

24'-4 1/2" MEAN ROOF HGT.  
 9'-1 1/8" CLG. HGT.  
 1'-8" HEADER HGT.  
 8'-1 1/8" CLG. HGT.  
 6'-8" HEADER HGT.

NOTE: MEAN ROOF HGT. MAY VARY PER GRADE



**FRONT ELEVATION**  
 Scale: 1/4" = 1'

STEPS TO GRADE AS REQ'D PER SITE CONDITIONS

© PLAN COPYRIGHT MCMILLAN DESIGN, INC.

ASPHALT SHINGLES PER SPEC.

FRIEZE BOARD - SIZE & MATERIAL PER SPEC.

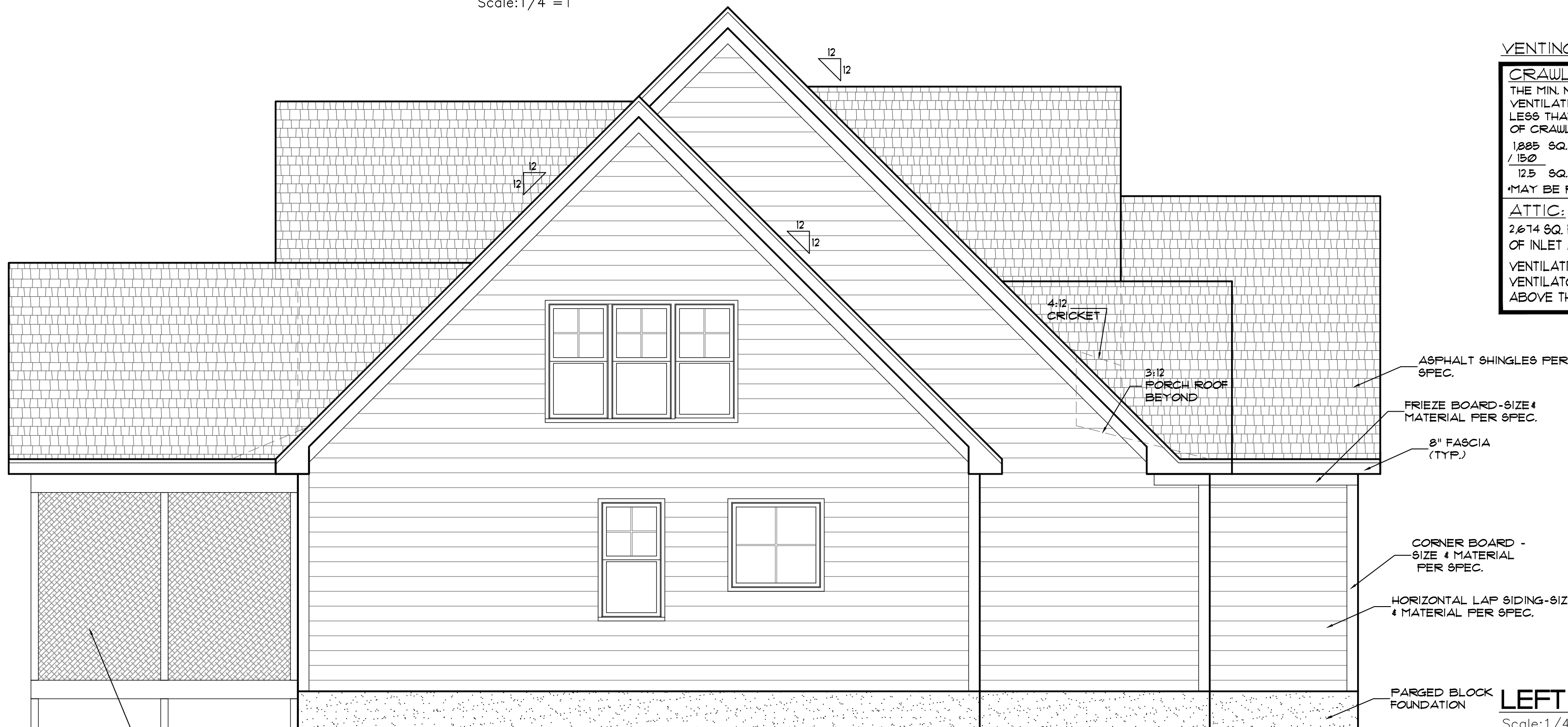
8" FASCIA (TYP.)

HORIZONTAL LAP SIDING - SIZE & MATERIAL PER SPEC.

CORNER BOARD - SIZE & MATERIAL PER SPEC.

FARGED BLOCK FOUNDATION

CULTURED STONE VENEER PER SPEC.



**VENTING CALCULATIONS:**

**CRAWLSPACE:**  
 THE MIN. NET FREE AREA OF CRAWL VENTILATION OPENINGS SHALL NOT BE LESS THAN 1 SQ. FT. FOR EACH 150 SQ. FT. OF CRAWL SPACE AREA.  
 1,885 SQ. FT. CRAWL SPACE AREA / 150 = 12.5 SQ. FT. NET FREE AREA REQUIRED  
 \*MAY BE REDUCED BY 50% W. VAPOR BARRIER

**ATTIC:**  
 2,674 SQ. FT. OF ATTIC / 300 = 8.9 SQ. FT. OF INLET AND OUTLET.  
 VENTILATION MAY BE REDUCED 50% WHEN VENTILATORS ARE USED AT LEAST 3'-0" ABOVE THE CORNICE VENTS.

**ELEVATION NOTES**

**BUILDING CODES:**  
 THIS PLAN HAS BEEN DESIGNED UNDER THE NC BUILDING CODES, 2018 RESIDENTIAL EDITION.  
**ROOFING:**  
 ASPHALT SHINGLES SHALL BE USED ONLY ON ROOF SLOPES OF TWO UNITS VERTICAL IN 12 UNITS HORIZONTAL (2:12) OR GREATER. FOR ROOF SLOPES FROM TWO UNITS VERTICAL IN 12 UNITS HORIZONTAL (2:12) UP TO FOUR UNITS VERTICAL IN 12 UNITS HORIZONTAL (4:12), DOUBLE UNDERLAYMENT APPLICATION IS REQUIRED IN ACCORDANCE WITH SECTION R905.1.1.

ASPHALT SHINGLES PER SPEC.

FRIEZE BOARD - SIZE & MATERIAL PER SPEC.

8" FASCIA (TYP.)

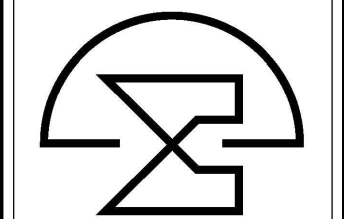
CORNER BOARD - SIZE & MATERIAL PER SPEC.

HORIZONTAL LAP SIDING - SIZE & MATERIAL PER SPEC.

FARGED BLOCK FOUNDATION

**LEFT ELEVATION**  
 Scale: 1/4" = 1'

**McMillan Design**  
 847 Wake Forest Business Park, Suite 102  
 Wake Forest, NC 27587  
 919.263.1509  
 www.mcmillan-design.com



Paramount Homes  
 Cotton Farms  
 Lot #21

Sheet Title:  
**FRONT & LEFT ELEVATIONS**

REVISIONS	
NUMBER	DATE

This plan is the property of McMillan Design and may not be used or reproduced without the expressed written consent of McMillan Design. These drawings are offered to the named client for a conditional one time use. The conditional use is limited to the lot or property as specified herein, and only for said location.  
 McMillan Design assumes no liability for any home constructed from these plans. Contractor or Builder shall verify all dimensions and conditions prior to construction. Caution must be exercised when making modifications to these drawings. If changes are made to these drawings, contact McMillan Design.

Plan Number  
**M112-23**  
 Sheet No. **A1**  
 Drawn By: **TE**  
 Date: **8/16/23**

© COPYRIGHT 2022  
 McMillan Design, Inc.



**REAR ELEVATION**  
 Scale: 1/4" = 1'



**RIGHT ELEVATION**  
 Scale: 1/4" = 1'

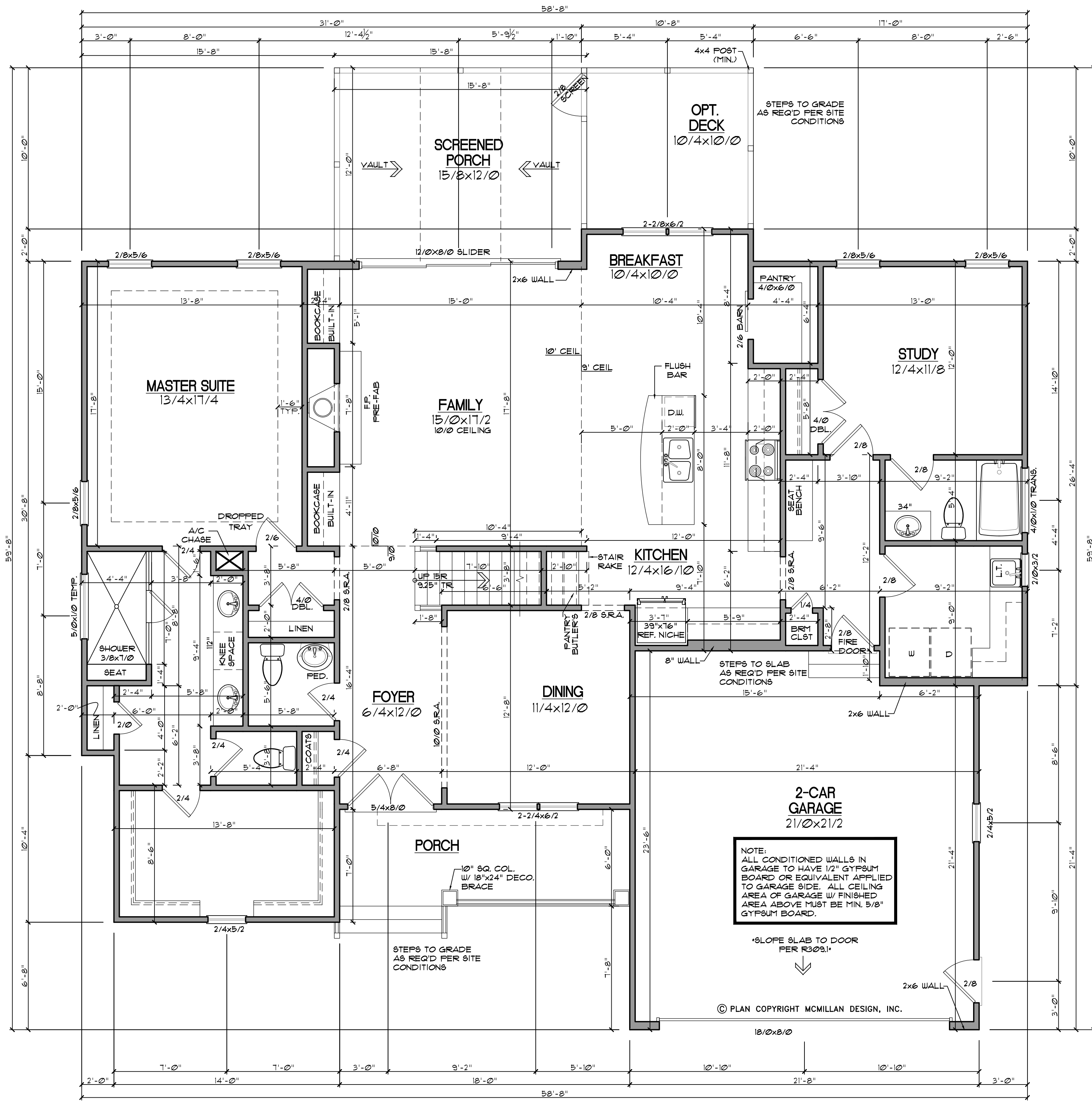
Sheet Title  
**REAR & RIGHT ELEVATIONS**

REVISIONS

NUMBER	DATE

This plan is the property of McMillan Design and may not be used or reproduced without the expressed written consent of McMillan Design. These drawings are offered to the named client for a conditional one time use. The conditional use is limited to the lot or property as specified herein, and only for said location. McMillan Design assumes no liability for any home constructed from these plans. Contractor or Builder shall verify all dimensions and conditions prior to construction. Caution must be exercised when making modifications to these drawings. If changes are made to these drawings, contact McMillan Design.

Plan Number  
**M112-23**  
 Sheet No. **A2**  
 Drawn By: **TE**  
 Date: **8/16/23**



**GENERAL NOTES**

**WALLS:**  
ALL WALLS ARE DRAWN 4" THICK UNO.  
ANGLED WALL ARE DRAWN @45° UNO.

**SMOKE DETECTORS:**  
LOCATION AND NUMBER OF DETECTORS SHALL CONFORM TO NEC.

**EGRESS:**  
ALL BEDROOMS MUST HAVE AT LEAST ONE WINDOW WHICH CONFORMS TO R-310 OF THE N.C. BLDG. CODE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY CHOSEN WINDOWS MEET EGRESS REQUIREMENTS AS MANUFACTURERS VARY.

