## **ABBREVIATIONS**

ABV ABOVE	L LENGTH
ABV ABOVE A/C AIR CONDITIONING	LA LAUNDRY
A.D. AREA DHAIN	LAV LAVATORY
ADJ ADJUSTABLE ALT ALTERNATE	
ALT ALTERNATE ALUM ALUMINUM	MAX MAXIMUM MECH MECHANICAL MFR. MANUFACTURER MIN MINIMUM MISC MISCELLANEOUS
	MECH MECHANICAL
BA BATHROOM BD BOARD	MIN MINIMUM
BF BI-FOLD (DOOH)	MISC MISCELLANEOUS
	NISC MISCELLANEOUS N. NORTH N.T.S. NOT TO SCALE O.G.D. OVERHEAD GARAGE DOOR OH OVERHEAD OPT OPTIONAL
BLK BLOCK (CMUS)	O G D OVERHEAD GARAGE DOOR
BLK BLOCK (CMUs) BLW BELOW BM BEAM	OH OVERHEAD OPT OPTIONAL
RP RLPASS (DOOR)	OPT OPTIONAL
BOT BOTTOM BTWN BETWEEN	PAR PARALLEL P.B. PUSH BUTTON
	PDR POWDER
CAB CABINET CER CERAMIC	PED PEDESTAL
	PL PLATE PR PAIR PT PRESSURE TREATED WOOD
CL CLOSET OR CENTER LINE	P.T. PRESSURE TREATED WOOD
CL CLOSET OR CENTER LINE CLG CELLING CLG CELLING CHG CLEATER MASONRY UNIT COL COLUMN CONCRETE	P.T. PRESSURE TREATED WOOD PVC POLYVINYL CHLORIDE PIPE PVMT PAVEMENT P.W. PRE-WIRE PWD PLYWOOD
CMU CONCRETE MASONRY UNIT	PVMT PAVEMENT
COL COLUMN CONC CONCRETE	PWD PLYWOOD
CONC CONCRETE	R RISER RAG RETURN AIR GRILL
CR CORROSION RESISTANT	RAG RETURN AIR GRILL
CSMT CASEMENT C.T. CERAMIC TILE	REF REFERENCE
D DRYER	REQ REQUIRED
D DRYER DBL DOUBLE	HEFE REFERENCE UNIL REFR REFRIGERATOR SOUTH SOUT
DH DOUBLE HUNG	SP SMOKE DETECTOR
DIM DIMENSION	S.G.D. SLIDING GLASS DOOR
DISP DISPOSAL	SH SINGLE HUNG OR SHELF
DIS DOWN DR DOOR DS DOWNSPOUT DS DOWNSPOUT DW DISH WASHER DWG DRAWING E EAST	SIM SIMILAR
DS DOWNSPOUT DW DISH WASHER	S&P SHELF AND POLE
DW DISH WASHER	SPEC SPECIFICATIONS
DWG DRAWING E EAST EA EACH	RAG RETURN AIR GAILL HEF REFERENCE REFERENCE SOUTHED STR STRUCTURAL
EAST EACH	SO SOLIARE
ELEV ELEVATION ELEC ELECTRICAL	SYM SYMBOL S4S SMOOTH FOUR SIDES T TREAD (AT STAIRS) OR TILE T.B. TOWEL BAR
ELEC ELECTRICAL EQ EQUAL	T TREAD (AT STAIRS) OR THE
EXT EXTERIOR	T.B. TOWEL BAR
EAUL EORCED AIR LINIT	IEMP. IEMPERED (GLASS)
FAU FORGED AIR UNIT F.C. FLOOR CHANNE F.D. FLOOR DRAIN FFL FINISH FLOOR LINE F.G. FINISHED GRADE	T&G TONGUE & GROOVE T.O.C. TOP OF CURB
F.D. FLOOR DRAIN	TV TELEVISION
FFL FINISH FLOOR LINE F.G. FINISHED GRADE	TV TELEVISION TYP TYPICAL
	U.N.O. UNLESS NOTED OTHERWISE
FL FLOURESCENT (LIGHT)	V.B. VAPOR BARRIER VERT VERTICAL
FND FOUNDATION F.O.S. FACE OF STUD FTG FOOTING FX FIXED GLASS GALY GALVANIZED GAR GARAGE GAR GARAGE	VERT VERTICAL
FOS FACEOFISTUD FOS FACEOFISTUD FX FIXED GLASS GALVANIZED GAR GARAGE	V.T.R. VENT THRU ROOF
FX FIXED GLASS	WD WASHING MACHINE
GALV GALVANIZED	WDW WINDOW WH WATER HEATER
	WI WROUGHT IRON
GD GRADE OR GRADING	VERI VERTICAL VI.R. VENT THRU ROOF W WASHING MACHINE WD WODOW WH WATER HEATER WI WROUGHT IRON WIC WALL-IN CLOSET WWO WITH OR WITHOUT
G.D.O. GARAGE DOOR OPENER GFI GROUND FAULT INTERRUPTER	W/W/O WITH OR WITHOUT
GE GEASS OF GEAZING	WP WATERPROOF(ING) WWM WELDED WIRE MESH
GYP BD GYPSUM BOARD HB HOSE BIBB HD HEAD OR HARD	
HB HOSE BIBB	<ul> <li>R PROPERTY LINE</li> <li>ROUND / DIAMETER</li> </ul>
HDR HEADER	
HDR HEADER HGT HEIGHT HVAC HEATING/VENTILATING/AIR COND. HWD HARDWOOD	& AND C CENTERLINE
HGT HEIGHT HVAC HEATING/VENTILATING/AIR COND. HVAD HARDWOOD HWD HARDWOOD	# POUND / NUMBER
INT INTERIOR	
INT INTERIOR JST JOIST JT JOINT	
JT JOINT	
KIT KITCHEN	
BUILDING CODE COM	
PROJECT INFORMATI	

ALL CONSTRUCTION TO COMPLY WITH LOCAL CODES AND ORDINANCES CURRENTLY IN USE WITH THE LOCAL JURISDICTION.

CONTRACTOR AND BUILDER SHALL BEVIEW ENTIRE PLAN TO VERIEY 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.

FOLLOW ALL APPLICABLE STATE AND LOCAL CODES. 2018 NORTH CAROLINA STATE RESIDENTIAL CODE

SINGLE FAMILY RESIDENCE

OCCUPANCY CLASSIFICATION RESIDENTIAL R-3

CONSTRUCTION TYPE TYPE VB

APPLICABLE CODES:

PRODUCT

## INDEX

DS-1 1.1.1 1.2.1 1.3.1 2.1.1 2.1.1.1 2.2.1 2.2.1 2.3.1 2.3.1.1 3.1.1 4.1.1

5.1.1 5.1.2 5.1.3 5.1.4 5.1.5 5.1.6

6.1 D-1 7.1 7.2

7.3

DELTA SHEET
FRONT ELEVATIONS 'CRAFTSMAN'
SIDE ELEVATIONS 'CRAFTSMAN'
REAR ELEV W/ ROOF PLAN 'CRAFSMAN' FIRST FLOOR PLAN 'CRAFTSMAN'
FIRST FLOOR PLAN OPTIONS
SECOND FLOOR PLAN 'CRAFTSMAN'
SECOND FLOOR PLAN OPTIONS
THIRD FLOOR PLAN
THIRD FLOOR OPTIONS
SLAB PLAN 'CRAFTSMAN'
CRAWL SPACE PLAN 'CRAFTSMAN'
OPT. COVERED PATIO W/ SLAB
OPT. COVERED DECK W/ CRAWL
OPT. SIDE FIREPLACE
OPT. SIDELOAD GARAGE 'CRAFTSMAN'
OPT. 3RD CAR GARAGE 'CRAFTSMAN'
OPT. 3RD CAR GARAGE 'CRAFTSMAN'
SECTIONS
DETAILS
FIRST FLOOR UTILITY PLAN
SECOND FLOOR UTILITY PLAN
THIRD FLOOR UTILITY PLAN

# THE NELSON 2020 -'CRAFTSMAN'

-			
ELEV. 'CRAFTSMAN' AREA		AREA OPTIONS	
Name	Area	Name	Area
FIRST FLOOR	1042 SF	OPT. FINISHED 3RD FLOOR	456 SF
SECOND FLOOR	1321 SF	HEATED	456 SF
HEATED	2363 SF		
		OPT. COVERED PATIO/DECK	176 SF
FRONT PORCH	103 SF	OPT. 3RD CAR GARAGE	247 SF
GARAGE	401 SF	UNHEATED	422 SF
REAR PATIO	179 SF		
UNFINISHED THIRD FLOOR	451 SF	]	
UNHEATED	1136 SF		

## **BUILDER SET:**

THE SCOPE OF THIS SET OF PLANS IS TO PROVIDE A "BUILDER'S 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 OF FASTENING. THEY ARE NOT INTENDED TO SPECIFY PARTICULAR PRODUCTS OR OTHER METHODS OF ANY DESCRIPTION DEDORDON TO THE MID LEMENTATION OF THE ONLY OF ANY DESCRIPTION DEDORDON TO THE MID LEMENTATION OF THE ONLY OF ANY DESCRIPTION DEDORDON TO THE MID LEMENTATION OF THE DIAS DECIMIES A 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.

AND MILETINDED OF UNIT MEDIATIS AND QUALITY: PROVIDE WORK OF THE SPECIFIC QUALITY: WHERE QUALITY LEVEL IS NOT INDICATED, PROVIDE WORK OF QUALITY CUSTOMARY IN SMILAR TYPES OF WORK. WHERE THE PLANS AND SPECIFICATIONS, CODES, LWS, REGULATIONS, MANUFACTURES'S RECOMMENDATIONS OF INDUSTRY STANDARDS REQUIRE WORK OF MIGHER QUALITY OR PERFORMANCE, PROVIDE WORK COMPUTING WITH THOSE REQUIREMENTS AND QUALITY. WHERE TWO OR MORE QUALITY PROVISIONS OF THOSE REQUIREMENTS CAPITAL THE MOST STRINGENT REQUIREMENT, WHERE THE DECUIREMENTS AND QUALITY. WHERE TWO OR MORE QUALITY PROVISIONS OF THOSE REQUIREMENTS CAPITAL THE MOST STRINGENT REQUIREMENTS CONFLICIT WITH THE MOST STRINGENT REQUIREMENT; WHERE REQUIREMENTS AND GUALITY. CLARIFICATION FROM THE ARCHITECT BEFORE PROCEEDING.

SCALE IS NOTED ON INDIVIDUAL PLAN TITLES. NCGS 83A-13(e) COMPLIANCE: CORPORATE OFFICER ADDRESS

#### SIGNATURE

THESE DOCUMENTS ARE THE PROPERTY OF THE BUILDER AND SHALL NOT BE COPIED DUPLICATED, ALTERED, MODIFIED OR REVISED IN ANY WAY WITHOUT THE EXPRESSED WRITTEN APPROVAL OF THE BUILDER. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE SITE AND

ALL INCONSISTENCES SHALL BE BROUGHT TO THE ATTENTION OF THE DEVELOPER AND THE BUILDER BEFORE PROCEEDING WITH WORK.

ANY ERRORS OR OMISSIONS FOUND IN THESE DRAWINGS SHALL BE BROUGHT TO DEVELOPERS AND BUILDERS ATTENTION IMMEDIATELY. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED

DIMENSIONS. ALL DIMENSIONS ARE TO FACE OF STUD OR TO FACE OF FRAMING UNLESS

**GENERAL NOTES:** 

OTHERWISE NOTED. ALL TRUSS DRAWINGS TO BE REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO ISSUANCE OF BUILDING PERMIT.

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. PROVIDE FIREBLOCKING. (PER LOCAL CODES.)

ALL ELECTRICAL AND MECHANICAL FOUIPMENT AND METERS ARE SUBJECT TO RELOCATION DUE TO FIELD CONDITIONS, CONTRACTOR TO VERIFY

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: EURNISH AND INSTALL ALL WATERPROOFING COMPLETE. A 40 MIL SELF-ADHERING MEMBRANE OF RUBBERIZED 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. TO THE BEST OF THE BUILDER'S KNOWLEDGE THESE DOCUMENTS ARE IN

CONFORMANCE WITH THE REQUIREMENTS OF THE BUILDING AUTHORITIES HAVING JUBISDICTION OVER THIS TYPE OF CONSTRUCTION AND OCCUPANCY. 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.

DEVIATIONS FROM THESE DOCUMENTS IN THE CONSTRUCTION PHASE SHALL BE REVIEWED BY THE BUILDER 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.

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.

GEOTECHNICAL ENGINEER (SOILS REPORT), ON THE STUDY OF THE PROPOSED SITE TO THE BUILDER, STRUCTURAL ENGINEER, AND GENERAL CONTRACTOR, IN THE TO THE BUILDER, STRUCTURAL ENGINEER, AND GENERAL CONTRACTOR. IN THE EVENT THE GENERATION AND A DESIGN SOIL PRESSURE STATED BY THE STRUCTURAL REINTER OF RECORD FOR THE PURPOSE OF STRUCTURAL DESIGN. GENERAL, CONTRACTOR SHALL ASSURE THE SOIL CONDITIONS MEET OR EXCEED TUR ORDERON. THE CRITERIA.

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 VERIEV AT LEAST ONE WINDOW IN ALL BEDROOMS TO HAVE A CLEAR WINCOW SUPFICE AREA OF VERIFY THE BASIS ONE WINCOW IN ALL BEDROUGHS THALL BE 22 AND OPENABLE AREA OF 4.0.SS OF THE MINIMUM NET CLEAR OPENING HIERITS HALL BE 22 AND THE MINIMUM NET CLEAR OPENING WIDTH SHALL BE 20" GLAZING TOTAL AREA OF NOT LESS THAN 5.0.SS OFT IN THE CASE OF A GROUND WINDOW AND NOT LESS THAN 5.7.S OFT IN THE

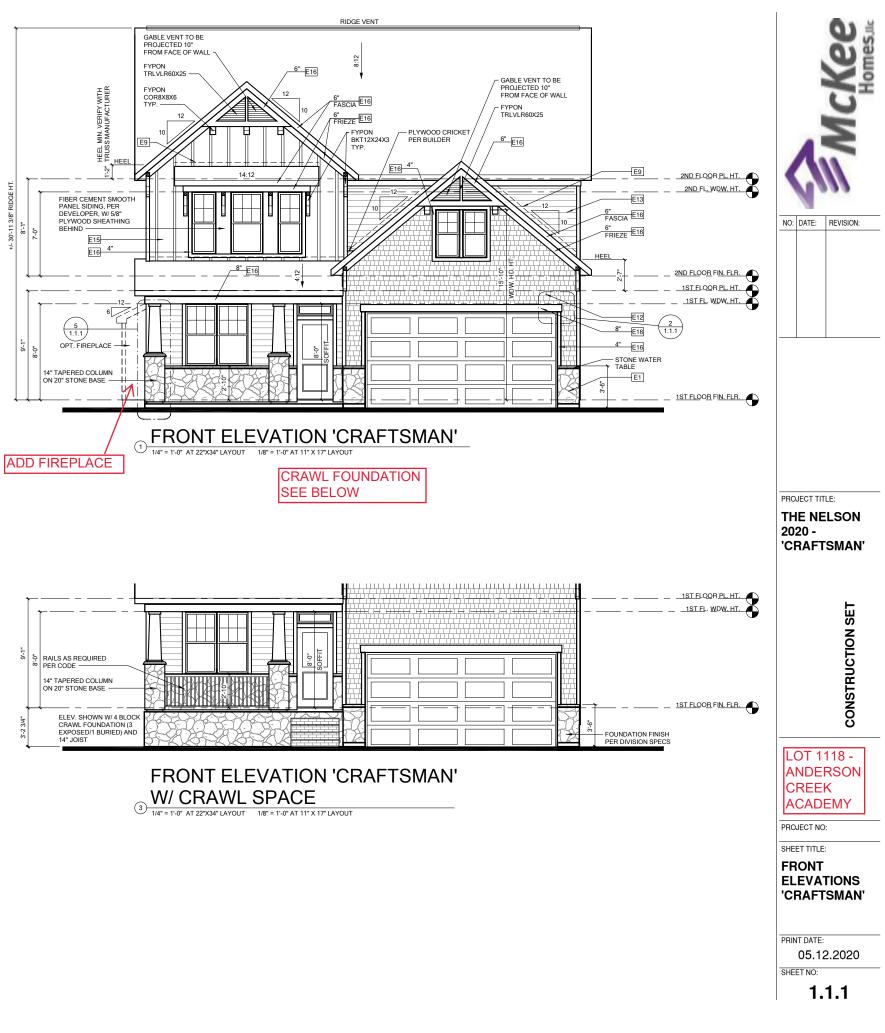
CASE OF AN UPPER STORY WINDOW. (PER NCRC SECTION R310.1.1) ALL HANDRAIL BALLUSTERS TO BE SPACED SUCH THAT A 4" SPHERE CANNOT PASS BETWEEN BALLUSTERS, (PER LOCAL CODES.)

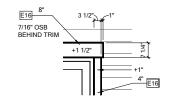
PROVIDE STAIR HANDRAILS AND GUARDRAILS PER LOCAL CODES.

THE OWNER SHALL FURNISH ANY AND ALL REPORTS RECEIVED FROM THE

ALL WORK PERFORMED BY THE GENERAL CONTRACTOR SHALL COMPLY AND

NC: DATE: REVISION:
PROJECT TITLE: THE NELSON 2020 - 'CRAFTSMAN'
CONSTRUCTION
ANDERSON CREEK ACADEMY PROJECT NO: SHEET TITLE: COVER SHEET
PRINT DATE: 05.12.2020 SHEET NO: <b>T-1</b>





GAR. HEAD TRIM (2) 1/2" = 1'-0" AT 22"X34" LAYOUT 1/8" = 1'-0" AT 11" X 17" LAYOUT

ALL WINDOWS WHOSE OPENING IS LESS THAN 24" ABOVE THE FINISH
FLOOR AND WHOSE OPENING IS GREATER THAN 72" ABOVE THE OUTSID
WALKING SURFACE MUST HAVE WINDOW OPENING CONTROL 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. INSTALL ALL LOW SLOPE ROOFING IN ACCORDANCE WITH R905 AND MANUFACTURERS SPECS.

