GENERAL NOTES:

1. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY THAT ALL DIMENSIONS, ROOF PITCHES, AND SQUARE FOOTAGE ARE CORRECT PRIOR TO CONSTRUCTION. K&A HOME DESIGNS, INC. IS NOT RESPONSIBLE FOR ANY DIMENSIONING, ROOF PITCH, OR SQUARE FOOTAGE ERRORS ONCE CONSTRUCTION BEGINS.
2. ALL WALLS SHOWN ON THE FLOOR PLANS ARE DRAWN AT 4" UNLESS NOTED OTHERWISE.
3. ALL ANGLED WALL SHOWN ON THE PLANS ARE 45 DEGREES UNLESS NOTED OTHERWISE.
4. STUD WALL DESIGN SHALL CONFORM TO ALL NORTH CAROLINA STATE BUILDING CODE REQUIREMENTS.
5. DO NOT SCALE PLANS. DRAWING SCALE MAY BE DISTORTED DUE TO COPIER IMPERFECTIONS.
6. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NORTH CAROLINA RESIDENTIAL STATE BUILDING CODE, 2018 EDITION.

SQUARE FOOTAGE

HEATED SQUARE FOOTAGE		UNHEATED SQUARE FOOTAGE	
FIRST FLOOR=	2437	GARAGE=	681
SECOND FLOOR=	645	FRONT PORCH=	248
THIRD FLOOR=	N/A	CVD. PORCH=	314
BASEMENT=	N/A	DECK=	N/A
TOTAL HEATED=	**3082**	**TOTAL UNHEATED=**	**1243**

CRAWL SPACE VENTILATION CALCULATIONS

-VENT LOCATIONS MAY VARY FROM THOSE SHOWN ON THE PLAN BUT SHOULD BE PLACED TO PROVIDE ADEQUATE VENTILATION AT ALL POINTS TO PREVENT DEAD AIR POCKETS.

-100% VAPOR BARRIER MUST BE PROVIDED WITH 12" MIN. LAP JOINTS.

-THE TOTAL AREA OF VENTILATION OPENINGS MAY BE REDUCED TO 1/1500 AS LONG AS REQUIRED OPENINGS ARE PLACED SO AS TO PROVIDE CROSS-VENTILATION OF THE SPACE. THE INSTALLATION OF OPERABLE LOUVERS SHALL NOT BE PROHIBITED. (COMPLY WITH NC CODE MIN. WITH REGARD TO VENT PLACEMENT FROM CORNERS)

N/A SQ. FT. OF CRAWL SPACE/1500

N/A SQ. FT. OF REQUIRED VENTILATION

PROVIDED BY: N/A VENTS AT 0.45 SQ. FT. NET FREE

VENTILATION EACH= N/A SQ. FT. OF VENTILATION

*****FOUNDATION DRAINAGE- WATERPROOFING PER SECTIONS 405 & 406.***

ATTIC VENTILATION CALCULATIONS

- CALCULATIONS SHOWN BELOW ARE BASED ON VENTILATORS USED AT LEAST 3 FT. ABOVE THE CORNICE VENTS WITH THE BALANCE OF VENTIALTION PROVIDED BE EAVE VENTS.

- CATHEDRAL CEILINGS SHALL HAVE A MIN. 1" CLEARANCE BETWEEN THE BOTTOM OF THE ROOF DECK AND THE INSULATION.

3681 SQ. FT. OF ATTIC/300= 12.27

EACH OF INLET AND OUTLET REQUIRED.

****WALL AND ROOF CLADDING DESIGN VALUES***

- WALL CLADDING IS DESIGNED FOR A 24.1 SQ. FT. OR GREATER POSITIVE AND NEGATIVE PRESSURE.

- ROOF VALUES BOTH POSITVE AND NEGATIVE SHALL BE AS FOLLOWS:

45.5 LBS. PER SQ. FT. FOR ROOF PITCHES OF 0/12 TO 2.25/12

34.8 LBS. PER SQ. FT. FOR ROOF PITCHES OF 2.25/12 TO 7/12

21 LBS. PER SQ. FT. FOR ROOF PITCHES OF 7/12 TO 12/12

***** MEAN ROOF HEIGHT 30' OR LESS***

FRONT ELEVATION
1/4" = 1'-0"

NOTICE TO CONTRACTOR
All construction must comply with current NC Building Codes and is subject to field inspection and verification.
APPROVED
Limited building only review
Permit holder responsible for full compliance with the code
07/20/2021
Harnett COUNTY NORTH CAROLINA

REAR ELEVATION
1/8" = 1'-0"

LEFT ELEVATION
1/8" = 1'-0"

RIGHT ELEVATION
1/8" = 1'-0"

Project #: 21-128
Date: 4-27-21
Drawn/Design By: KBB
Scale: REFER TO ELEV.