**ATTIC ACCESS:**  
MIN. ATTIC ACCESS SHALL BE PROVIDED BY BUILDER AND LOCATED ON SITE.

**WALL/CEILING HGT.**  
WALL AND CEILING HEIGHT NOTES ARE BASED ON NOMINAL WALL SIZE.  
KNEE WALL HEIGHT LABELS FOR WALLS UNDER RAFTERS ASSUME AN EXTRA 2" FOR FURRING (IN HEATED SPACES) FOR INSULATION. THE WALL HEIGHT REFERS TO THE HGT. FROM THE FLOOR DECKING TO THE BOTTOM OF THE FURRING.

**SQUARE FOOTAGE**

Heated Square Footage	
First Floor Plan	1,887.9
Second Floor	1,236.7
Unheated Square Footage	
2-Car Garage	492.5
Front Porch	108.0
Opt. Deck	103.3
Screened Porch	187.3
Walk-In Storage	299.4

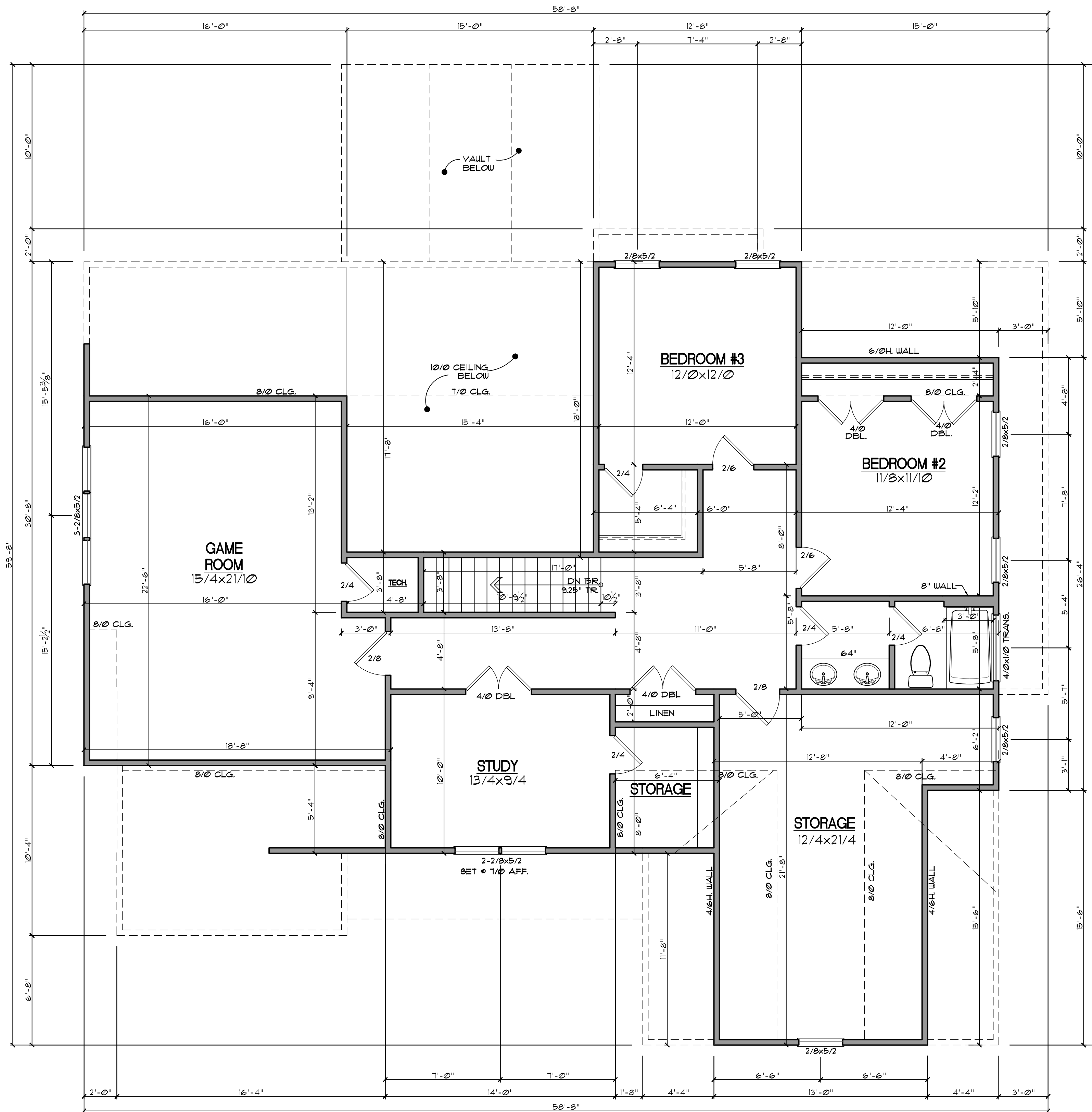
**FIRST FLOOR**  
SCALE: 1/4" = 1'-0"

© PLAN COPYRIGHT MCMILLAN DESIGN, INC.

**REVISIONS**

NUMBER	DATE

This plan is the property of McMillan Design and may not be used or reproduced without the expressed written consent of McMillan Design. These drawings are offered to the named client for a conditional one time use. The conditional use is limited to the lot or property as specified herein, and only for said location. McMillan Design assumes no liability for any home constructed from these plans. Contractor or Builder shall verify all dimensions and conditions prior to construction. Caution must be exercised when making modifications to these drawings. If changes are made to these drawings, contact McMillan Design.



**GENERAL NOTES**

**WALLS:**  
ALL WALLS ARE DRAWN 4" THICK UNO. ANGLED WALL ARE DRAWN @45° UNO.

**SMOKE DETECTORS:**  
LOCATION AND NUMBER OF DETECTORS SHALL CONFORM TO NEC.

**EGRESS:**  
ALL BEDROOMS MUST HAVE AT LEAST ONE WINDOW WHICH CONFORMS TO R-310 OF THE N.C. BLDG. CODE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY CHOSEN WINDOWS MEET EGRESS REQUIREMENTS AS MANUFACTURERS VARY.

**ATTIC ACCESS:**  
MIN. ATTIC ACCESS SHALL BE PROVIDED BY BUILDER AND LOCATED ON SITE.

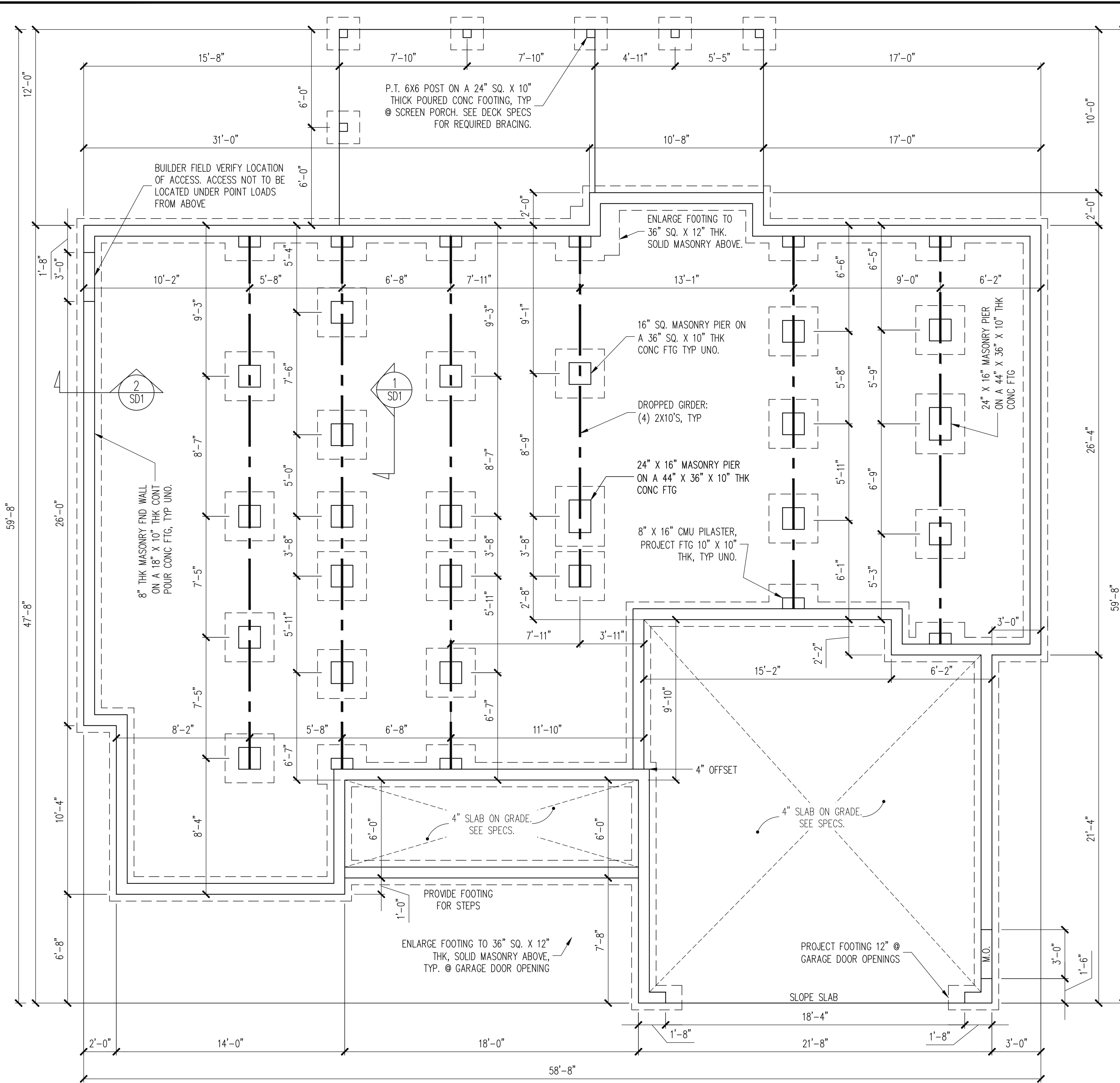
**WALL/CEILING HGT.**  
WALL AND CEILING HEIGHT NOTES ARE BASED ON NOMINAL WALL SIZE. KNEE WALL HEIGHT LABELS FOR WALLS UNDER RAFTERS ASSUME AN EXTRA 2" FOR FURRING (IN HEATED SPACES) FOR INSULATION. THE WALL HEIGHT REFERS TO THE HGT. FROM THE FLOOR DECKING TO THE BOTTOM OF THE FURRING.

**SECOND FLOOR**  
SCALE: 1/4"=1'

REVISIONS	
NUMBER	DATE

This plan is the property of McMillan Design and may not be used or reproduced without the expressed written consent of McMillan Design. These drawings are offered to the named client for a conditional one time use. The conditional use is limited to the lot or property as specified herein, and only for said location.

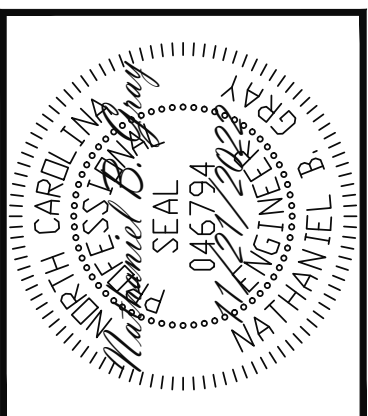
McMillan Design assumes no liability for any home constructed from these plans. Contractor or Builder shall verify all dimensions and conditions prior to construction. Caution must be exercised when making modifications to these drawings. If changes are made to these drawings, contact McMillan Design.



The structural design of this plan is the property of Engineering Tech Associates, P.A. These plans are for the one time use at the location and for the client listed. Engineering Tech Associates, P.A. assumes no liability for these plans if they are reproduced, in whole or in part, for construction at any other location without written permission from Engineering Tech Associates, P.A.

**STRUCTURAL ENGINEERS**  
 License No. C-3870  
 318 W Millbrook, Suite 201  
 Raleigh, North Carolina 27615  
 (919) 844-1661 Fax: (919) 844-1665

**Engineering Tech ASSOCIATES, P.A.**



**CONSTRUCTION SPECIFICATIONS**  
 INSTANT REFERENCES

REFER TO THE CONSTRUCTION SPECIFICATIONS SECTIONS FOR THE FOLLOWING INFORMATION:

PART 1.01: CURRENT GOVERNING CODE

PART 14: STUD SUPPORT FOR BEAMS

PART 16.02: GENERAL WALL BRACING NOTES

PART 17: KING STUDS FOR EXTERIOR WALLS

SEE DETAIL / CONSTRUCTION SPECIFICATIONS SHEETS FOR I-JOISTS ALLOWABLE SUBSTITUTIONS

**FOUNDATION SCHEDULE**

F1

NOTES:  
 -HEIGHT AND BACKFILL LIMITATIONS FOR FOUNDATION WALLS ARE TO BE GOVERNED BY THE NCSBC, LATEST EDITION.  
 -14" SQ POURED CONC PIERS OR 16" Ø POURED CONC PIERS MAY BE USED IN LIEU OF 16" SQ MASONRY PIERS.

