

Revised to finish 3rd floor.

LOT 1013 Anderson Creek Academ

D PLANS MAKE BININ IONUD TO MORE MOTOS LLC. AND AND COMMEND FOR GNALL LOT USE ONLY AS LINE ON TITLE BLOCK. LOT 1073 Anderson Creek Academy 2) P GEALED PLANS ARE (RELIVED BY MINICIPALITY FOR STRUCTURE DEMAN INCLURE TO DEMANDER FOR GEALED LETTER AS NEEDED. LOT 1073 Anderson Creek Academ

y any an one changes ar variations from Flans Hann must be veryfied with Denisher ar Branser Her Local Codes, Glidelmer, Load Calculations

=

Structural Designer

OWNER / CONTRACTOR NOTES:

THE GEALING OF THIS FLAN FOR A LOT SPECIFIC ISSUE, AUTHORIZES THE CANSTRUCTION FROM THESE FLANS FOR ONE HOUSE ON ONE LOT FOR THE LOT FECTIC REFERENCED IN TILBELOCK UNDERLED FLANS MUST BE BROM THE OR CONSTRUCTION CONSTRUCTION FROM THESE FLANS MUST BE FROM THE ATEST AFFRONZED DATE FLANS, INCLUDING REVISIONS AND ADDEDIDA

2. The sealing of this plan for a master plan set issue, authorizes th construction front these plans for multiple kouses on multiple lots for builder with designers' knouledge of construction frequencies insigned with designers' knouledge for construction, construction fraction insign plans has be front the latest approach dute plans, kouldng

B. CONSTRUCTION DEVIATING FROM THESE FLANS UNLL INVALIDATE THEIR FLANS REVENE INSENTITION UNLE. THE DEVIATION REVENTION OF THE INSTRUCTION DEVIATING FROM THE DEVIATION OF THE DEVIATION AND THE PROMITING FROM THE DEVIATION OF THE DEVIATION AND THE DEVIATION AND

, do not scale drawings, but rather inquire information from Esigner, reproduction of these drawings are prohibited unless ranted written consent from designer.

THE OUNER AND/OR CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE LLOUING INFORMATION (NON-EXHAUSTIVE) BUILDING FERMITS, SITE GINEERING NACLIDING SURVEYTING, TOPOGRAPHIC STUDIES, GEOTECHNICAL (PORTS, AND SEPTIC FERMITS): INTERIOR CASELLORK DESIGNS PLUMBING, (CHANICAL, AND ELECTRICAL DESIGN

BUILDING CODE NOTES

THIS PLAN HAS BEEN DESIGNED UNDER THE 2018 NORTH CAROLINA RESIDENTIAL CODE.

APPLICABLE CODES: NC. FIRE CODE, 2018 NC. MECHANICAL CODE, 2018 NC. PLUMBING CODE, 2018 N.C. ENERGY CODE, 2018 N.C. ELECTRICAL CODE, 2011 N.C. GAS CODE 2018

BUILDING DATA:

Construction Type: _V Use Group: _R		
Use Group: <u>R</u> Number of Stories: 2		
Building Ridge Height:	(Elevation A) =	
Building Ridge Height:	(Elevation B) =	
Building Ridge Height	(Elevation C) =	
Building Ridge Height:	(Elevation D) =	
Building Ridge Height:	(Elevation E) = (Euro)(+/-)35'-5"	
Mean Roof Height:	(Elevation A) =	
Mean Roof Heights	(Elevation B) =	
Mean Roof Height:	(Elevation C) =	
Mean Roof Heights	(Elevation D) =	
Mean Roof Heights	(Elevation E) = (Euro) (+/-) 28'-1"	
ON EXTERIOR ELEVA	d above are based on grad .Tions Sheets. NG Official to verify final gi	

CONSTRUCTION NOTES: THE FOLLOWING 16 A NON-EXHAUSTIVE LIST OF SOME COMMONLY MISSED CODE RECURRENENTS AND ARE ENFORCEABLE IN THE CONSTRUCTION FROM THESE PLANS. SEE THE ICK, RESIDENTIAL CODE BOOK FOR MORE INFO.

L (REGRA) ALL GLAZING WITHIN 24" OF EITHER RIDE OF A DOOR IN A CLOGED POSITION, AND ON THE GATE WALL PLAYE SHALL BE TEMPERED. ALL WINDOWS THAT WEET ALL OF THE FOLLOWING CONDITIONS SHALL BE TEMPERED. ALL WINDOWS THAT PANES OF MIN. 9 SP. DI BOTTOM EDGE IS WITHIN 19" OF RLOOR C) TOP EDGE IS AT LEAST 36" ABOVE FLOOR AND DI GLAZING IS WITHIN 36" COF HOT TUBS OR STATULE LADING TEMPERED GLAZING IS ALSO REGUIRED WITHIN 56" OF HOT TUBS OR STATULE LEADING ADD FINISHEDDES. TEMPERED WIDOWS ALSO REGUIRED FER REVAINDER OF THIS

2. (1930)) ALL ELEEPING ROOMS AND SARDHENTS WITH HADRITALE GRACE SHALL VALVE AT LEAST ORE EXCEPTING AND CARONING THE FOLLOWING. A I'MI AU S.F. CLEAR OFENINGI B) FINI TOTAL GLASS AREA OF 30 BC (GROUPD FLOOR WINDOW) AND 51 SF. (WITTER STORY WINDOW. IT IS THE CONTRACTORS RESPONSIBILITY TO CHOSE THE PROFER CONTRACTION WINDOW. IT IS THE CONTRACTORS RESPONSIBILITY TO CHOSE THE PROFER CONTRACTION WINDOW. AND HAVE EGRESS WINDOWS PROFERLY DISTRIBUTED AND INSTALLED AS REGUMEED.

(RSII2) ALL INTERIOR EGRESS DOORS AND A MINIMUM OF ONE EXTERIOR EGRESS DOOR SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT USE OF A KEY OR SPECIAL KNOWLEDGE.

4, (RGILTS) MAXIMUM STAIR RIGER HEIGHT SHALL BE S-1/4", AND MINIMUM TREAD SHALL BE 9".

B. (1834.3) SMOKE ALARMS SHALL BE INSTALLED AND INTERCONNECTED, WITH BATTERY BACK-UP IN THE FOLLOWING AREAS, EACH GLEEPING ROOMS IN THE AREA (HALLIMAY) RIGHT GUTSIDE THE GLEEPING ROOMS: AND EACH STORY, THE GNE GUTSIDE THE GLEEPING ROOMS WILL SATISFY THAT STORY.

6. (R402.12) ALL LUMBER SHALL BE PRESSURE TREATED AND DRIED AFTER TREATMENT IN ACCORDANCE WITH AWPA UI AND SHALL BEAR THE LABEL OF AN

1. (R406.)) BITUMINOUS DAMPPROOFING SHALL BE APPLIED TO EXTERIOR FOUNDATIONS OF ALL HABITABLE AND USABLE (STORAGE, ETC.) SPACES.

8. (R408.12) INSTALL ONE FOUNDATION VENT WITHIN 3' OF EACH CORNER (NOT ONE EACH SIDE OF EACH CORNER?)

9. (R1034) FLASH ALL VALLEYS AND WALL/ROOF INTERSECTIONS, AND CHIMMEY AND OTHER ROOF PENETRATIONS. WEILCE AND WATER SHIELD ON ALL ROOFS LESS THAN 4.12 SLOPE. LASHING TO BE INCN-CORRECTIVE.

12. (R2011) BUILDER TO LOCATE 22%30" ATTIC ACCESS IN ALL ATTICS WITHOUT STAIR ACCESS, LOCATE ACCESS TO PROVIDE A 30" CLEAR SPACE ABOVE ACCESS DOOR-TYP.

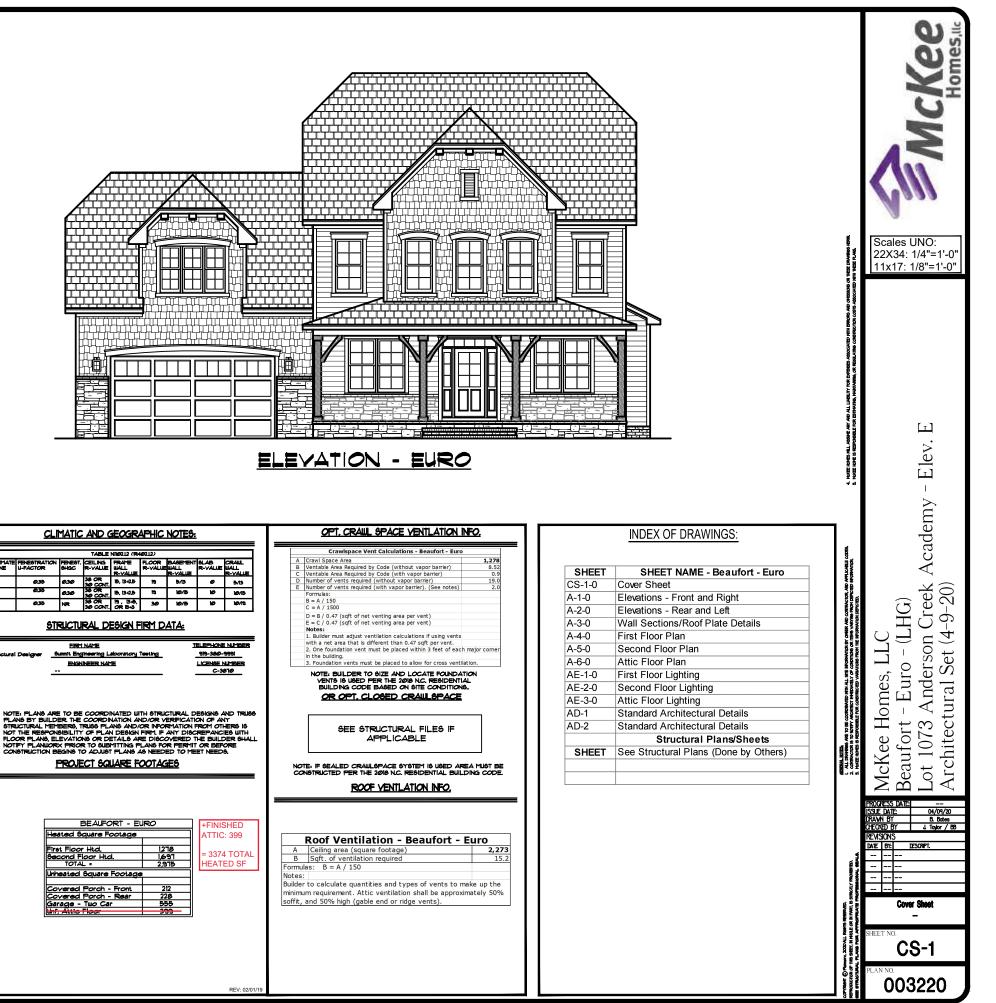
IL (REGOL) MASONRY FIREPLACE WALLS TO BE MIN 9" THICK, AND MIN 2" TO PRAMING. POURD HEARTHS TO HAVE MIN 4402" O.C. EACH WAY, HEARTHS TO BE MIN 20" FIRCH RIFERDOX AND HAVE MIN 2" WIDER THAN FIRERDOX AND I EACH BIDE.

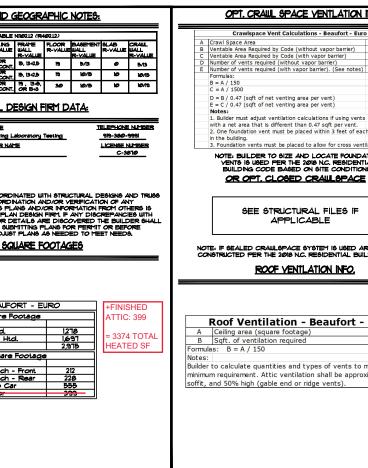
12. (R403.L6) ANCHOR BOLTS SHALL BE MIN. "DIAMETER 4 SHALL EXTEND A MINIMUM TINTO MASONRY OR CONCRETE. ANCHOR BOLTS TO BE NO MORE THAN 5" OC. AND WITHIN 12" OF THE

13. (R315) INSTALL APPROVED CARBON MONOXIDE ALARM OUTSIDE EACH BEDROOM AND IN IMMEDIATE VICINITY OF EACH SEPARATE SLEEPING AREA.

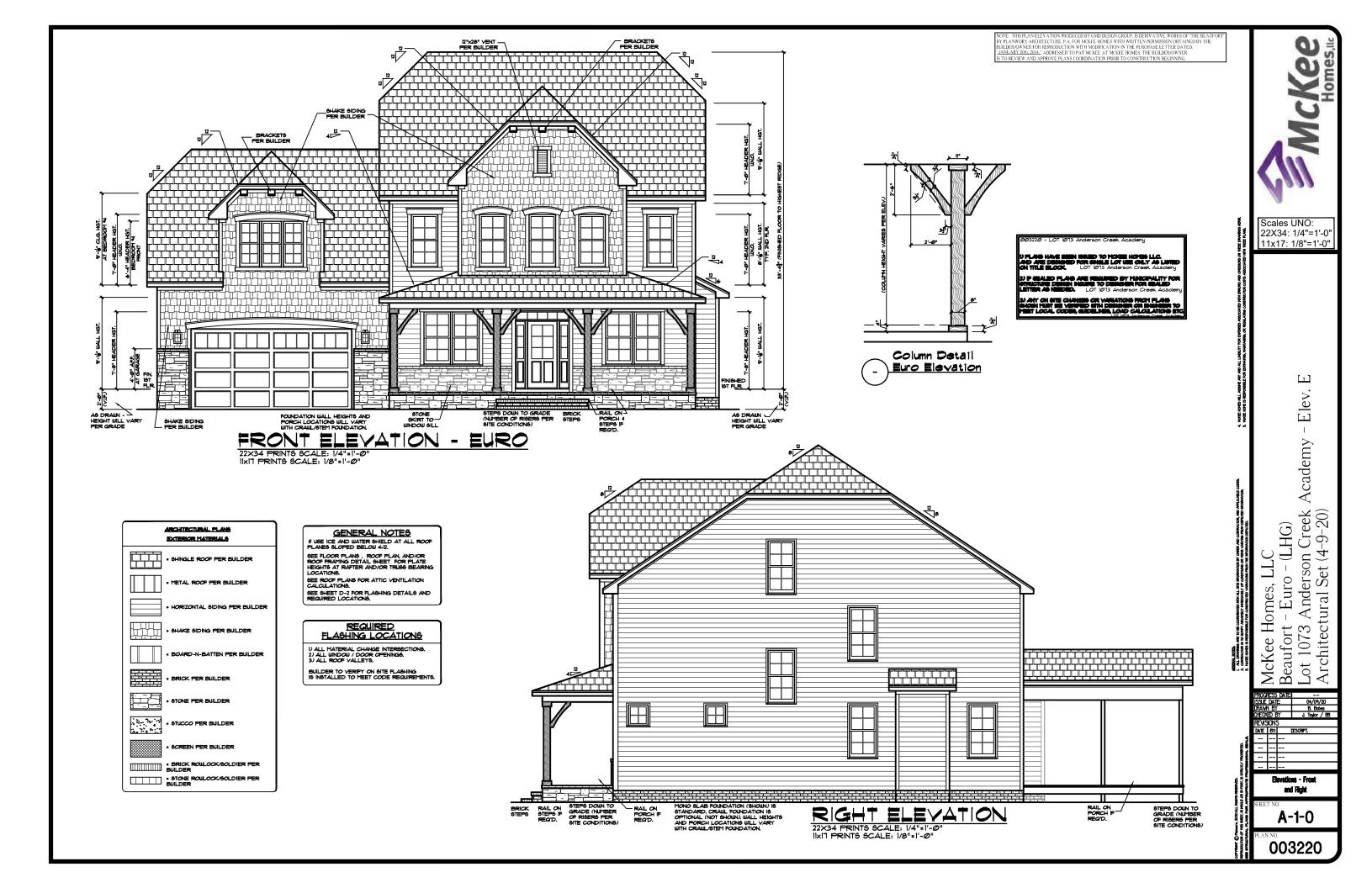
IA. ALL WINDOWS &HALL BE LABELED TO CONFORM WITH AAMAANWUDA WILS2 BUILDER TO VERRY HIN DP CLASSIFICATION FOR ALL WINDOWS BASED ON LOCATION SINGLE KOMES ARE BUILT BASED ON REQUIREMENTS FOR THAT WIND ZONE AREA.

