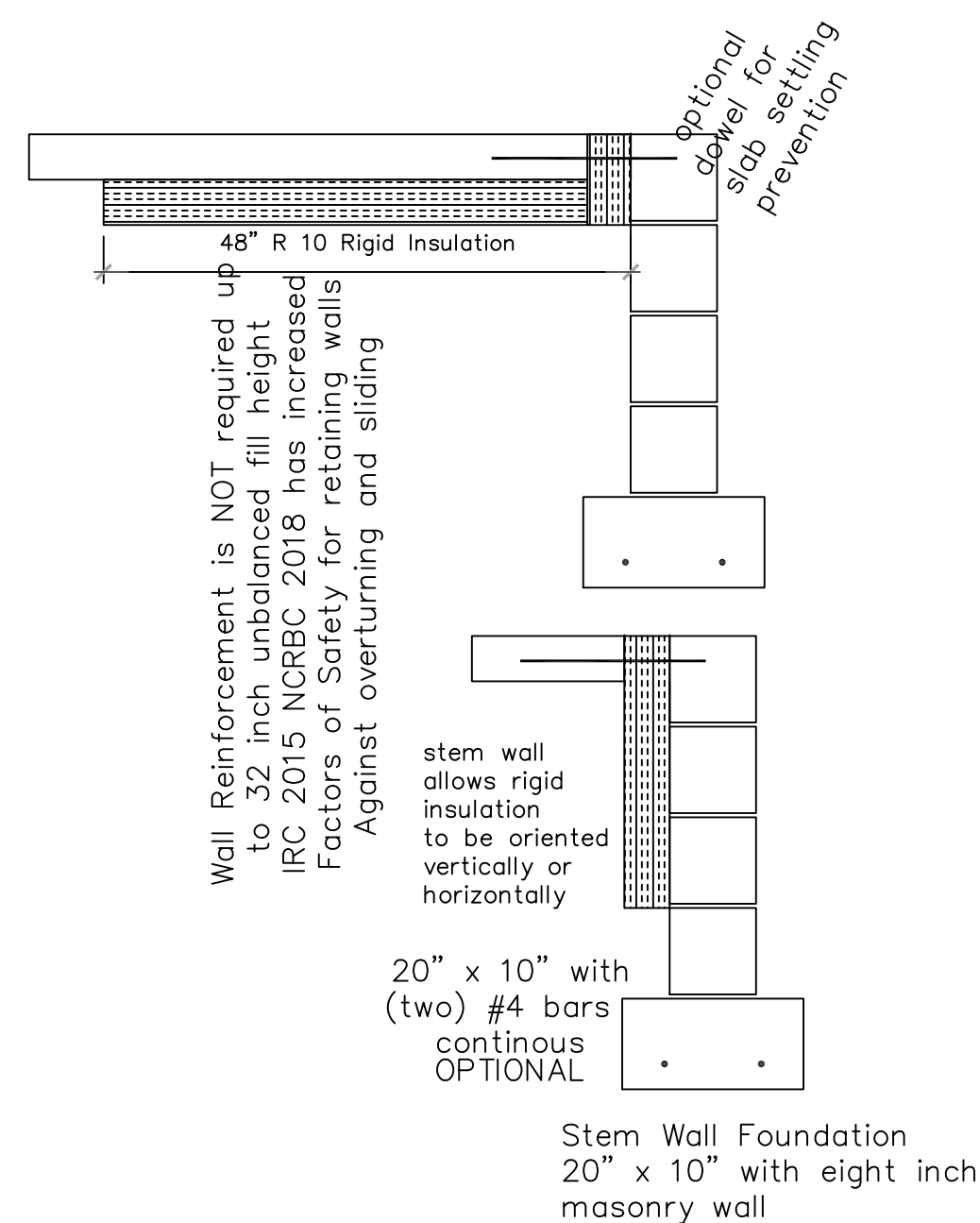
NOTE TO BUILDER:
It is the sole responsibility of the builder to review and verify these plans according to the north carolina building code (IRC) and to understand every part of these plans herein.



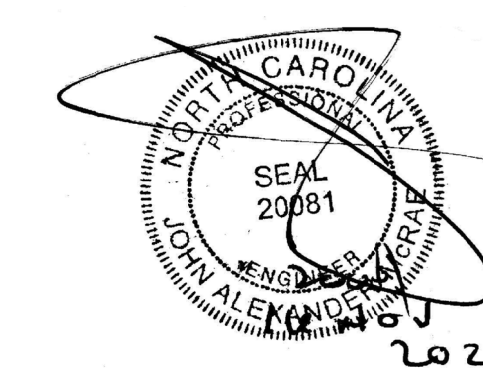
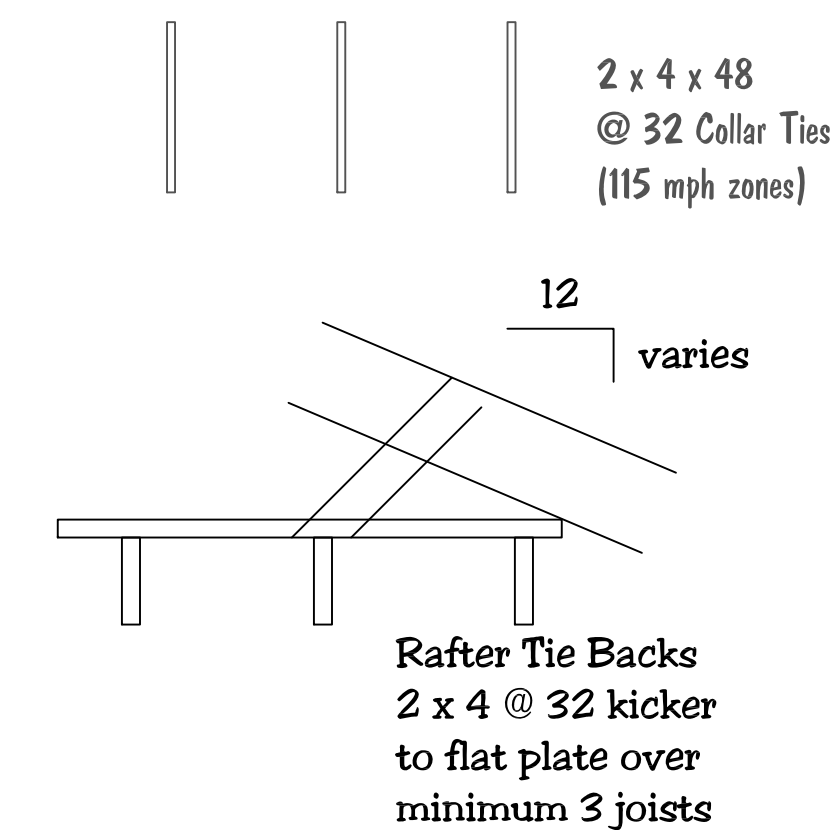
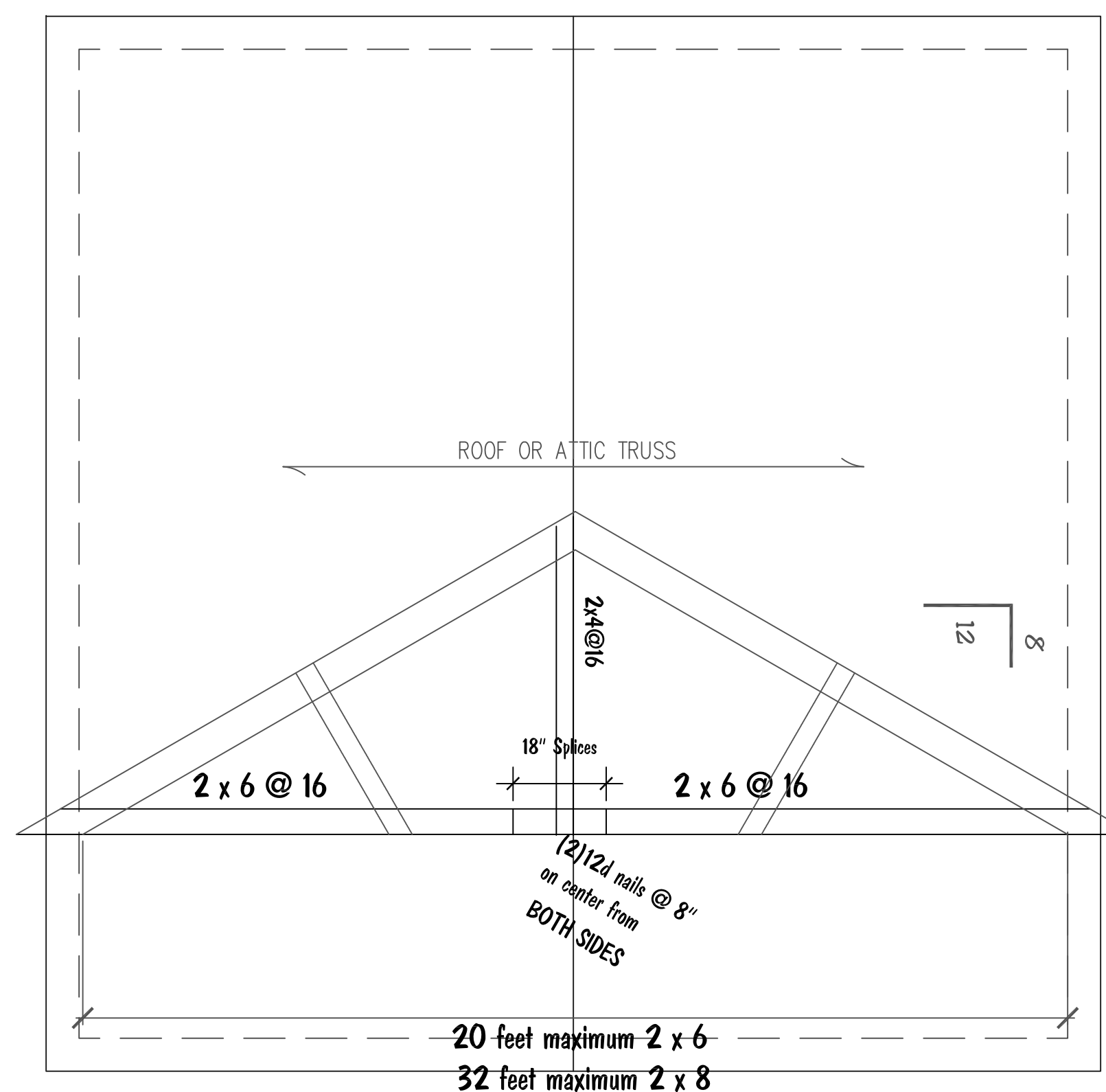
FOUNDATION WALLS
ALL FOUNDATION WALLS 8" BLOCK
PARGED - or - 4" BRICK w/ 4" BLOCK
w/ 4" SOLID CAP ON 16"x8" CONTINUOUS
CONCRETE FOOTER
20" x 10" in areas of brick veneer