**FOUNDATION PLAN**  
 1/4" = 1'-0"

PARAMOUNT HOMES	
SCOPE	STRUCTURAL ADDENDUM
LOT #:	21 COTTON FARMS
ENG:	CIB/NBG
REV:	8/21/2023
DATE:	11/21/2022

**PLAN NO.**  
 M112-23

**PROJECT NO.**  
 23-21-127\_281

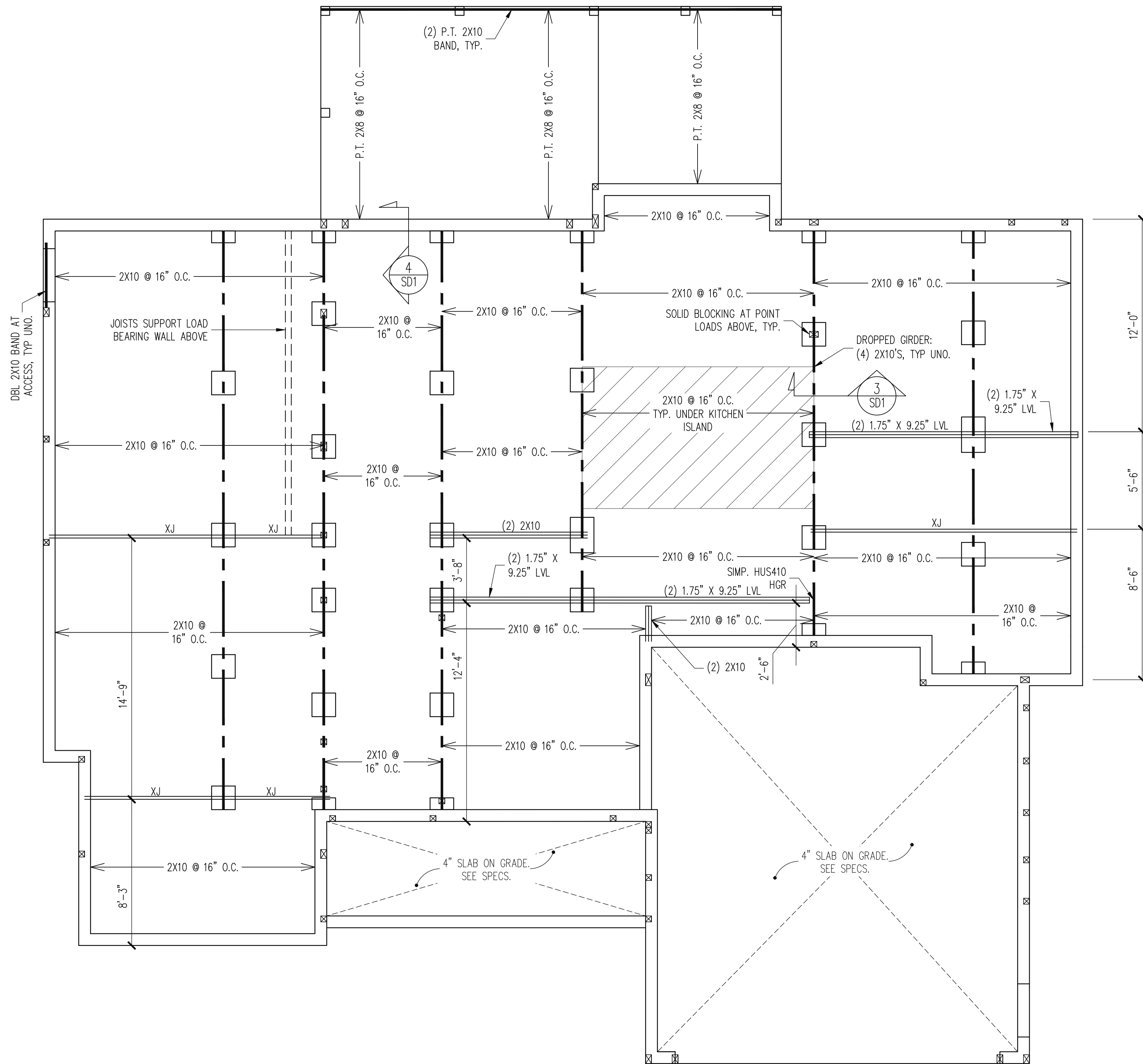
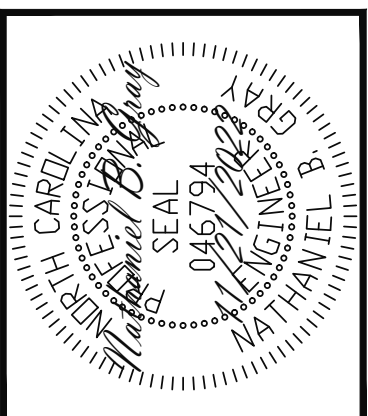
**SHEET NO.**  
 S1

1 of 8

The structural design of this plan is the property of Engineering Tech Associates, P.A. These plans are for the one time use at the location and for the client listed. Engineering Tech Associates, P.A. assumes no liability for these plans if they are reproduced, in whole or in part, for construction at any other location without written permission from Engineering Tech Associates, P.A.

**STRUCTURAL ENGINEERS**  
 License No. C-3870  
 318 W Millbrook, Suite 201  
 Raleigh, North Carolina 27615  
 (919) 844-1661 Fax: (919) 844-1665

**Engineering Tech ASSOCIATES, P.A.**



CRAWLSPACE FRAMING PLAN  
 1/4" = 1'-0"

PARAMOUNT HOMES	
SCOPE	STRUCTURAL ADDENDUM
LOT #:	21 COTTON FARMS
ENG:	CIB/NBG
REV:	8/21/2023
DATE:	11/21/2022

PLAN NO.  
M112-23

PROJECT NO.  
23-21-127\_281

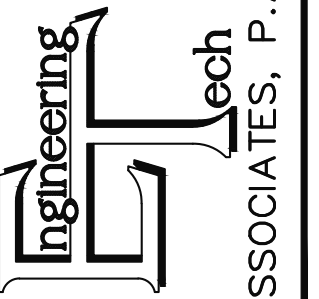
SHEET NO.  
S2

2 of 8

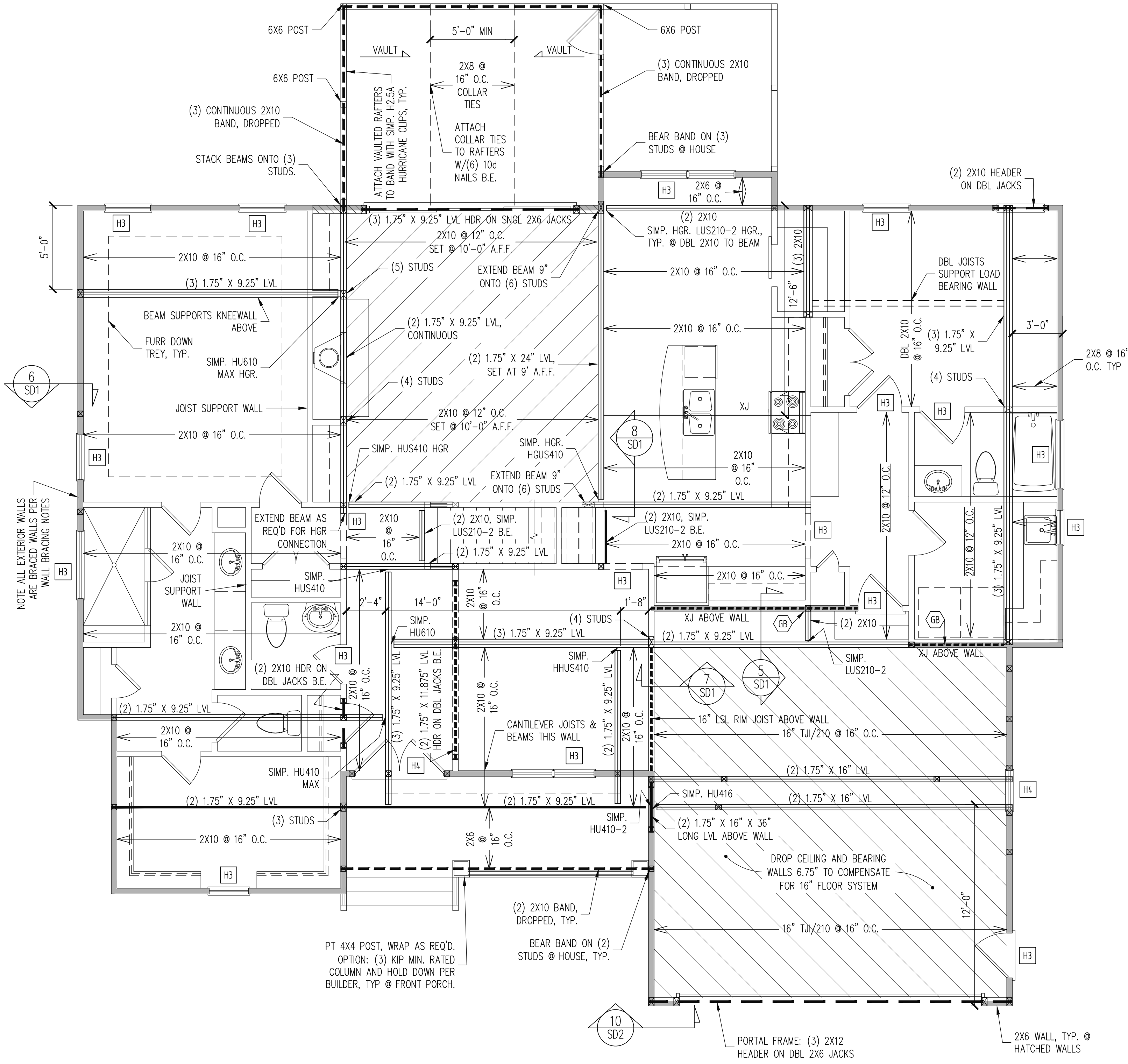
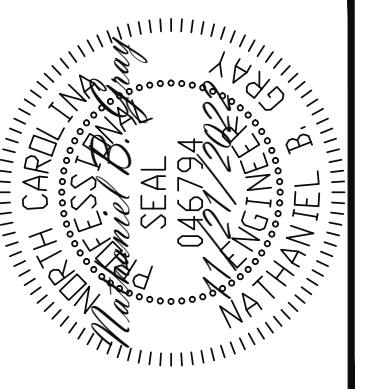


The structural design of this plan is the property of Engineering Tech Associates, P.A. These plans are for the one time use at the location and for the client listed. Engineering Tech Associates, P.A. assumes no liability for these plans if they are reproduced, in whole or in part, for construction at any other location without written permission from Engineering Tech Associates, P.A.

STRUCTURAL ENGINEERS  
License No. C-3870  
318 W Millbrook, Suite 201  
Raleigh, North Carolina 27615



ASSOCIATES, P.A. (919) 844-1661 Fax: (919) 844-1665



**WALL BRACING**

**FIRST FLOOR ONLY**

CS - ALL EXTERIOR STUD WALLS, EXTERIOR SIDE, ARE TO BE CONTINUOUSLY SHEATHED WITH 7/16 APA RATED OSB NAILED TO STUDS WITH 8d NAILS @ 4" O.C. AT PANEL EDGES, 8" O.C. IN PANEL FIELD.

**SHADED WALLS:**

GB INTERIOR BRACED WALL. 1/2" GB SECURED PER TABLE R602.10.2 OF THE 2012 NCRBC. (FASTENERS @ 7" O.C.) BOTH SIDES OF WALL, OR (FASTENERS @ 4" O.C.) ONE SIDE OF WALL AT STAIRS. WSP BRACING MAY BE USED IN LIEU OF GB AT BUILDERS DISCRETION, TYP. THROUGHOUT PLAN.

WSP - ONE SIDE OF INTERIOR WALL OR INSIDE OF EXTERIOR WALL WITH 3/8" MIN. THICKNESS WOOD STRUCTURAL PANELING. ATTACH WSP TO STUD WALL WITH 8d NAILS @ 6" O.C. AT PANEL EDGES, 12" O.C. IN PANEL FIELD.

NOTES:  
-PROVIDED CONTINUOUS SHEATHING = 233' MIN.

**HEADER SCHEDULE**

- H1 SINGLE 2X4 TURNED FLAT (A)
- H2 (2) 2X4'S ON SINGLE JACKS (B)
- H3 (2) 2X10'S ON SINGLE JACKS (C)
- H4 (2) 1.75" X 9.25" LVL'S ON DBL JACKS
- H5 (3) 2X10'S ON SINGLE JACKS

- (A) TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY, ROUGH OPENING 38" MAX.
- (B) TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY, ROUGH OPNG 38" TO 74" MAX.
- (C) TYPICAL FOR ALL CONDITIONS NOT LISTED IN (A) OR (B) UNO.

NOTES:  
-HEADERS IN NON LOAD BEARING INTERIOR WALLS ARE NOT LABELED.