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

ENTRY DOOR: AS SELECTED BY BUILDER

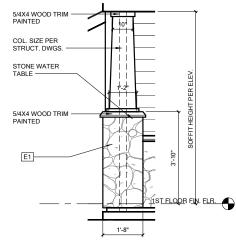
CHIMNEY AS OCCURS: TOP OF CHIMNEYS TO BE A MINIMUM OF 24" ABOVE ANY ROOF WITHIN 10'-0" OF CHIMNEY

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

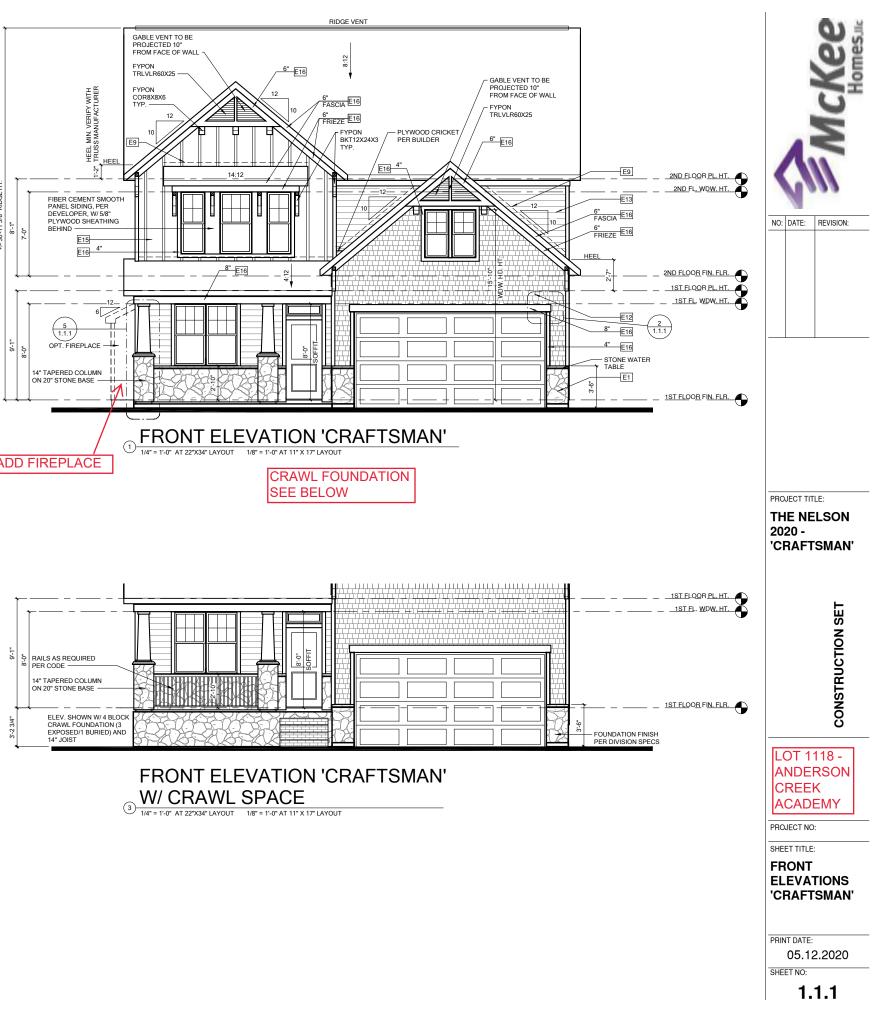


GUARDRAIL PER LOCAL CODE, SEE EXT. ELEV. - SOFFIT ABOVE, SEE EXT. ELEV. - EDGE OF PORCH SLAB - COL. SIZE PER STRUCT. DWGS. - 2X4 P.T. WOOD FRAMING W/ 1/2" 5 1/4" P.T. WOOD SHEATHING TO FACE OF COL. Ø 1'-2" ₹ G

#### COLUMN DETAIL 'CRAFTSMAN' = 1'-0" AT 11" X 17" LAYOU







# (2) RIGHT ELEVATION 'CRAFTSMAN' 1/4" = 1'-0" AT 22"X34" LAYOUT 1/8" = 1'-0" AT 11" X 17" LAYOUT



#### ELEVATION KEYNOTE LEGEND

-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.

-WINDOWS: MANUFACTURER PER BUILDER. DIVIDED LITES AS SHOWN ON THE EXTERIOR ELEVATIONS -ENTRY DOOR: AS SELECTED BY BUILDER

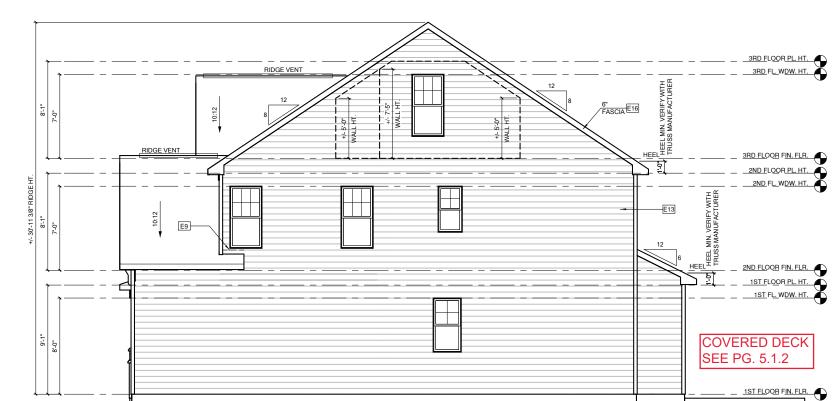
-ROOFING: PITCHED SHINGLES PER BUILDER. INSTALL ALL LOW SLOPE ROOFING IN ACCORDANCE WITH R905 AND MANUFACTURERS SPECS.

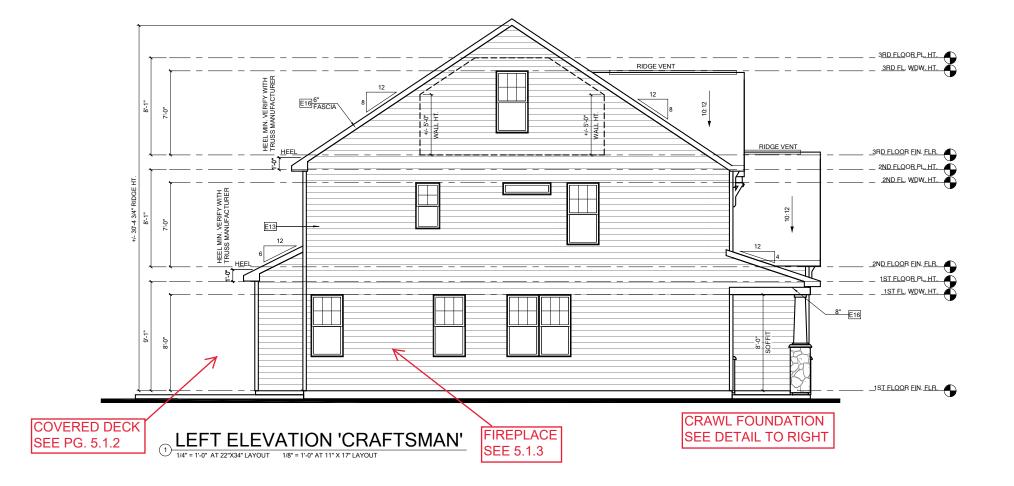
-WINDOW HEAD HEIGHTS: 1ST FLOOR = 8'-0" U.N.O. ON ELEVATIONS 2ND FLOOR = 7'-0" U.N.O. ON ELEVATIONS 3RD FLOOR = 7'-0" U.N.O. ON ELEVATIONS.

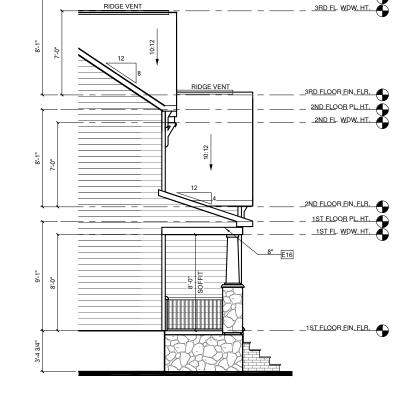
-GRADE CONDITIONS MAY VARY FOR INDIVIDUAL SITE FROM THAT SHOWN. BUILDER SHALL VERIFY AND COORDINATE PER ACTUAL SITE CONDITIONS.

NOTES:

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 CONTROL DEVICES COMPLYING WITH THE 2018 NCRC SECTION R312.2.



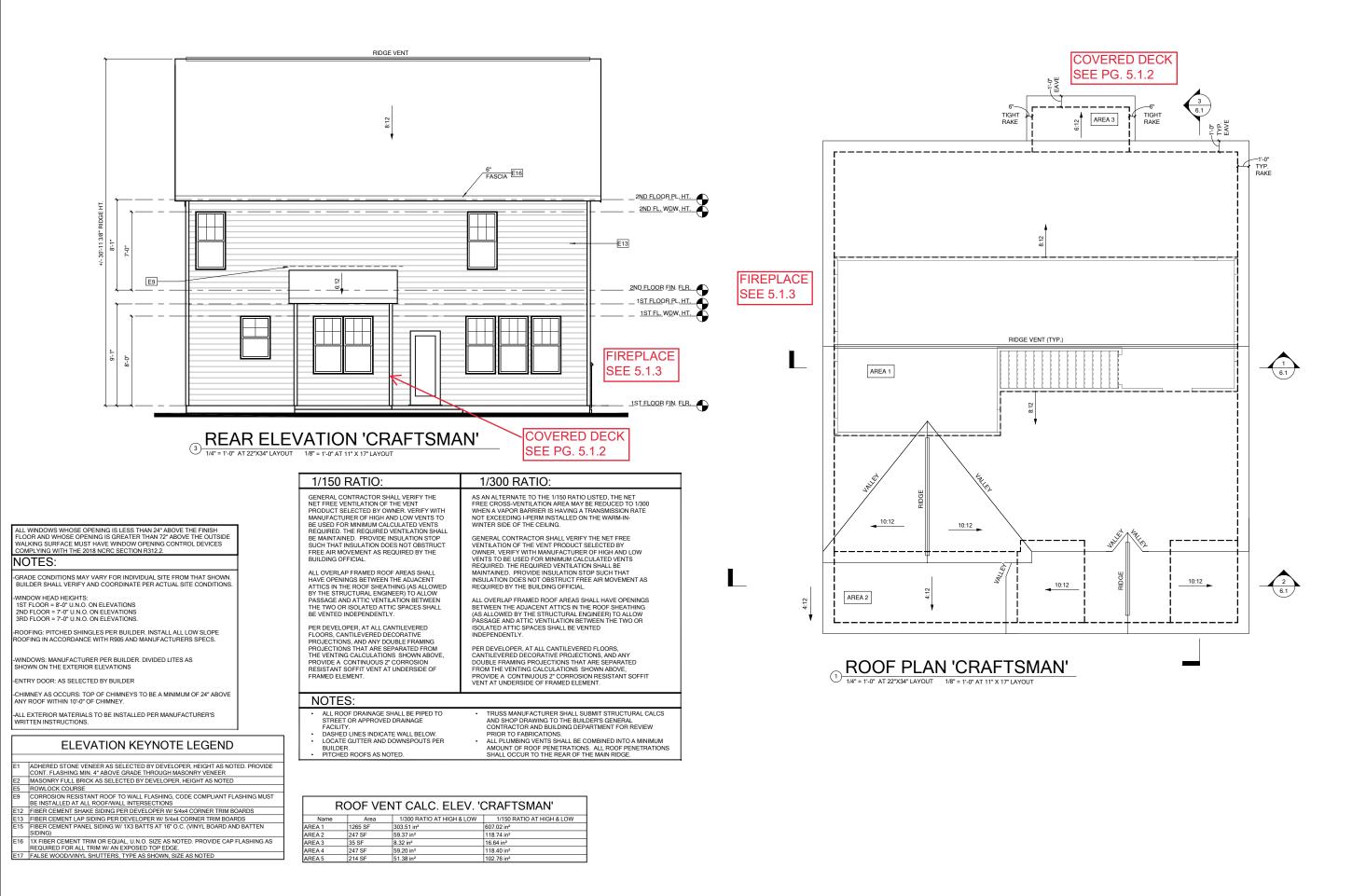




3RD FLOOR PL. HT.

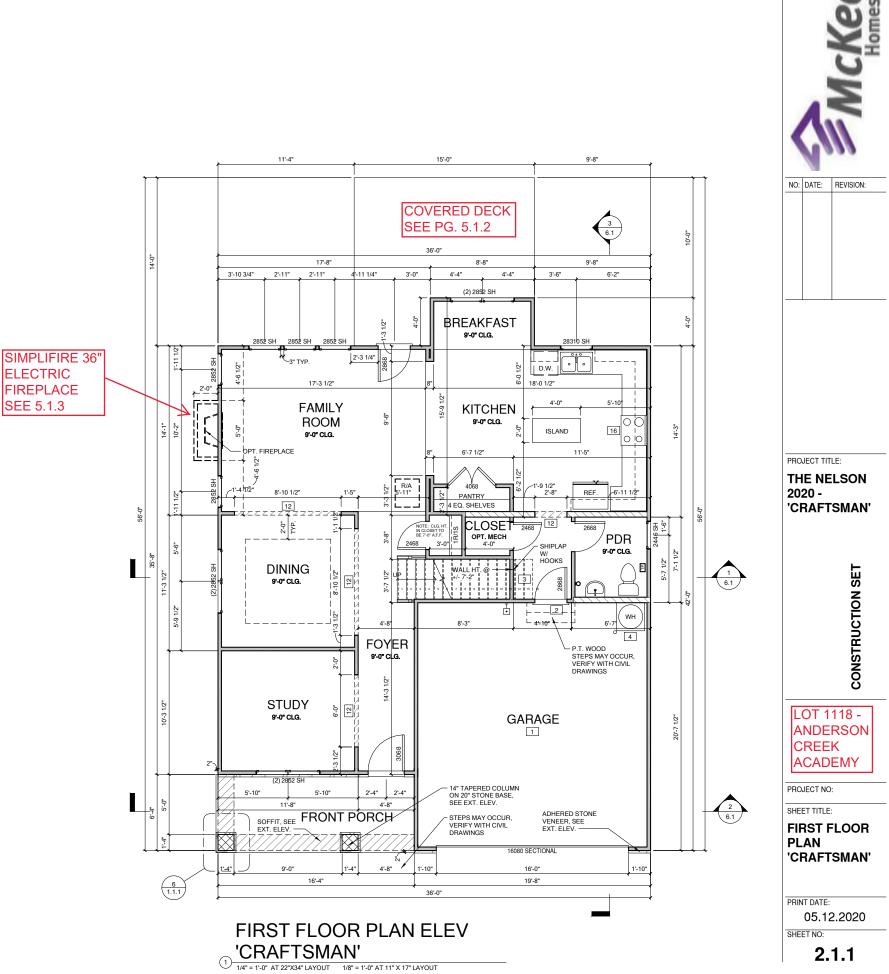
## LEFT ELEVATION 'CRAFTSMAN' (3) W/ CRAWL @ PORCH (3) 1/4" = 1'-0" AT 22"X34" LAYOUT 1/8" = 1'-0" AT 11" X 17" LAYOUT

		MCKee
NO:	DATE:	REVISION:
TH 20:	20 -	LSON SMAN'
		CONSTRUCTION SET
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	ET NO:	2.2020 <b>2.1</b>





WALL LEGEND			FLOOR PLAN KEYNOTE LEGEND
FULL HEIGHT 2X4 WOOD STUD PARTITION STONE VENEER BRICK VENEER STUD WALL BELOW HEIGHT AND STUD SIZE AS NOTED	FULL HEIGHT 2X6 WOOD STUD PARTITION 2255 WOOD STUD PARTITION 2255 WOOD STUD PARTITION 2255 WOOD STUD PARTITION 2255 WOOD PARTITION 2055 WOOD PARTI	1 2 3 4 7 9 11	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%" TYPE "X" GYPSUM BOARD. WITH HABITABLE SPACE ABOVE GARAGE ALL WALLS REQUIRE MINIMUM 1/2 INCH GB. (PER NCRC TABLE R302.6). 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-FABICATED METAL FIREPLACE, INSTALL PER MANUFACTURER WRITTEN INSTRUCTIONS TEMPERED SAFETY GLASS HALF WALL, HEIGHT AS NOTED INTERIOR SOFFITS: FILE 7-8" U.N.O. SPL = 7-6" U.N.O. OPT. CASED OPENING U.N.O.
	FULL HEIGHT CMU WALL, SIZE AS NOTED	13	SHOWER, TEMPERED GLASS ENCLOSURE
		14	TUB-SHOWER COMBO ACRYLIC TUB W/ PLATFORM, SIZE AS NOTED
		16	SLIDE-IN ELECTRICAL RANGE W/ HOOD AND MICRO ABV. VENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS
		19	ACCESS HATCH/DOOR. FULLY WEATHER STRIPPED AND INSULATED. (PER NCRC SECTION N1102.2.4)



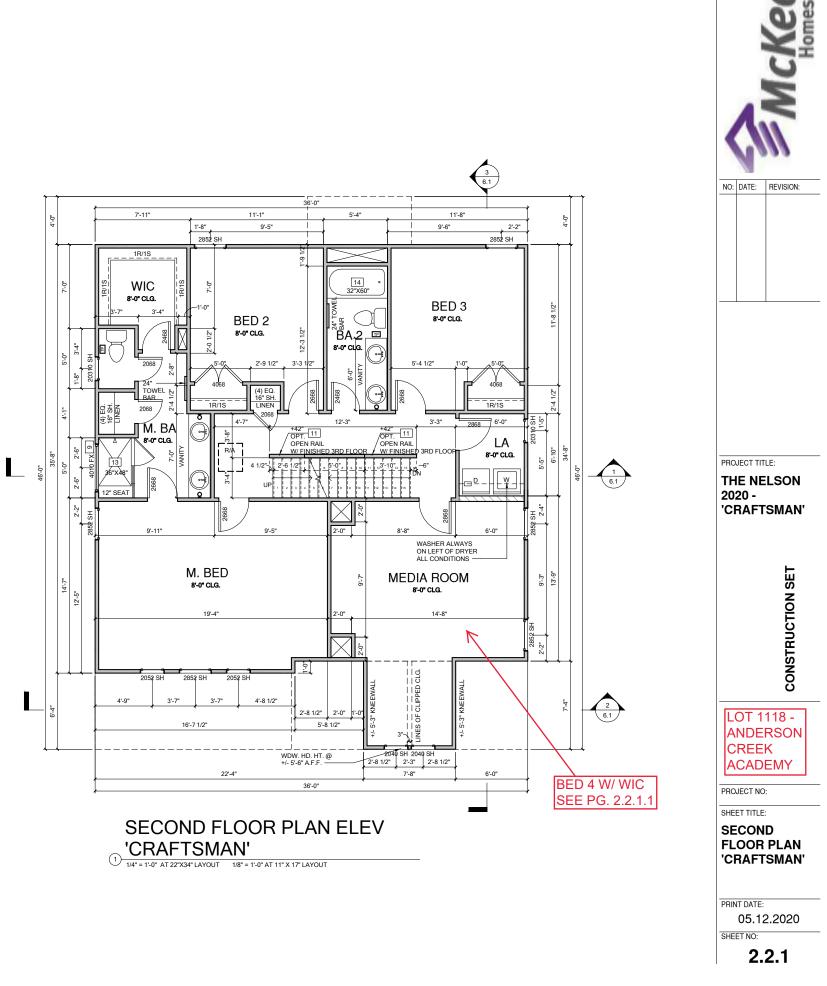
WALL LEGEND	
FULL HEIGHT 2X4 WOOD STUD PARTITION STONE VENEER	FULL HEIGHT 2X6 WOOD STUD PARTITION ======= DRYWALL OPENING HEIGHT AS NOTED ON PLAN
BRICK VENEER STUD WALL BELOW HEIGHT AND STUD SIZE AS NOTED	FULL HEIGHT POURED CONCRETE WALL, SIZE AS NOTED CONCRETE FULL HEIGHT CMU WALL, SIZE AS NOTED

