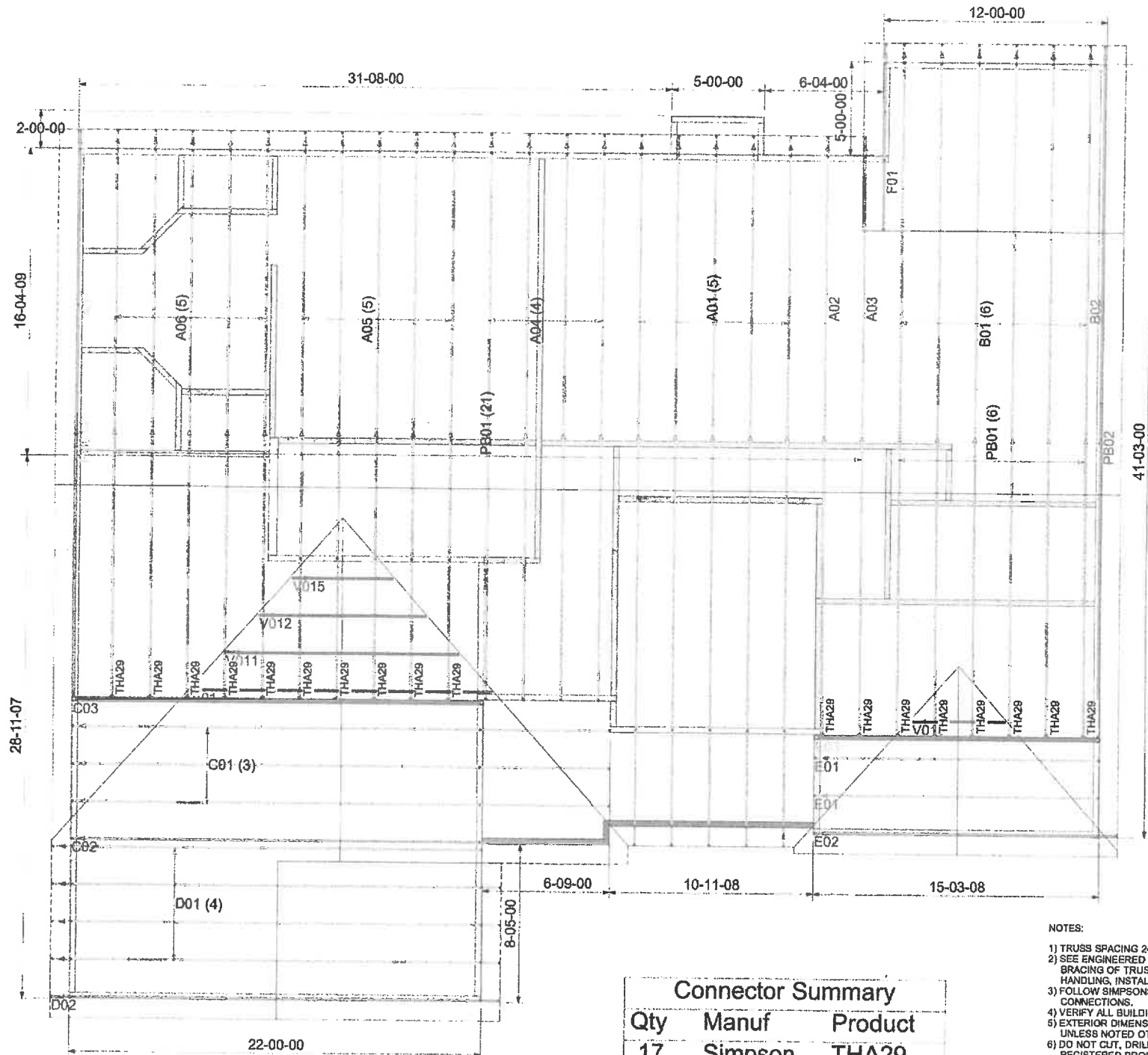


SCALE
 1/4" = 1'-0"
 1/8" = 1'-0"
 1/16" = 1'-0"

FOUNDATION PLAN

REVISIONS:							
FILE	1578 PLAN	FOUNDATION					
DATE	8/14/20						
SHEET	2						
Perfect Image Construction 75 MAXIMUS CIRCLE GARRER, NC 27529 (919) 418-6205							



