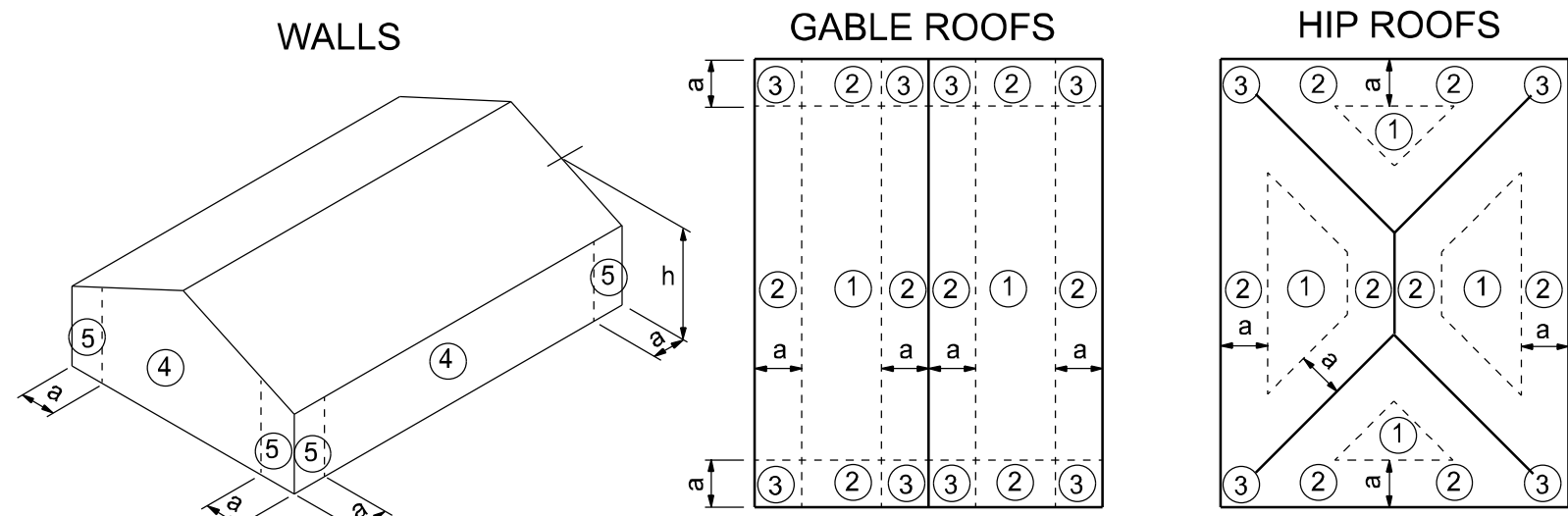


ALL WIND LOADS ARE IN ACCORDANCE WITH SECTION 1609, FLORIDA BUILDING CODE 8TH EDITION (2023)		
FLOOR AND ROOF LIVE LOADS		
UNINHABITABLE ATTICS:	20 PSF	
HABITABLE ATTICS, BEDROOM:	30 PSF	
ALL OTHER ROOMS:	40 PSF	
GARAGE:	40 PSF	
ROOFS:	20 PSF UNIFORM	
WIND DESIGN DATA		
ULTIMATE WIND SPEED:	125 MPH	
NOMINAL (BASIC) WIND SPEED:	97 MPH	
RISK CATEGORY:	II	
WIND EXPOSURE:	B	
ENCLOSURE CLASSIFICATION:	ENCLOSED	
INTERNAL PRESSURE COEFFICIENT:	0.18 +/-	
COMPONENTS AND CLADDING		
ROOFING ZONE 1:	16.0 PSF MAX.	-17.0 PSF MIN.
ROOFING ZONE 2:	16.0 PSF MAX.	-19.8 PSF MIN.
ROOFING ZONE 3:	16.0 PSF MAX.	-19.8 PSF MIN.
ROOFING AT ZONE 2 OVERHANGS:	-28.8 PSF MIN.	
ROOFING AT ZONE 3 OVERHANGS:	-28.8 PSF MIN.	
STUCCO, CLADDING, DOORS AND WINDOWS		
ROOFING ZONE 4:	17.0 PSF MAX.	-18.4 PSF MIN.
ROOFING ZONE 5:	17.0 PSF MAX.	-22.7 PSF MIN.
9' WIDE O/H DR.:	16.0 PSF MAX.	-16.9 PSF MIN.
16' WIDE O/H DR.:	16.0 PSF MAX.	-16.0 PSF MIN.



a: 10% of least horizontal dim. or 0.4h, whichever is smaller, but not less than either 4% of least horizontal dimension or 3 ft.
h: mean roof height, in feet.

COMPONENTS AND CLADDING

STRUCTURAL DESIGN CRITERIA

CODES:	FLORIDA BUILDING CODE 8TH EDITION (2023) BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE SPECIFICATIONS FOR STRUCTURAL CONCRETE BUILDINGS BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION, 2018 EDITION APA PLYWOOD DESIGN SPECIFICATION	
LIVE LOADS:	ROOF RESIDENTIAL FLOOR, UNLESS OTHERWISE INDICATED BALCONIES STAIRS LIGHT PARTITIONS (DEAD LOAD), U.N.O.	20 PSF (REDUCIBLE) 40 PSF 40 PSF 40 PSF 20 PSF
WIND LOADS: (F.B.C.)	WIND LOADS BASED ON FBC, SECTION 1609 WIND VELOCITY: 125 M.P.H., USE FACTOR: 1.0	
CONCRETE STRENGTH @ 28 DAYS	ALL CONCRETE UNLESS OTHERWISE INDICATED PEA GRAVEL CONCRETE FOR MASONRY CELLS ONLY (DO NOT USE FOR CONCRETE COLUMNS OR TIE BEAMS)	2500 PSI 3000 PSI
REINFORCING:	WELDED WIRE FABRIC SHALL CONFORM TO ALL REINFORCING BARS ALL STIRRUPS AND TIES	ASTM A185 ASTM A615-40 40,000 PSI ASTM A615-40 40,000 PSI
CONCRETE MASONRY UNITS:	ASTM C90-99b, STANDARD WEIGHT UNITS, fm=1500 PSI MORTAR TYPE "S" 1800 PSI CONCRETE GROUT: 3000 PSI CONTINUOUS MASONRY INSPECTION IS REQUIRED DURING CONSTRUCTION	
STRUCTURAL STEEL:	ALL STRUCTURAL AND MISCELLANEOUS STEEL A36 36,000 PSI, U.N.O. SHOP AND FIELD WELDS: E70XX ELECTRODES ALL BOLTS CAST IN CONCRETE: ASTM A36 OR ASTM A-307	
WOOD FRAMING:	BEAMS, RAFTERS, JOIST PLATES, ETC. U.N.O. NO. 2 SOUTHERN YELLOW PINE (19% M.C.) ROOF DECK: PLYWOOD C-C/C-D, EXTERIOR, or OSB FLOOR SHEATHING: T&G A-C GROUP 1 APA RATED (48/24) WALL SHEATHING: PLYWOOD C-C/C-D, EXTERIOR OR OSB VERSA LAM BEAM Fb = 2900 PSI (2.0E) WOOD COLS. PARALLAM 2.0E U.N.O.	
WOOD ROOF TRUSSES:	DESIGN LOADS: TOP CHORD LIVE AND DEAD LOAD: 30 PSF BOTTOM CHORD DEAD LOAD: 10 PSF TOTAL: 40 PSF	
SOIL BEARING VALUE:	SEE DRAWINGS FOR SPECIAL CONCENTRATED LOADS. DESIGN FOR NEW WIND UPLIFT AS PER SPECIFIED CODES, DEDUCTING A MAXIMUM OF 5 P.S.F. DEAD LOAD, BUT NOT EXCEEDING ACTUAL DEAD LOAD. ASSUMED ALLOWABLE SOIL BEARING PRESSURE AFTER COMPACTION: 1,500 PSF SEE SOILS REPORT AND SPECIFICATIONS FOR COMPACTION REQUIREMENTS IF SOIL CONDITIONS IN THE PROJECT DO NOT MEET OR EXCEED THE CAPACITY THE GENERAL CONTRACTOR SHALL CONTACT THE ENGINEER PRIOR TO FOUNDATION POUR FOR VERIFICATION OF FOUNDATION DESIGN.	

PROJECT LOCATION
20-3S-16-02202-124
COLUMBIA COUNTY

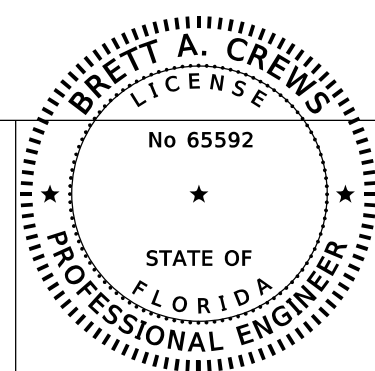
LAY RESIDENCE

ABBREVIATIONS

A.B.	Anchor Bolt	Fir.	Floor	Plt. Ht.	Plate Height
Abv.	Above	Fdn.	Foundation	Plt Sh.	Plant Shelf
A/C	Air-Conditioner	Fir. Sys.	Floor System	PSF	Pounds per square foot
Adj.	Adjustable	F.Pl.	Fireplace	P.T.	Pressure Treated
A.F.F.	Above Finished Floor	Ft.	Foot / Feet	Pwd.	Powder Room
A.H.U.	Air Handler Unit	Ftg.	Footing	Rad.	Radius
ALT.	Alternate	FX	Fixed	Ref.	Refrigerator
B.C.	Base Cabinet	Galv.	Galvanized	Req'd.	Required
B.F.	Bifold Door	G.C.	General Contractor	Rm.	Room
Bk Sh	Book Shelf	G.F.I.	Ground Fault Interrupter	Rnd.	Round
Bm.	Beam	G.T.	Girder Truss	R/SH	Rod and Shelf
BOT.	Bottom	Hdr.	Header	SD.	Smoke Detector
B.P.	Bypass door	Hgt.	Height	S.F.	Square Ft.
Brg.	Bearing	HB	Hose Bibb	Sh.	Shelves
Cir.	Circle	Int.	Interior	SHT	Sheet
Clg.	Ceiling	K/Wall	Kneewall	S.L.	Side Lights
Col.	Column	K.S.	Knee Space	S.P.F.	Spruce Pine Fir
Comp.	A/C Compressor	Laun.	Laundry	Sq.	Square
C.T.	Ceramic Tile	Lav.	Lavatory	S.Y.P.	Southern Yellow Pine
D.	Dryer	L.F.	Linear FL	Temp.	Tempered
Dec.	Decorative	L.T.	Laundry Tub	Thickn.	Thicken
Ded.	Dedicated Outlet	Mas.	Masonry	T.O.B.	Top of Block
Dbl.	Double	Max	Maximum	T.O.M.	Top of Masonry
Dia.	Diameter	M.C.	Medicine Cabinet	T.O.P.	Top of Plate
Disp.	Disposal	MDP	Master Distribution Panel	Trans.	Transom Window
Dist.	Distance	Mfr.	Manufacturer	Typ.	Typical
D.S.	Drawer Stack	Micro.	Microwave	UCL	Under Cabinet Lighting
D.V.	Dryer Vent	Min	Minimum	U.N.O.	Unless Noted Otherwise
D.W.	Dishwasher	M.L.	Microdam	VB	Vanity Base
Ea.	Each	Mir.	Mirror	Vert.	Vertical
E.W.	Each Way	Mono	Monolithic	V.L.	Versalam
Elec.	Electrical	N.T.S.	Not to Scale	VTR	Vent through Roof
Elev.	Elevation	Opn'g.	Opening	W	Washer
Ext.	Exterior	Opt.	Optional	W/	With
Exp.	Expansion	Pc.	Piece	W/C	Water Closet
F.B.C.	Florida Bldg. Code	Ped.	Pedestal	W.A.	Wedge Anchor
Fin. Fir.	Finished Floor	PL	Parallam	Wd	Wood
F.G.	Fixed Glass	PLF	Pounds per linear foot	WP	Water Proof

INDEX OF SHEETS

SHEET	DESCRIPTION
A-1	COVER SHEET
A-2	FLOOR PLAN
A-3	ELEVATIONS FRONT AND REAR
A-4	ELEVATIONS SIDES
A-5	ROOF PLAN
A-6	FOUNDATION PLAN
A-7	SECTIONS AND FRAMING DETAILS
A-8	SHEARWALL DETAILS
A-9	ELECTRICAL PLAN