#### 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, WITH HABITABLE SPACE ABOVE GARAGE, ALL WALLS REQUIRE MINIMUM 1/2 INCH GB. (PER NCRO TABLE R302.6). 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 TEMPERED SAFETY GLASS

- PRE-FABRICATED METAL FIREPLACE, INSTALL PER MANUFACTURER WRITTEN INST TEMPERED SAFETY GLASS HALF WALL, HEIGHT AS NOTED INTERIOR SOFFITS: FFL = 7-8" U.N.O. SFL = 7-6" U.N.O., OPT. CASED OPENING U.N.O SHOWER, TEMPERED GLASS ENCLOSURE TUB-SHOWER COMBO

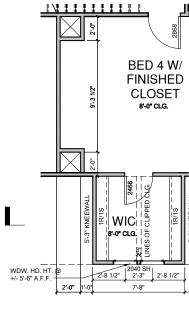
- ACRYLIC TUB W/ PLATFORM, SIZE AS NOTED SUIDE-IN ELECTRICAL RANGE W/ HOOD AND MICRO ABV. VENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS ACCESS HATCH/DOOR. FULLY WEATHER STRIPPED AND INSULATED. (PER NCRC SECTION N1102.2.4)

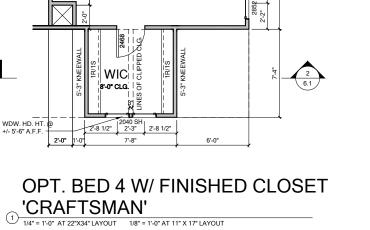


WALL LEGEND	
FULL HEIGHT 2X4 WOOD STUD PARTITION	FULL HEIGHT 2X6 WOOD STUD PARTITION ======= DRYWALL OPENING HEIGHT AS NOTED ON PLAN
BRICK VENEER STUD WALL BELOW HEIGHT AND STUD SIZE AS NOTED	FULL HEIGHT POURED CONCRETE WALL, SIZE AS NOTED CONCOUNT FULL HEIGHT CMU WALL SIZE AS NOTED

#### FLOOR PLAN KEYNOTE LEGEND

1	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 7" GYPSUM BOARD. WITH HABITABLE SPACE ABOVE GARAGE, ALL WALLS REQUIRE MINIMUM 1/2 INCH GB. (PER NCRC TABLE R302.6).
2	HOUSE TO GARAGE DOOR SEPARATION. PROVIDE 1 3/8" SOLID CORE DOOR OR APPROVED 20 MINUTE RATED DOOR
3	BENEATH STAIRS AND LANDINGS. 1/2" GYPSUM BOARD ON WALLS AND CEILING OF ENCLOSED ACCESSIBLE AREAS
4	GAS WATER HEATER ON 18" HIGH PLATFORM
7	PRE-FABRICATED METAL FIREPLACE, INSTALL PER MANUFACTURER WRITTEN INSTRUCTIONS
9	TEMPERED SAFETY GLASS
11	HALF WALL, HEIGHT AS NOTED
12	INTERIOR SOFFITS: FFL = 7'-8" U.N.O. SFL = 7'-6" U.N.O., OPT. CASED OPENING U.N.O.
13	SHOWER, TEMPERED GLASS ENCLOSURE
14	TUB-SHOWER COMBO
15	ACRYLIC TUB W/ PLATFORM, SIZE AS NOTED
16	SLIDE-IN ELECTRICAL RANGE W/ HOOD AND MICRO ABV. VENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS
19	ACCESS HATCH/DOOR. FULLY WEATHER STRIPPED AND INSULATED. (PER NCRC SECTION N1102.2.4)





9'-3"

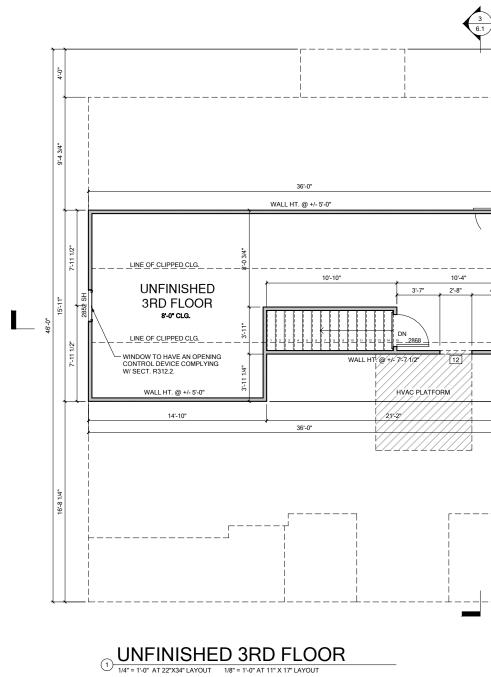


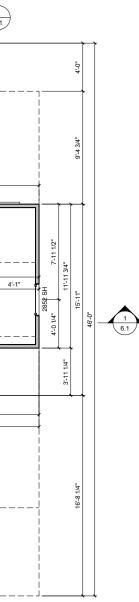
#### WALL LEGEND

FULL HEIGHT 2X4 WOOD STUD PARTITION	FULL HEIGHT 2X6 WOOD STUD PARTITION
STONE VENEER	CONTRACTION CONTRACTICO CONTRA
BRICK VENEER STUD WALL BELOW HEIGHT AND STUD SIZE AS NOTED	FULL HEIGHT POURED CONCRETE WALL, SIZE AS NOTED
	FULL HEIGHT

#### FLOOR PLAN KEYNOTE LEGEND

1	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. WITH HABITABLE SPACE ABOVE GARAGE, ALL WALLS REQUIRE MINIMUM 1/2 INCH GB. (PER NCRC TABLE R302.6).
2	HOUSE TO GARAGE DOOR SEPARATION. PROVIDE 1 3/8" SOLID CORE DOOR OR APPROVED 20 MINUTE RATED DOOR
3	BENEATH STAIRS AND LANDINGS. 1/2" GYPSUM BOARD ON WALLS AND CEILING OF ENCLOSED ACCESSIBLE AREAS
4	GAS WATER HEATER ON 18" HIGH PLATFORM
7	PRE-FABRICATED METAL FIREPLACE, INSTALL PER MANUFACTURER WRITTEN INSTRUCTIONS
9	TEMPERED SAFETY GLASS
11	HALF WALL, HEIGHT AS NOTED
12	INTERIOR SOFFITS: FFL = 7'-8" U.N.O. SFL = 7'-6" U.N.O., OPT. CASED OPENING U.N.O.
13	SHOWER, TEMPERED GLASS ENCLOSURE
14	TUB-SHOWER COMBO
15	ACRYLIC TUB W/ PLATFORM, SIZE AS NOTED
16	SLIDE-IN ELECTRICAL RANGE W/ HOOD AND MICRO ABV. VENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS
19	ACCESS HATCH/DOOR. FULLY WEATHER STRIPPED AND INSULATED. (PER NCRC SECTION N1102.2.4)





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#### CRAWL SPACE NOTES FOR NORTH CAROLINA:

-REFER TO STRUCTURAL DRAWINGS FOR INFORMATION NOT SHOWN ON THIS PLAN

-FOR ADDITIONAL NOTES SEE GENERAL NOTES ON TITLE SHEET AND DETAILS.

-PROVIDE FIREBLOCKING. (PER NCRC SECTION R602.8)

-ALL ELECTRICAL AND MECHANICAL EQUIPMENT AND METERS ARE SUBJECT TO RELOCATION DUE TO FIELD CONDITIONS, CONTRACTOR TO VERIFY.

-VERIFY ALL DOOR THRESHOLD HEIGHTS TO HARD S URFACES. 8 1/4" MAX AT INSWING DOORS. (PER NCRC SECTION R311.3.1)

-SLOPE ALL STOOPS AND HARDSCAPE MATERIAL AWAY FROM BUILDING - TYPICAL.

-SLOPE GARAGE FLOOR 1/8" PER FOOT TO GARAGE DOOR OPENING.

-VERIFY CURB CUT BLOCKOUT WITH GARAGE DOOR MANUFACTURER

-REFER TO CIVIL DRAWINGS FOR FINISH SURFACE ELEVATIONS

-TYP. STOOP AT INSWING/SLIDER DOORS: 36" DEEP BY THE WIDTH OF THE DOOR SERVED, MINIMUM (PER NCRC SECTIONS R311.3) PROVIDE A SLIP-RESISTANT FINISH.

SOLIS TREATMENT: 100% GROUND COVERAGE OVER FINISHED GRADE/CRAWL SPACE, EITHER BAIT STATIONS OR CHEMICAL TREATMENT FOR PROTECTION FROM TERMITE INVESTATION ACCORDING TO THE STANDARDS OF THE NC DEPT. OF AGRICULTURE.

-AT VENTED CRAWL SPACE: APPLY AN APPROVED VAPOR RETARDER OR EQUIVALENT, 6 MIL POLY-VINYL, GROUND COVER OVER FINISH GRADE OR CRAWL SPACE PER NCC SECTION 408.2

-PROVIDE VENTS SPACED AROUND PERIMETER TO PROMOTE CROSS VENTILATION AT A RATE OF 1 SF VENT FOR EVERY 1500 SF OF CRAWL FLOOR AREA. ONE VENT MUST BE LOCATED WITHIN 3-0" OF EACH CORNER OF THE BUILDING AND LOCATED TO ALLOW FOR CROSS VENTILATION. (PER NCRC SECTION R408.1.1 EXCEPTION.)

-PROVIDE AN ACCESS OPENING, MINIMUM SIZE OF 18"X24" FOR CRAWL ACCESS. COORDINATE WITH MECHANICAL CONTRACTOR FOR LARGER SIZE REQUIREMENTS IF MECHANICAL EQUIPMENT IS LOCATED IN CRAWL. (PER NCRC SECTION 408.8)

-WOOD CONTACTING CONCRETE OR MASONRY OR LESS THAN CODE REQUIRED SEPARATION TO GRADE SHALL BE PRESSURE TREATED OR FOUNDATION GRADE REDWOOD. SET ALL EXTERIOR WALL SILLS IN MASTIC.

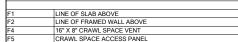
CRAWL SPACE VENT CALC. 'CRAFTSMAN'
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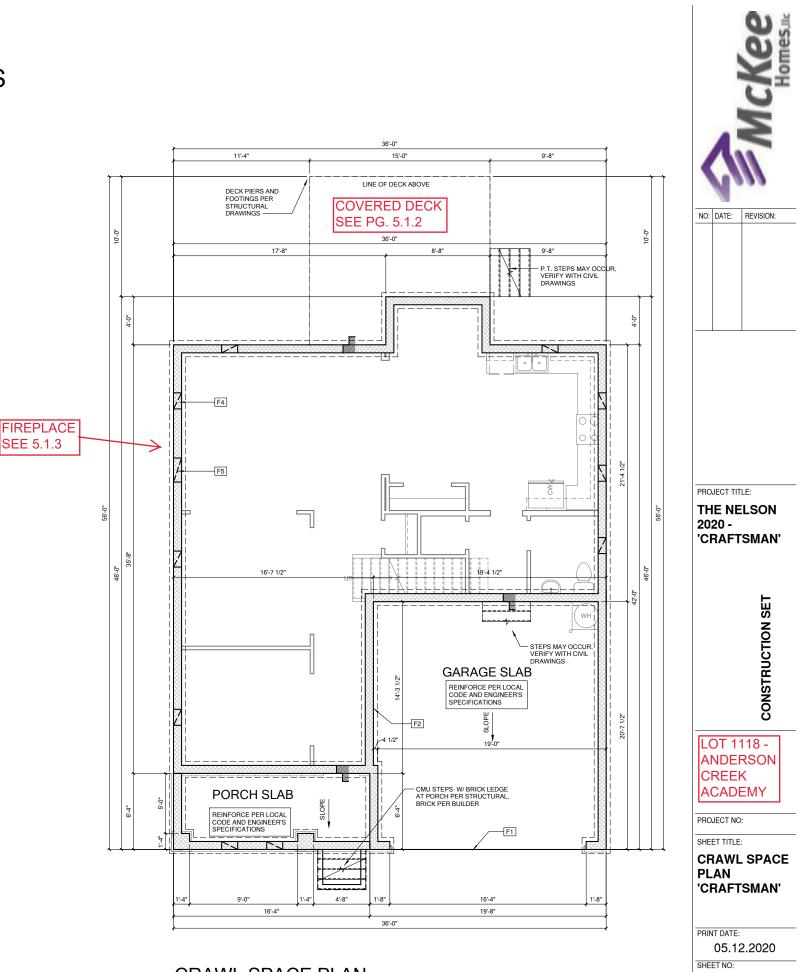
 Name
 Area
 1/150 VENT REQ.
 1/150 VENT REQ.

 AREA 1
 1042 SF
 6.95 SF
 0.69 SF

## REFER TO STRUCTURAL DRAWINGS FOR ALL FOUNDATION DIMENSIONS

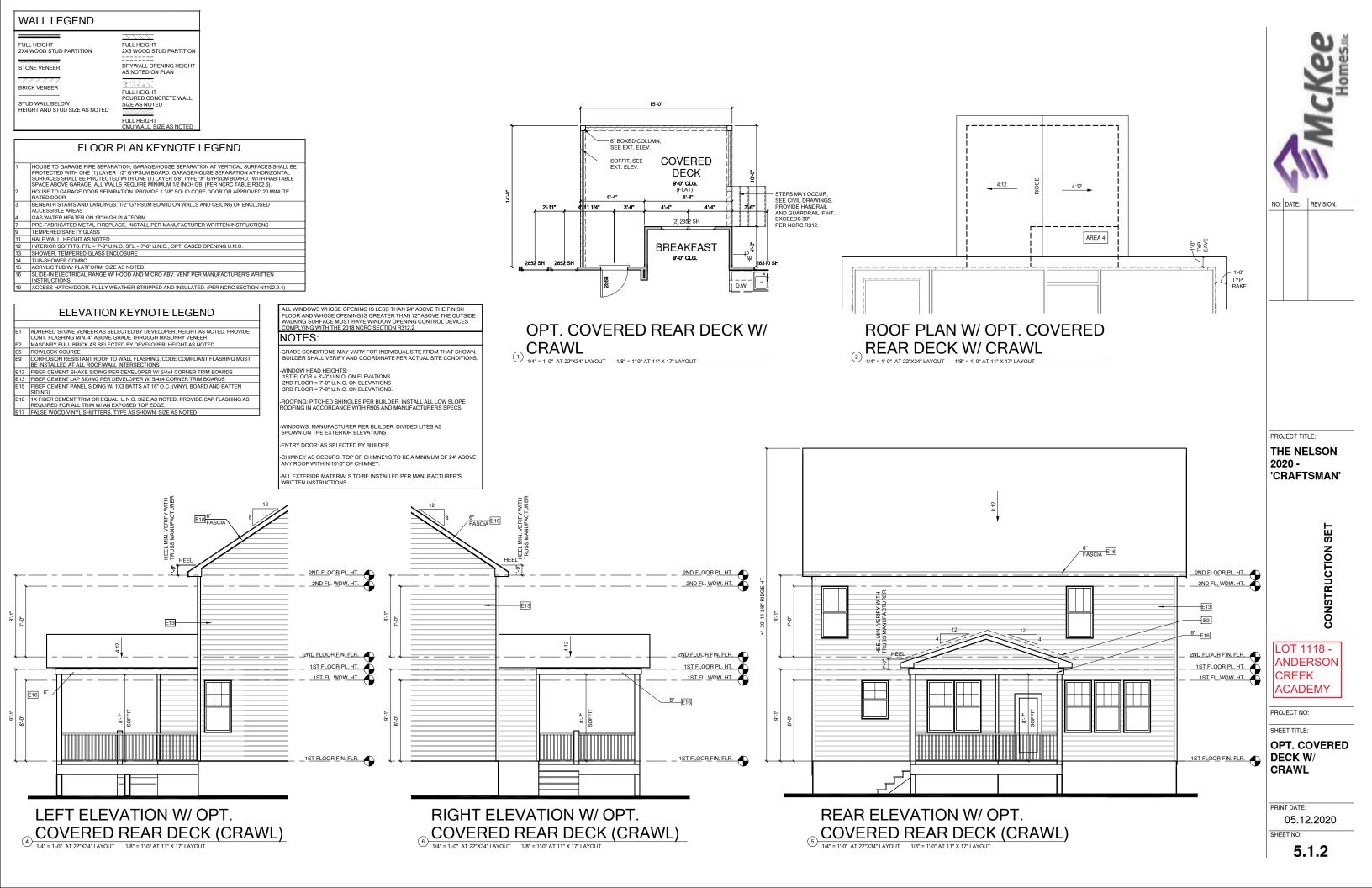
#### FOUNDATION KEYNOTE LEGEND







4.1.1



WALL LEGEND	
FULL HEIGHT 2X4 WOOD STUD PARTITION STONE VENEER	FULL HEIGHT 2X6 WOOD STUD PARTITION ======= DRYWALL OPENING HEIGHT AS NOTED ON PLAN
BRICK VENEER STUD WALL BELOW HEIGHT AND STUD SIZE AS NOTED	FULL HEIGHT POURED CONCRETE WALL, SIZE AS NOTED TOTOTOTOT FULL HEIGHT CMU WALL SIZE AS NOTED

#### FLOOR PLAN KEYNOTE LEGEND

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19	ACCESS HATCH/DOOR. FULLY WEATHER STRIPPED AND INSULATED. (PER NCRC SECTION N1102.2.4)

#### ELEVATION KEYNOTE LEGEND

E1	ADHERED STONE VENEER AS SELECTED BY DEVELOPER, HEIGHT AS NOTED. PROVIDE CONT. FLASHING MIN. 4" ABOVE GRADE THROUGH MASONRY VENEER
E2	MASONRY FULL BRICK AS SELECTED BY DEVELOPER, HEIGHT AS NOTED
E5	ROWLOCK COURSE
E9	CORROSION RESISTANT ROOF TO WALL FLASHING, CODE COMPLIANT FLASHING MUST BE INSTALLED AT ALL ROOF/WALL INTERSECTIONS
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. PROVIDE CAP FLASHING AS REQUIRED FOR ALL TRIM W/ AN EXPOSED TOP EDGE.
E17	FALSE WOOD/VINYL SHUTTERS, TYPE AS SHOWN, SIZE AS NOTED

# 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 CONTROL 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.

INDOW HEAD HEIGHT 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.

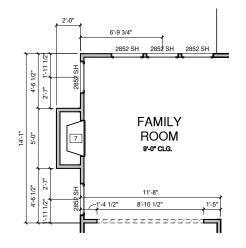
ROOFING: PITCHED SHINGLES PER BUILDER. INSTALL ALL LOW SLOPE ROOFING IN ACCORDANCE WITH R905 AND MANUFACTURERS SPECS.

