APPROVED

Limited building only review Permit holder responsible for full compliance with the code

NOTICE TO CONTRACTOR

All construction must comply with current NC Building Codes and is subject to field inspection and verification.

......

BUILDING CODE COMPLIANCE / PROJECT INFORMATION	INDEX
ALL CONSTRUCTION TO COMPLY WITH LOCAL CODES AND ORDINANCES CURRENTLY IN USE WITH THE LOCAL JURISDICTION. APPLICABLE CODES: FOLLOW ALL APPLICABLE STATE AND LOCAL CODES. 2018 NORTH CAROLINA STATE RESIDENTIAL CODE CONTRACTOR AND BUILDER SHALL REVIEW ENTIRE PLAN TO VERIFY CONFORMANCE WITH ALL CURRENT APPLICABLE CODES IN EFFECT AT TIME OF CONSTRUCTION. BY USING THESE DRAWINGS FOR CONSTRUCTION IT IS UNDERSTOOD THAT CONFORMANCE WITH ALL APPLICABLE CODES IS THE RESPONSIBILITY OF THE BUILDER AND CONTRACTOR. PRODUCT: SINGLE FAMILY RESIDENCE OCCUPANCY CLASSIFICATION RESIDENTIAL R-3	1.1ELEVATIONS 'CRAFTSMAN'1.2ELEVATIONS 'CRAFTSMAN'1.3ROOF PLAN 'CRAFTSMAN'1.4SECTIONS1.6FIRST FLOOR PLAN 'CRAFTSMAN'1.7FIRST FLOOR UTILITY PLAN 'CRAFTSMAN'
CONSTRUCTION TYPE: TYPE VB (2 HOUR DWELLING SEPARATION BETWEEN UNITS.)	ALL CONSULTANT DRAWINGS ACCOMPANYING THESE GMD DESIGN GROUP DRAWINGS HAVE NOT BEEN PREPARED BY OR UNDER THE DIRECTION OF GMD DESIGN GROUP, INC. GMD DESIGN GROUP INC. THEREFORE ASSUMES NO LIABILITY FOR THE COMPLETENESS OR CORRECTNESS OF THESE DRAWINGS.
GENERAL NOTES:	
THESE DOCUMENTS ARE THE PROPERTY OF THE DESIGNER AND SHALL NOT BE COPIED, DUPLICATED, ALTERED, MODIFIED OR REVISED IN ANY WAY WITHOUT THE EXPRESSED WRITTEN APPROVAL OF THE DESIGNER. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE SITE AND ALL INCONSISTENCES SHALL BE BROUGHT TO THE ATTENTION OF THE DEVELOPER	PROVIDE BLOCKING AND/OR BACKING AT ALL TOWEL BAR, TOWEL RING AND/OR TOILET PAPER HOLDER LOCATIONS, AS SHOWN PER PLAN. TYPICAL AT ALL BATHROOMS AND POWDER ROOMS. VERIFY LOCATIONS AT FRAMING WALK. ELASTOMERIC SHEET WATERPROOFING: FURNISH AND INSTALL ALL WATERPROOFING COMPLETE, A 40 MIL. SELF-ADHERING MEMBRANE OF RUBBERIZED
AND THE DESIGNER BEFORE PROCEEDING WITH WORK. ANY ERRORS OR OMISSIONS FOUND IN THESE DRAWINGS SHALL BE BROUGHT TO DEVELOPERS AND DESIGNERS ATTENTION IMMEDIATELY.	ASPHALT INTEGRALLY BONDED TO POLYETHYLENE SHEETING, OR EQUAL. INSTALL PER MANUFACTURE'S AND TRADE ASSOCIATION'S PRINTED INSTALLATION INSTRUCTIONS. 6" MINIMUM LAP AT ALL ADJACENT WALL SURFACES.
DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. ALL DIMENSIONS ARE TO FACE OF STUD OR TO FACE OF FRAMING UNLESS	TO THE BEST OF THE DESIGNER'S KNOWLEDGE THESE DOCUMENTS ARE IN CONFORMANCE WITH THE REQUIREMENTS OF THE BUILDING AUTHORITIES HAVING JURISDICTION OVER THIS TYPE OF CONSTRUCTION AND OCCUPANCY.
OTHERWISE NOTED. ALL TRUSS DRAWINGS TO BE REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO ISSUANCE OF BUILDING PERMIT.	SHOP DRAWING REVIEW AND DISTRIBUSTION, ALONG WITH PRODUCT SUBMITTALS, REQUESTED IN THE CONSTRUCTION DOCUMENTS, SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR, UNLESS DIRECTED OTHERWISE UNDER A SEPARATE AGREEMENT.
ALL OR EQUAL SUBSTITUTIONS MUST BE SUBMITTED TO AND APPROVED BY CITY BUILDING OFFICIAL PRIOR TO INSTALLATION. ALL ANGLED PARTITIONS ARE 45 DEGREES UNLESS OTHERWISE NOTED.	DEVIATIONS FROM THESE DOCUMENTS IN THE CONSTRUCTION PHASE SHALL BE REVIEWED BY THE DESIGNER AND THE OWNER PRIOR TO THE START OF WORK IN QUESTION. ANY DEVIATIONS FROM THESE DOCUMENTS WITHOUT PRIOR REVIEW, SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
PROVIDE FIREBLOCKING. (PER LOCAL CODES.) ALL ELECTRICAL AND MECHANICAL EQUIPMENT AND METERS ARE SUBJECT TO RELOCATION DUE TO FIELD CONDITIONS, CONTRACTOR TO VERIFY.	THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK AND MATERIALS REPRESENTED ON THESE DOCUMENTS INCLUDING THE WORK AND MATERIALS FURNISHED BY SUBCONTRACTORS AND VENDORS.

ELEV. 'C	RAFTSMA
Name	Area
FIRST FLOOR	1994 SF
HEATED	1994 SF
GARAGE	493 SF
PATIO	355 SF
PORCH	166 SF
SCREENED-IN PORCH	105 SF
UNHEATED	1118 SF

THE OWNER SHALL FURNISH ANY AND ALL REPORTS RECEIVED FROM THE GEOTECHNICAL ENGINEER (SOILS REPORT), ON THE STUDY OF THE PROPOSED SITE, TO THE DESIGNER, STRUCTURAL ENGINEER, AND GENERAL CONTRACTOR. IN THE EVENT THE GEOTECHNICAL REPORTS DO NOT EXIST, THE SOILS CONDITION SHALL BE ASSUMED TO BE A MINIMUM DESIGN SOIL PRESSURE STATED BY THE STRUCTURAL ENGINEER OF RECORD FOR THE PURPOSE OF STRUCTURAL DESIGN. GENERAL CONTRACTOR SHALL ASSURE THE SOIL CONDITIONS MEET OR EXCEED THE CRITERIA.

ALL WORK PERFORMED BY THE GENERAL CONTRACTOR SHALL COMPLY AND CONFORM WITH LOCAL AND STATE BUILDING CODES, ORDINANCES AND REGULATIONS, ALONG WITH ALL OTHER AUTHORITIES HAVING JURISDICTION. THE GENERAL CONTRCATOR IS RESPONSIBLE TO BE AWARE OF THESE REQUIREMENTS AND GOVERNING REGULATIONS.

PROVIDE AN APPROVED WASHER DRAIN PAN AT SECOND FLOOR ONLY THAT DRAINS TO EXTERIOR.

WINDOW SUPPLIER TO VERIFY AT LEAST ONE WINDOW IN ALL BEDROOMS TO HAVE A CLEAR OPENABLE AREA OF 4.0 SQ FT. THE MINIMUM NET CLEAR OPENING HEIGHT SHALL BE 22" AND THE MINIMUM NET CLEAR OPENING WIDTH SHALL BE 20". GLAZING TOTAL AREA OF NOT LESS THAN 5.0 SQ FT IN THE CASE OF A GROUND WINDOW AND NOT LESS THAN 5.7 SQ FT IN THE CASE OF AN UPPER STORY WINDOW. (PER NCRC SECTION R310.1.1)

ALL HANDRAIL BALLUSTERS TO BE SPACED SUCH THAT A 4" SPHERE CANNOT PASS BETWEEN BALLUSTERS. (PER LOCAL CODES.)

PROVIDE STAIR HANDRAILS AND GUARDRAILS PER LOCAL CODES.

BUILDER SET:

THE SCOPE OF THIS SET OF PLANS IS TO PROVIDE A "BUILDER'S SET" OF CONSTRUCTION DOCUMENTS AND GENERAL NOTES HEREINAFTER REFERRED TO AS "PLANS". THIS SET OF PLANS IS SUFFICIENT TO OBTAIN A BUILDING PERMIT; HOWEVER, ALL MATERIALS AND METHODS OF CONSTRUCTION NECESSARY TO COMPLETE THE PROJECT ARE NOT NECESSARILY DESCRIBED. THE PLANS DELINEATE AND DESCRIBE ONLY LOCATIONS, DIMENSIONS, TYPES OF MATERIALS, AND GENERAL METHODS OF ASSEMBLING OR FASTENING. THEY ARE NOT INTENDED TO SPECIFY PARTICULAR PRODUCTS OR OTHER METHODS OF ANY SPECIFIC MATERIALS, PRODUCT OR METHOD. THE IMPLEMENTATION OF THE PLANS REQUIRES A CLIENT / CONTRACTOR THOROUGHLY KNOWLEDGEABLE WITH THE APPLICABLE BUILDING CODES AND METHODS OF CONSTRUCTION SPECIFIC TO THIS PRODUCT TYPE AND TYPE OF CONSTRUCTION.

CONSTRUCTION REQUIREMENTS AND QUALITY: PROVIDE WORK OF THE SPECIFIC QUALITY; WHERE QUALITY LEVEL IS NOT INDICATED, PROVIDE WORK OF QUALITY CUSTOMARY IN SIMILAR TYPES OF WORK. WHERE THE PLANS AND SPECIFICATIONS, CODES, LAWS, REGULATIONS, MANUFACTURER'S RECOMMENDATIONS OR INDUSTRY STANDARDS REQUIRE WORK OF HIGHER QUALITY OR PERFORMANCE, PROVIDE WORK COMPLYING WITH THOSE REQUIREMENTS AND QUALITY. WHERE TWO OR MORE QUALITY PROVISIONS OF THOSE REQUIREMENTS CONFLICT WITH THE MOST STRINGENT REQUIREMENT; WHERE REQUIREMENTS ARE DIFFERENT BUT APPARENTLY EQUAL, AND WHERE IT IS UNCERTAIN WHICH REQUIREMENT IS MOST STRINGENT, OBTAIN CLARIFICATION FROM THE ARCHITECT BEFORE PROCEEDING.

> PRINT DATE: 12.03.19 SHEET NO: T-1

COVER SHEET

SHEET TITLE:

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C S Φ Ε 0 66 C Σ

ALL WINDOWS WHOSE OPENING IS LESS THAN 24" ABOVE THE FINISH FLOOR AND WHOSE OPENING IS GREATER THAN 72" ABOVE THE OUTSIDE WALKING SURFACE MUST HAVE WINDOW OPENING LIMITING DEVICES COMPLYING WITH THE 2018 NCRC SECTION R312.2.

NOTES:

-GRADE CONDITIONS MAY VARY FOR INDIVIDUAL SITE FROM THAT SHOWN. BUILDER SHALL VERIFY AND COORDINATE PER ACTUAL SITE CONDITIONS.

-WINDOW HEAD HEIGHTS: 1ST FLOOR = 8'-0" U.N.O. ON ELEVATIONS 2ND FLOOR = 7'-0" U.N.O. ON ELEVATIONS 3RD FLOOR = 7'-0" U.N.O. ON ELEVATIONS.

-ROOFING: PITCHED SHINGLES PER BUILDER.

-WINDOWS: MANUFACTURER PER BUILDER. DIVIDED LITES AS SHOWN ON THE EXTERIOR ELEVATIONS

-ENTRY DOOR: AS SELECTED BY BUILDER

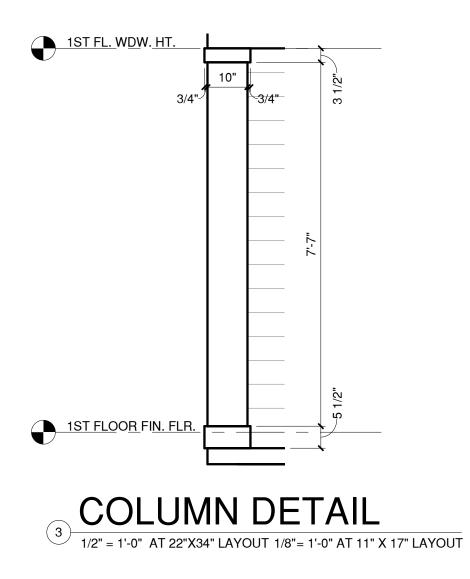
-CHIMNEY AS OCCURS: TOP OF CHIMNEYS TO BE A MINIMUM OF 24" ABOVE ANY ROOF WITHIN 10'-0" OF CHIMNEY.

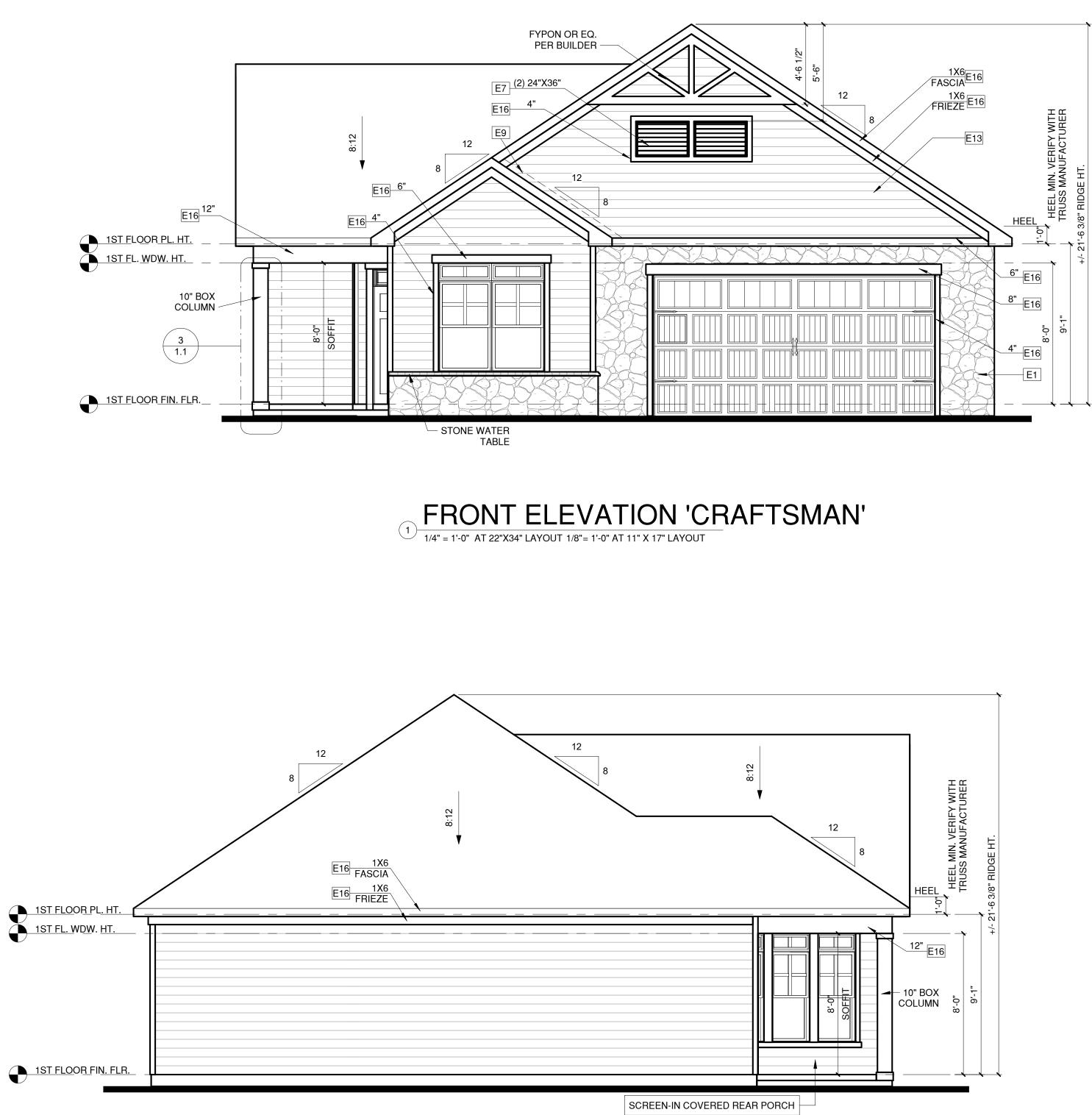
-ALL EXTERIOR MATERIALS TO BE INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS.