Brett A. Crews, P.E. 65592

FOUNDATION NOTES

- CONCRETE:
CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS.
- REINFORCING STEEL:
THE REINFORCING STEEL SHALL BE MINIMUM GRADE 40.
- COVER OVER REINFORCING STEEL
FOR FOUNDATIONS, MINIMUM CONCRETE COVER OVER REINFORCING BARS SHALL BE:
3 INCHES IN FOUNDATIONS WHERE THE CONCRETE IS CAST AGAINST AND PERMANENTLY IN CONTACT WITH THE EARTH OR EXPOSED TO THE EARTH OR WEATHER AND 1 1/2 INCHES ELSEWHERE. REINFORCING BARS EMBEDDED IN GROUTED CELLS SHALL HAVE A MINIMUM CLEAR DISTANCE OF 1/4 INCH FOR FINE GROUT OR 1/2 INCH FOR COARSE GROUT BETWEEN REINFORCING BARS AND ANY FACE OF A CELL. REINFORCING BARS USED IN MASONRY WALLS SHALL HAVE A MASONRY COVER (INCLUDING GROUT) OF NOT LESS THAN 2 INCHES FOR MASONRY UNITS WITH FACE EXPOSED TO EARTH OR WEATHER 1 1/2 INCHES FOR MASONRY UNITS NOT EXPOSED TO EARTH OR WEATHER
- REINFORCEMENT MAY BE BENT IN THE SHOP OR THE FIELD PROVIDED:
1. ALL REINFORCEMENT IS BENT COLD.
2. THE DIAMETER OF THE BEND, MEASURED ON THE INSIDE OF THE BAR, IS NOT LESS THAN SIX-BAR DIAMETERS AND
3. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT.
EXCEPTION: WHERE BENDING IS NECESSARY TO ALIGN DOWEL BARS WITH A VERTICAL CELL, BARS PARTIALLY EMBEDDED IN CONCRETE SHALL BE PERMITTED TO BE BENT AT A SLOPE OF NOT MORE THAN 1 INCH OF HORIZONTAL DISPLACEMENT TO 6 INCHES OF VERTICAL BAR LENGTH.
- GALVANIZATION:
METAL ACCESSORIES FOR USE IN EXTERIOR WALL CONSTRUCTION AND NOT DIRECTLY EXPOSED TO THE WEATHER SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 153, CLASS B-2. METAL PLATE CONNECTORS, SCREWS, BOLTS AND NAILS EXPOSED DIRECTLY TO THE WEATHER SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED.
- CONCRETE SLABS ON GRADE:
1. ALL INTERIOR AND EXTERIOR SLABS AND WALKWAYS AS SHOWN ON THE STRUCTURAL OR ARCHITECTURAL PLANS, SHALL BE FOUR INCHES THICK MINIMUM REINFORCED WITH 6 X 6 - W1.4 X W1.4 WELDED WIRE FABRIC (UNLESS OTHERWISE NOTED).
2. ALL SLABS ON GRADE TO BE CONSTRUCTED IN ACCORDANCE WITH LATEST A.C.I. - "GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION" (A.C.I. - 302.1R).
3. JOINTS SHALL BE PROVIDED IN ALL INTERIOR SLABS ON GRADE AT COLUMN CENTER-LINES DIVIDING THE SLAB INTO SQUARE PANELS NOT TO EXCEED 20 X 20 FT. IN SIZE. CAST SLAB IN LONG ALTERNATE STRIPS. PROVIDE A CONTRACTION JOINT BETWEEN EACH STRIP. SEE PLAN FOR SAW-CUT, CONTRACTION AND ISOLATION JOINT DETAILS.
4. PROVIDE SAW-CUT JOINTS AT ALL SIDEWALKS AT A MAXIMUM SPACING OF FIVE FEET ON CENTERS AND ISOLATION JOINTS AT 20 FEET O.C. (U.O.N.).
5. FILL MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING 12" AND COMPACTED TO 98 % MODIFIED PROCTOR (ASTM D-1557) WITHIN A DISTANCE OF 3 FEET BEYOND ALL FOOTING EDGES. TAKE AT LEAST ONE DENSITY TEST FOR EACH 1,800 SQ.FT. OF AREA AND 12" BELOW SURFACE. SEND RESULTS OF THE TEST TO OWNER, ARCHITECT AND ENGINEER.
6. ALL CONCRETE SHALL BE THOROUGHLY CONSOLIDATED BY MECHANICAL VIBRATION DURING PLACEMENT AND SHALL BE THOROUGHLY WORKED AROUND REINFORCEMENT AND EMBEDDED FIXTURES AND ALL FORMS AND KEYWAYS.
- TERMITE PROTECTION NOTES:
SOIL CHEMICAL BARRIER METHOD:
1. A PERMANENT SIGN WHICH IDENTIFIES THE TERMITE TREATMENT PROVIDER AND NEED FOR REINSPECTION AND TREATMENT CONTRACT RENEWAL SHALL BE PROVIDED. THE SIGN SHALL BE POSTED NEAR THE WATER HEATER OR ELECTRIC PANEL. FBC 104.2.6
2. CONDENSATE AND ROOF DOWNSPOUTS SHALL DISCHARGE AT LEAST 1'-0" AWAY FROM BUILDING SIDE WALLS. FBC 1503.4.4
3. IRRIGATION/SPRINKLER SYSTEMS INCLUDING ALL RISERS AND SPRAY HEADS SHALL NOT BE INSTALLED WITHIN 1'-0" FROM BUILDING SIDE WALLS. FBC 1503.4.4
4. TO PROVIDE FOR INSPECTION FOR TERMITE INFESTATION, BETWEEN WALL COVERINGS AND FINAL EARTH GRADE SHALL NOT BE LESS THAN 6". EXCEPTION: PAINT AND DECORATIVE CEMENTIOUS FINISH LESS THAN 5/8" THICK ADHERED DIRECTLY TO THE FOUNDATION WALL. FBC 1403.1.6
5. INITIAL TREATMENT SHALL BE DONE AFTER ALL EXCAVATION AND BACKFILL IS COMPLETE. FBC 1816.1.1
6. SOIL DISTURBED AFTER THE INITIAL TREATMENT SHALL BE RETREATED INCLUDING SPACES BOXED OR FORMED. FBC 1816.1.2
7. BOXED AREAS IN CONCRETE FLOOR FOR SUBSEQUENT INSTALLATION OF TRAPS, ETC., SHALL BE MADE WITH PERMANENT METAL OR PLASTIC FORMS. PERMANENT FORMS MUST BE OF A SIZE AND DEPTH THAT WILL ELIMINATE THE DISTURBANCE OF SOIL AFTER THE INITIAL TREATMENT. FBC 1816.1.3
8. MINIMUM 6 MIL VAPOR RETARDER MUST BE INSTALLED TO PROTECT AGAINST RAINFALL DILUTION. IF RAINFALL OCCURS BEFORE VAPOR RETARDER PLACEMENT, RETREATMENT IS REQUIRED. FBC 1816.1.4
9. CONCRETE OVERPOUR AND MORTAR ALONG THE FOUNDATION PERIMETER MUST BE REMOVED BEFORE EXTERIOR SOIL TREATMENT. FBC 1816.1.5
10. SOIL TREATMENT MUST BE APPLIED UNDER ALL EXTERIOR CONCRETE OR GRADE WITHIN 1'-0" OF THE STRUCTURE SIDEWALLS. FBC 1816.1.6
11. AN EXTERIOR VERTICAL CHEMICAL BARRIER MUST BE INSTALLED AFTER CONSTRUCTION IS COMPLETE INCLUDING LANDSCAPING AND IRRIGATION. ANY SOIL DISTURBED AFTER THE VERTICAL BARRIER IS APPLIED, SHALL BE RETREATED. FBC 1816.1.6
12. ALL BUILDINGS ARE REQUIRED TO HAVE PER-CONSTRUCTION TREATMENT. FBC 1816.1.7
13. A CERTIFICATE OF COMPLIANCE MUST BE ISSUED TO THE BUILDING DEPARTMENT BY # LICENSED PEST CONTROL COMPANY BEFORE A CERTIFICATE OF OCCUPANCY WILL BE ISSUED. THE CERTIFICATE OF COMPLIANCE SHALL STATE: "THE BUILDING HAS RECEIVED A COMPLETE TREATMENT FOR THE PREVENTION OF SUBTERRANEAN TERMITES. THE TREATMENT IS IN ACCORDANCE WITH THE RULES AND LAWS OF THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES". FBC 1816.1.7
14. AFTER ALL WORK IS COMPLETED, LOOSE WOOD AND FILL MUST BE REMOVED FROM BELOW AND WITHIN 1'-0" OF THE BUILDING. THIS INCLUDES ALL GRADE STAKES, TUB TRAP BOXES, FORMS, SHORING OR OTHER CELLULOSE CONTAINING MATERIAL. FBC 2303.1.3
15. NO WOOD, VEGETATION, STUMPS, CARDBOARD, TRASH, ETC., SHALL BE BURIED WITHIN 15'-0" OF ANY BUILDING OR PROPOSED BUILDING. FBC 2303.1.4

REVISIONS		
DATE	BY	DESCRIPTION

DESIGN BY:

TRADEMARK
Construction Group, Inc.

CERTIFIED GENERAL CONTRACTOR
CGC1514780

163 SW MIDTOWN PL.
STE. 101
LAKE CITY, FL. 32025
(386)755-5254

CES
Crews Engineering Services, LLC

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NO. 28022

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DRAWN BY:

TM

APPROVED BY:

BC

LAY RESIDENCE

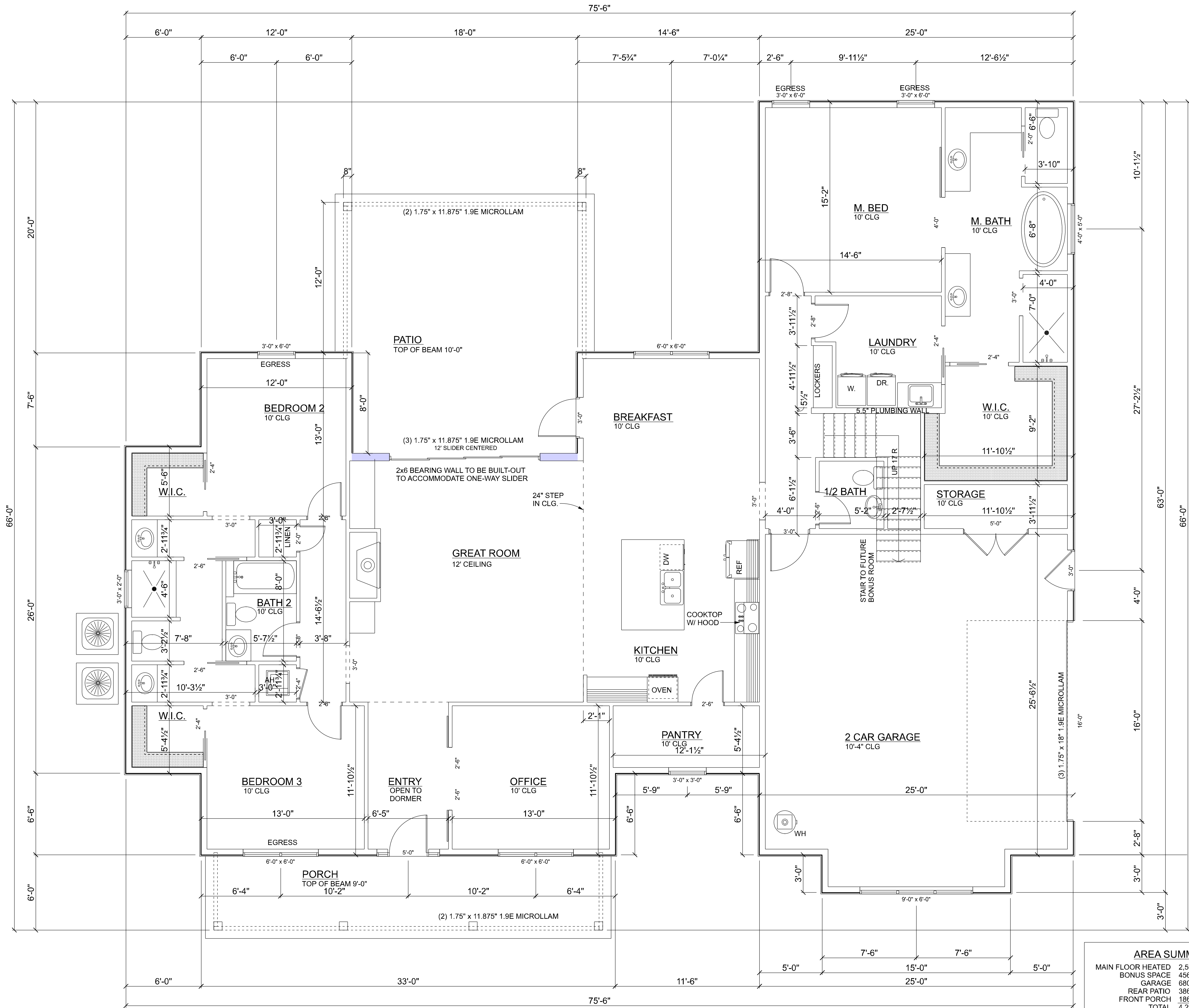
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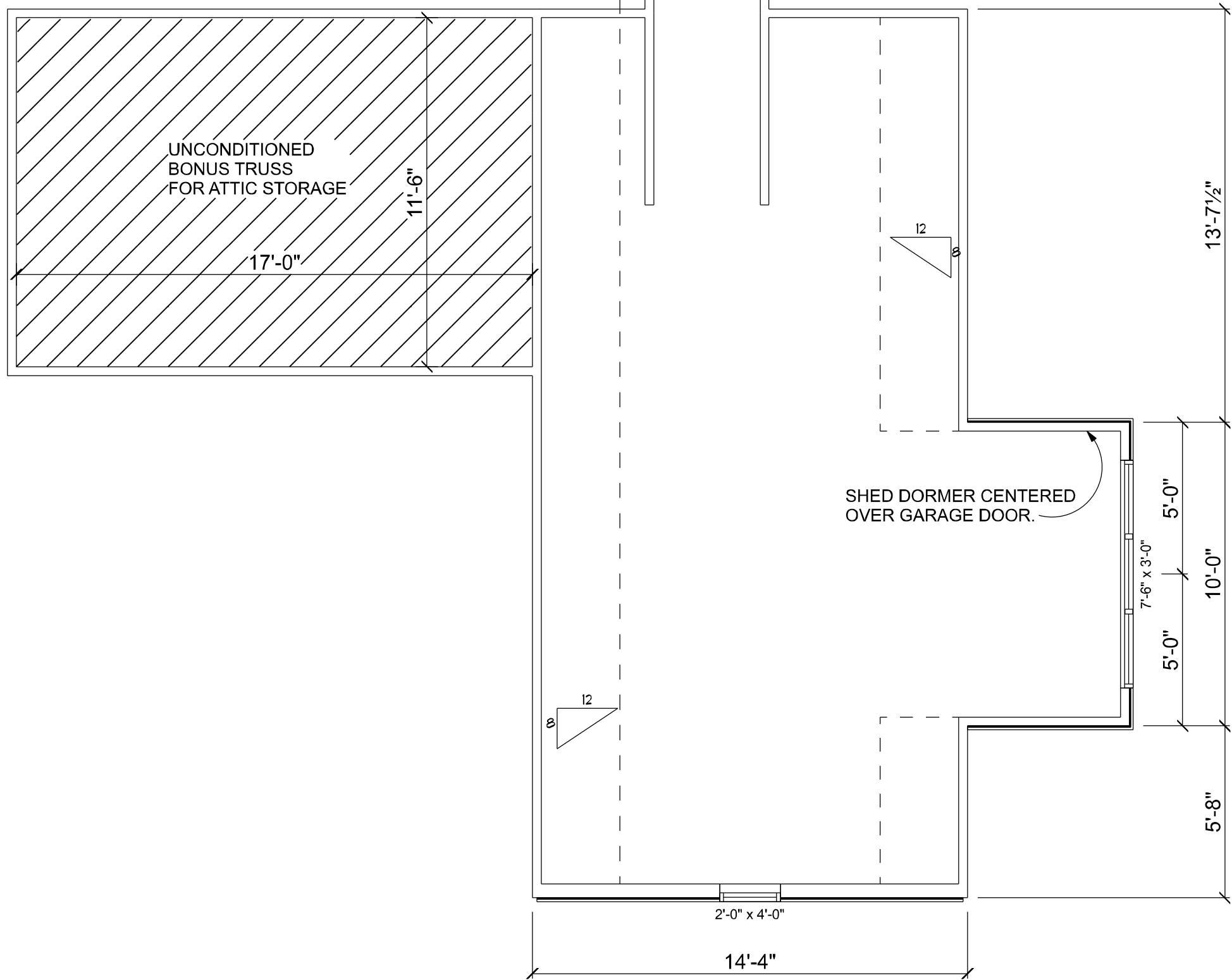
R22.013

SHEET:

A-1



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



OPTIONAL BONUS
ROOM LAYOUT
SCALE: 1/4" = 1'-0"

AREA SUMMARY	
MAIN FLOOR HEATED	2,590 SF
BONUS SPACE	456 SF
GARAGE	680 SF
REAR PATIO	386 SF
FRONT PORCH	186 SF
TOTAL	4,298 SF

REVISIONS		
DATE	BY	DESCRIPTION

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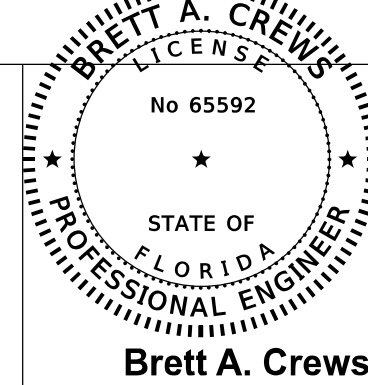
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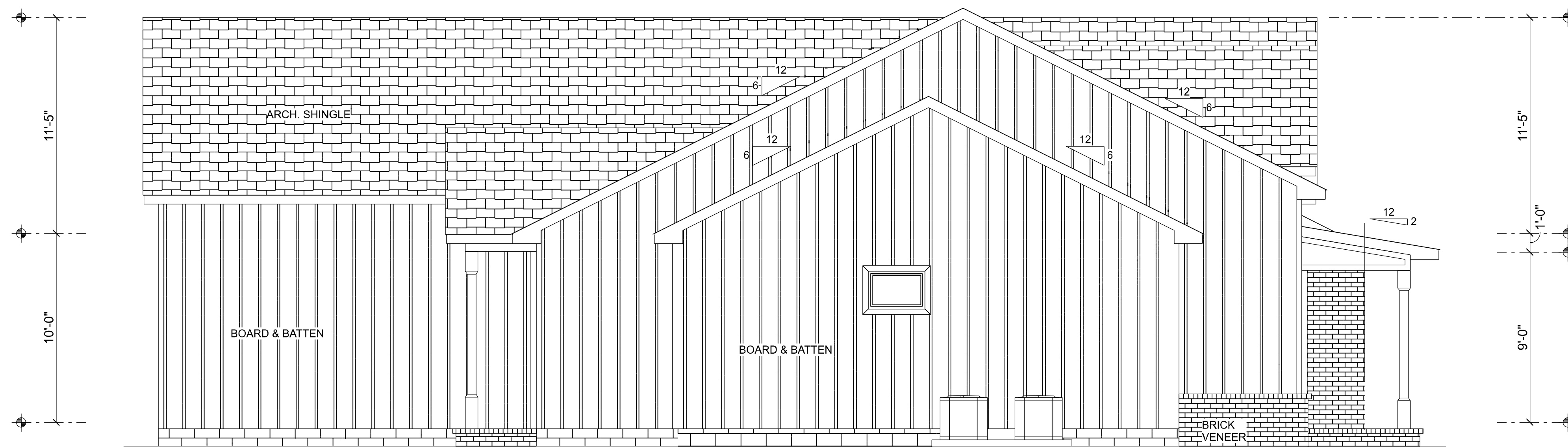
FLOOR PLAN