/INDOWS: MANUFACTURER PER BUILDER, DIVIDED LITES AS HOWN ON THE EXTERIOR ELEVATIONS

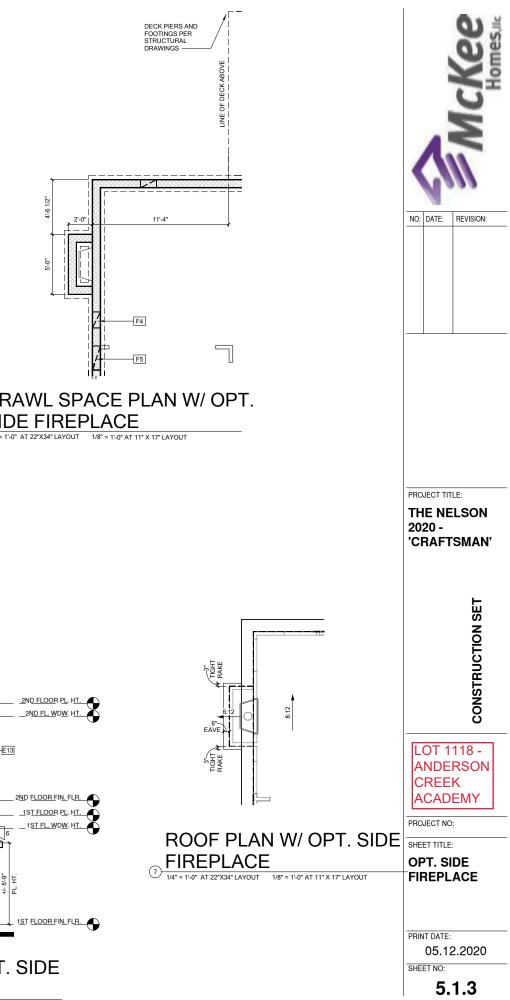
NTRY DOOR: AS SELECTED BY BUILDER

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.



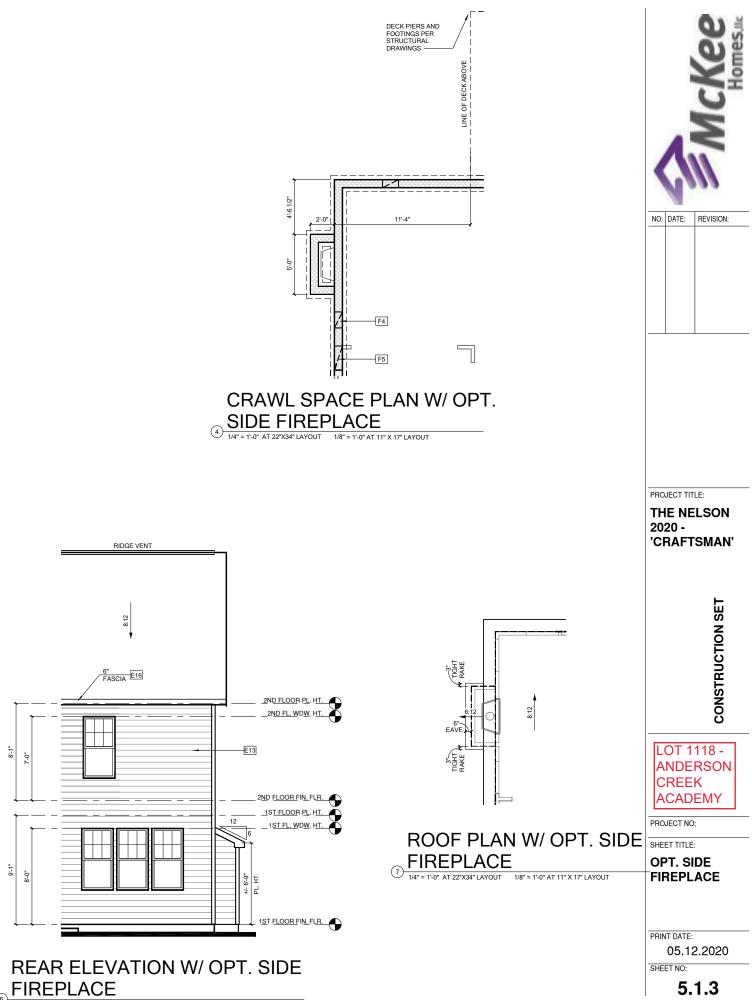






FIREPLACE

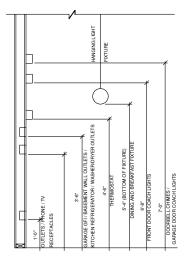
5 1/4" = 1'-0" AT 22"X34" LAYOUT 1/8" = 1'-0" AT 11" X 17" LAYOUT



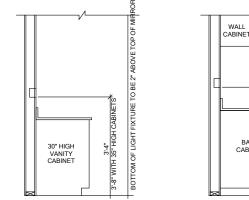
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#### STANDARD ELECTRICAL BOX HEIGHTS



# BASE CABINET

#### 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.

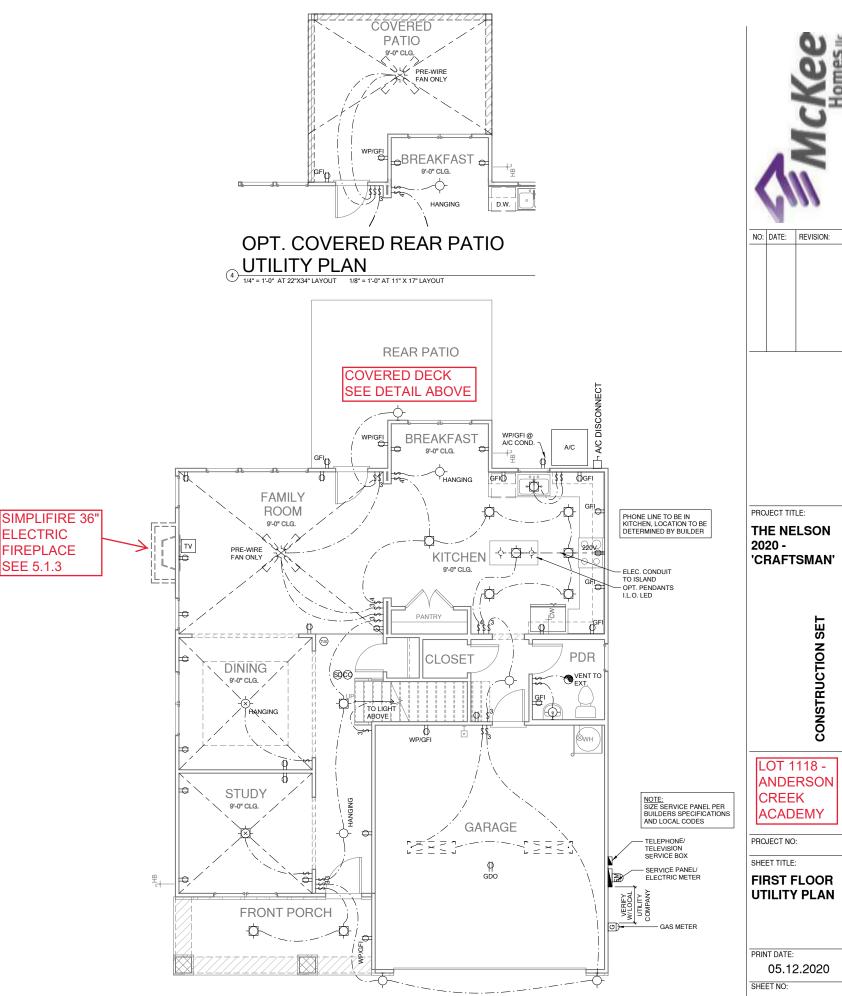
-HVAC CONTRACTOR TO VERIFY THERMOSTAT LOCATIONS.

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.

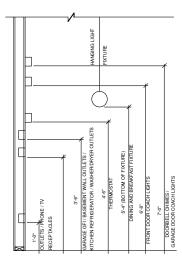
-PROVIDE POWER, LIGHT AND SWITCH AS REQUIRED FOR ATTIC FURNACE PER CODE AND MANUFACTURER'S WRITTEN INSTRUCTIONS.

#### LEGEND:

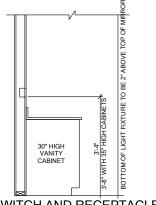
LEGE	END:		
φ	DUPLEX OUTLET		EILING MOUNTED INCANDESCENT LIGHT FIXTURE
Øw₽/GFI	WEATHERPROOF GFI DUPLEX OUTLET	Υ -	
₽ <sub>GFI</sub>	GROUND-FAULT CIRCUIT- INTERRUPTER DUPLEX OUTLET	∽ w	ALL MOUNTED INCANDESCENT LIGHT FIXUTRE
P	HALF-SWITCHED DUPLEX OUTLET		URFACE MOUNT LED LIGHT FIXTURE
₽ 220V	220 VOLT OUTLET		(P) = VAPOR PROOF
J	REINFORCED JUNCTION BOX	e 🖉	XHAUST FAN (VENT TO EXTERIOR)
\$	WALL SWITCH		XHAUST FAN/LIGHT COMBINATION
\$3	THREE-WAY SWITCH	V (V	(ENT TO EXTERIOR)
\$4	FOUR-WAY SWITCH	FI FI	LUORESCENT LIGHT FIXTURE
CH	CHIMES		
Ŧ	PUSHBUTTON SWITCH		ECH HUB SYSTEM
SD	110V SMOKE DETECTOR W/ BATTERY BACKUP		EILING FAN ROVIDE ADEQUATE SUPPORT)
Co	CO2 DETECTOR		
T	THERMOSTAT		EILING FAN WITH INCANDESCENT LIGHT FIXTURE PROVIDE ADEQUATE SUPPORT)
PH	TELEPHONE		,
TV	TELEVISION	] ⊢⊗   G.	AS SUPPLY WITH VALVE
Δ	ELECTRIC METER	н	OSE BIBB
	ELECTRIC PANEL		
	DISCONNECT SWITCH	-tcw <sup>1/4</sup>	4" WATER STUB OUT
		-X w	ALL SCONCE

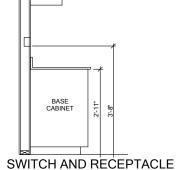


## THE ST FLOOR UTILITY PLAN



#### STANDARD ELECTRICAL BOX HEIGHTS





WALL

ARINE

#### 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." FLECTRICAL SYSTEMS ARE SHOWN FOR INTENT ONLY. THESE SYSTEMS SHALL BE ENGINEERED BY

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-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.

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-ELECTRICAL CONTRACTOR TO PROVIDE REQURIED DIRECT HOOK-UPS/CUTOFFS

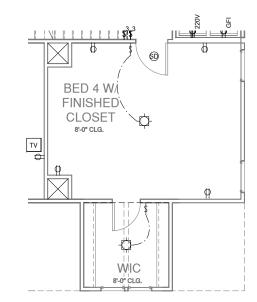
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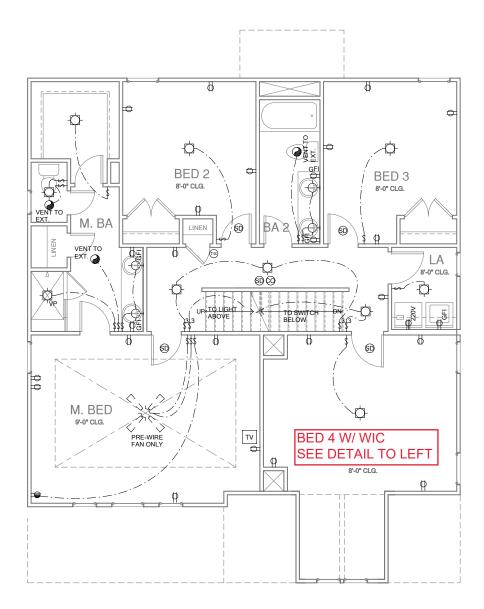
-PROVIDE POWER, LIGHT AND SWITCH AS REQUIRED FOR ATTIC FURNACE PER CODE AND MANUFACTURER'S WRITTEN INSTRUCTIONS.

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LEGE	ND:		
φ	DUPLEX OUTLET		CEILING MOUNTED INCANDESCENT LIGHT FIXTURE
Øw₽/GFI	WEATHERPROOF GFI DUPLEX OUTLET	<u>Υ</u>	
₽ <sub>GFI</sub>	GROUND-FAULT CIRCUIT- INTERRUPTER DUPLEX OUTLET	]- <u></u>	WALL MOUNTED INCANDESCENT LIGHT FIXUTRE
P	HALF-SWITCHED DUPLEX OUTLET		SURFACE MOUNT LED LIGHT FIXTURE
₽ 220V	220 VOLT OUTLET	ļΦ.	(VP) = VAPOR PROOF
J	REINFORCED JUNCTION BOX	0	EXHAUST FAN (VENT TO EXTERIOR)
\$	WALL SWITCH	<b>b</b>	EXHAUST FAN/LIGHT COMBINATION
\$3	THREE-WAY SWITCH	-9-	(VENT TO EXTERIOR)
\$4	FOUR-WAY SWITCH		FLUORESCENT LIGHT FIXTURE
СН	CHIMES		TECH HUB SYSTEM
Ŧ	PUSHBUTTON SWITCH		
SD	110V SMOKE DETECTOR W/ BATTERY BACKUP	$ \mathcal{K} $	CEILING FAN (PROVIDE ADEQUATE SUPPORT)
Co	CO2 DETECTOR	<u>\</u>	>
T	THERMOSTAT	] 業	CEILING FAN WITH INCANDESCENT LIGHT FIXTURE (PROVIDE ADEQUATE SUPPORT)
PH	TELEPHONE		······································
ΤV	TELEVISION	⊢⊗	GAS SUPPLY WITH VALVE
Δ	ELECTRIC METER		HOSE BIBB
	ELECTRIC PANEL	HE	
-	DISCONNECT SWITCH	-t <sub>cv</sub>	1/4" WATER STUB OUT V
		-X	WALL SCONCE

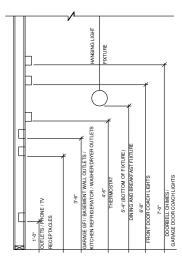


## OPT. BED 4 W/ FINISHED CLOSET (2) UTILITY PLAN (2) 1/4"= 1'-0" AT 22"X34" LAYOUT 1/8"= 1'-0" AT 11" X 17" LAYOUT

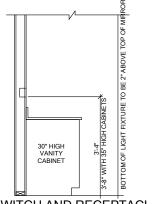


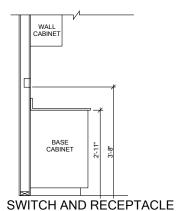


NC: DATE: REVISION:
PROJECT TITLE: THE NELSON 2020 - 'CRAFTSMAN'
LOT 1118 - ANDERSON CREEK ACADEMY PROJECT NO:
SHEET TITLE: SECOND FLOOR UTILITY PLAN
PRINT DATE: 05.12.2020 SHEET NO: <b>7.2</b>



#### 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.

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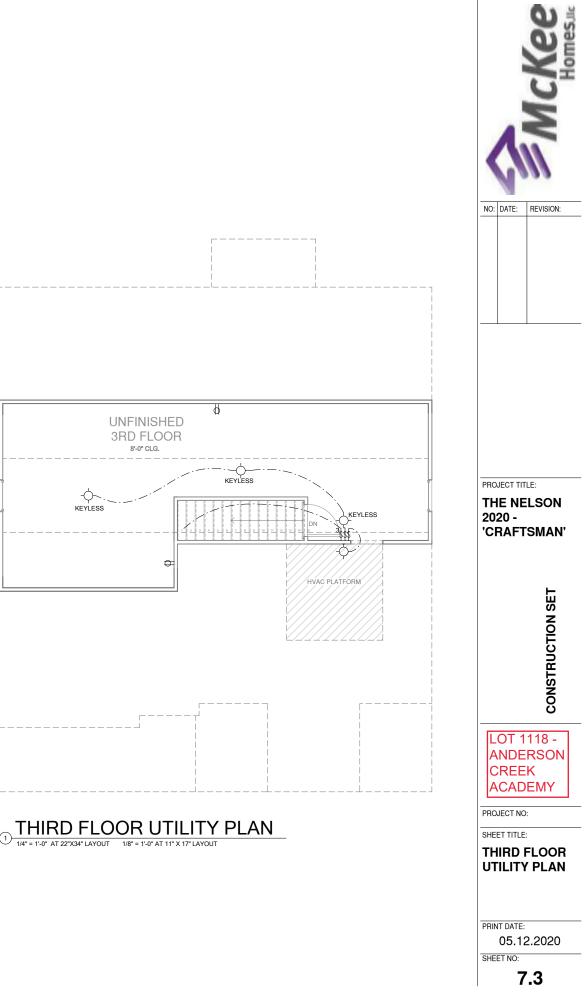
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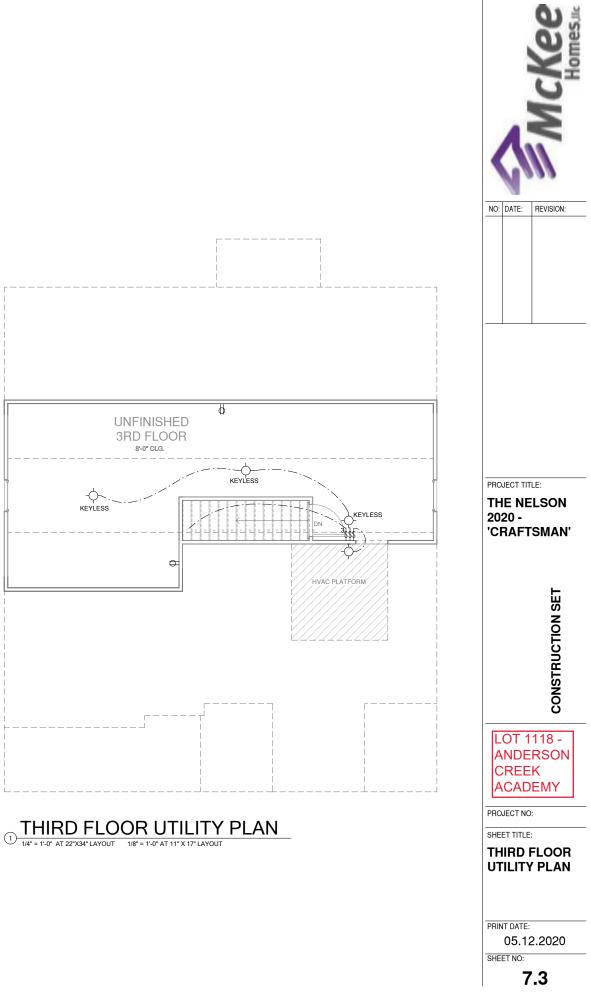
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LEGE	END:	
<b>φ</b>	DUPLEX OUTLET	- CEILING MOUNTED INCANDESCENT LIGHT FIXTURE
Qwp/GFI	WEATHERPROOF GFI DUPLEX OUTLET	Т
₽ <sub>GFI</sub>	GROUND-FAULT CIRCUIT- INTERRUPTER DUPLEX OUTLET	
P	HALF-SWITCHED DUPLEX OUTLET	
₽ <sub>220V</sub>	220 VOLT OUTLET	$-Q^2$ (VP) = VAPOR PROOF
J	REINFORCED JUNCTION BOX	EXHAUST FAN (VENT TO EXTERIOR)
\$	WALL SWITCH	EXHAUST FAN/LIGHT COMBINATION
\$3	THREE-WAY SWITCH	VENT TO EXTERIOR)
\$4	FOUR-WAY SWITCH	FLUORESCENT LIGHT FIXTURE
СН	CHIMES	TECH HUB SYSTEM
Ŧ	PUSHBUTTON SWITCH	
Sd	110V SMOKE DETECTOR W/ BATTERY BACKUP	CEILING FAN (PROVIDE ADEQUATE SUPPORT)
Co	CO2 DETECTOR	
T	THERMOSTAT	CEILING FAN WITH INCANDESCENT LIGHT FIXTURE
PH	TELEPHONE	
ΤV	TELEVISION	←⊗ GAS SUPPLY WITH VALVE
Ê	ELECTRIC METER	
	ELECTRIC PANEL	
	DISCONNECT SWITCH	CW 1/4" WATER STUB OUT
		- WALL SCONCE





### 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

<ul> <li>ASCE 7-10: Minim</li> </ul>	um Design Lo	ads for Builo	lings and Oth	er Structures
Design Loads: 1. Roof Live Lo	ads			
				PSF
1.2. Truss				PSF
				PSF
2. Roof Dead L				
2.2. Truss 3. Snow				
				- <b>5</b> F
4. Floor Live Lo				
				PSF
				PSF
5. Floor Dead L			1.0	
6. Ultimate Desig				
	e i	u () see. gust		
6.3. Wind B				
6.3.1.	√× =			
6.3.2.	V			
7. Component ar	nd Cladding (	in PSF)		
MEAN ROOF HT.	UP TO 30'	30'1"-35'	35' "-4Ø'	40'1"-45'
Z <i>O</i> NE 1	16.7,-18.0	17.5,-18.9	18.2,-19.6	18.7,-20.2
ZONE 2	16.T,-21.Ø	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	2Ø.4,-21.3
ZONE 5	18.2,-24 <i>.</i> Ø	19.2,-25.2	19.9,-26.1	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 ...... No
- 8.9. Lateral Design Control: Seismic 🗌 🦳 Wind 🖂

- 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 ( $F_{\mu}$ ) of 36 ksi unless otherwise noted.
- 4. Welding shall conform to the latest edition of the American Welding Society's Structural Welding Code AWS DI.I. Electrodes for shop and field welding shall be class E70XX. 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".