Connector Summary		
Qty	Manuf	Product
17	Simpson	THA29

- NOTES:
- 1) TRUSS SPACING 24" o/c UNLESS NOTED OTHERWISE.
 - 2) SEE ENGINEERED TRUSS DRAWINGS FOR NOTES AND REQUIRED BRACING OF TRUSS WEBS IN ADDITION TO BCSI-61 SUMMARY SHEET FOR HANDLING, INSTALLING AND BRACING.
 - 3) FOLLOW SIMPSON'S INSTALLATION RECOMMENDATIONS FOR HANGER CONNECTIONS.
 - 4) VERIFY ALL BUILDING DIMENSIONS PRIOR TO TRUSS ERECTION.
 - 5) EXTERIOR DIMENSIONS ARE FROM OUT TO OUT OF SHEATHING UNLESS NOTED OTHERWISE.
 - 6) DO NOT CUT, DRILL OR ALTER TRUSS WITH OUT CONSULTING A REGISTERED PROFESSIONAL ENGINEER.
 - 7) ATTIC ACCESS MUST BE PLACED BETWEEN TRUSSES.
 - 8) BUILDER IS RESPONSIBLE FOR PROVIDING ADEQUATE BEARING TO SUPPORT TRUSS REACTIONS.
 - 9) DIMENSIONS ARE IN FEET-INCHES-SIXTEENTHS.
 - 10) NO HANGERS ARE REQUIRED FOR SMALL, OPEN-ENDED TRUSSES. INSTEAD, USE 3 NAILS IN BOTH THE TOP AND BOTTOM CHORDS.

THIS IS A TRUSS PLACEMENT DIAGRAM ONLY. These trusses are designed as individual building components to be incorporated into the building specification of the building designer. It is the builder's responsibility to verify that the structure can support the entire roof or floor truss system. See engineered drawings for required lateral bracing and other information for each truss design in this placement drawing. The building designer is responsible for permanent bracing of the trusses. For more information, contact the BCSI-61 SUMMARY SHEET. For general guidance regarding bracing, consult the BCSI-61 SUMMARY SHEET provided by BMC. THE BUILDER IS CAUTIONED TO seek professional advice or follow the bracing guidelines of BCSI-61 while installing the trusses in order to prevent topping or doming of inadequately braced trusses.

Customer: **TIM ADAMS**

Job Name: **1578 PLAN**

Level: **ROOF**

Drawn by: **JDW**

Job #: **20-080698T**

Scale: **N.T.S.**

Date: **06/20/2020**

Company: **BMC, NC & SC 1-800-672-2145**



STRUCTURAL NOTES

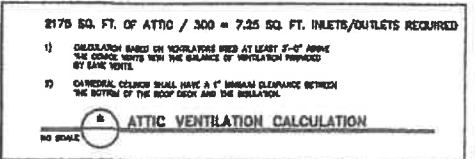
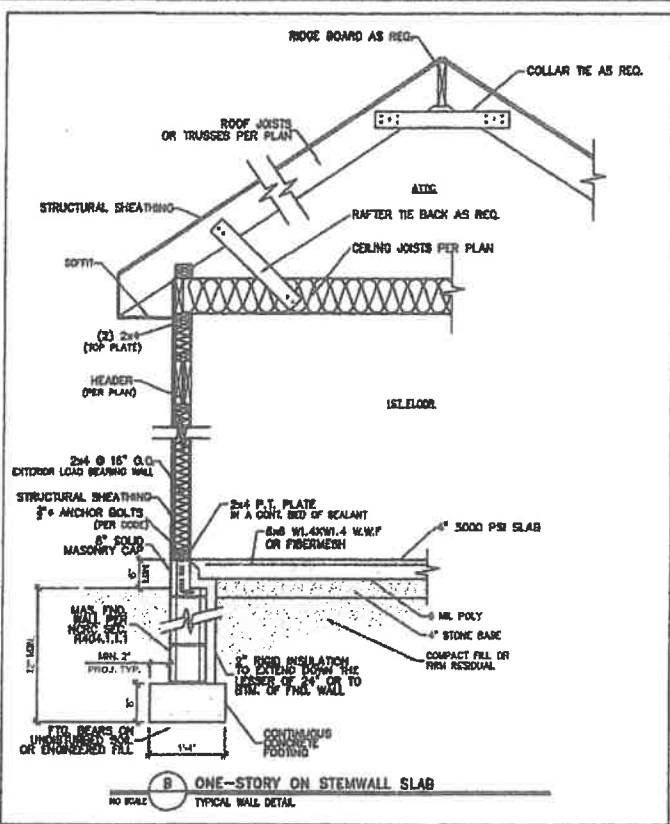
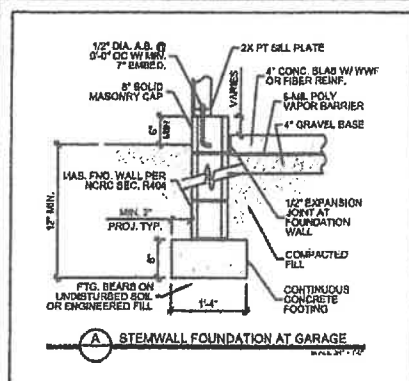
- ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF "NORTH CAROLINA STATE 2018 RESIDENTIAL BUILDING CODE", IN ADDITION TO ALL LOCAL CODES AND REGULATIONS.
- DESIGN LOADS:

	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION	
			L/L	T/L
ALL FLOORS	40	10	L/360	L/240
ATTC (w/ mech. info)	30	10	L/240	L/240
ATTC (no mech. access)	20	10	L/240	L/240
ATTC (no access)	10	5	L/240	L/180
EXTERNAL BALCONY	40	10	L/360	L/240
ROOF	20	10	L/240	L/180
ROOF TRUSS	20	20	L/240	L/180
WIND LOAD	BASED ON 120 MPH (EXPOSURE B)			
DESIGN	DESIGN ZONES A, B & C			
- MINIMUM ALLOWABLE SOIL BEARING PRESSURE = 2000 PSF
- CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI AND A MAXIMUM SLUMP OF FIVE INCHES UNLESS NOTED OTHERWISE. (U.N.O.)
- MAXIMUM DEPTH OF UNBALANCED FILL AGAINST FOUNDATION WALLS TO BE LESS THAN 4'-0" WITHOUT USING SUFFICIENT WALL BRACING. REFER TO SECTION R404 OF 2018 NC BUILDING CODE FOR BACKFILL LIMITATIONS BASED ON WALL HEIGHT, WALL THICKNESS, SOIL TYPE, AND UNBALANCED BACKFILL HEIGHT.
- ALL FRAMING LUMBER SHALL BE SYP #2 (Fb = 800 PSF BASED ON 2x10) UNO. ALL FRAMING LUMBER EXPOSED TO THE ELEMENTS SHALL BE TREATED MATERIAL. ALL LVL LUMBER TO BE 1.75" WIDE NOMINAL EACH SINGLE MEMBER AND Fb = 2800 PSF, E = 1.9M PSF (U.N.O.). ALL LVL LUMBER TO BE 3.5" WIDE NOMINAL EACH SINGLE MEMBER AND Fb = 3225 PSF, E = 1.8M PSF (U.N.O.). ALL PSL LUMBER TO BE 3.5" WIDE NOMINAL EACH SINGLE MEMBER AND Fb = 2400 PSF, E = 1.8M PSF (U.N.O.).
- ALL LOAD BEARING EXTERIOR HEADERS SHALL BE AT (2) 2x10 (U.N.O.) REFER TO TABLE R002.7(1) & (2) FOR JACK STUD REQUIREMENTS FOR HEADER SPANS FOR INTERIOR AND EXTERIOR LOAD CONDITIONS UNLESS SPECIFICALLY NOTED ON PLANS.
- ALL STRUCTURAL STEEL W-SHAPES (I-BEAMS) SHALL BE ASTM A992 GRADE 50. ALL STEEL ANGLES, PLATES, AND C-CHANNELS SHALL BE ASTM A36. ALL STEEL PIPE SHALL BE ASTM A53 GRADE B.
- STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3-1/2" AND FULL FLANGE WIDTH. PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO (2) LAG BOLDS (1/2" x 4" LONG). LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDED THE JOISTS ARE TOE NAILED TO THE SOLE PLATES, AND THE SOLE PLATES ARE NAILED OR BOLTED TO THE BEAM FLANGES @ 48" O.C.
- PROVIDE ANCHOR BOLT PLACEMENT PER SECTION 403.1.6; 1/2" x 2" ANCHOR BOLTS SPACED AT 6'-0" O.C. AND PLACED 12" FROM THE END OF EACH PLATE SECTION. ANCHOR BOLTS SHALL BE SPACED AT 3'-0" O.C. FOR BASEMENTS. ANCHOR BOLT SHALL EXTEND 7" INTO CONCRETE OR MASONRY. THE BOLTS SHALL BE LOCATED IN THE MIDDLE THIRD OF THE WIDTH OF THE PLATE. THERE SHALL BE A MINIMUM TWO ANCHOR BOLTS PER PLATE SECTION.
- FOUNDATION DRAINAGE-DAMP PROOFING OR WATERPROOFING PER SECTION 405 AND 406 OF NC BUILDING CODE.
- WALL AND ROOF CLADDING VALUES:
WALL CLADDING SHALL BE DESIGNED FOR 20.0 POUNDS PER SQUARE FOOT (LBS/SQFT) OR GREATER POSITIVE AND NEGATIVE PRESSURE.
ROOF CLADDING BOTH POSITIVE AND NEGATIVE SHALL BE AS FOLLOWS:
30.0 LBS/SQFT FOR ROOF PITCHES 0/12 TO 1.5/12
35.0 LBS/SQFT FOR ROOF PITCHES 1.5/12 TO 2/12
15.0 LBS/SQFT FOR ROOF PITCHES 0/12 TO 12/12
*MEAN ROOF HEIGHT 30'-0" OR LESS
- FOR ROOF SLOPES FROM 2/12 THROUGH 4/12, BUILDER TO INSTALL 2 LAYERS OF 15# FELT PAPER.
- REFER TO SECTION R002.3 FOR FRAMING OF ALL WALLS OVER 10'-0" IN HEIGHT.
- PROVIDE CONTINUOUS SHEATHING PER SECTION 502.10.3 OF THE 2018 NCBC.
- UPLIFT LOADS GREATER THAN 300# SHALL BE CONTINUOUSLY ANCHORED TO THE FOUNDATION.
- REFER TO TABLE M1102.1 FOR PRESCRIPTIVE BUILDING ENVELOPE THERMAL COMPONENT CRITERIA.
- PSL COLUMNS DESIGNED WITH MAXIMUM HEIGHT OF 9'-0" (U.N.O.)
- PROVIDE A MINIMUM OF 500# UPLIFT & LATERAL CONNECTION AT TOP AND BOTTOM OF PORCH COLUMNS. (U.N.O.)
- MAXIMUM MASONRY PER HEIGHT SHALL NOT EXCEED FOUR TIMES ITS LEAST HORIZONTAL DIMENSION.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND SQUARE FOOTAGE PRIOR TO CONSTRUCTION. TYNALL ENGINEERING & DESIGN, P.A. IS NOT RESPONSIBLE FOR DIMENSION OR SQUARE FOOTAGE ERRORS ONCE CONSTRUCTION BEGINS.