PROJECT NO.:

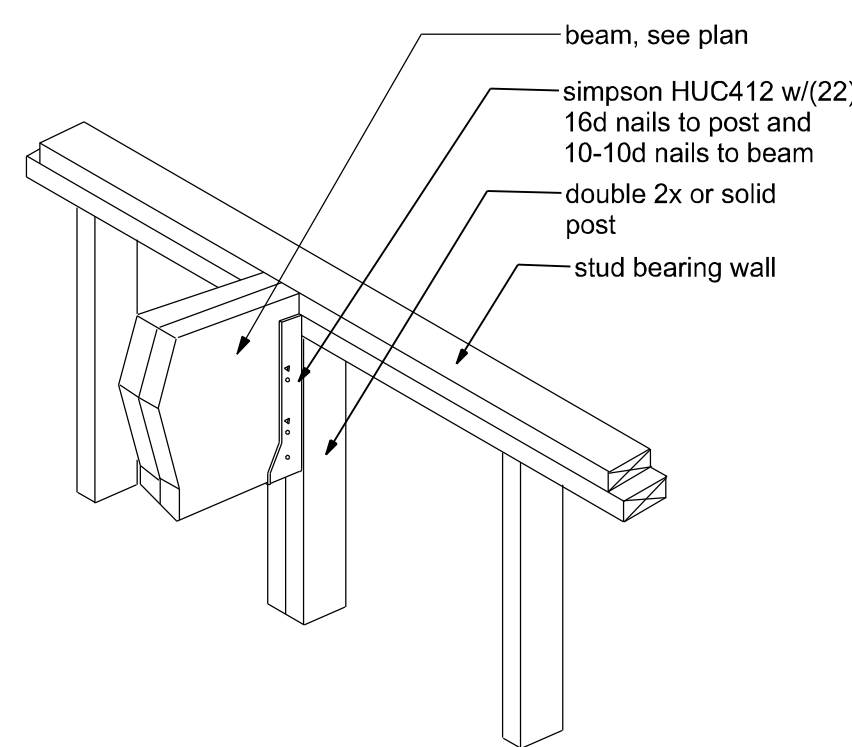
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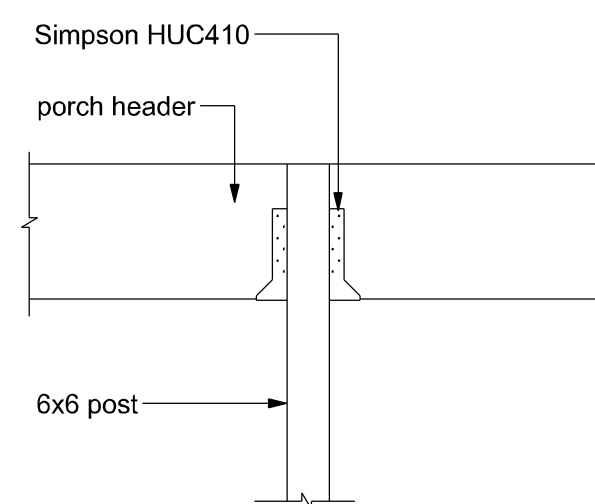
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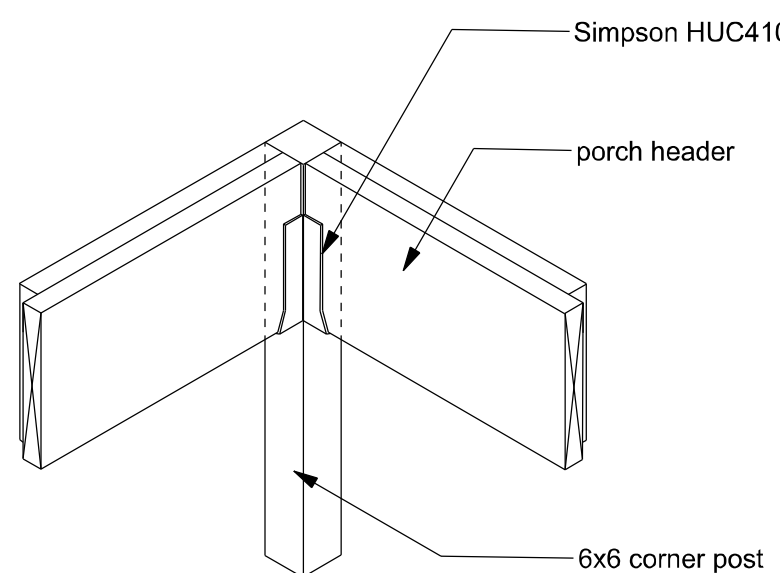
LEFT ELEVATION
SCALE: 1/4" = 1'-0"



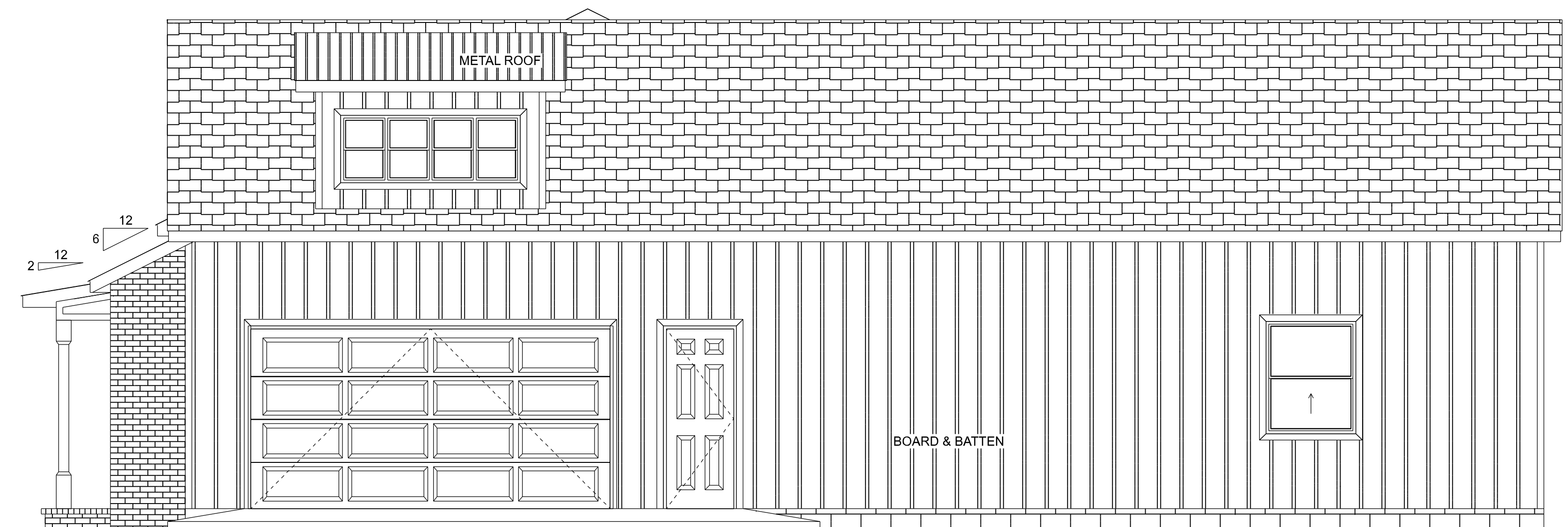
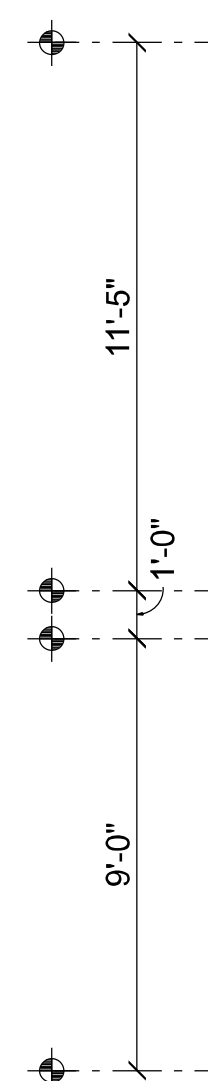
BEAM/WALL CONNECTION
MAX. CAPACITY - 3640# DOWN; 1810# UPLIFT NOT TO SCALE



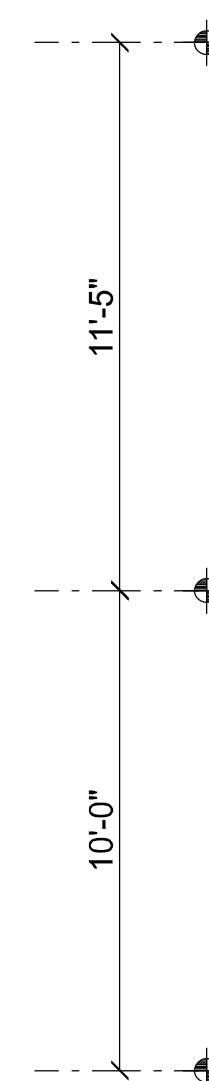
INTERMEDIATE POST
NTS



CORNER POST
NTS



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

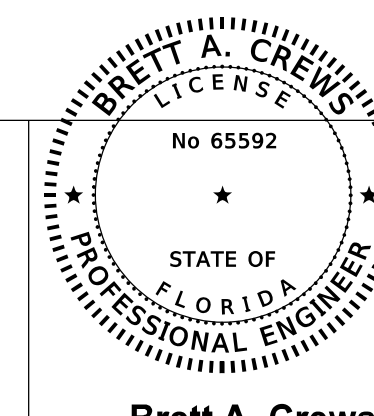


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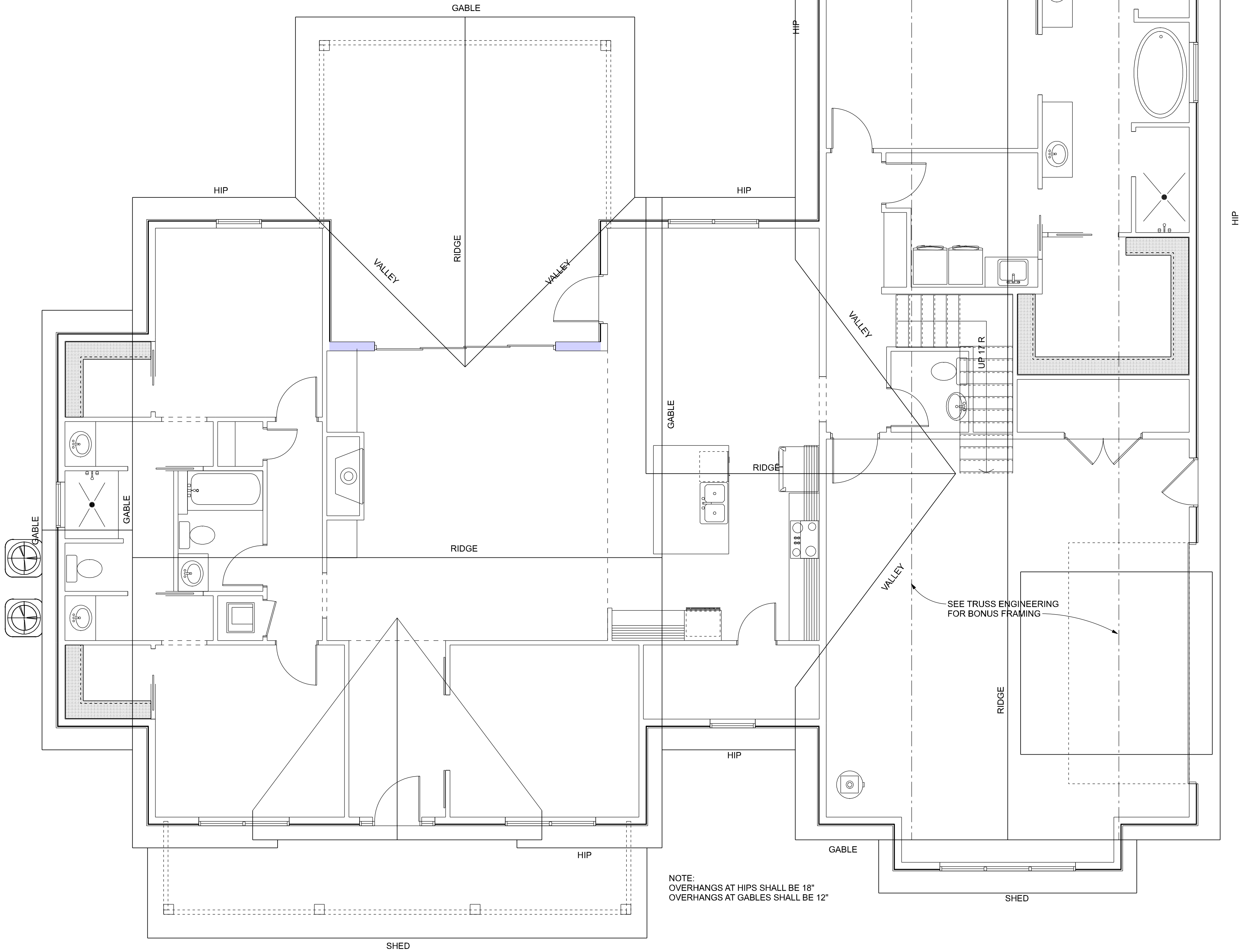
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TM
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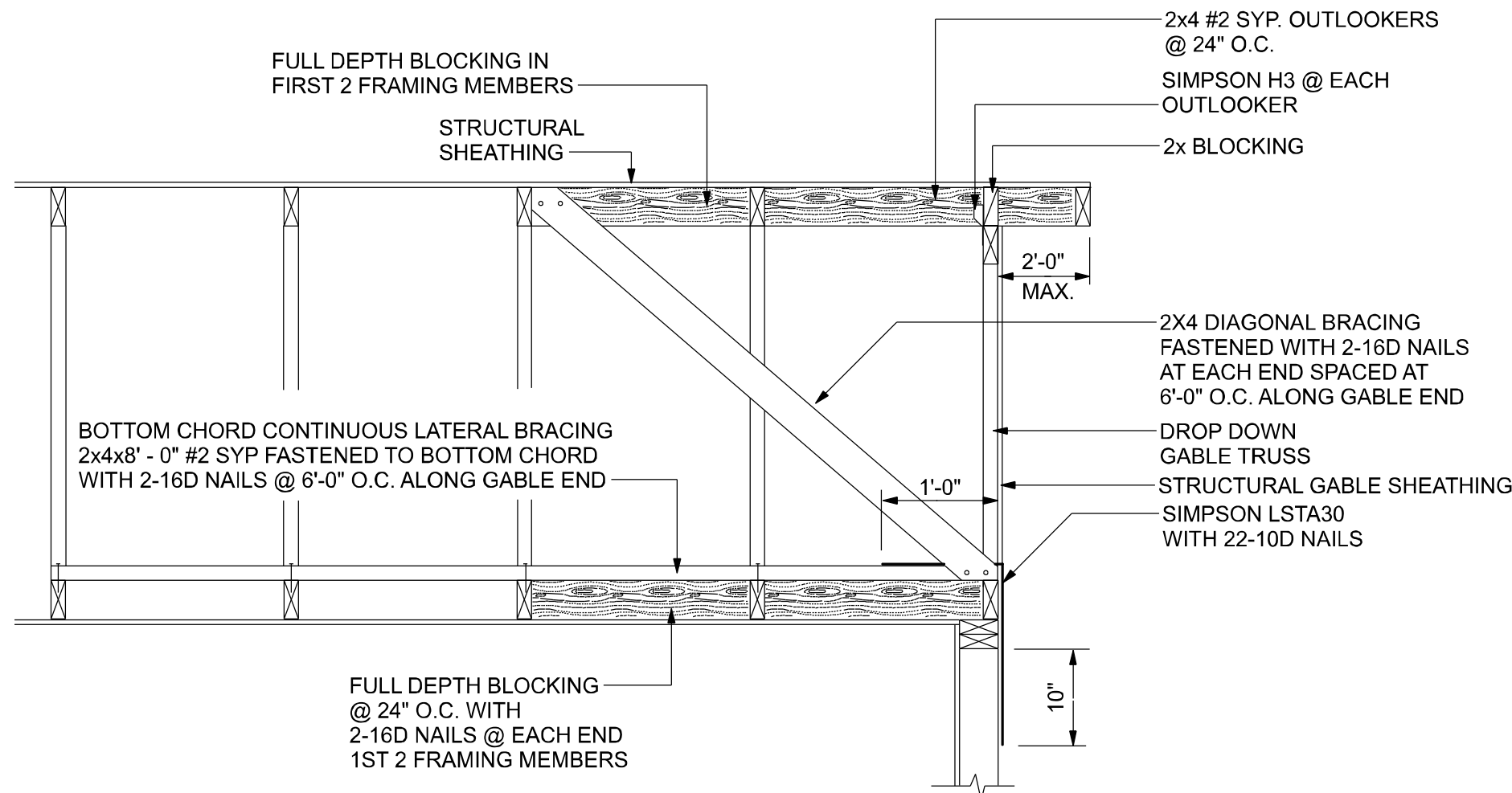
ELEVATIONS SIDES