ELEVATION KEYNOTE LEGEND

ADHERED STONE VENEER AS SELECTED BY DEVELOPER, HEIGHT AS NOTED FYPON OR EQUIVALENT LOUVERED VENT, SIZE AS NOTED CORROSION RESISTANT ROOF TO WALL FLASHING, CODE COMPLIANT FLASHING MUST BE INSTALLED AT ALL ROOF/WALL INTERSECTIONS E10 OPT. STANDING SEAM METAL ROOF, INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS E12 FIBER CEMENT SHAKE SIDING PER DEVELOPER W/ 5/4x4 CORNER TRIM BOARDS E13 | FIBER CEMENT LAP SIDING PER DEVELOPER W/ 5/4x4 CORNER TRIM BOARDS E15 FIBER CEMENT PANEL SIDING W/ 1X3 BATTS AT 16" O.C. (VINYL BOARD AND BATTEN SIDING)

E16 1X FIBER CEMENT TRIM OR EQUAL, U.N.O. SIZE AS NOTED





2 **REAR ELEVATION 'CRAFTSMAN'** 1/4" = 1'-0" AT 22"X34" LAYOUT 1/8" = 1'-0" AT 11" X 17" LAYOUT



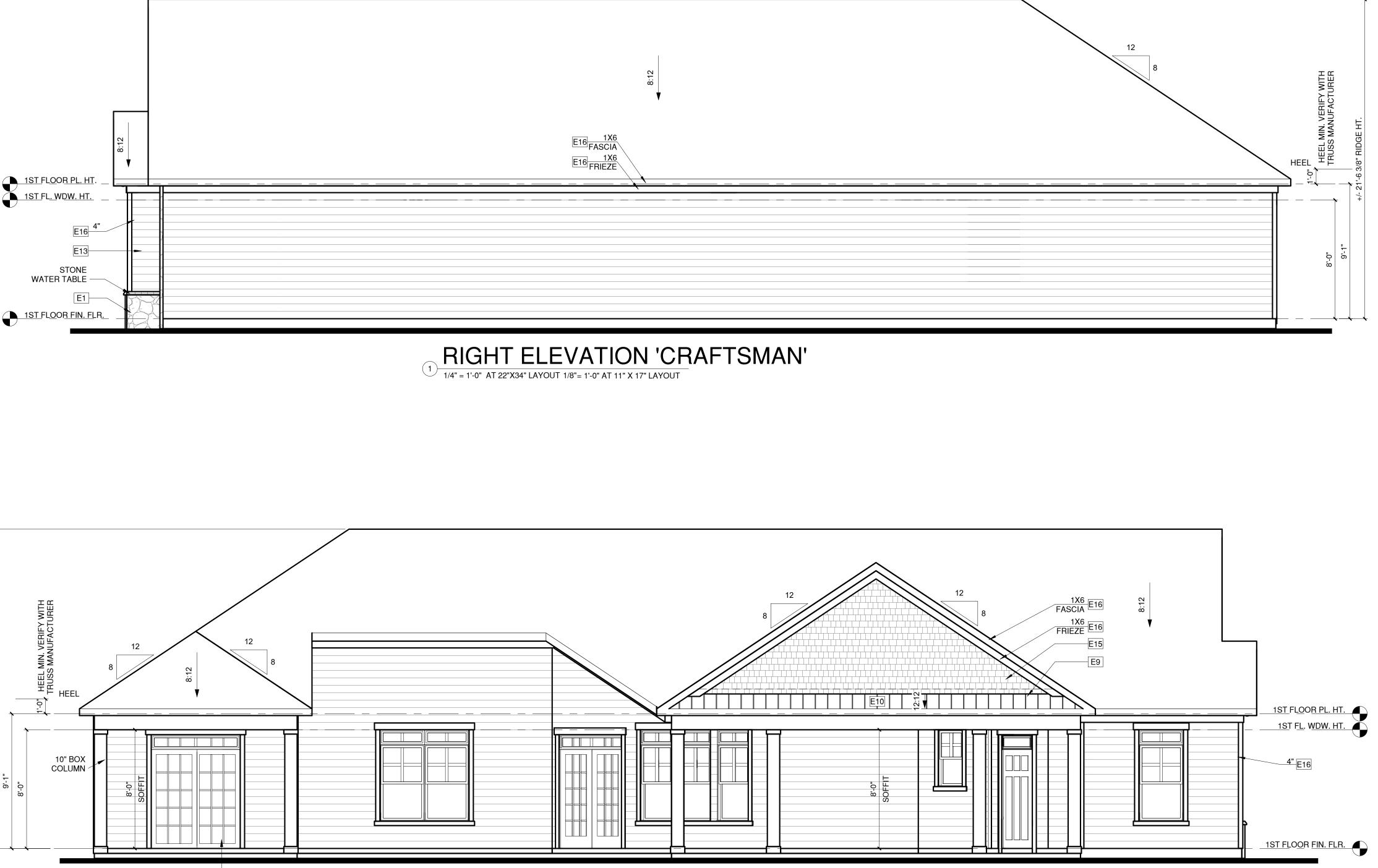
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SHEET TITLE:

ELEVATIONS 'CRAFTSMAN'

PRINT DATE: 12.03.19

SHEET NO: 1.1



ALL WINDOWS WHOSE OPENING IS LESS THAN 24" ABOVE THE FINISH FLOOR AND WHOSE OPENING IS GREATER THAN 72" ABOVE THE OUTSIDE WALKING SURFACE MUST HAVE WINDOW OPENING LIMITING DEVICES COMPLYING WITH THE 2018 NCRC SECTION R312.2.

NOTES:

-GRADE CONDITIONS MAY VARY FOR INDIVIDUAL SITE FROM THAT SHOWN. BUILDER SHALL VERIFY AND COORDINATE PER ACTUAL SITE CONDITIONS.

-WINDOW HEAD HEIGHTS: 1ST FLOOR = 8'-0" U.N.O. ON ELEVATIONS 2ND FLOOR = 7'-0" U.N.O. ON ELEVATIONS 3RD FLOOR = 7'-0" U.N.O. ON ELEVATIONS.

-ROOFING: PITCHED SHINGLES PER BUILDER.

-WINDOWS: MANUFACTURER PER BUILDER. DIVIDED LITES AS SHOWN ON THE EXTERIOR ELEVATIONS

-ENTRY DOOR: AS SELECTED BY BUILDER

-CHIMNEY AS OCCURS: TOP OF CHIMNEYS TO BE A MINIMUM OF 24" ABOVE ANY ROOF WITHIN 10'-0" OF CHIMNEY.

-ALL EXTERIOR MATERIALS TO BE INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS.

ELEVATION KEYNOTE LEGEND

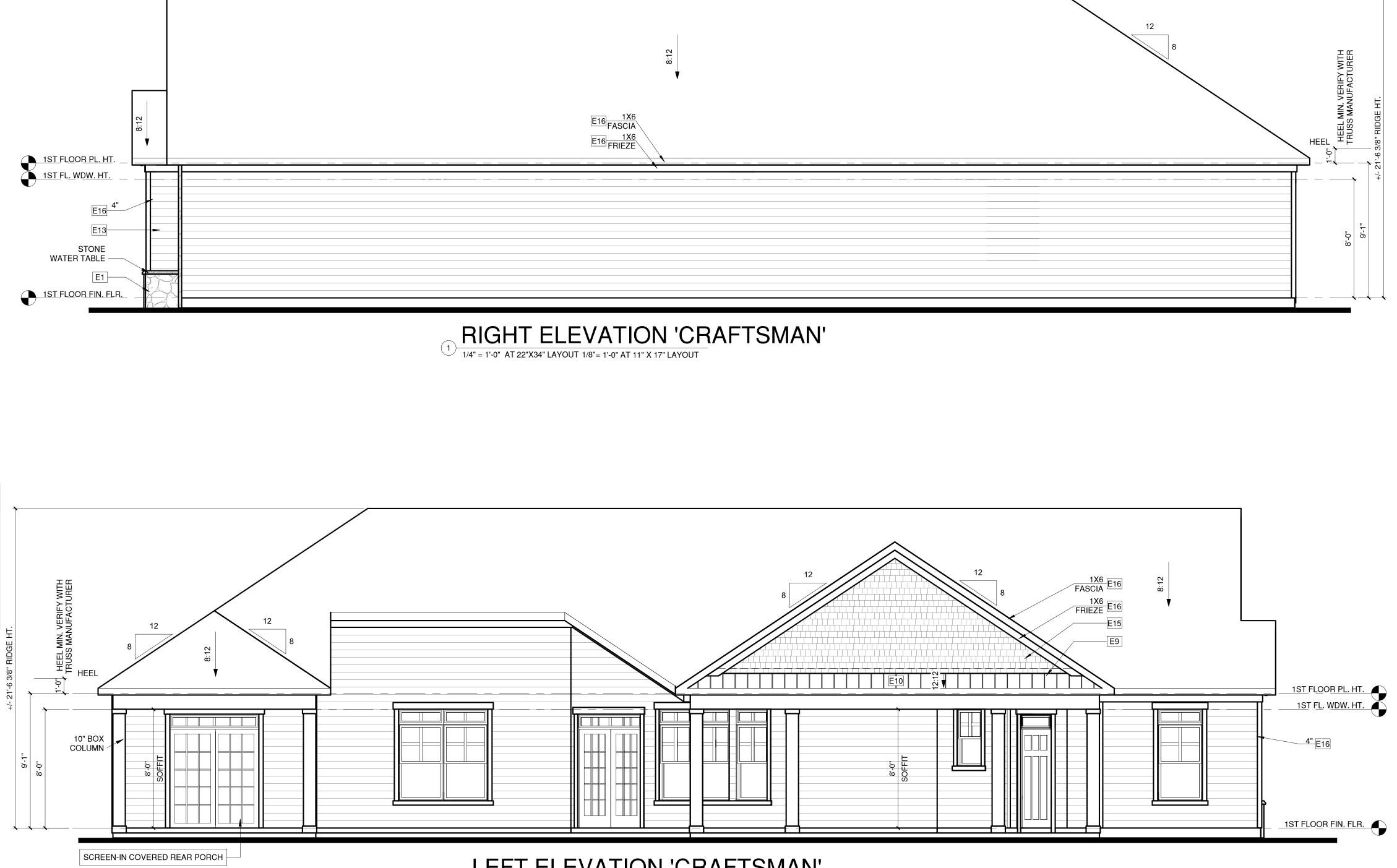
ADHERED STONE VENEER AS SELECTED BY DEVELOPER, HEIGHT AS NOTED FYPON OR EQUIVALENT LOUVERED VENT, SIZE AS NOTED

CORROSION RESISTANT ROOF TO WALL FLASHING, CODE COMPLIANT FLASHING MUST BE INSTALLED AT ALL ROOF/WALL INTERSECTIONS 10 OPT. STANDING SEAM METAL ROOF, INSTALL PER MANUFACTURER'S WRITTEN

INSTRUCTIONS

- E12 FIBER CEMENT SHAKE SIDING PER DEVELOPER W/ 5/4x4 CORNER TRIM BOARDS E13 FIBER CEMENT LAP SIDING PER DEVELOPER W/ 5/4x4 CORNER TRIM BOARDS
- E15 FIBER CEMENT PANEL SIDING W/ 1X3 BATTS AT 16" O.C. (VINYL BOARD AND BATTEN

SIDING) E16 1X FIBER CEMENT TRIM OR EQUAL, U.N.O. SIZE AS NOTED



LEFT ELEVATION 'CRAFTSMAN' 2 1/4" = 1'-0" AT 22"X34" LAYOUT 1/8"= 1'-0" AT 11" X 17" LAYOUT



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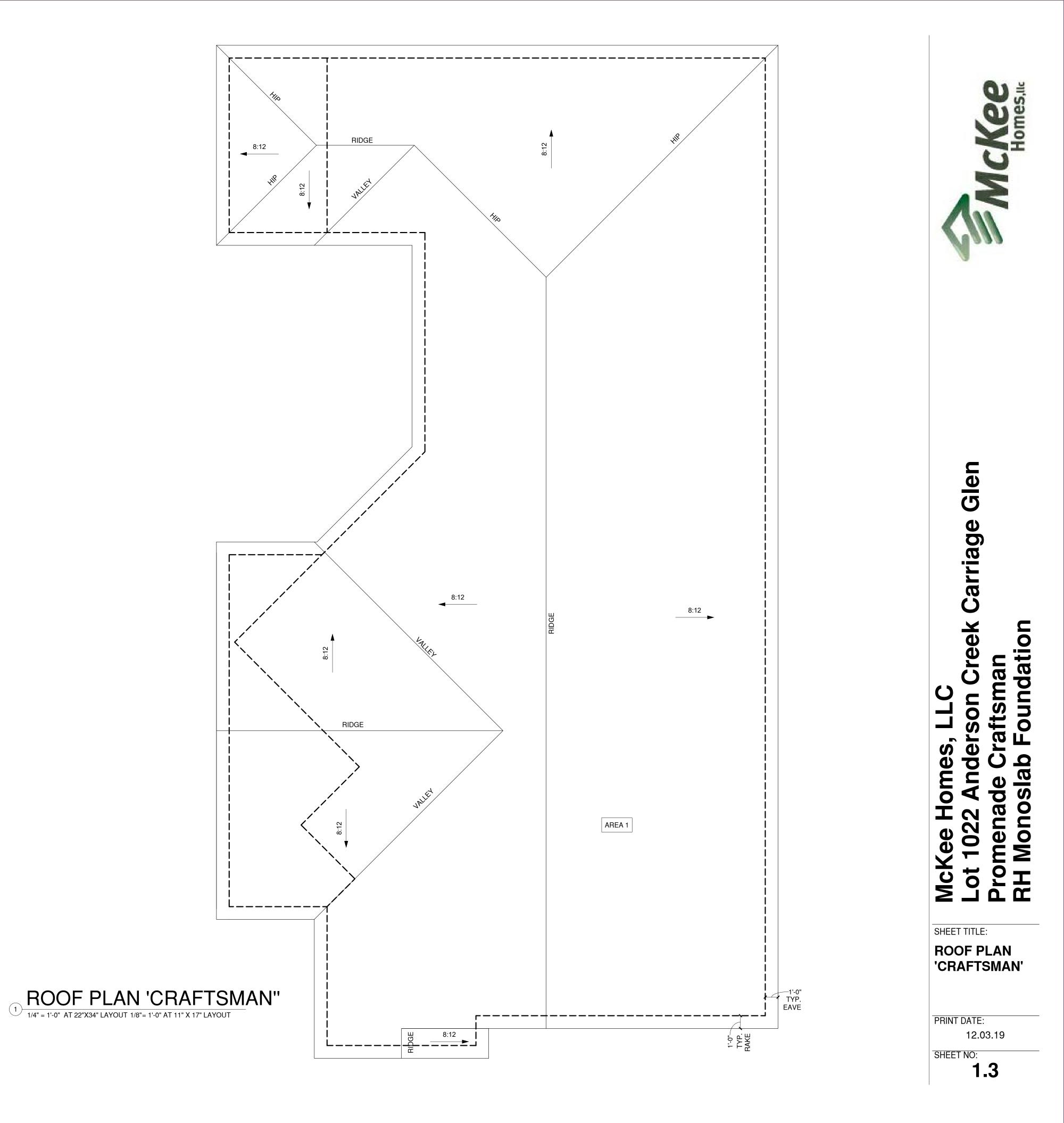