- supported during the concrete pour.
- CONCRETE REINFORCEMENT:

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



STRUCTURAL PLANS PREPARED FOR:

NELSON 2020

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
ΕE	EACH END	SYP	SOUTHERN YELLOW PINE
ΕW	EACH WAY	ŤĴ	TRIPLE JOIGT
NTS	NOT TO SCALE	tsp	TRIPLE STUD POCKET
ос	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

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

8. 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.

### SHEET LIST:

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
56 <i>.</i> 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

<u>WOOD TRUSSES:</u>

- 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.

	CASC A CONTRACTOR CONT
	CLIENT: McKee Homes 109 Hay 5t. Suite 301 Fayetteville, NC 28301
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. 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 be applied with the long direction perpendicular to framing. 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 exposure I or 2. Attach sheathing to its supporting framing with (1)-8d CC ringshark 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 gependicular to framing. Apply building paper over the sheathing shall be applied with the framing spacing. Use suitable edge support by use of T4G plywood or lumber blocking unless otherwise noted or the plans. Sheathing shall be applied manel field unless otherwise noted or lumber blocking unless otherwise noted. Panel edges and at 12°o/c in panel field unless otherwise noted or lumber blocking unless otherwise noted or lumber blocking unless otherwise noted. Panel edges and at 12°o/c in panel field unless otherwise noted or the plans. Sheathing shall be applied with the framing spacing. Use suitable edge support by use of T4G plywood or lumber blocking unless otherwise noted. Panel edge support blocking unless otherwise noted at 10° inthe shall occur over framing. Apply building	HORE: BAUNS DATE: 04000000
All structurally required fiberboard sheathing shall bear the mark of the AFA. Fiberboard 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 have a 1/8" gap at panel ends and edges are recommended in accordance with the AFA.	DATE: 04/20/2020 SCALE: 22x34 1/4"=1'-0" Ik/1 1/8"=1'-0" PROJECT * 4240500: 21196 DRAUN BY: EMB CHECKED BY: LAG ORIGINAL INFORMATION PROJECT * DATE 21196 04/20/2020 REFER TO COVER SHEET FOR A COMPLETE LIGT OF REVISIONS

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.
- 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.
- 5. FOOTINGS AND PIERS SHALL BE CENTERED UNDER THEIR RESPECTIVE ELEMENTS. PROVIDE 2" MINIMUM FOOTING PROJECTION FROM THE FACE OF MASONRY.
- 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 <u>NOT</u> 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 <u>04/01/2020</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.

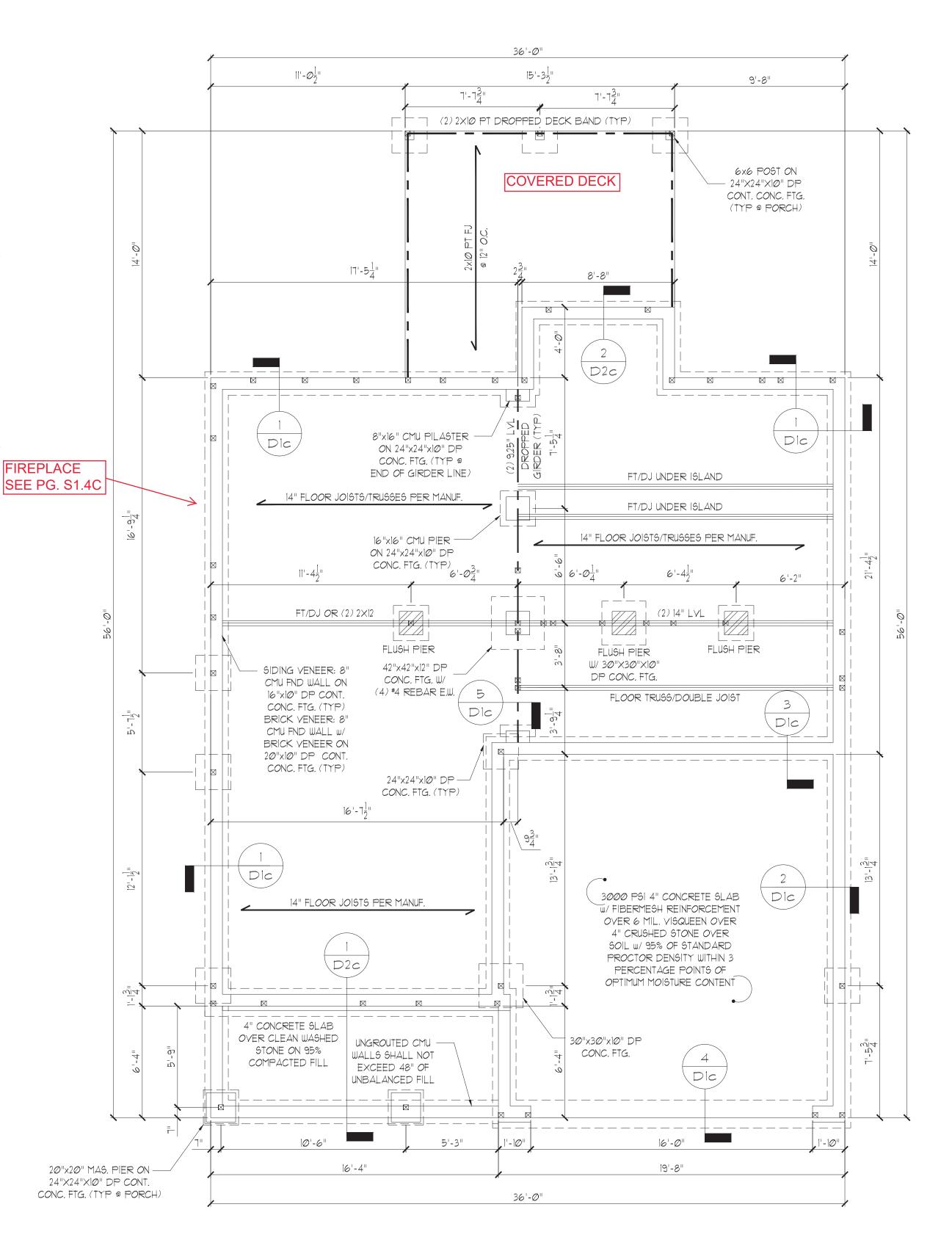
STRUCTURAL MEMBERS ONLY

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.

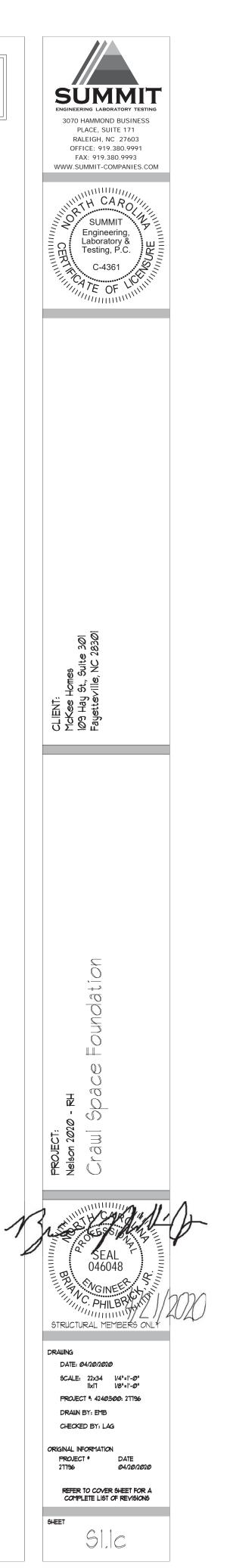
CRAWL SPACE FOUNDATION PLAN

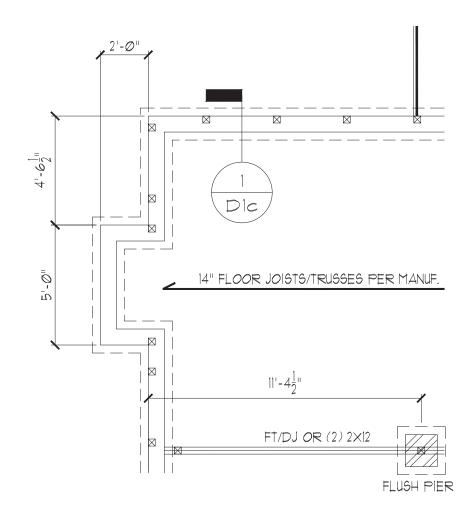
SCALE: 1/4"=1'-Ø" ON 22"x34" OR 1/8"=1'-Ø" ON 11"x17"



<u>CRAFTSMAN</u>

18"x24" MIN. CRAWL SPACE ACCESS DOOR TO BE LOCATED IN FIELD PER BUILDER. PROVIDE MIN. (2) 2x10 HEADER OVER DOOR W/ MIN. 4" BEARING EACH END. AVOID SHOWN POINT LOADS.





<u>OPT. FIREPLACE</u>

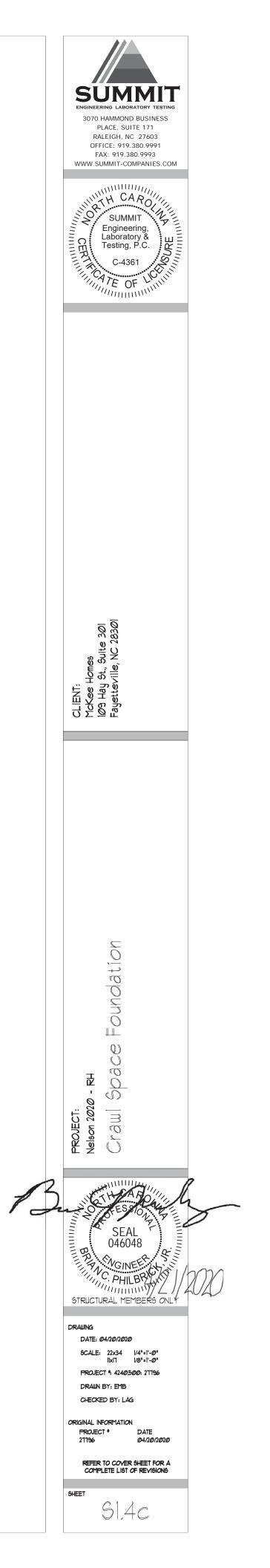
STRUCTURAL MEMBERS ONLY

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 REGIST 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 = 1.25x10<sup>6</sup> 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:
  - DJ = DOUBLE JOIST GT = GIRDER TRUSS
  - SC = STUD COLUMN EE = EACH END
  - TJ = TRIPLE JOIST
  - CL = CENTER LINE
- TR = TRIPLE RAFTER OC = ON CENTER PL = POINT LOAD

SJ = SINGLE JOIST

FT = FLOOR TRUSS

DR = DOUBLE RAFTER

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:

\_\_\_\_ 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 04/01/2020. 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.

## FIRST FLOOR FRAMING PLAN

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

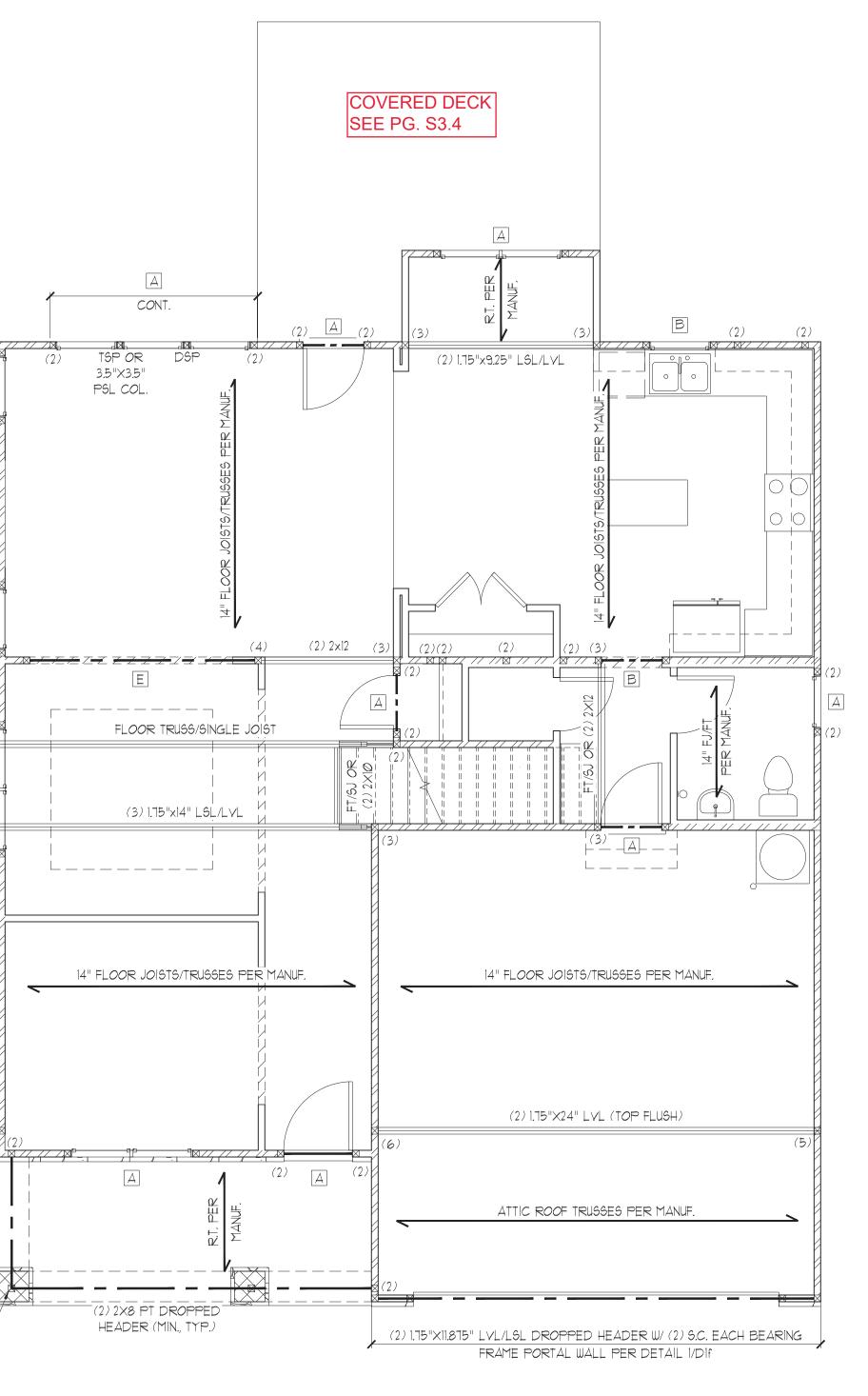
MIN. 4" P.T. POSTS OR COL. RATED FOR 2000# (MIN, TYP) ATTACH POSTS TO HEADER W/ SST CS16 STRAPS AND ATTACH POSTS TO FOUNDATION W/ SST ABA44 POST BASE OR EQUIV. (TYP)

Α

E

FIREPLACE

SEE PG. S3.4



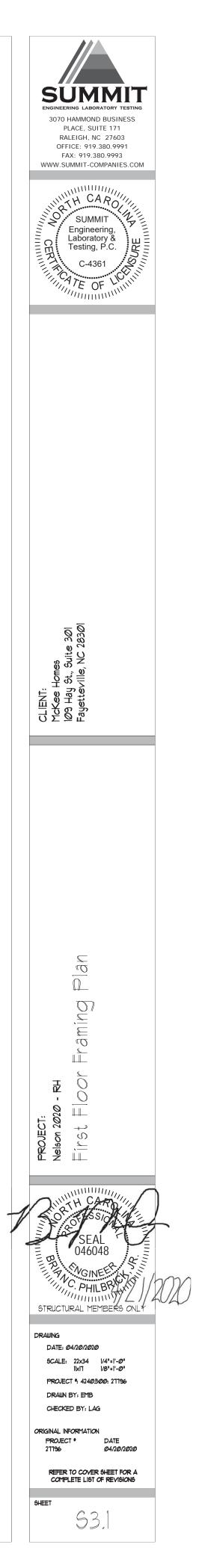
CRAFTSMAN

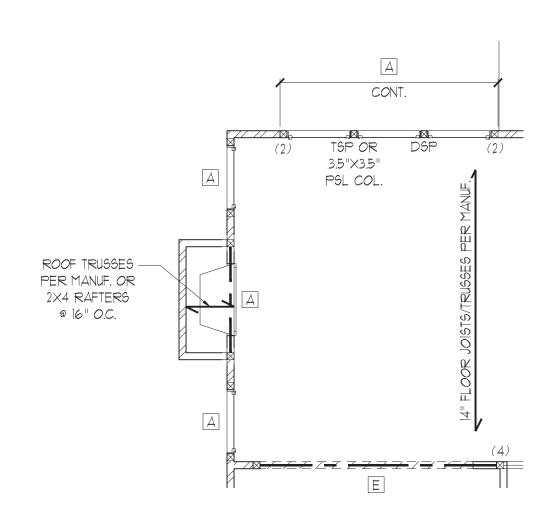
HEADER SCHEDULE					
ŤÁG	SIZE	JACKS (EACH END)			
А	(2) 2x6	(1)			
ß	(2) 2x8	(2)			
C	(2) 2x1Ø	(2)			
D	(2) 2x12	(2)			
Ш	(2) 9-1/4" LSL/LVL	(3)			
Ħ	(3)2x6	(1)			
G	(3)2x8	(2)			
Ŧ	(3)2x1Ø	(2)			
[	(3) 2x12	(3)			
Image: 1       (3) 2x12       (3)         NOTES:       I. HEADER SIZES SHOWN ON PLANS 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 (3) KING STUDS AT E.E.         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.					