Anchor bolts required ALL foundation walls provide 1/2" x 10" with 7 inch embedment 6' on center and 12 inches from ends / corners



Stem Wall Foundation
20" x 10" with eight inch masonry wall

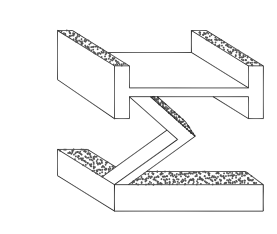


Structural Design By:
John Alexander McRae, PE, Inc
218 Coley Farm Road
Fuquay-Varina North Carolina 27526
jampe@nc.rr.com (919) 210-5749
P O Box 1466 Apex, NC 27502
Report deficiencies immediately
2210-20
(NC C-2298)

date:
12 October, 2022

drawn by:
J A McRae

John Alexander McRae, P.E., Inc.
Residential and Commercial Engineering



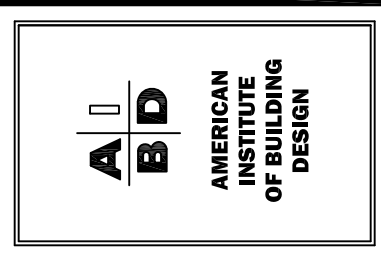
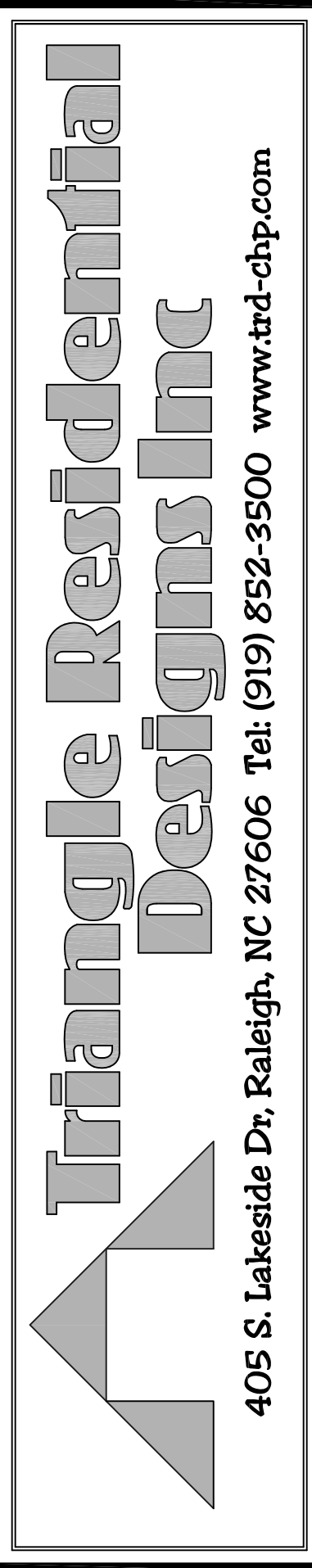
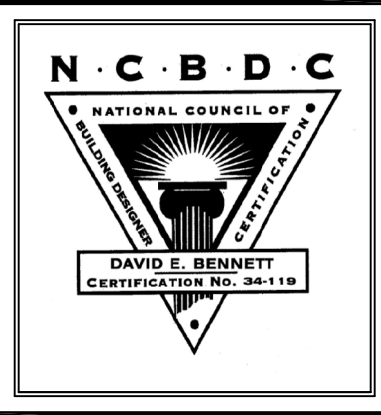
(NC C-2298)
218 Coley Farm Rd Fuquay-Varina, N.C. 27526
voice 919.662.5531 fax 919.662.8599

Trevel Construction
414 Young Rd Angier NC

sheet no.
D1 of **D1**
plan no.
2210-20

Design to IRC 2015 NCRC 2018 Building Code

JAMPE, INC. does not assume liability for any deviation of these plans or construction methods. All information must be confirmed by contractor prior to commencement of construction.



Client: TREVEL CONSTRUCTION
 Project: PLAN #1807 (DERIVED FROM #1758)
 Address/ Lot #: 414 YOUNG ROAD, ANGLE, NC 27562, WAKE COUNTY
 Shc. D1 of 2
 Date: OCTOBER 6, 2022

STANDARD CONSTRUCTION DETAILS & NOTES

FLOOR PLAN NOTES

- 1) ALL JOIST SPANS ARE CALCULATED USING #2 GRADE SPRUCE PINE FIR.
- 2) JOIST SIZES ARE SHOWN AT MINIMUM TO MEET STRUCTURAL REQUIREMENTS. SIZES MAY BE INCREASED TO PROVIDE MINIMUM INSULATION VALUES OR AIR PASSAGES.
- 3) PROVIDE DOUBLE FLOOR JOISTS AT ALL NON LOAD BEARING PARTITION WALLS RUNNING PARALLEL TO FLOOR JOISTS. ALSO UNDER ALL BOOKCASES, CABINETS, TUBS AND WASHING MACHINES (RECOMMENDED - NOT REQUIRED)
- 4) FLOOR JOISTS MUST BEAR 1 1/2" MIN. ON WOOD OR METAL AND 3" MIN. ON MASONRY OR CONCRETE.
- 5) PROVIDE 1"x4" CROSS-BRACING OR SOLID BLOCKING BETWEEN FLOOR JOISTS AT 6'-0" O.C. MAX. (RECOMMENDED BUT NOT REQUIRED.)
- 6) ALL EXTERIOR AND LOAD BEARING HEADERS ARE TO BE (2)-2X10.
- 7) MINIMUM LVL DESIGN STRENGTH: E-2.0 x 2 MILLION PSL, FB-2500 PSL, FK-255 PSL
- 8) ALL LVL BEAMS TO HAVE 3 STUDS EACH END.
- 9) LOAD BEARING HEADER JACKS MUST REST ON DOUBLE JOISTS - SUPPLY EXTRA JOISTS AS REQUIRED
- 10) DRAFTSTOPPING AND FIREBLOCKING AS REQUIRED PER CODE.
- 11) DESIGNS FOR WOOD FLOOR TRUSSES MUST BE PREPARED BY A REGISTERED DESIGN PROFESSIONAL.

WOOD WALL CONSTRUCTION

- 1) ALL STUDS ARE TO BE #3 GRADE STANDARD OR STUD GRADE LUMBER - #2 GRADE RECOMMENDED BUT NOT REQUIRED.
- 2) ALL INTERIOR LOAD-BEARING WALLS SHALL BE CONSTRUCTED, FRAMED & FIREBLOCKED AS SPECIFIED FOR EXTERIOR WALLS.
- 3) WALLS ARE 2x4 STUDS @ 16" O.C.
- 4) ALL OPEN AREA, TWO STORY WALLS ARE TO BE BALLOON FRAMED, 2"x 6" STUDS AT 12" O.C.
- 5) DRAFTSTOPPING AND FIREBLOCKING REQUIRED AS PER CODE.
- 6) ALL OPEN AREA, TWO STORY WALLS ARE TO BE BALLOON FRAMED, 2"x 6" STUDS AT 12" O.C.
- 7) WINDOWS SHOULD BE RATED FOR 25PSI.

GARAGE DOOR WALL CONSTRUCTION

- ONLY FOR GARAGE DOOR WALLS THAT DO NOT MEET BRACING REQUIREMENTS OF THE NC 2002 RESIDENTIAL BUILDING CODE.
- 1) PLACE (2)-1/2" DIAM. ANCHOR BOLTS AT OUTSIDE QUARTER OF THESE PANELS. EXTEND #4 STEEL REINFORCING VERTICALLY, LAPPING THE ANCHOR BOLT A MINIMUM OF 6" AND EXTENDING TO THE FOOTING WITH A 4" MINIMUM HORIZONTAL LEG INTO THE FOOTING. THE FOOTING MUST BE REINFORCED WITH (1) #4 BAR TOP AND BOTTOM IN THIS AREA. SECURE WALL TO ANCHOR BOLTS WITH SIMPSON "STRONG TIE" LTT181, HTT16, HTT22, MTT22B OR TENSION TIE WITH 1800# MINIMUM CAPACITY.
 - 2) FULLY FACE GARAGE WALL WITH 7/16" OSB OR 1/2" CDX, NAILED PER TABLE R602.3(1) AND BLOCKED AT ALL WOOD STRUCTURAL PANEL SHEATHING EDGES.