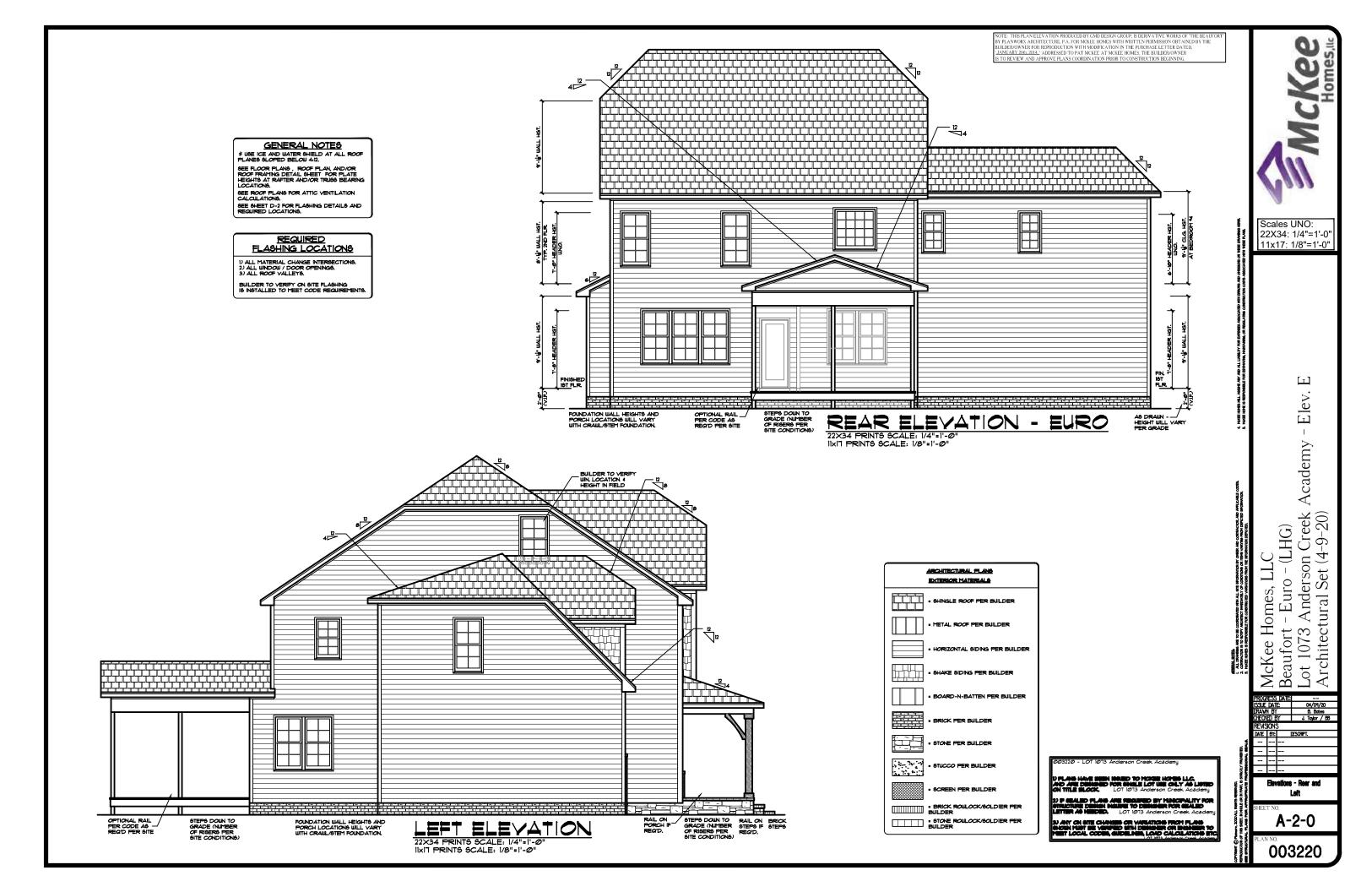
B. IF CRAWL SPACE FOUNDATION OFTION IS USED BUILDER TO LOCATE ACCESS PER CURRENT CODE REQ. WITH 36%24" (MIN) CLEAR OFENING IF NO HVAC LOCATED IN CRAWL OR 36%36" (MIN) WITH HVAC LOCATED IN CRAWL SPACE AREA.

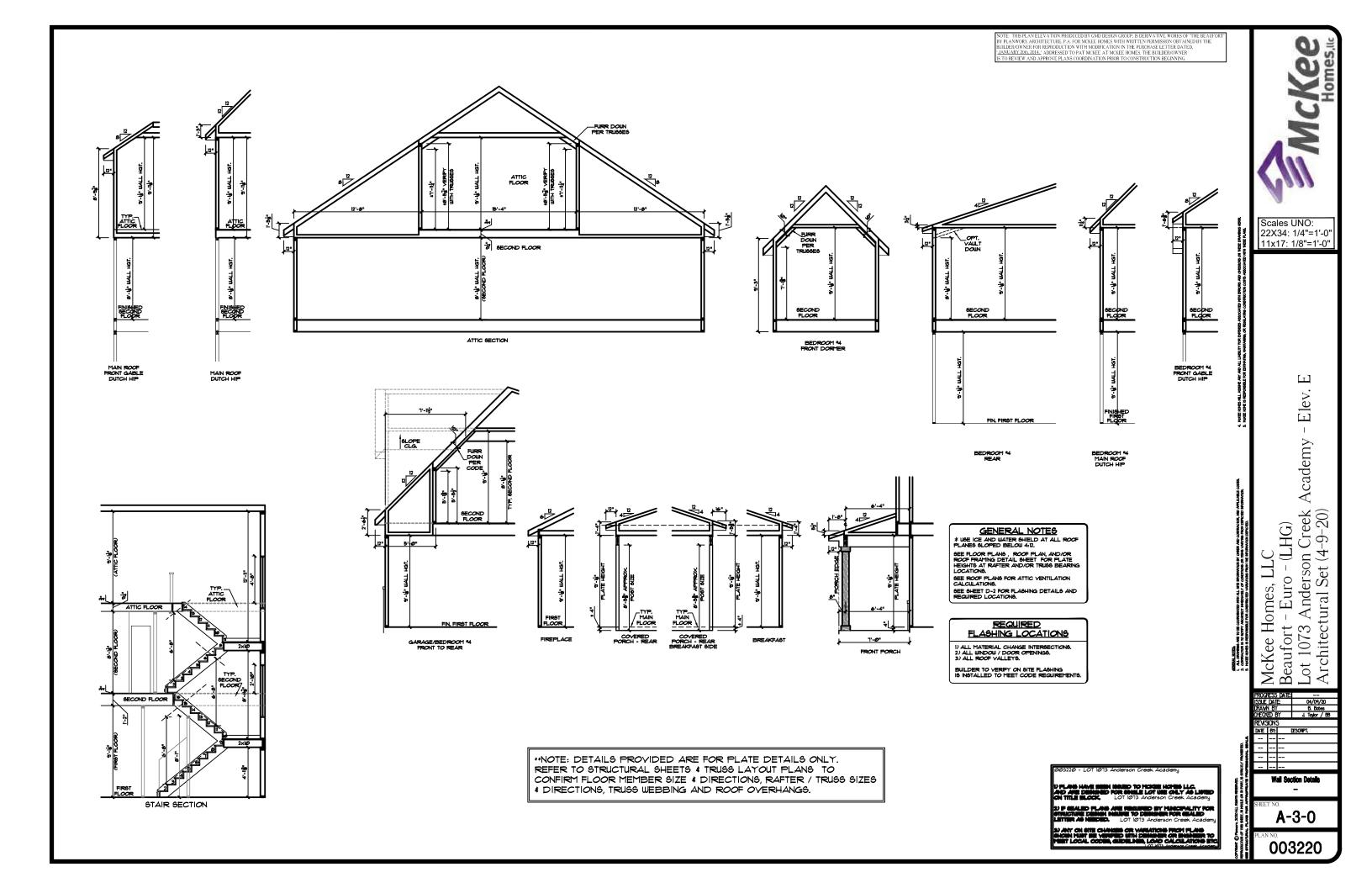


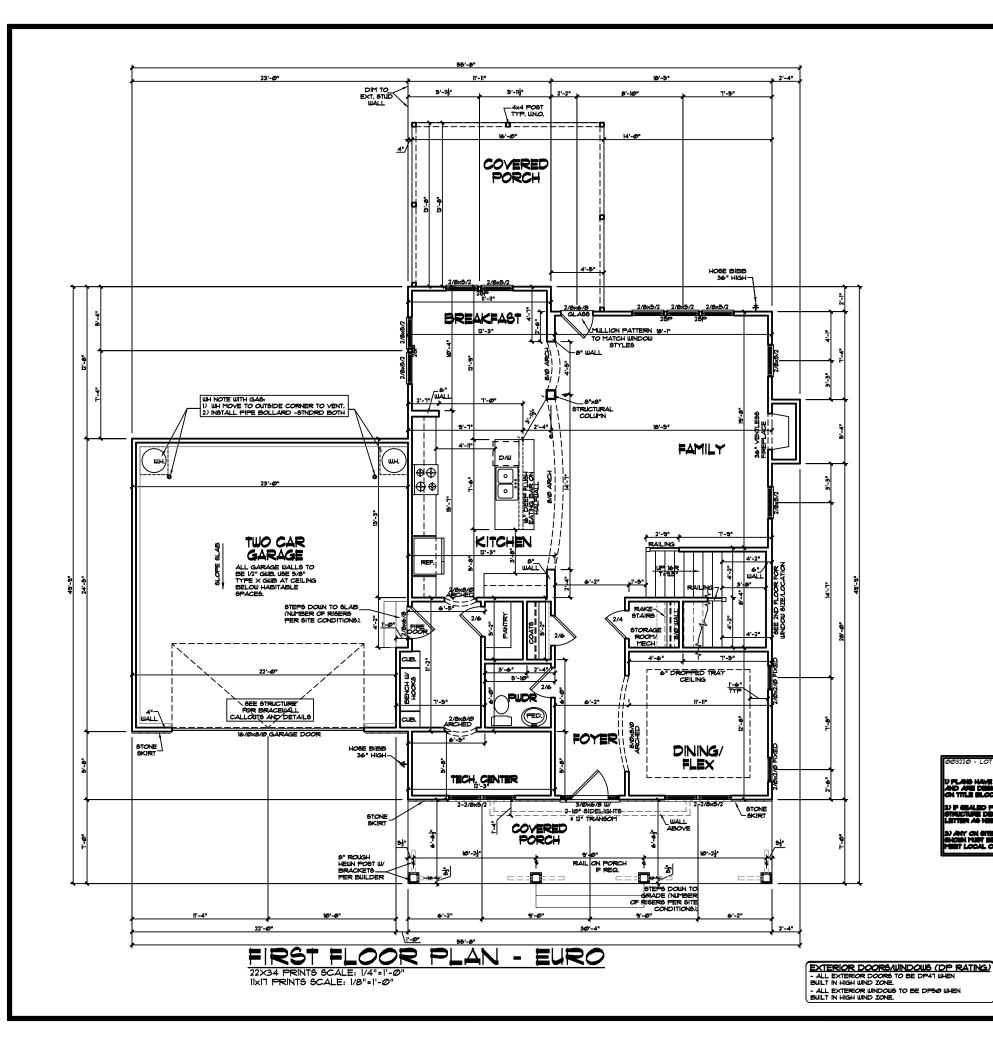


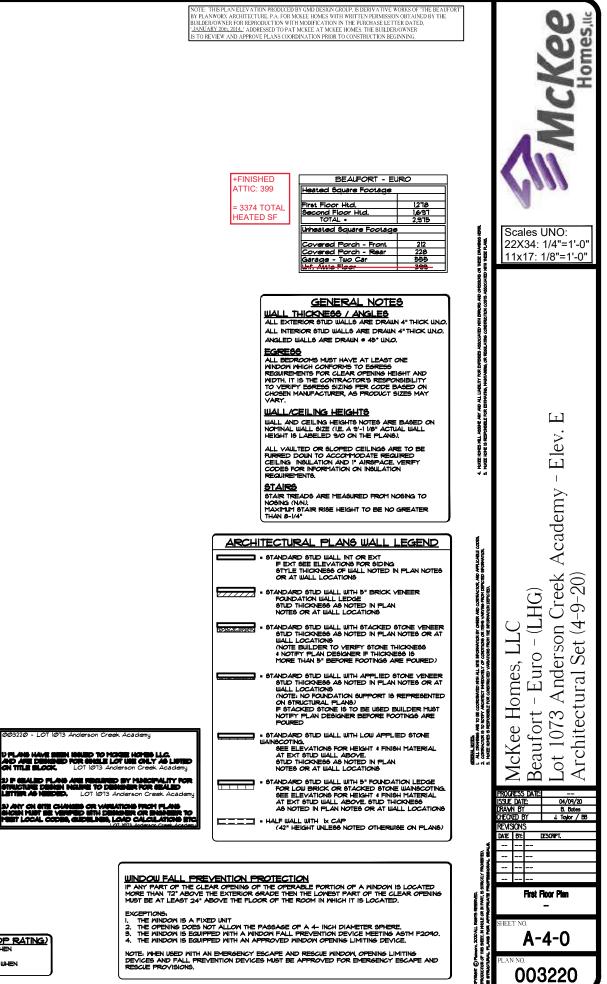
C: A- A- A- A- A- A- A- A- A- A- A- A- A-	
A· A- A- A- A- A- A- A- A- A- A- A- A- A-	
A A A A A A A A A A A A A A A A	C
	A
	A
	A
A A A A A A	A
A A A A	A
A A A	A
A A	А
A	А
A	
	А
	А