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))

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"	16"	12"	24"		
2×6	24"	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.						





<u>OPT. FIREPLACE</u>

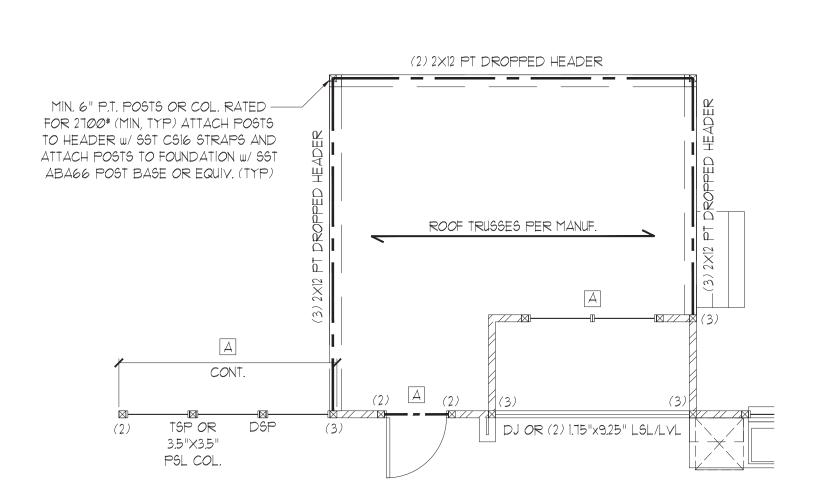
STRUCTURAL MEMBERS ONLY

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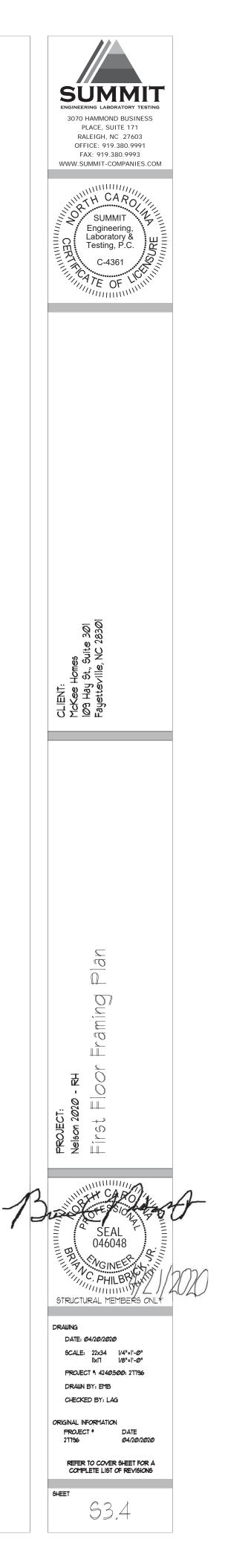
STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

FIRST FLOOR FRAMING PLAN

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



OPT. COVERED/SCREENED PORCH



#### HEADER SCHEDULE TAG SIZE JACKS (EACH END) (2) 2x6 Д (1)(2) 2x8 (2) В (2) С (2) 2x1Ø (2) 2x12(2) D (2) 9-1/4" LSL/LVL (3) E F (3) 2x6 (1) (3) 2x8 (2) G (3) 2x1Ø (2) H (3) 2x12 (3) NOTES: 1. 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.).

 ALL HEADERS TO BE DROPPED (U.N.O.).
 STUD COLUMNS NOTED ON PLAN OVERRIDE STUD COLUMNS LISTED ABOVE (U.N.O.).
 OPENINGS LESS THAN 3'-Ø" USE (1) KING STUD AT E.E.
 OPENINGS 3'-1" TO 4'-Ø" USE (2) KING STUDS AT E.E.
 OPENINGS 4'-1" TO 8'-Ø" USE (3) KING STUDS AT E.E.
 OPENINGS 8'-1" TO 12'-Ø" USE (5) KING STUDS AT E.E.
 OPENINGS 12'-1" TO 16'-Ø" 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.

 $\overline{}$ 

L3x3x1/4"
 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 STUD SCHEDULE (10 FT HEIGHT)

 STUD SIZE

 STUD SPACING (0.C.)

 ROOF ONLY
 ROOF 4
 ROOF 4
 ROOF 4
 ROOF 4
 ROOF 4
 ROOF 4
 BEARING

 2x4
 24"
 16"
 12"
 24"

 2x6
 24"
 24"
 16"
 24"

 NOTES:
 24"
 24"
 16"
 24"

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.

SHADED WALLS INDICATED LOAD BEARING WALLS

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

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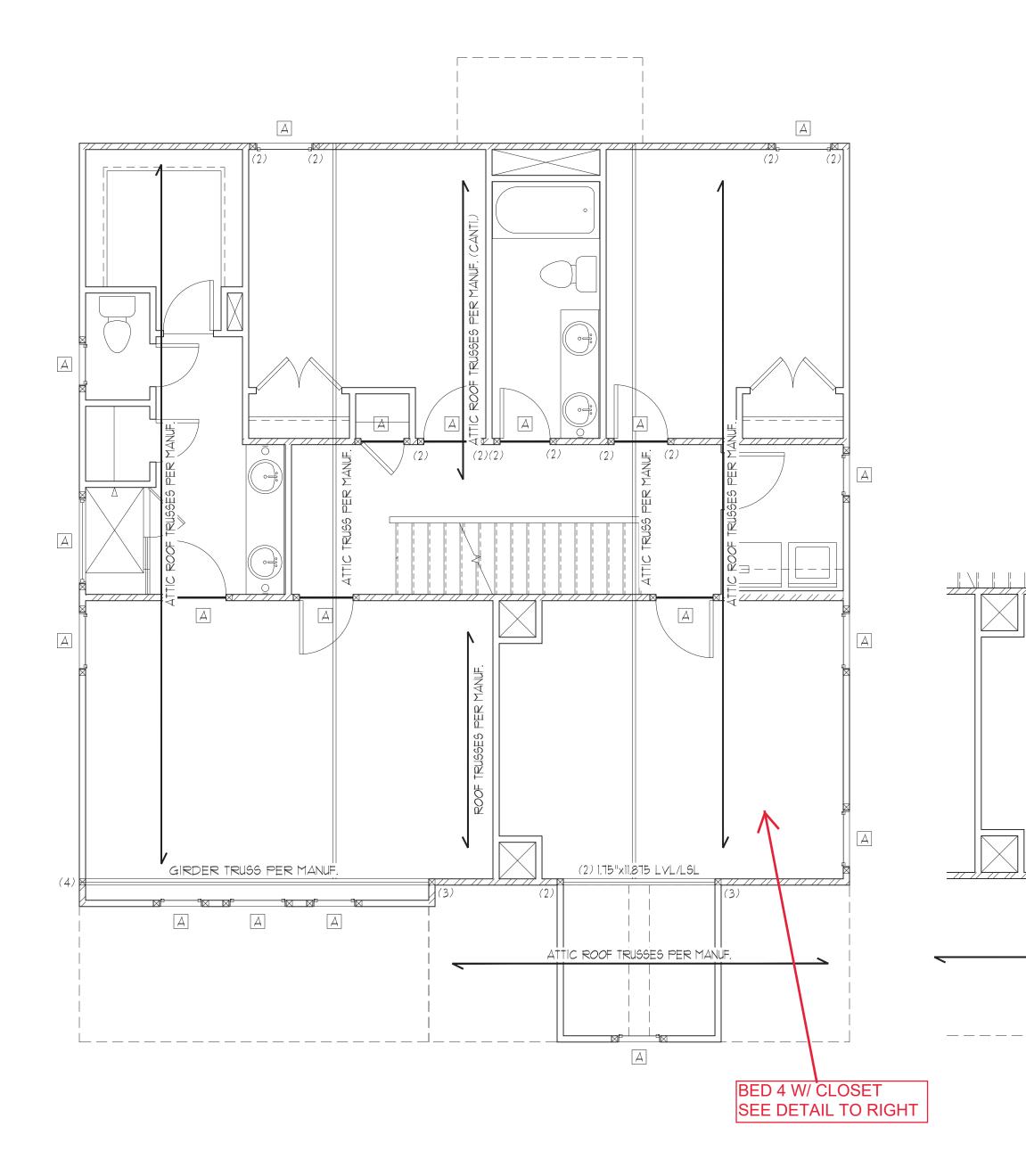
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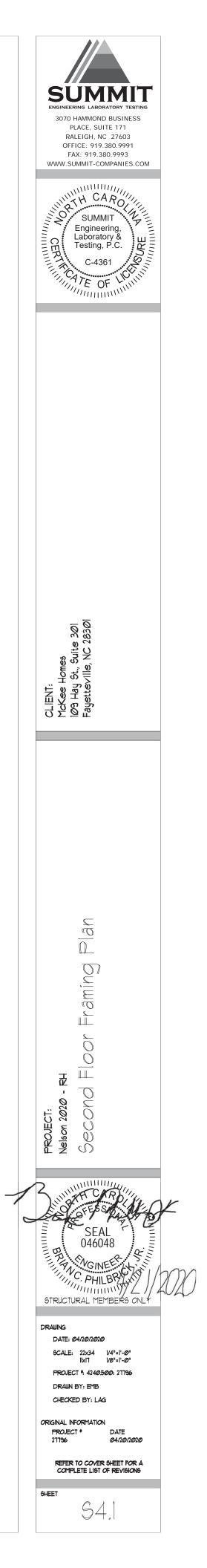
STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

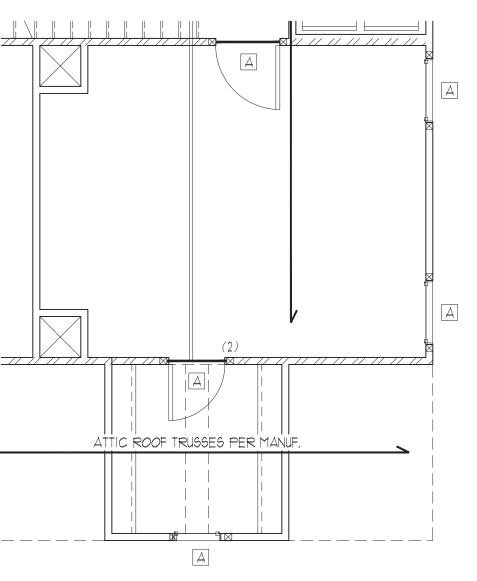
## SECOND FLOOR FRAMING PLAN

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

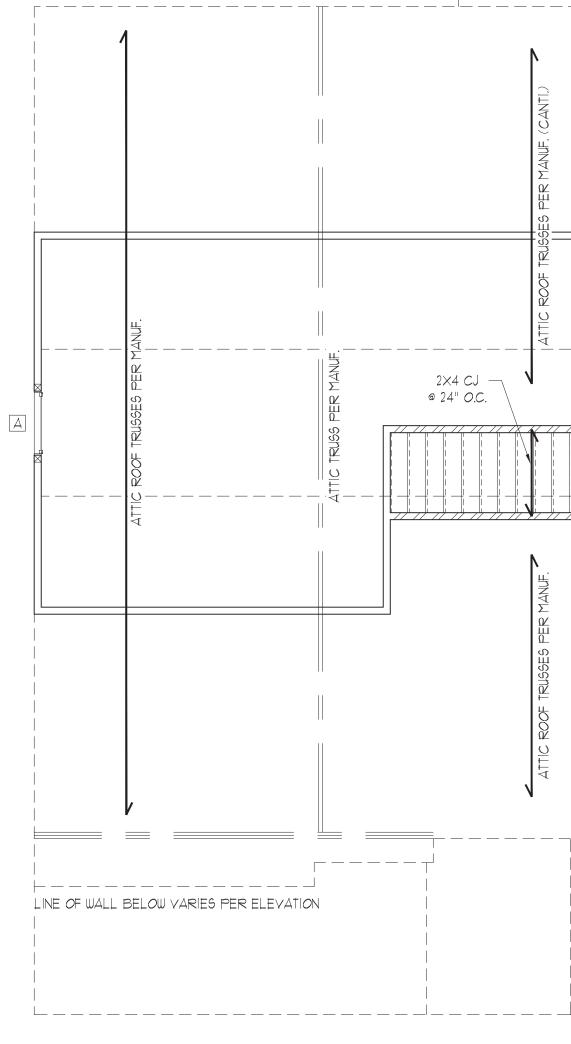


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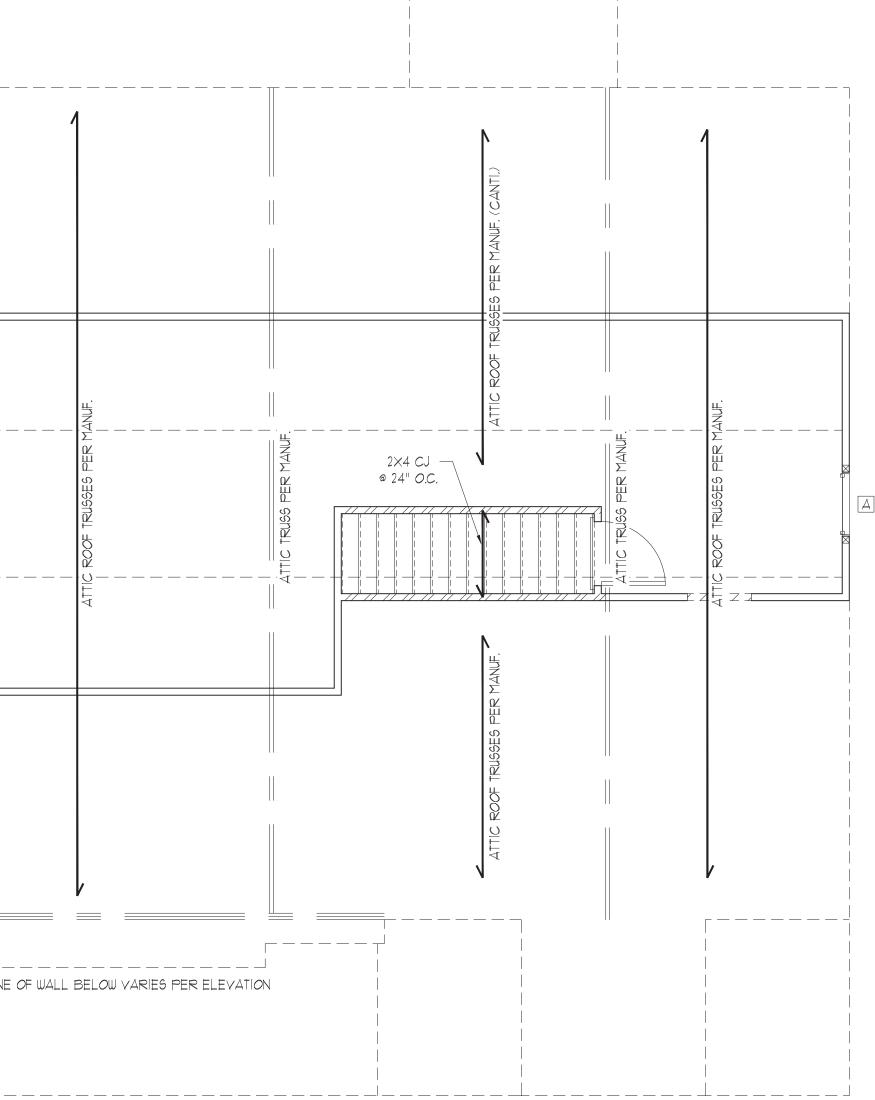
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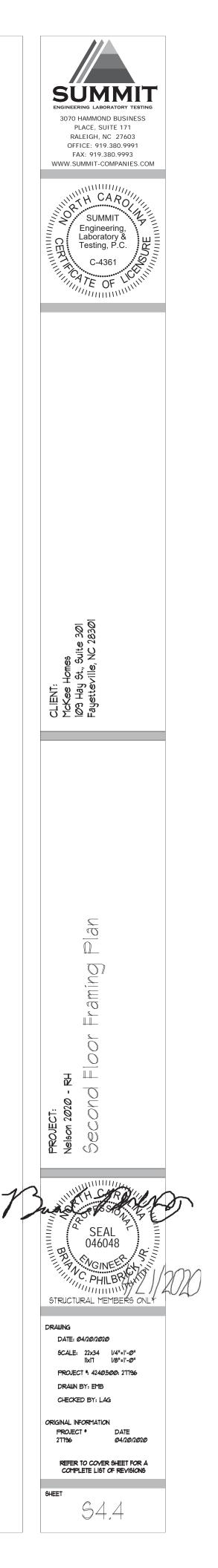
STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

# SECOND FLOOR FRAMING PLAN

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



ALL ELEVATIONS



+000					
TRUSS UPLIFT CONNECTOR SCHEDULE					
MAX, UPLIFT	ROOF TO WALL	FLOOR TO FLOOR	FLOOR TO FND		
600 LBS	H2.5A	PER WALL SHEATHIN	IG & 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		
JESS LBSLGTS-SDS2.5HTTGTS2HTTG1. ALL PRODUCTS LISTED ARE SIMPSON STRONG-TIE. EQUIVALENT PRODUCTS MAY BE USED PER MANUFACTURER'S SPECIFICATIONS.2. UPLIFT VALUES LISTED ARE FOR SYP *2 GRADE MEMBERS.3. REFER TO TRUSS LAYOUT PER MANUF. FOR UPLIFT VALUES AND TRUSS TO TRUSS CONNECTIONS. CONNECTORS SPECIFIED BY TRUSS MANUFACTURER OVERRIDE THOSE LISTED ABOVE.4. 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.