REVISIONS

No.	Date:	Remarks
1		
2		
3		
4		

9101 Ten-Ten Rd.
Raleigh, NC 27603
Office: (919) 302-0693
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Email: Kent@KandAHomeDesigns.com

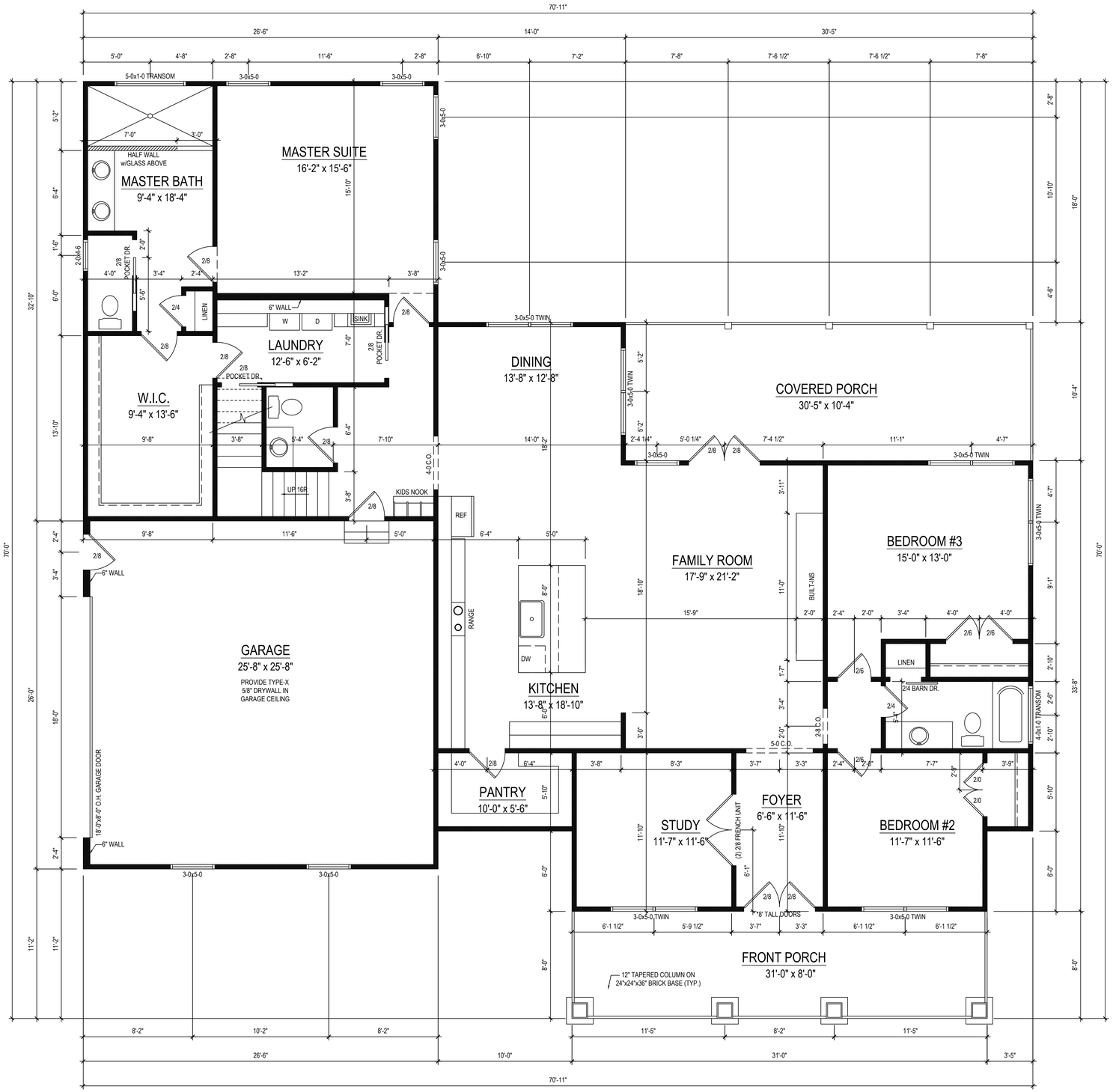
K&A HOME DESIGN Inc.

Project Name: DiEmma Job

Client Name: Triangle Home Pros LLC
6312 Lauraca Lane
Fuquay Varina, NC 27526

ELEVATIONS

Sheet Number 1 of 3



FIRST FLOOR PLAN

1/4" = 1'-0" *CEILING HT. = 9'-0"*

Project #: 21-128
Date: 4-27-21
Drawn/Design By: KBB
Scale: 1/4" = 1'-0"

REVISIONS

No.	Date:	Remarks
1		
2		
3		
4		

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K&A HOME DESIGN Inc.