CONCRETE SLAB FLOORS

- 1) CONCRETE SLAB ON GROUND FLOORS SHALL BE A MINIMUM OF 3-1/2" THICK.
- 2) FILL MATERIAL SHALL BE COMACTED TO ASSURE UNIFORM SUPPORT OF SLAB.
- 3) FILL SHALL NOT EXCEED 24" FOR CLEAN SAND OR GRAVEL AND 8" FOR EARTH.
- 4) GARAGE SLABS SHALL BE 4" CONC. W/ 6x6 W/M OR FIBERMESH, WITH VAPOR BARRIER, OVER 4" OF CRUSHED STONE OR GRAVEL ON TAMPED EARTH. (W/M OR FIBERMESH RECOMMENDED - NOT REQ'D)
- 5) GARAGE SLAB SHALL BE SLOPED TO FACILITATE THE MOVEMENT OF LIQUIDS TO A DRAIN OR TOWARD THE MAIN VEHICLE ENTRYWAY.
- 6) BASEMENT SLABS SAME AS GARAGE SLABS BUT WITH PERIMETER INSULATION PER CODE.
- 7) ELEVATED GARAGE FLOOR SHALL BE CAPABLE OF SUPPORTING A 2,000# LOAD OVER A 20-SQUARE-INCH AREA WITH A LIVE LOAD OF 50 PSF
- 8) EXPANSION JOINT REQUIRED WHERE ENCLOSED SLAB MEETS FOUNDATION WALL.

DECK NOTES

- 1) WHEN THE DECK IS ATTACHED TO THE STRUCTURE, THE STRUCTURE SHALL HAVE A TREATED WOOD BAND FOR THE LENGTH OF THE DECK, OR CORROSION RESISTANT FLASHING SHALL BE USED TO PREVENT MOISTURE FROM COMING IN CONTACT WITH THE UNTREATED FRAMING TO THE STRUCTURE.
- 2) THE DECK AND STRUCTURE BANDS SHALL BE CONSTRUCTED IN CONTACT WITH EACH OTHER, EXCEPT ON BRICK VENEER STRUCTURES AND WHERE PLYWOOD SHEATHING IS REQUIRED AND PROPERLY FLASHED.
- 3) SIDING SHALL NOT BE INSTALLED BETWEEN THE STRUCTURE AND THE DECK BAND.
- 4) IF ATTACHED TO A BRICK STRUCTURE, NEITHER THE FLASHING NOR A TREATED BAND FOR THE STRUCTURE IS REQUIRED. THE TREATED DECK BAND SHALL BE CONSTRUCTED IN CONTACT WITH THE BRICK VENEER.
- 5) GIRDERS SHALL BEAR DIRECTLY ON POSTS OR BE CONNECTED TO THE SIDES OF THE POSTS WITH 2-5/8" HOT DIPPED GALVANIZED BOLTS.
- 6) FLOOR DECKING SHALL BE #2 GRADE TREATED SOUTHERN PINE OR EQUIVALENT. MINIMUM FLOOR DECKING THICKNESS FOR JOISTS AT 16" O.C. IS 1" T&G.
- 7) DECKS MAY NOT BE ATTACHED TO CANTILEVERED FLOOR SYSTEMS.
- 8) ALL JOIST SPANS ARE CALCULATED USING #2 GRADE SPRUCE PINE FIR.
- 9) JOIST SIZES ARE SHOWN AT MINIMUM TO MEET STRUCTURAL REQUIREMENTS. SIZES MAY BE INCREASED.
- 10) DECKS OVER 4'-0" ABOVE GRADE SHALL BE BRACED AS PER CODE APPENDIX M.

PIERS

- 1) MASONRY PIERS HEIGHT SHALL NOT EXCEED 10 TIMES THEIR LEAST DIMENSION.
- 2) WHEN STRUCTURAL CLAY OR HOLLOW CONCRETE MASONRY UNITS ARE USED TO SUPPORT BEAMS & GIRDERS, THE CELLULAR SPACES MUST BE FILLED SOLIDLY WITH CONCRETE OR TYPE "M" OR "S" MORTAR.
- 3) UNFILLED UNITS MAY BE USED IF THE HEIGHT IS NOT MORE THAN 4 TIMES THE LEAST DIMENSION.
- 4) HOLLOW PIERS SHALL BE CAPPED WITH 4" OF SOLID MASONRY OR CONCRETE, OR SHALL HAVE CAVITIES OF THE TOP COURSE FILLED WITH CONCRETE.
- 5) PIERS INDICATED ON PLAN ARE TYPICALLY 16"x 16" ON 24"x 24"x 8" FOOTINGS.
- 6) THE ALL HALF PIERS INTO WALLS

FOUNDATION NOTES

- 1) CRAWL SPACE IS TO BE LEVEL & CLEAN OF CONSTRUCTION DEBRIS, VEGETATION AND ANY ORGANIC MATERIAL.
- 2) ONE VENT MUST BE WITHIN 3' OF EACH CORNER OF THE BUILDING
- 3) POSSIBLE VENT LOCATIONS INDICATED ON THE FOUNDATION PLAN.
- 4) APPROVED VAPOR RETARDER TO COVER 100% OF CRAWL SPACE.

FOOTINGS

- 1) FOOTING PROJECTIONS SHALL BE AT LEAST 2" AND SHALL NOT EXCEED THE THICKNESS OF THE FOOTING.
- 2) THE TOP SURFACE OF FOOTINGS SHALL BE LEVEL W/ MASONRY UNITS WITH FILL MORTAR. JOINTS BOTTOM SURFACE OF FOOTINGS MAY SLOPE NO MORE THAN 10%. FOOTINGS SHALL BE STEPPED TO CHANGE THE ELEVATION OF THE TOP SURFACE OR WHERE THE SLOPE OF THE BOTTOM OF THE FOOTING WILL EXCEED 10%.
- 3) FINISHED GRADE OF THE UNDER FLOOR SURFACE MAY BE LOCATED AT THE BOTTOM OF THE FOOTINGS.
- 4) MINIMUM 8" WALL FOOTING TO BE NO LESS THAN 16" X 8"
- 5) MINIMUM CONCRETE FOOTING STRENGTH = 3000 PSI

DRAINAGE

- 1) INSTALL AROUND FOUNDATION, DRAIN TILES, GRAVEL OR CRUSHED STONE DRAINS, PERFORATED PIPES OR OTHER APPROVED SYSTEM AS REQUIRED BY GRADE.
- 2) FOUNDATION DRAINAGE MAY BE OMITTED WHEN THE INTERIOR GRADE IS LESS THAN 12" BELOW THE EXTERIOR GRADE.
- 3) GRADE LOT 50 AS TO DRAIN SURFACE WATER AWAY FROM FOUNDATION WALLS AT A MINIMUM OF 6" WITHIN THE FIRST 10'.

WATERPROOFING:

- 1) FOUNDATION WALLS, WHERE THE OUTSIDE GRADE IS HIGHER THAN THE INSIDE GRADE, SHALL BE DAMPROOFED FROM THE TOP OF THE FOOTING TO THE FINISHED GRADE. USE CODE APPROVED METHOD

ANCHORAGE

- 1) THE WOOD SOLE PLATE AT EXTERIOR WALLS ON MONOLITHIC SLABS AND WOOD SILL PLATE SHALL BE ANCHORED TO THE FOUNDATION W/ ANCHOR BOLTS SPACED A MAXIMUM OF 6'-0" ON CENTER AND LOCATED WITHIN 12" FROM THE ENDS OF EACH PLATE SECTION. BOLTS SHALL BE AT LEAST 1/2" IN DIAMETER AND SHALL EXTEND A MINIMUM OF 7" INTO MASONRY OR CONCRETE.
- 2) BOLTS MAY BE REPLACED BY ANCHOR STRAPS, SPACED AS REQUIRED TO PROVIDE EQUIVALENT ANCHORAGE.
- 3) INTERIOR BEARING WALL SOLE PLATES ON MONOLITHIC SLABS SHALL BE ANCHORED W/ APPROVED FASTENERS.