PROJECT NO.:
 R22.013
 SHEET:
A-4

CONNECTOR SCHEDULE FOR TRUSS ANCHORAGE				
CONNECTOR	TRUSS	TOP PLATE	UPLIFT PROVIDED	MANUFACTURER
H2.5	5-8d NAILS	5-8d NAILS	365 LBS	SIMPSON
H10	8-8d NAILS	8-8d NAILS	850 LBS	SIMPSON
MTS12	7-10d NAILS	7-10d NAILS	1,000 LBS	SIMPSON
H16	2-10d NAILS	10-10d NAILS	1,300 LBS	SIMPSON
(2)HTS20	10-10d NAILS	10-10d NAILS	2 x 1,450 = 2,900 LBS	SIMPSON



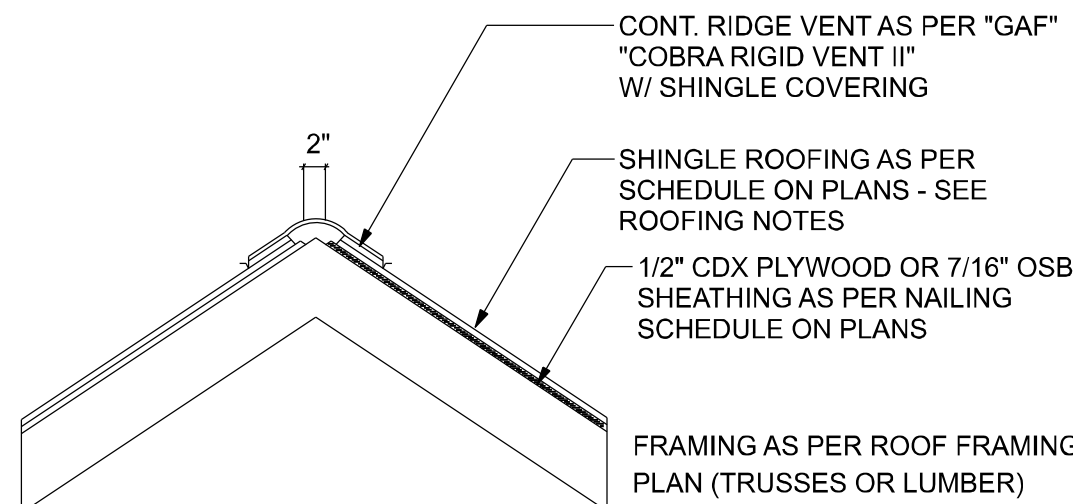
ROOF LAYOUT
SCALE: 1/4" = 1'-0"



END WALL BRACING FOR CEILING DIAPHRAGM

NTS NOTE: ALL WOOD TO BE NUMBER 2 GRADE SOUTHERN YELLOW PINE

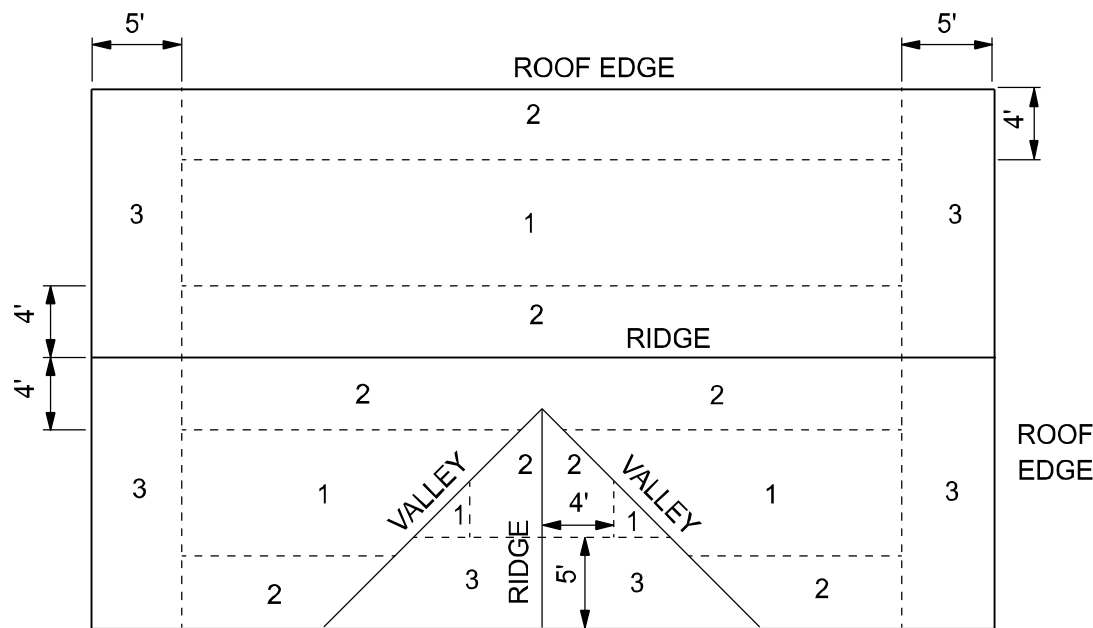
ROOF SHEATHING FASTENERS			
NAILING ZONE	SHEATHING TYPE	FASTENER	SPACING
1	7/16" OSB	8D GALV. RING SHANK NAILS	6" O.C. EDGE 12" O.C. FIELD
2			6" O.C. EDGE 6" O.C. FIELD
3 (N/A)			4" O.C. @ GABLES 6" O.C. EDGE 6" O.C. FIELD



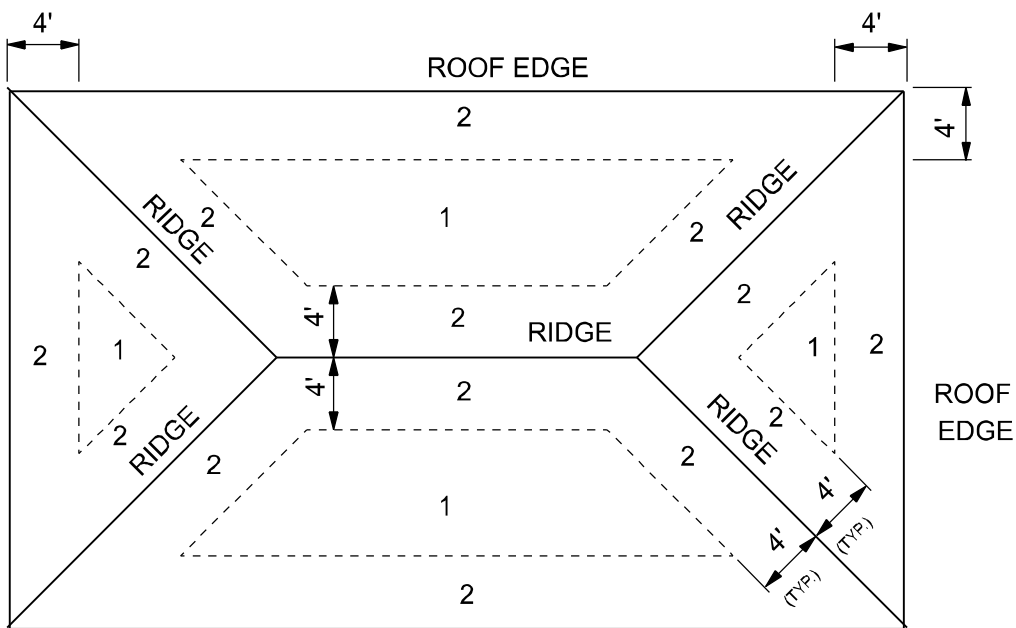
RIDGE VENT DETAIL

NOTE:
VENTING SHALL BE PROVIDED SUCH THAT TOTAL
NET FREE VENTILATING AREA SHALL NOT BE
LESS THAN 1/150 OF THE AREA OF THE SPACE
VENTILATED

ROOF SHEATHING
FASTENING



ROOF SHEATHING
NAILING ZONES
(GABLE ROOF)



ROOF SHEATHING
NAILING ZONES
(HIP ROOF)

REVISIONS		
DATE	BY	DESCRIPTION

DESIGN BY:

TRADEMARK
Construction Group, Inc.