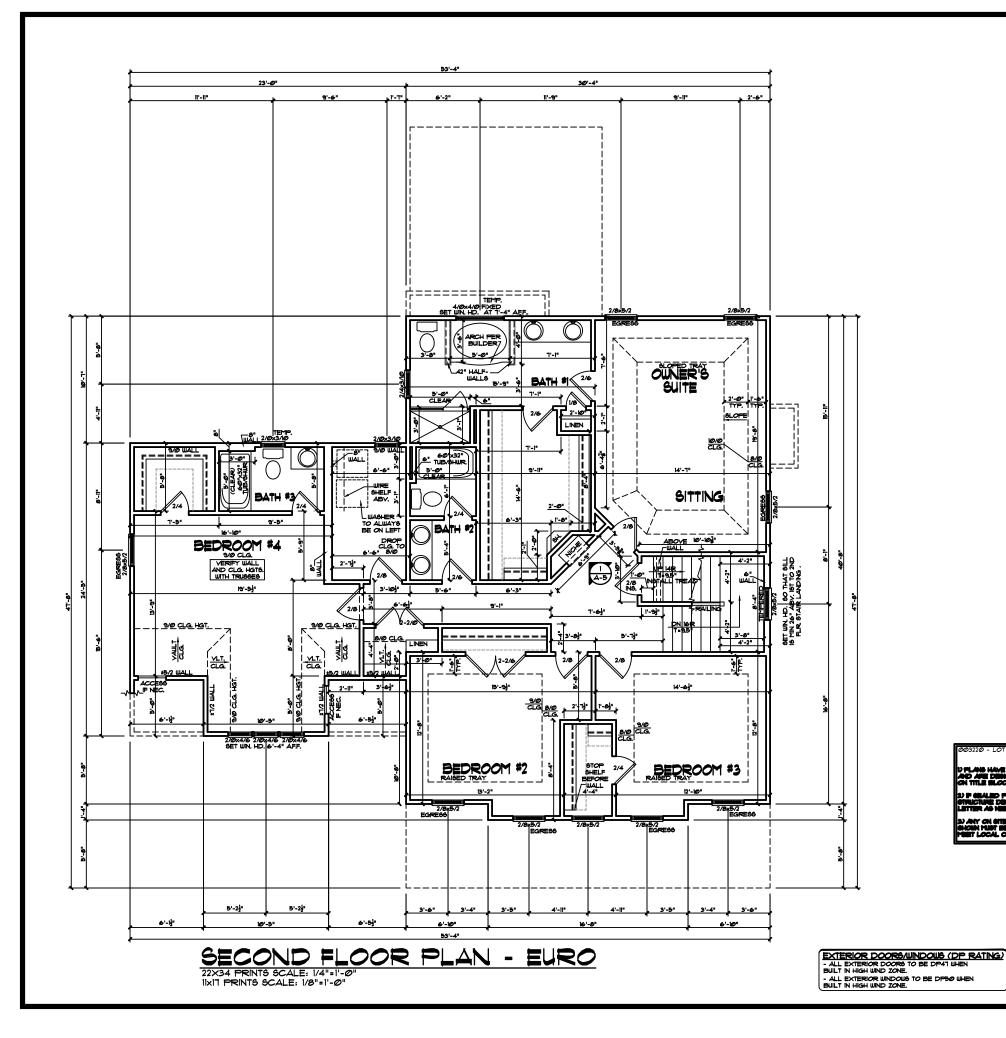


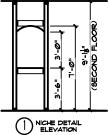


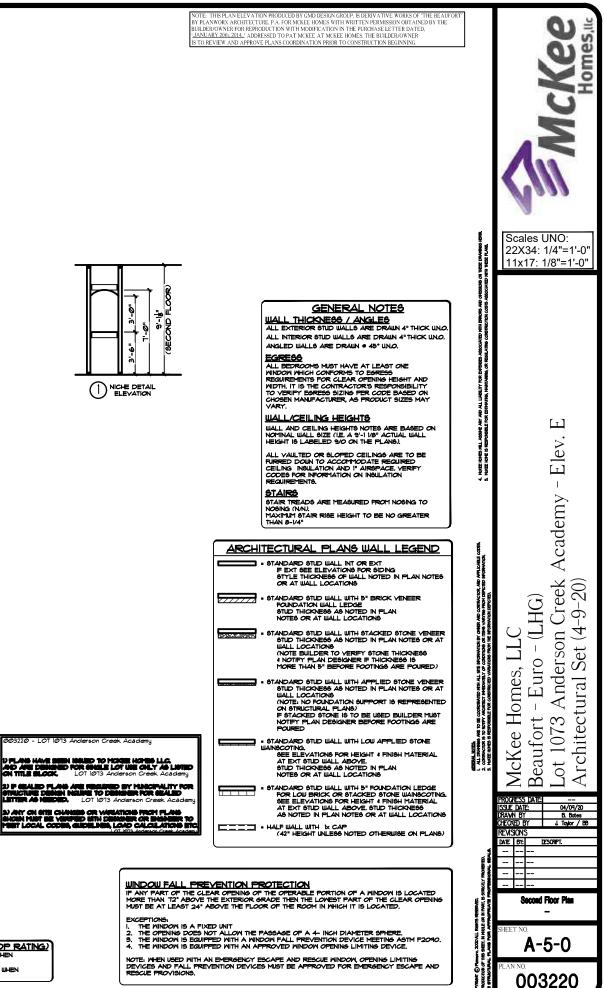


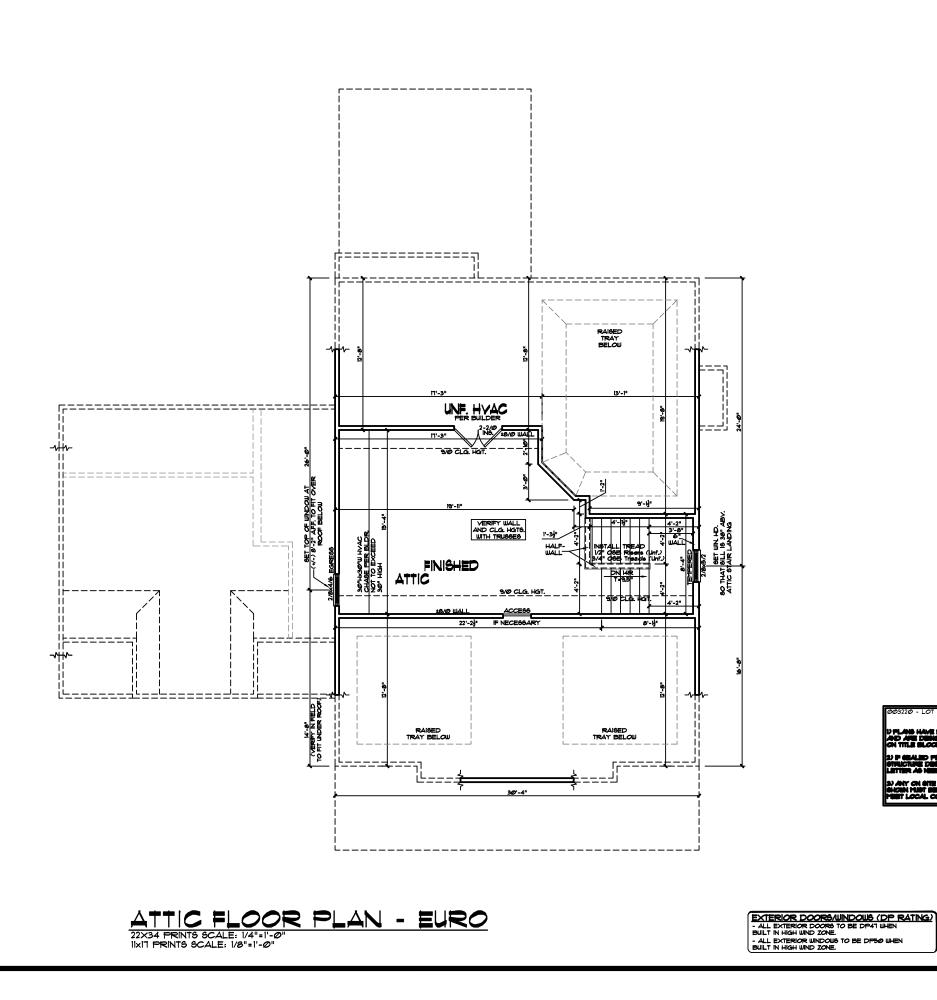


NOTE: THIS PLAN ELEVATION PRODUCED BY GND DESIGN GROUP, IS DERIVATIVE WORKS OF "THE BEAUFG BY PLANWORX ARCHITECTURE, P.A. FOR MCKEE HOMES WITH WRITTEN PERMISSION OBTAINED BY THE BUILDEROWNER FOR REPRODUCTION WITH MODIFICATION IN THE PURHASE. LETTER DATED, <u>JANLARY 2010</u>, 2014, "ADDRESSED TO PAT MCKEE AT MCKEE HOMES. THE BUILDEROWNER IS TO REVEW AND APPROVE PLANS COORDINATION PRIOR TO CONSTRUCTION BEGINNIG.









 STANDARD STUD WALL WITH LOW APPLIED STONE
WANGCOTING.
 SEE LEVATIONS FOR HEIGHT 4 FNISH MATERIAL
 AT EXT STUD WALL ABOVE.
 STUD THICORES AS NOTED IN PLAN
 NOTES OR AT WALL LOCATIONS derson Creek Acad U FLANG HAVE SEEN HOUED TO MOREE HOHED LLC. AND ANE DESIGNED FOR GNALE LOT USE ONLY AS LIGHT ON TITLE BLOCK. LOT 1073 Anderson Creek Academy LED FLANG ARE REALINED BY MINI RE DEMINI NALINE TO DEMINING RO AS NUMBER, LOT 1073 Anderson C 2) IP 6864 3) ANY ON STEE CHANGES OR VARIATIONS FROM FLANS SHOWN MUST BE VERY ED WITH DEMANDER OR BIOMADER MEET LOCAL CODES, GLIDBLINES, LOAD CHARLENTON WINDOW FALL PREVENTION PROTECTION IF ANY PART OF THE CLEAR OFENING OF THE OPERABLE PORTION OF A WINDOW IS LOCATED MORE THAN 12' ABOVE THE EXTERIOR GRADE THEN THE LOWEST PART OF THE CLEAR OFENING MUST BE AT LEAST 24' ABOVE THE FLOOR OF THE ROOM IN WHICH IT IS LOCATED.

NOTE: THIS PLAN ELEVATION PRODUCED BY GMD DESIGN GROUP, IS DERIVATIVE WORKS OF THE BEAUFO BY PLANWORK ARCHITECTURE, P.A. FOR MCKEE HOMES WITH WRITTEN PREMISSION OBTAINED BY THE BUILDEROWNER FOR REPRODUCTION WITH MODIFICATION IN THE PURCHASE LETTER DATED. JANLARY 2011, 2014, 2010 DRESSED TO PAT MCKEE AT MCKEE HOMES. THE BUILDEROWNER IS TO REVEW AND APPROVE PLANSE COORDINATION PRIOR TO CONSTRUCTION BEGINNIG.

ATTIC NOTES

L KNEEWALLS IN UNFINISHED ATTIC ARE OPTIONAL, UNLESS USED TO SUPPORT RAFTERS (SEE STRUCTURAL SHEETS), KNEEWALL LOCATOWNEIGHT MAY BE ADJUSTED IN THE FIELD IF THESE WALLS ARE NOT LOAD BEARING.

2. CEILING LINES SHOWN IN UNFINISHED ATTIC MAY BE JUST FOR REPRESENTATION OF FUTURE FLAT CEILINGS, IF A FLAT CEILING ID DESIRED, THIS UILL HAYE TO BE COORDINATED WITH THE STRUCTURAL PLANS.

GENERAL NOTES

WALL THICKNESS / ANGLES ALL EXTERIOR STUD WALLS ARE DRAWN 4" THICK UNC ALL INTERIOR STUD WALLS ARE DRAWN 4" THICK UNC. ANGLED WALLS ARE DRAWN . 45" UN.O.

EGRESS

ALL BEDROOMS MUST HAVE AT LEAST ONE ALL BEDROOMS MUST HAVE AT LEAST ONE WINDOW HIGH CONFORTS TO EXCESS REQUIREMENTS FOR CLEAR OPENING HEIGHT AND MIDTH, IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ESRESS SIZING PER CODE BASED ON CHOSEN MANUFACTURER, AS PRODUCT SIZES MAY VARY.

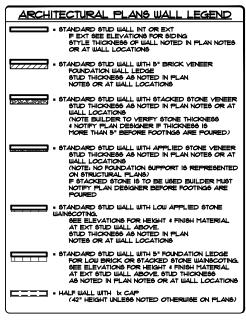
WALL/CEILING HEIGHTS

WALL AND CEILING HEIGHTS NOTES ARE BASED ON NOMINAL WALL SIZE (I.E. A 9'-1 1/8" ACTUAL WALL HEIGHT IS LABELED 9/0 ON THE PLANS).

ALL VAULTED OR & LOPED CEILINGS ARE TO BE FURRED DOWN TO ACCOMMODATE REQUIRED CEILING INSULATION AND I"A LIRSPACE. VERIFY CODES FOR INFORMATION ON INSULATION REQUIREMENTS.

<u>STAIRS</u>

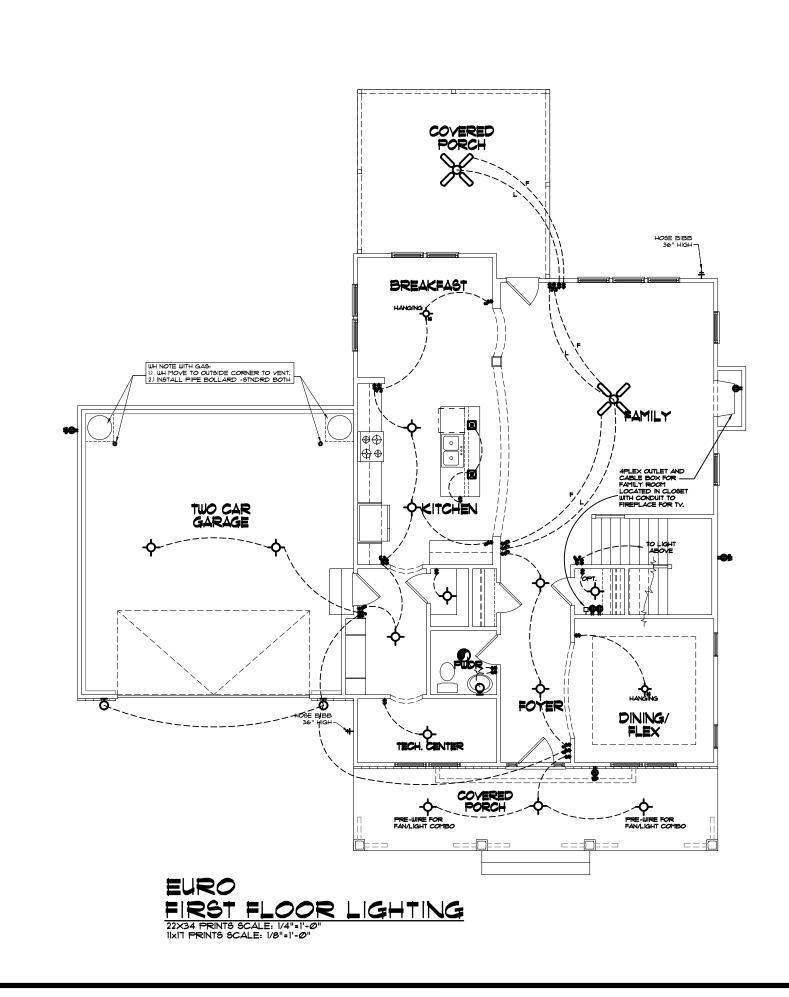
STAIR TREADS ARE MEASURED FROM NOSING TO NOSING (NN), MAXIMUM STAIR RISE HEIGHT TO BE NO GREATER THAN S-1/4"

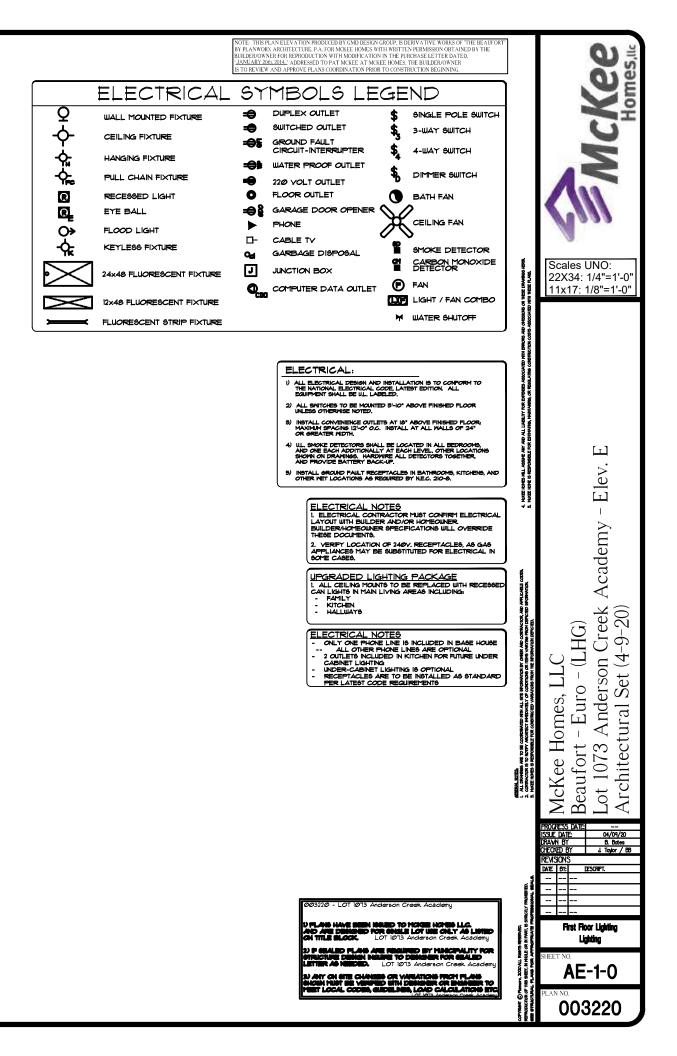


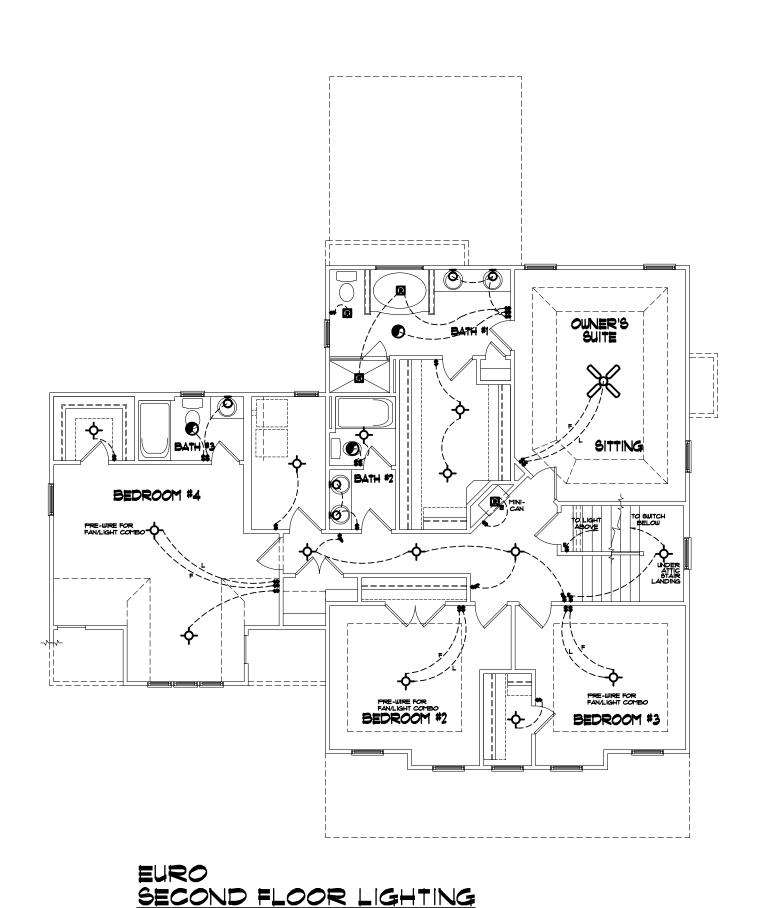
Exceptions; I. The Mindow IS a fixed unit 2. The Orenins does not allow the passage of a 4- inch diameter sphere. 3. The Mindow IS Equipped with a Mindow Fall prevention device meeting astm f2090. 4. The Mindow IS Equipped with a A PROVED WINDOW OPENIS Limiting device.