CLIMATE ZONES	PENETRATION U-FACTOR	SKYLIGHT U-FACTOR	GLAZED FENESTRATION SHGC	CEILING R-VALUE	WOOD FRAMED WALL R-VALUE	MASS WALL R-VALUE	FLOOR R-VALUE	BASEMENT WALL R-VALUE	SLAB R-VALUE AND DEPTH	CRAWL SPACE R-VALUE
3	0.35	0.55	0.30	38 or 30 cont	15 or 15 + 2.0*	1.13 or 0.70 cont	19	5/13	0	5/13
4	0.35	0.55	0.30	38 or 30 cont	15 or 15 + 2.0*	1.13 or 0.70 cont	19	10/18	10	10/18
5	0.35	0.55	NR	38 or 30 cont	15 or 15 + 2.0* or 15 + 3	1.13 or 0.70 cont	30*	10/18	10	10/18

TABLE N1102.1 CLIMATE ZONES 3-5

- R-VALUES ARE MINIMUMS. U-FACTORS AND SHGC ARE MAXIMUMS. WHEN INSULATION IS INSTALLED IN A CAVITY WHICH IS LESS THAN THE LABEL OR DESIGN THICKNESS OF THE INSULATION, THE INSTALLED R-VALUE OF THE INSULATION SHALL NOT BE LESS THAN THE R-VALUE SPECIFIED IN THE TABLE.
- THE PENETRATION U-FACTOR COLUMN EXCLUDED SKYLIGHTS. THE SOLAR HEAT GAIN COEFFICIENT (SHGC) COLUMN APPLIES TO ALL GLAZED PENETRATION.
- "10/18" MEANS R-10 CONTINUOUS INSULATED SHEATHING ON THE INTERIOR OR EXTERIOR OF THE HOME OR R-15 CAVITY INSULATION AT THE INTERIOR OF THE BASEMENT WALL OR CRAWL SPACE WALL.
- FOR MONOLITHIC SLAB INSULATION SHALL BE APPLIED FROM THE INSPECTION GAP DOWNWARD TO THE BOTTOM OF THE FOOTING OR A MAXIMUM OF 24" BELOW GRADE WHICHEVER IS LESS. FOR FLOATING SLAB INSULATION SHALL EXTEND TO THE BOTTOM OF THE FOUNDATION WALL OR 24" WHICHEVER IS LESS. R-5 SHALL BE ADDED TO THE REQUIRED SLAB EDGE R-VALUES FOR HEATED SLABS.
- DELETED.
- BASEMENT WALL INSULATION IS NOT REQUIRED IN WARM-HUMID LOCATIONS AS DEFINED BY EQUATION M1101.7 AND TABLE M1101.2 OR INSULATION SUFFICIENT TO FILL THE FRAMING CAVITY. R-19 MINIMUM.
- THE FIRST VALUE IS CAVITY INSULATION, THE SECOND VALUE IS CONTINUOUS INSULATION, SO "13+5" MEANS R-13 CAVITY INSULATION PLUS R-5 INSULATED SHEATHING. "15+3" MEANS R-15 CAVITY INSULATION PLUS R-3 INSULATED SHEATHING. IF STRUCTURAL SHEATHING COVERS 25% OR LESS OF THE EXTERIOR, INSULATED SHEATHING IS NOT REQUIRED WHERE THE STRUCTURAL SHEATHING IS USED. IF STRUCTURAL SHEATHING COVERS MORE THAN 25 PERCENT OF THE EXTERIOR, SHALL BE SUPPLEMENTED WITH INSULATED SHEATHING OF AT LEAST R-2. "13 + 2.5" MEANS R-13 CAVITY INSULATION PLUS R-2.5 SHEATHING.