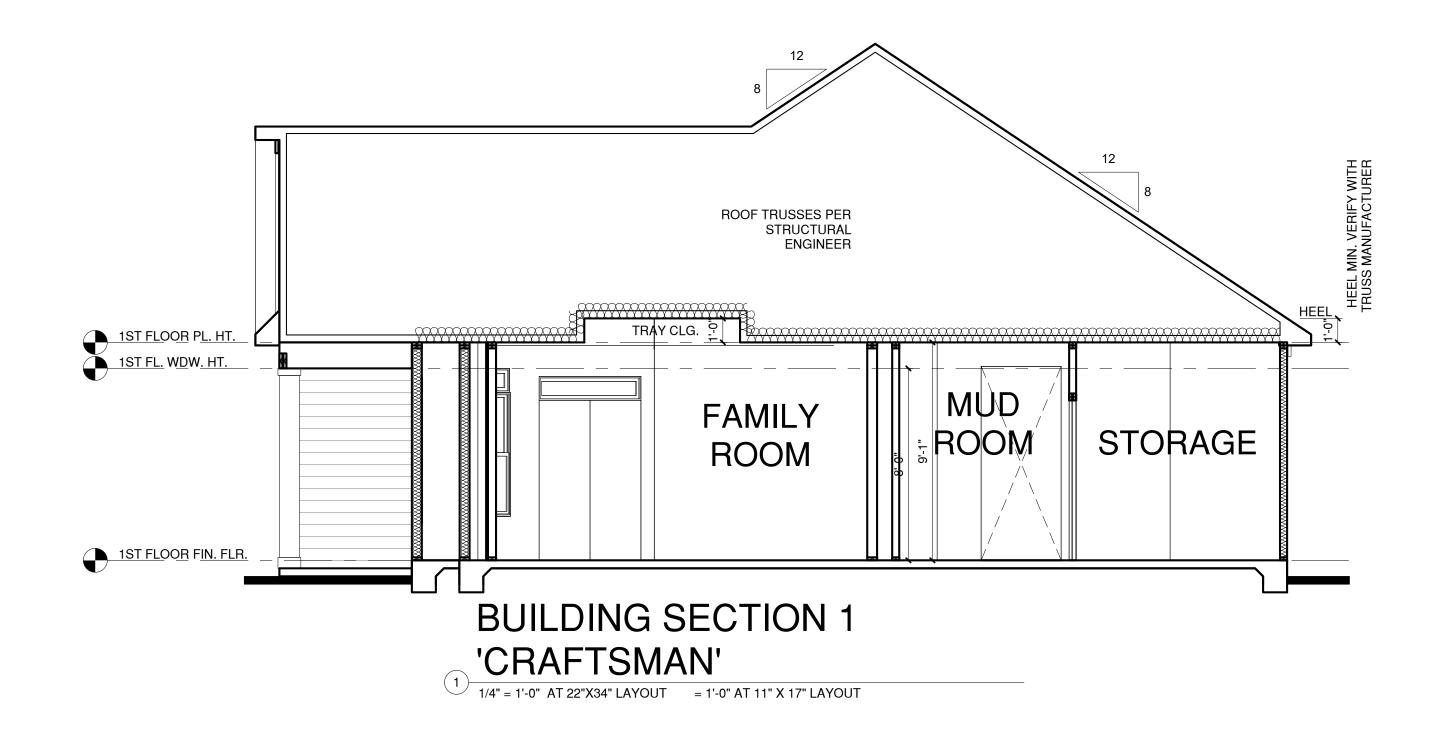
PRINT DATE: 12.03.19

SHEET NO:

1/150 RATIO:	1/300 RATIO:
GENERAL CONTRACTOR SHALL VERIFY THE NET FREE VENTILATION OF THE VENT PRODUCT SELECTED BY OWNER. VERIFY WITH MANUFACTURER OF HIGH AND LOW VENTS TO BE USED FOR MINIMUM CALCULATED VENTS REQUIRED. THE REQUIRED VENTILATION SHALL BE MAINTAINED. PROVIDE INSULATION STOP SUCH THAT INSULATION DOES NOT OBSTRUCT FREE AIR MOVEMENT AS REQUIRED BY THE BUILDING OFFICIAL. ALL OVERLAP FRAMED ROOF AREAS SHALL HAVE OPENINGS BETWEEN THE ADJACENT ATTICS IN THE ROOF SHEATHING (AS ALLOWED BY THE STRUCTURAL ENGINEER) TO ALLOW PASSAGE AND ATTIC VENTILATION BETWEEN THE TWO OR ISOLATED ATTIC SPACES SHALL BE VENTED INDEPENDENTLY. PER DEVELOPER, AT ALL CANTILEVERED FLOORS, CANTILEVERED DECORATIVE PROJECTIONS, AND ANY DOUBLE FRAMING PROJECTIONS THAT ARE SEPARATED FROM THE VENTING CALCULATIONS SHOWN ABOVE, PROVIDE A CONTINUOUS 2" CORROSION RESISTANT SOFFIT VENT AT UNDERSIDE OF FRAMED ELEMENT.	AS AN ALTERNATE TO THE 1/150 RATIO LISTED, THE NET FREE CROSS-VENTILATION AREA MAY BE REDUCED TO 1/300 WHEN A VAPOR BARRIER IS HAVING A TRANSMISSION RATE NOT EXCEEDING I-PERM INSTALLED ON THE WARM-IN- WINTER SIDE OF THE CEILING. GENERAL CONTRACTOR SHALL VERIFY THE NET FREE VENTILATION OF THE VENT PRODUCT SELECTED BY OWNER. VERIFY WITH MANUFACTURER OF HIGH AND LOW VENTS TO BE USED FOR MINIMUM CALCULATED VENTS REQUIRED. THE REQUIRED VENTILATION SHALL BE MAINTAINED. PROVIDE INSULATION STOP SUCH THAT INSULATION DOES NOT OBSTRUCT FREE AIR MOVEMENT AS REQUIRED BY THE BUILDING OFFICIAL. ALL OVERLAP FRAMED ROOF AREAS SHALL HAVE OPENINGS BETWEEN THE ADJACENT ATTICS IN THE ROOF SHEATHING (AS ALLOWED BY THE STRUCTURAL ENGINEER) TO ALLOW PASSAGE AND ATTIC VENTILATION BETWEEN THE TWO OR ISOLATED ATTIC SPACES SHALL BE VENTED INDEPENDENTLY. PER DEVELOPER, AT ALL CANTILEVERED FLOORS, CANTILEVERED DECORATIVE PROJECTIONS, AND ANY DOUBLE FRAMING PROJECTIONS THAT ARE SEPARATED FROM THE VENTING CALCULATIONS SHOWN ABOVE, PROVIDE A CONTINUOUS 2" CORROSION RESISTANT SOFFIT VENT AT UNDERSIDE OF FRAMED ELEMENT.
NOTES:	
 ALL ROOF DRAINAGE SHALL BE PIPED TO STREET OR APPROVED DRAINAGE FACILITY. DASHED LINES INDICATE WALL BELOW. LOCATE GUTTER AND DOWNSPOUTS PER BUILDER. PITCHED ROOFS AS NOTED. 	 TRUSS MANUFACTURER SHALL SUBMIT STRUCTURAL CALCS AND SHOP DRAWING TO THE BUILDER'S GENERAL CONTRACTOR AND BUILDING DEPARTMENT FOR REVIEW PRIOR TO FABRICATIONS. ALL PLUMBING VENTS SHALL BE COMBINED INTO A MINIMUM AMOUNT OF ROOF PENETRATIONS. ALL ROOF PENETRATIONS SHALL OCCUR TO THE REAR OF THE MAIN RIDGE.

ROOF VENT CALC. ELEV. 'A'				
Name	Area	1/300 RATIO AT HIGH & LOW	1/150 RATIO AT HIGH & LOW	
AREA 1	2757 SF	661.73 in ²	1323.47 in ²	









SHEET TITLE: SECTIONS

PRINT DATE: 12.03.19 SHEET NO:

WALL LEGEND

FULL HEIGHT

2X4 WOOD STUD PARTITION 2X6 WOOD STUD PARTITION

FULL HEIGHT

DRYWALL OPENING HEIGHT

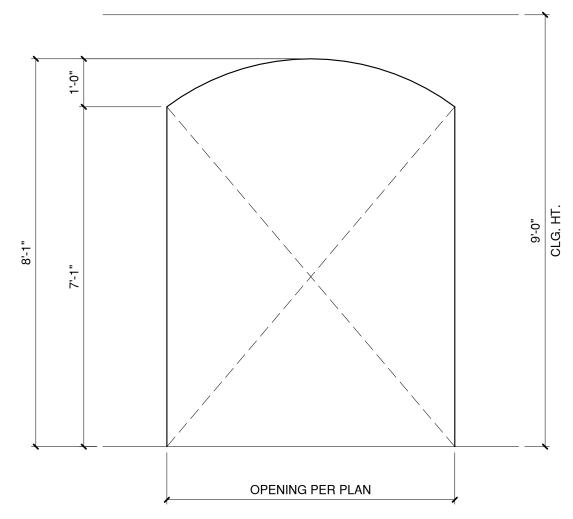
AS NOTED ON PLAN

STONE VENEER

BRICK VENEER

STUD WALL BELOW HEIGHT AND STUD SIZE AS NOTED

FLOOR PLAN KEYNOTE LEGEND HOUSE TO GARAGE FIRE SEPARATION, GARAGE/HOUSE SEPARATION AT VERTICAL SURFACES SHALL BE PROTECTED WITH ONE (1) LAYER 1/2" GYPSUM BOARD. GARAGE/HOUSE SEPARATION AT HORIZONTAL SURFACES SHALL BE PROTECTED WITH ONE (1) LAYER 5/8" TYPE "X" GYPSUM BOARD HOUSE TO GARAGE DOOR SEPARATION. PROVIDE 1 3/8" SOLID CORE DOOR OR APPROVED 20 MINUTE RATED DOOR BENEATH STAIRS AND LANDINGS. 1/2" GYPSUM BOARD ON WALLS AND CEILING OF ENCLOSED ACCESSIBLE AREAS GAS WATER HEATER ON 18" HIGH PLATFORM PRE-FABRICATED METAL FIREPLACE, INSTALL PER MANUFACTURER WRITTEN INSTRUCTIONS ATTIC ACCESS LARGE ENOUGH TO REMOVE LARGEST PIECE OF EQUIPMENT BUT NOT LESS THAN 30"X22". FIRE RATED ACCESS AS NOTED. ATTIC ACCESS LADDER, VERIFY LOCATION AND SIZE WITH TRUSSES (25 1/2"X54" SIZE) TEMPERED SAFETY GLASS INTERIOR SOFFITS: FFL = 8'-1" U.N.O. SFL = 7'-6" U.N.O., OPT. CASED OPENING U.N.O. SHOWER, TEMPERED GLASS ENCLOSURE **TUB-SHOWER COMBO** ACRYLIC TUB W/ PLATFORM, SIZE AS NOTED GAS COOKTOP AND HOOD, VENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS

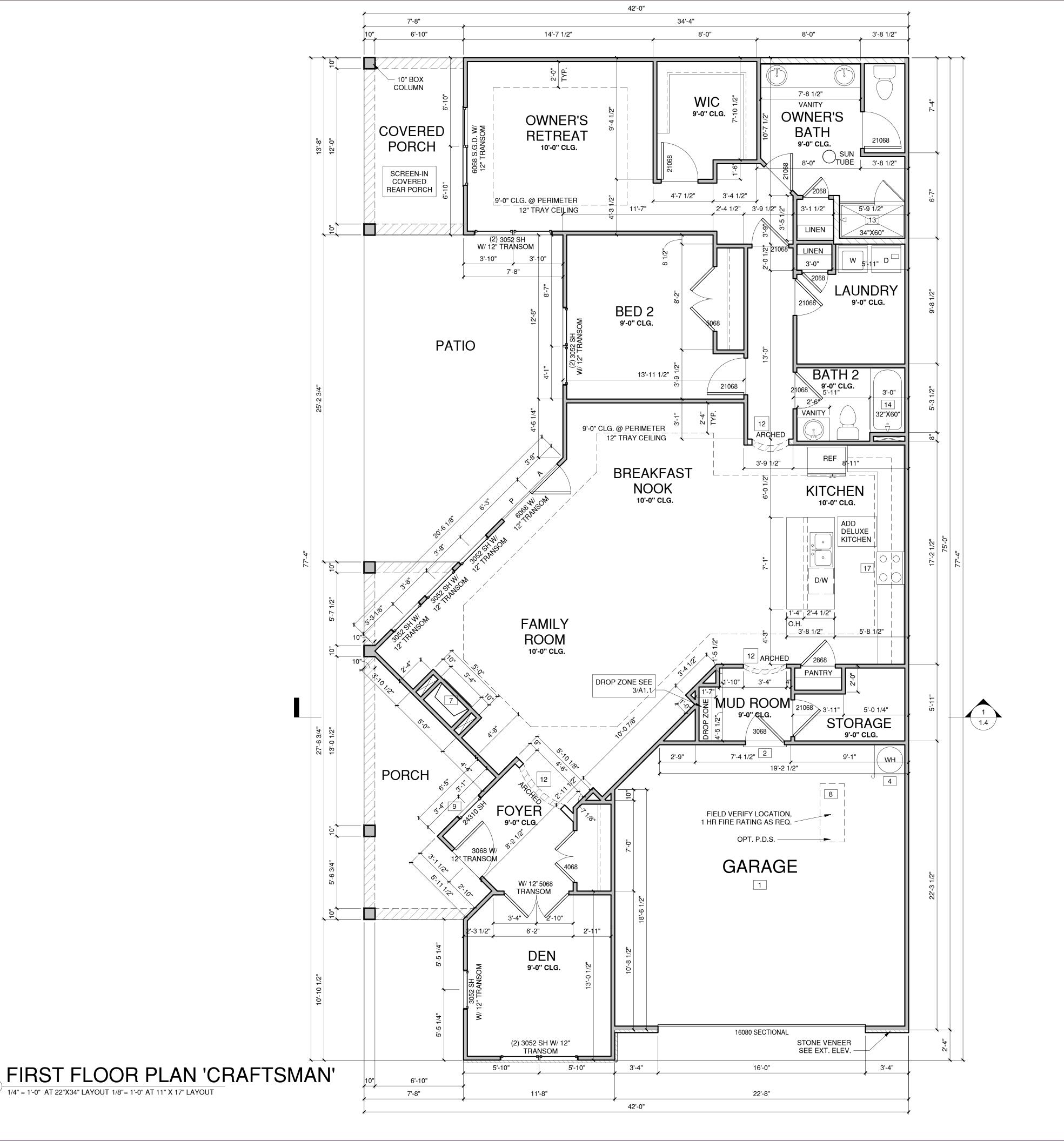


TYP. ARCHED OPENING DETAIL 2 1/2" = 1'-0" AT 22"X34" LAYOUT 1/4"= 1'-0" AT 11" X 17" LAYOUT

HOOKS 8" O.C. < 0 0 WOOD RAIL TRIM AND PAINT BEAD BOARD -16" DEEP BASE CABINET CUBBIES 4'-3" DROP ZONE DETAIL

3 <u>1/2" = 1'-0" AT 22"X34" LAYOUT 1/4"= 1'-0" AT 11" X 17" LAYOUT</u>



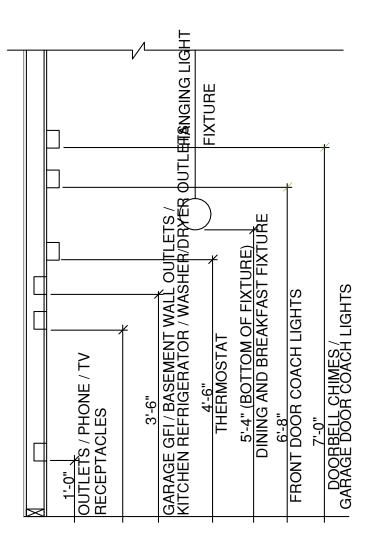




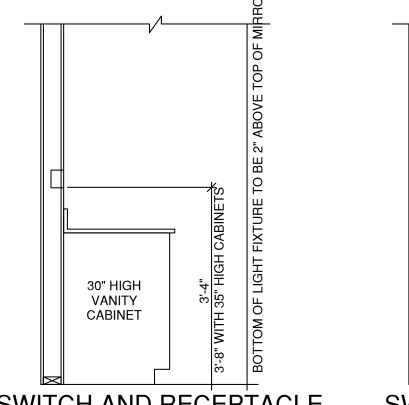


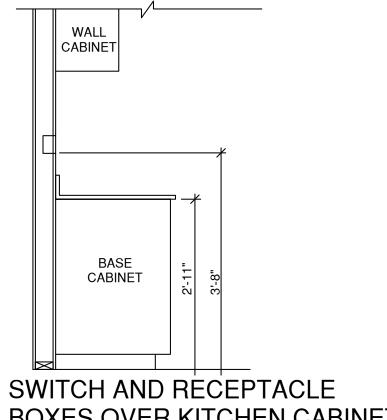
PRINT DATE: 12.03.19

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STANDARD ELECTRICAL BOX HEIGHTS





SWITCH AND RECEPTACLE BOXES OVER BATH CABINETS

BOXES OVER KITCHEN CABINETS

NOTES:

PROVIDE GROUNDING ELECTRICAL ROD PER LOCAL CODES.

-PROVIDE AND INSTALL ARC FAULT CIRCUIT-INTERRUPTERS (AFCI) AS REQUIRED BY NATIONAL ELECTRICAL CODE (NEC) AND MEETING THE REQURIEMENTS OF ALL GOVERNING CODES.

-ALL EXHAUST FANS SHALL HAVE BACKDRAFT DAMPERS

FAN/LIGHTS IN WET/DAMP LOCATIONS SHALL BE LABLED "SUITABLE FOR WET OR DAMP LOCATIONS."

ELECTRICAL SYSTEMS ARE SHOWN FOR INTENT ONLY. THESE SYSTEMS SHALL BE ENGINEERED BY OTHERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER INSTALLATION AND PLACEMENT.

PROVIDE AND INSTALL LOCALLY CERTIFIED SMOKE DETECTORS AND CO2 DETECTORS AS REQUIRED BY NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) AND MEETING THE REQUIREMENTS OF ALL GOVERNING CODES.

PROVIDE AND INSTALL GROUND FAULT CIRCUIT-INTERRUPTERS (GFI) AS REQUIRED BY NATIONAL ELECTRICAL

CODE (NEC) AND MEETING THE REQUIREMENTS OF ALL GOVERNING CODES. ELECTRICAL CONTRACTOR TO PROVIDE REQURIED DIRECT HOOK-UPS/CUTOFFS.

