



FRONT ELEVATION

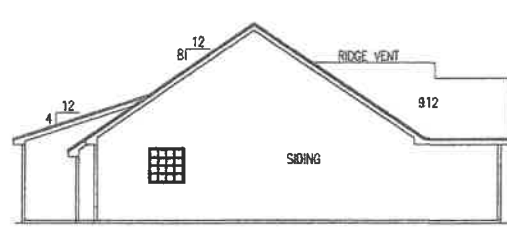
ATTIC SPACE VENTILATION

REQUIRED
 $2255 \text{ SQ. FT. OF CLG.} / 150 = 15.03 \text{ SQ. FT. REQUIRED}$

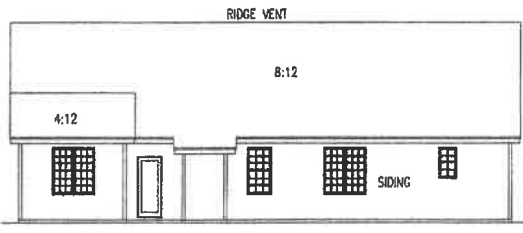
REFER TO SECTION R806 (ROOF VENTILATION) IN NORTH CAROLINA STATE INTERNATIONAL RESIDENTIAL BUILDING CODES.

MEAN ROOF HGT.

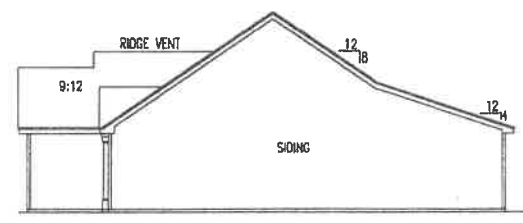
Soffit Hgt. From Assumed Grade	+ Highest Ridge Hgt. From Assumed Grade	+ 2	= Mean Roof Hgt.
9'-4"	+ 22'-10"	+ 2	= 16'-1" Mean Roof Hgt.



RIGHT ELEVATION



REAR ELEVATION



LEFT ELEVATION

REVISIONS:

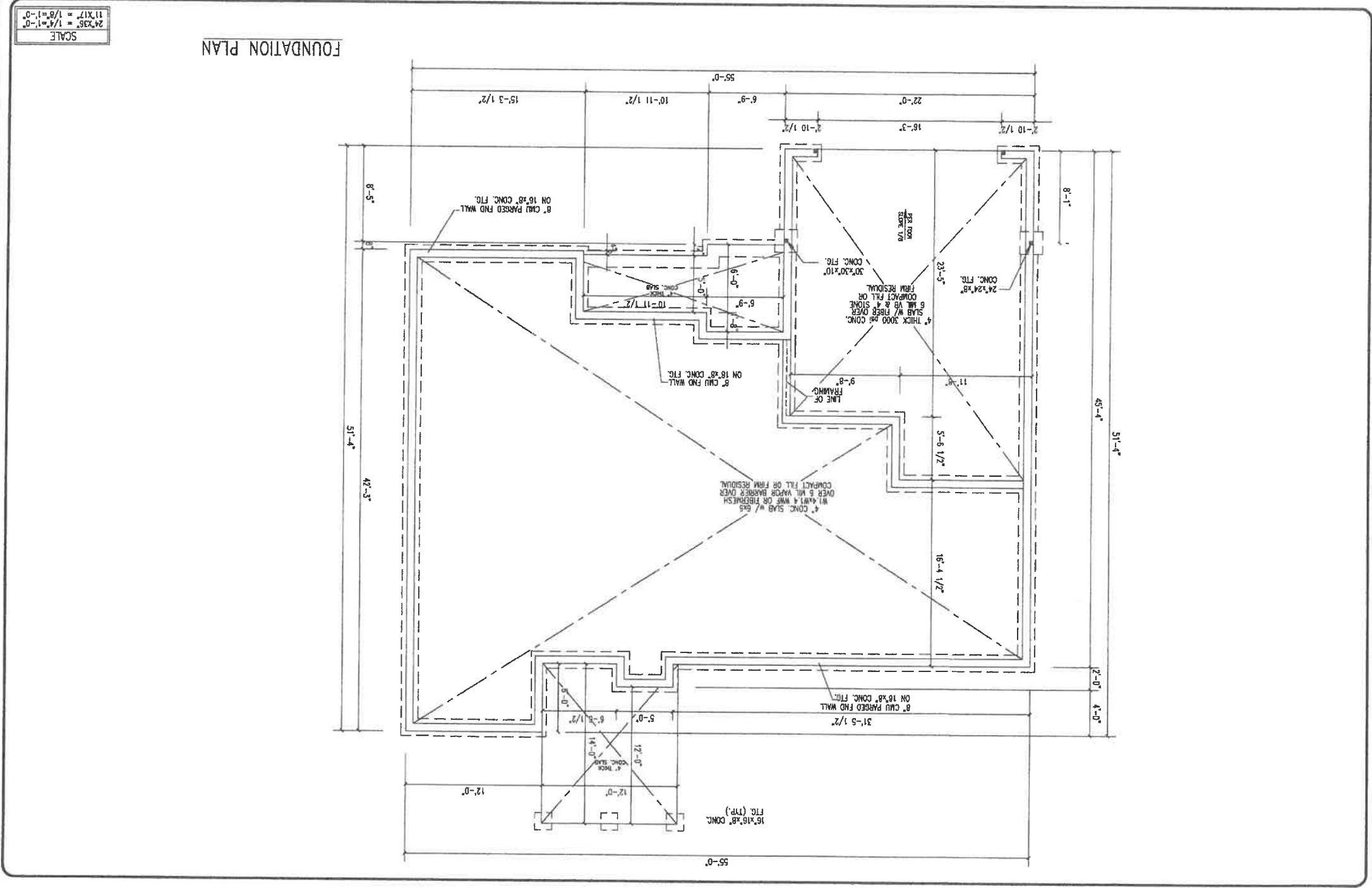
Perfect Image Construction
 75 MAXIMUS CIRCLE
 GARNER, NC 27529 (919) 418-6205