FOUNDATION WALLS

- 1) VERTICAL REINFORCEMENT OF MASONRY WALLS SHALL BE TIED TO THE HORIZONTAL REINFORCEMENT OF THE FOOTINGS.
- 2) FOUNDATION WALL IS TO BE 8" CONC. BLOCK OR 8" BRICK & BLOCK ON CONTINUOUS CONCRETE FOOTING.
- 3) FOUNDATION WALL IS TO HAVE A SOLID 8" MASONRY CAP.
- 4) WALL HEIGHT ABOVE FINISHED SHALL BE 4" WHERE MASONRY VENEER IS USED AND 6" ELSEWHERE.
- 5) WALL SUPPORTING OVER 4' OF UNBALANCED BACKFILL MUST BE BRACED TO PREVENT DAMAGE BY THE BACKFILL.
- 6) CAVITY WALL OR MASONRY VENEER CONSTRUCTION MAY BE SUPPORTED ON AN 8" FOUNDATION WALL, PROVIDED THE WALL IS COREFILLED WITH SOLID MASONRY TO THE WIDTH OF THE WALL SYSTEM ABOVE. THE TOTAL HORIZONTAL PROJECTION OF THE CORBEL SHALL NOT EXCEED 2" WITH INDIVIDUAL CORBELS PROJECTING NOT MORE THAN 1/3 THE THICKNESS OF THE UNIT OR 1/2 THE HEIGHT OF THE UNIT. THE TOP COURSE OF ALL CORBELS SHALL BE A HEADER COURSE.
- 7) VENTS ARE INTENDED TO BE 16" X 8" ALUMINUM.

CAVITY ACCESS

- 1) MIN. CRAWL SPACE ACCESS IS 12"(W) x 24"(H) W/ DBL. BAND ABOVE. PLACE AT BEST LOCATION WITH REFERENCE TO GRADE.
- 2) ACCESS MAKE BE INCREASED IF MECHANICAL EQUIPMENT IS LOCATED UNDER FLOORS - SEE NC MECHANICAL CODE FOR REQUIREMENTS.
- 3) ATTIC ACCESS SHALL BE 22" x 30" MINIMUM.

ROOF NOTES

- 1) RAFTER SIZES ARE SHOWN AT MINIMUM STRUCTURAL REQUIREMENTS. SIZES MAY BE INCREASED TO PROVIDE MINIMUM INSULATION VALUES OR AIR PASSAGES.
- 2) RAFTER SPANS ARE CALCULATED ON #2 GRADE SPRUCE PINE PINE FIR.
- 3) RAFTERS SHALL BE FRAMED TO RIDGE BOARD OR TO EACH OTHER WITH A GUSSET PLATE.
- 4) RIDGE BOARDS SHALL BE AT LEAST 1" NOMINAL THICKNESS AND NOT LESS IN DEPTH THAN THE CUT END OF THE RAFTER.
- 5) OPPOSING RAFTERS AT THE RIDGE MUST ALIGN WITHIN THE THICKNESS OF THE RIDGE.
- 6) IF CLG JSTS ARE NOT PARALLEL TO RAFTERS, SUBFLOORING OR METAL TIES SHALL BE ATTACHED TO RAFTERS ENDS TO SUPPLY A CONTINUOUS TIE ACROSS THE BUILDING OR RAFTERS SHALL BE ATTACHED TO 1"x 4" CROSSTIES.
- 7) ATTACH 1"x6" OR 2"x4" COLLAR TIES IN THE UPPER THIRD OF THE ROOF TO EVERY THIRD PAIR OF RAFTERS, NOT TO EXCEED 4'-0" O.C.
- 8) ALL DORMERS SHALL HAVE DOUBLE HEADERS AND TRIMMERS.
- 9) TRUSS ROOF DRAWINGS SHALL BE PREPARED BY A REGISTERED DESIGN PROFESSIONAL.
- 10) SHINGLED ROOFS WITH PITCHES 2/12 TO 4/12 SHALL HAVE DOUBLE UNDERLAYMENT.
- 11) A CRICKET OR SADDLE IS REQUIRED FOR CHIMNEYS OVER 30" WIDE. THE COVERING SHALL BE METAL OR THE SAME MATERIAL AS THE ROOF COVERING.

HANDRAIL AND GUARDS

- 1) HANDRAILS SHALL HAVE A MINIMUM HEIGHT OF 30" AND A MAXIMUM HEIGHT OF 38".
- 2) PORCHES, BALCONIES OR RAISED FLOORS OVER 30" ABOVE FLOOR OR GRADE SHALL HAVE GUARD RAILS NO LESS THAN 36" HIGH.
- 3) STAIRS THAT HAVE A RISE OF 30" ABOVE THE FLOOR SHALL HAVE HANDRAILS OF 30" HIGH.
- 4) GUARDS ON OPEN SIDES OF STAIRWAYS, RAISED FLOORS, BALCONIES AND PORCHES SHALL HAVE INTERMEDIATE RAILS OR ORNAMENTAL CLOSURES THAT DO NOT ALLOW PASSAGE OF AN OBJECT 6" OR MORE IN DIAMETER.

GLAZING

- 1) ALL HABITABLE ROOMS SHALL HAVE A GLAZING AREA OF NOT LESS THAN 8% OF THE FLOOR AREA.
- 2) WINDOWS SHALL HAVE A MINIMUM DESIGN REQUIREMENT OF 25#DPI AND U-40
- 3) VERIFY WINDOW EGRESS WITH WINDOW MANUFACTURER.

EMERGENCY ESCAPE

- 1) OPENINGS PROVIDED AS MEANS OF ESCAPE CANNOT HAVE A SILL HEIGHT OF MORE THAN 44" ABOVE THE FLOOR.
- 2) ESCAPE OPENINGS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 4 SQ. FT. THE MINIMUM CLEAR OPENING HEIGHT IS 22" AND THE WIDTH IS 20".
- 3) ESCAPE OPENING SHALL HAVE A TOTAL GLASS AREA OF NOT LESS THAN 5 SQ. FT. FOR A GROUND WINDOW AND 5.7 SQ. FT. FOR AN UPPER STORY WINDOW.
- 4) REQUIRED EXIT DOORS SHALL BE NO LESS THAN 3'-0" x 6'-8".

GARAGE

- 1) DOOR FROM GARAGE TO HOUSE MUST BE 1 3/4" THICK SOLID WOOD OR SOLID OR HONEYCOMBED CORE STEEL DOORS OR 20 MIN. FIRE RATED.
- 2) GARAGE SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC AREA BY NOT LESS THAN 1/2" GYPSUM BOARD APPLIED TO THE GARAGE SIDE. IT SHALL BE SEPARATED FROM HABITABLE ROOMS ABOVE THE GARAGE BY NOT LESS THAN 3/8" TYPE X GYPSUM BOARD OR IT'S EQUIVALENT

STAIRWAYS

- 1) STAIRWAYS SHALL BE A MINIMUM 3'-0" WIDE.
- 2) HANDRAILS SHALL NOT PROJECT MORE THAN 4.5" ON EITHER SIDE.
- 3) MINIMUM CLEAR WIDTH OF THE STAIRWAY AT AND BELOW THE HANDRAIL SHALL NOT BE LESS THAN 51.5" WHERE THE HANDRAIL IS INSTALLED ON ONE SIDE AND 27" WHERE HANDRAILS ARE ON BOTH SIDES.
- 4) STAIRS NOT REQUIRED FOR EGRESS MAY BE AS NARROW AS 26"
- 5) MAXIMUM RISER HEIGHT SHALL BE 8-1/4" AND THE MINIMUM TREAD DEPTH SHALL BE 9"
- 6) NOSING SHALL BE 3/4" MINIMUM AND 1-1/4" MAXIMUM.
- 7) MINIMUM HEADROOM IN ALL PARTS OF THE STAIR SHALL NOT BE LESS THAN 6'-8".
- 8) WINDERS MUST, AT A POINT NOT MORE THAN 12" FROM THE SIDE WHERE THE TREADS ARE NARROWER, BE LESS THAN 9" AND THE MINIMUM WIDTH OF ANY TREAD IS NOT LESS THAN 4".
- 9) SPIRAL STAIRS MUST BE 26" WIDE MINIMUM AND TREADS MUST BE 7-1/2" x 12" FROM THE NARROW EDGE. ALL TREADS MUST BE IDENTICAL WITH A MAXIMUM RISE OF 9-1/2". MINIMUM HEADROOM OF 6'-8" REQUIRED.
- 10) CIRCULAR STAIRS MUST, AT A POINT NOT MORE THAN 12" FROM THE SIDE WHERE THE TREADS ARE NARROWER, BE LESS THAN 9" AND THE MINIMUM WIDTH OF ANY TREAD IS NOT LESS THAN 6".