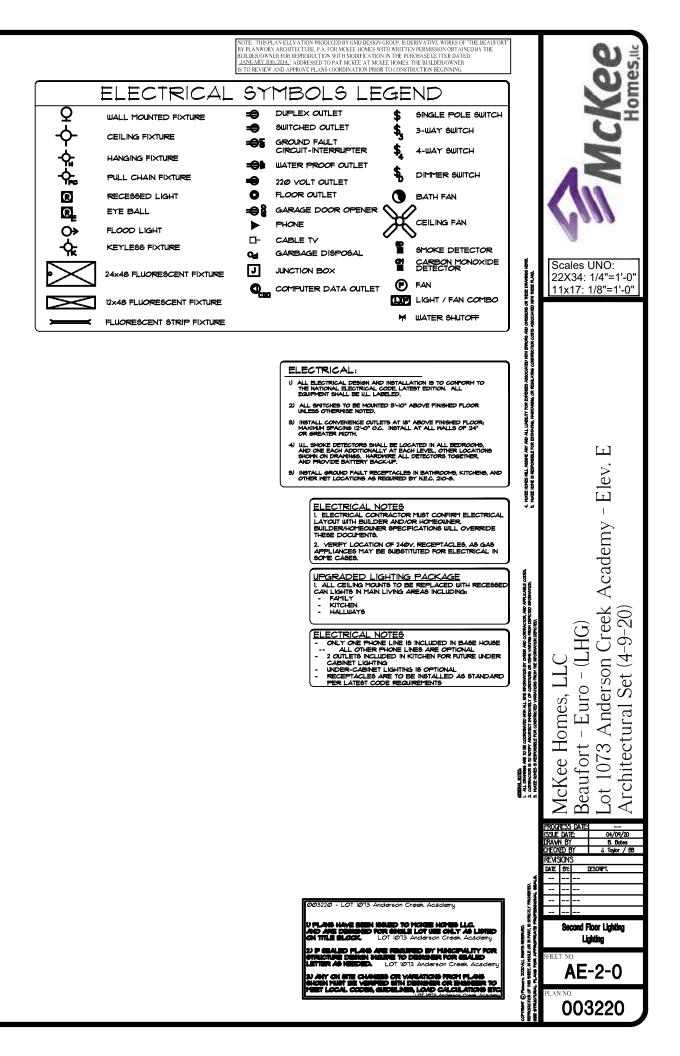
NOTE: WHEN USED WITH AN EMERGENCY ESCAPE AND RESCUE WINDOW, OPENING LIMITING DEVICES AND FALL PREVENTION DEVICES MUST BE APPROVED FOR EMERGENCY ESCAPE AND RESCUE PROVISIONS.

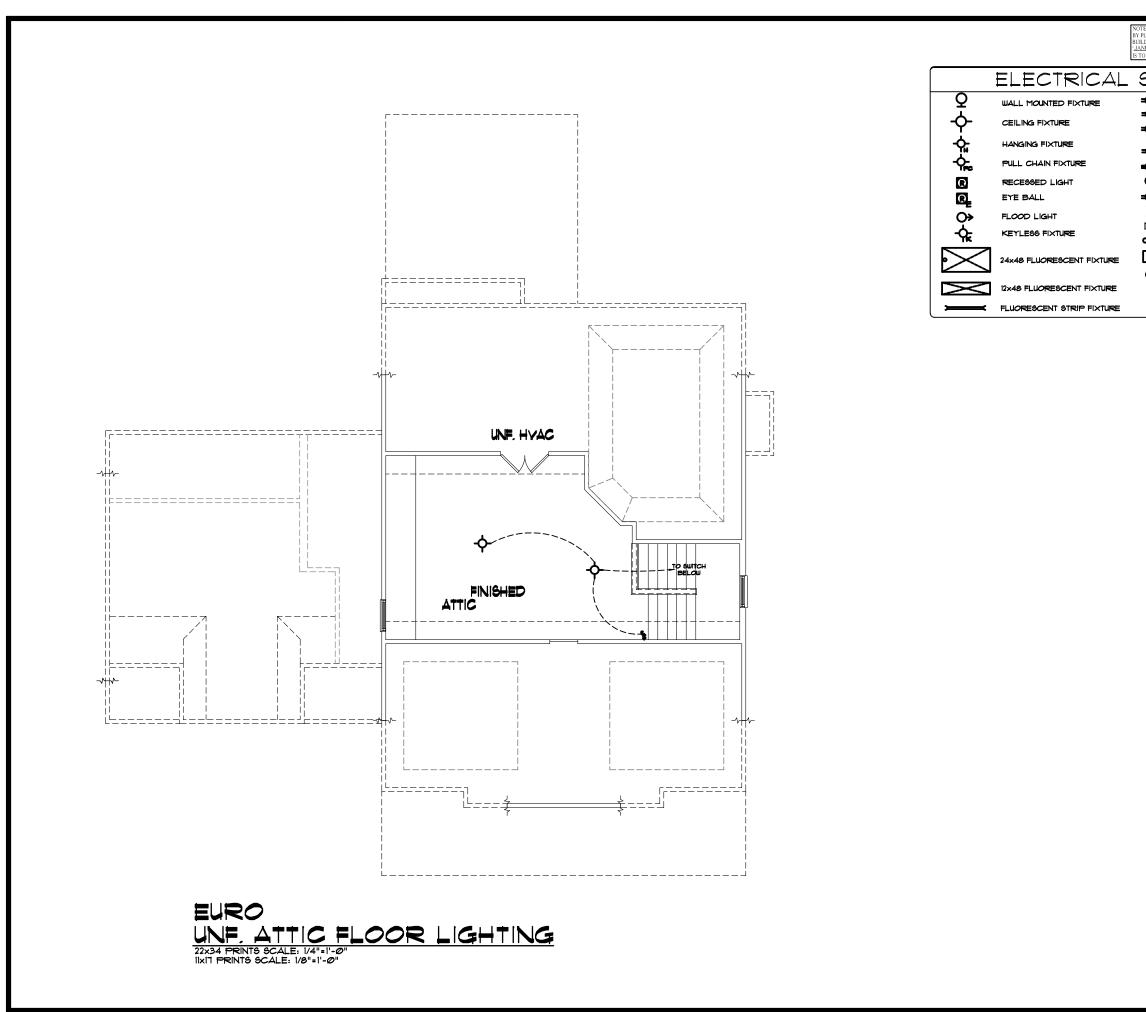


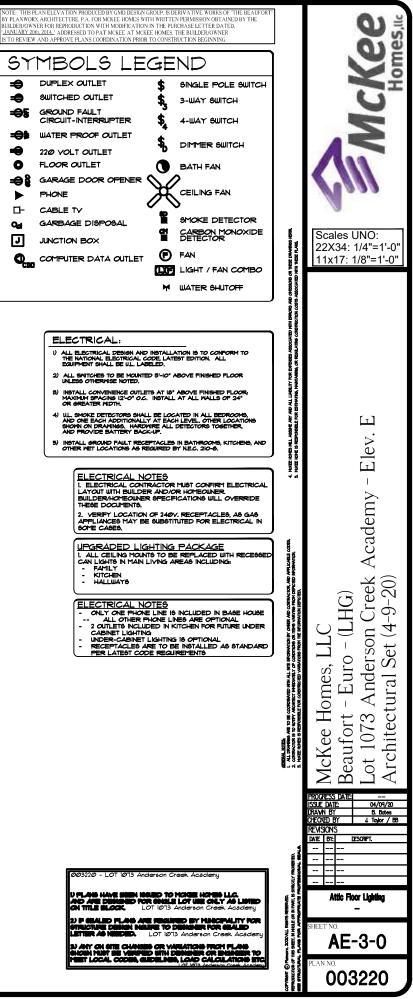


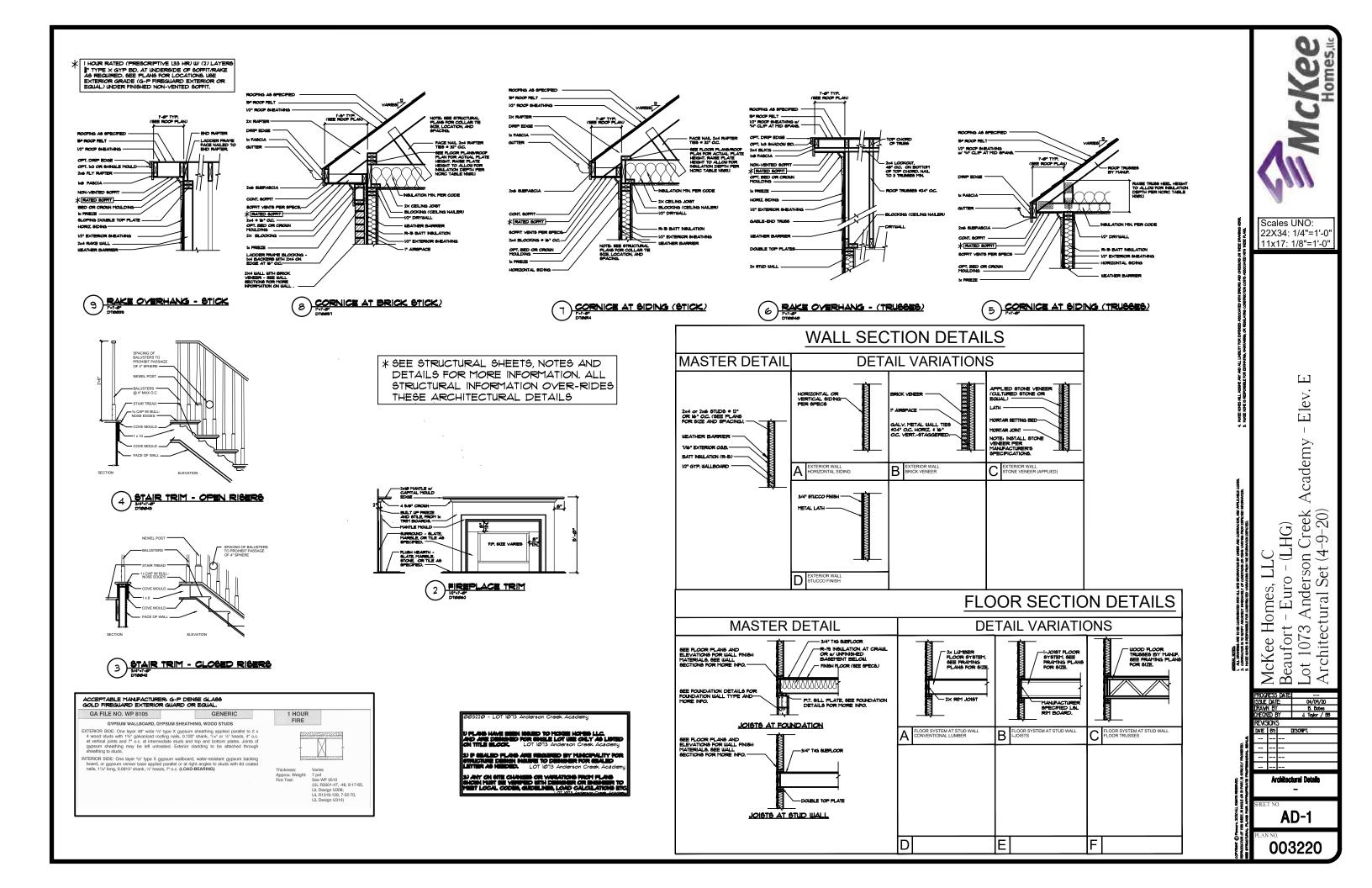


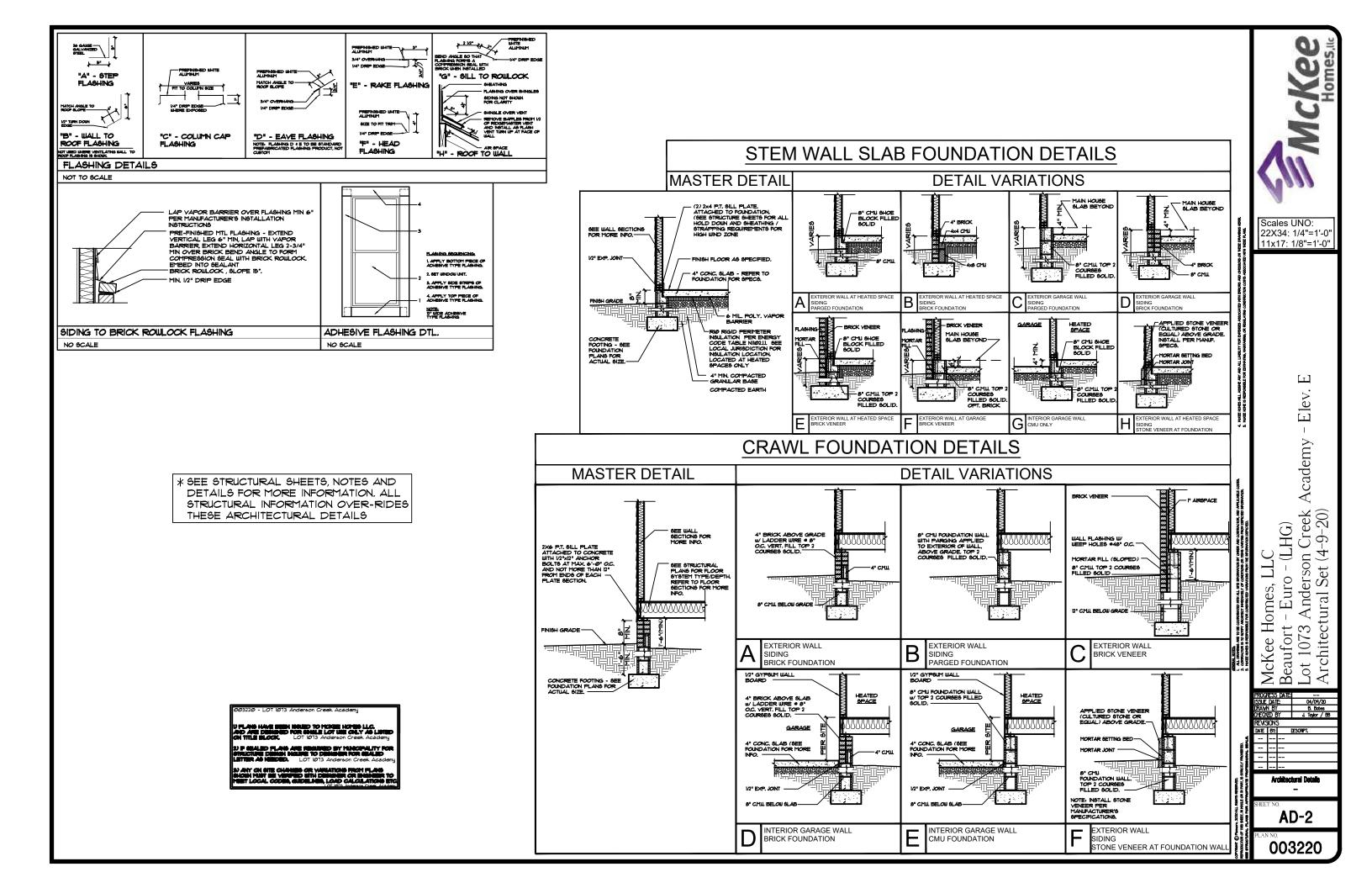












DESIGN SPECIFICATIONS:

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

• As	BCE 7-10: Minimu	um Design Lo	ads for Builo	lings and Oth	er Structures
Design L	_oads:				
1.	Roof Live Lo				
	1.1. Conver	itional 2x			PSF
	1.2. Truss				PSF
	1.2.1. +	Attic Truss			PSF
2.	Roof Dead L	oads			
	2.1. Conver	itional 2x		10 F	PSF
	2.2. Truss				PSF
3.	Snow				°SF
	3.1. Importa	nce Factor		1.Ø	
4.	Floor Live Lo				
					PSF
5.	Floor Dead L				
				15 F	
6.	Ultimate Desig				MPH
	1	re			
		nce Factor		I.Ø	
	6.3. Wind Ba				
	6.3.1.				
-	6.3.2.				
١.	Component an	a claaalng (In 1757/	1	
	MEAN ROOF	UP TO 30'	30'1"-35'	35'1"-4Ø'	40'1"-45'
	ZONE 1	16.7,-18.0	17.5,-18.9	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.T,=21.Ø	17.5,-22.1	18.2,-22.9	18.7,-23.5
	ZONE 4	18.2,-19.0	19.2,-20.0	19.9,-20.7	20.4,-21.3
	ZONE 5	18.2,-24.Ø	19.2,-25.2	19.9,-26.1	20.4,-26.9
	L	1		1	1

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.
- 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.