ELEVATION

1578 PLAN

FILE
DESIGN ADS
DRAWN ADS
CHECKED
DATE 8/14/20
SHEET 1

SCALE
 $24" \times 36" = 1/4" = 1'-0"$
 $11" \times 17" = 1/8" = 1'-0"$

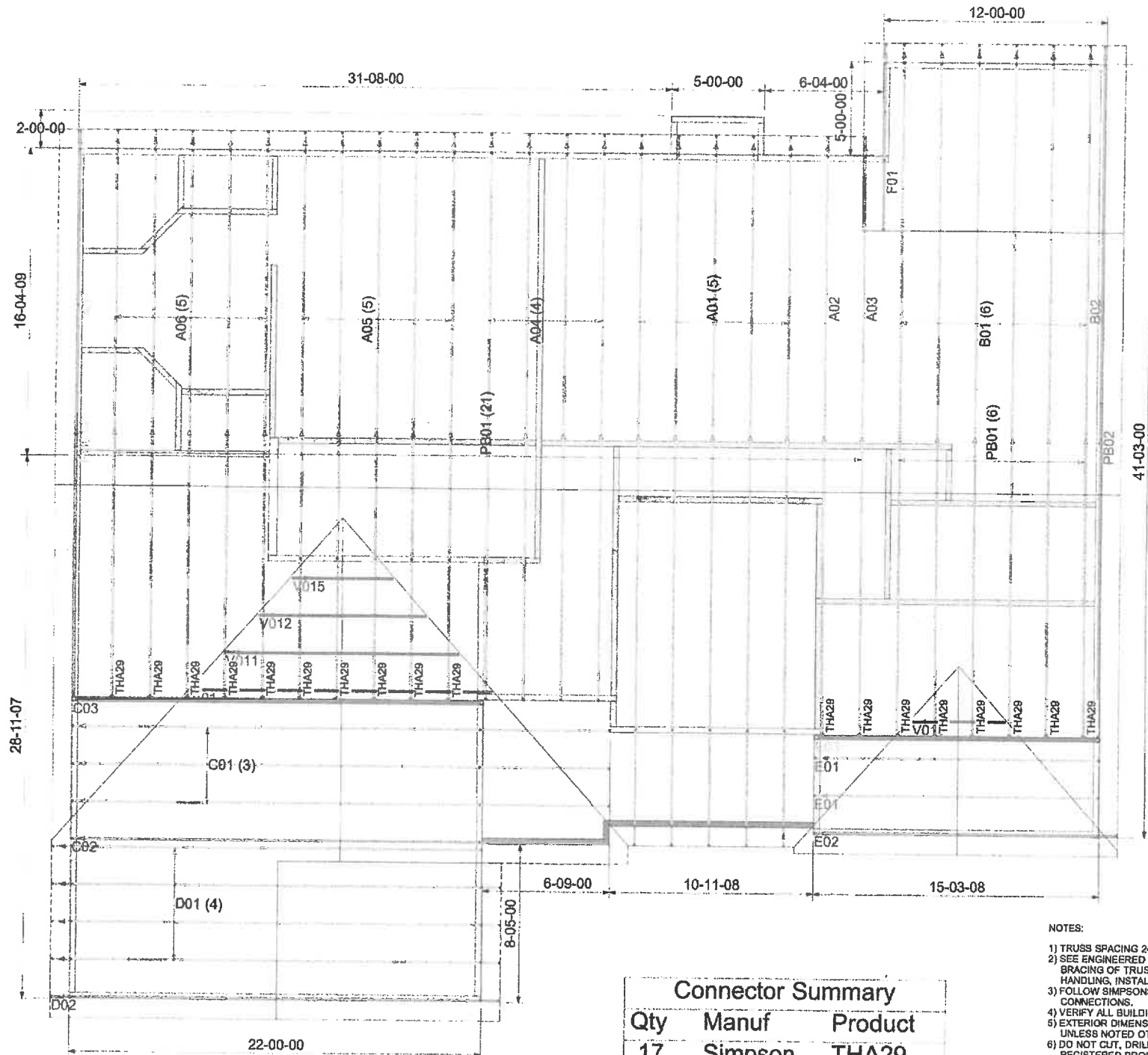


FOUNDATION PLAN

SCALE
 1/4" = 1'-0"
 1/8" = 1'-0"
 11x17 = 1/8" = 1'-0"

REVISIONS:							
FILE	1578 PLAN	FOUNDATION					
DESIGN							
DRAWN							
CHECKED							
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

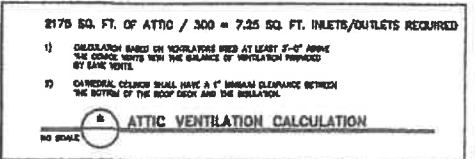
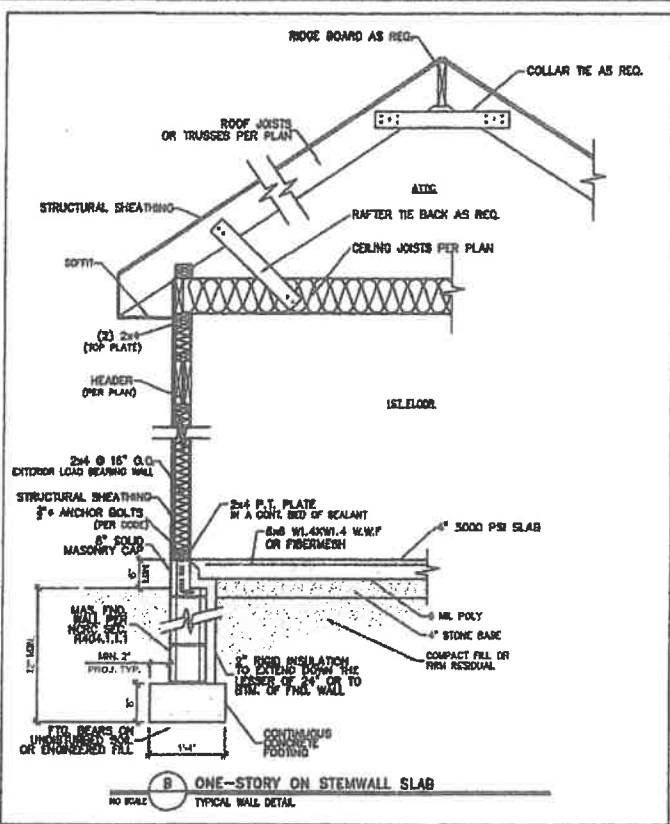
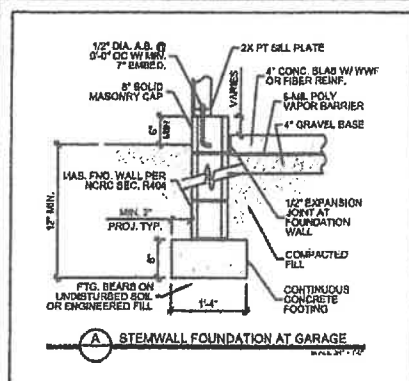
- ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF "NORTH CAROLINA STATE 2018 RESIDENTIAL BUILDING CODE", IN ADDITION TO ALL LOCAL CODES AND REGULATIONS.
- DESIGN LOADS:

	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION	
			LL	TL
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 PSI BASED ON 2x10 UNG). 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 PSI, E = 1.9M PSI (U.N.O.). ALL LVL LUMBER TO BE 3.5" WIDE NOMINAL EACH SINGLE MEMBER AND Fb = 3225 PSI, E = 1.8M PSI (U.N.O.). ALL PSL LUMBER TO BE 3.5" WIDE NOMINAL EACH SINGLE MEMBER AND Fb = 2400 PSI, E = 1.8M PSI (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 403.1.1; 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. TYNDALE 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 0.75 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 0.75 cont	19	10/13	10	10/13
5	0.35	0.55	NR	38 or 30 cont	15 or 15 + 2.0* or 15 + 3	1.13 or 0.75 cont	30*	10/13	10	10/13

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.
- "10/13" 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, INSULATING 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 BASE OF THE R-50 INSULATION IS REQUIRED WHERE APPROPRIATE. CLADDING, PARTS OR 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 COMPRESSION AND INSTALLED IN A NORMAL 2" x 8 FRAMING CAVITY IS DEEMED TO COMPLY. FIBERGLASS BATTIS RATED R-19 OR HIGHER COMPRESSED.
- 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
CAVT = 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
DIAM = DIAMETER	RS = ROOF SUPPORT
DJ = DOUBLE JOIST	SC = STUD COLUMN
DR = DOUBLE RAFTER	SCH = SCHEDULE
EA = EACH	SPEC = SPECIFIED
EE = EACH END	THK = THICK
FJ = FLOOR JOIST	TJ = TRIPLE JOIST
FND = FOUNDATION	TRED = TREATED
FTG = FOOTING	TRP = TYPICAL
GLV = GALVANIZED	UNG = UNLESS NOTED OTHERWISE
HORIZ = HORIZONTAL	W = 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 Tynndale Engineering & Design, P.A. Failure to do so will void Tynndale Engineering & Design, P.A. liability.
* Plans review these documents carefully. Tynndale Engineering & Design, P.A. will interpret them as dimensions, recommendations, etc. provided in these documents were detected 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

Sheet Number
D2

NOT TO SCALE

SEAL DATE: 02/12/20

Client: **KEN DAWSON**

Plan: **PLAN 1341 (GARAGE LEFT)**

Engineer shall not be held responsible for design, method, technique, equipment, material, or safety of any construction. The design is based on the information provided by the client. The engineer does not warrant the accuracy of the information provided. The engineer's liability is limited to the design of the structure shown on these drawings. The engineer does not warrant the accuracy of the information provided. The engineer's liability is limited to the design of the structure shown on these drawings.