**1ST FLOOR FRAMING PLAN**

WALLS AND CEILING 1/4" = 1'-0"

PARAMOUNT HOMES STRUCTURAL ADDENDUM	ENG	CIB/NBG	REV:	DATE
	21 COTTON FARMS	8/21/2023	11/21/2022	

PLAN NO.  
**M112-23**

PROJECT NO.  
**23-21-127\_281**

SHEET NO.  
**S3**

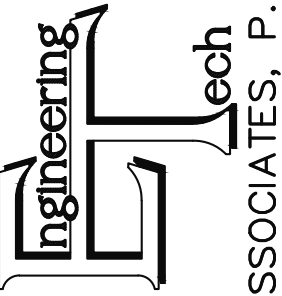
3 of 8



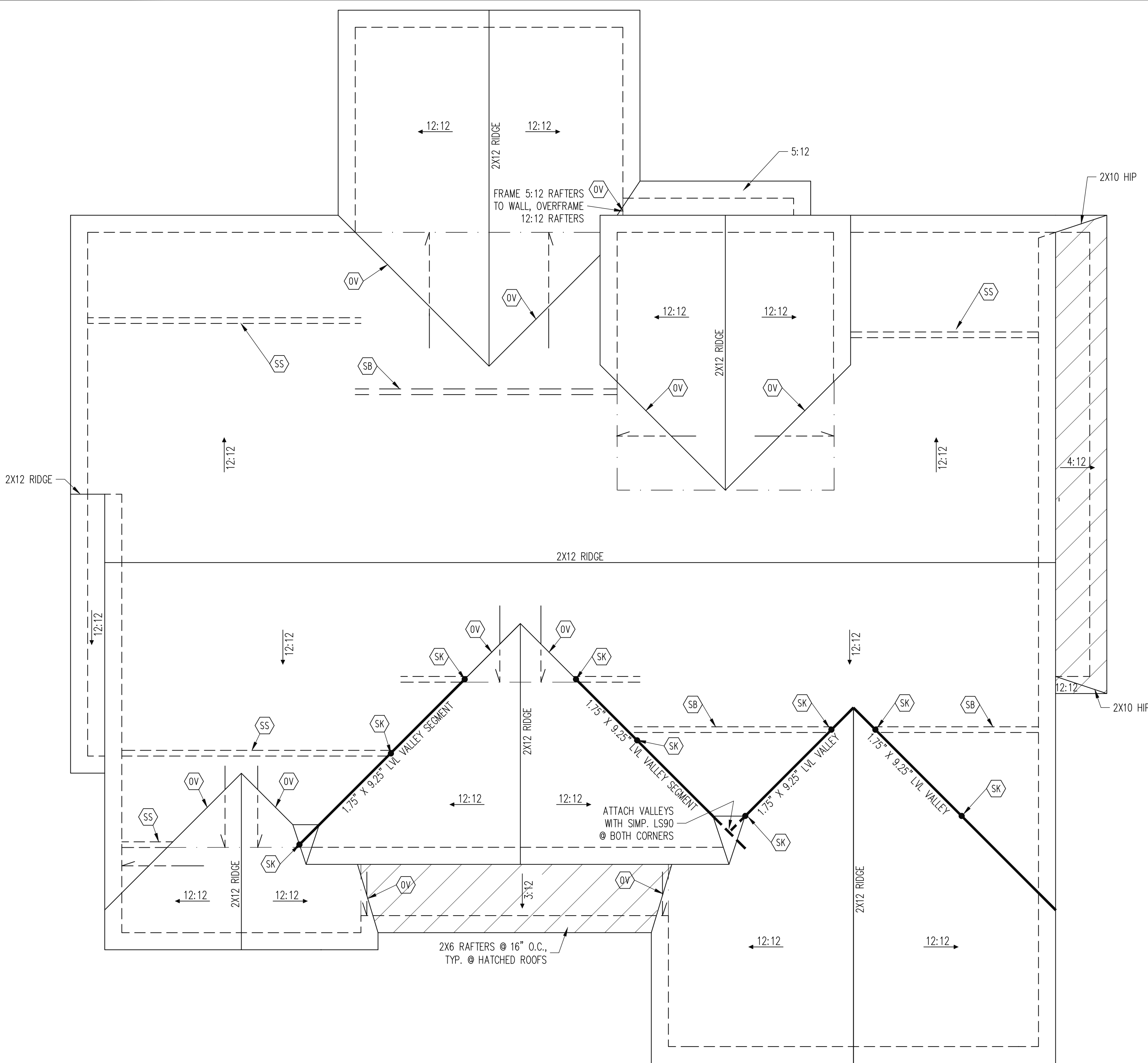
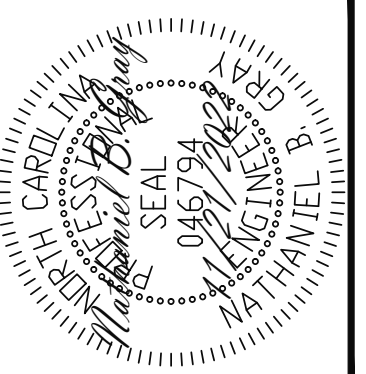


The structural design of this plan is the property of Engineering Tech Associates, P.A. These plans are for the one time use at the location and for the client listed. Engineering Tech Associates, P.A. assumes no liability for these plans if they are reproduced, in whole or in part, for construction at any other location without written permission from Engineering Tech Associates, P.A.

STRUCTURAL ENGINEERS  
License No. C-3870  
318 W Millbrook, Suite 201  
Raleigh, North Carolina 27615  
(919) 844-1661 Fax: (919) 844-1665



ASSOCIATES, P.A.



**FRAMING NOTES**  
ROOF ONLY

- COMMON RAFTERS 2X8 @ 16" O.C. TYP U.N.O.
- COLLAR TIES 2X4 EVERY 3RD SET OF RAFTERS TYP U.N.O.
- VERIFY ALL KNEEWALL HEIGHTS AND ARCHITECTURAL OVERHANGS PRIOR TO CONSTRUCTION

**FRAMING SCHEDULE**  
ROOF ONLY

OV OVERFRAME VALLEY ( 2X10 SLEEPER )

SK STIFF KNEE (DBL 2X4)

SS SUPPORT/SPLICE RAFTERS ON KNEEWALL BELOW

SB SUPPORT/SPLICE RAFTERS ON BEAM BELOW

**ROOF FRAMING PLAN**

1/4" = 1'-0"