Project Name: *DiEmma Job*

Client Name: *Triangle Home Pros LLC*
6312 Lauraca Lane
Fuquay Varina, NC 27526

FIRST FLOOR

Sheet Number 2 of 3

STRUCTURAL NOTES

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

2) DESIGN LOADS:

	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION (DL & LL)
ALL FLOORS	40	10	L/360
ATTIC (pull down access)	20	10	L/240
ATTIC (no access)	10	5	L/240
EXTERNAL BALCONY	60	10	L/360
ROOF	20	10	L/180
ROOF TRUSS	20	20	L/240
WIND LOAD	[BASED ON 115 MPH (3-second gusts)]		

3) MINIMUM ALLOWABLE SOIL BEARING PRESSURE = 2000 PSF

4) CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 3000 PSI AND A MAXIMUM SLUMP OF FIVE INCHES UNLESS NOTED OTHERWISE (UNO).

5) MAXIMUM DEPTH OF UNBALANCED FILL AGAINST FOUNDATION WALLS TO BE LESS THAN 4'-0" WITHOUT USING SUFFICIENT WALL BRACING. REFER TO SECTION R404 OF 2018 NC RESIDENTIAL BUILDING CODE FOR BACKFILL LIMITATIONS BASED ON WALL HEIGHT, WALL THICKNESS, SOIL TYPE, AND UNBALANCED BACKFILL HEIGHT

6) ALL FRAMING LUMBER SHALL BE SYP #2 (Fb = 800 PSI) UNO.
ALL FRAMING LUMBER EXPOSED TO THE ELEMENTS SHALL BE TREATED MATERIAL.

7) ALL LOAD BEARING HEADERS SHALL BE (2)2x10 (UNO). ALL WINDOW AND DOOR HEADERS SHALL BE SUPPORTED BY
(1) JACK STUD AND (1) KING STUD AT EACH END UNLESS NOTED. ALL OTHER BEAMS SHALL BE SUPPORTED BY 2 STUDS OR THE AMOUNT OF STUDS REQUIRED FOR FULL BEARING AT EACH END UNLESS NOTED. POINT LOADS (STIFF KNEES, ETC.) SHALL CONSIST OF 2 STUDS UNLESS NOTED. ALL SUPPORTS OF 2 STUDS OR MORE SHALL BE TRANSFERRED THROUGH EACH FLOOR TO THE FOUNDATION.

8) ALL EXTERIOR WALLS TO BE SHEATHED WITH MIN. 7/16" WOOD STRUCTURAL PANELS FASTNED WITH 8D NAILS 6" O.C. AT EDGES AND 12" O.C. AT INT. SUPPORTS. BLOCKING SHALL BE INSTALLED IF LESS THAN 50 PERCENT OF THE WALL LENGTH IS SHEATHED. WHERE BLOCKING IS REQ'D, ALL PANELS SHALL BE FASTENED AT 3" O.C AT EDGES AND 6" O.C. AT INT. SUPPORTS.

9) ALL STRUCTURAL STEEL SHALL ASTM A-36. STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3-1/2" INCHES AND FULL FLANGE WIDTH, PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO LAG SCREWS (1/2 DIAMETER AND 4" LONG). LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDING THE JOISTS ARE TOE NAILED TO THE SOLE PLATES, AND THE SOLE PLATES ARE NAILED OR BOLTED TO THE BEAM FLANGES @ 48" O.C.

10) ANCHOR BOLT PLACEMENT PER SECTION R403.1.6. 1/2" DIAMETER ANCHOR BOLTS SPACED AT 6'-0" O/C AND PLACED 12" FROM THE END OF EACH PLATE SECTION