<u>OPT. FIREPLACE</u>

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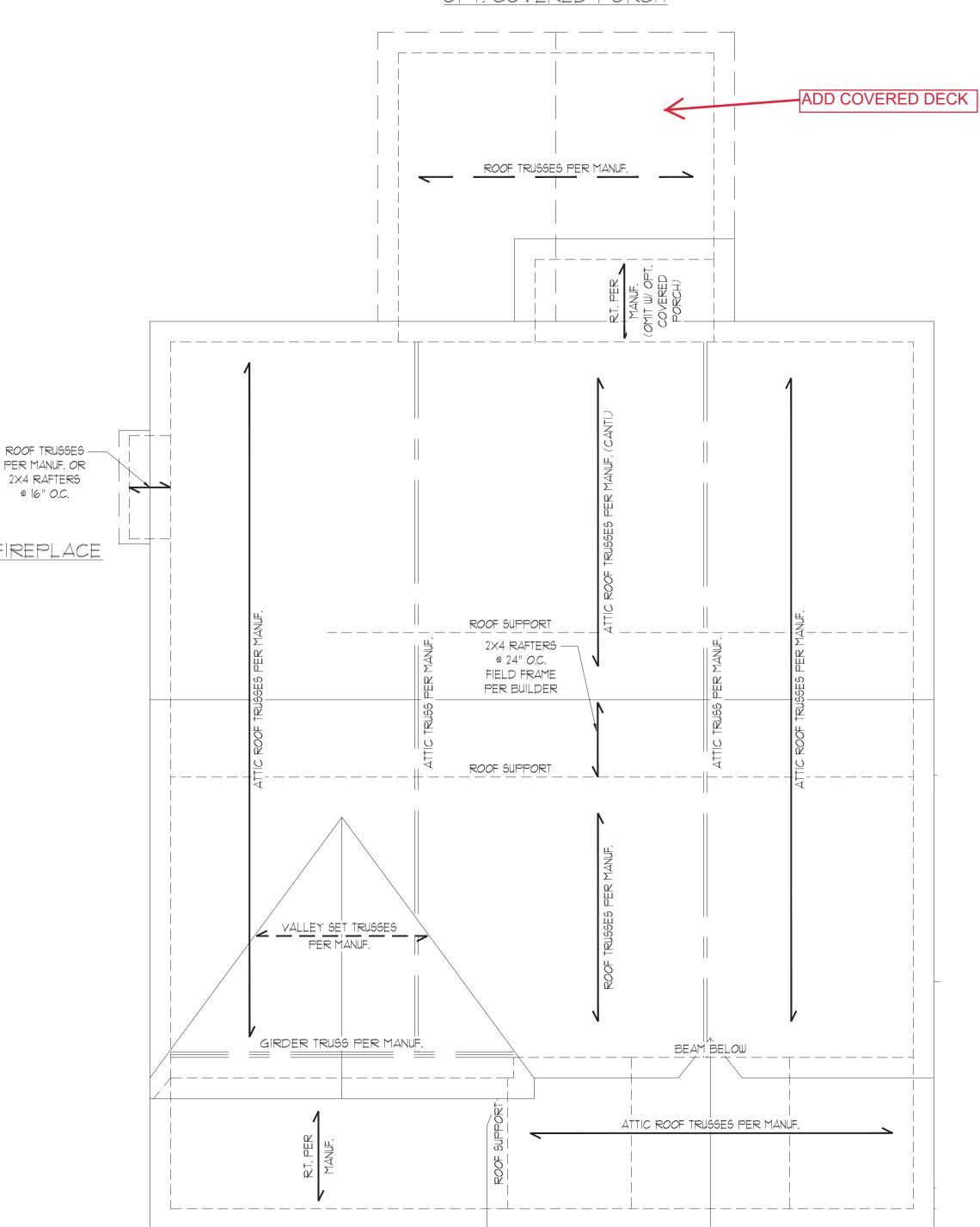
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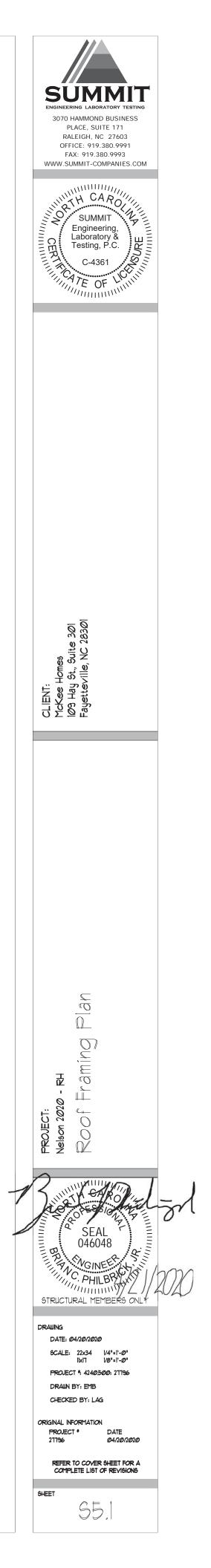
# ROOF FRAMING PLAN

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



OPT. COVERED PORCH

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	REQUIRED BRACED WALL PANEL CONNECTIONS				
			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 R102.3.5				

REAR

HOUSE

FRONT

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.

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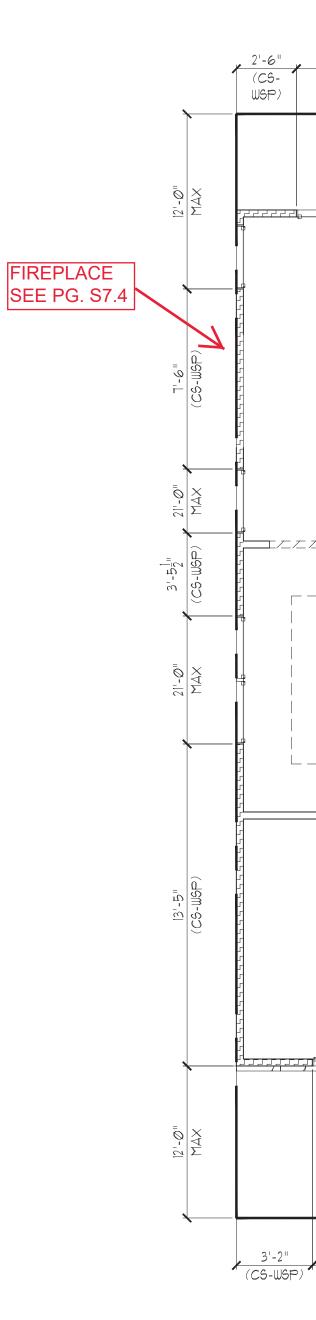
STRUCTURAL MEMBERS ONLY

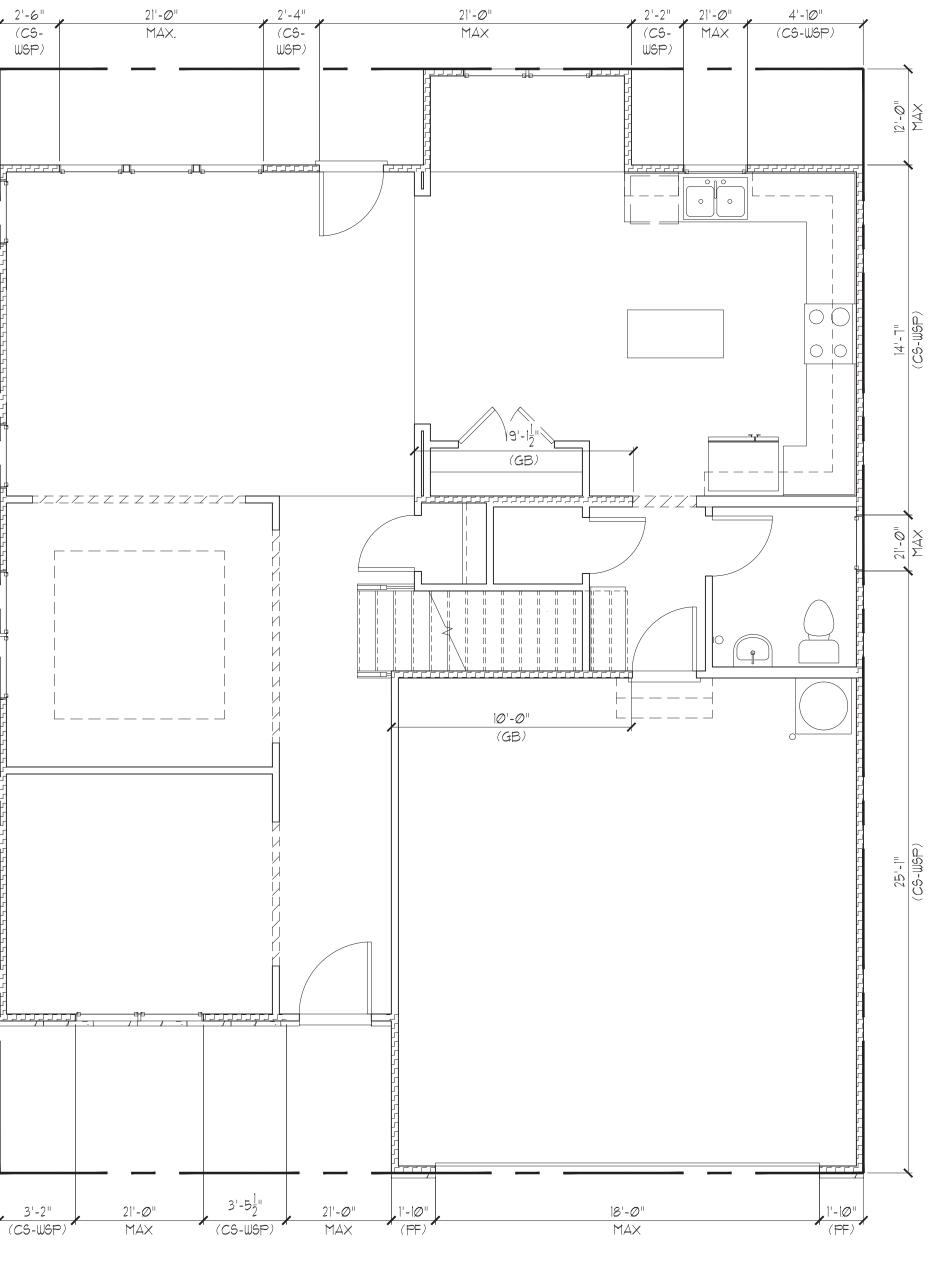
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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

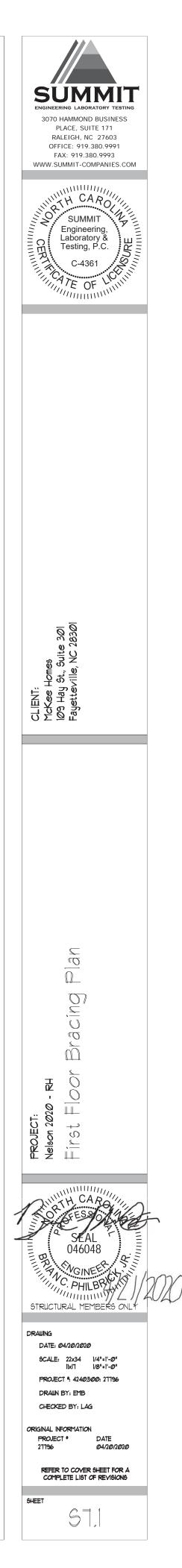
FIRST FLOOR BRACING PLAN

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

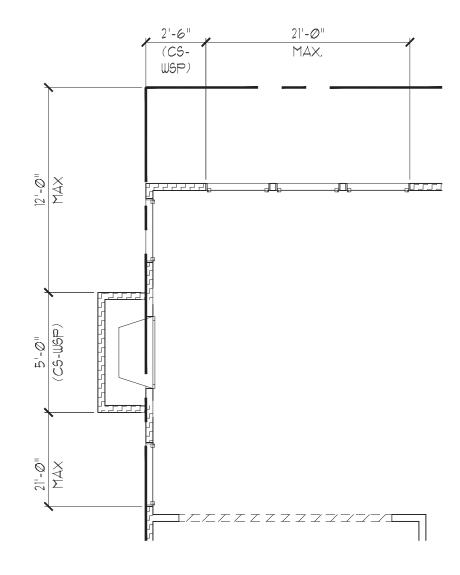




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FIRST FLOOR BRACING (FT)					
CONTINUOUS SHEATHING METHOD					
	REQUIRED	PROVIDED			
FRONT	14.6	1,1			
LEFT	11.7	24.3			
REAR	14.6	16.3			
RIGHT	11.7	39.6			



<u>OPT. FIREPLACE</u>

FIRST FLOOR BRACING (FT)				
CONTIN	NUOUS SHEATHING M	ETHOD		
REQUIRED PROVIDED				
FRONT	14.6	*PER ELEV.*		
LEFT	12.3	21.8		
REAR	14.6	16.3		
RIGHT	12.3	39.6		

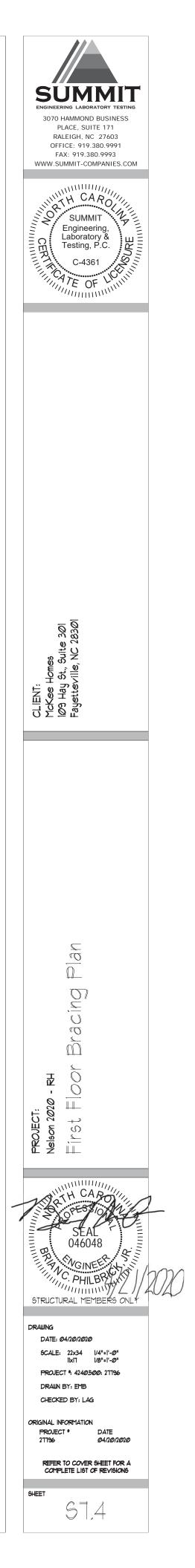
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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

FIRST FLOOR BRACING PLAN

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



	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:

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- 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).
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- 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
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- 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 R602.10.1 (UNO)
- 17. ON SCHEMATIC, SHADED WALLS INDICATE BRACED WALL PANELS. 18. ABBREVIATIONS:

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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>04/01/2020</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.

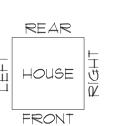
STRUCTURAL MEMBERS ONLY

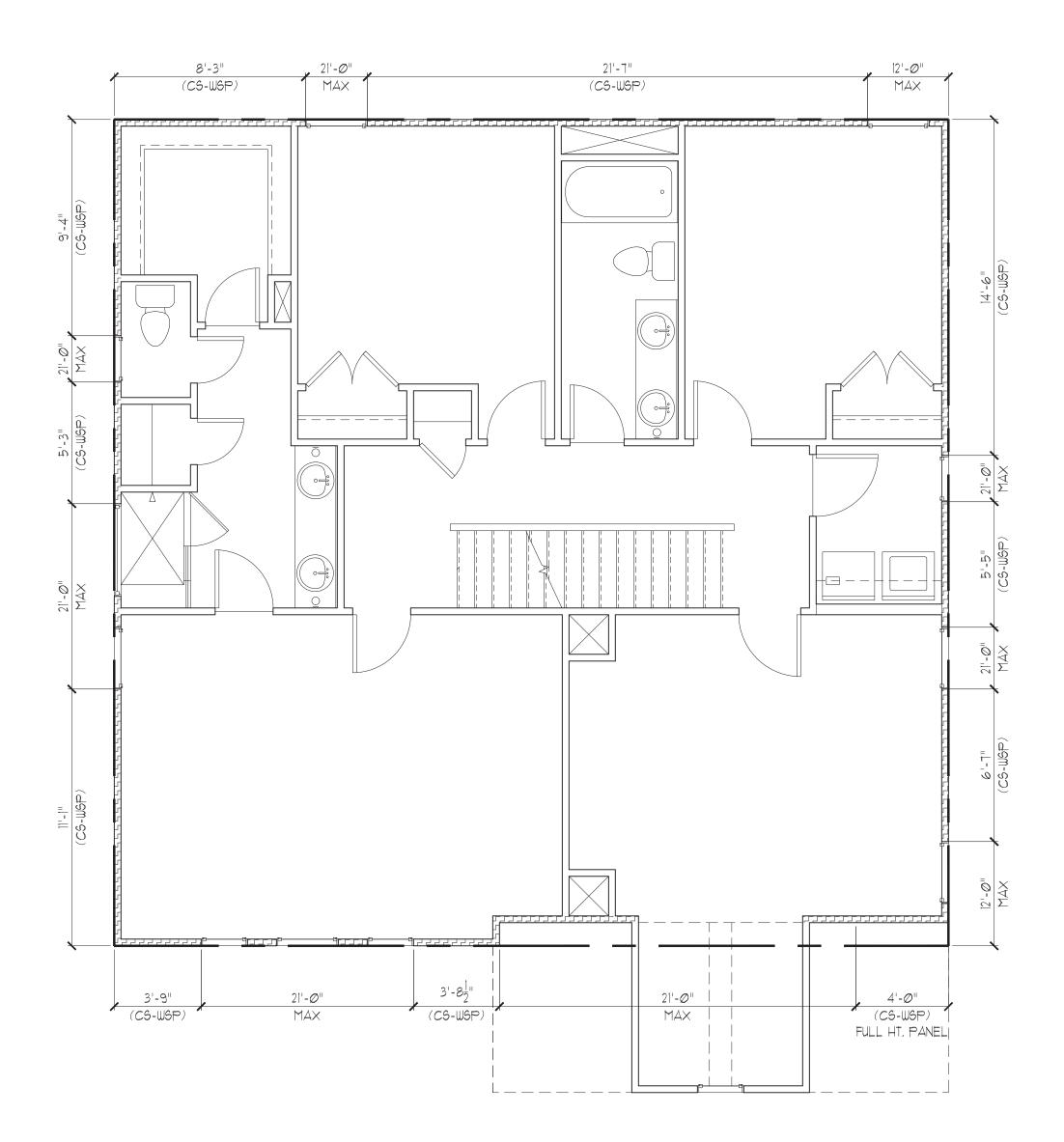
ENGINEERING SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS ON THIS DOCUMENT, SEAL DOES NOT INCLUDE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS. ANY DEVIATIONS OR DISCREPANCIES ON PLANS ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF SUMMIT ENGINEERING, LABORATORY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

STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

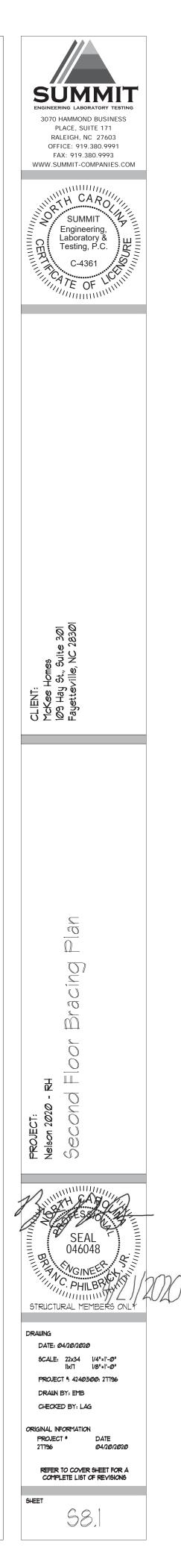
## SECOND FLOOR BRACING PLAN

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





CRAFTSMAN



SECOND FLOOR BRACING (FT)					
CONTINUOUS SHEATHING METHOD					
	REQUIRED	PROVIDED			
FRONT	5.1	11.4			
LEFT	5.1	25.6			
REAR	5,1	29.8			
RIGHT	5,1	26.5			