PARAMOUNT HOMES	
SCOPE	STRUCTURAL ADDENDUM
LOT #:	21 COTTON FARMS
ENG:	CIB/NBG
REV:	8/21/2023
DATE:	11/21/2022

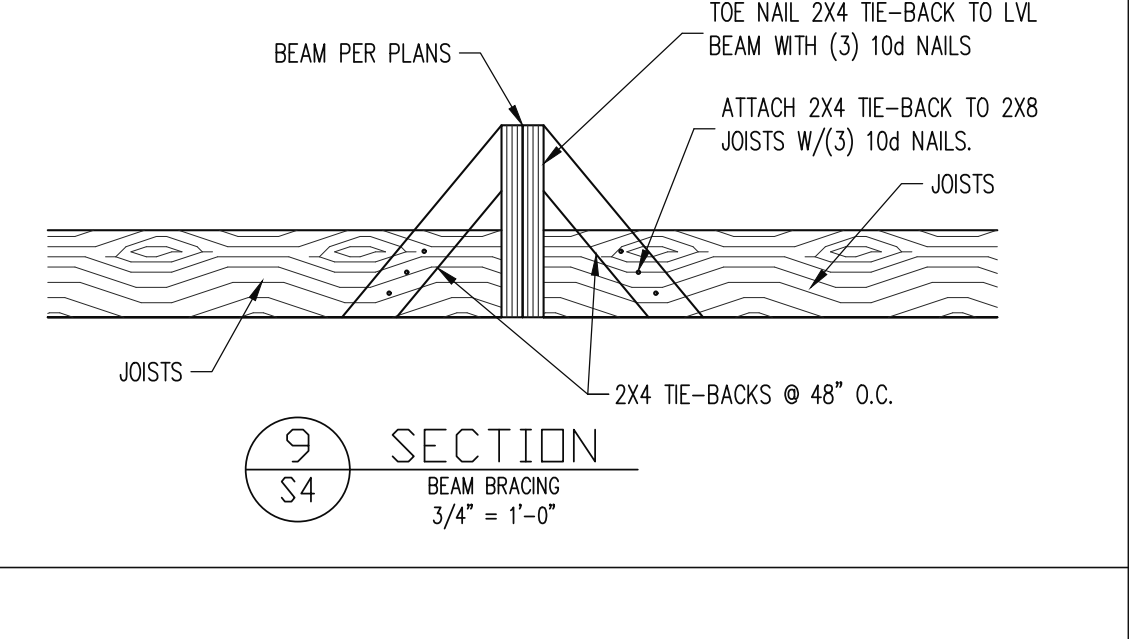
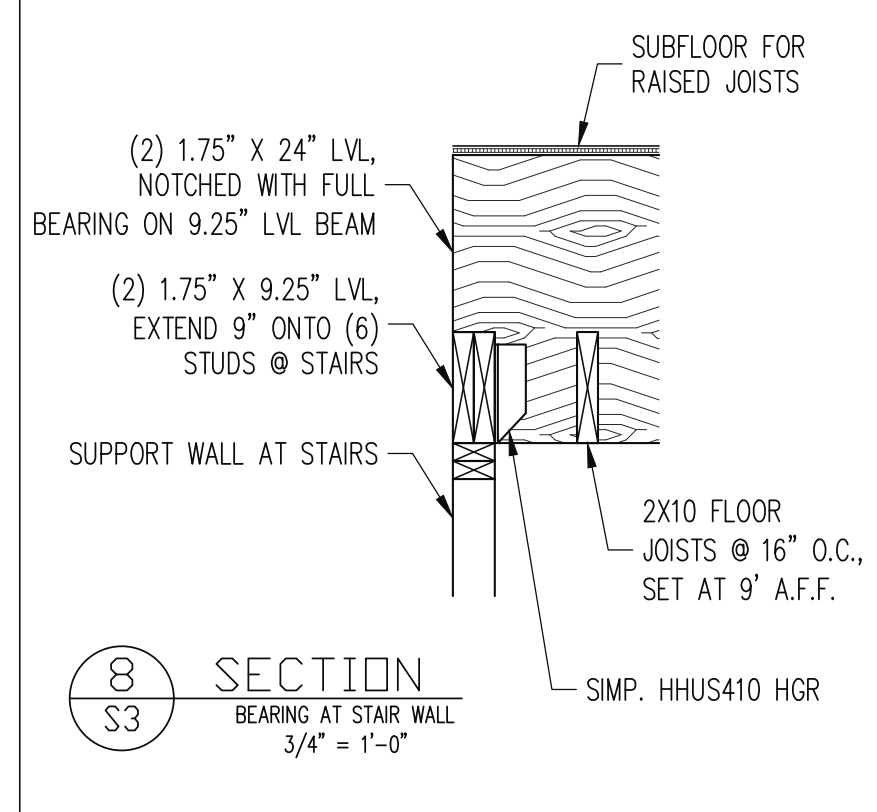
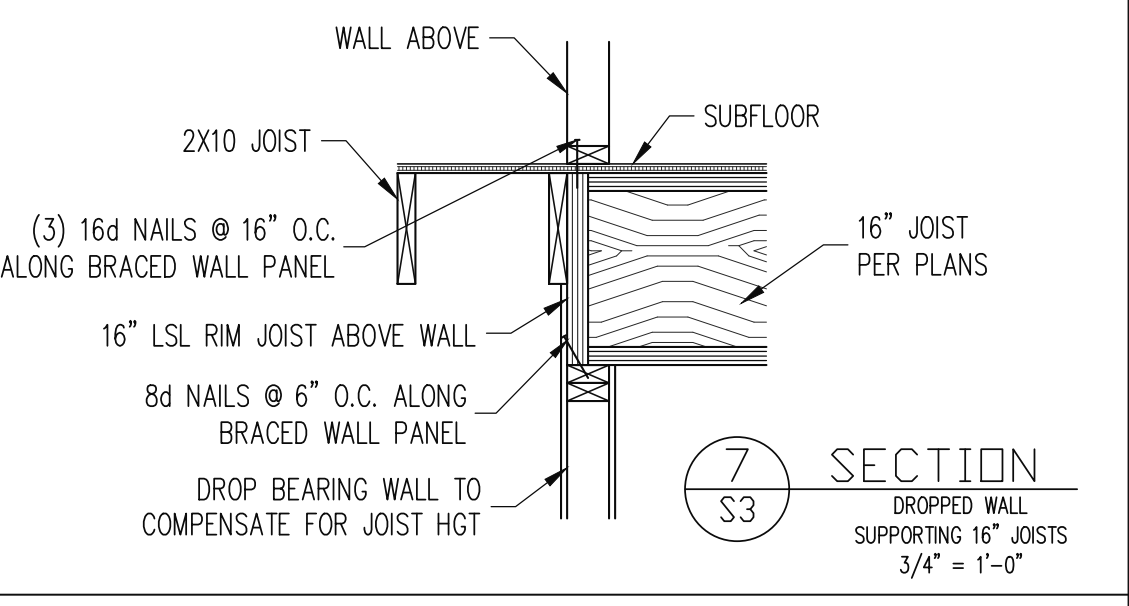
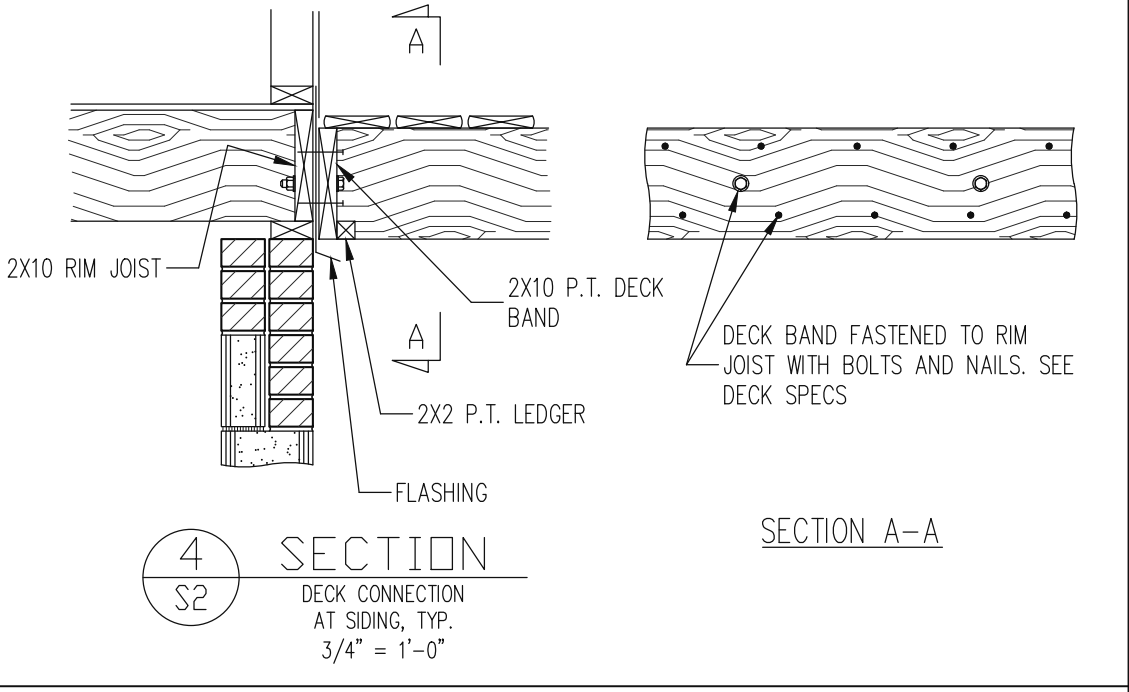
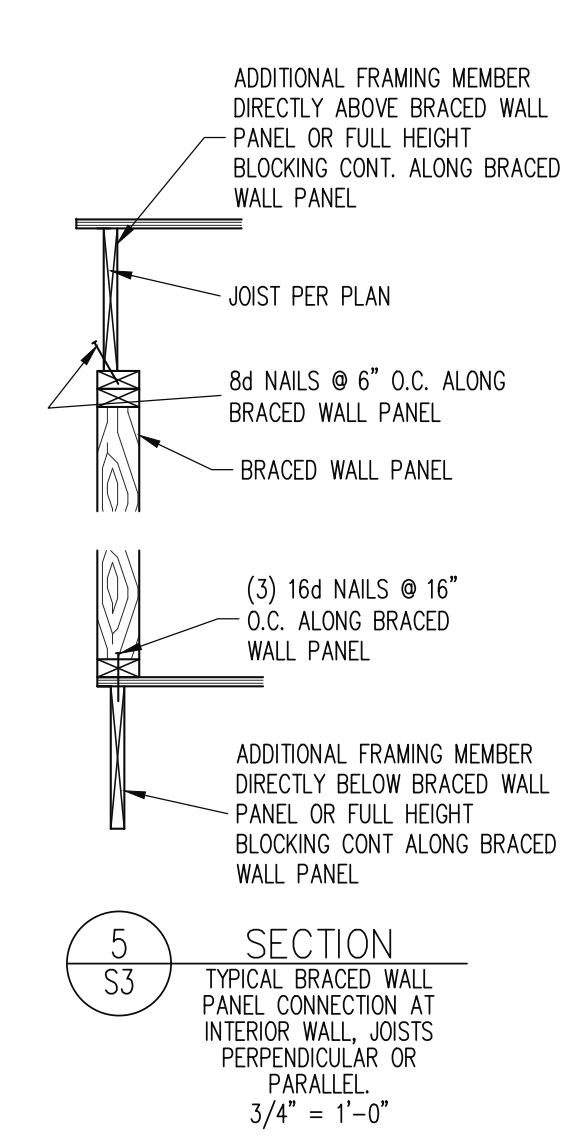
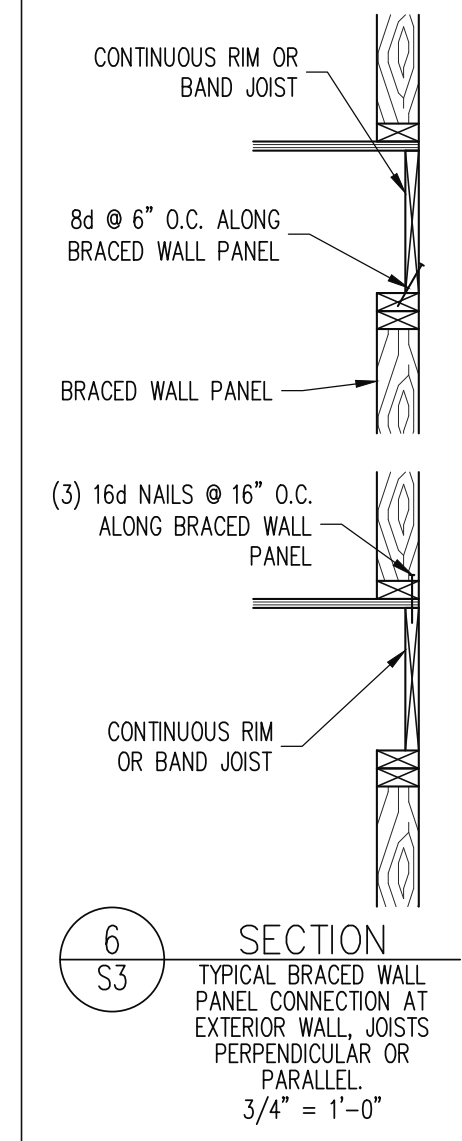
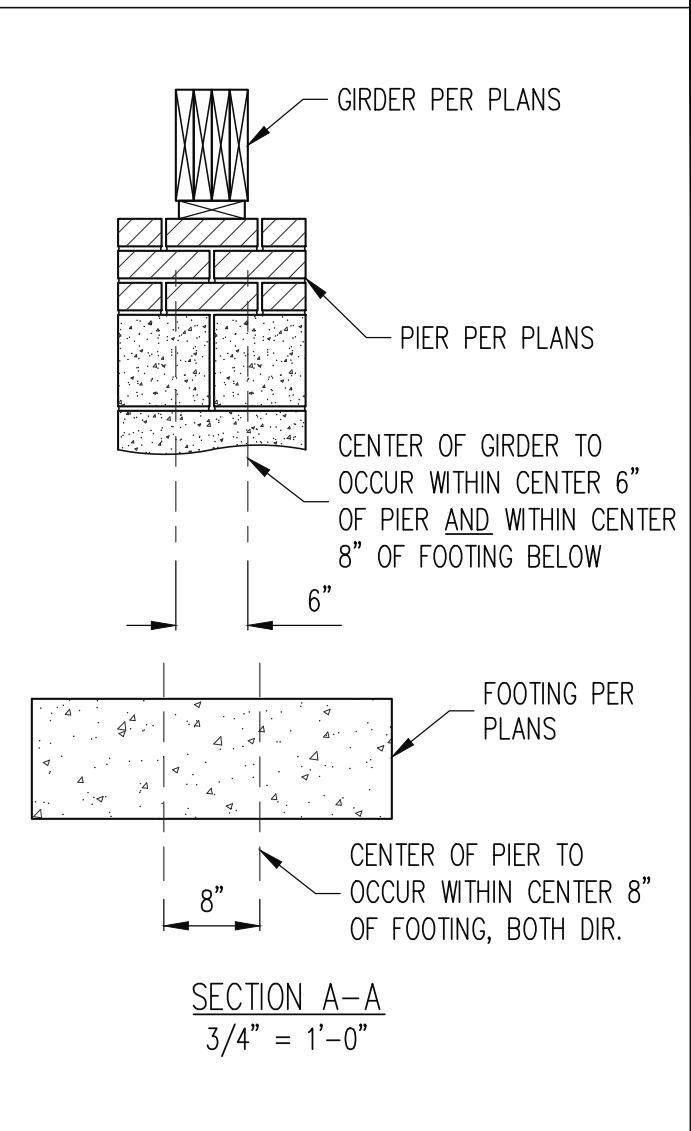
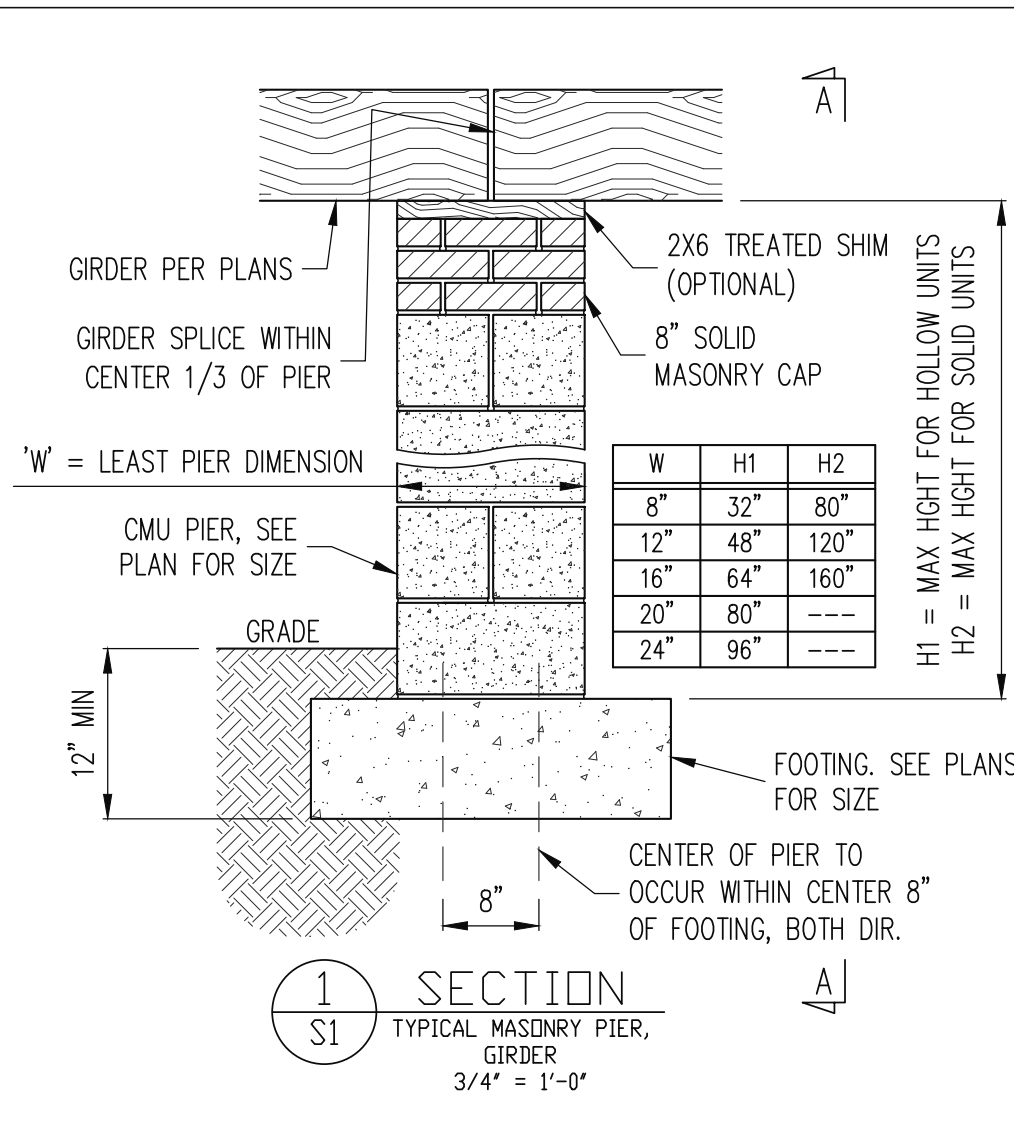
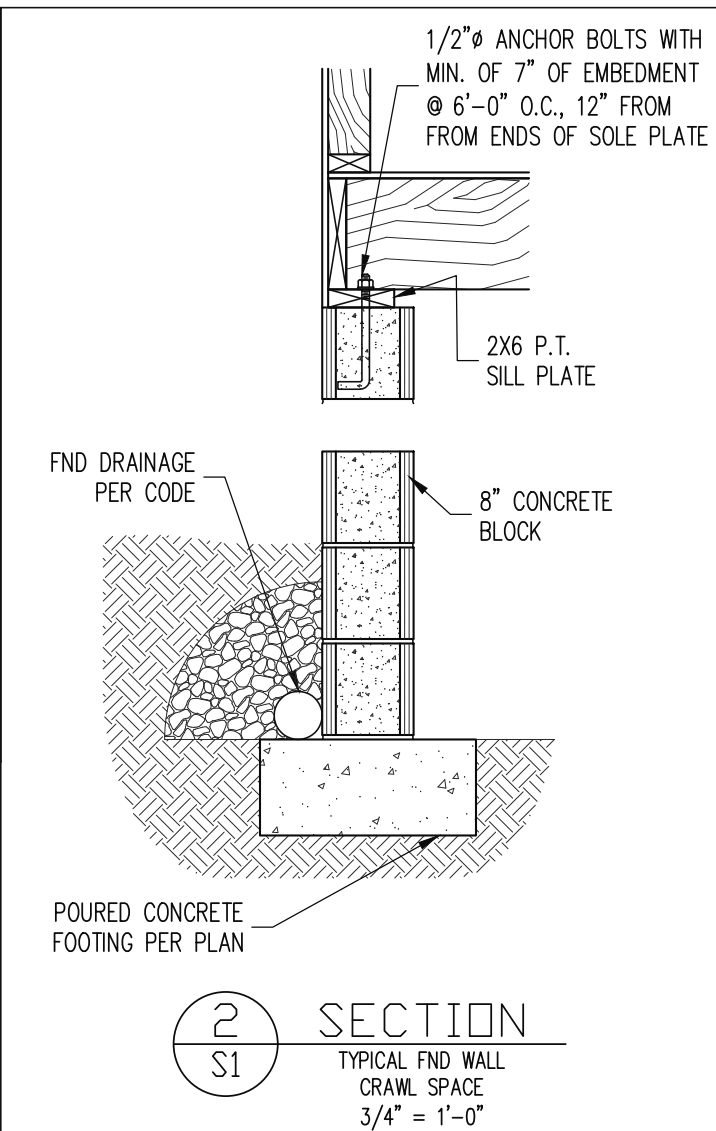
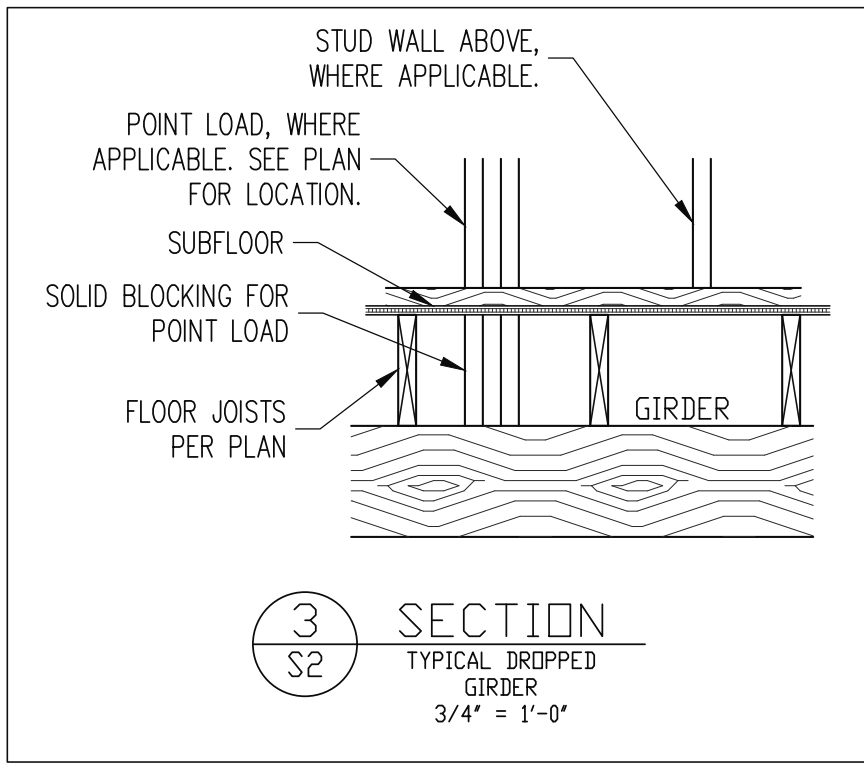
PLAN NO.  
M112-23