- 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".
- 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".

- supported during the concrete pour.
- CONCRETE REINFORCEMENT:

- standard.
- ASTM A615, grade 60.
- tension splice.



STRUCTURAL PLANS PREPARED FOR:

LOT 1073 ANDE	RSON CREEK ACADEMY
PROJECT ADDRESS:	OUNER:
TBD	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.

PLAN 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	ТJ	TRIPLE JOIST	
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	₩WF	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

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 0.1% 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

Lap reinforcement as required, a minimum of 40 bar diameters

for tension or compression unless otherwise noted. Splices in masonry shall be a minimum of 48 bar diameters.

- 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 ANGI/AGME 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
Sl.Øs	Stem Wall Foundation
SI.Øc	Crawl Space Foundation
S1.Øb	Basement Foundation
S2.Ø	Basement Framing Plan
\$3.Ø	First Floor Framing Plan
\$4.Ø	Second Floor Framing Plan
S5.Ø	Roof Framing Plan
S6.Ø	Basement Bracing Plan
ST.Ø	First Floor Bracing Plan
58.Ø	Second Floor Bracing Plan

<u>REVISION LIST:</u>

Revision No.	Date	Project No.	Description

WOOD TRUSSES:

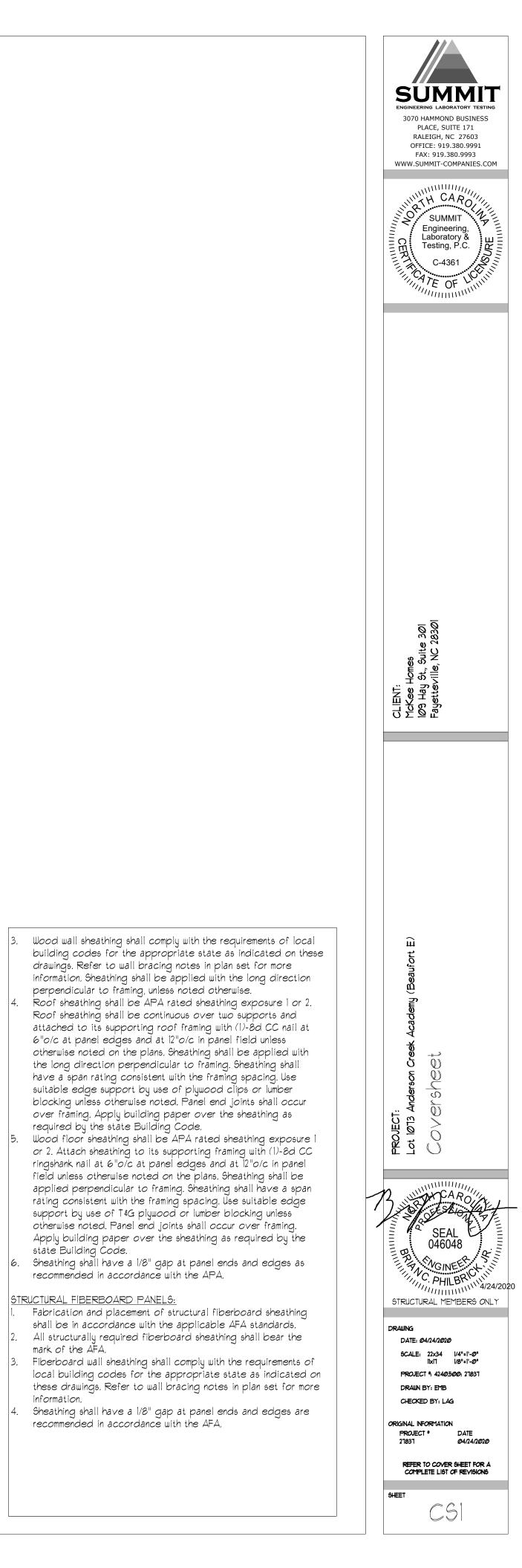
- The wood truss manufacturer/fabricator is responsible for the design of the wood trusses. Submit sealed shop drawings and supporting calculations to the SER for review prior to fabrication. The SER shall have a minimum of five (5) days for review. The review by the SER shall review for overall compliance 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 7-10), 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.



FOUNDATION NOTES:

- 1. 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.
- 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.
- 5. 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.
- PILASTERS TO BE BONDED TO PERIMETER FOUNDATION WALL.
- 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 12. CAROLINA RESIDENTIAL CODE SECTION R403.1.6. MINIMUM 1/2" DIA. BOLTS SPACED AT 6'-O" 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 JOIGT 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

REINFORCE GARAGE PORTAL WALLS PER FIGURE R602.10.4.3 OF THE 2018 NCRC. (TYP)

BEAM POCKETS MAY BE SUBSTITUTED FOR MASONRY PILASTERS AT GIRDER ENDS. BEAM POCKETS SHALL HAVE A MINIMUM 4" SOLID MASONRY BEARING.

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

DECK JOISTS SHALL BE SPACED AT A MAX. 12" O.C. WHEN DECK BOARDS ARE INSTALLED DIAGONALLY.

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY MCKEE HOMES COMPLETED/REVISED ON 04/09/2020. 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.

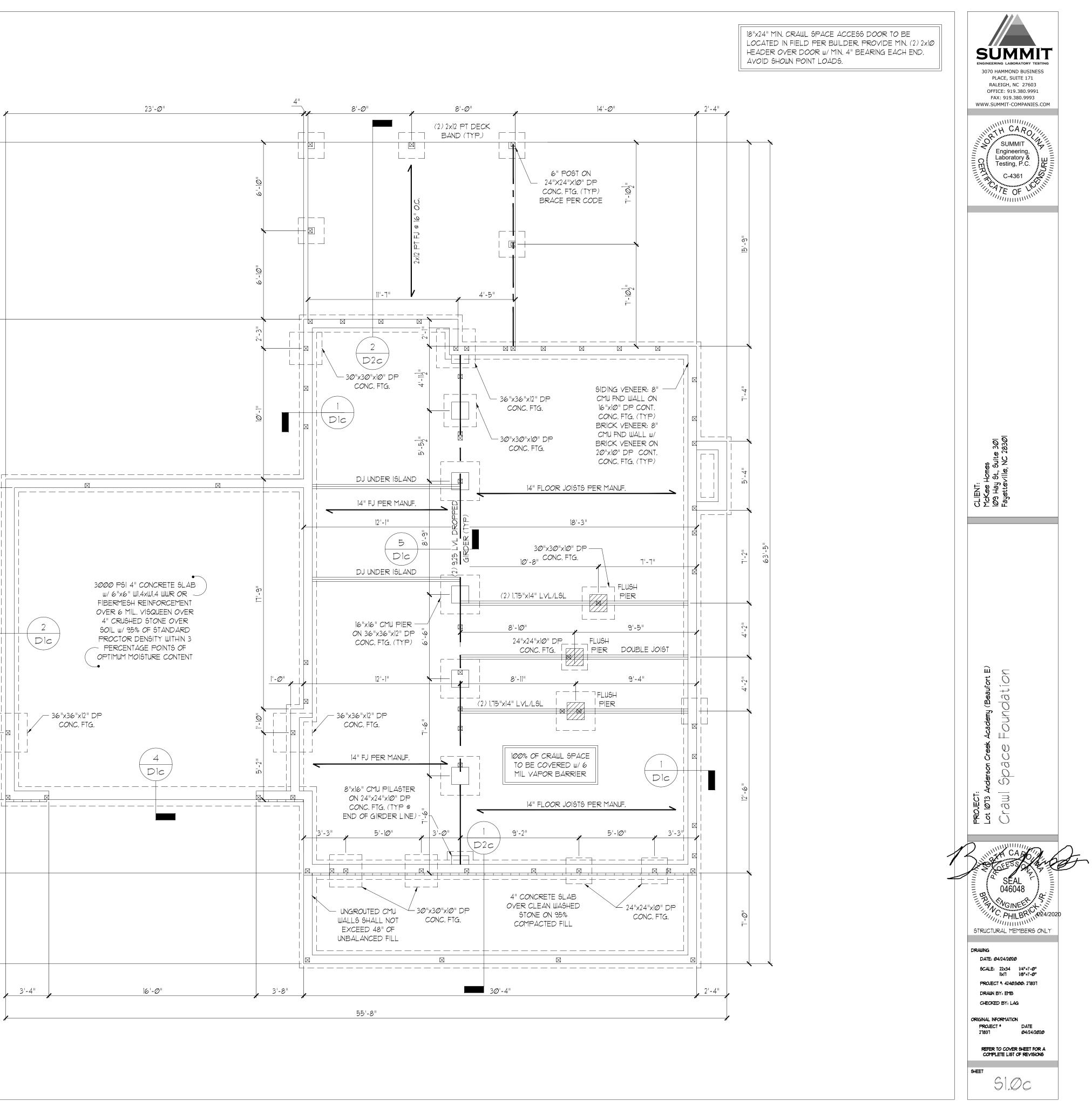
STRUCTURAL MEMBERS ONLY

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.

CRAWL SPACE FOUNDATION PLAN

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



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.
- PROPERTIES USED IN THE DESIGN ARE AS FOLLOWS: 4 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 = 1.25x10⁶ PSI
- ALL WOOD MEMBERS SHALL BE #2 SYP UNLESS NOTED ON PLAN. ALL STUD COLUMNS AND JOISTS SHALL BE #2 SYP (UNO). 6. ALL BEAMS SHALL BE SUPPORTED WITH A (2) 2x4 #2 SYP STUD COLUMN
- AT EACH END UNLESS NOTED OTHERWISE.
- 1. ALL REINFORCING STEEL SHALL BE GRADE 60 BARS CONFORMING TO ASTM AGI5 AND SHALL HAVE A MINIMUM COVER OF 3". 8. FOUNDATION ANCHORAGE SHALL BE CONSTRUCTED PER THE 2018
- NORTH CAROLINA RESIDENTIAL CODE SECTION R403.1.6. MINIMUM 1/2" DIA. BOLTS SPACED AT 6'-O" ON CENTER WITH A 7" 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.
- 11. 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'-O" OF CRIPPLE WALL ABOVE, SHALL BE (2) FLAT 2x4 SYP #2, DROPPED. (UNLESS NOTED OTHERWISE) 12. ABBREVIATIONS:

SJ = SINGLE JOIST

FT = FLOOR TRUSS

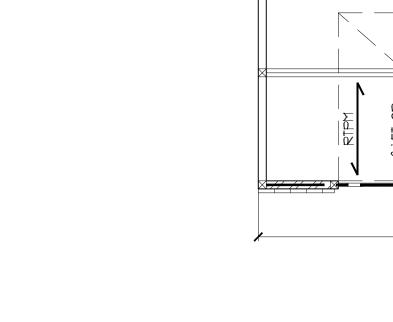
- DJ = DOUBLE JOIST
- GT = GIRDER TRUSS SC = STUD COLUMN
- DR = DOUBLE RAFTER EE = EACH END TR = TRIPLE RAFTER OC = ON CENTER
- TJ = TRIPLE JOIST PL = POINT LOAD CL = CENTER LINE
- SHADED WALLS INDICATED LOAD BEARING WALLS

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:

 \equiv \equiv \equiv DESIGNATES JOIST SUPPORTED LOAD BEARING 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>04/09/2020</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.

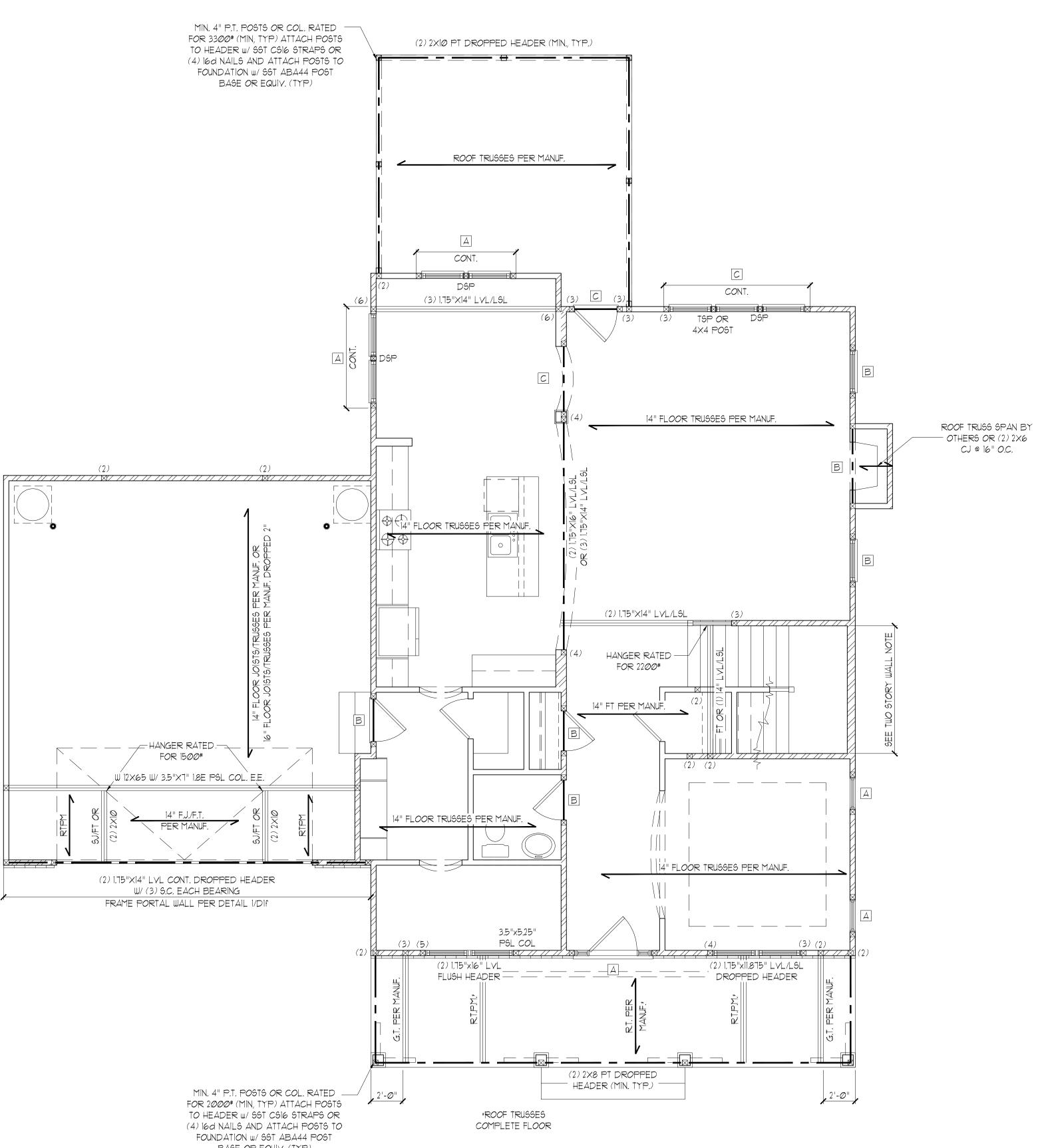
STRUCTURAL MEMBERS ONLY

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





BASE OR EQUIV. (TYP)

HEADER SCHEDULE				
TAG	SIZE	JACKS (EACH END)		
А	(2) 2x6	(1)		
В	(2) 2x8	(2)		
С	(2) 2x1Ø	(2)		
D	(2) 2x12	(2)		
E	(2) 9-1/4" LSL/LVL	(3)		
F	(3)2x6	(1)		
G	(3)2x8	(2)		
H	(3)2x1Ø	(2)		
	(3) 2x12	(3)		
I (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'-0" USE (1) KING STUD AT E.E. OPENINGS 3'-1" TO 4'-0" USE (2) KING STUDS AT E.E. OPENINGS 4'-1" TO 8'-0" USE (5) KING STUDS AT E.E. OPENINGS 12'-1" TO 16'-0" USE (6) KING STUDS AT E.E.				