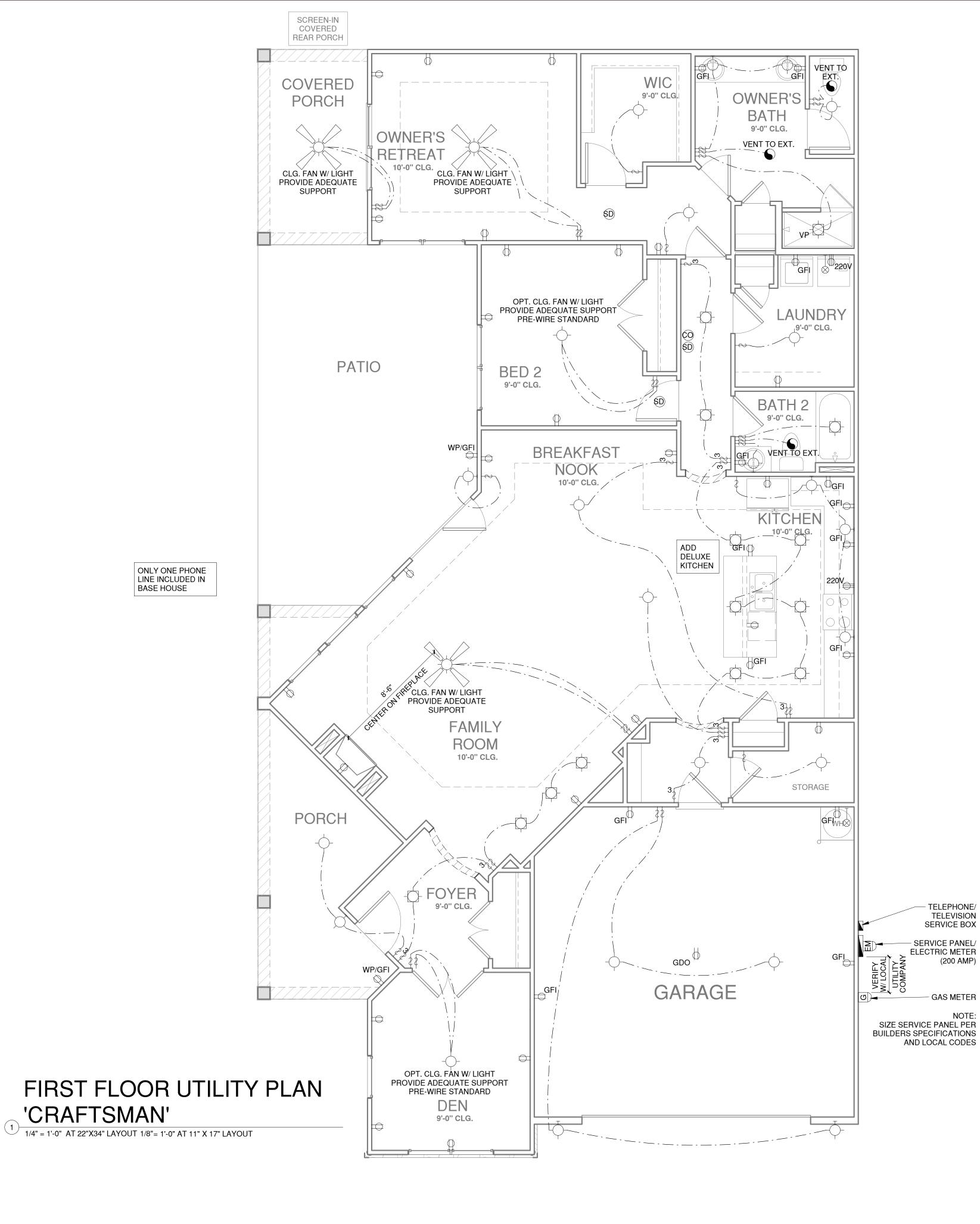
HVAC CONTRACTOR TO VERIFY THERMOSTAT LOCATIONS.

ALL ELECTRICAL AND MECHANICAL EQUIPMENT (FURNACES, A/C UNITS, ELECTRICAL PANELS, SANITARY SUMP PITS, DRAING TILE SUMP, AND WATER HEATERS) ARE SUBJECT TO RELOCATOIN DUE TO FIELD CONDITIONS.

PROVIDE POWER, LIGHT AND SWITCH AS REQUIRED FOR ATTIC FURNACE PER CODE AND MANUFACTURER'S WRITTEN INSTRUCTIONS.

LEGEND:

LLML	ND.	
\bigcirc	DUPLEX OUTLET	
₩P/GFI	WEATHERPROOF GFI DUPLEX OUTLET	WALL MOUNTED INCANDESCENT LIGHT FIXUTRE
₽GFI	GROUND-FAULT CIRCUIT- INTERRUPTER DUPLEX OUTLET	
Φ	HALF-SWITCHED DUPLEX OUTLET	(VP) = VAPOR PROOF
₽ 220V	220 VOLT OUTLET	EXHAUST FAN (VENT TO EXTERIOR)
J	REINFORCED JUNCTION BOX	EXHAUST FAN/LIGHT COMBINATION (VENT TO EXTERIOR)
\$	WALL SWITCH	
\$ 3	THREE-WAY SWITCH	
\$4	FOUR-WAY SWITCH	TECH HUB SYSTEM
СН	CHIMES	
	PUSHBUTTON SWITCH	(PROVIDE ADEQUATE SUPPORT)
SD	110V SMOKE DETECTOR W/ BATTERY BACKUP	CEILING FAN WITH INCANDESCENT LIGHT FIXTURE
CO	CO2 DETECTOR	
T	THERMOSTAT	
PH	TELEPHONE	
TV	TELEVISION	
	ELECTRIC METER	+ 1/4" WATER STUB OUT
	ELECTRIC PANEL	
	DISCONNECT SWITCH	



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MCKe

SHEET TITLE:

NOTE:

FIRST FLOOR UTILITY PLAN 'CRAFTSMAN'

PRINT DATE: 12.03.19 SHEET NO:

DESIGN SPECIFICATIONS:

Construction Type: Commerical 🗌 Residential 🛛

Applicable Building Codes:

• 2018 North Carolina Residential Building Code with All Local Amendments • ASCE 1-10: Minimum Design Loads for Buildings and Other Structures

 ASCE 7-10: Minimum Design Loads for Buildings and Other Structures 					
Design Loads:					
1. Roof Live Lo					
	ntional 2x				
	Attic Truss		60	PSF	
2. Roof Dead L					
	ntional 2x				
3. Snow				PSF	
	ince Factor		1 <i>.</i> Ø		
4. Floor Live Lo					
	uelling				
	ng Areas				
	-				
	ger Garage			PSF	
5. Floor Dead L					
	ntional 2x				
	5.3. Floor Truss				
6. Ultimate Desig				MPH	
	ire				
	ince Factor		1 <i>.</i> Ø		
6.3. Wind B					
6.3.1.					
6.3.2.	~				
7. Component ar	nd Cladding (in PSF)			
MEAN ROOF	UP TO 30'	30'1"-35'	35'1"-40'	40'1"-45'	
	HI,				
	ZONE 1 16.7,-18.0		18.2,-19.6	18.7,-20.2	
ZONE 2	16.7,-21.0	17.5,-22.1	18.2,-22.9	18.7,-23.5	
ZONE 3	16.7,-21.0	17.5,-22.1	18.2,=22.9	18.7,-23.5	
ZONE 4	18.2,-19.0	19.2,-2 <i>0.0</i> 19.2,-25.2	19.9,-20.7 19.9,-26.1	20.4,-21.3	
ZONE 5	ZONE 5 18.2,-24.0			20.4,-26.9	

8. Seismic

- 8.1. Site Class ... 8.2. Design Category
- 8.3. Importance Factor .
- 8.4. Seismic Use Group.
- 8.5. Spectral Response Acceleration
- 8.5.1. Sms = %q 8.5.2. Sml = %q
- 8.6. Seismic Base Shear
- 8.6.1. Vx =
- 8.6.2.Vy =
- 8.7. Basic Structural System (check one)
 - 🛛 Bearing Wall
 - Building Frame □ Moment Frame
 - Dual w/ Special Moment Frame
 - Dual w/ Intermediate R/C or Special Steel
 - 🗌 Inverted Pendulum
- 8.8. Arch/Mech Components Anchored
- 8.9. Lateral Design Control: Seismic 🗌 🛛 Wind 🖂
- 9. Assumed Soil Bearing Capacity 2000psf

- GENERAL STRUCTURAL NOTES:
- The design professional whose seal appears on these drawings is the structural engineer of record (SER) for this project. The SER bears the responsibility of the primary structural elements and the performance of this structure. No other party may revise, alter, or delete any structural aspects of these construction documents without written permission of SUMMIT Engineering, Laboratory & Testing, P.C. (SUMMIT) or the SER. For the purposes of these construction documents the SER and SUMMIT
- shall be considered the same entity. The structure is only stable in its completed form. The contractor shall provide all required temporary bracing during construction
- to stabilize the structure. The SER is not responsible for construction sequences, methods, or techniques in connection with the construction of this structure. The SER will not be held responsible for the contractor's failure to conform to the contract documents, should any non-conformities occur.
- Any structural elements or details not fully developed on the construction drawings shall be completed under the direction of a licensed professional engineer. These shop drawings shall be submitted to SUMMIT for review before any construction begins. The shop drawings will be reviewed for overall compliance as it relates to the structural design of this project. Verification of the shop drawings for dimensions, or for actual field conditions, is not the responsibility of the SER or SUMMIT.
- Verification of assumed field conditions is not the responsibility of the SER. The contractor shall verify the field conditions for accuracy and report any discrepancies to SUMMIT before construction begins.
- The SER is not responsible for any secondary structural elements or non-structural elements, except for the elements specifically noted on the structural drawings
- This structure and all construction shall conform to all applicable sections of the international residential code.
- 8. This structure and all construction shall conform to all
- applicable sections of local building codes.
- 9. All structural assemblies are to meet or exceed to requirements of the current local building code.

FOUNDATIONS:

The structural engineer has not performed a subsurface investigation. Verification of this assumed value is the responsibility of the owner or the contractor. Should any adverse soil condition be encountered the SER must be contacted before proceeding.

- 2. The bottom of all footings shall extend below the frost line for the region in which the structure is to be constructed. However, the bottom of all footings shall be a minimum of 12" below grade.
- 3. Any fill shall be placed under the direction or recommendation of a licensed professional engineer.
- 4. The resulting soil shall be compacted to a minimum of 95% maximum dry density.
- 5. Excavations of footings shall be lined temporarily with a 6 mil polyethylene membrane if placement of concrete does not occur within 24 hours of excavation.
- 6. No concrete shall be placed against any subgrade containing water, ice, frost, or loose material.

STRUCTURAL STEEL:

- Structural steel shall be fabricated and erected in accordance with the American Institute of Steel Construction "Code of Standard Practice for Steel Buildings and Bridges" and the manual of Steel Construction "Load Resistance Factor Design" latest editions.
- Structural steel shall receive one coat of shop applied rust-inhibitive paint.
- All steel shall have a minimum yield stress (F_{μ}) of 36 ksi unless otherwise noted.
- Welding shall conform to the latest edition of the American Welding Society's Structural Welding Code AWS D1.1. Electrodes for shop and field welding shall be class ETØXX. All welding shall be performed by a certified welder per the above standards.

CONCRETE:

- Concrete shall have a normal weight aggregate and a minimum compressive strength (f'c) at 28 days of 3000 psi, unless otherwise noted on the plan.
- Concrete shall be proportioned, mixed, and placed in accordance with the latest editions of ACI 318: "Building Code Requirements for Reinforced Concrete" and ACI 301: "Specifications for Structural Concrete for Buildings".
- 3. Air entrained concrete must be used for all structural elements exposed to freeze/thaw cycles and deicing chemicals. Air entrainment amounts (in percent) shall be within -1% to +2% of target values as follows: 3.1. Footings: 5%
 - 3.2. Exterior Slabs: 5%
- 4. No admixtures shall be added to any structural concrete without written permission of the SER.

- Construction".

- standard.

- - CONCRETE REINFORCEMENT:

 - ASTM A615, grade 60.

 - tension splice. masonry shall be a minimum of 48 bar diameters.



STRUCTURAL PLANS PREPARED FOR:

PROJECT ADDRESS: TBD

OWNER: McKee Homes 109 Hay St., Suite 301 Fayetteville, NC 28301

DESIGNER: Planworx Architecture, P.A. 5711 Six Forks Rd. #100 Raleigh, NC 27609

These drawings are to be coordinated with the architectural, mechanical, plumbing, electrical, and civil drawings. This coordination is not the responsibility of the structural engineering of record (SER). Should any discrepancies become apparent, the contractor shall notify SUMMIT Engineering, Laboratory & Testing, P.C. before construction begins.

<u>PLAN</u>	ABBREVIATIONS:		
AB	ANCHOR BOLT	PT	PRESSURE TREATED
AFF	ABOVE FINISHED FLOOR	RS	ROOF SUPPORT
CJ	CEILING JOIST	SC	STUD COLUMN
CLR	CLEAR	SJ	SINGLE JOIST
DJ	DOUBLE JOIST	SPF	SPRUCE PINE FIR
DSP	DOUBLE STUD POCKET	SST	SIMPSON STRONG-TIE
EE	EACH END	SYP	SOUTHERN YELLOW PINE
ΕW	EACH WAY	ŤĴ	TRIPLE JOIGT
NTS	NOT TO SCALE	TSP	TRIPLE STUD POCKET
OC	ON CENTER	TYP	TYPICAL
PSF	POUNDS PER SQUARE FOOT	UNO	UNLESS NOTED OTHERWISE
PSI	POUNDS PER SQUARE INCH	WWF	WELDED WIRE FABRIC

Roof truss and floor joist layouts, and their corresponding loading details, were not provided to SUMMIT Engineering, Laboratory & Testing, P.C. (SUMMIT) prior to the initial design. Therefore, truss and joist directions were assumed based on the information provided by MCKEE HOMES. Subsequent plan revisions based on roof truss and floor joist layouts shall be noted in the revision list, indicating the date the layouts were provided. Should any discrepancies become apparent, the contractor shall notify SUMMIT immediately.

Concrete slabs-on-grade shall be constructed in accordance with ACI 302.IR-96: "Guide for Concrete Slab and Slab

The concrete slab-on-grade has been designed using a subgrade modulus of k=250 pci and a design loading of 200 psf. The SER is not responsible for differential settlement, slab cracking or other future defects resulting from unreported conditions not in accordance with the above assumptions. Control or saw cut joints shall be spaced in interior slabs-on-grade at a maximum of 15'-0" O.C. and in exterior slabs-on-grade at a maximum of 10'-0" unless otherwise noted. Control or saw cut joints shall be produced using conventional process within 4 to 12 hours after the slab has been finished 9. Reinforcing steel may not extend through a control joint. Reinforcing steel may extend through a saw cut joint. 10. All welded wire fabric (W.W.F.) for concrete slabs-on-grade shall be placed at mid-depth of slab. The W.W.F. shall be securely supported during the concrete pour.

Fibrous concrete reinforcement, or fibermesh, specified in concrete slabs-on-grade may be used for control of cracking due to shrinkage and thermal expansion/contraction, lowered water migration, an increase in impact capacity, increased abrasion resistance, and residual strength.

Fibermesh reinforcing to be 100% virgin polypropylene fibers containing no reprocessed olefin materials and specifically manufactured for use as concrete secondary reinforcement. Application of fibermesh per cubic yard of concrete shall equal a minimum of Ø.1% by volume (1.5 pounds per cubic yard) Fibermesh shall comply with ASTM CIII6, any local building code requirements, and shall meet or exceed the current industry

5. Steel reinforcing bars shall be new billet steel conforming to

6. Detailing, fabrication, and placement of reinforcing steel shall be in accordance with the latest edition of ACI 315: "Manual of Standard Practice for Detailing Concrete Structures" Horizontal footing and wall reinforcement shall be continuous and shall have 90° bends, or corner bars with the same size/spacing as the horizontal reinforcement with a class B

8. Lap reinforcement as required, a minimum of 40 bar diameters for tension or compression unless otherwise noted. Splices in

- 9. Where reinforcing dowels are required, they shall be equivalent in size and spacing to the vertical reinforcement. The dowel shall extend 48 bar diameters vertically and 20 bar diameters into the footing.
- 10. Where reinforcing steel is required vertically, dowels shall be provided unless otherwise noted.