PROJECT NO.  
23-21-127\_281

SHEET NO.  
S5

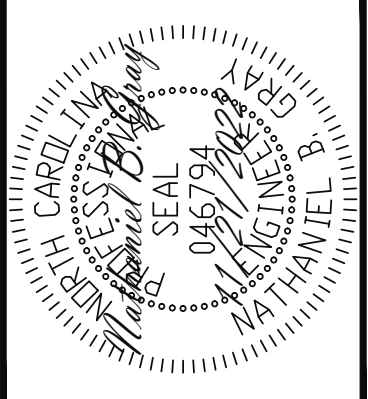
5 of 8

The structural design of this plan is the property of Engineering Tech Associates, P.A. These plans are for the one time use at the location and for the client listed. Engineering Tech Associates, P.A. assumes no liability for these plans if they are reproduced, in whole or in part, for construction at any other location without written permission from Engineering Tech Associates, P.A.



**STRUCTURAL ENGINEERS**  
 License No. C-3870  
 318 W Millbrook, Suite 201  
 Raleigh, North Carolina 27615  
 (919) 844-1661 Fax: (919) 844-1665

**Engineering Tech Associates, P.A.**



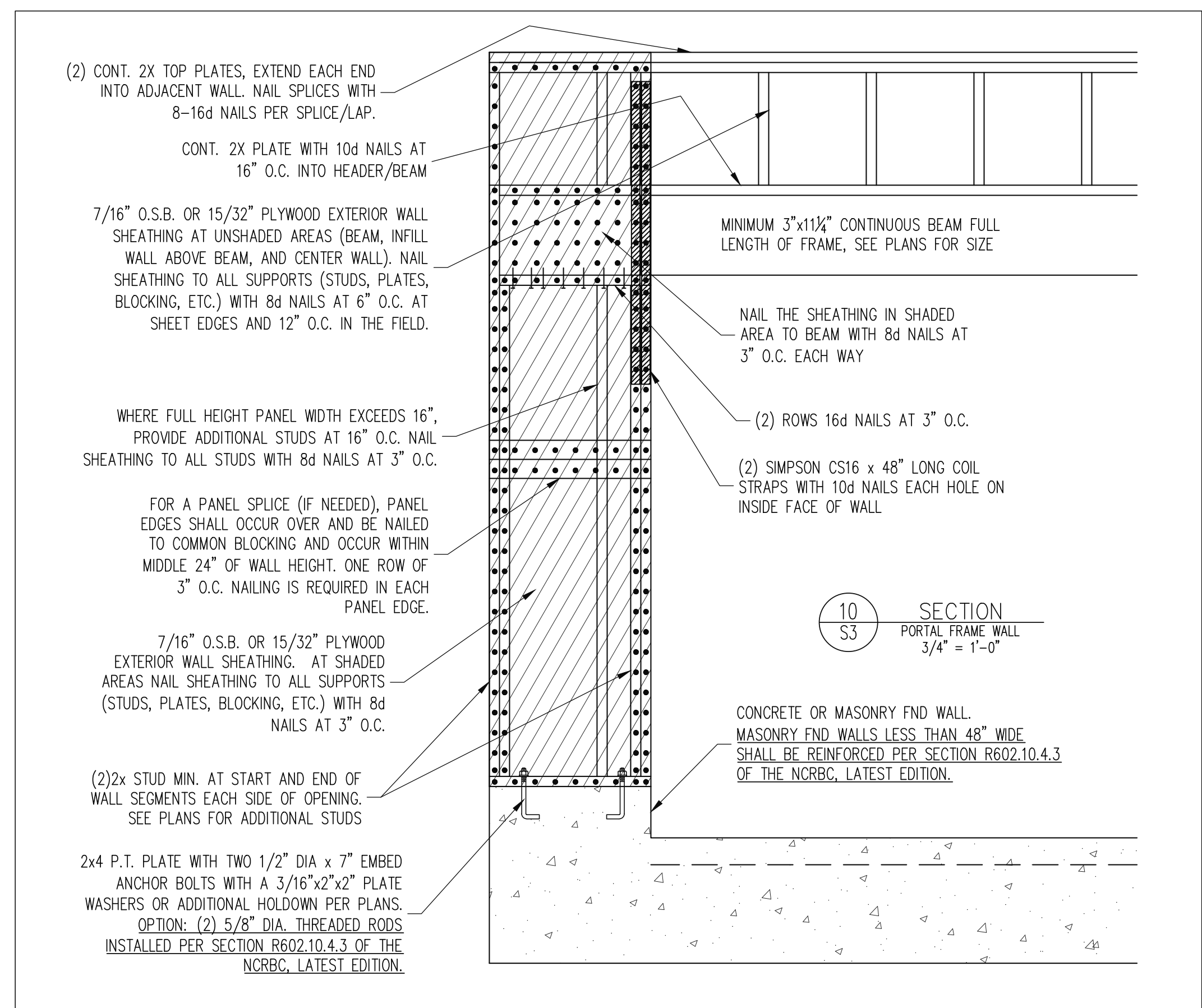
PARAMOUNT HOMES STRUCTURAL ADDENDUM	ENG:	CIB/NBG
	REV:	8/21/2023
SCOPE:	LOT #:	21 COTTON FARMS
	DATE:	11/21/2022

PLAN NO.  
M112-23

PROJECT NO.  
23-21-127\_281

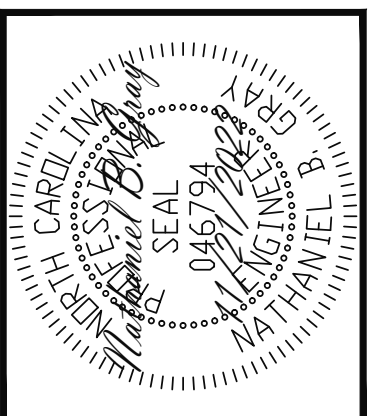
SHEET NO.  
SD1

The structural design of this plan is the property of Engineering Tech Associates, P.A. These plans are for the one time use at the location and for the client listed. Engineering Tech Associates, P.A. assumes no liability for these plans if they are reproduced, in whole or in part, for construction at any other location without written permission from Engineering Tech Associates, P.A.



STRUCTURAL ENGINEERS  
License No. C-3870  
318 W Millbrook, Suite 201  
Raleigh, North Carolina 27615  
(919) 844-1661 Fax: (919) 844-1665

Engineering Tech ASSOCIATES, P.A.



PARAMOUNT HOMES	
SCOPE	STRUCTURAL ADDENDUM
LOT #:	21 COTTON FARMS
ENG:	CIB/NBG
REV:	8/21/2023
DATE:	11/21/2022

PLAN NO.  
M112-23

PROJECT NO.  
23-21-127\_281

SHEET NO.  
SD2  
7 of 8

## DECK SPECIFICATIONS

- A DECK IS AN EXPOSED EXTERIOR WOOD FLOOR STRUCTURE WHICH MAY BE ATTACHED TO A STRUCTURE OR BE FREE STANDING. ROOFED PORCHES, OPEN OR SCREENED IN, MAY BE CONSTRUCTED USING THESE PROVISIONS.
- SUPPORT POSTS SHALL BE SUPPORTED BY A FOOTING.
- WHEN ATTACHED TO A STRUCTURE, THE STRUCTURE TO WHICH ATTACHED SHALL HAVE A TREATED WOOD BAND FOR THE LENGTH OF THE DECK, OR CORROSION RESISTANT FLASHING SHALL BE USED TO PREVENT MOISTURE FROM COMING IN CONTACT WITH THE UNTREATED FRAMING OF THE STRUCTURE. THE DECK BAND AND THE STRUCTURE BAND SHALL BE CONSTRUCTED IN CONTACT WITH EACH OTHER EXCEPT AT BRICK VENEER AND WHERE PLYWOOD SHEATHING IS REQUIRED AND PROPERLY FLASHED. SIDING SHALL NOT BE INSTALLED BETWEEN THE STRUCTURE AND THE DECK BAND. IF ATTACHED TO A BRICK STRUCTURE, NEITHER FLASHING NOR A TREATED BAND FOR THE BRICK STRUCTURE IS REQUIRED. IN ADDITION, THE TREATED DECK BAND SHALL BE CONSTRUCTED IN CONTACT WITH THE BRICK
- WHEN THE DECK IS SUPPORTED AT THE STRUCTURE BY ATTACHING THE DECK TO THE STRUCTURE, THE FOLLOWING ATTACHMENT SCHEDULES SHALL APPLY FOR ATTACHING THE DECK BAND TO THE STRUCTURE:

**A. ALL STRUCTURES EXCEPT BRICK STRUCTURES**

REQUIRED FASTENERS	JOIST LENGTH	
	UP TO 8' MAX.	UP TO 16' MAX.
	ONE - 5/8" Ø BOLT @ 42" O.C. AND (2) ROWS OF 12d NAILS @ 8" O.C. OR TWO ROWS OF SIMPSON SDWS22400DB @ d = 32" O.C. STAGGERED	ONE - 5/8" Ø BOLT @ 20" O.C. AND (3) ROWS OF 12d NAILS @ 6" O.C. OR TWO ROWS OF SIMPSON SDWS22400DB @ d = 16" O.C. STAGGERED

**A. BRICK VENEER STRUCTURES**

REQUIRED FASTENERS	JOIST LENGTH	
	UP TO 8' MAX.	UP TO 16' MAX.
	ONE - 5/8" Ø BOLT @ 28" O.C.	ONE - 5/8" Ø BOLT @ 16" O.C.