	DE\$IGN \$PECIFICATIONS:         Construction Type:       Commerical       Residential       X         Applicable Building Codes:       •       2018 North Carolina Residential Building Code with All Local Amendments         •       ASCE T-10: Minimum Design Loads for Buildings and Other Structures         Design Loads:       .       .         1.       Roort Live Loads       .       .         12.       Truss       .       .         12.       Truss       .       .         12.       Truss       .       .         20       PSF       .       .         12.       Truss       .       .         20.       Roof Dead Loads       .       .         21.       Conventional 2x       .       .         22.       Truss       .       .       .         23.       Gnou       .       .       .         3.       Moort Ance Factor       .       .       .         3.       Importance Factor       .       .       .	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         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         51. Conventional 2x       10 PGF         52. I-Joist       15 PGF         53. Floor Truss       15 PGF         6. Ultimate Design Wind Speed (3 sec. gust)       130 MPH         61. Exposure       B         62. Importance Factor       10         63. Wind Base Shear       63.1 Vx =         63.2 Vx =       63.2 Vx =	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'I''-35'       35'I''-40'       40'I''-45'         HT.       IsC.780       IT5,-18.9       182,-19.6       187,-202         ZONE 2       16.1,-18.0       IT5,-22.1       182,-22.9       181,-23.5         ZONE 3       16.1,-21.0       IT5,-22.1       182,-22.9       181,-23.5         ZONE 4       182,-19.0       IT5,-22.1       182,-22.9       181,-23.5         ZONE 5       182,-12.0       IT5,-22.1       182,-22.9       181,-23.5         ZONE 5       182,-12.0       IT5,-22.1       182,-22.9       183,-26.1         ZONE 5       182,-12.0       It5,-25.0       193,-26.1       204,-21.3         ZONE 5       182,-12.0       It5,-25.0       193,-26.1       204,-26.9         8.       Selsmic       5.0       192,-25.2       193,-26.1       204,-26.9         8.       Selse Caegory	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         C.J. CELLING JOIST       SC       STUD COLUMN         CLR       CLAR       SJ       SINGLE JOIST         D       DOUBLE JOIST       SF       SPRUCE PINE FIR         DSP       DOUBLE STUD POCKET       SG1       SIMPSON STRONG-TIE         EE       EACH END       STP       SPRUCE PINE FIR         DSP       DOUBLE STUD POCKET       SG1       SIMPSON STRONG-TIE         EE       EACH END       STP       SOUTHERN YELLOW PINE         EW       EACH WAY       TJ       TRIPLE STUD POCKET         OC ON CENTER       TYP       TYPICAL         PSF       POUNDS PER SQUARE FOOT       UNO       UNESS NOTED OTHERWISE         PSi       POUNDS PER SQUARE FOOT       UNO       UNESS NOTED OTHERWISE         PSi       POUNDS PER SQUARE FOOT       UNO       UNE SON ST	Image: set of the
<ul> <li>GENERAL STRUCTURAL NOTES:</li> <li>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.</li> <li>The structure is only stable in its completed form. The contractor shall provide all required temporary bracing during construction to stabilize the structure.</li> <li>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.</li> <li>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 for dimensions, or for actual field conditions, is not the responsibility of the SER of SUMMIT.</li> <li>Verification of assumed field conditions for accuracy and report any discrepancies to SUMMIT before construction begins.</li> <li>The SER is not responsible for any secondary structural elements or non-structural elements, except for the elements specifically noted on the structural drawings.</li> <li>This structure and all construction shall conform to all applicable sections of the international residential code.</li> <li>This structure and all construction shall conform to all applicable sections of local building codes.</li> </ul>	<ul> <li>the region in which the structure is to be constructed. However, the bottom of all footings shall be a minimum of 12° below grade.</li> <li>Any fill shall be placed under the direction or recommendation of a licensed professional engineer.</li> <li>The resulting soil shall be compacted to a minimum of 95% maximum dry density.</li> <li>Excavations of footings shall be lined temporarily with a 6 mill polyethylene membrane if placement of concrete does not occur within 24 hours of excavation.</li> <li>No concrete shall be placed against any subgrade containing water, ice, frost, or loose material.</li> <li>STRUCTURAL STEEL:</li> <li>Structural steel shall be fabricated and erected in accordance in which to to 12 standard Practice for Steel Construction "Code of Standard Practice for Steel Construction "Code of Standard Practice for Steel Duildings and Bridges" and the manual of steel Construction "Load Resistance Factor Design" latest editions.</li> <li>Structural steel shall have a minimum yield stress (Fy) of 36 ksi unless otherwise noted.</li> <li>Welding shall conform to the latest edition of the American Welding Society's Structural Welding Concrets shall have a normal weight aggregate and a minimum concress standards.</li> <li>Concrete shall have a normal weight aggregate and a minimum cont 92% concrete shall comply requirements, and shall comply requirements, and shall comply requirements and shall c</li></ul>	<ul> <li>discrepancies become apparent, the contractor shall notify SUMMIT immediately.</li> <li>discrepancies become apparent, the contractor shall notify SUMMIT immediately.</li> <li>discrepancies become apparent, the contractor shall notify SUMMIT immediately.</li> <li>discrepancies become apparent, the contractor shall notify SUMMIT immediately.</li> <li>discrepancies become apparent, the contractor shall notify SUMMIT immediately.</li> <li>discrepancies become apparent, the contractor shall be contract with accordance with the above assumptions.</li> <li>to there reinforcing steel is required vertically dow provided unless otherwise noted.</li> <li>Solid sam wood framing members shall conform to apportide through a saw cut joint.</li> <li>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 other wise noted, all wood framing members are de Specification for Wood Construction (ND other wise noted, all wood framing members are de Specification for Wood Construction (ND other wise noted, all wood framing members are de Specification for Wood Construction (ND other wise noted, all wood framing members are de Specification for Wood Construction (ND other wise noted, all wood framing members are de Specification for Wood Construction (ND other wise noted, all wood framing members are de Specification for Wood Construction (ND other wise noted, all wood framing members are de Specification for Wood Construction (ND other wise noted).</li> <li>UMUFJ for concrete shall be securely concrete pour.</li> <li>Let = 1,900,000 psi 22. For 32600 psi 24. Fc = 100 psi</li></ul>	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.

- All structurally required wood sheathing shall bear the mark of the APA.

- 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.

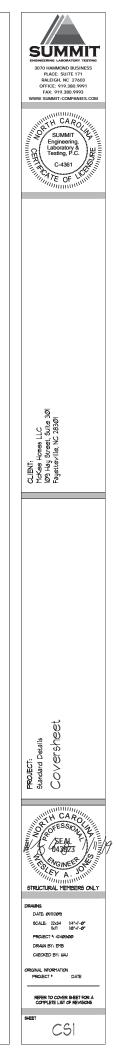
of the current local building code.

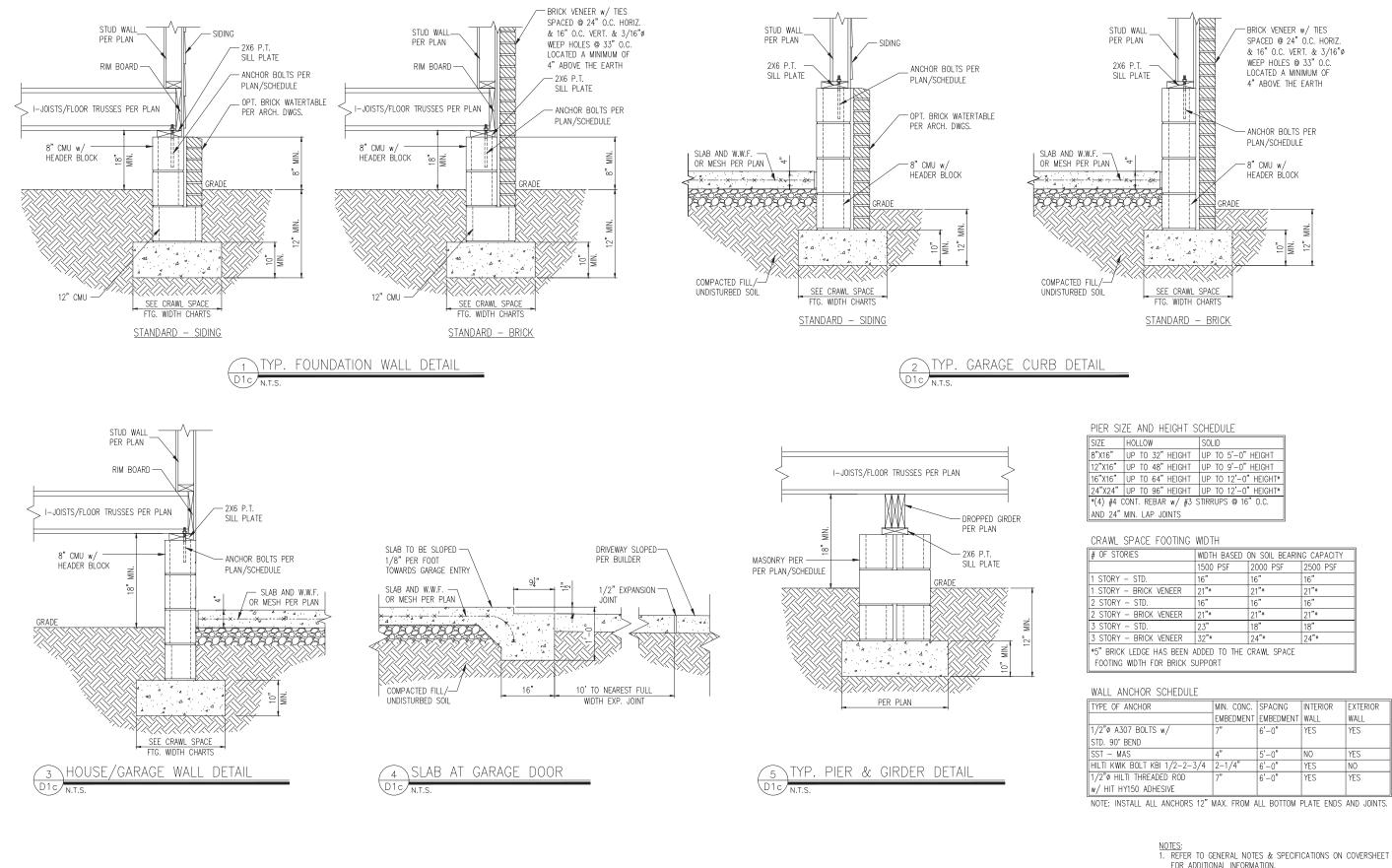
- Requirements for Reinforced Concrete" and ACI 301: "Specifications for Structural Concrete for Buildings". Air entrained concrete must be used for all structural elements
- exposed to freeze/thau cycles and deicing chemicals. Air entrainment amounts (in percent) shall be within -1% to +2% of target values as follows: 3.1. Footings: 5% 3.2. Exterior 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

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.





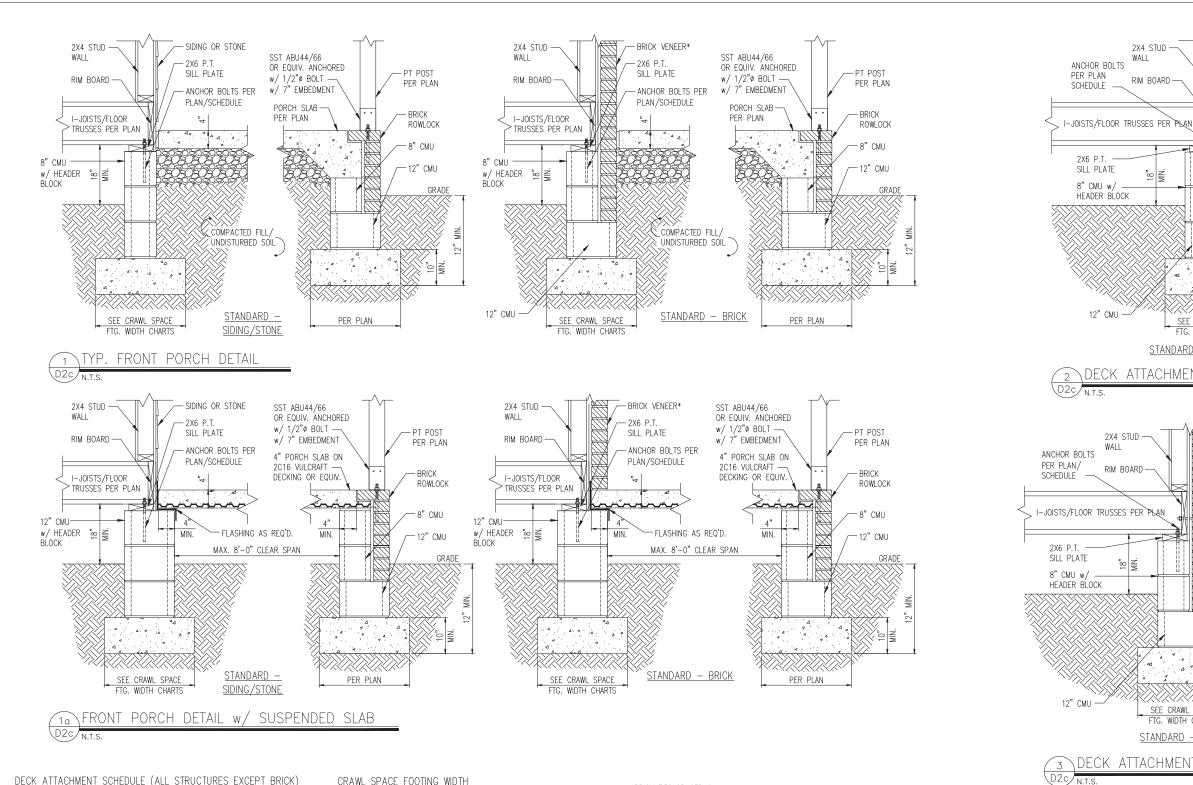
HOLLOW	SOLID		
UP TO 32" HEIGHT	UP TO 5'-0" HEIGHT		
	UP TO 9'-0" HEIGHT		
UP TO 64" HEIGHT	UP TO 12'-0" HEIGHT*		
UP TO 96" HEIGHT	UP TO 12'-0" HEIGHT*		
ONT. REBAR w/ #3 S	TIRRUPS @ 16" O.C.		
MIN. LAP JOINTS			

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"*
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





DECK ATTACHMENT SCHEDULE	(ALL STRUCTURES EXCEPT BRICK)	
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FASTENERS	MAX. 8'-0" JOIST	MAX. 16'-0" JOIST
	SPAN	SPAN
5/8" GALV. BOLTS w/ NUT & WASHER <sup>b</sup>	(1) @ 3'-6" O.C.	(1) @ 1'-8" O.C.
AND	AND	AND
12d COMMON GALV NAILS <sup>C</sup>	(2) @ 8" 0 C	(3) @ 6" 0 C

a. ATTACHMENT INTERPOLATION BETWEEN 8' AND 16' JOIST SPANS IS ALLOWED. b. MINIMUM EDGE DISTANCE FOR BOLTS IS 22".

c. NAILS MUST PENETRATE THE SUPPORTING STRUCTURE BAND A MINIMUM OF  $1\frac{1}{2}^{n}$ 

DECK ATTACHMENT SCHEDULE (BRICK STRUCTURES)

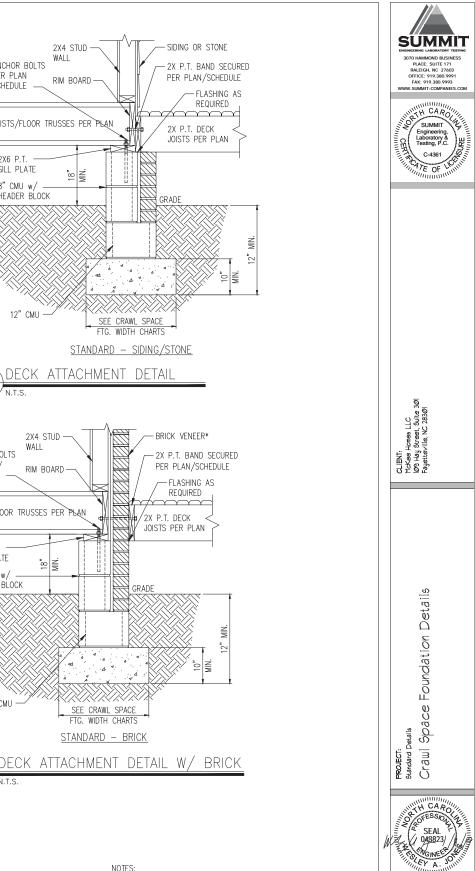
FASTENERS	MAX. 8'-0" JOIST	MAX. 16'-0" JOIST
	SPAN	SPAN
5/8" GALV. BOLTS w/ NUT & WASHER <sup>b</sup>	(1) @ 2'-4" O.C.	(1) @ 1'-4" O.C.

a. ATTACHMENT INTERPOLATION BETWEEN 8' AND 16' JOIST SPANS IS ALLOWED. b. MINIMUM EDGE DISTANCE FOR BOLTS IS  $2\frac{1}{2}$ ".

CRAWL SPACE FOOTING WIDTH

# OF STORIES	WIDTH BASED	ON SOIL BEARIN	NG CAPACITY	
	1500 PSF	2000 PSF	2500 PSF	
1 STORY - STD.	16"	16"	16"	
1 STORY - BRICK VENEER	21"*	21"*	21"*	
2 STORY - STD.	16"	16"	16"	
2 STORY - BRICK VENEER	21"*	21"*	21"*	
3 STORY - STD.	23"	18"	18"	
3 STORY - BRICK VENEER	32"*	24"*	24"*	
*5" BRICK LEDGE HAS BEEN ADDED TO THE CRAWL SPACE FOOTING WIDTH FOR BRICK SUPPORT				

\*BRICK TIES SPACED @ 24" O.C. HORIZ. & 16" O.C. VERT. AND 3/16"Ø WEEP HOLES @ 33" O.C. LOCATED A MINIMUM OF 4" ABOVE THE EARTH



NOTES: 1. REFER TO GENERAL NOTES & SPECIFICATIONS ON COVERSHEET FOR ADDITIONAL INFORMATION.

N.T.S

- 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

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

D2c

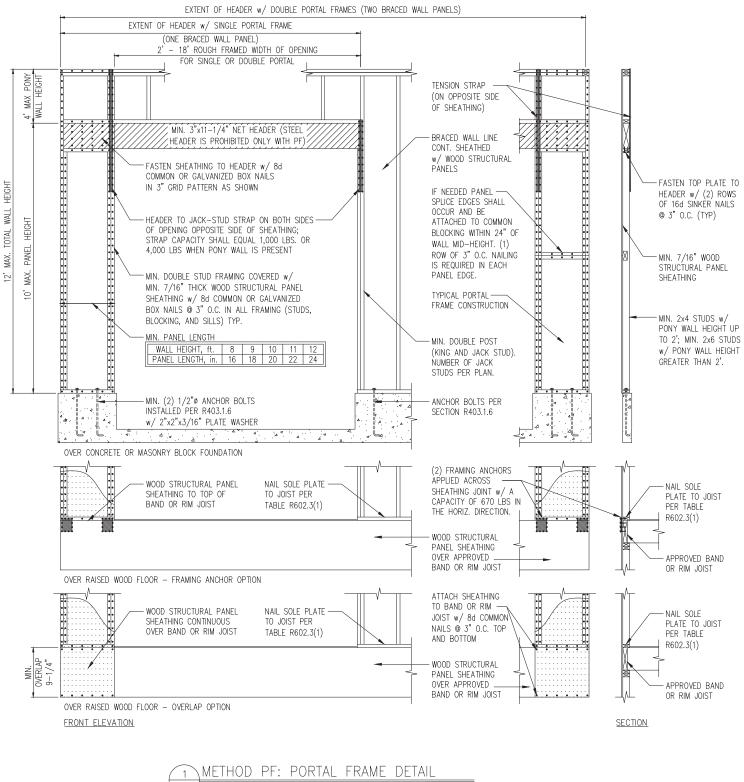
STRUCTURAL MEMBERS ONLY

SCALE: 22x34 1/4"+1"-Ø" 1x11 1/8"+1"-Ø"

PROJECT \* 4240500 DRAWN BY; EMB CHECKED BY: WAJ

PROJECT PROJECT DATE

DRAWING DATE: 01/1/2019



D1f 3/8" = 1'-0"