- FOR MASS WALLS, THE SECOND R-VALUE APPLIES WHEN MORE THAN HALF THE INSULATION IS ON THE INTERIOR MASS WALL.
- IN ADDITION TO THE PENETRATION IN SECTION M1102.3.3, A MAXIMUM OF TWO GLAZED PENETRATION PRODUCT ASSEMBLIES HAVING A U-FACTOR NO GREATER THAN 0.55 SHALL BE PERMITTED TO BE SUBSTITUTED FOR MINIMUM CODE COMPLIANT PENETRATION PRODUCT ASSEMBLIES WITHOUT PENALTY.
- IN ADDITION TO THE PENETRATION IN SECTION M1102.3.3, A MAXIMUM OF TWO GLAZED PENETRATION PRODUCT ASSEMBLIES HAVING A SHGC NO GREATER THAN 0.70 SHALL BE PERMITTED TO BE SUBSTITUTED FOR MINIMUM CODE COMPLIANT PENETRATION PRODUCT ASSEMBLIES WITHOUT PENALTY.
- R-50 SHALL BE REQUIRED TO MATCH THE CEILING INSULATION REQUIREMENT UNLESS THE FULL HEIGHT OF UNCOMPLETED R-50 INSULATION EXTENDS OVER THE WALL. THE SLATE AT THE RAFTERS MUST BE INSULATED IN A MANNER THAT PROVIDES ADEQUATE CLADDING. PARTS OF INSULATION MUST EXTEND TO EITHER THE INSULATION BAFFLE OR WITHIN 1" OF THE ATTIC ROOF DECK.
- TABLE VALUES REQUIRED EXCEPT FOR ROOF DECK WHERE THE SPACE IS LIMITED BY THE PITCH OF THE ROOF, THERE THE INSULATION MUST FILL THE SPACE UP TO THE AIR BAFFLE.
- R-10 EXTERIOR WALL INSULATION AND INSULATION INSTALLED IN A NORMAL 2" x 8 FRAMING CAVITY IS DEEMED TO COMPLY. FIBERGLASS BATTIS RATED R-19 OR HIGHER COMPRESSED AND INSTALLED IN A 2x4 WALL IS DEEMED TO COMPLY.
- BASEMENT WALL MEETING THE MINIMUM MASS WALL SPECIFIC HEAT CONTENT REQUIREMENT MAY USE THE MASS WALL R-VALUE AS THE MINIMUM REQUIREMENT.



DEFINITIONS FOR COMMON ABBREVIATIONS

ALT = ALTERNATE	MAX = MAXIMUM
CAV = CANTILEVER	MIN = MINIMUM
CJ = CEILING JOIST	NOM = NOMINAL
CMU = CONCRETE MASONRY UNIT	O.C. = ON CENTER
COL = COLLAR	PL = PLATE
COND = CONCRETE	PT = PRESSURE TREATED
CONT = CONTINUOUS	REIN = REINFORCED
CT = COLLAR TIE	REQD = REQUIRED
DBL = DOUBLE	RJ = ROOF JOIST
DI = DIAMETER	RS = ROOF SUPPORT
DJ = DOUBLE JOIST	SC = STUD COLUMN
DR = DOUBLE RAFTER	SCH = SCHEDULE
EA = EACH	SPEC = SPECIFIED
EE = EACH END	TRK = TRUCK
FJ = FLOOR JOIST	TJ = TRIPLE JOIST
FND = FOUNDATION	TRED = TREATED
FTG = FOOTING	TYP = TYPICAL
GLV = GALVANIZED	UNO = UNLESS NOTED OTHERWISE
HORIZ = HORIZONTAL	WF = WIDE FLANGE BEAM
HT = HEIGHT	WEL = WELDED WIRE FABRIC
MANUF = MANUFACTURER	XJ = EXTRA JOIST