WOOD FRAMING:

- Solid sawn wood framing members shall conform to the specifications listed in the latest edition of the "National Design Specification for Wood Construction" (NDS). Unless otherwise noted, all wood framing members are designed to be Southern-Yellow-Pine (SYP) #2.
- LVL or PSL engineered wood shall have the following minimum design values:
 - 2.1. E = 1,300,000 psi
 - 2.2. Fb = 2600 psi
 - 2.3. Fv = 285 psi
 - 2.4.Fc = 700 psi
- Wood in contact with concrete, masonry, or earth shall be pressure treated in accordance with AWPA standard C-15. All other moisture exposed wood shall be treated in accordance with AWPA standard C-2
- Nails shall be common wire nails unless otherwise noted. 5. Lag screws shall conform to ANSI/ASME standard B18.2.1-1981. Lead holes for lag screws shall be in accordance with NDS specifications.
- All beams shall have full bearing on supporting framing members unless otherwise noted.
- Exterior and load bearing stud walls are to be 2x4 SYP #2 @ 16" O.C. unless otherwise noted. Studs shall be continuous from the sole plate to the double top plate. Studs shall only be discontinuous at headers for window/door openings. A minimum
- of one king stud shall be placed at each end of the header. King studs shall be continuous. Individual studs forming a column shall be attached with one 10d
- nail @ 6" O.C. staggered. The stud column shall be continuous to the foundation or beam. The column shall be properly blocked at all floor levels to ensure proper load transfer.
- . Multi-ply beams shall have each ply attached with (3) 10d nails @ 24" O.C. 10. Four and five ply beams shall be bolted together with (2) rows
- of 1/2" diameter through bolts staggered @ 16" O.C. unless noted otherwise.

<u>SHEET LIST:</u>

Sheet No.	Description	
CSI	Cover Sheet, Specifications, Revisions	
S1.Øm	Monolithic Slab Foundation	
SI.Øs	Stem Wall Foundation	
SI.Øc	Crawl Space Foundation	
S1.Øb	Basement Foundation	
S2.Ø	Basement Framing Plan	
53.Ø	First Floor Framing Plan	
54 <i>.</i> Ø	Second Floor Framing Plan	
S5.Ø	Roof Framing Plan	
56.Ø	Basement Bracing Plan	
S7.Ø	First Floor Bracing Plan	
58.Ø	Second Floor Bracing Plan	

<u>REVISION LIST:</u>

1 8.8.19 22224R Updated per new truss layouts and added foundation for optional L-shaped shower 2 11/14.19 22224R2 Updated floor beams to be floor depth 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 <th>Revision No.</th> <th>Date</th> <th>Project No.</th> <th>Description</th>	Revision No.	Date	Project No.	Description
2 II.I4.I9 22224R2 Updated floor beams to be floor depth	1	8.8.19	22224R	Updated per new truss layouts and added foundation for optional L-shaped shower
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WOOD TRUSSES:

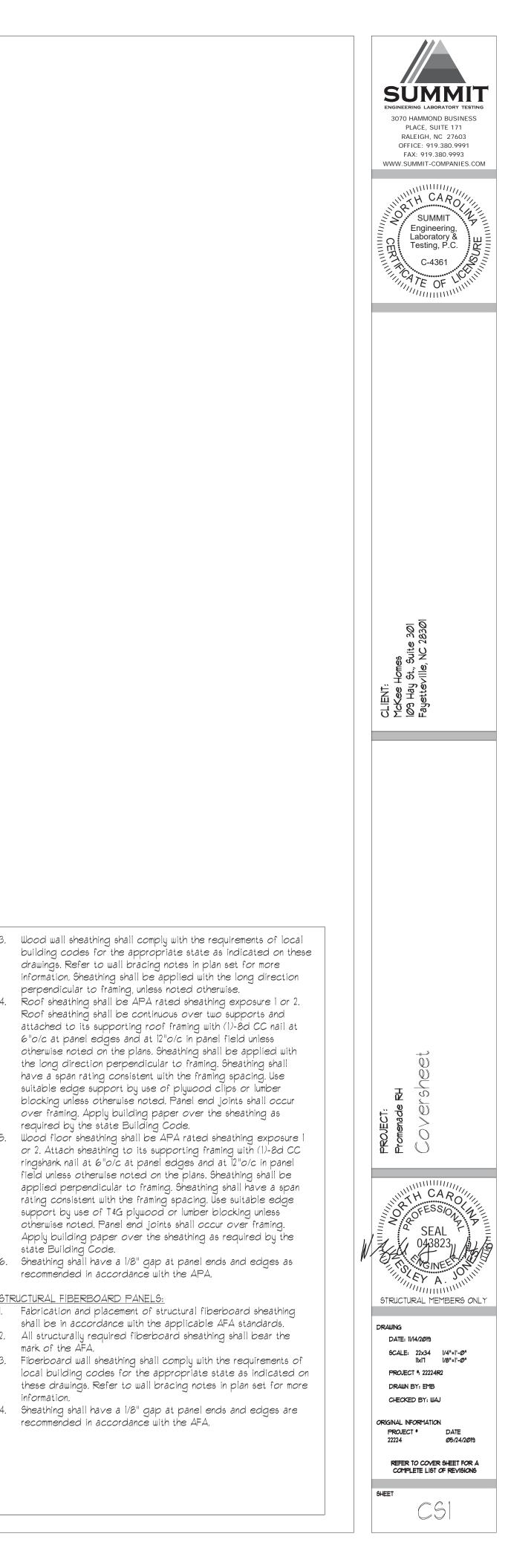
- The wood truss manufacturer/fabricator is responsible for the design of the wood trusses. Submit sealed shop drawings and supporting calculations to the SER for review prior to fabrication. The SER shall have a minimum of five (5) days for review. The review by the SER shall review for overall compliance with the design documents. The SER shall assume no responsibility for the correctness for the structural design for the wood trusses.
- The wood trusses shall be designed for all required loadings as specified in the local building code, the ASCE Standard "Minimum Design Loads for Buildings and Other Structures." (ASCE 1-10), and the loading requirements shown on these specifications. The truss drawings shall be coordinated with all other construction documents and provisions provided for loads shown on these drawings including but not limited to HVAC equipment, piping, and architectural fixtures attached to the trusses.
- The trusses shall be designed, fabricated, and erected in accordance with the latest edition of the "National Design Specification for Wood Construction." (NDS) and "Design Specification for Metal Plate Connected Wood Trusses."
- The truss manufacturer shall provide adequate bracing information in accordance with "Commentary and Recommendations for Handling, Installing, and Bracing Metal Plate Connected Wood Trusses" (HIB-91). This bracing, both temporary and permanent, shall be shown on the shop drawings.
- Also, the shop drawings shall show the required attachments for the trusses. Any chords or truss webs shown on these drawings have been
- shown as a reference only. The final design of the trusses shall be per the manufacturer.

EXTERIOR WOOD FRAMED DECKS:

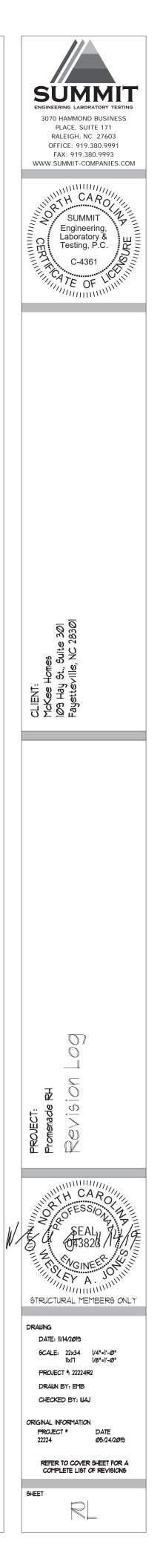
Decks are to be framed in accordance with local building codes and as referenced on the structural plans, either through code references or construction details.

WOOD STRUCTURAL PANELS:

- Fabrication and placement of structural wood sheathing shall be in accordance with the APA Design/Construction Guide "Residential and Commercial," and all other applicable APA standards.
- All structurally required wood sheathing shall bear the mark of the APA.



DATE:	SHEET:	REVISION:
8.8.19	ALL	Updated per new truss layouts and added foundation for optional L-shaped shower
11.14.19	S3	Updated floor beams to be floor depth
_		



FOUNDATION NOTES:

- FOUNDATIONS TO BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 4 OF THE 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE WITH ALL LOCAL AMENDMENTS.
- 2. STRUCTURAL CONCRETE TO BE $F_c = 3000$ PSI, PREPARED AND PLACED IN ACCORDANCE WITH ACI STANDARD 318.
- 3. FOOTINGS TO BE PLACED ON UNDISTURBED EARTH, BEARING A MINIMUM OF 12" BELOW ADJACENT FINISHED GRADE, OR AS OTHERWISE DIRECTED BY THE CODE ENFORCEMENT OFFICIAL.
- 4. FOOTING SIZES BASED ON A PRESUMPTIVE SOIL BEARING CAPACITY OF 2000 PSF. CONTRACTOR IS SOLELY RESPONSIBLE FOR VERIFYING THE SUITABILITY OF THE SITE SOIL CONDITIONS AT THE TIME OF CONSTRUCTION.
- FOOTINGS AND PIERS SHALL BE CENTERED UNDER THEIR RESPECTIVE ELEMENTS. PROVIDE 2" MINIMUM FOOTING PROJECTION FROM THE FACE OF
- MASONRY. 6. MAXIMUM DEPTH OF UNBALANCED FILL AGAINST MASONRY WALLS TO BE AS SPECIFIED IN SECTION R404.1 OF THE 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE.
- 1. PILASTERS TO BE BONDED TO PERIMETER FOUNDATION WALL.
- 8. PROVIDE FOUNDATION WATERPROOFING, AND DRAIN WITH POSITIVE SLOPE TO OUTLET AS REQUIRED BY SITE CONDITIONS.
- 9. PROVIDED PERIMETER INSULATION FOR ALL FOUNDATIONS PER 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE.
- 10. CORBEL FOUNDATION WALL AS REQUIRED TO ACCOMMODATE BRICK VENEERS.
- CRAWL SPACE TO BE GRADED LEVEL, AND CLEARED OF ALL DEBRIS.
 FOUNDATION ANCHORAGE SHALL BE CONSTRUCTED PER THE 2018 NORTH CAROLINA RESIDENTIAL CODE SECTION R403.1.6. MINIMUM 1/2" DIA. BOLTS SPACED AT 6'-0" ON CENTER WITH A 1" MINIMUM EMBEDMENT INTO MASONRY OR CONCRETE. ANCHOR BOLTS SHALL BE 12" FROM THE END OF EACH PLATE SECTION. MINIMUM (2) ANCHOR BOLTS PER PLATE SECTION. ANCHOR BOLTS SHALL BE LOCATED IN THE CENTER THIRD OF THE PLATE.
- 13. ABBREVIATIONS:

DJ = DOUBLE JOIST	
GT = GIRDER TRUSS	
SC = STUD COLUMN	
EE = EACH END	
TJ = TRIPLE JOIST	
CL = CENTER LINE	

- SJ = SINGLE JOIST FT = FLOOR TRUSS DR = DOUBLE RAFTER TR = TRIPLE RAFTER OC = ON CENTER PL = POINT LOAD
- 14. ALL PIERS TO BE 16"x16" MASONRY AND ALL PILASTERS TO BE 8"x16"
- MASONRY, TYPICAL. (UNO)
 15. WALL FOOTINGS TO BE CONTINUOUS CONCRETE, SIZES PER STRUCTURAL PLAN.
 16. A FOUNDATION EXCAVATION OBSERVATION SHOULD BE CONDUCTED BY A PROFESSIONAL GEOTECHNICAL ENGINEER, OR HIS QUALIFIED
- REPRESENTATIVE. IF ISOLATED AREAS OF YIELDING MATERIALS AND/OR POTENTIALLY EXPANSIVE SOILS ARE OBSERVED IN THE FOOTING EXCAVATIONS AT THE TIME OF CONSTRUCTION, SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. MUST BE PROVIDED THE OPPORTUNITY TO REVIEW THE FOOTING DESIGN PRIOR TO CONCRETE PLACEMENT.
- 17. ALL FOOTINGS & SLABS ARE TO BEAR ON UNDISTURBED SOIL OR 95% COMPACTED FILL, VERIFIED BY ENGINEER OR CODE OFFICIAL.

REFER TO BRACED WALL PLAN FOR PANEL LOCATIONS AND ANY REQUIRED HOLD-DOWNS. ADDITIONAL INFORMATION PER SECTION R602.10.4 AND FIGURE R602.10.3(4) OF THE 2018 NCRC.

NOTE: ALL EXTERIOR FOUNDATION DIMENSIONS ARE TO FRAMING AND NOT BRICK VENEER, UNO

NOTE: A 4" CRUSHED STONE BASE COURSE IS NOT REQUIRED WHEN SLAB IS INSTALLED ON WELL-DRAINED OR SAND-GRAVEL MIXTURE SOILS CLASSIFIED AS GROUP I PER TABLE R405.1

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY <u>MCKEE HOMES</u> COMPLETED/REVISED ON <u>05/15/2018</u>. IT IS THE RESPONSIBILITY OF THE CLIENT TO NOTIFY SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. IF ANY CHANGES ARE MADE TO THE ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. CANNOT GUARANTEE THE ADEQUACY OF THESE STRUCTURAL PLANS WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.

STRUCTURAL MEMBERS ONLY

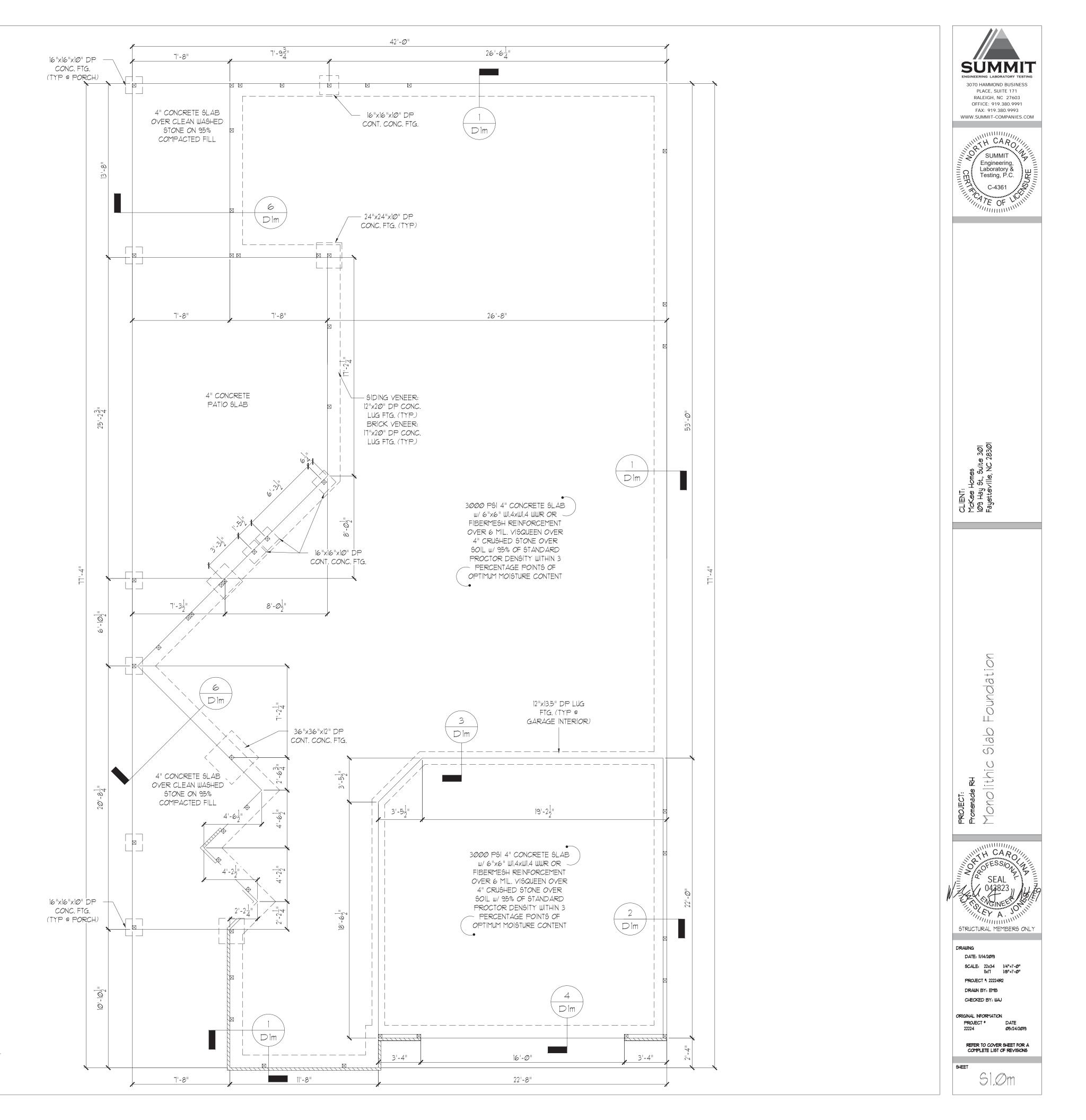
ENGINEERING SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS ON THIS DOCUMENT, SEAL DOES NOT INCLUDE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS. ANY DEVIATIONS OR DISCREPANCIES ON PLANS ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. FAILURE TO DO SO WILL VOID SUMMIT LIABILITY.

STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

MONOLITHIC SLAB FOUNDATION PLAN

SCALE: 1/4"=1'-0" ON 22"x34" OR 1/8"=1'-0" ON 11"x17"

CRAFTSMAN



GENERAL STRUCTURAL NOTES:

- 1. CONSTRUCTION SHALL CONFORM TO 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE WITH ALL LOCAL AMENDMENTS.
- 2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. CONTRACTOR SHALL COMPLY WITH THE CONTENTS OF THE DRAWING FOR THIS SPECIFIC PROJECT. ENGINEER IS NOT RESPONSIBLE FOR ANY DEVIATIONS FROM THIS PLAN.
- 3. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY BRACING REQUIRED TO RESIST ALL FORCES ENCOUNTERED DURING ERECTION.
- 4. PROPERTIES USED IN THE DESIGN ARE AS FOLLOWS: MICROLLAM (LVL): $F_b = 2600$ PSI, $F_v = 285$ PSI, $E = 1.9 \times 10^6$ PSI PARALLAM (PSL): $F_b = 2900$ PSI, $F_v = 290$ PSI, $E = 1.25 \times 10^6$ PSI
- ALL WOOD MEMBERS SHALL BE #2 SYP UNLESS NOTED ON PLAN. ALL STUD COLUMNS AND JOISTS SHALL BE #2 SYP (UNO).
 ALL BEAMS SHALL BE SUPPORTED WITH A (2) 2x4 #2 SYP STUD COLUMN
- ALL BEATING SHALL DE SUPPORTED WITH A (2) 2X4 *2 STP STUD COLUTIN AT EACH END UNLESS NOTED OTHERWISE.
 ALL REINFORCING STEEL SHALL BE GRADE 60 BARS CONFORMING TO
- ALL REINFORCING STEEL SHALL BE GRADE 60 BARS CONFORTING TO ASTM A615 AND SHALL HAVE A MINIMUM COVER OF 3".
 FOUNDATION ANCHORAGE SHALL BE CONSTRUCTED PER THE 2018 NORTH CAROLINA RESIDENTIAL CODE SECTION R403.1.6. MINIMUM 1/2"
- DIA. BOLTS SPACED AT 6'-0" ON CENTER WITH A 1" MINIMUM EMBEDMENT INTO MASONRY OR CONCRETE. ANCHOR BOLTS SHALL BE 12" FROM THE END OF EACH PLATE SECTION. MINIMUM (2) ANCHOR BOLTS PER PLATE SECTION. ANCHOR BOLTS SHALL BE LOCATED IN THE CENTER THIRD OF THE PLATE.
- 9. CONTRACTOR TO PROVIDED LOOKOUTS WHEN CEILING JOISTS SPAN PERPENDICULAR TO RAFTERS.
- 10. FLITCH BEAMS, 4-PLY LVLS AND 3-PLY SIDE LOADED LVLS SHALL BE BOLTED TOGETHER WITH 1/2" DIA. THRU BOLTS SPACED AT 24" O.C. (MAX) STAGGERED OR EQUIVALENT CONNECTIONS PER DETAIL 1/D3f. MIN. EDGE DISTANCE SHALL BE 2" AND (2) BOLTS SHALL BE LOCATED MINIMUM 6" FROM EACH END OF THE BEAM.
- ALL NON-LOAD BEARING HEADERS SHALL BE (1) FLAT 2x4 SYP *2, DROPPED, FOR NON-LOAD BEARING HEADERS EXCEEDING 8'-0" IN WIDTH AND/OR WITH MORE THAN 2'-0" OF CRIPPLE WALL ABOVE, SHALL BE (2) FLAT 2x4 SYP *2, DROPPED. (UNLESS NOTED OTHERWISE)
 ABBREVIATIONS:
 - DJ = DOUBLE JOIST GT = GIRDER TRUSS
 - SC = STUD COLUMNEE = EACH END
 - TJ = TRIPLE JOIGT CL = CENTER LINE
- DR = DOUBLE RAFTER TR = TRIPLE RAFTER OC = ON CENTER PL = POINT LOAD

SJ = SINGLE JOIST

FT = FLOOR TRUSS

SHADED WALLS INDICATED LOAD BEARING WALLS

NOTE: REDUCE JOIST SPACING UNDER TILE FLOORS, GRANITE COUNTERTOPS AND/OR ISLANDS.

JOIST & BEAM SIZES SHOWN ARE MINIMUMS. BUILDER MAY INCREASE DEPTH FOR EASE OF CONSTRUCTION.

NOTE:

EARING WALL ABOVE. PROVIDE BLOCKING UNDER JOIST SUPPORTED LOAD BEARING WALL.

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY MCKEE HOMES COMPLETED/REVISED ON <u>Ø5/15/2018</u>. IT IS THE RESPONSIBILITY OF THE CLIENT TO NOTIFY SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. IF ANY CHANGES ARE MADE TO THE ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. CANNOT GUARANTEE THE ADEQUACY OF THESE STRUCTURAL PLANS WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.

STRUCTURAL MEMBERS ONLY

ENGINEERING SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS ON THIS DOCUMENT, SEAL DOES NOT INCLUDE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS. ANY DEVIATIONS OR DISCREPANCIES ON PLANS ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. FAILURE TO DO SO WILL VOID SUMMIT LIABILITY.

STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

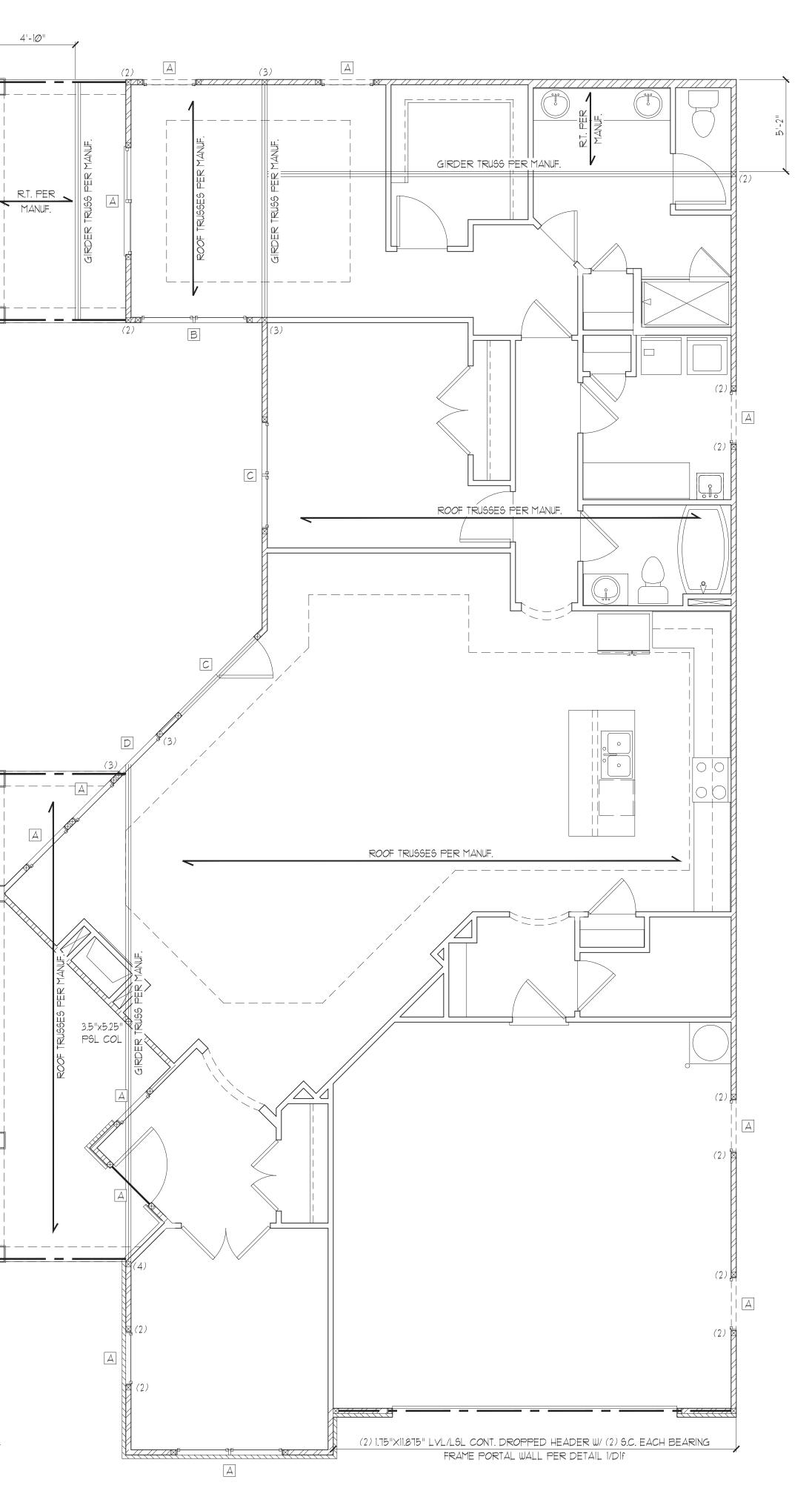
FIRST FLOOR FRAMING PLAN

SCALE: 1/4"=1'-0" ON 22"x34" OR 1/8"=1'-0" ON 11"x17"

MIN. 4" P.T. POSTS OR COL. RATED -FOR 2000* (MIN, TYP) ATTACH POSTS TO HEADER W/ SST CSIG STRAPS OR (4) IGd NAILS AND ATTACH POSTS TO FOUNDATION W/ SST ABA44 POST BASE OR EQUIV. (TYP)

MIN. 4" P.T. POSTS OR COL. RATED -FOR 2400* (MIN, TYP) ATTACH POSTS TO HEADER W/ SST CSIG STRAPS OR (4) IGD NAILS AND ATTACH POSTS TO FOUNDATION W/ SST ABA44 POST BASE OR EQUIV. (TYP)

CRAFTSMAN

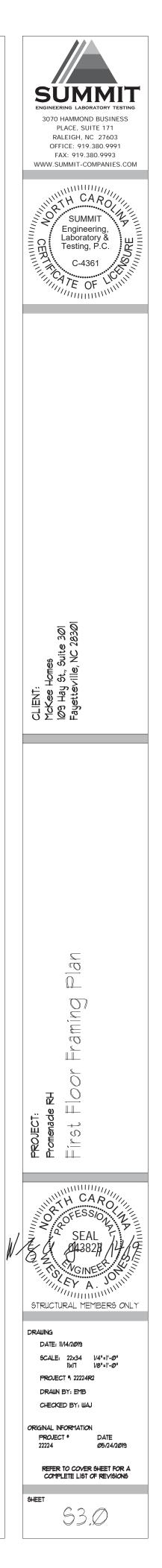


[
HEADER SCHEDULE					
ŤÁG	SIZE	JACKS (EACH END)			
А	(2) 2x6	(1)			
В	(2) 2x8	(2)			
С	(2) 2x1Ø	(2)			
D	(2) 2x12	(2)			
Ш	(2) 9-1/4" LSL/LVL	(3)			
F	(3)2x6	(1)			
G	(3)2x8	(2)			
Н	(3) 2x1Ø	(2)			
[(3) 2x12	(3)			
NOTES: I. HEADER SIZES SHOWN ON PLANS ARE MINIMUMS. GREATER HEADER SIZES MAY BE USED FOR EASE OF CONSTRUCTION. 2. ALL HEADERS TO BE DROPPED (U.N.O.). 3. STUD COLUMNS NOTED ON PLAN OVERRIDE STUD COLUMNS LISTED ABOVE (U.N.O.). 4. OPENINGS LESS THAN 3'-O" USE (1) KING STUD AT E.E. OPENINGS 3'-1" TO 4'-O" USE (2) KING STUDS AT E.E. OPENINGS 4'-1" TO 8'-O" USE (3) KING STUDS AT E.E. OPENINGS 8'-1" TO 12'-O" USE (5) KING STUDS AT E.E. OPENINGS 12'-1" TO 16'-O" USE (6) KING STUDS AT E.E.					

 LINTEL (UN.O.)
 LINTEL SCHEDULE:
 STEEL ANGLES TO HAVE MINIMUM 4" BEARING ONTO BRICK AT EACH END.
 L3x3x1/4"
 L5x3"x1/4"
 L5x3-1/2x5/16"
 L5x3-1/2"x5/16" ROLLED OR EQUAL ARCHED COMPONENT.
 SECURE LINTEL TO HEADER w/ (2) 1/2" DIAMETER LAG SCREWS STAGGERED @ 16" O.C. (TYP FOR (3))

ALL HEADERS WHERE BRICK IS USED, TO BE:

WALL STUD SCHEDULE (10 FT HEIGHT)								
STUD SIZE	STUD SPACING (O.C.)							
	ROOF ONLY ROOF & ROOF & NON-LOAD 1 FLOOR 2 FLOORS BEARING							
2×4	24"	24" 16" 12" 24"						
2×6	24" 24" 16" 24"							
NOTES: 1. BRACED WALLS STUDS SHALL BE A MAX. OF 16" O.C. 2. STUDS SUPPORTS OPTIONAL WALK-UP ATTIC SHALL BE SPACED A MAX. OF 16" O.C. 3. TWO STORY WALLS SHALL BE FRAMED w/ 2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. BALLOON FRAMED w/ CROSS BRACING @ 6'-0" O.C. VERTICALLY.								



TRUSS UPLIFT CONNECTOR SCHEDULE						
MAX, UPLIFT	MAX. UPLIFT ROOF TO WALL FLOOR TO FLOOR FLOOR TO FND					
600 LBS	H2.5A	PER WALL SHEATHIN	G & FASTENERS			
12 <i>00</i> LBS	(2) H2.5A	CS16 (END = 11")	dtt2Z			
1450 LBS	HTS2Ø	CS16 (END = 11")	DTT2Z			
2 <i>000</i> LBS	(2) MTS2Ø	(2) CS16 (END = 11")	DTT2Z			
2900 LBS	(2) HTS2Ø	(2) CS16 (END = 11")	HTT4			
3685 LBS	LGT3-SDS2.5	MSTC52	HTT4			
 ALL PRODUCTS LISTED ARE SIMPSON STRONG-TIE. EQUIVALENT PRODUCTS MAY BE USED PER MANUFACTURER'S SPECIFICATIONS. UPLIFT VALUES LISTED ARE FOR SYP #2 GRADE MEMBERS. REFER TO TRUSS LAYOUT PER MANUF. FOR UPLIFT VALUES AND TRUSS TO TRUSS CONNECTIONS. CONNECTORS SPECIFIED BY TRUSS MANUFACTURER OVERRIDE THOSE LISTED ABOVE. CONTACT SUMMIT FOR REQUIRED CONNECTORS WHEN LOADS EXCEED THOSE LISTED ABOVE. 						

NOTE: IST PLY OF ALL SHOWN GIRDER TRUSSES TO ALIGN WITH INSIDE FACE OF WALL (TYP, UNO)

NOTE: ROOF TRUSSES SHALL BE SPACED TO SUPPORT FALSE FRAMED DORMER WALLS (TYP, UNO)

REFER TO DETAIL 5/D3F FOR EYEBROW, RETURN OR SHED ROOF FRAMING REQUIREMENTS. (TYP FOR ROOFS PROTRUDING MAXIMUM 24" FROM STRUCTURE)

NOTE: TRUSS UPLIFT LOADS SHALL BE DETERMINED PER TRUSS MANUFACTURER IN ACCORDANCE WITH SECTION R802.11.1.1. WALL SHEATHING AND FASTENERS HAVE BEEN DESIGNED TO RESIST THE WIND UPLIFT LOAD PATH IN ACCORDANCE WITH METHOD 3 OF SECTION R602.3.5 OF THE 2018 NCRC. REFER TO BRACED WALL PLANS FOR SHEATHING AND FASTENER REQUIREMENTS.

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY MCKEE HOMES COMPLETED/REVISED ON $\underline{05/15/2018}$. It is the responsibility of THE CLIENT TO NOTIFY SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. IF ANY CHANGES ARE MADE TO THE ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. CANNOT GUARANTEE THE ADEQUACY OF THESE STRUCTURAL PLANS WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.