COMPONENT & CLADDING DESIGNED FOR THE FOLLOWING LOADS

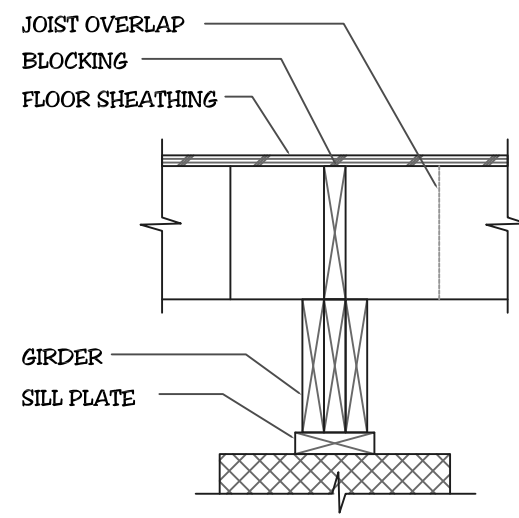
	MEAN ROOF HEIGHT				
	UP TO 30'	30'-1" TO 35'	35'-1" TO 40'	40'-1" TO 45'	
ZONE 1	16.5, -18.0	17.3, -18.9	18.0, -19.6	18.5, -20.2	
ZONE 2	16.5, -21.0	17.3, -22.1	18.0, -22.9	18.5, -23.5	
ZONE 3	16.5, -21.0	17.3, -22.1	18.0, -22.9	18.5, -23.5	
ZONE 4	18.0, -19.5	18.9, -20.5	19.6, -21.3	20.2, -21.8	
ZONE 5	18.0, -24.1	18.9, -25.3	19.6, -26.3	20.2, -27.0	

SEE NC BUILDING CODE FOR LOCATION OF ZONES
 PLUS AND MINUS SIGNS SIGNIFY PRESSURES ACTING TOWARDS AND AWAY FROM THE BUILDING SURFACES

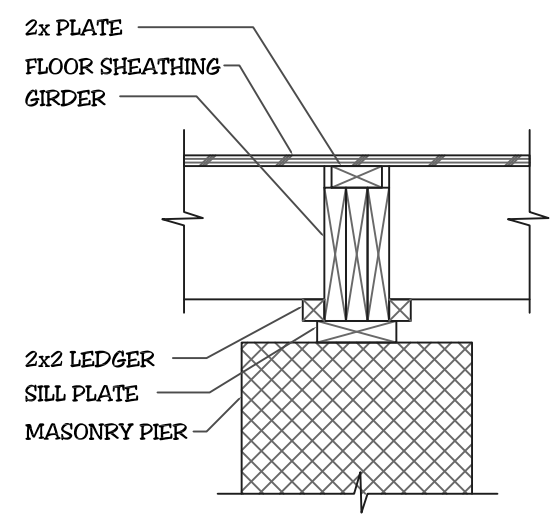
NOTES:

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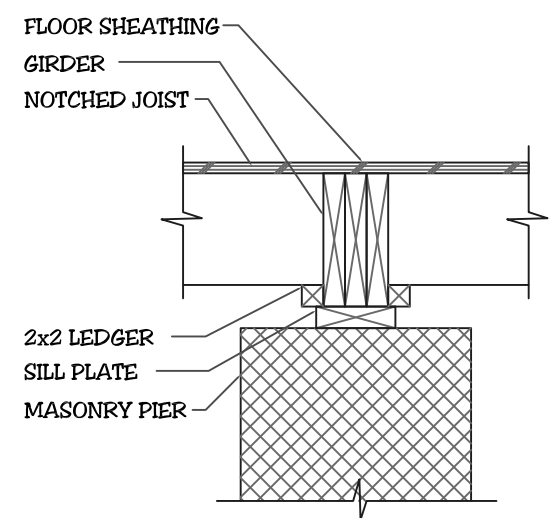
NOTE: SEALED ENGINEER'S DRAWINGS TAKE PRECEDENCE OVER TRD'S STANDARD DETAILS AND NOTES