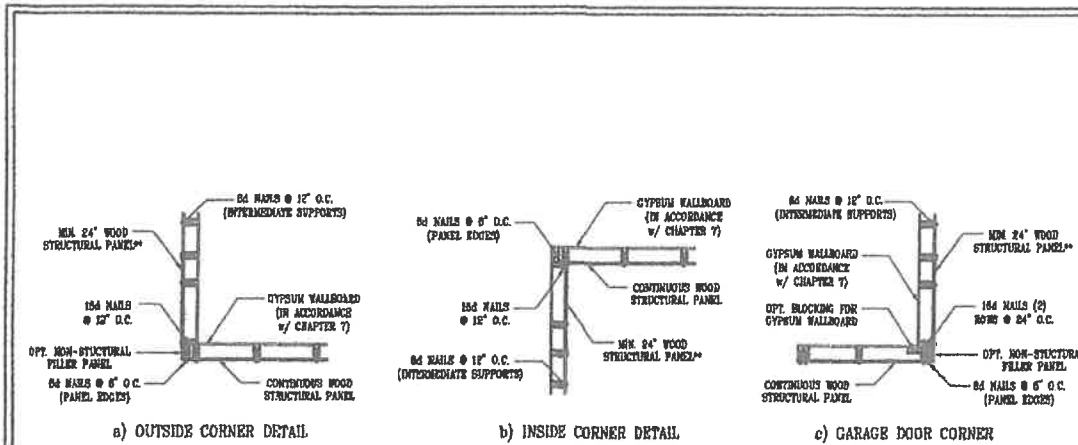
* Engineers seal does not include construction means, methods, techniques, equipment, procedures or safety precautions.
* Any deviations or omissions on plans are to be brought to the immediate attention of Tynall Engineering & Design, P.A. Failure to do so will void Tynall Engineering & Design, P.A. liability.
* Plans review does not constitute a warranty. Tynall Engineering & Design, P.A. will interpret that all dimensions, recommendations, etc. provided in these documents were determined acceptable once construction begins.

Climate: KEN DAWSON
Plan: PLAN 1341 (GARAGE LEFT)