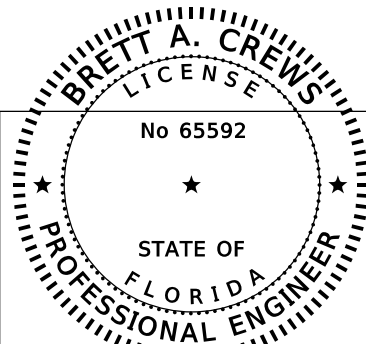
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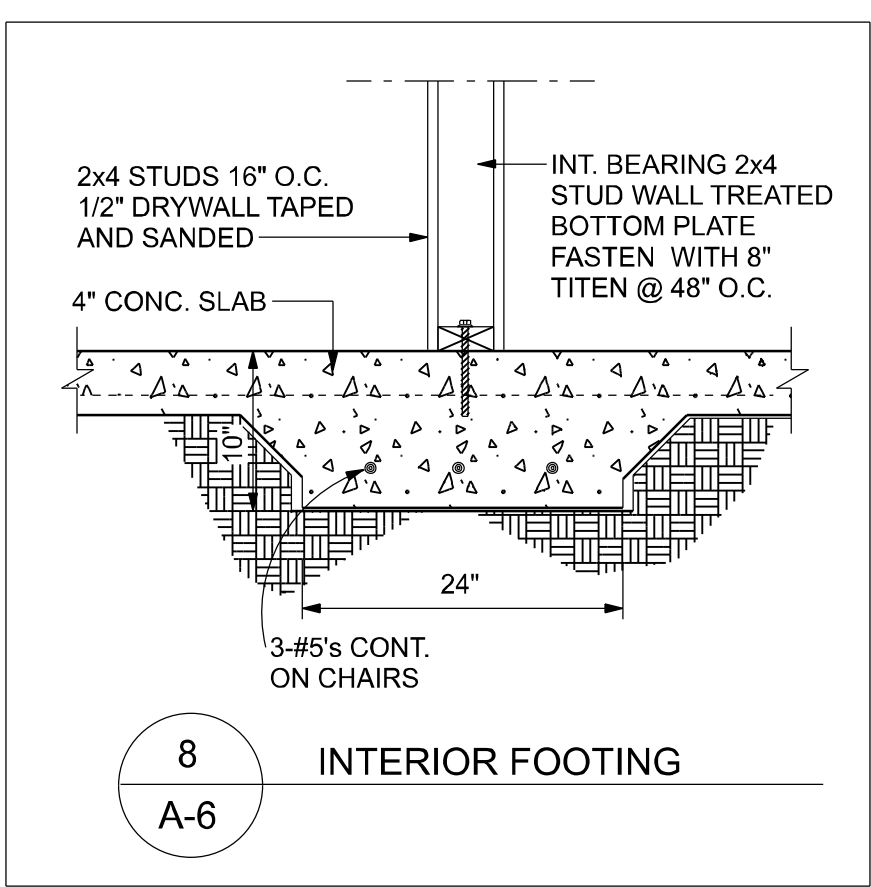
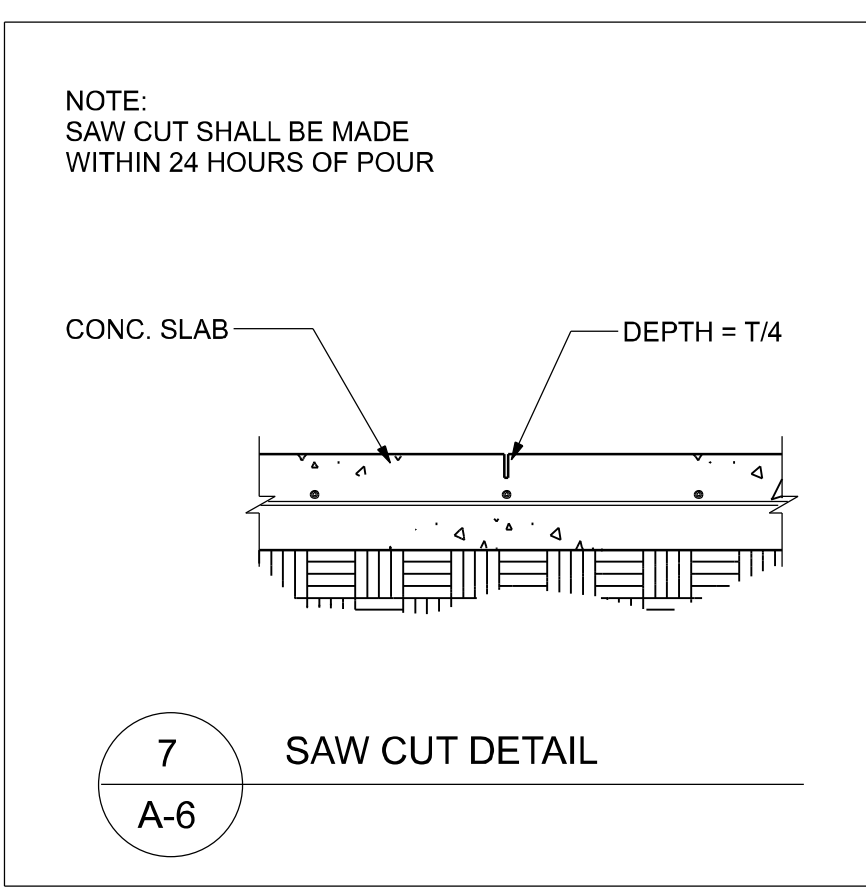
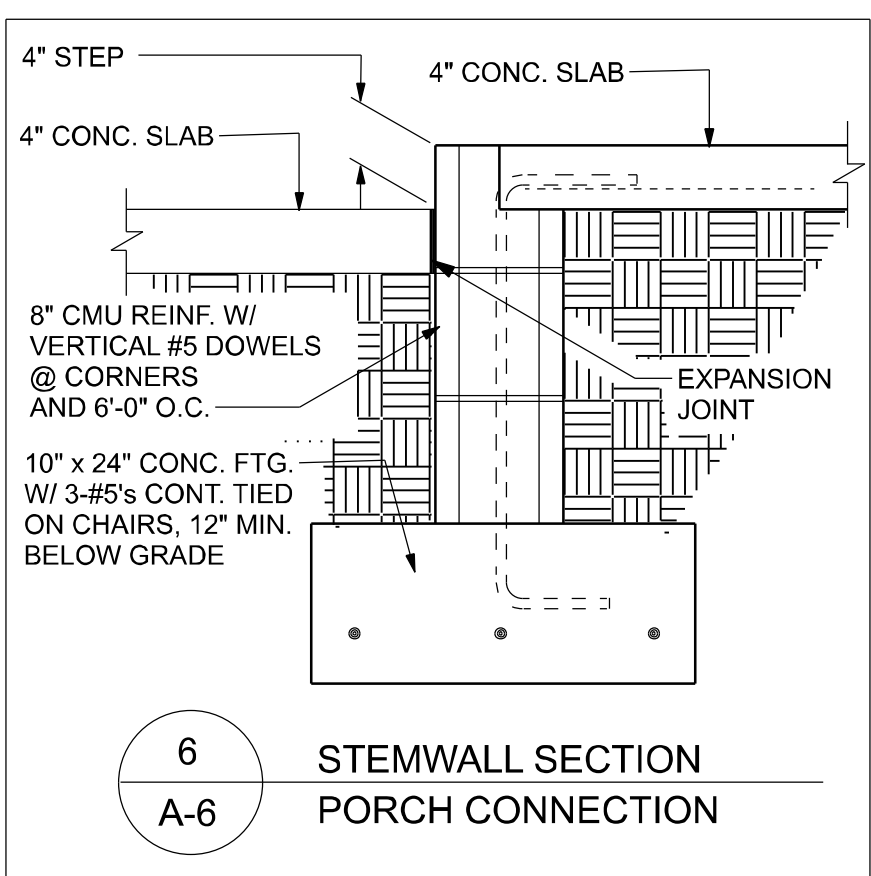
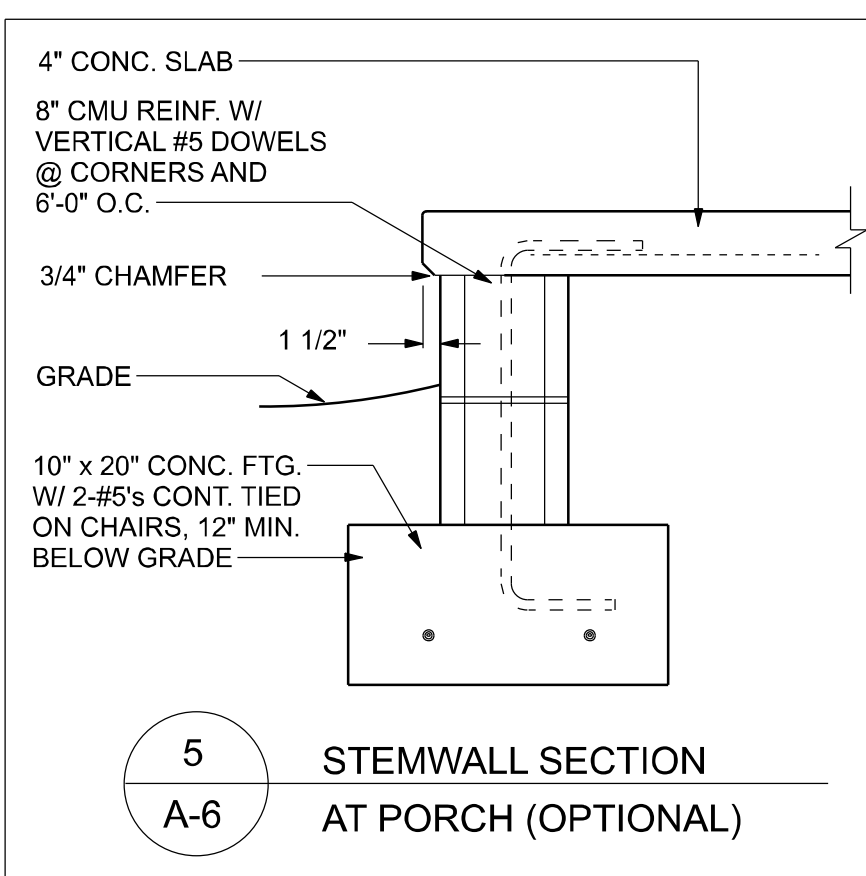
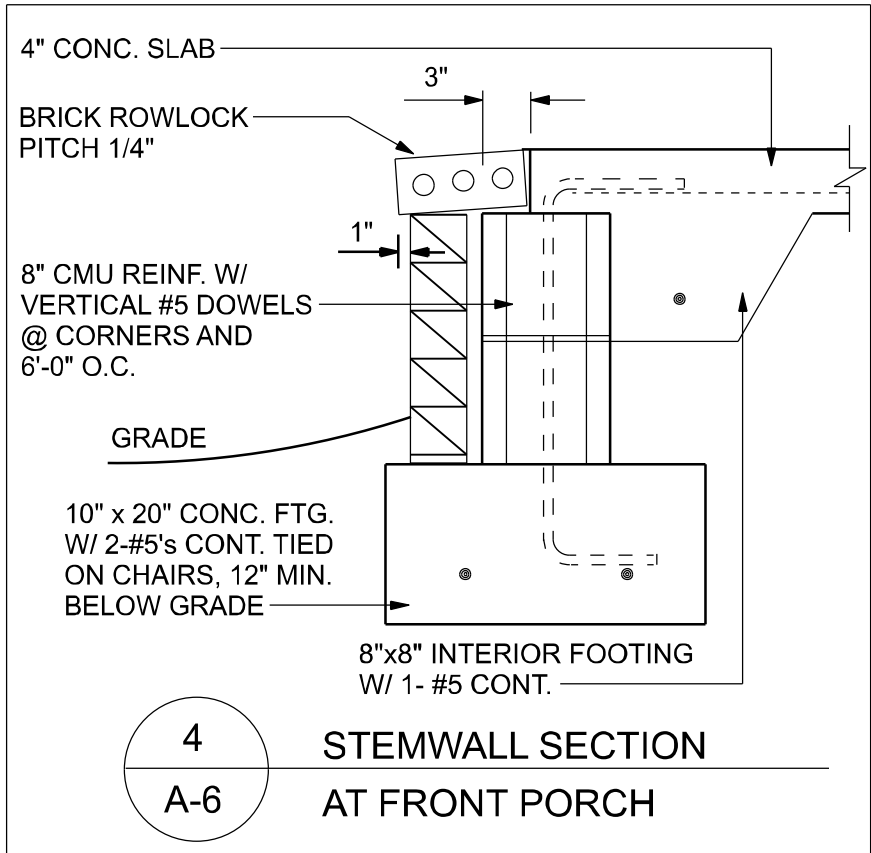
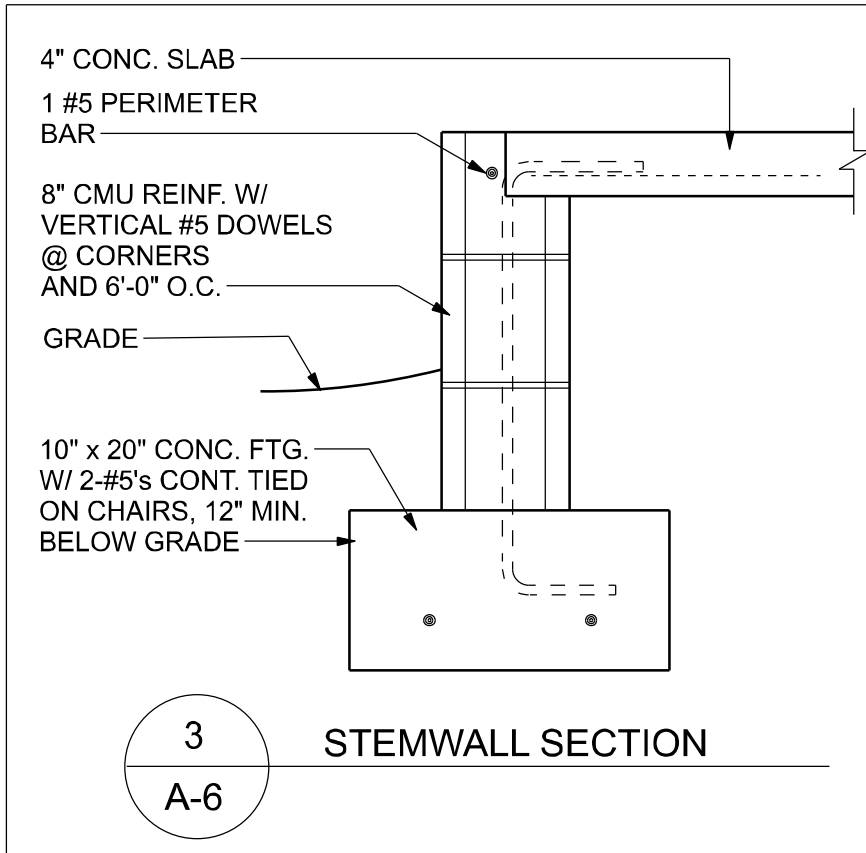
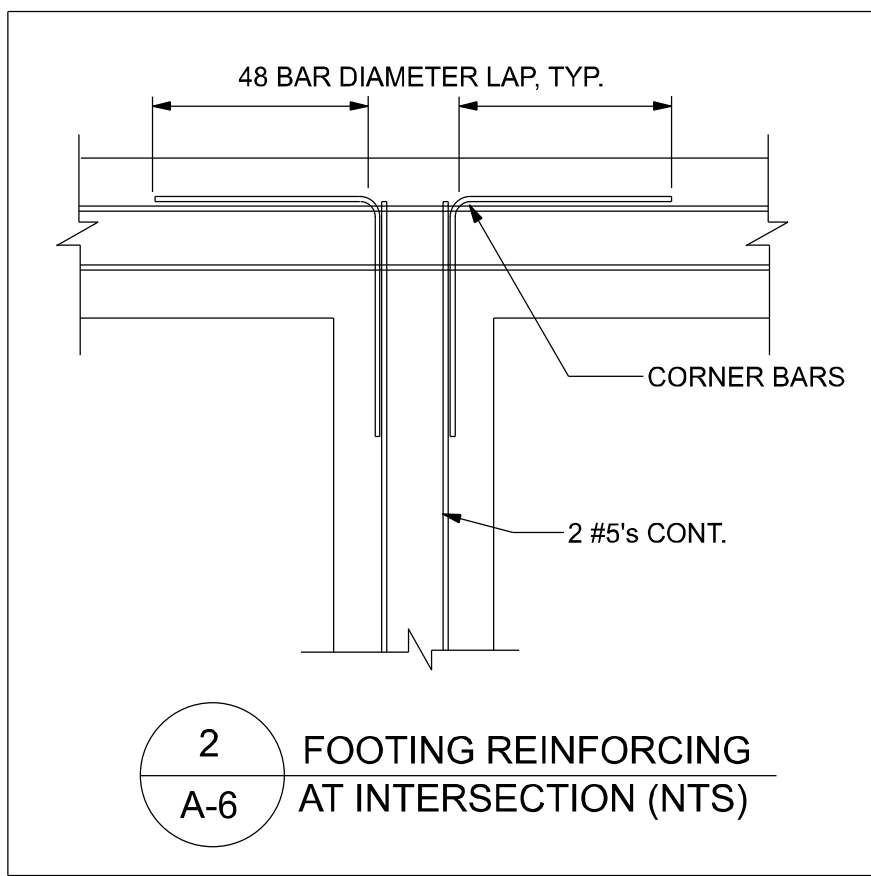
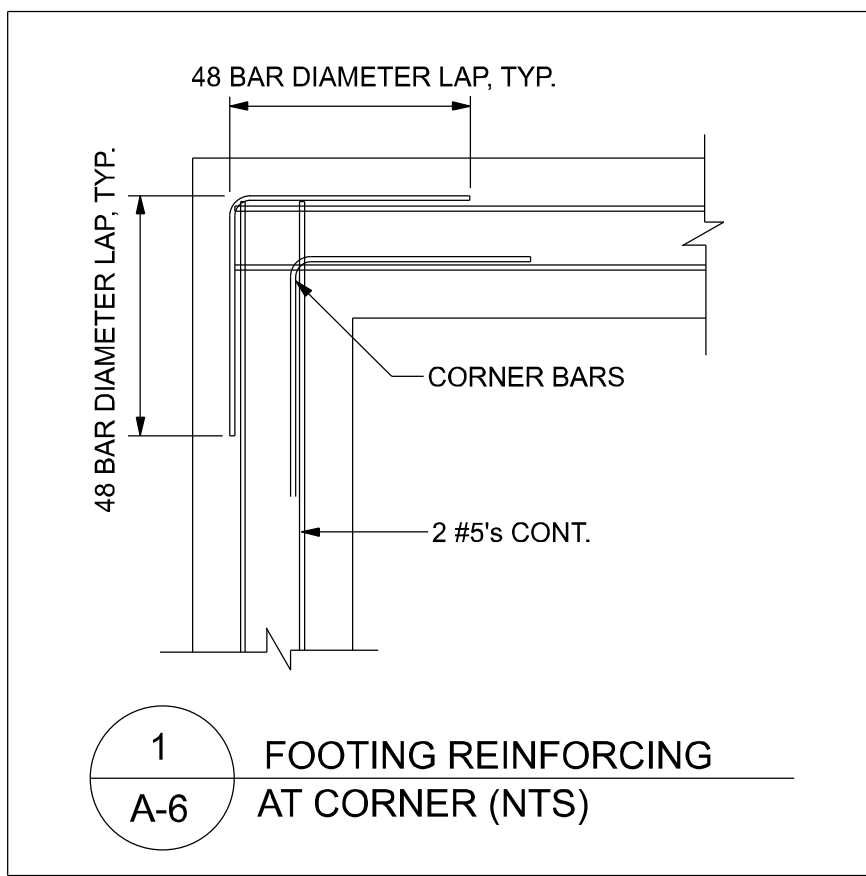
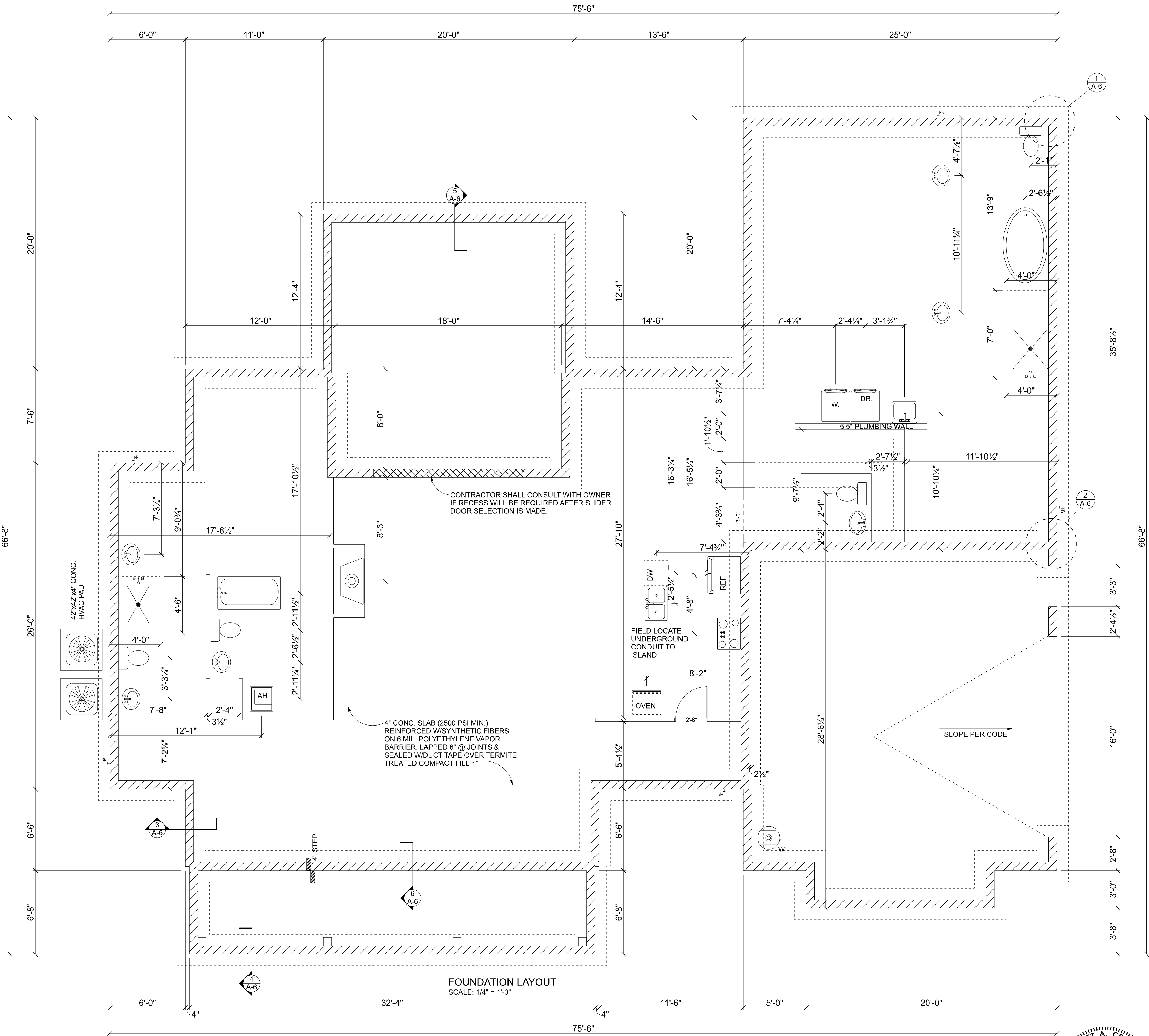
ROOF PLAN