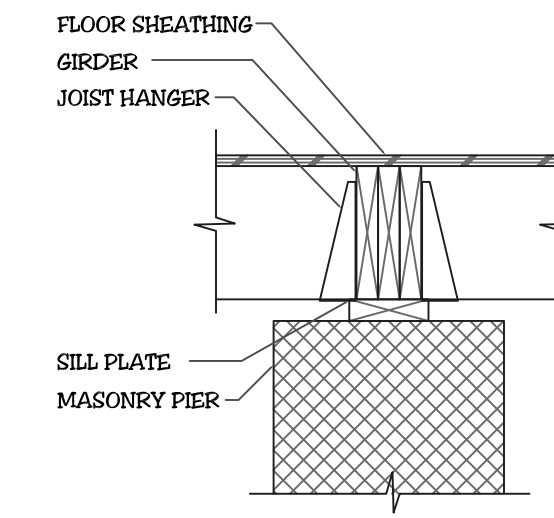
DROPPED GIRDER
GIRDER DETAILS



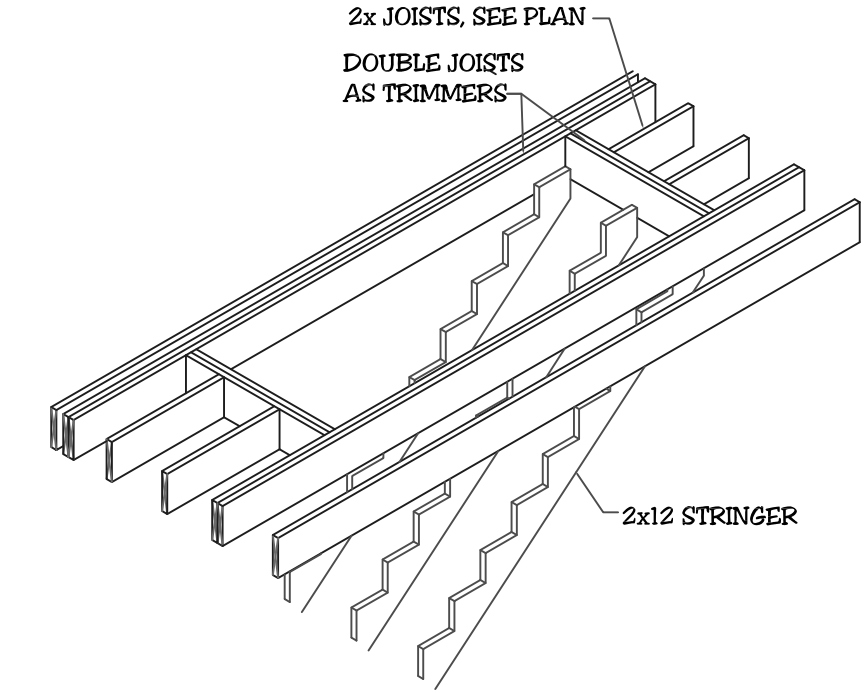
FLUSH BEARING W/CAP



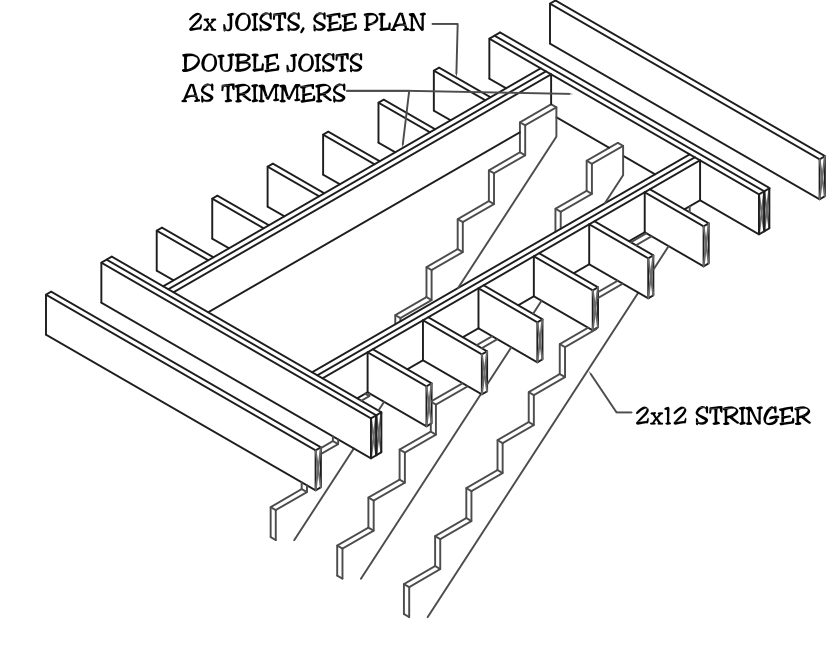
FLUSH BEARING W/LEDGER



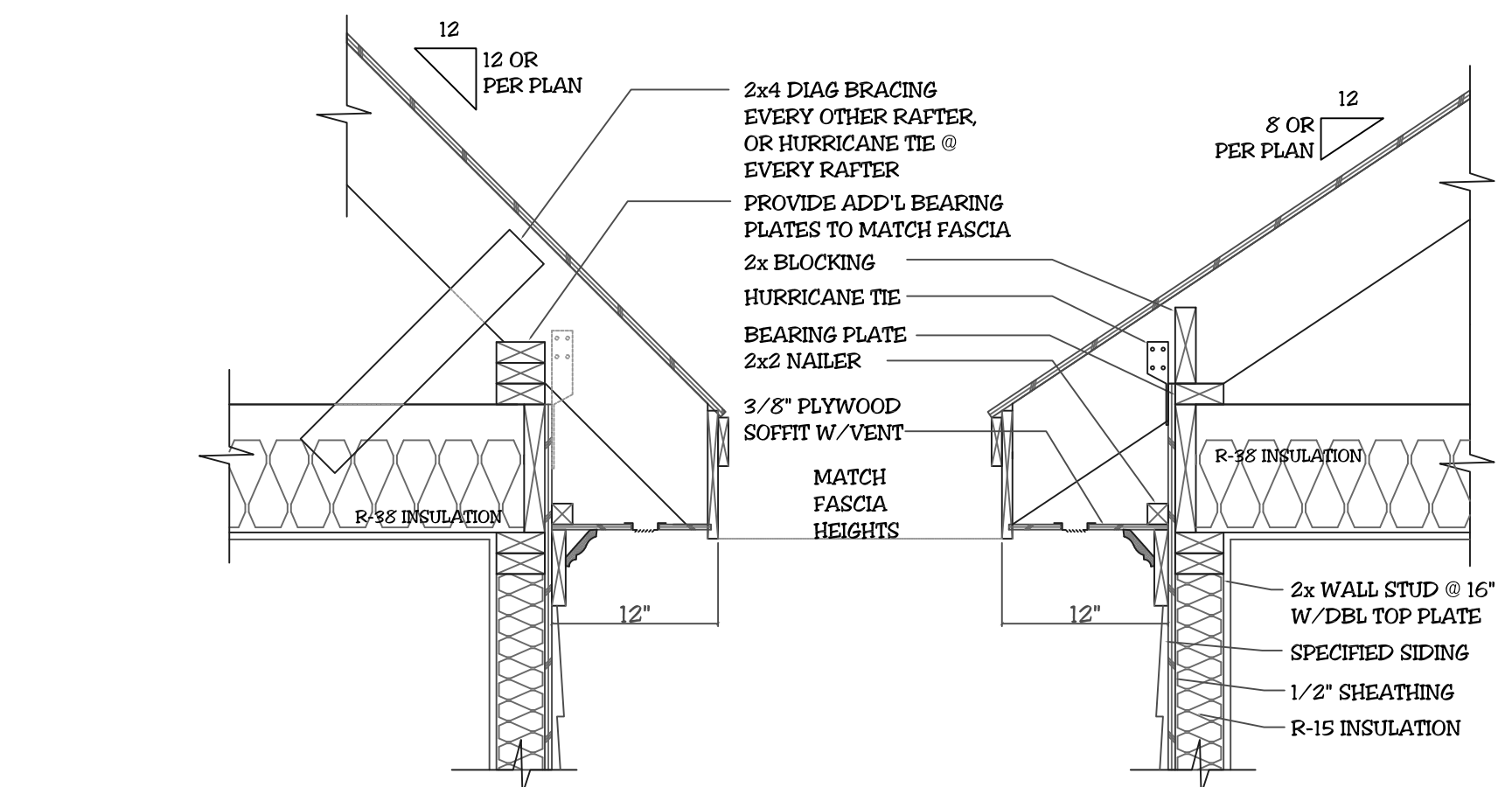
FLUSH BEARING W/HANGER



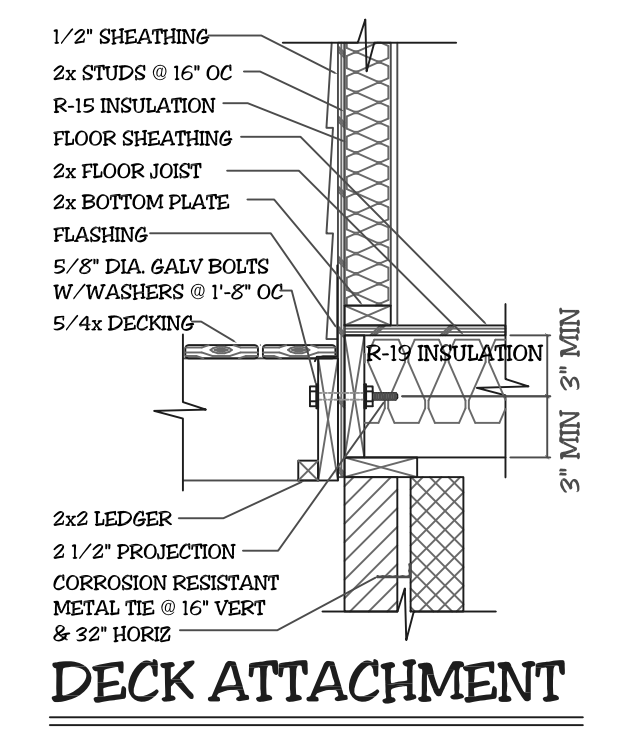
STAIR FRAMING w/PARALLEL JOISTS



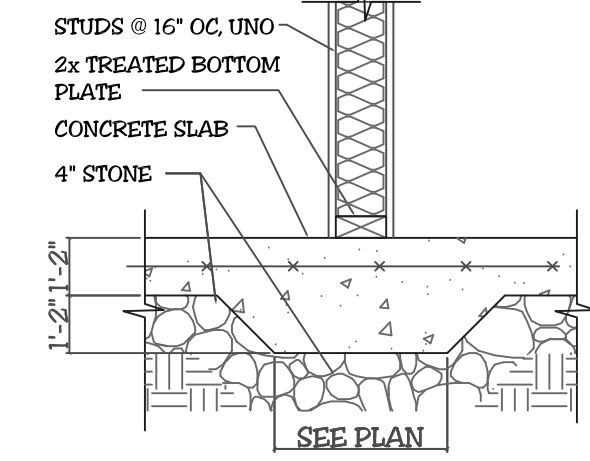
STAIR FRAMING w/PERPENDICULAR JOISTS



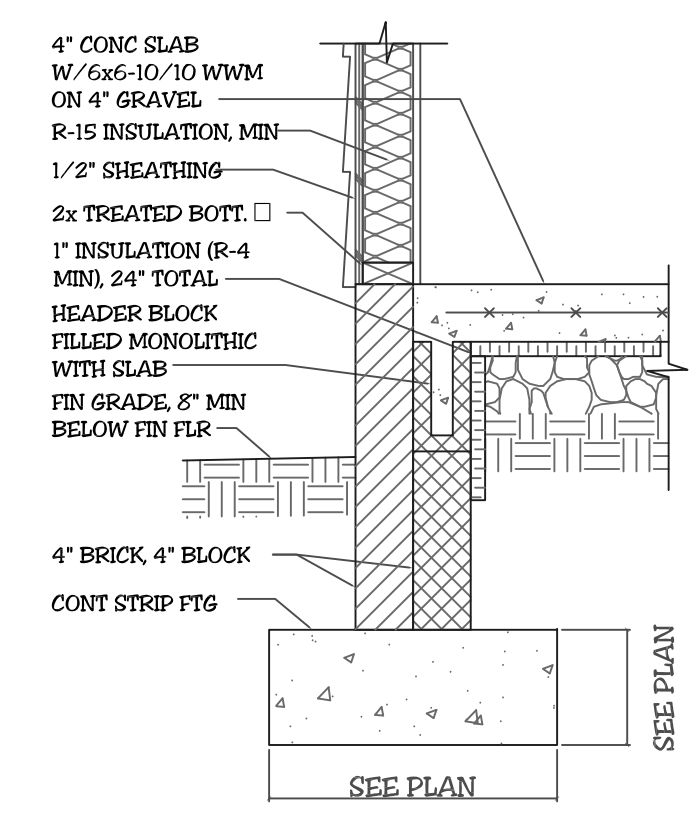
FASICA ELEVATION COORDINATION



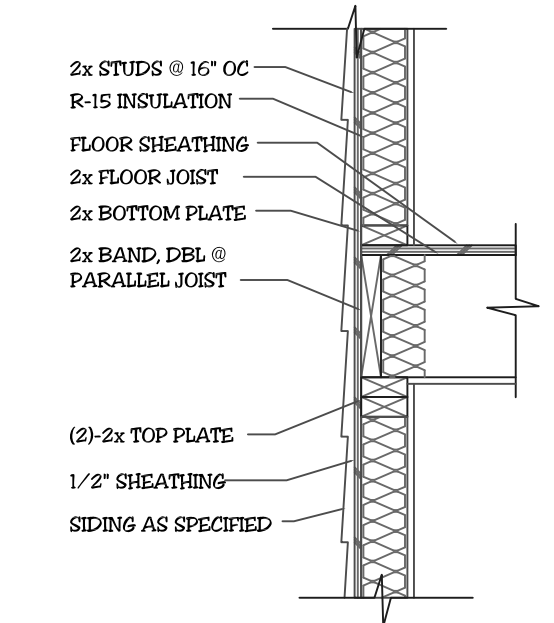
DECK ATTACHMENT