NORTH CAROLINA PROFESSIONAL SEAL
45675
PATRICK S. EDWARDS
ENGINEER
SEAL DATE: 02/12/20

NO.	DATE	REVISIONS	REMARKS

Sheet Number: **D1**
7



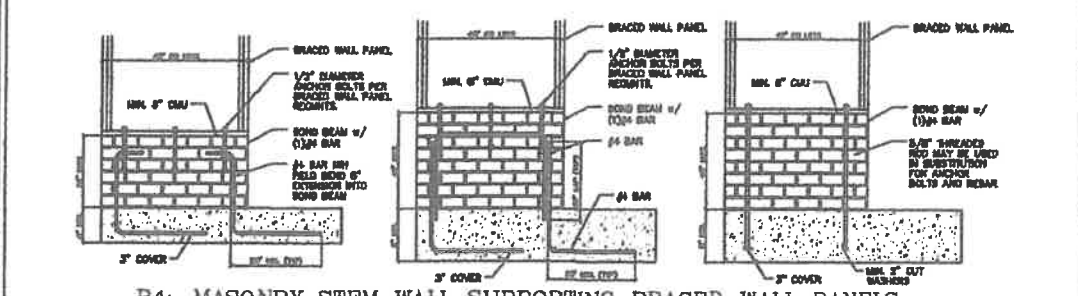
B1: TYPICAL EXTERIOR CORNER FRAMING FOR CONTINUOUS SHEATHING
NO SCALE

- STRUCTURAL SHEATHING NOTES**
- DESIGNED FOR DESIGN ZONE A-C AND WIND SPEEDS OF 100 MPH OR LESS.
 - WALLS SHALL BE BRACED IN ACCORDANCE WITH SECTION 1001.1 OF THE 2015 IBC.
 - BRACING REQUIREMENTS SHALL BE PER TABLE 602.3.1.1. REFER TO SECTION 1001.1 FOR LATER PANEL DETAILS INCLUDING CONNECTIONS & SUPPORT OF BRACED WALL PANELS.
 - REFERENCE FIGURE 1002.10.3.3 OF THE 2015 IBC.
 - INTERIOR BRACED WALL PANELS (BWP) BEHIND WALLS TO BE BRACED IN ACCORDANCE WITH THE 2015 IBC OR PER METHOD AS PRESCRIBED IN SECTION 1001.1.1 (2)(D).
 - 1/2" GYPSUM BOARD (GB) SPREAD LENGTHS OF 8'-0" BETWEEN PANELS OF 4'-0" CONTINUOUS SHEATHING. SECURE W/ 8d COMMON NAILS (N) EQUAL PER TABLE 602.3.1.1.1. GYPSUM BOARD SHALL BE BRACED TO TOP AND BOTTOM PLATES AT 2' O.C. AT INTERMEDIATE SUPPORTS.
 - 2x4 WOOD STRUCTURAL PANELS (WSP) BEHIND W/ 8d COMMON NAILS SPACED AT 2' O.C. AT INTERMEDIATE SUPPORTS.
 - EXTERIOR BRACED WALL PANELS (BWP) SHALL BE CONSTRUCTION OR ACCORDANCE WITH CS-PF METHOD AS PRESCRIBED IN SECTION 1001.1.1 (2)(D).
 - ALL INTERMEDIATE SUPPORTS OF EXTERIOR WALLS INCLUDING ANGLES ABOVE AND BELOW OPENINGS AND GABLE END WALLS SHALL BE CONTINUOUSLY SHEATHED WITH WOOD STRUCTURAL PANELS. EXTERIOR SHEATHING SHALL BE BRACED WITH SUPPORTS AT COMMON NAILS SPACED AT 2' O.C. AT PANEL EDGES AND SPACED AT 12' O.C. AT INTERMEDIATE SUPPORTS.
 - BRACED WALL PANEL LENGTHS WITH CS-PF METHOD SHALL BE AS FOLLOWS:
- 10' ADJUSTED TO OPENINGS NOT MORE THAN 80% OF WALL HEIGHT.
- 12' ADJUSTED TO OPENINGS GREATER THAN 80% AND LESS THAN 90% OF WALL HEIGHT.
- 14' FOR OPENINGS GREATER THAN 90% OF WALL HEIGHT.
 - BRACED INTERIOR & EXTERIOR
 - FOR CS-PF METHOD, A MINIMUM 2x4 BRACED WALL PANEL COVER BEHIND SHALL BE PROVIDED AT EACH END OF A BRACED WALL LINE BY ACCORDANCE WITH FIGURE 1002.10.3.1.1 IN USE OF A CORNER DETAIL, OTHER A WALL OF BRACED WALL PANELS SHALL BE PROVIDED AT THE CORNER BY A HOLD-DOWN DEVICE WITH A MINIMUM 2x4 BRACED WALL PANEL BEHIND TO BE FASTENED TO THE BACK OF THE BRACED WALL PANEL CLOSEST TO THE CORNER AND TO THE FOUNDATION OR FRAMING BELOW.
 - MINIMUM BODY HOLD-DOWN DEVICE