- IF THE DECK BAND IS SUPPORTED BY A 1/2" MINIMUM MASONRY LEDGE ALONG THE FOUNDATION WALL, 5/8" Ø BOLTS SPACED @ 48" O.C. MAY BE USED FOR SUPPORT.
- OTHER MEANS OF SUPPORT, SUCH AS JOIST HANGERS, MAY BE USED TO CONNECT DECK JOISTS TO A TREATED STRUCTURE BAND
- GIRDERS SHALL BEAR DIRECTLY ON POSTS OR BE CONNECTED TO THE SIDES OF POSTS WITH 2 - 5/8" Ø BOLTS
- FLOOR DECKING SHALL BE NO. 2 GRADE TREATED SOUTHERN PINE OR EQUIVALENT. THE MINIMUM FLOOR DECKING THICKNESS SHALL BE AS FOLLOWS:

JOIST SPAN	DECKING
12" O.C.	1" S4S
16" O.C.	1" T&G
24" O.C.	1 1/4" S4S
32" O.C.	2" S4S

- MAXIMUM HEIGHT OF DECK SUPPORT POSTS IS AS FOLLOWS:

POST SIZE	MAX POST HEIGHT
4x4	8'
6x6	20'
ENGINEERED	20' +

- NOTES: 1) THIS TABLE IS BASED ON NO. 2 TREATED SOUTHERN PINE POSTS.  
2) THIS TABLE IS BASED ON A MAXIMUM TRIBUTARY AREA OF 128 SQ. FT.  
3) POST HEIGHT IS FROM TOP OF FOOTING TO BOTTOM OF GIRDER.

- DECKS SHALL BE BRACED TO PROVIDE LATERAL STABILITY BY ONE OF THE FOLLOWING METHODS:
  - WHEN THE DECK FLOOR HEIGHT IS LESS THAN 4'-0" AND THE DECK IS ATTACHED TO THE STRUCTURE IN ACCORDANCE WITH SECTION 4, LATERAL BRACING IS NOT REQUIRED.
  - 4X4 WOOD KNEE BRACES MAY BE PROVIDED ON EACH COLUMN IN BOTH DIRECTIONS. THE KNEE BRACES SHALL ATTACH TO EACH POST AT A POINT NOT LESS THAN 1/3 OF THE POST LENGTH FROM THE TOP OF THE POST, AND THE BRACES SHALL BE ANGLED BETWEEN 45° AND 60° FROM THE HORIZONTAL. KNEE BRACES SHALL BE ATTACHED AT THE ENDS TO THE GIRDER AND THE POST WITH ONE - 5/8" Ø BOLT

- FOR FREE STANDING DECKS WITHOUT KNEE BRACES OR DIAGONAL BRACING, LATERAL STABILITY MAY BE PROVIDED BY EMBEDDING THE POSTS IN CONCRETE IN ACCORDANCE WITH THE FOLLOWING:

POST SIZE	TRIBUT. AREA	POST HEIGHT	EMB. DEPTH	CONC. DIAM.
4x4	48 SQ. FT.	4'-0"	2'-6"	1'-0"
6x6	120 SQ. FT.	6'-0"	3'-6"	1'-8"

- 2X6 DIAGONAL VERTICAL CROSS BRACING SHALL BE PROVIDED IN TWO PERPENDICULAR DIRECTIONS FOR FREE STANDING DECKS OR PARALLEL TO THE STRUCTURE AT THE EXTERIOR COLUMN LINE FOR ATTACHED DECKS. THE BRACES SHALL BE ATTACHED TO THE POSTS WITH ONE - 5/8" Ø BOLT AT EACH END OF THE BRACE.

- NOTES: 1) ALL NAILS AND BOLTS ARE TO BE HOT DIPPED GALVANIZED.  
2) MINIMUM EDGE DISTANCE FOR BOLTS IS 2 1/2".  
3) NAILS MUST PENETRATE THE SUPPORTING STRUCTURE BAND A MINIMUM OF 1 1/2".

## CONSTRUCTION SPECIFICATIONS

**PART 1: GENERAL**

- CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.
- DIMENSIONS SHOWN SHALL GOVERN OVER SCALE ON THESE DRAWINGS.
- METHODS, PROCEDURES AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR, WHO SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND INSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.

**PART 2: DESIGN LOADS**

- DESIGN LOADS SHALL CONFORM WITH THE TABLE BELOW:

USE	LIVE LOAD (PSF)	DEAD LOAD (PSF)
BALCONIES, DECKS, ATTICS WITH FIXED STAIR ACCESS, DWELLING UNITS INCLUDING ATTICS WITH FIXED STAIR ACCESS, STAIRS, FIRE ESCAPES	40	10
GARAGES (PASSENGER CARS ONLY)	50	--
ATTICS (NO STORAGE, LESS THAN 5' HEADROOM)	10	10
ATTICS (WITH STORAGE)	20	10
ROOF	20	10 (15 FOR VAULTS)

- NOTES: - INDIVIDUAL STAIR TREADS ARE TO BE DESIGNED FOR THE UNIFORMLY DISTRIBUTED LIVE LOAD OF 40 PSF OR A 300 LB. CONCENTRATED LOAD ACTING OVER AN AREA OF 4 SQ. WHICHEVER PRODUCES THE GREATER STRESS.  
- BUILDER TO VERIFY DEAD LOAD DOES NOT EXCEED 10 PSF WHEN HEAVY FLOOR OR ROOF FINISHES SUCH AS TILE OR SLATE ARE UTILIZED. NOTIFY ENGINEERING UNDER THESE CONDITIONS

- INTERIOR WALLS: 5 PSF LATERAL.
- BASIC WIND DESIGN VELOCITY OF 120 MPH.
- SOIL BEARING CAPACITY 2000 PSF (PRESUMPTIVE).

**PART 3: STRUCTURAL STEEL**

- WIDE FLANGE BEAMS AND TEE SECTIONS SHALL CONFORM TO ASTM A992 MINIMUM GRADE
- SQUARE AND RECTANGULAR TUBING SHALL CONFORM TO ASTM A500 GRADE B MINIMUM GRADE.
- STEEL PIPE SHALL CONFORM TO ASTM A53 GRADE B, TYPE S, MINIMUM GRADE
- ALL OTHER STRUCTURAL STEEL SHALL CONFORM TO ASTM A36 MINIMUM GRADE
- STRUCTURAL STEEL CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.

**PART 4: WELDING**

- WELDING ELECTRODES SHALL BE E70XX AND ALL WELDING SHALL BE PERFORMED BY AN AWS CERTIFIED WELDER

**PART 5: CONCRETE AND SLABS ON GRADE**

- CAST IN PLACE CONCRETE SHALL BE OF NORMAL WEIGHT, 4-6% AIR ENTRAINMENT, FOR EXTERIOR CONCRETE AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS TYP UNO. ALL ITEMS NOTED AS 'CONCRETE' ARE TO BE CAST IN PLACE, TYP UNO.

- REINFORCED CAST IN PLACE CONCRETE SHALL BE PROPORTIONED, MIXED AND PLACED IN ACCORDANCE WITH THE SPECIFICATIONS OF ACI 318, LATEST EDITION.

- SLABS ON GRADE, IF ANY, SHALL BE CAST IN PLACE, CONTAIN SYNTHETIC POLYPROPYLENE FIBRILLATED MICRO FIBERS, FIBER LENGTH 1 1/2", DOSAGE RATE 1 1/2 LBS/CU YD. SLAB TO BE PLACED ON A 6 MIL VAPOR BARRIER ON 4" MIN GRANULAR FILL ON SOIL WITH 90% MIN STANDARD PROCTOR DENSITY. VAPOR BARRIER MAY BE OMITTED FOR SLABS NOT IN ENCLOSED AREAS

**PART 6: REBAR AND WIRE REINFORCEMENT**

- REBAR SHALL BE DEFORMED STEEL CONFORMING TO ASTM A615 GRADE 60 TYP UNO
- LAP SPLICES SHALL BE CLASS B AS DEFINED BY ACI 318, TYP UNO
- WIRE REINFORCEMENT SHALL BE 9 GA AND SHALL CONFORM TO ASTM A1064.

**PART 7: MASONRY**

- CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 AND C55, NORMAL WEIGHT,

### ALLOWABLE I-JOIST SUBSTITUTION

NOTE: MAINTAIN JOIST DEPTH, DIRECTION, AND SPACING SPECIFIED ON PLANS.

MANUFACTURER	DEPTH	SERIES	SIMPSON FACE MOUNT HGR	SIMPSON TOP FLANGE HGR
BLUELUX	16"	BLI 40	IUS2.56/16	ITS2.56/16
BLUELUX	16"	BLI 60	IUS2.56/16	ITS2.56/16
BOISE CASCADE	16"	BCI 5000s	IUS2.06/16	ITS2.06/16
BOISE CASCADE	16"	BCI 6000S	IUS2.37/16	ITS2.37/16
INTERNATIONAL BEAMS	16"	IB 600	IUS2.56/16	ITS2.56/16
LP CORP	16"	LPI 20+	IUS2.56/16	ITS2.56/16
NORDIC	16"	NI 40X	IUS2.56/16	ITS2.56/16
ROSEBURG	16"	RFPI 60S	IUS2.56/16	ITS2.56/16
WEYERHAEUSER	16"	TJI 210	IUS2.06/16	ITS2.06/16

BOISE CASCADE	16"	BCI 60s	IUS2.37/16	ITS2.37/16
LP CORP	16"	LP 36	IUS2.37/16	ITS2.37/16
LP CORP	16"	LP 42+	IUS2.56/16	ITS2.56/16
NORDIC	16"	NI 70	IUS2.56/16	ITS2.56/16
ROSEBURG	16"	RFPI 70	IUS2.37/16	ITS2.37/16
WEYERHAEUSER	16"	TJI 360	IUS2.37/16	ITS2.37/16
WEYERHAEUSER	16"	EEL-30	IUS2.37/16	ITS2.73/16

JOISTS NOT LISTED IN THE ABOVE TABLE MAY BE USED PROVIDED THEY MEET OR EXCEED THE PROPERTIES OF THOSE LISTED. SUBSTITUTE USP BRAND HANGERS WITH EQUIVALENT VALUES AS DESIRED.

- f'm = 1,500 PSI MIN
- CLAY MASONRY UNITS SHALL CONFORM TO ASTM C62-17 GRADE SW
  - MORTAR SHALL BE TYPE S. MORTAR AND GROUT SHALL CONFORM TO ASTM C476, MIN COMPRESSIVE STRENGTH OF 2000 PSI.
  - MASONRY CONSTRUCTION SHALL CONFORM TO THE SPECIFICATIONS OF ACI 530
  - LADDER WIRE REINFORCEMENT SHALL CONFORM TO ASTM A951. 6" MIN LAPS FOR CONTINUOUS WALL APPLICATIONS

**PART 8: BOLTS AND LAG SCREWS**

- BOLTS SHALL CONFORM TO ASTM A307 MINIMUM GRADE TYP UNO. INSTALL STANDARD STEEL WASHERS (ASTM F844-07a) FOR THE NUT / BOLT HEAD WHEN BOLTING WOOD MEMBERS. HOLES FOR BOLTS SHALL BE AISC STANDARD HOLES UNO
- LAG SCREWS SHALL CONFORM TO ANSI/ASME STANDARD B18.2.1-1981. PILOT HOLES SHALL BE USED FOR LAG SCREW INSTALLATION AND SHALL BE BORED ACCORDING TO NDS SPECIFICATIONS. INSTALL STANDARD STEEL WASHERS (ASTM F844-07a) FOR SCREW HEAD
- ANCHOR RODS AND BOLTS SHALL CONFORM TO ASTM F1554-15 GRADE 36 UNO. BENT ANCHOR BOLTS SHALL HAVE A 2" MIN HOOK UNO

**PART 9: DRIVEN FASTENERS**

- NAILS, SPIKES AND STAPLES SHALL CONFORM TO ASTM F 1667- 05. NAILS ARE TO BE COMMON WIRE OR BOX

**PART 10: DIMENSIONAL LUMBER**

- SOLID SAWN WOOD FRAMING DESIGN IS BASED ON NO. 2 SPRUCE PINE FIR OR SYP #2 FOR JOISTS, RAFTERS, GIRDERS, BEAMS, STUDS, ETC. MINIMUM ALLOWABLE DESIGN PROPERTIES ARE AS FOLLOWS:  
E = 1,400,000 PSI, F<sub>c</sub> <sub>perp</sub> = 425 PSI, F<sub>v</sub> = 285 PSI, SPECIFIC GRAVITY = 0.42 MIN  
F<sub>b</sub> = 875 PSI FOR 2X4, 2X6, 2X8. F<sub>b</sub> = 800 PSI FOR 2X10'S, 750 PSI FOR 2X12'S

**PART 11: ENGINEERED LUMBER**

- LVL OR PSL MINIMUM ALLOWABLE DESIGN PROPERTIES ARE AS FOLLOWS:  
E = 1,900,000 PSI, F<sub>b</sub> = 2600 PSI, F<sub>v</sub> = 285 PSI, F<sub>c</sub> <sub>perp</sub> = 750 PSI  
LSL MINIMUM ALLOWABLE DESIGN STRESSES ARE AS FOLLOWS:  
E = 1.3 X 10E6 PSI, F<sub>b</sub> = 1700 PSI, F<sub>v</sub> = 400 PSI, F<sub>c</sub> <sub>perp</sub> = 680 PSI

**PART 12: PRESSURE TREATED LUMBER**

- LVL OR PSL MEMBERS MAY BE RIPPED FROM DEEPER MEMBERS TO MATCH THE MEMBER DEPTH SPECIFIED IN THE PLANS
- LUMBER IN CONTACT WITH THE GROUND, CONCRETE OR MASONRY SHALL BE PRESSURE TREATED IN ACCORDANCE WITH AWPA STANDARD C-15. ALL OTHER EXPOSED LUMBER SHALL BE TREATED IN ACCORDANCE WITH AWPA STANDARD C-2 OR BY ANY METHOD GIVING EQUAL PROTECTION. THE BUILDING CODE OFFICE MAY ALSO APPROVE A NATURAL DECAY RESISTANT WOOD PER SECTION 19-6(a)