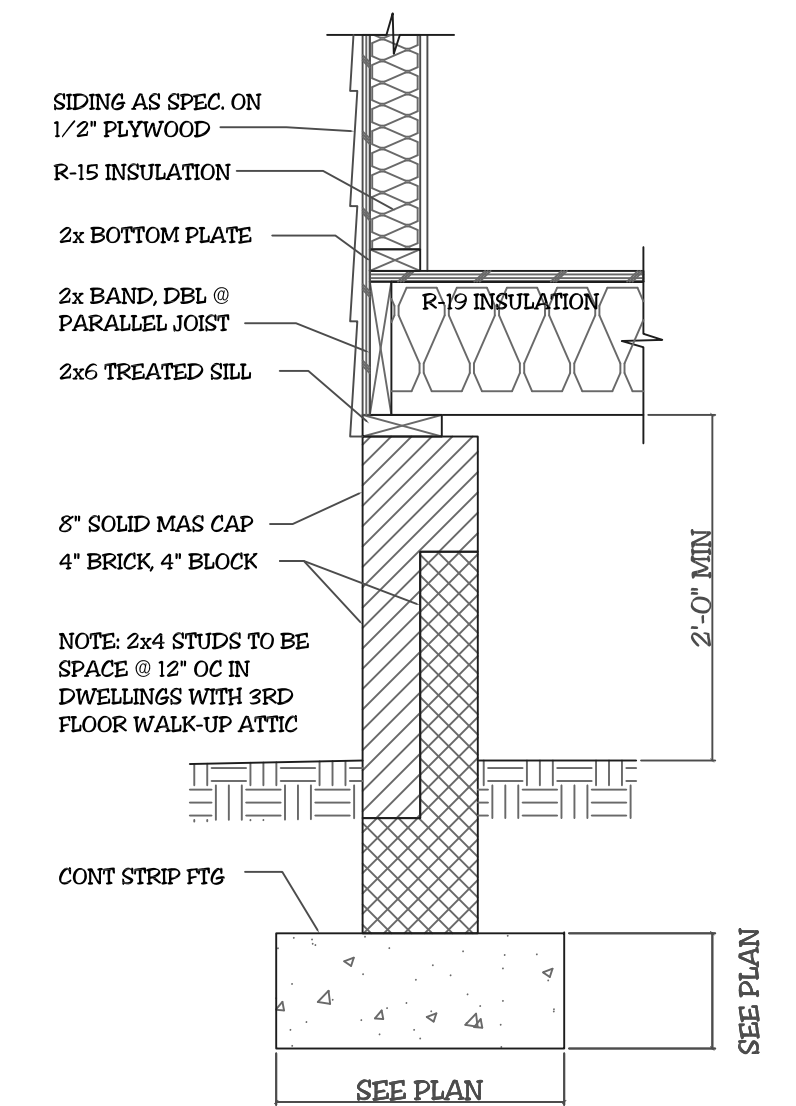
THICKENED SLAB



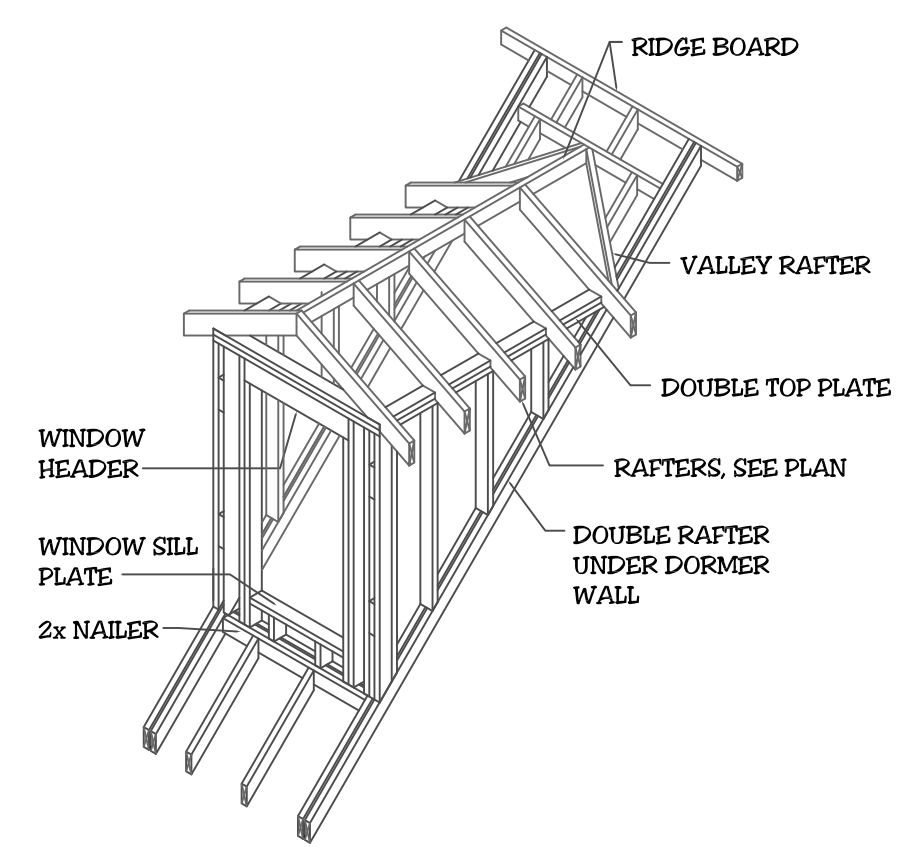
SLAB w/SIDING



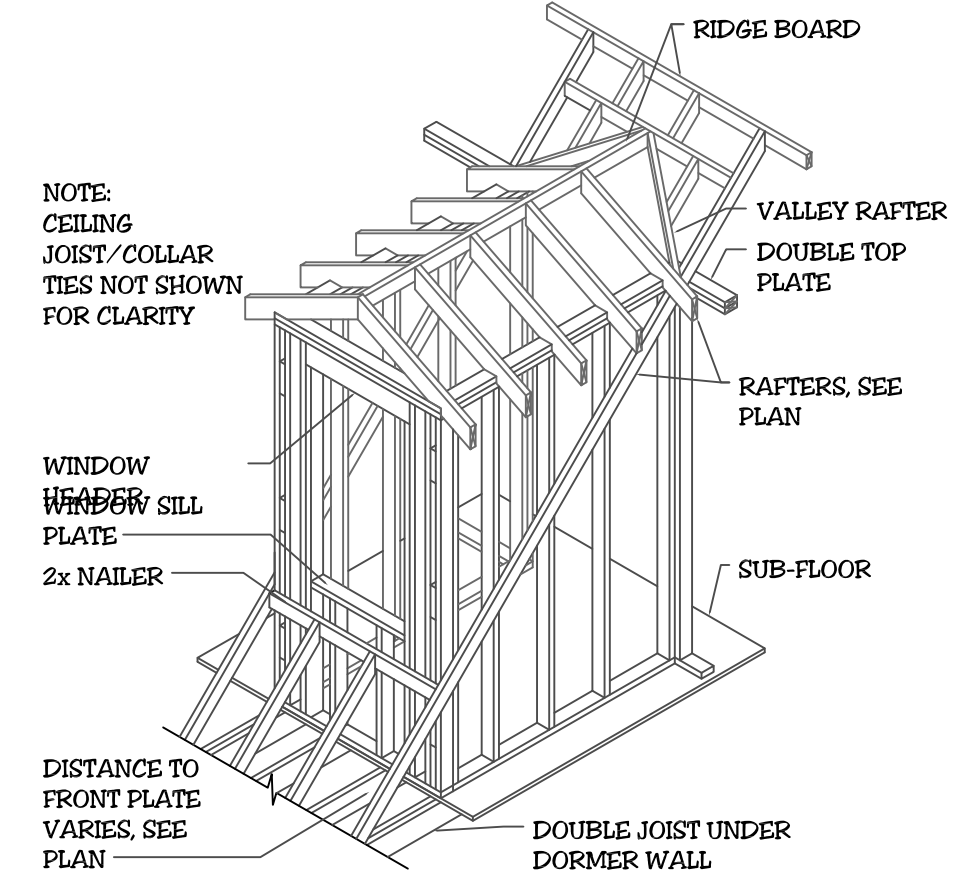
FLOOR FRAMING



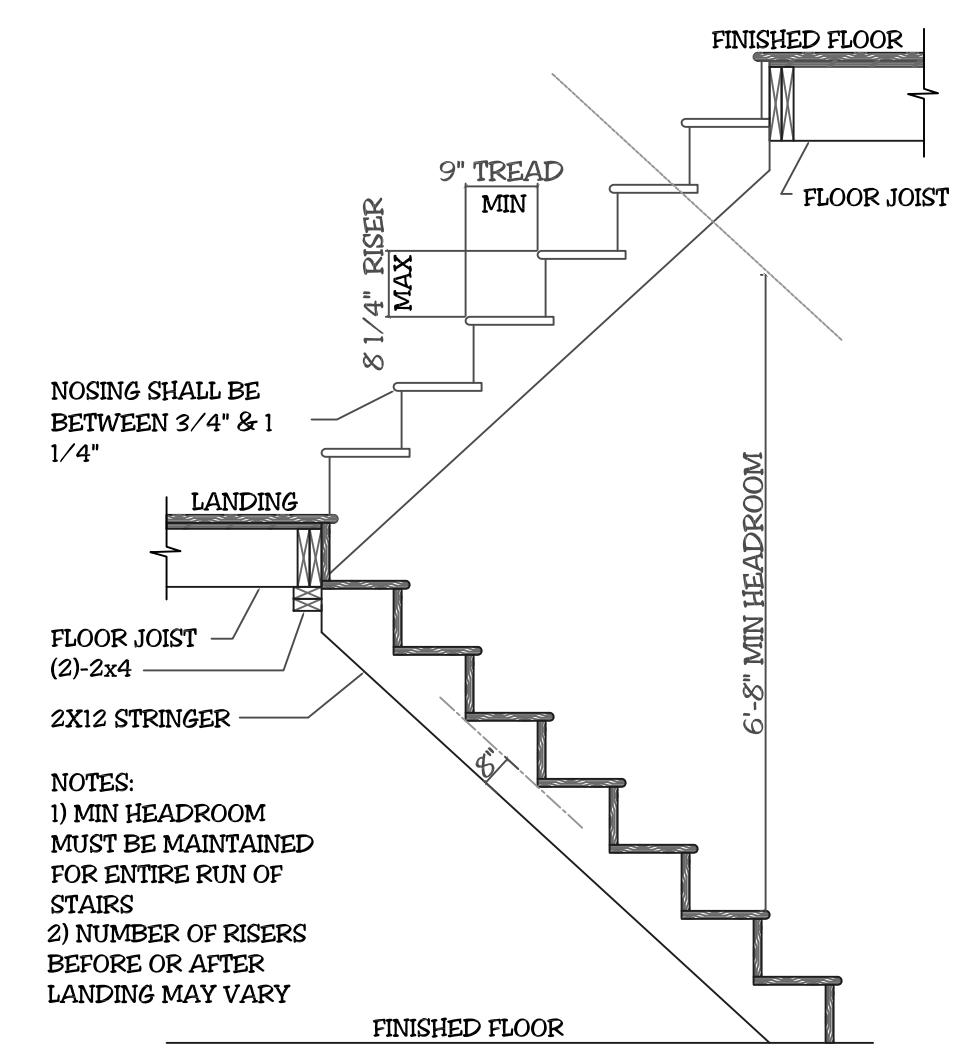
CRAWL SPACE w/SIDING



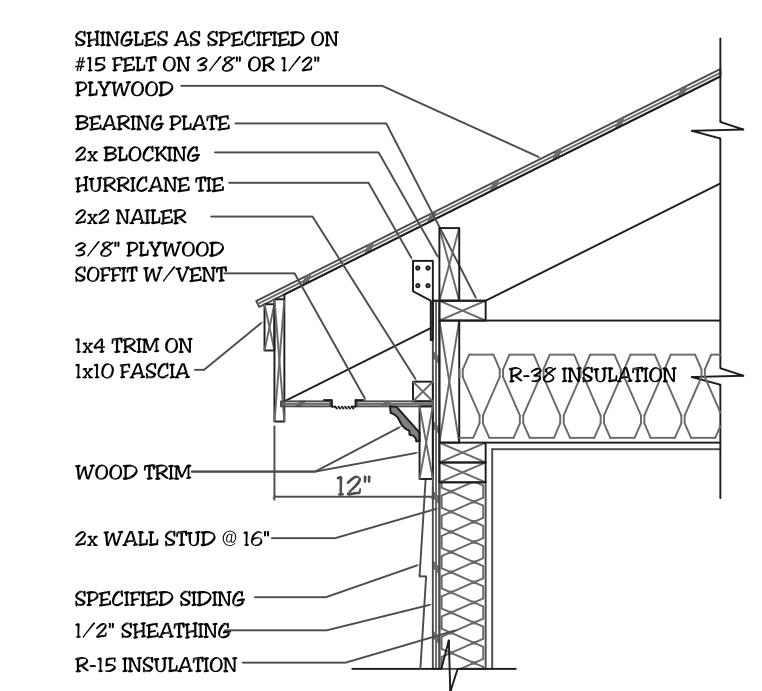
DORMER FRAMING DETAIL



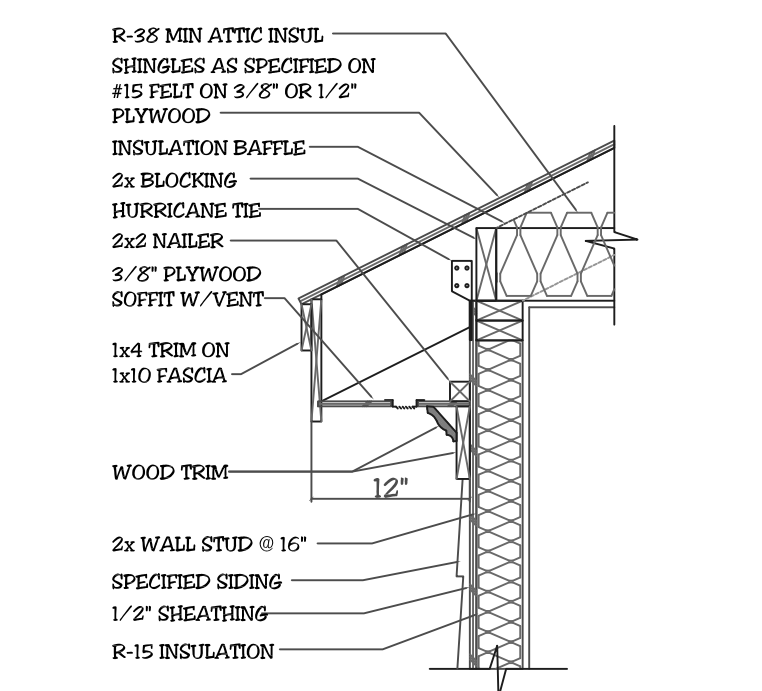
DORMER FRAMING DETAIL



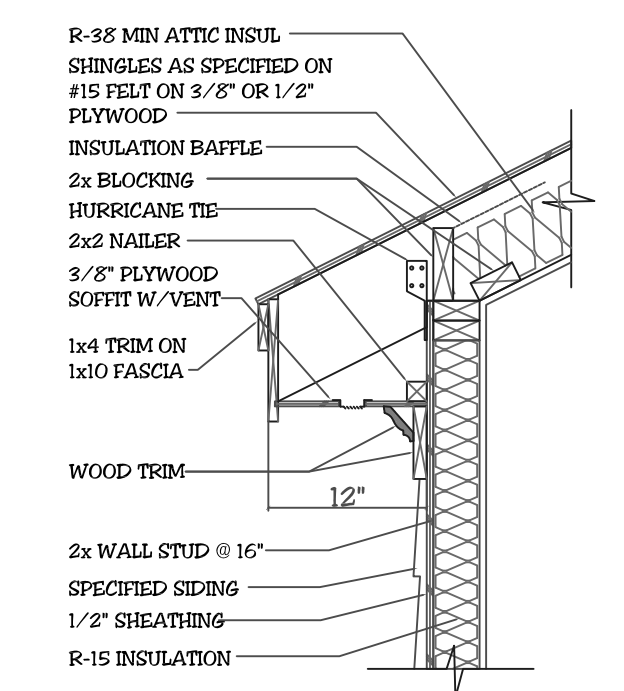
STAIR SECTION



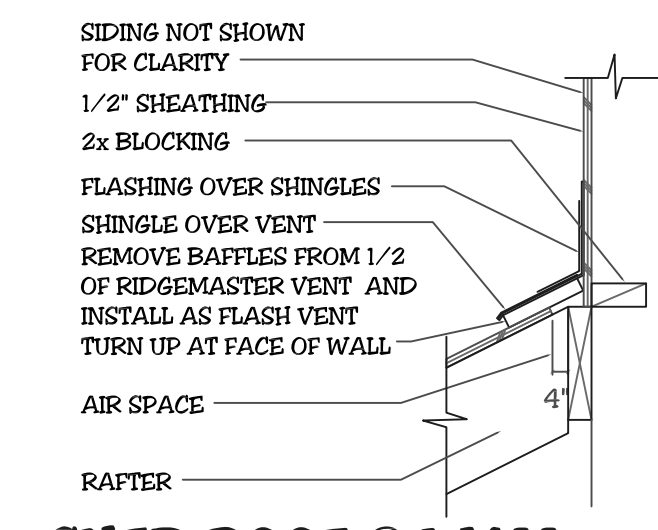
RAFTERS ON TOP OF JOISTS



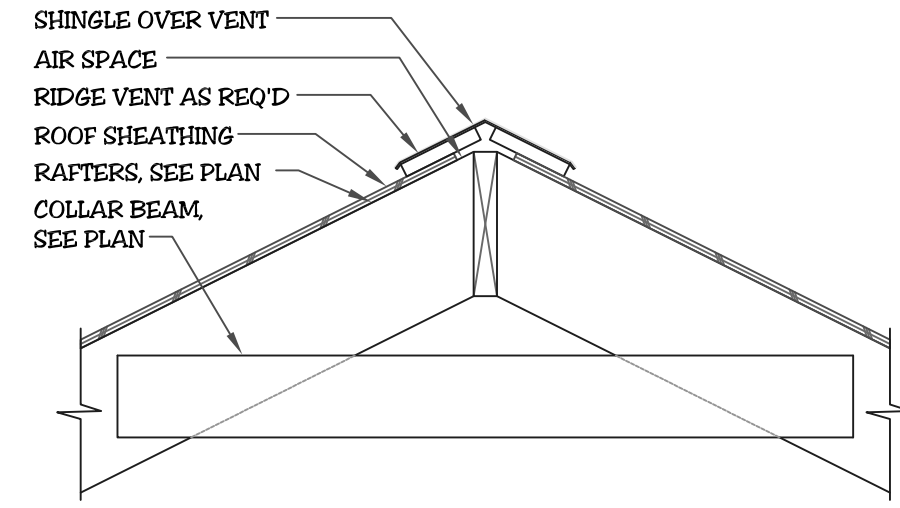
RAFTERS ON DBL TOP PLATE



RAFTERS w/SLOPED CLG



SHED ROOF @ WALL



COLLAR BEAM DETAIL

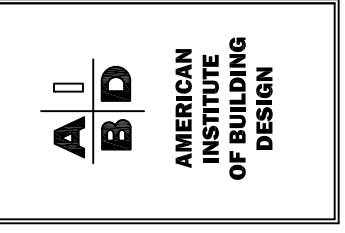
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ANCHOR BOLT NOTE
 1/2" DIA X 10" ANCHOR BOLTS W/ 7" MIN EMBEDMENT @ 6'-0" OC AND 12" FROM EACH PLATE SPLICE AND CORNER.



Triangle Residential Designs Inc
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Drawn by: **DEB**
 Revised:

Address/Job #
 414 YOUNG ROAD
 ANGER, NC 27562
 WAKE COUNTY

Client: **TREVEL CONSTRUCTION**
 Project: **PLAN #1807 (DERIVED FROM #1758)**
 Date: **OCTOBER 6, 2022**
 Sh. **D2** of **2**

STANDARD CONSTRUCTION DETAILS