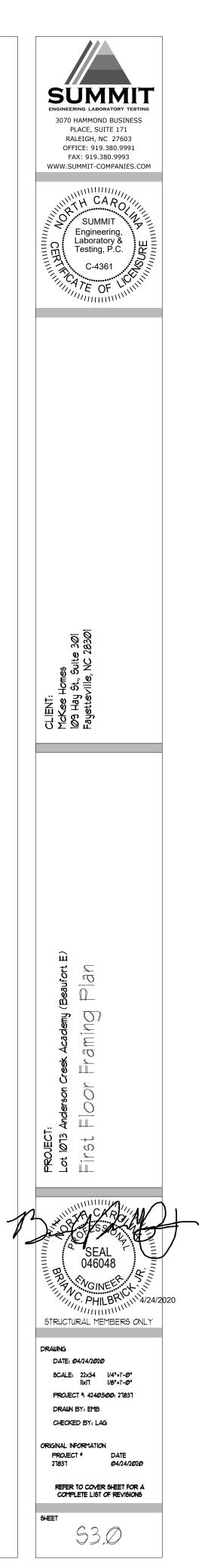
ALL HEADERS WHERE BRICK IS USED, TO BE: LINTEL (U.N.O.) LINTEL SCHEDULE: STEEL ANGLES TO HAVE MINIMUM 4" BEARING ONTO BRICK AT EACH END. () L3x3x1/4" 2 L5x3"x1/4" (3) L5x3-1/2x5/16" (4) L5x3-1/2"x5/16" ROLLED OR EQUAL ARCHED

COMPONENT. SECURE LINTEL TO HEADER w/(2) 1/2" DIAMETER LAG

SCREWS STAGGERED @ 16" O.C. (TYP FOR (3))

WALL S	WALL STUD SCHEDULE (10 FT HEIGHT)			
STUD SIZE	STUD SPACING (O.C.)			
	ROOF ONLY ROOF & ROOF & NON-LO			
2×4	24"	12"	24"	
2×6	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				

O.C. OR 2X6 STUDS @ 16" O.C. BALLOON FRAMED W/ CROSS BRACING @ 6'-0" O.C. VERTICALLY.



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

BE BROUGHT TO THE IMMEDIATE ATTENTION OF

STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

SECOND FLOOR FRAMING PLAN

SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. FAILURE TO DO SO WILL VOID SUMMIT LIABILITY.

INCLUDE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS. ANY DEVIATIONS OR DISCREPANCIES ON PLANS ARE TO

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY MCKEE HOMES

MAY INCREASE DEPTH FOR EASE OF CONSTRUCTION.

JOIST & BEAM SIZES SHOWN ARE MINIMUMS, BUILDER

SHADED WALLS INDICATED LOAD BEARING WALLS

	STUD SIZE	STUD SPACING (O.C.)			
		ROOF ONLY	ROOF ∉ 1 FLOOR	ROOF \$ 2 FLOORS	NON-LOAE BEARING
	2x4	24"	6"	12"	24"
	2x6	24"	24"	16"	24"
<u>NOTES:</u> 1. BRACED WALLS STUDS SHALL BE A MAX. OF 16" O.C. 2. STUDS SUPPORTS OPTIONAL WALK-UP ATTIC SHALL BE					

3. TWO STORY WALLS SHALL BE FRAMED w/ 2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. BALLOON FRAMED W/ CROSS

SPACED A MAX. OF 16" O.C.

BRACING @ 6'-0" O.C. VERTICALLY.

WALL STUD SCHEDULE (10 FT HEIGHT)

2 L5x3"x1/4" 3 L5x3-1/2x5/16" 4 L5x3-1/2"x5/16" ROLLED OR EQUAL ARCHED COMPONENT.

() L3x3x1/4"

SECURE LINTEL TO HEADER w/ (2) 1/2" DIAMETER LAG SCREWS STAGGERED @ 16" O.C. (TYP FOR (3))

STEEL ANGLES TO HAVE MINIMUM 4" BEARING ONTO BRICK AT EACH END.

() LINTEL (U.N.O.)

LINTEL SCHEDULE:

ALL HEADERS WHERE BRICK IS USED, TO BE:

HEADER SCHEDULE

SIZE

(2) 2x6

(2) 2x8

(2) 2x1Ø

(2) 2x12

(2) 9-1/4" LSL/LVL

(3)2x6

(3)2x8 (3)2x1Ø

(3) 2x12

1. HEADER SIZES SHOWN ON PLANS ARE MINIMUMS. GREATER

HEADER SIZES MAY BE USED FOR EASE OF CONSTRUCTION.

3. STUD COLUMNS NOTED ON PLAN OVERRIDE STUD

4. OPENINGS LESS THAN 3'-O" USE (1) KING STUD AT E.E. OPENINGS 3'-1" TO 4'-0" USE (2) KING STUDS AT E.E. OPENINGS 4'-1" TO 8'-0" USE (3) KING STUDS AT E.E.

JACKS (EACH END)

(1)

(2)

(2)

(2)

(3)

(1)

(2)

(2)

(3)

TAG

А

B

С

D

E

F

G

H

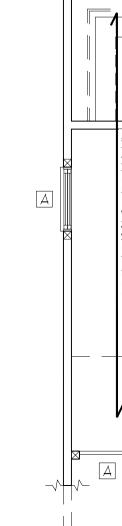
NOTES:

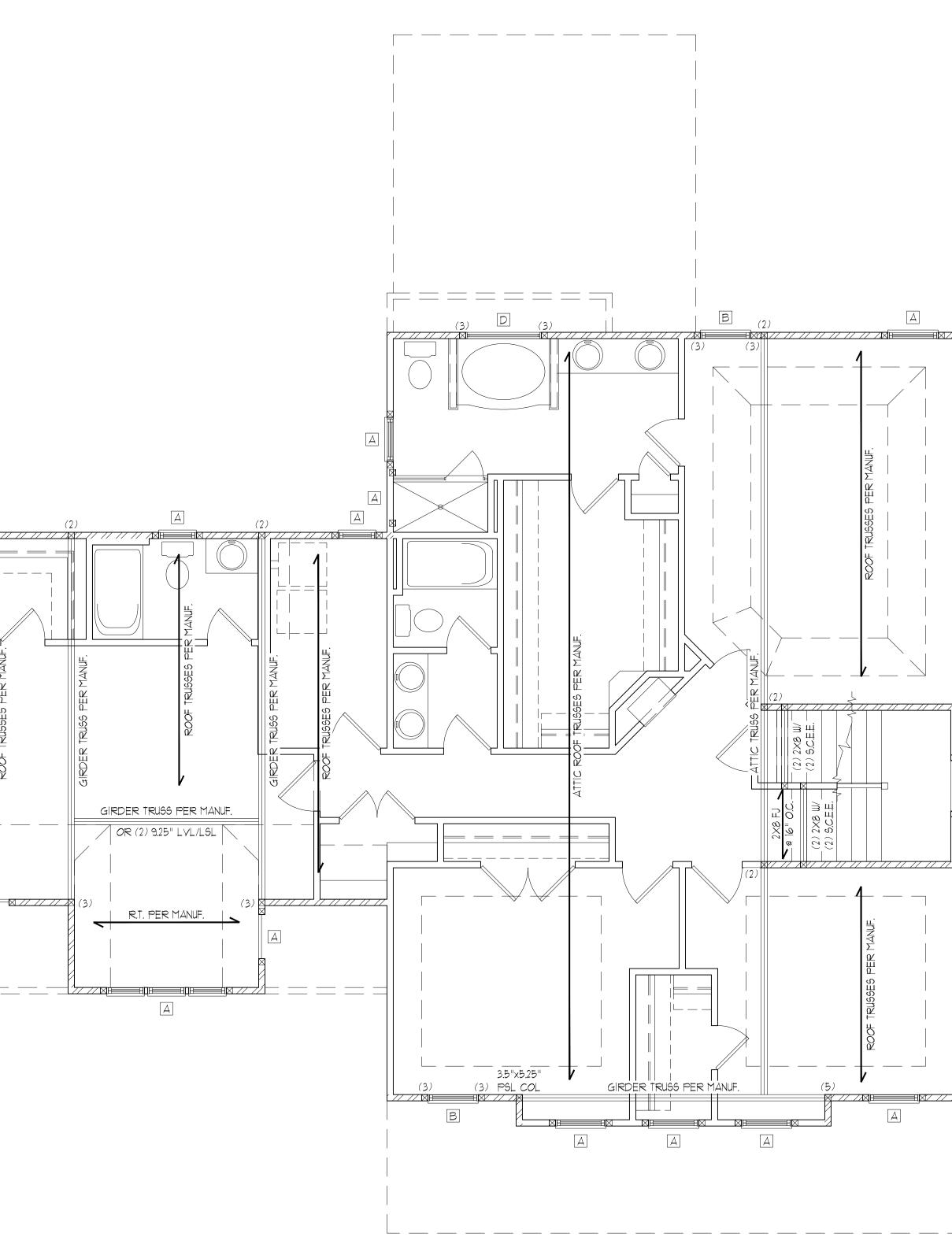
OPENINGS 8'-1" TO 12'-0" USE (5) KING STUDS AT E.E. OPENINGS 12'-1" TO 16'-0" USE (6) KING STUDS AT E.E.

2. ALL HEADERS TO BE DROPPED (U.N.O.).

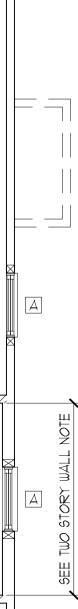
COLUMNS LISTED ABOVE (U.N.O.).

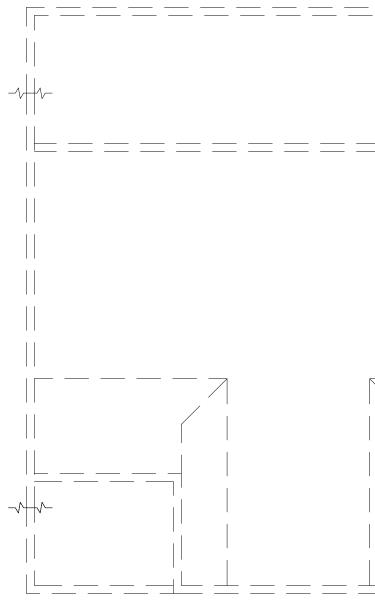






SUMMIT 3070 HAMMOND BUSINESS PLACE, SUITE 171 RALEIGH, NC 27603 OFFICE: 919.380.9991 FAX: 919.380.9993 WWW.SUMMIT-COMPANIES.COM AN CAR SUMMIT Engineering Laboratory & Testing, P.C. 20 C-4361 CLIENT: McKee Homes 109 Hay St., Suite 301 Fayetteville, NC 28301 \mathcal{O} $\widehat{\mathbf{m}}$ $\overline{\mathbb{D}}$ \bigcirc $\langle 0 \rangle$ Ũ δ ⊥⊥ $\overline{\mathbb{O}}$ UEC1 1013 C For BRO STRUCTURAL MEMBERS ONLY DRAWING DATE: 04/24/2020 SCALE: 22x34 |/4"=1'-Ø" |ix17 |/8"=1'-Ø" PROJECT . 4240500: 21831 DRAWN BY: EMB CHECKED BY: LAG ORIGINAL INFORMATION PROJECT * DATE 27837 04/24/2020 REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS SHEET 54*.*Ø





THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY <u>MCKEE HOMES</u> COMPLETED/REVISED ON <u>04/09/2020</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 4 TESTING, P.C. CANNOT GUARANTEE THE ADEQUACY OF THESE STRUCTURAL PLANS WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.

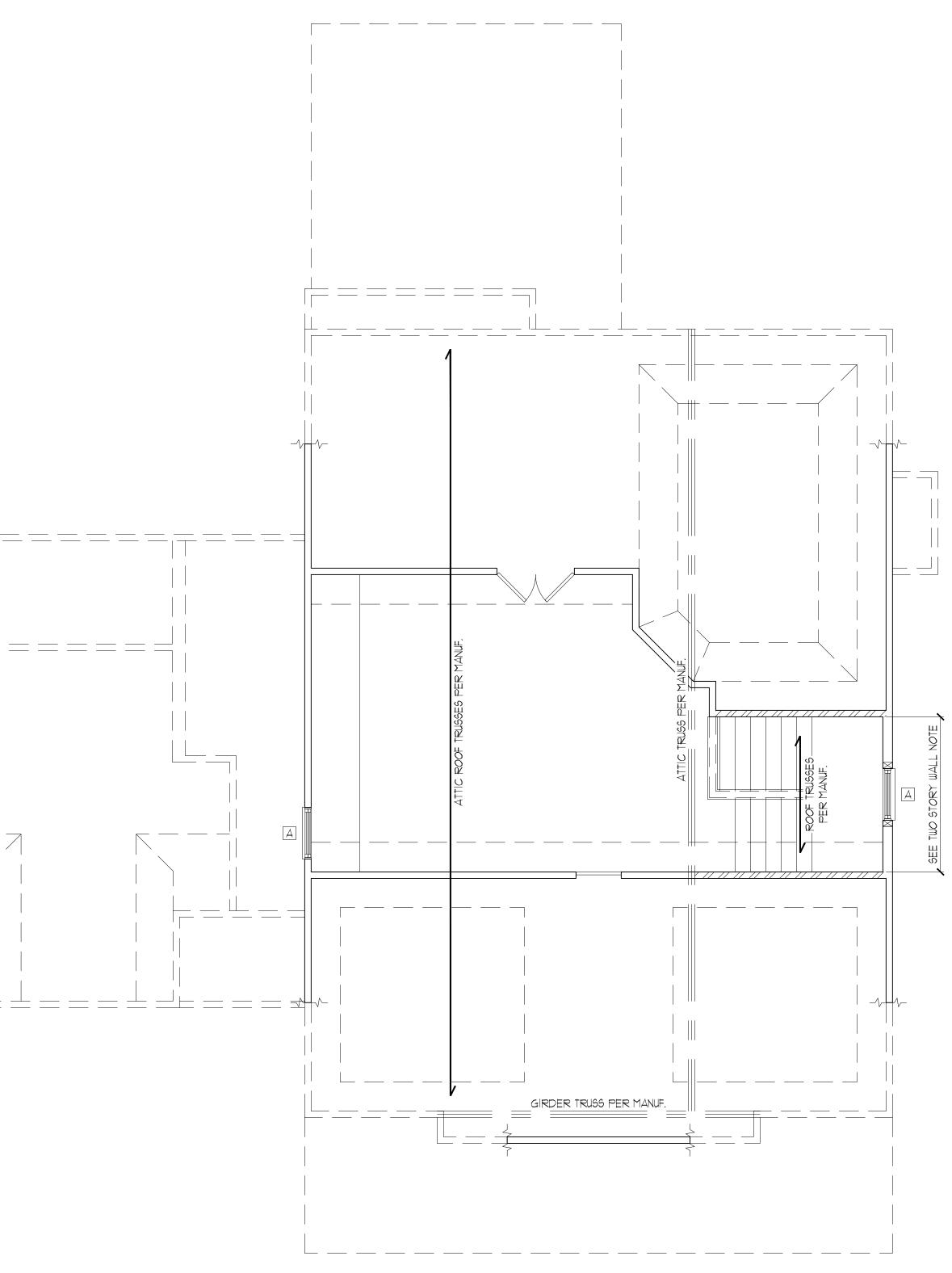
STRUCTURAL MEMBERS ONLY

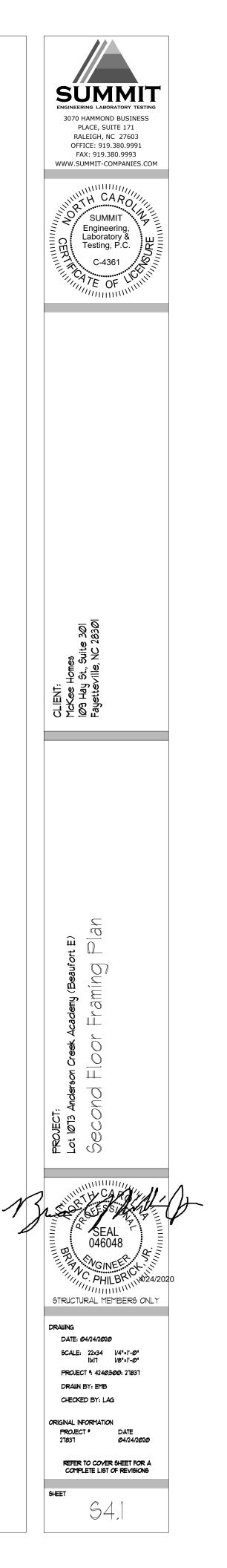
ENGINEERING SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS ON THIS DOCUMENT, SEAL DOES NOT INCLUDE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS. ANY DEVIATIONS OR DISCREPANCIES ON PLANS ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF SUMMIT ENGINEERING, LABORATORY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

STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

<u>SECOND FLOOR FRAMING PLAN</u>

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





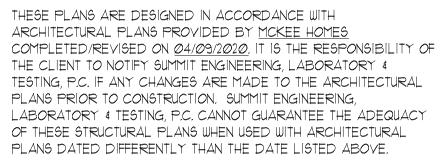
TRUSS UPLIFT CONNECTOR SCHEDULE			
MAX. UPLIFT	ROOF TO WALL	FLOOR TO FLOOR	FLOOR TO FND
600 LBS	H2.5A	PER WALL SHEATHIN	G & FASTENERS
12 <i>00</i> LBS	(2) H2.5A	CS16 (END = 11")	DTT2Z
1450 LBS	HTS2Ø	CS16 (END = 11")	DTT2Z
2 <i>000</i> LBS	(2) MTS2Ø	(2) CS16 (END = 11")	DTT2Z
2900 LBS	(2) HTS2Ø	(2) CS16 (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: 1ST 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.



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

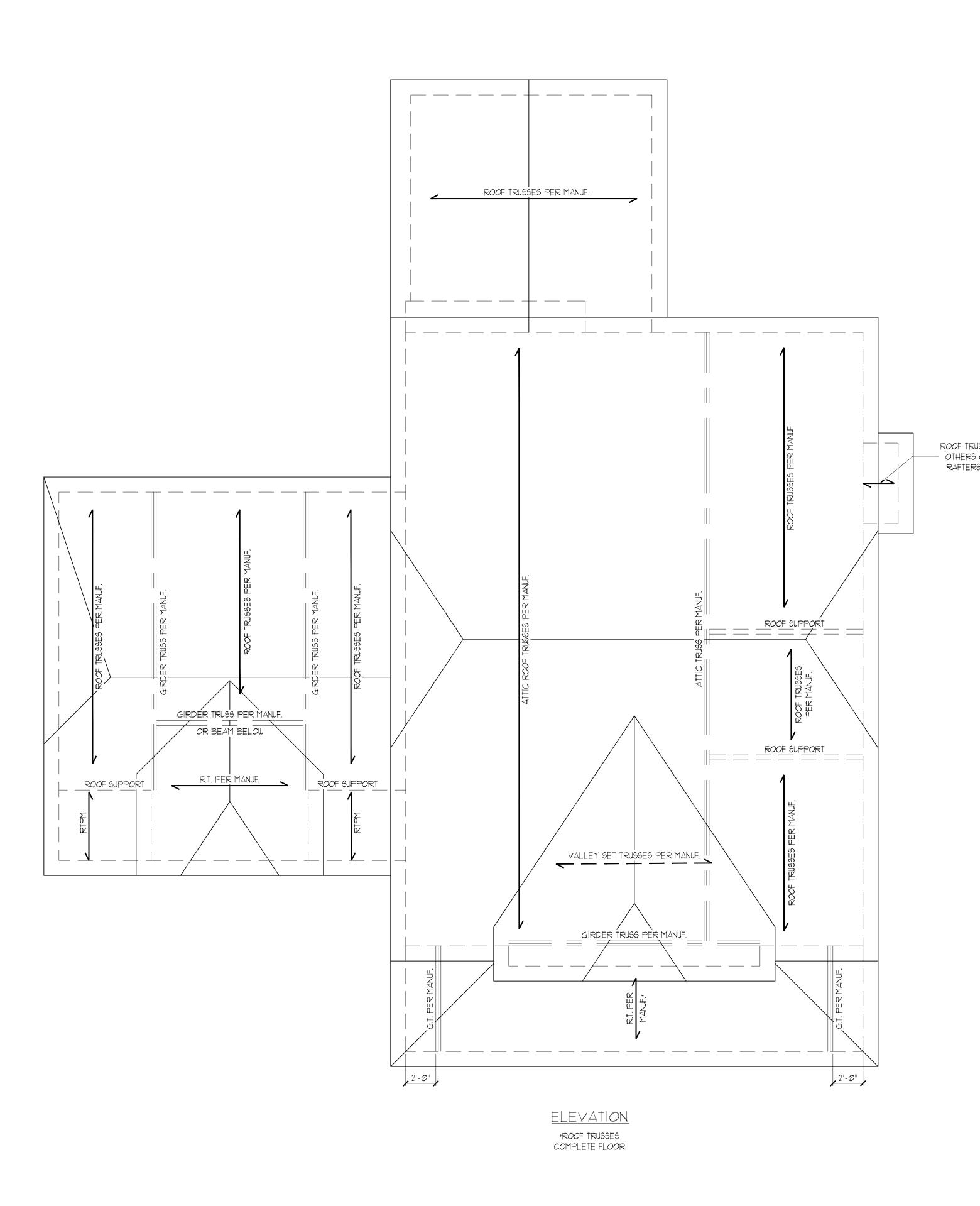


	Image: Construction of the second of the
ROOF TRUGG SPAN BY OTHERS OR (2) 2XG RAFTERS @ 16" O.C.	CLIENT: McKee Homes Mo9 Hay St., Suite 301 Fayetteville, NC 28301
	PROJECT: Lot IØ13 Anderson Creek Academy (Beaufort E) ROOF Framing Plan
	SEAL O46048 SEAL O46048 SEAL O46048 MGINEER V. PHILBRUM 4/24/2020 STRUCTURAL MEMBERS ONLY DRAWNS DATE: 04/24/2020 SCALE: 22x34 1/4"=1'-0" IkiT 108"=1'-0" PROJECT * 42405000: 21831 DRAWN BY: EMB CHECKED BY: LAG ORIGINAL INFORMATION PROJECT * DATE 21831 04/24/2020 REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

	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 EQUIVALEN	T PER TABLE R102.3.5	-

BRACED WALL NOTES:

- 1. 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>04/09/2020</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.

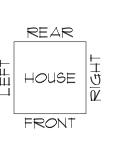
STRUCTURAL MEMBERS ONLY

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 ELT LIABILITY.

STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

FIRST FLOOR BRACING PLAN

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



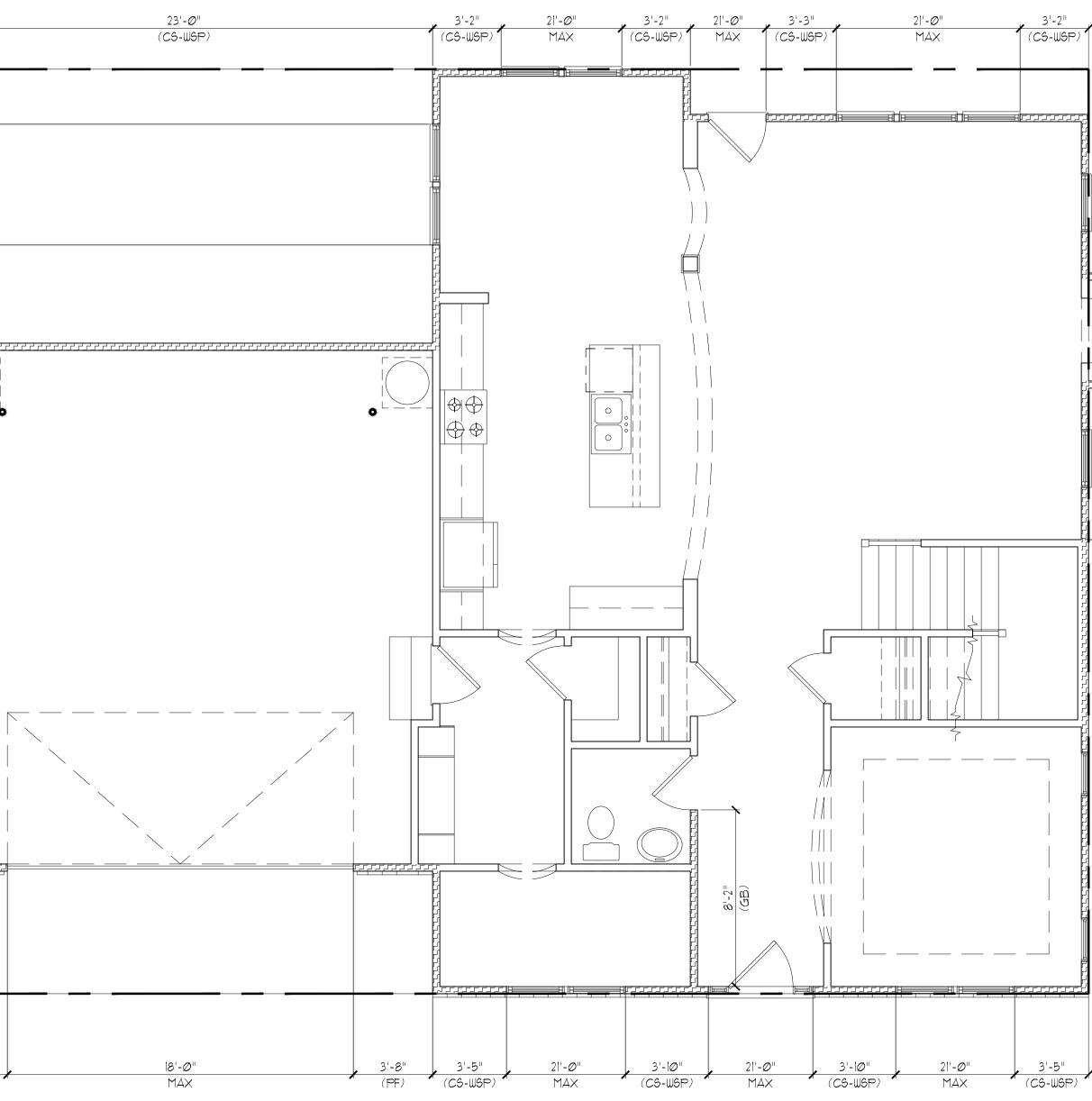
.-6<u>7</u> (CS-IISP)

∂|X

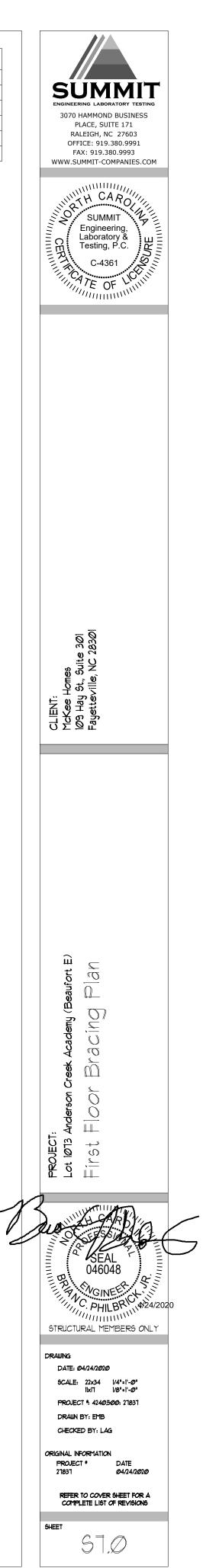
<u>6</u> 1 105

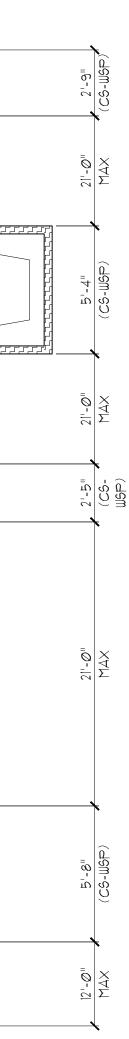
64

3'-4" (PF)



FIRST FLOOR BRACING (FT)				
NUOUS SHEATHING M	ETHOD			
REQUIRED PROVIDED				
14 <i>.</i> Ø	25.Ø			
17.3	2Ø.2			
14 <i>.</i> Ø	35.7			
17.3	37.1			
	NUOUS SHEATHING M REQUIRED 14.0 17.3 14.0			





	REQUIRED	BRACED W	ALL PANEL CONNE	CTIONS
REQUIRED CONNECTION				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

BRACED WALL NOTES:

- 1. WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10 FROM THE 2018 INTERNATIONAL REGIDENTIAL 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.
- 3. 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 CS-XXX = CONT, SHEATHED ENG = ENGINEERED SOLUTION PF = PORTAL FRAME

WSP = WOOD STRUCTURAL PANEL 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>04/09/2020</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.