PROJECT NO.:

R22.013

SHEET:

A-5



NOTE:
STEMWALL HEIGHTS MAY DIFFER IN THE FIELD BUT
SHALL NOT EXCEED 5'-4" UNLESS APPROVED BY
THE ENGINEER.

REVISIONS		
DATE	BY	DESCRIPTION

DESIGN BY:
TRADEMARK
Construction Group, Inc.

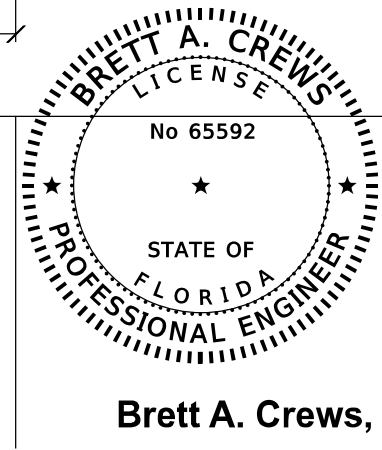
CERTIFIED GENERAL CONTRACTOR
CGC1514780

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CES
Crews Engineering Services, LLC

CERTIFICATE OF AUTHORIZATION
NO. 28022

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DRAWN BY: TM	LAY RESIDENCE	PROJECT NO.: R22.013
APPROVED BY: BC		SHEET: A-6

SHINGLE NOTES:
DECK REQUIREMENTS:
ASPHALT SHINGLES SHALL BE FASTENED TO SOLIDLY SHEATHED DECKS.

SLOPE:
ASPHALT SHINGLES SHALL BE USED ONLY ON ROOF SLOPES OF 4:12 OR GREATER. FOR ROOF SLOPES FROM 3:12 TO 4:12, DOUBLE UNDERLAYMENT IS REQUIRED.

UNDERLAYMENT:
UNLESS OTHERWISE NOTED, UNDERLAYMENT SHALL CONFORM WITH ASTM D 226, TYPE 1, OR ASTM D 4869, TYPE 1.

SELF-ADHERING POLYMER MODIFIED BITUMEN SHEET:
SELF ADHERING POLYMER MODIFIED BITUMEN SHALL COMPLY WITH ASTM D 1970.

ASPHALT SHINGLES:
ASPHALT SHINGLES SHALL HAVE SELF SEAL STRIPS OR BE INTERLOCKING, AND COMPLY WITH ASTM D 225 OR ASTM D 3462.

FASTENERS:
FASTENERS FOR ASPHALT SHINGLES SHALL BE GALVANIZED, STAINLESS STEEL, ALUMINUM OR COPPER ROOFING NAILS, MINIMUM 12 GAUGE SHANK WITH A MINIMUM 3/8 INCH DIAMETER HEAD, OF A LENGTH TO PENETRATE THROUGH THE ROOFING MATERIAL AND A MINIMUM 3/4" INTO THE ROOF SHEATHING. WHERE ROOF SHEATHING IS LESS THAN 3/4" THICK, THE NAILS SHALL PENETRATE THROUGH THE SHEATHING.

ATTACHMENT:
ASPHALT SHINGLES SHALL BE SECURED TO THE ROOF WITH NOT LESS THAN FOUR FASTENERS PER STRIP SHINGLE OR TWO FASTENERS PER INDIVIDUAL SHINGLE. WHERE ROOFS LOCATED IN BASIC WIND SPEED OF 110 MPH OR GREATER, SPECIAL METHODS OF FASTENING ARE REQUIRED. UNLESS OTHERWISE NOTED, ATTACHMENT OF ASPHALT SHINGLES SHALL CONFORM WITH ASTM D 3161 OR M-DC PA 107-95.

UNDERLAYMENT APPLICATION:
FOR ROOF SLOPES FROM 3:12 TO 4:12, UNDERLAYMENT SHALL BE A MINIMUM OF TWO LAYERS APPLIED AS FOLLOWS:
1. STARTING AT THE EAVE, A 19 INCH STRIP OF UNDERLAYMENT SHALL BE APPLIED PARALLEL WITH THE EAVE AND FASTENED SUFFICIENTLY TO STAY IN PLACE.
2. STARTING AT THE EAVE, 36 INCH WIDE STRIPS OF UNDERLAYMENT FELT SHALL BE APPLIED OVERLAPPING SUCCESSIVE SHEETS 19 INCHES AND FASTENED SUFFICIENTLY TO STAY IN PLACE.

FOR ROOF SLOPED 4:12 AND GREATER, UNDERLAYMENT SHALL BE A MINIMUM OF ONE LAYER OF UNDERLAYMENT FELT APPLIED AS FOLLOWS:
STARTING AT THE EAVE, UNDERLAYMENT SHALL BE APPLIED SHINGLE FASHION PARALLEL TO THE EAVE, LAPPED 2 INCHES, AND FASTENED SUFFICIENTLY TO STAY IN PLACE.

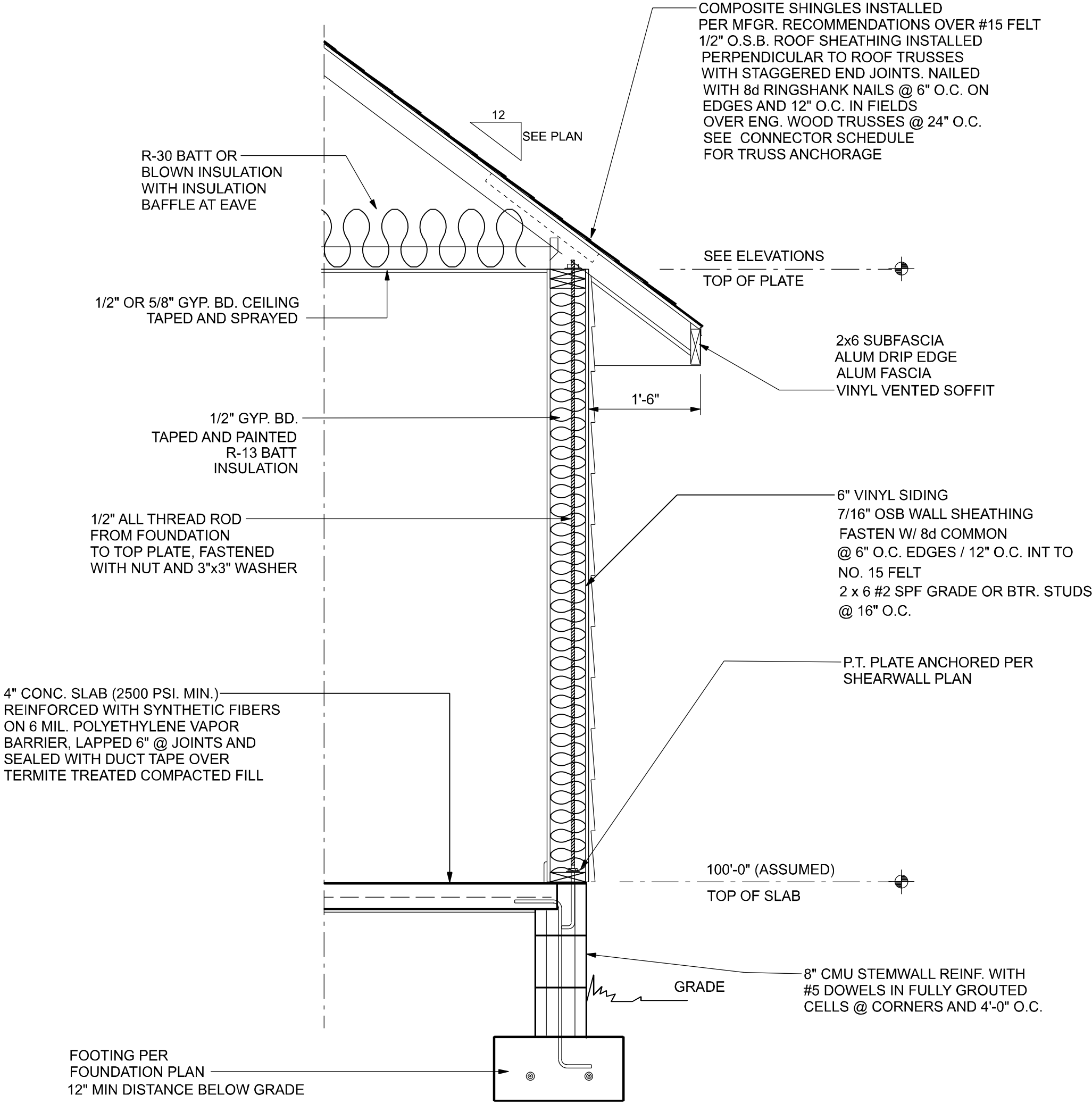
BASE AND CAP FLASHINGS:
BASE AND CAP FLASHING SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. BASE FLASHING SHALL BE OF EITHER CORROSION RESISTANT METAL OF MINIMUM NOMINAL THICKNESS 0.019 INCH OR MINERAL SURFACE ROLL ROOFING WEIGHING A MINIMUM OF 77 LBS PER 100 SQUARE FEET. CAP FLASHING SHALL BE CORROSION RESISTANT METAL OF MINIMUM NOMINAL THICKNESS OF 0.019 INCH.

VALLEYS:
VALLEY LININGS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS BEFORE APPLYING ASPHALT SHINGLES. VALLEY LININGS OF THE FOLLOWING TYPES SHALL BE PERMITTED.
1. FOR OPEN VALLEYS LINED WITH METAL, THE VALLEY LINING SHALL BE AT LEAST 16 INCHES WIDE AND OF ANY OF THE CORROSION RESISTANT METALS IN TABLE 1507.3.9.2.
2. FOR OPEN VALLEYS, VALLEY LINING OF TWO PLIES OF MINERAL SURFACE ROLL ROOFING SHALL BE PERMITTED. THE BOTTOM LAYER SHALL BE 18 INCHES AND THE TOP LAYER A MINIMUM OF 36 INCHES WIDE.
3. FOR CLOSED VALLEYS VALLEY LINING SHALL BE ONE OF THE FOLLOWING:
1. BOTH TYPES 1 AND 2 ABOVE, COMBINED.
2. ONE PLY OF SMOOTH ROLL ROOFING AT LEAST 36 INCHES WIDE AND COMPLYING WITH ASTM D 224.
3. SPECIALTY UNDERLAYMENT AT LEAST 36 INCHES WIDE AND COMPLYING WITH ASTM D 1970.

MATERIAL	MINIMUM THICKNESS (in)	GAGE	WEIGHT (LB)
COPPER			1
ALUMINUM	0.024		
STAINLESS STEEL		28	
GALVANIZED STEEL	0.0179	26 (zinc coated G90)	
ZINC ALLOY LEAD PAINTED TERNE	0.027		2 1/2 20

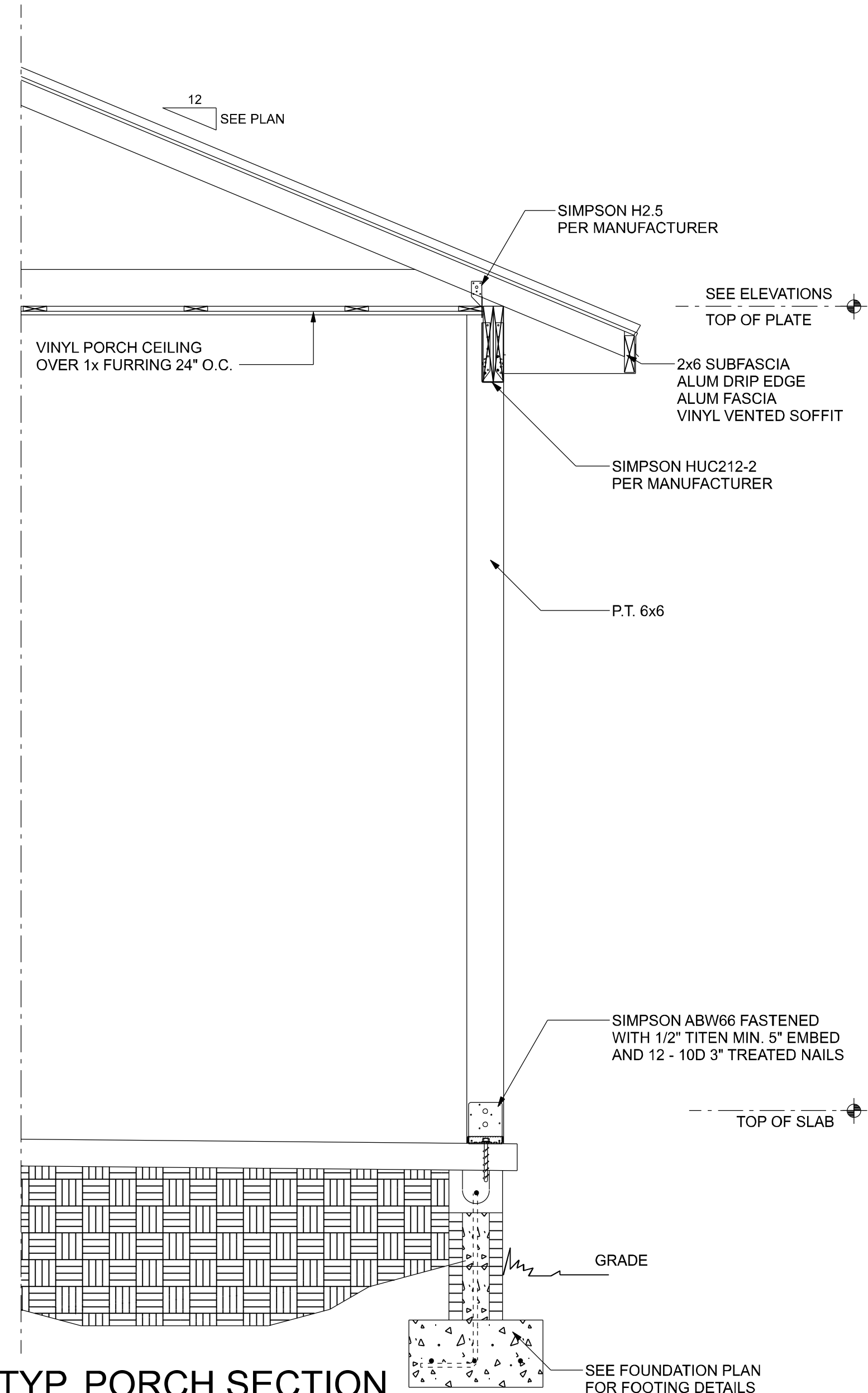
GENERAL NOTES:

- THE CONTRACTOR SHALL INDEMNIFY THE OWNER AGAINST ALL CLAIMS, WHETHER FROM PERSONAL INJURY OR PROPERTY DAMAGE, ARISING FROM EVENTS ASSOCIATED WITH THE WORK PERFORMED UNDER THE CONTRACT FOR THIS PROJECT.
- THE CONTRACTOR AND/OR SUB-CONTRACTORS SHALL WARRANT ALL WORK FOR A PERIOD OF ONE YEAR FOLLOWING THE WORK DATE OF FINAL COMPLETION AND ACCEPTANCE BY THE OWNER. DEFECTS IN MATERIALS, EQUIPMENT, COMPONENTS AND WORK-MANSHIP SHALL BE CORRECTED AT NO FURTHER COST TO THE OWNER DURING THE ONE YEAR WARRANTY PERIOD.
- AT THE OWNER'S OPTION, A WARRANTY INSPECTION SHALL BE PERFORMED DURING THE ELEVENTH MONTH FOLLOWING THE COMMENCEMENT OF THE WARRANTY PERIOD, FOR THE PURPOSE OF DETERMINING ANY WARRANTY WORK THAT MAY BE REQUIRED. THE CONTRACTOR SHALL BE PRESENT DURING THIS INSPECTION IF REQUESTED BY THE OWNER.
- THE CONTRACTOR SHALL PAY FOR ALL PERMITS, LICENSES, TESTS AND THE LIKE THAT MAY BE REQUIRED BY THE VARIOUS AUTHORITIES HAVING JURISDICTION OVER THIS PROJECT BE THEY CITY, COUNTY, STATE OR FEDERAL.



TYPICAL WALL SECTION

3/4" = 1'-0"



TYP. PORCH SECTION

SCALE: NTS

UPLIFT CONNECTORS

1. UPLIFT CONNECTORS SUCH AS HURRICANE CLIPS, TRUSS ANCHORS AND ANCHOR BOLTS ARE ONLY REQUIRED ON MEMBERS IN WALLS THAT ARE EXPOSED TO UPLIFT FORCES. INTERIOR LOAD BEARING WALLS ARE NOT ALWAYS EXPOSED TO UPLIFT FORCES. THE MEMBERS OF THESE WALLS WOULD NOT NEED TO HAVE CONNECTORS APPLIED. PLEASE CONSULT THE TRUSS ENGINEERING FOR THE LOCATION OF THESE WALLS.

FIELD REPAIR NOTES

1. MISSED LINTEL STRAPS FOR MASONRY CONSTRUCTION MAY BE SUBSTITUTED W/ (1) "SIMPSON MTS16 TWIST STRAP W/ (4) 1/4" X 2 1/4" DIA. TITENS TO THE BOND BEAM BLOCK AND (7) 10d TO THE TRUSS FOR UPLIFTS OF 1000 LBS. OR LESS. USE (2) FOR 2000 LBS. OR LESS. OTHERS MAY BE SUBSTITUTED ON A CASE BY CASE BASIS.
2. MISSED "J" BOLTS FOR WOOD BEARING WALLS MAY BE SUBSTITUTED W/ 1/2" DIA. ANCHOR BOLTS SET IN 3/4" DIA. X 8" DEEP UNITEX "PROPOXY" 300 ADHESIVE BINDER FOLLOWING ALL MANUFACTURERS RECOMMENDATIONS (OR 1/2" X 6" RAWL STUD EXPANSION ANCHORS.)
3. REGARDING MISSED REBAR IN VERTICAL FILLED CELLS: DRILL A 3/4" DIAMETER HOLE 6" DEEP AT THE LOCATION OF THE OMITTED REBAR, AND INSTALL A 32" LONG #5 BAR INTO THE EPOXY FILLED HOLE. USE A TWO PART EMBEDDMENT EPOXY (SIMPSON "EPOXY TIE SET", OR HILTI " 2 PART" EMBEDDMENT EPOXY). MIXED PER MANUFACTURER'S INSTRUCTIONS. ASSURE THAT ALL DUST AND DEBRIS FROM DRILLING ARE REMOVED FROM THE HOLE BY BRUSHING AND AND USING COMPRESSED AIR PRIOR TO APPLYING THE EPOXY. ALLOW THE EPOXY TO CURE TO MANUFACTURER'S SPECIFICATIONS, THEN FILL THE CELL IN THE NORMAL WAY DURING BOND BEAM POUR.
4. HURRICANE STRAPS MAY BE SUBSTITUTED WITH A STRAP OF GREATER HOLDOWN VALUE OR GREATER UPLIFT VALUE IN THE FIELD WITHOUT VERIFICATION, PROVIDED ALL MANUFACTURERS INSTALLATION INSTRUCTIONS ARE FOLLOWED.
5. FOR MORTER JOINTS LESS THAN 1/4", PROVIDE (1) #5 VERT. IN CONC. FILLED CELL EACH SIDE OF THE JOINT (BAR DOES NOT HAVE TO BE CONT. TO FOOTING)

CONSTRUCTION DOCUMENTS:

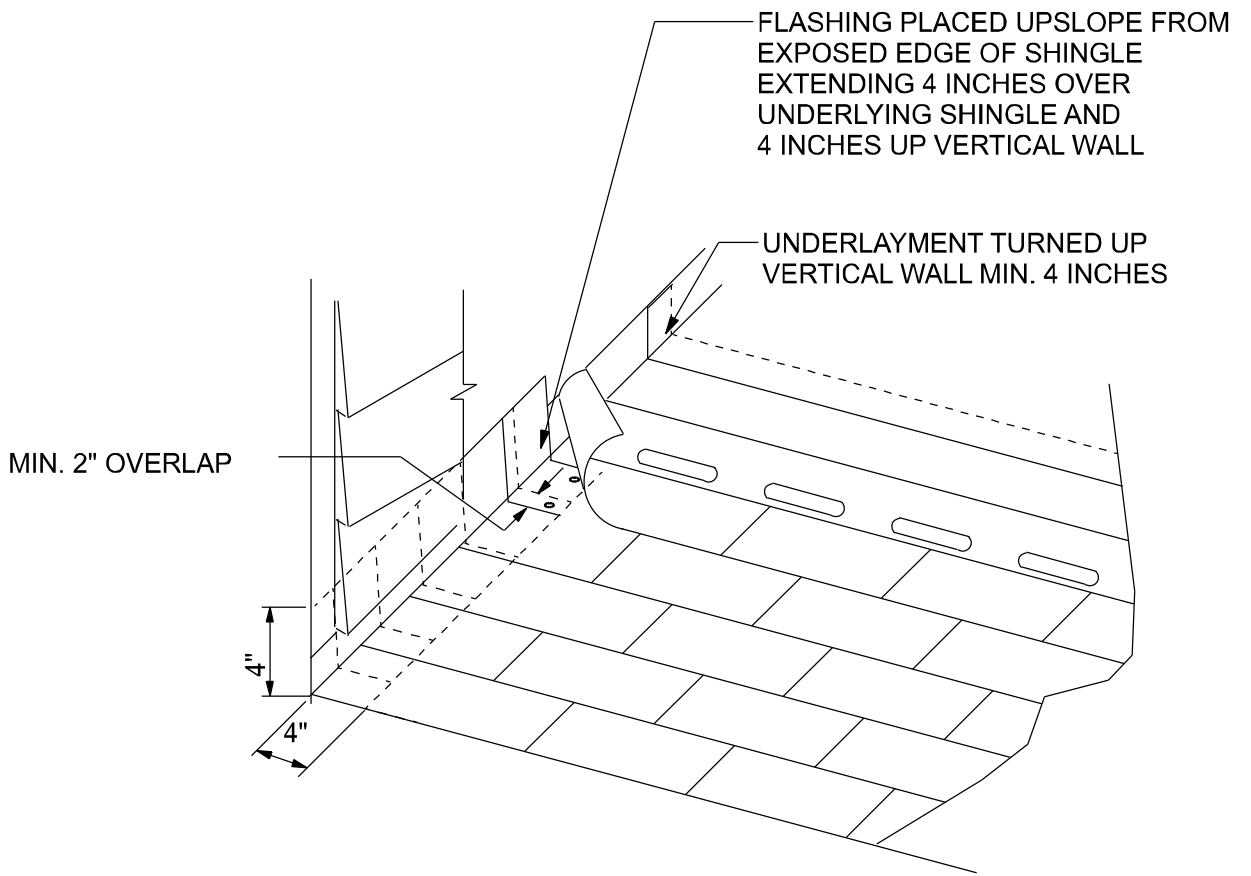
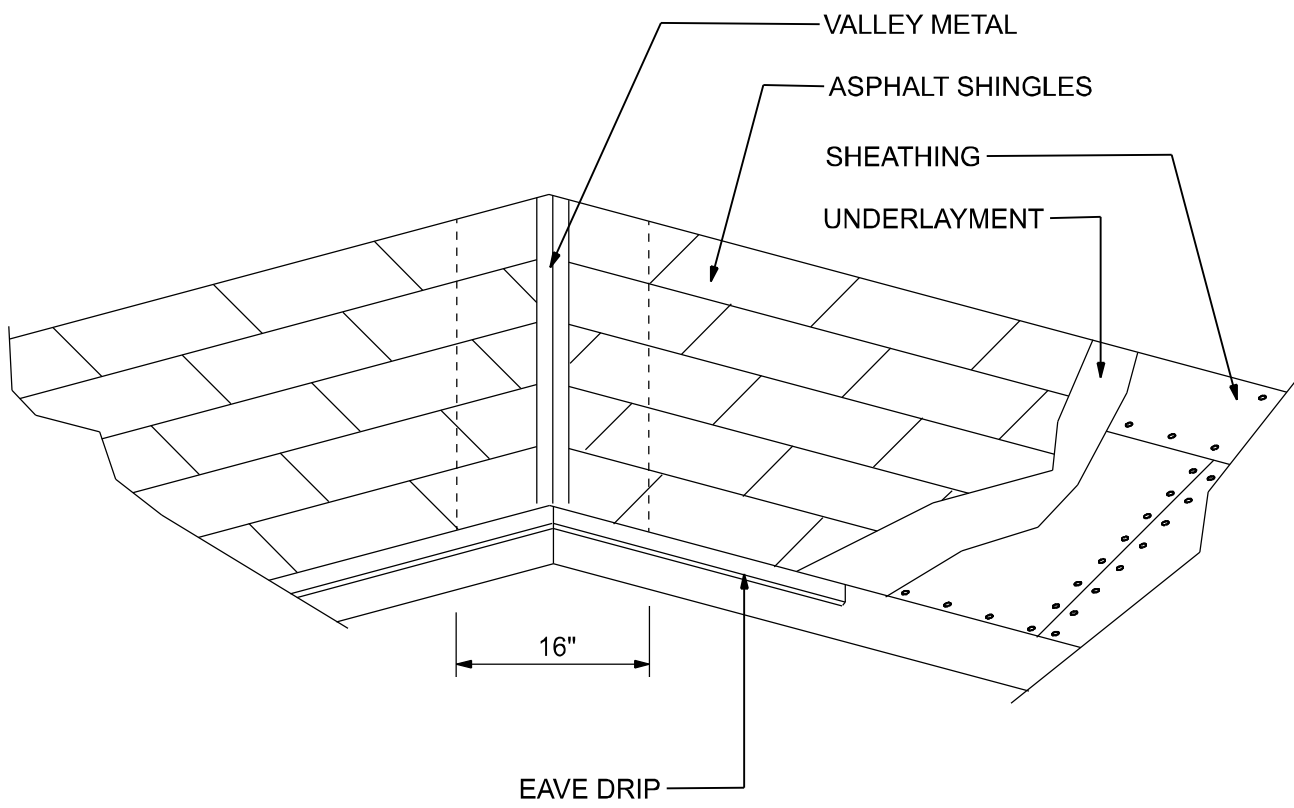
THE CUSTOMER IS RESPONSIBLE FOR DELIVERING THE REQUIRED SETS OF CONSTRUCTION DOCUMENTS TO THE PERMIT ISSUING AUTHORITY FOR THE ISSUANCE OF CONSTRUCTION PERMITS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR REVIEWING THE PLANS AND VERIFYING ALL EXISTING CONDITIONS, ELEVATIONS, AND DIMENSIONS PRIOR TO COMMENCING CONSTRUCTION INCLUDING FABRICATION. ALL DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT/ENGINEER FOR RESOLUTION.

DO NOT SCALE THESE PLANS:

AMPLE DIMENSIONS ARE SHOWN ON THE PLANS TO LOCATE ALL ITEMS. SIMPLE ARITHMATIC MAY BE USED TO DETERMINE THE LOCATION OF THOSE ITEMS NOT DIMENSIONED.

CHANGES TO PLAN SETS:

PLEASE DO NOT MAKE ANY STRUCTURAL CHANGES TO THES PLANS WITHOUT CONSULTING WITH THE ARCHITECT/ENGINEER. THE OWNER SHALL ASSUME ANY AND ALL LIABILITY FOR STRUCTURAL DAMAGE RESULTING FROM CHANGES MADE TO THE PLANS OR BY SUBSTITUTION OF MATERIALS DIFFERENT FROM SPECIFICATIONS ON THE PLANS.



REVISIONS		
DATE	BY	DESCRIPTION

DESIGN BY:

TRADEMARK
Construction Group, Inc.

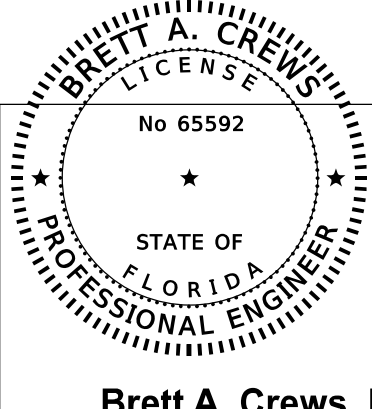
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CES
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CERTIFICATE OF AUTHORIZATION
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Brett A. Crews, P.E. 65592

DRAWN BY:

TM

APPROVED BY:

BC

LAY RESIDENCE

SECTIONS AND FRAMING DETAILS

PROJECT NO.:

R22.013

SHEET:

A-7

1. One all-thread rod at each corner.
2. One all-thread rod at each end of shearwalls.
3. One all-thread rod at each end of opening headers greater than 3'-0"
4. Check sub-sheathing to top plate connection for horizontal transfer capability.
5. If necessary, add all-thread rods to girders individually to exclude the from average uplift plf.
6. Check sole plate to slab connection, additional anchors may be required for lateral and shear load transfer.

Placement at slab level:

When presetting the all-thread rod at a building corner, the rod should be placed 8 to 12 inches away from the corner so it does not set under the corner framing members. When a all-thread rod is specified at a building corner, it may be placed on either side of the corner.

When presetting the all-thread rod at a header end, the rod should be placed 8 to 12 inches away from the header end so it does not fall under the stud pack framing members.

Top connections made at corners and header ends shall be made within 2 inches of the framing pack. A nut and 3X3 washer shall be applied to the top plates and tightened securely.