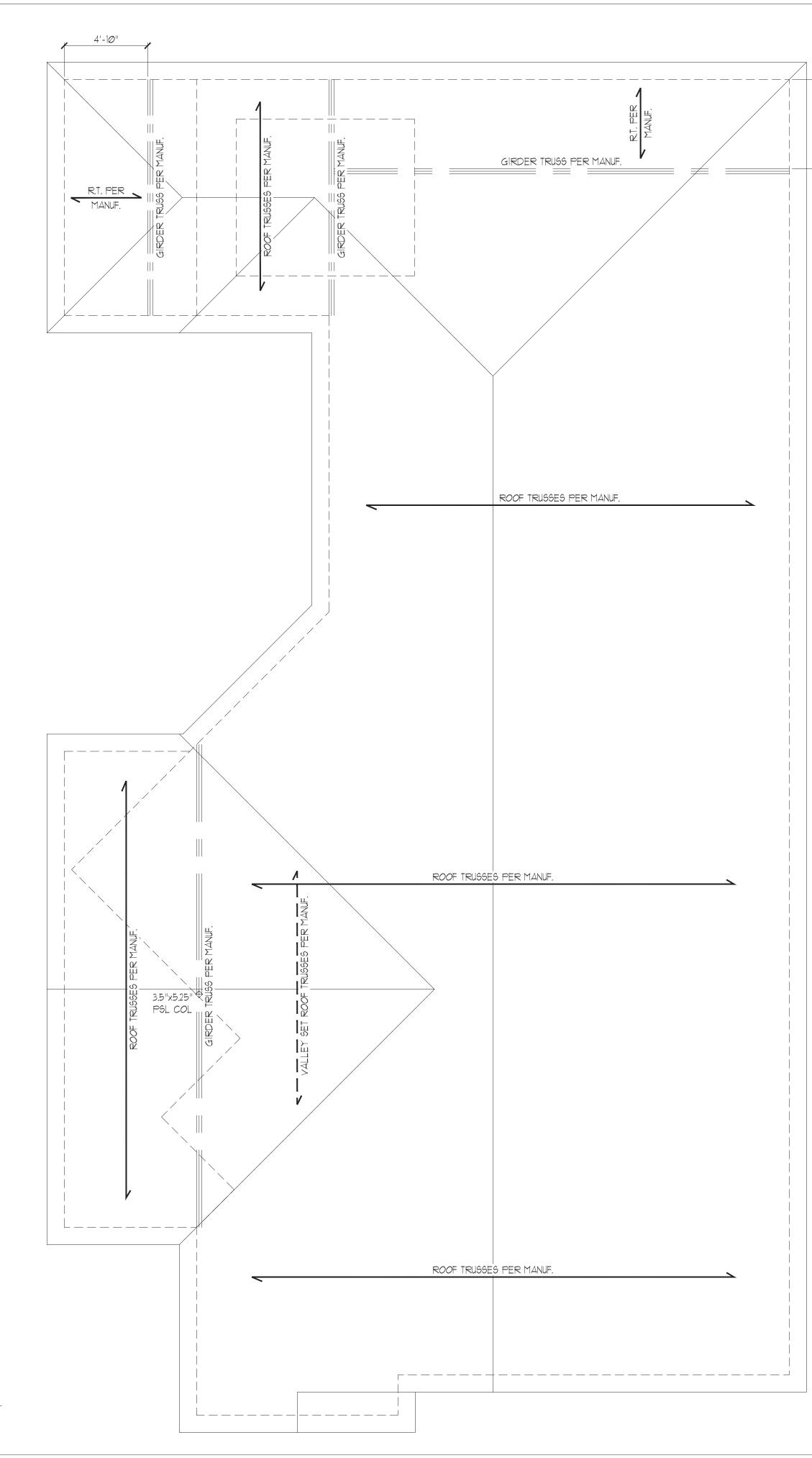
STRUCTURAL MEMBERS ONLY

ENGINEERING SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS ON THIS DOCUMENT, SEAL DOES NOT INCLUDE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS. ANY DEVIATIONS OR DISCREPANCIES ON PLANS ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. FAILURE TO DO SO WILL VOID SUMMIT LIABILITY.

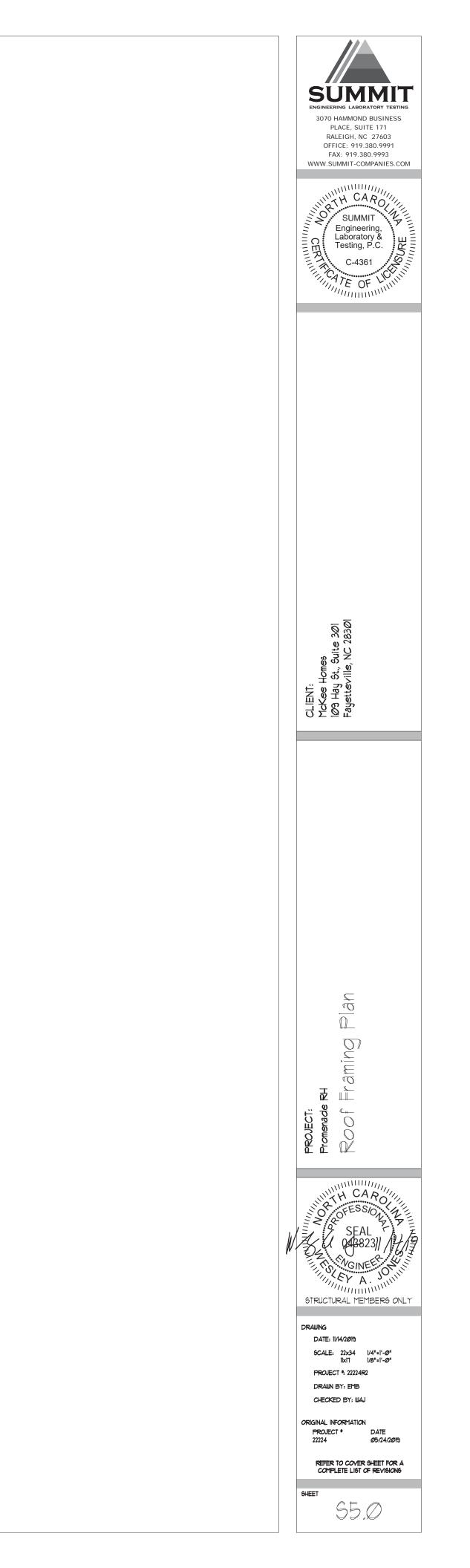
STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

ROOF FRAMING PLAN

SCALE: 1/4"=1'-Ø" ON 22"x34" OR 1/8"=1'-Ø" ON 11"x17"



CRAFTSMAN



	REQUIRED	BRACED W,	ALL PANEL CONNE	CTIONS	
			REQUIRED CONNECTION		
METHOD	MATERIAL	MIN. THICKNESS	@ PANEL EDGES	@ INTERMEDIATE SUPPORTS	
CS-WSP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6" O.C.	6d COMMON NAILS @ 12" O.C.	
GB	GYPSUM BOARD	1/2"	5d COOLER NAILS** @ 7" O.C.	5d COOLER NAILS** @ 7" O.C.	
WSP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6" O.C.	6d COMMON NAILS @ 12" O.C.	
PF	WOOD STRUCTURAL PANEL	7/16"	PER FIGURE R602.10.1	PER FIGURE R602.10.1	

**OR EQUIVALENT PER TABLE RTØ2.3.5

BRACED WALL NOTES:

- WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10 FROM THE 2018 INTERNATIONAL RESIDENTIAL CODE WITH ALL LOCAL AND STATE AMENDMENTS. 2. WALLS ARE DESIGNED FOR SEISMIC ZONES A-C AND ULTIMATE DESIGN
- WIND SPEEDS UP TO 130 MPH. REFER TO ARCHITECTURAL PLAN FOR DOOR/WINDOW OPENING SIZES.
- 4. BRACING MATERIALS, METHODS AND FASTENERS SHALL BE IN
- ACCORDANCE WITH TABLE R602.10.1 5. ALL BRACED WALL PANELS SHALL BE FULL WALL HEIGHT AND SHALL
- NOT EXCEED 10 FEET FOR ISOLATED PANEL METHOD AND 12 FEET FOR CONTINUOUS SHEATHING METHOD WITHOUT ADDITIONAL ENGINEERING CALCULATIONS. 6. MINIMUM PANEL LENGTH SHALL BE PER TABLE R602.10.1.
- 1. THE INTERIOR SIDE OF EXTERIOR WALLS AND BOTH SIDES OF INTERIOR WALLS SHALL BE SHEATHED CONTINUOUSLY WITH MINIMUM 1/2" GYPSUM BOARD (UNO).
- 8. FOR CONTINUOUS SHEATHING METHOD, EXTERIOR WALLS SHALL BE SHEATHED ON ALL SHEATHABLE SURFACES INCLUDING INFILL AREAS BETWEEN BRACED WALL PANELS, ABOVE AND BELOW WALL OPENINGS, AND ON GABLE END WALLS.
- 9. FLOORS SHALL NOT BE CANTILEVERED MORE THAN 24" BEYOND THE FOUNDATION OR BEARING WALL BELOW WITHOUT ADDITIONAL ENGINEERING CALCULATIONS.
- 10. A BRACED WALL PANEL SHALL BE LOCATED WITHIN 12 FEET OF EACH END OF A BRACED WALL LINE.
- 11. THE MAXIMUM EDGE DISTANCE BETWEEN BRACED WALL PANELS SHALL NOT EXCEED 21 FEET. 12. MASONRY OR CONCRETE STEM WALLS WITH A LENGTH OF 48" OR LESS
- SUPPORTING A BRACED WALL PANEL SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.4.3 OF THE 2018 IRC OR DETAIL 2/D2f. 13. BRACED WALL PANEL CONNECTIONS TO FLOOR/CEILING SHALL BE
- CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.4.4
- 14. BRACED WALL PANEL CONNECTIONS TO ROOF SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.4.5
- 15. CRIPPLE WALLS AND WALK OUT BASEMENT WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.104.6
- 16. PORTAL WALLS SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R6Ø2.1Ø.1 (UNO) 17. ON SCHEMATIC, SHADED WALLS INDICATE BRACED WALL PANELS.
- 18. ABBREVIATIONS:

GB = GYPSUM BOARD PF = PORTAL FRAME

WSP = WOOD STRUCTURAL PANEL CS-XXX = CONT. SHEATHED ENG = ENGINEERED SOLUTION PF-ENG = ENG, PORTAL FRAME

INSTALL HOLD-DOWNS FOR BRACED WALL END CONDITIONS PER SECTION R602.10.4 AND FIGURE R602.10.3(4) OF THE 2018 NCRC.

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY MCKEE HOMES COMPLETED/REVISED ON <u>05/15/2018</u>. IT IS THE RESPONSIBILITY OF THE CLIENT TO NOTIFY SUMMIT ENGINEERING, LABORATORY 4 TESTING, P.C. IF ANY CHANGES ARE MADE TO THE ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. CANNOT GUARANTEE THE ADEQUACY OF THESE STRUCTURAL PLANS WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.

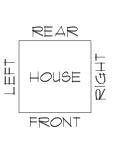
STRUCTURAL MEMBERS ONLY

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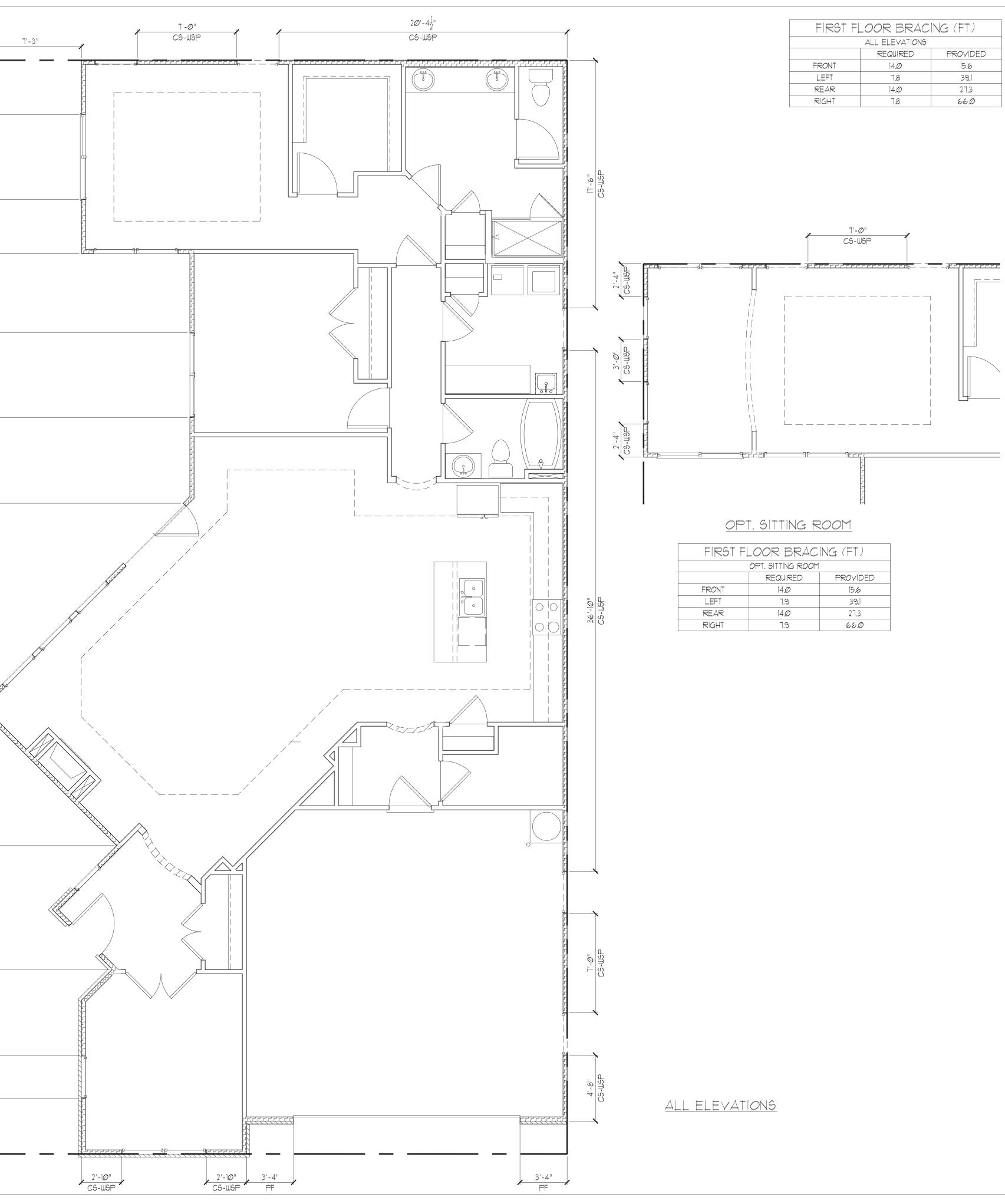
STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

FIRST FLOOR BRACING PLAN

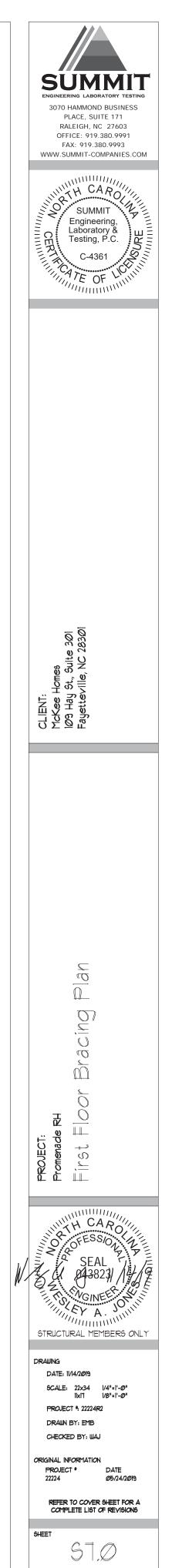
SCALE: 1/4"=1'-0" ON 22"x34" OR 1/8"=1'-0" ON 11"x17"



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FIRST FLOOR BRACING (FT)						
	ALL ELEVATIONS					
	REQUIRED PROVIDED					
FRONT	14 <i>.</i> Ø	15.6				
LEFT	٦.8	39,1				
REAR	14 <i>.</i> Ø	27.3				
RIGHT	7.8	66.0				



FIRST FLOOR BRACING (FT)						
OPT. SITTING ROOM						
	REQUIRED PROVIDED					
RONT	14 <i>.</i> Ø	15.6				
LEFT	P.5	39.1				
REAR	14 <i>.</i> Ø	27.3				
RIGHT	P.9	66.0				