**PART 13: STEEL FLITCH PLATE BEAMS**

- FLITCH PLATE BEAMS SHALL CONSIST OF A CONTINUOUS STEEL PLATE BOLTED BETWEEN TWO PIECES OF CONTINUOUS LUMBER AS SIZED ON THE PLANS. BOLT PIECES TOGETHER USING 1/2" Ø BOLTS SPACED AT 16" O.C. STAGGERED TOP TO BOTTOM OF THE BEAM. MAINTAIN A 2" EDGE DISTANCE. PLACE TWO BOLTS, ONE ABOVE THE OTHER, 16" MAX FROM EACH END OF THE BEAM. TYP UNO

**PART 14: STUD SUPPORTS FOR BEAMS**

- STEEL, ENGINEERED LUMBER, AND FLITCH PLATE BEAMS BEARING ON A STUD WALL SHALL BEAR AS FOLLOWS:

- WHEN THE BEAM IS PERPENDICULAR TO, OR SKEWED RELATIVE TO THE WALL, THE BEAM SHALL BEAR FULL WIDTH ON THE SUPPORTING WALL INDICATED AND SHALL BE SUPPORTED BY A MINIMUM OF THREE GANGED STUDS, OR A GANGED STUD COLUMN WITH A NUMBER OF STUDS SUCH THAT THE STUD COLUMN IS AT LEAST AS WIDE AS THE TRUE WIDTH OF THE BEAM BEING SUPPORTED, WHICHEVER IS GREATER, TYP UNO. FOR THE SKEWED CONDITION PARTICULAR CARE SHALL BE TAKEN TO ENSURE STUD COLUMN IS CENTERED ON THE BEAM
- BEAMS BEARING ONTO THE END OF A STUD WALL PARALLEL TO THE BEAM SHALL BEAR A MINIMUM OF 4 1/2" ONTO THE WALL AND BE SUPPORTED BY A TRPL STUD GANGED COLUMN TYP UNO.

- DIMENSIONAL LUMBER BEAMS BEARING ON A STUD WALL SHALL BEAR AS FOLLOWS:
  - WHEN THE BEAM IS PERPENDICULAR TO, OR SKEWED RELATIVE TO THE WALL, THE BEAM SHALL BEAR FULL WIDTH ON THE SUPPORTING WALL INDICATED (LESS 1 1/2" TO ALLOW FOR A CONTINUOUS RIM JOIST WHERE APPLICABLE) AND SHALL BE SUPPORTED BY A GANGED STUD COLUMN THE SAME WIDTH AS THE BEAM TYP UNO. (E.G. A TRIPLE 2X10 IS TO BE SUPPORTED BY (3) STUDS). FOR THE SKEWED CONDITION PARTICULAR CARE SHALL BE TAKEN TO ENSURE STUD COLUMN IS CENTERED ON THE BEAM

## NOTES

- THE BUILDER IS RESPONSIBLE FOR REVIEWING PLANS PRIOR TO CONSTRUCTION. THE BUILDER SHALL IMMEDIATELY CONTACT THE ENGINEER OF RECORD (EOR) BEFORE PROCEEDING IF THE FOLLOWING CONDITIONS ARE NOTED BEFORE OR DURING CONSTRUCTION:
- THE WORKING PLANS DO NOT BEAR THE SEAL OF THE EOR
  - THE PLANS CONTAIN DISCREPANT OR INCOMPLETE INFORMATION

ANY ERRORS DUE TO A FAILURE TO FOLLOW THE ABOVE PROCEDURES SHALL NOT BE THE RESPONSIBILITY OF THE EOR. FURTHERMORE, IT IS THE RESPONSIBILITY OF THE BUILDER TO ENSURE THAN ANY REVISIONS ISSUED BY THE EOR ARE PROMPLY DISTRIBUTED TO THE SUBCONTRACTORS

THE EOR DOES NOT PERFORM FENESTRATION OR VENTING CALCULATIONS OR ANY OTHER CALCULATIONS THAT ARE NOT DIRECTLY RELATED TO STRUCTURAL ENGINEERING.

ROOF AND FLOOR TRUSSES TO BE DESIGNED BY AN ENGINEER REGISTERED BY THE STATE. FINAL TRUSS DRAWING SHOULD BE SUBMITTED TO THE EOR FOR REVIEW

- BEAMS BEARING ONTO THE END OF A STUD WALL PARALLEL TO THE BEAM SHALL BEAR A MINIMUM OF 3" ONTO THE WALL AND BE SUPPORTED BY A DBL STUD GANGED COLUMN TYP UNO.

- EXTRA JOISTS BEARING ON A STUD WALL PERPENDICULAR TO OR SKEWED RELATIVE TO THE BEAM SHALL BE SUPPORTED BY ONE ADDITIONAL STUD.

- STUDS THAT ARE GANGED TO FORM A COLUMN SHALL HAVE ADJACENT STUDS WITHIN THE COLUMN NAILED TOGETHER WITH ONE ROW OF 10d NAILS AT 8" O.C. (TWO ROWS OF 10d NAILS @ 8" O.C., 3" APART, FOR 2X8 OR 2X10 STUDS) ALL COLUMNS SHALL BE CONTINUOUS DOWN TO THE FOUNDATION OR OTHER PROPERLY DESIGNED STRUCTURAL ELEMENT SUCH AS A BEAM. COLUMNS TRANSFERRING LOADS THROUGH FLOOR LEVELS SHALL BE SOLIDLY BLOCKED FOR THE FULL WIDTH OF THE STUD COLUMN WITHIN THE CAVITY FORMED BY THE FLOOR JOISTS.

**PART 15: NAILING OF MULTI PLY WOOD BEAMS**

- SOLID SAWN LUMBER JOISTS THAT ARE GANGED TO FORM A BEAM SHALL HAVE ADJACENT MEMBERS IN THE BEAM NAILED TOGETHER WITH THREE ROWS OF 10d NAILS @ 16" O.C. FOR 2X10 OR LARGER, TWO ROWS OF 10d NAILS @ 16" O.C. FOR 2X8, ONE ROW OF 10d NAILS @ 16" O.C. FOR 2X6 OR SMALLER. STAGGER ROWS 5" MIN.

- LVL MEMBERS THAT ARE GANGED TO FORM A BEAM SHALL HAVE ADJACENT MEMBERS IN THE BEAM FASTENED TOGETHER PER MANUFACTURERS RECOMMENDATIONS, TYP UNO

**PART 16: WALL FRAMING AND BRACING**

- STUD WALLS SHALL CONSIST OF 2X4 STUDS SPACED AT 16" O.C. UNO. STUDS SHALL BE CONTINUOUS FROM SOLE PLATE AT FLOOR TO DOUBLE TOP PLATE AT THE CEILING OR ROOF. NO INTERMEDIATE BANDS OR PLATES SHALL CAUSE DISCONTINUITIES IN A STUD WALL EXCEPT AS REQUIRED FOR DOOR OR WINDOW OPENINGS. THE KING STUDS FOR SUCH OPENINGS SHALL BE CONTINUOUS, TYP UNO.  
MAX ALLOWABLE WALL HEIGHTS FOR EXTERIOR STUD WALLS, INCLUSIVE OF SOLE PLATE AND DBL TOP PLATE AND 7/16" OSB EXTERIOR BRACING AND ROW OF 2X4 2X6 PURLINS AT 8' HEIGHT (AND AT 16' HEIGHT FOR TALL WALLS), TYP UNO:  
2X4 @ 16" O.C.: 11'-1 1/2" 2X6 @ 16" O.C.: 17'-0"  
2X4 @ 12" O.C.: 12'-1 1/2" 2X6 @ 12" O.C.: 18'-8"  
DBL 2X4 @ 16" O.C.: 13'-4" DBL 2X6 @ 16" O.C.: 21'-0"

- FOR WALL BRACING THE FOLLOWING SHALL APPLY:
  - BLOCKING AT UNSUPPORTED PANEL EDGES IS REQUIRED TYP UNO.
  - WALL BRACING IS BY ENGINEERED DESIGN AND NOT PRESCRIPTIVE PER SECTION 602.10 OF THE 2018 NCR. CONTINUOUS SHEATHING HAS BEEN PROVIDED, ALONG WITH ALTERNATIVE METHODS TO INSURE THE MINIMUM INTENT OF SECTION 602.10 OF THE 2018 NCR HAS BEEN MET AND EXCEEDED.
  - BRACED WALL PANELS SHALL BE FASTENED IN ACCORDANCE WITH TABLE 602.3(1) TO PROVIDE CONTINUOUS PANEL UPLIFT RESISTANCE AND COMPLIANCE WITH NCRBC R602.3.5 AND R802.11 UNLESS NOTED OTHERWISE ON STRUCTURAL PLANS.
  - MAY SUBSTITUTE WSP FOR GB
  - SINGLE JOIST, CONTINUOUS RIM JOIST, OR BLOCKING OF EQUAL DEPTH IS REQUIRED ABOVE AND BELOW ALL BRACED WALLS. NAIL BLOCKING ABOVE WALL TO TOP PLATE WITH 16d TOE NAILS @ 6" O.C. NAIL SOLE PLATE OF BRACED WALL TO BLOCKING BELOW WITH (3) 16d NAILS @ 16" O.C. BLOCKING AT HORIZONTAL JOINTS IN BRACED WALL LINES ONLY REQUIRED AT SHADED WALLS, UNO.

**PART 17: KING STUDS**

- KING STUDS FOR OPENINGS IN EXTERIOR WALLS SHALL BE AS FOLLOWS:

MAX. OPENING WIDTH	NUMBER OF KING STUDS				
	5'-0"	9'-0"	13'-0"	17'-0"	21'-0"
2X4	1	2	3	4	5
2X6	1	1	2	2	2
2X8	1	1	1	1	2

**PART 18: SUBSTITUTIONS**

- MATERIAL OR MEMBER SIZE SUBSTITUTIONS OR PLAN DEVIATIONS REQUIRE THE WRITTEN AUTHORIZATION OF THE DESIGNERS. UNAUTHORIZED DEVIATIONS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

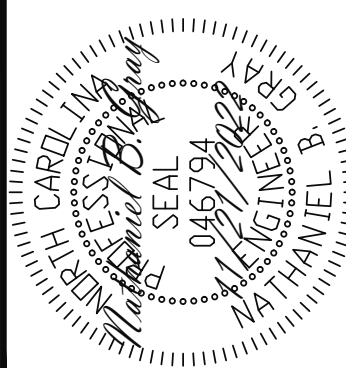
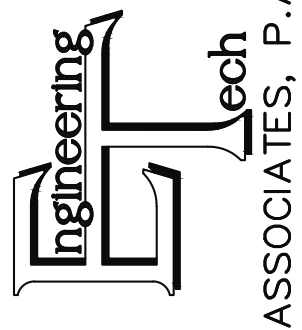
**PART 19: OWNERSHIP OF STRUCTURAL DESIGN**

- THE STRUCTURAL DESIGN OF THIS PLAN IS THE PROPERTY OF ENGINEERING TECH ASSOCIATES (ETA). THESE PLANS ARE FOR THE ONE TIME USE AT THE LOCATION INDICATED AND FOR THE CLIENT LISTED. ETA ASSUMES NO LIABILITY FOR THESE PLANS IF THEY ARE REPRODUCED, IN WHOLE OR IN PART, FOR CONSTRUCTION AT ANY OTHER LOCATION WITHOUT WRITTEN PERMISSION FROM ETA

## ABBREVIATIONS

ABV	ABOVE	FND	FOUNDATION	TJ	TRIPLE JOIST
B	BOTH	FTG	FOOTING	TYP	TYPICAL
B.E.	BOTH ENDS	HOG	HOT DIPPED	TRPL	TRIPLE
B/TWN	BETWEEN	HGR	GALVANIZED	TSP	TRIPLE STUD POCKET
CIP	CAST IN PLACE	LVL	LAMINATED VENEER	UNO	UNLESS NOTED OTHERWISE
CONC	CONCRETE	NTS	LUMBER	XJ	EXTRA JOIST
CS	CONTINUOUS SHEATHING		NOT TO SCALE		
DIA	DIAMETER		O.C. ON CENTER		
DBL	DOUBLE		PARALLEL STRAND LUMBER		
DJ	DOUBLE JOIST				
DSP	DBL STUD POCKET				
EQ	EQUAL	PT	PRESSURE TREATED		
EA	EACH	QJ	QUAD JOIST		
FLG	FLANGE	SP	SPACE (OR SPACING)		
FL PL	FLITCH PLATE	SSP	SINGLE STUD POCKET		
FLR	FLOOR	SQ	SQUARE		

**STRUCTURAL ENGINEERS**  
 License No. C-3870  
 318 W Millbrook, Suite 201  
 Raleigh, North Carolina 27615  
 (919) 844-1661 Fax: (919) 844-1665



SCOPE	LOT #:	ENG	CIB/NBG	REV:	DATE
PARAMOUNT HOMES	21 COTTON FARMS	ENG	CIB/NBG	8/21/2023	11/21/2022

STRUCTURAL ADDENDUM
STRUCTURAL ADDENDUM

PLAN NO.

M112-23