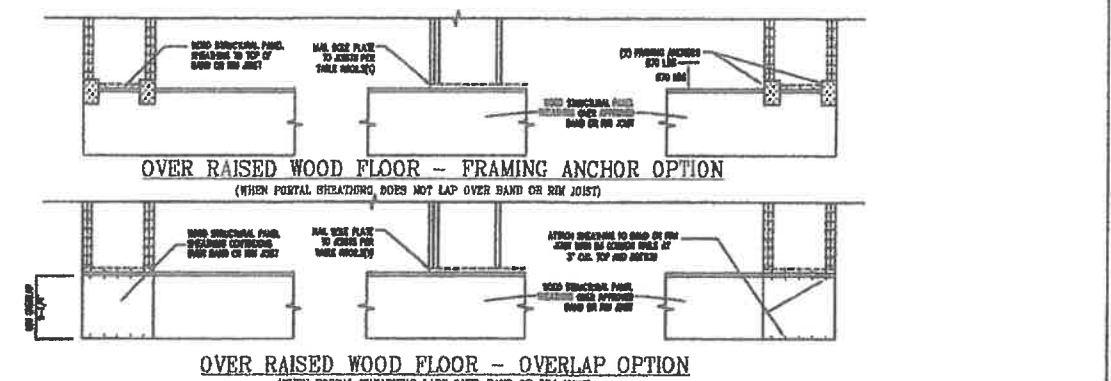
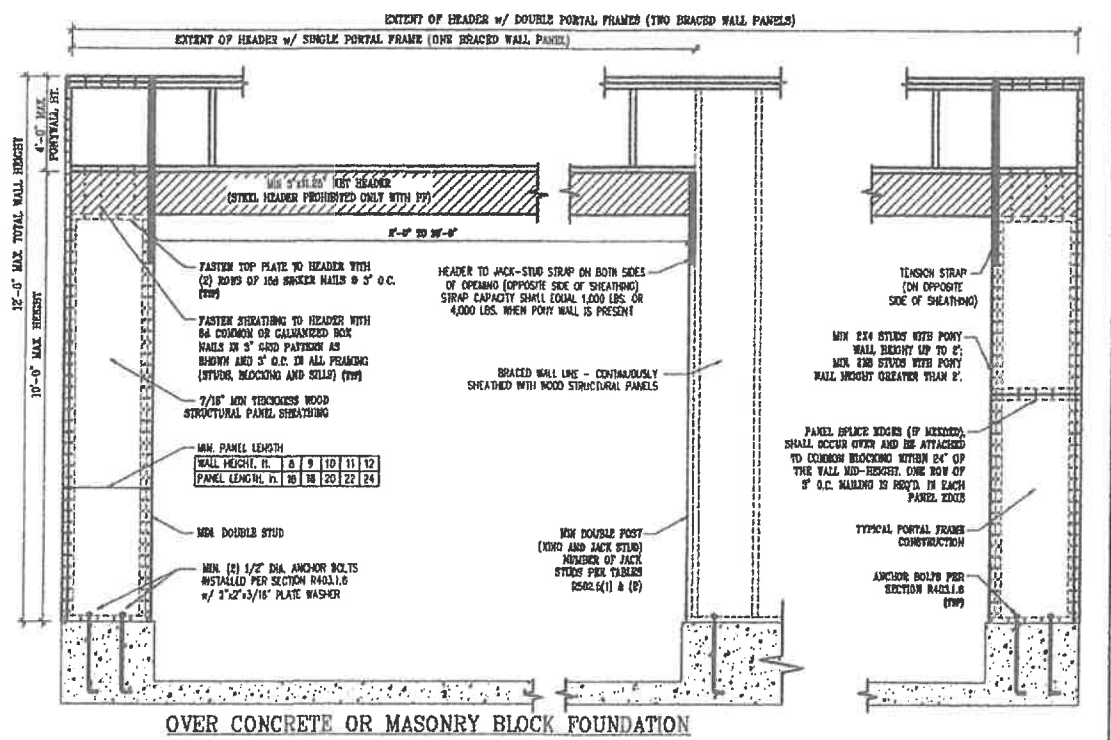
REQUIRED BRACED WALL PANEL CONNECTIONS

METHOD	MATERIAL	MIN. THICKNESS	@ PANEL EDGES	@ INTERMEDIATE SUPPORTS
CS-PF	WOOD STRUCTURAL PANEL	5/8"	6d COMMON NAILS @ 8" O.C.	6d COMMON NAILS @ 12" O.C.
GB	GYPSUM BOARD	1/2"	5d COOLER NAIL** @ 7" O.C.	5d COOLER NAIL** @ 7" O.C.
WSP	WOOD STRUCTURAL PANEL	5/8"	6d COMMON NAILS @ 8" O.C.	6d COMMON NAILS @ 12" O.C.

B3: BRACE WALL PANEL CONNECTIONS
NO SCALE



B4: MASONRY STEM WALL SUPPORTING BRACED WALL PANELS
FIGURE 1002.10.3.3 OF THE 2015 IBC
NOTE: GYPSUM BOARD BEHIND AND ALL CELLS WHICH CONTAIN REBAR, THREADED RODS AND ANCHOR BOLTS



B2: METHOD CS-PF: CONTINUOUSLY SHEATHED PORTAL FRAME
FIGURE 1002.10.1

* Engineers seal does not include construction means, methods, techniques, sequences, procedures or safety precautions.
* Any deviations or circumstances not shown are to be brought to the immediate attention of Tynning Engineering & Design, P.A. Failure to do so will void Tynning Engineering & Design, P.A. liability.
* Please review these documents carefully. Tynning Engineering & Design, P.A. will interpret all dimensions, recommendations, etc. provided in these documents were deemed acceptable once construction begins.

Client: KEN DAWSON
Title: PLAN 1341 (GARAGE LEFT)

NORTH CAROLINA PROFESSIONAL SEAL
45675
PATRICK S. EDWARDS
SEAL DATE: 02/12/20

Project:	1341-010393	
Date:	02/12/20	
Approved By:	PS	
Checked By:	PS	
Scale:	NOT TO SCALE	
Revisions:		
No.	Date	Remarks

Sheet Number
D3
of 7