When using the rod coupler, care should be taken to ensure full and equal thread engagement. This is easily achieved by threading the coupler all the way onto the rod, then standing the two rods end to end, then threading the coupler back over the rod joint so each rod is halfway into the coupler.

In the case of an all thread rod misplacement, the rod may be epoxied into the concrete.

The slab level sole plate shall be connected to the slab with the connectors specified and at the spacing specified within the design documents. All-thread rods shall be placed as per the design specifications. All-thread rods with a nut and washer at the sole plate will qualify as a sole plate connection but may require other anchors intermediate of the all-thread rod locations to qualify the specified spacing requirements.

On multiple story applications, the all-thread rod system shall be rechecked for proper tension just before the walls are veneered. This will allow the all-thread rod system to compensate for the buildings dead load compression.

1. ALL SHEARWALLS SHALL BE TYPE 2 SHEARWALLS AS DEFINED BY STD 10-99 305.4.3.
2. THE WALL SHALL BE ENTIRELY SHEATHED WITH 7/16" O.S.B. INCLUDING AREAS ABOVE AND BELOW OPENINGS.
3. ALL SHEATHING SHALL BE ATTACHED TO FRAMING ALONG ALL FOUR EDGES WITH JOINTS FOR ADJACENT PANELS OCCURRING OVER COMMON FRAMING MEMBERS OR ALONG BLOCKING.
4. NAIL SPACING SHALL BE 6" O.C. EDGES AND 12" O.C. IN THE FIELD.
5. ALL SHEARWALLS ARE DESIGNED FOR THE OPENING IT CONTAINS. MAXIMUM HEIGHT OF OPENING SHALL BE 5/6 TIMES THE WALL HEIGHT. THE MINIMUM DISTANCE BETWEEN OPENINGS SHALL BE THE WALL HEIGHT/3.5 ie. FOR 8'-0" WALLS - (2'-3").

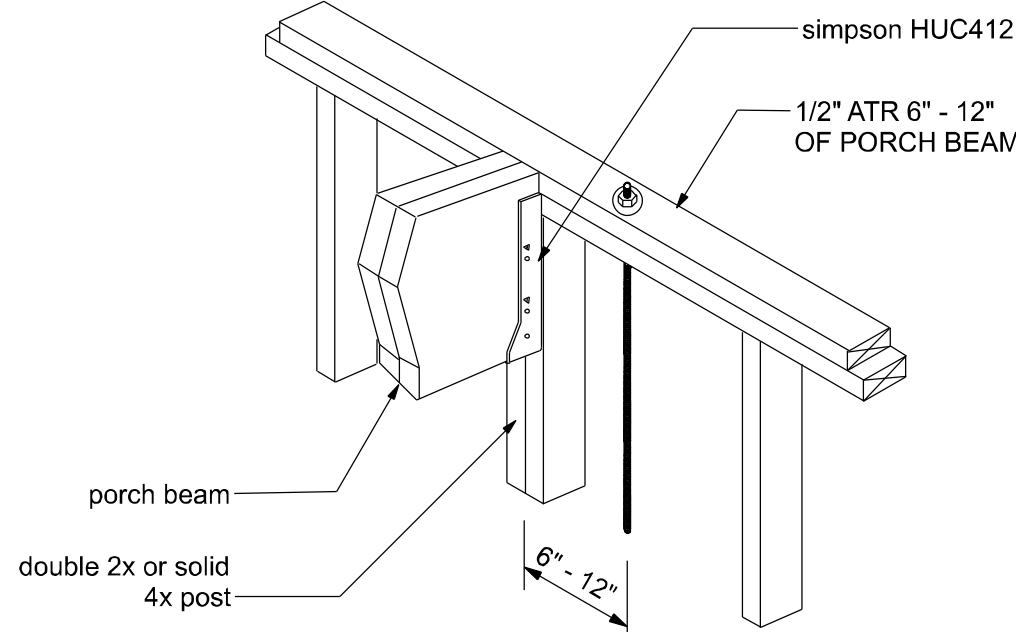
UPLIFT CAPACITY = 474 pl
(TABLE 305S1 SSTD10-99)

NOTE:
ALL WALL SHEATHING SHALL BE WINDSTORM
1 1/8" FULL HEIGHT SHEATHING-
SEE DETAIL 1 FOR NAILING



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

NOTE:
VERIFY GIRDER TRUSS LOCATION
ON TRUSS LAYOUT FOR REQ'D
ALL THREAD AT GIRDER LOCATION



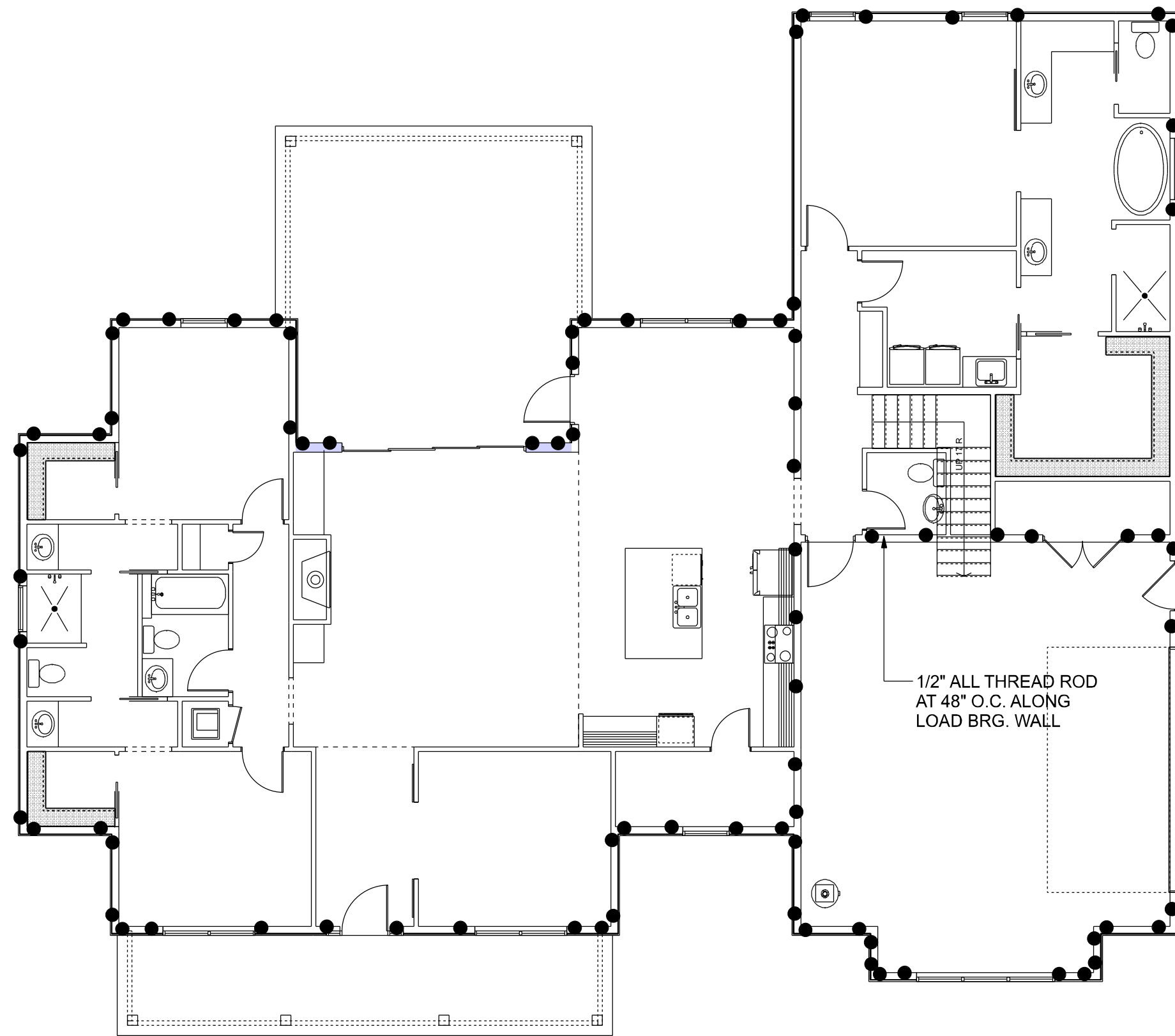
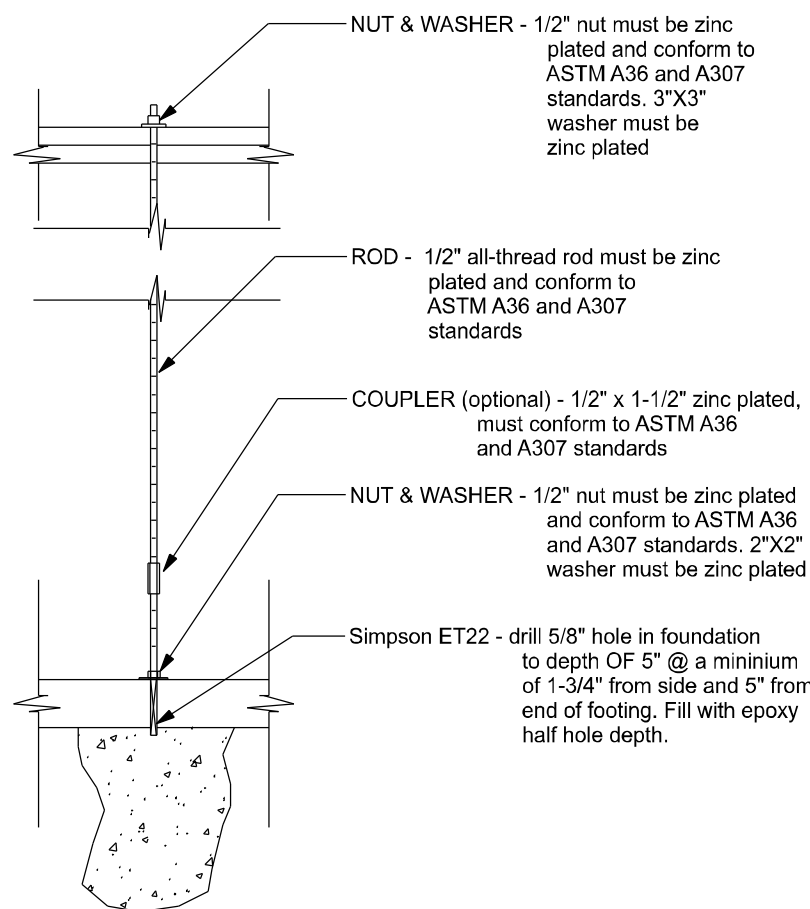
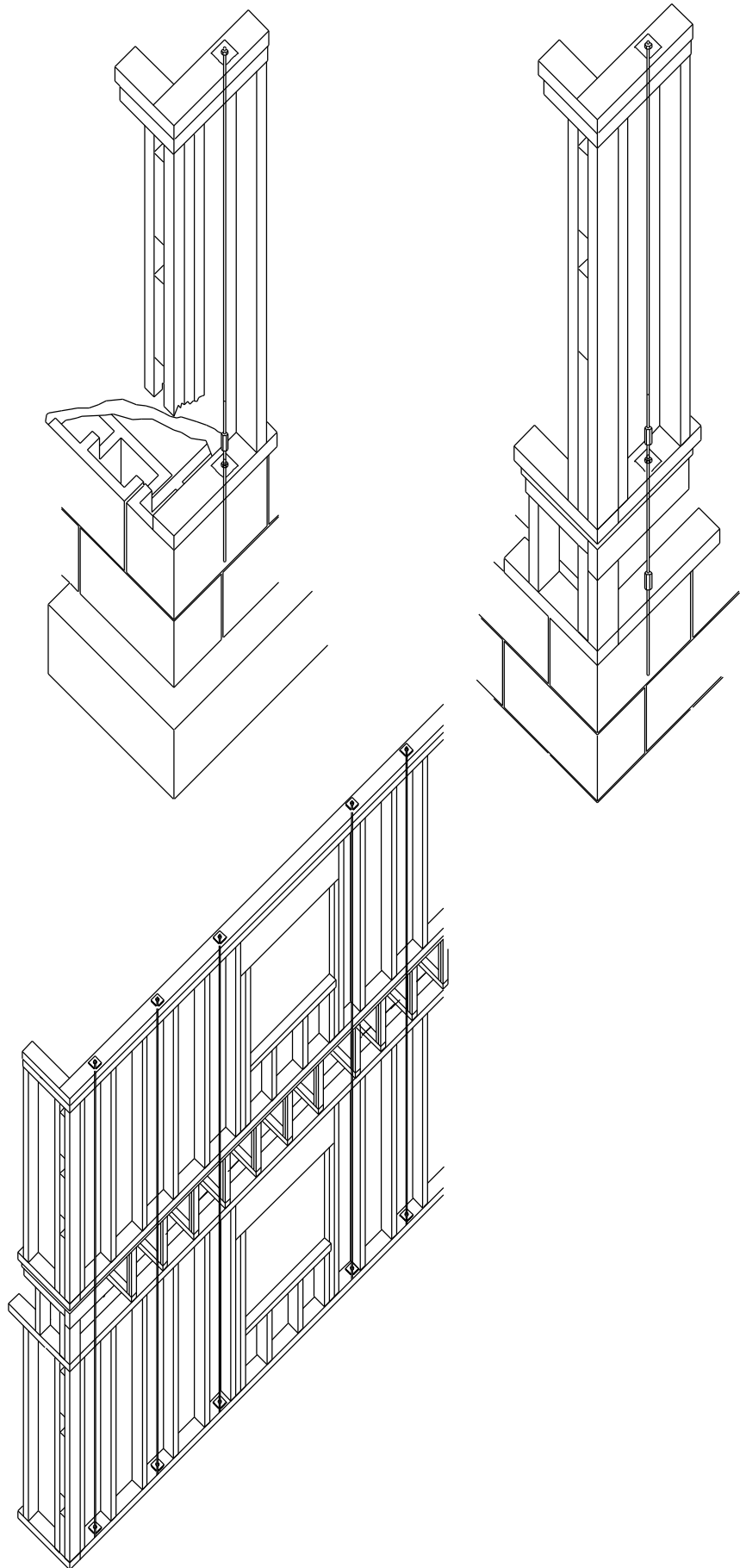
NTS

STRUCTURAL MEMBER	ALLOWABLE DEFLECTION
rafters having slopes greater than 2/12 with no finished ceiling attached to rafters	L/180
interior walls and partitions	H/180
floors and plastered ceilings	L/360
all other structural members	L/240
exterior walls with plaster or stucco finish	H/360
exterior walls - wind loads with brittle finishes	L/240
exterior walls - wind loads with flexible finishes	L/120

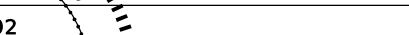
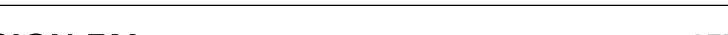
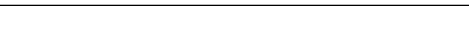
NOTE:
A SOLID MEMBER OF EQUAL OR GREATER SIZE THAN MULTIPLE MEMBERS MAY BE USED.
IF RATED SHEATHING IS APPLIED TO NARROW EDGES, NAILED TO EACH STUD AT 12" O.C. MAXIMUM, THE LAMINATION NAILING SHOWN HERE IS NOT REQUIRED.

END (TOP OR BOTTOM)

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



● ALL THREAD LOCATION

REVISIONS			DESIGN BY:		CERTIFIED GENERAL CONTRACTOR CGC1514780		CERTIFICATE OF AUTHORIZATION NO. 28022				DRAWN BY: TM		LAY RESIDENCE		PROJECT NO.: R22.013	
DATE	BY	DESCRIPTION			163 SW MIDTOWN PL. STE. 101 LAKE CITY, FL. 32025 (386)755-5254		 Crows Engineering Services, LLC		P.O. BOX 970 LAKE CITY, FL 32056 PHONE: 386.754.4085		APPROVED BY: BC		SHEARWALL DETAILS		SHEET: A-8	