	DE5/GN SPECIFICATIONS: Construction Type: Commerical Residential Image: Second S	ENGINEERING LABORATORY TESTING	Sheet No. Description C6I Cover Sheet, Specifications, Revisions Dim Monolithic Slab Foundation Details Dis Shem Wall Foundation Details Dic Crawl Space Foundation Details Dib Basement Foundation Details Dif Framing Details
	4. Floor Live Loads 40 PGF 41. Typ. Duelling 40 PGF 42. Sleeping Areas 30 PGF 43. Decks 40 PGF 44. Passenger Garage 50 PGF 55. Floor Dead Loads 50 PGF 52. I-Joint Izx 10 PGF 53. Floor Trus 15 PGF 6. Ultimate Design Wind Speed (3 sec. gust) 130 MPH 61. Exposure B 62. Importance Factor 10 63. Wind Speed Yu = 63. Vu =	Standard Details PROJECT ADDRESS: TBD McKee Homes 109 Hay St., Suite 301 Fayetteville, NC 28301 DESIGNER:	Revision Date Project Description No. Date Project Description I UIU9 - Updated to 2018 NCRC
	1. Component and Cladding (in PSF) MEAN ROOF UP TO 30 30"1"-35' 351"-40' 40"1"-45' HT. ID TO 30 30"1"-35' 351"-40' 40"1"-45' ZONE 1 16.1,-180 115,-18.9 182,-19.6 181,-202 ZONE 2 161,-210 115,-22.1 182,-22.9 181,-235 ZONE 3 16.1,-210 115,-22.1 182,-22.9 181,-235 ZONE 4 182,-19.0 192,-202 193,-26.1 204,-213 ZONE 5 182,-19.0 192,-25.2 193,-26.1 204,-26.9 8. Selsmic 8.1 Site Class	These drawings are to be coordinated with the architectural, mechanical, plumbing, electrical, and civil drawings. This coordination is not the responsibility of the structural engineering of cereord (SER). Should any discrepancies become apparent, the contractor shall notify SUMMIT Engineering, Laboratory 4 Testing, P.C. before construction begins. ELAN ABBREVIATIONS: AB ANCHOR BOLT PT PRESSURE TREATED AF ABOVE FINISHED FLOOR R5 ROOF SUPPORT CJ. CELLING JOIST SC STUD COLUMN CLR CLEAR SJ SINGLE JOIST DD DOUBLE JOIST SC STUD COLUMN CLR CLEAR SJ SINGLE JOIST DF DRUELE STUD POCKET SG1 SIMPSON STRONGS-TIE EE EACH END STP STUD COLUMN CLR CLEAR TJ TRIPLE JOIST DF DOUBLE JOIST SFP SPRUCE PINE FIR DSP DOUBLE STUD POCKET SG1 SIMPSON STRONGS-TIE EE EACH WAY TJ TRIPLE STUD POCKET OC NS NOT TO SCALE TSP TRIPLE STUD POCKET OC OC ON CENTER TYP TYPICAL	Image: set of the
 GENERAL STRUCTURAL NOTES: The design professional whose seal appears on these drawings is the structural engineer of record (SER) for this project. The SER bears the responsibility of the primary structural elements and the performance of this structure. No other party may revise, alter, or delete any structural aspects of these construction documents without written permission of SUMMIT Engineering. Laboratory 4 Testing, P.C. (SUMMIT) or the SER. For the purposes of these construction documents the SER and SUMMIT shall be considered the same entity. The structure is only stable in its completed form. The contractor shall provide all required temporary bracing during construction to stabilize the structure. The SER is not responsible for construction sequences, methods, or techniques in connection with the construction of this structure. The SER will not be held responsible for the contractor's failure to conform to the contract documents, should any non-conformities occur. Any structural elements or details not fully developed on the construction drawings shall be completed under the direction of a licensed professional engineer. These shop drawings shall be submitted to SUMMIT for reviewed for overall compliance as it relates to the structural design of this project. Verification of the shop drawings will be reviewed for overall compliance as it relates to the structural design of this project. Verification of the SER the contractor shall verify the field conditions, is not the responsibility of the SER of SUMMIT. Verification of assumed field conditions for accuracy and report any discrepancies to SUMMIT before construction begins. The SER is not responsible for any secondary structural elements or non-structural elements, except for the elements specifically noted on the structural drawings. This structure and all construction shall conform to all applicable sections of the international residential code. This structure and all	 the region in which the structure is to be constructed. However, the bottom of all footings shall be a minimum of 12" below grade. Any fill shall be placed under the direction or recommendation of a licensed professional engineer. The resulting soil shall be compacted to a minimum of 95% maximum dry density. Excavations of footings shall be lined temporarily with a 6 mill polyathylene membrane if placement of concrete data of a monotonic or saw cut. Join slabs-on-grade at a minimum attribute of steacaration. No concrete shall be placed against any subgrade containing water, ice, frost, or loose material. STRICTURAL STEEL: Structural steel shall be fabricated and erected in accordance in manual of steel Construction "Load Resistance Factor Design" latest editions. Biructural steel shall have a minimum yield stress (Fy) of 36 kis unless otherwise noted. Welding shall be canoffer be class and be class Endox. All welding shall be canoffer shop and field welding shall be canoffer be above standards. Concrete shall have a normal weight aggregate and a minimum compressive strength (F₂) at 28 days of 30000 psi, unless otherwise noted on the plan. Concrete shall have a normal weight aggregate and a minimum cole by proteing the grade data minimum at an intervent of 20% by we standard. Concrete shall have a normal weight aggregate and a minimum a congressive strength (F₂) at 28 days of 30000 psi, unless otherwise noted on the plan. Concrete shall have a normal weight aggregate and a minimum of 20% by we constructed in accordance with the latest editions of ACI 30%. The annet a minimum at an intervent and and. Steel reinforced for use a Application of the plane a minimum for the plane a minimum of a blab comply requirements is and shall comply requirements and shall be proportioned, mixed, and placed in accordance with the latest editions o	 discrepancies become apparent, the contractor shall notify SUMMIT immediately. discrepancies become apparent, the contractor shall notify SUMMIT immediately. discrepancies become apparent, the contractor shall notify SUMMIT immediately. discrepancies become apparent, the contractor shall notify SUMMIT immediately. discrepancies become apparent, the contractor shall notify SUMMIT immediately. discrepancies become apparent, the contractor shall be contract with accordance with the above assumptions. to the reinforcing steel is required vertically down apparent in exterior naximum of 10°-0° unless otherwise noted. Solid sam wood framing members shall conform to apparent in exterior naximum of 10°-0° unless otherwise noted. Solid sam wood framing members are de Southern-response insed in the latest edition of the 'Design Specification for Wood Construction' (ND otherwise noted, all wood framing members are de Southern-response). LVL or PSL engineered wood shall have the fold construction (ND otherwise noted, all wood framing members are de Southern-response). LVL or PSL engineered wood shall have the fold conterned and through a saw cut joint. UWDP in concrete slabs-on-grade shall be the altest edition of the 'Design values: UWDP in concrete pour. L E = 1,920,000 psi 22. Fb = 1,260 ppi 1 Wood in contact with AWPA standard C-2 Nails shall be common wire nails unless otherwise noted. Exterior and load bearing stud wills are to be 20°. Uries, and cord stude shall be comtin sole plate to the double top plate. Studes shall on contact with AWPA standard C-2 Nails beams shall have full bearing on supporting fr undes otherwise noted. Exterior and load bearing stud wills are to be 20°. Ukid shall be comtin sole plate to the double top plate. Stude shall be comtin sole plate to the	The douel I. The wood truss manufacturer/fabricator is responsible for the design of the wood trusses. Submit sealed shop drawings and supporting calculations to the SER for review prior to fabrication. The SER shall have a minimum of five (5) days for review. The review by the SER shall review for overall compliance with the design documents. The SER shall review for overall compliance with the design documents. The SER shall review for overall compliance with the design documents. The SER shall review for overall compliance with the design documents. The SER shall review for overall compliance with the design documents. The SER shall assume no responsibility for the correctness for the structural design for the wood trusses. 50. Inless The wood trusses shall be designed for all required loadings as specified in the local building code, the ASCE Shandard "filmimun Design Loads for Equipments shown on these specifications. The trus drawings including but not limited to HVAC equipment, piping, and architectural fixtures attached to the trusses. 3. The trusses shall be designed, fabricated, and erected in accordance with the latest colition of the "National Design Specification for Meal Plate Connected Wood Trusses." 4. The trusses shall be designed, fabricated, and erected in accordance with the latest colition of the "National Design Specification for Meal Plate Connected Wood Trusses." 5. The truss and advectore with "Commentary and Recommendations for Handling, installing, and Eracing Metal Plate Connected Wood Trusses." 6. Any chords or truss webs shown on these drawings have been shown as a reference only. The final design of the trusses shall be per the manufacturer. existence Any chords or truss webs shown on these drawings have b

- Initial studies and be contributed in Individual studies forming a column shall be attached with one loci nail $e \in 0^{\circ}$ O.C. staggered. The studi column shall be continuous to the foundation or beam. The column shall be properly blocked at all floor levels to ensure proper load transfer. Multi-ply beams shall have each ply attached with (3) loci nails e
- 24" 0'C
- noted otherwise.

- - exposed to freeze/thau cycles and deicing chemicals. Air entrainment amounts (in percent) shall be within -1% to +2% of

- 4
- FOUNDATIONS: I. The structural engineer has not performed a subsurface investigation. Verification of this assumed value is the responsibility of the owner or the contractor. Should any adverse soil condition be encountered the SER must be contacted before proceeding.

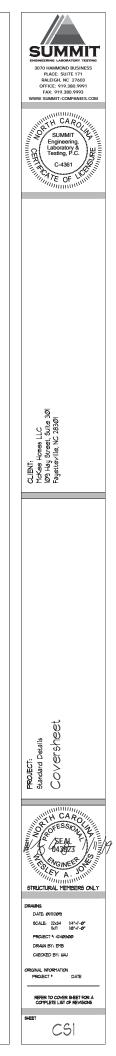
of the current local building code.

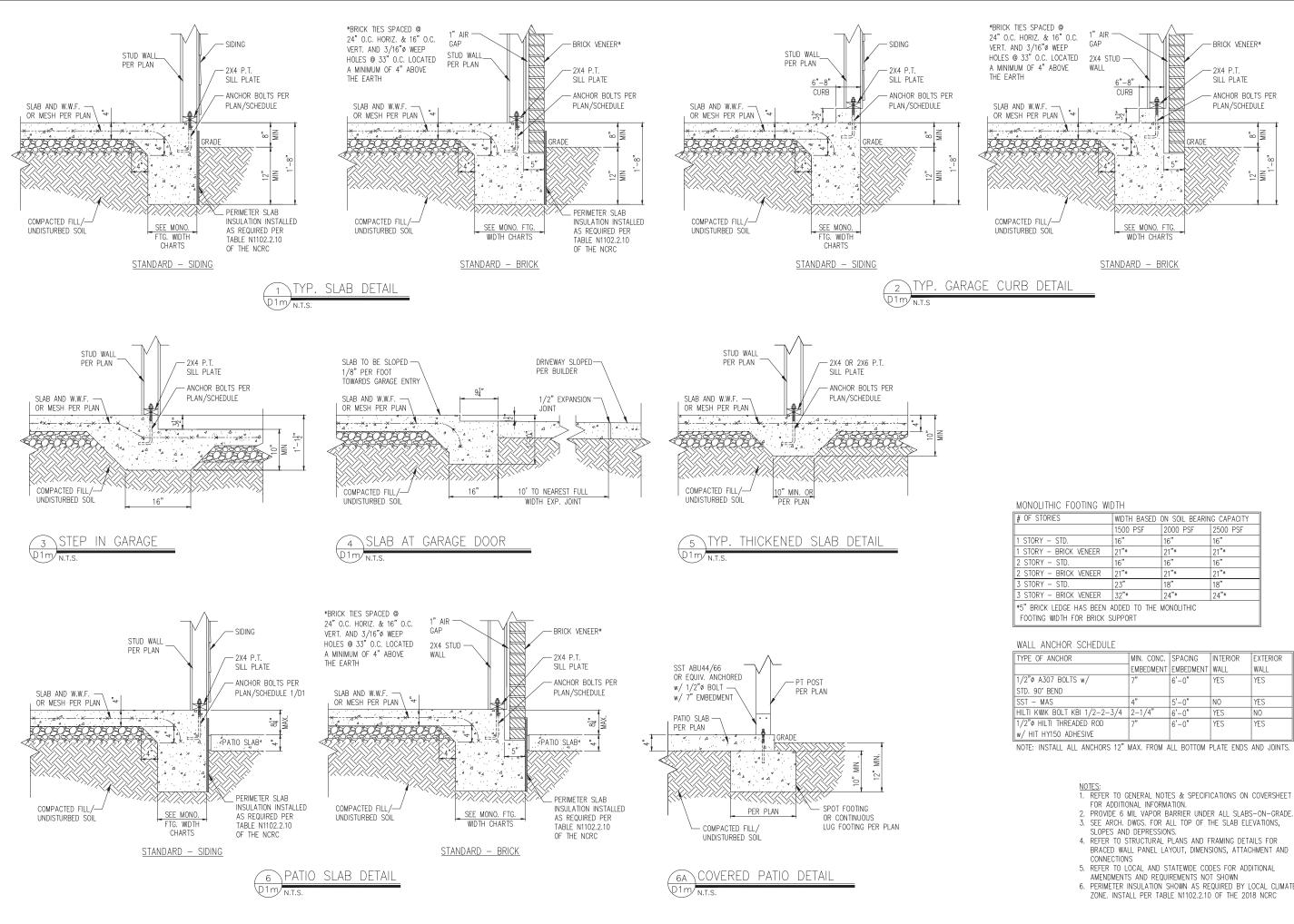
- Requirements for Reinforced Concrete" and ACI 301: "Specifications for Structural Concrete for Buildings". Air entrained concrete must be used for all structural elements
- target values as follows: 3.1. Footings: 5% 3.2. Exterior Glabs: 5%

- No admixtures shall be added to any structural concrete without written permission of the SER.
- Detailing, fabrication, and placement of reinforcing steel shall be in accordance with the latest edition of ACI 315: "Manual of
- be in accordance with the latest edition of ACI 3B: "Manual of Standard Practice for Detailing Concrete Structures" Horizontal footing and wall reinforcement shall be continuous and shall have 30° bends, or corner bars with the same size/spacing as the horizontal reinforcement with a class B tension splice. Lap reinforcement as required, a minimum of 40 bar diameters for tension or compression unless otherwise noted. Splices in masorry shall be a minimum of 48 bar diameters.

- Four and five ply beams shall be bolted together with (2) rows of 1/2" diameter through bolts staggered @ 16" O.C. unless not of how to be and the staggered of the
- codes and as referenced on the structural plans, either through code references or construction details.
- UDOD STRUCTURAL PANELS: 1. Fabrication and placement of structural wood sheathing shall be in accordance with the APA Design/Construction Guide "Residential and Commercial," and all other applicable APA
- All structurally required wood sheathing shall bear the mark of the APA.

3.	Wood wall sheathing shall comply with the requirements of local
	building codes for the appropriate state as indicated on these drawings. Refer to wall bracing notes in plan set for more information. Sheathing shall be applied with the long direction perpendicular to framing, unless noted otherwise.
4.	Roof sheathing shall be APA rated sheathing exposure I or 2. Roof sheathing shall be continuous over two supports and attached to its supporting roof framing with (1)-8d CC nail at 6'o/c at panel edges and at 12'o/c in panel field unless
	otherwise noted on the plans. Sheathing shall be applied with the long direction perpendicular to framing. Sheathing shall have a span rating consistent with the framing spacing, Use suitable edge support by use of plywood clips or lumber
	blocking unless otherwise noted. Panel end joints shall occur over framing. Apply building paper over the sheathing as required by the state Building Code.
5.	Wood floot sheathing shall be APA rated sheathing exposure I or 2. Attach sheathing to its supporting framing with (1)-8d CC ringshark hall at 6'o/c at panel edges and at 12'o/c in panel field unless otherwise noted on the plans. Sheathing shall be applied perpendicular to framing, Sheathing shall have a span rating consistent with the framing spacing. Use suitable edge support by use of T4G plywood or lumber blocking unless otherwise noted. Panel end joints shall occur over framing. Appli building paper over the sheathing as required by the state Building Code.
6.	Sheathing shall have a 1/8" gap at panel ends and edges as recommended in accordance with the APA.
<u>STR</u> I. 2.	<u>UCTURAL FIBERBOARD PANELS:</u> Fabrication and placement of structural fiberboard sheathing shall be in accordance with the applicable AFA standards. All structurally required fiberboard sheathing shall bear the
3.	The source of the source in the source of th
4.	Sheathing shall have a 1/8" gap at panel ends and edges are recommended in accordance with the AFA.





RIES	WIDTH BASED ON SOIL BEARING CAPACITY				
	1500 PSF	2000 PSF	2500 PSF		
- STD.	16"	16"	16"		
- BRICK VENEER	21"*	21"*	21"*		
- STD.	16"	16"	16"		
- BRICK VENEER	21"*	21"*	21"*		
- STD.	23"	18"	18"		
- BRICK VENEER	32"*	24"*	24"*		
<pre>< LEDGE HAS BEEN ADDED TO THE MONOLITHIC WDTH FOR BRICK SUPPORT</pre>					

ANCHOR	MIN. CONC.	SPACING	INTERIOR	EXTERIOR
	EMBEDMENT	EMBEDMENT	WALL	WALL
607 BOLTS w/	7"	6'-0"	YES	YES
BEND				
AS	4"	5'-0"	NO	YES
K BOLT KBI 1/2-2-3/4	2-1/4"	6'-0"	YES	NO
TI THREADED ROD	7"	6'-0"	YES	YES
Y150 ADHESIVE				

- BRACED WALL PANEL LAYOUT, DIMENSIONS, ATTACHMENT AND
- 6. PERIMETER INSULATION SHOWN AS REQUIRED BY LOCAL CLIMATE