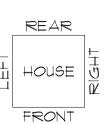
STRUCTURAL MEMBERS ONLY

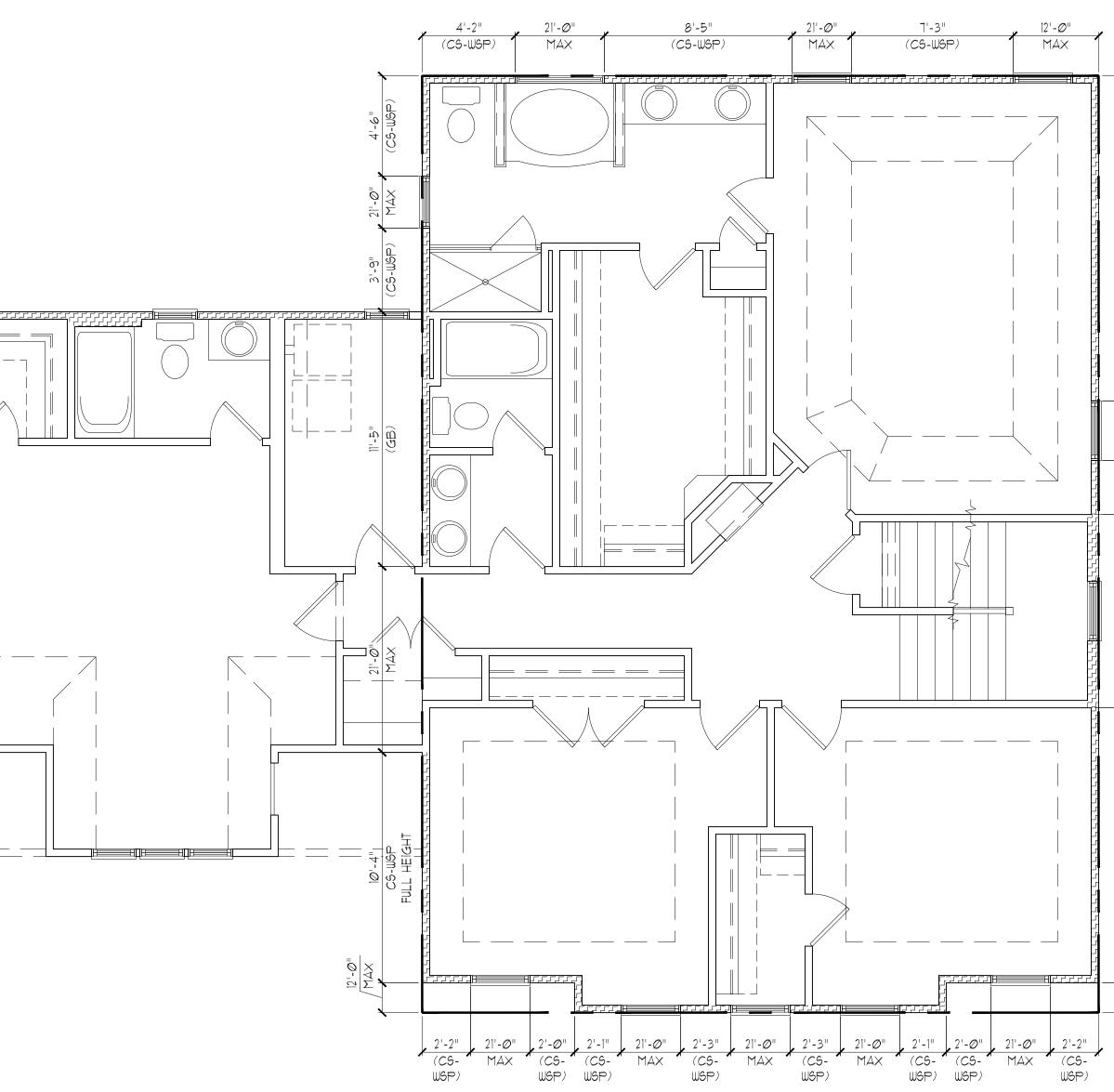
ENGINEERING SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS ON THIS DOCUMENT, SEAL DOES NOT INCLUDE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS. ANY DEVIATIONS OR DISCREPANCIES ON PLANS ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF SUMMIT ENGINEERING, LABORATORY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

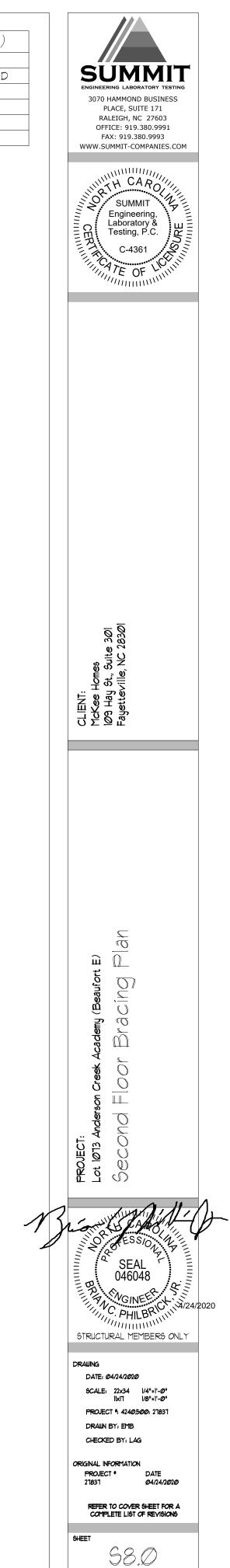
STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

SECOND FLOOR BRACING PLAN

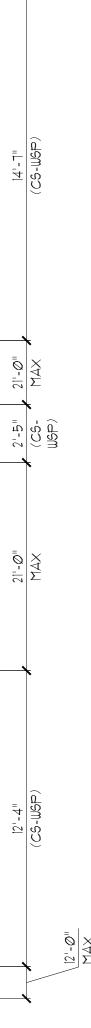
SCALE: 1/4"=1'-0" ON 22"x34" OR 1/8"=1'-0" ON 11"x17"







SECOND FLOOR BRACING (FT)					
CONTIN	CONTINUOUS SHEATHING METHOD				
REQUIRED PROVIDED					
FRONT	6.4	17.0			
LEFT	4.5	24.2			
REAR	6.4	19.8			
RIGHT	4.5	24.4			



	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 True 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 70 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,-23.5 ZONE 3 16.1,-210 115,-22.1 182,-22.9 181,-23.5 ZONE 4 182,-19.0 192,-20.2 193,-26.1 204,-26.3 2. Design Category C 83. Importance Factor C 8.1. Botte Class D 20,-25.2 193,-26.1 204,-26.3 8.2. Design Category C 83. Importance Factor C 8.3. Importance Factor L0 84. Selsimic Use Group I 8.5. Opectral Response Acceleration 85.1. Sms = %g 86.1. Vx = 86.2. Vy = 8.1. Dasic Structural System (check one) IM Bearing Uall Importance Structural System (check one) Importance Structural System (check one) Bearing Uall Dual w/ Special Moment Frame Dual w/ Special Moment Frame Dual w/ Intermodiate RC or Special Steel </td <td>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 coord (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 D DOUBLE JOIST SF SPRUCE PINE FIR DSP DOUBLE JOIST SF SPRUCE PINE FIR DSP DOUBLE STUD POCKET S61 SIMPSON STRONGS-TIE EE EACH BND SYF SOUTHERN YELLOW PINE EW EACH WAY TJ TRIPLE STUD POCKET OC ON CENTER TYF TYFICAL PSF POUNDS PER SQUARE FOOT UNO INLESS NOTED OTHERWISE P3I POUNDS PER SQUARE FOOT UNO INLESS NOTED OTHERWISE P3F POUNDS PER SQUARE FOOT UNO INLESS NOTED OTHERWISE P3I POUNDS PER SQUARE FOOT UNO</td> <td>Image: Construction of the sector of the</td>	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 coord (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 D DOUBLE JOIST SF SPRUCE PINE FIR DSP DOUBLE JOIST SF SPRUCE PINE FIR DSP DOUBLE STUD POCKET S61 SIMPSON STRONGS-TIE EE EACH BND SYF SOUTHERN YELLOW PINE EW EACH WAY TJ TRIPLE STUD POCKET OC ON CENTER TYF TYFICAL PSF POUNDS PER SQUARE FOOT UNO INLESS NOTED OTHERWISE P3I POUNDS PER SQUARE FOOT UNO INLESS NOTED OTHERWISE P3F POUNDS PER SQUARE FOOT UNO INLESS NOTED OTHERWISE P3I POUNDS PER SQUARE FOOT UNO	Image: Construction of the sector 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 inder 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 of a scavation. 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. Concrete shall have a normal weight aggregate and a minimum compressive strength (F₂) at 28 days of 30000 psi, unless otherwise noted. Concrete shall have a normal weight aggregate and a minimum cole the proportioned, mixed, and placed in accordance with the latest editions of ACI 30⁶. Concrete shall have a normal weight aggregate and a minimum cole the placed in accordance with the latest editions of ACI 30⁶. Detailing, fabrication, or fibermesh shall comply requirements, and shall 	 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 there reinforcing steel is required vertically dow provided unless otherwise noted. Solid sam wood framing members shall conform to apportide through a saw cut joint. Solid sam wood framing members are de Specification for Wood Construction? (ND other wise noted, all wood framing members are de Specification for Wood Construction? (ND otherwise noted, all wood framing members are de Specification for Wood Construction? (ND otherwise noted, all wood framing members are de Specification for Wood Construction? (ND otherwise noted, all wood framing members are de Specification for Wood Construction? (ND otherwise noted, all wood framing members are de Specification for Wood Construction? (ND otherwise noted, all wood framing members are de Specification for Wood Construction? (ND otherwise noted, all wood framing members are de Specification for Wood Construction? (ND otherwise noted, all wood framing members are de Specification for Wood Construction? (ND otherwise noted and base otherwise noted at the active and approximation of W-0° vingin polypropylene fibers ase do lefin materials and specificality as concrets shall equal to be Wood's vingin polypropylene fibers ase dolers materials and specificality as concrets shall equal the set wood yrein polymonylene fibers as concrets shall be produce de the bar of a staw and apporting from whall be naccordance with AWPA standard C-2. All beams sh	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 review for the screaters are specifications. The truss of the wood trusses. 50. Inless The wood trusses shall be designed for all required loadings as specifications. The truss drawings should not the select of the trustes. 60. Complexity of the trustes. The trusses shall be designed, fabricated with all other construction documents and provisions provided for load shown on these drawings including but not limited to HVAC equipment, piping, and architectural fixtures attached to the trusses. 8. 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." 9. The trusses shall be designed, fabricated, and erected in accordance with the altest edition of the "National Design Specification for Meal Plate Connected Wood Trusses." 9. The trusses shall be designed, fabricated, and erected in accordance with the altest edition of the "National Design Specification for Meal Plate Connected Wood Trusses." 9. The trusse det with the shop drawings. Also, the shop drawings shall show the required attachments

- Initial studies and be contributed in the set of the s
- 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.

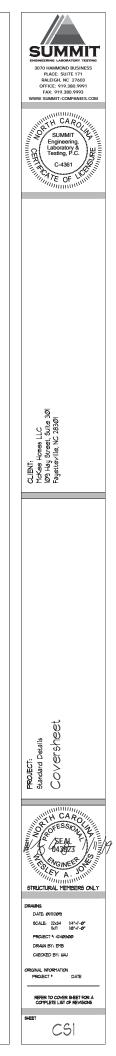
of the current local building code.

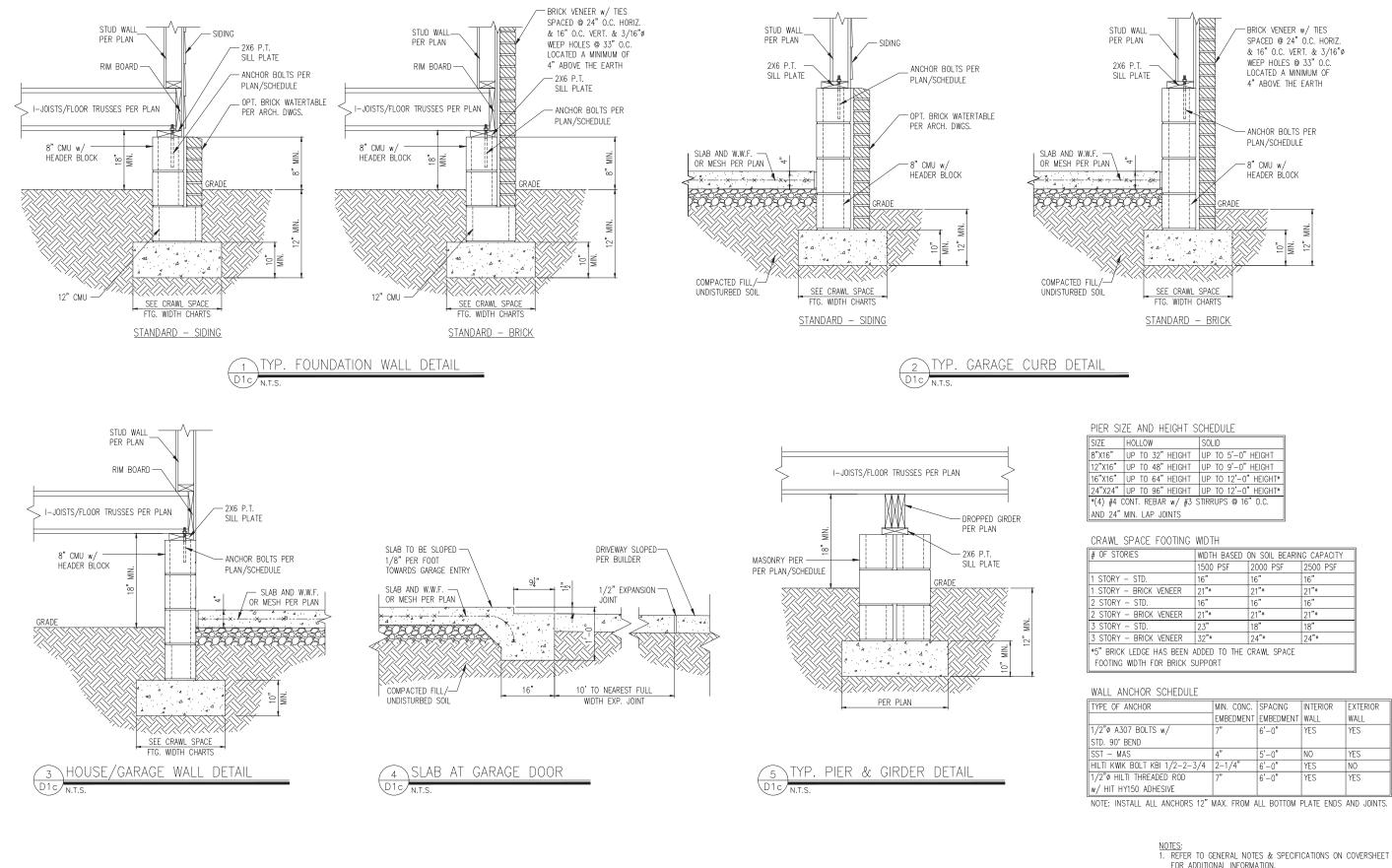
- Requirements for Reinforced Concrete" and ACI 301: "Specifications for Structural Concrete for Buildings". Air entrained concrete must be used for all structural elements
- target values as follows: 3.1. Footings: 5% 3.2. Exterior Glabs: 5%

- 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.





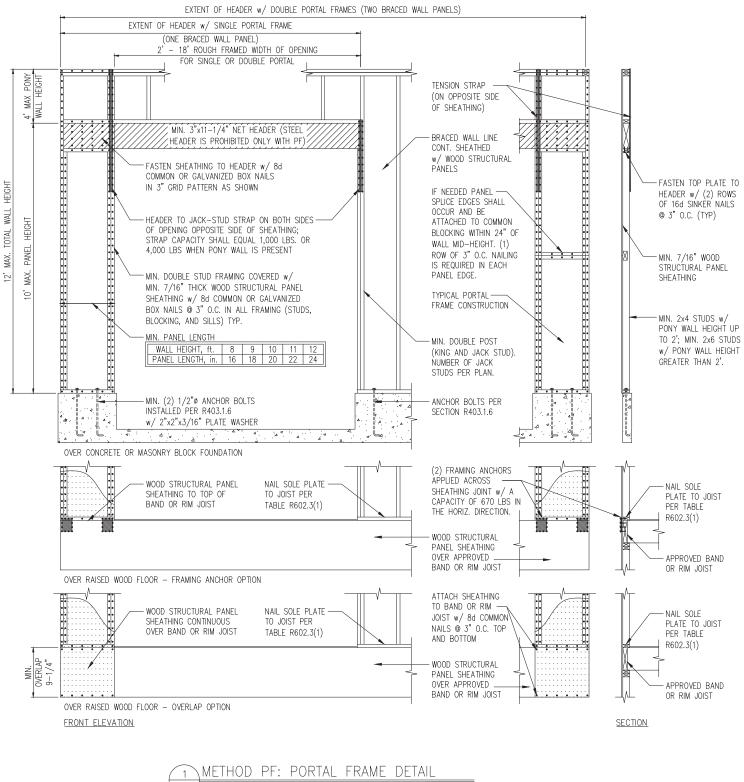
HOLLOW	SOLID				
UP TO 32" HEIGHT	UP TO 5'-0" HEIGHT				
	UP TO 9'-0" HEIGHT				
UP TO 64" HEIGHT	UP TO 12'-0" HEIGHT*				
UP TO 96" HEIGHT	UP TO 12'-0" HEIGHT*				
ONT. REBAR w/ #3 STIRRUPS @ 16" O.C.					
MIN. LAP JOINTS					

RIES	WIDTH BASED (ON SOIL BEARIN	G 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"*		
LEDGE HAS BEEN ADDED TO THE CRAWL SPACE WIDTH FOR BRICK SUPPORT					

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				

- FOR ADDITIONAL INFORMATION.
- 2. PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE. 3. SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS,
- SLOPES AND DEPRESSIONS. 4. REFER TO STRUCTURAL PLANS AND FRAMING DETAILS FOR BRACED WALL PANEL LAYOUT, DIMENSIONS, ATTACHMENT AND CONNECTIONS
- 5. REFER TO LOCAL AND STATEWIDE CODES FOR ADDITIONAL AMENDMENTS AND REQUIREMENTS NOT SHOWN
- 6. PERIMETER INSULATION SHOWN AS REQUIRED BY LOCAL CLIMATE ZONE. INSTALL PER TABLE N1102.2.10 OF THE 2018 NCRC





D1f 3/8" = 1'-0"