11) FOUNDATION DRAINAGE-DAMP PROOFING OR WATERPROOFING PER SECTION 405 AND 406 OF 2018 NC RESIDENTIAL BUILDING CODE

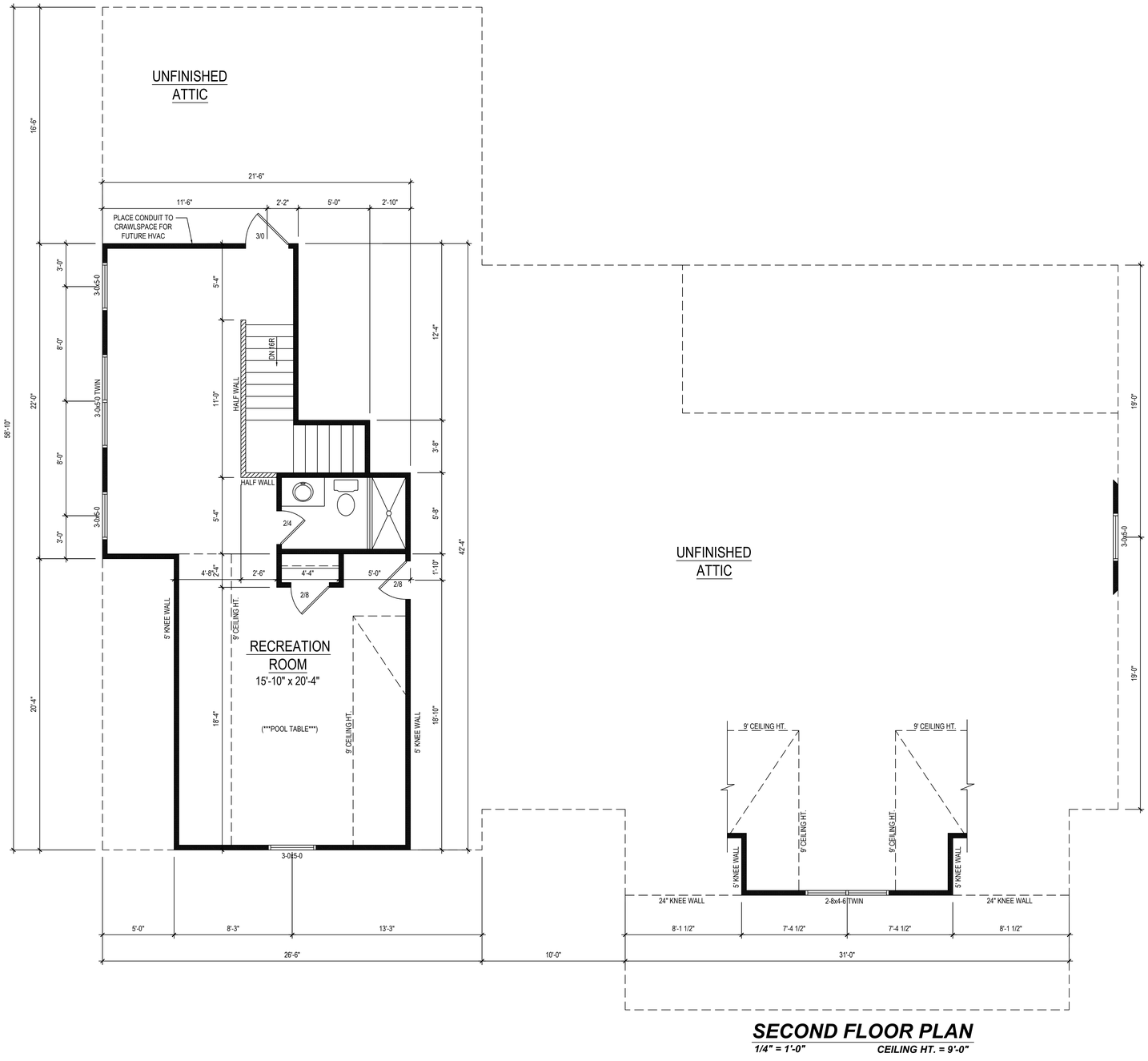
12) WALL AND ROOF CLADDING VALUES:
WALL CLADDING SHALL BE DESIGNED FOR A 24.1 SQ.FT. OR GREATER POSITIVE AND NEGATIVE PRESSURE
ROOF VALUES BOTH POSITIVE AND NEGATIVE SHALL BE AS FOLLOWS:
45.5 LBS/SQFT FOR ROOF PITCHES OF 0/12 TO 2.25/12
34.8 LBS/SQFT FOR ROOF PITCHES OF 2.25/12 TO 7/12
21.0 LBS/SQFT FOR ROOF PITCHES OF 7/12 TO 12/12
** MEAN ROOF HEIGHT 30' OR LESS

13) FOR ROOF SLOPES FROM 2:12 THROUGH 4:12, BUILDER TO INSTALL 2 LAYERS OF 15# FELT PAPER

14) IT IS THE CONTRACTOR'S RESPONSIBLITY TO VERIFY ALL DIMENSIONS AND SQ. FTG. ARE CORRECT PRIOR TO CONSTRUCTION. DESIGNER IS NOT RESPONSIBLE FOR DIMENSIONING OR SQ. FTG. ERRORS ONCE CONSTRUCTION BEGINS

TABLE N1102.1 INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT

CLIMATE ZONE	MAXIMUM GLAZING U-FACTOR	MINIMUM INSULATION R-VALUE					
		CEILINGS	WALLS	FLOORS	BASEMENT WALLS	SLAB PERIMETER	CRAWL SPACE WALLS
3	.35	R-38 or R-30	R-15	R-19	R-5/13	R-0	R-5/13
4	.35	R-38 or R-30	R-15	R-19	R-10/15	R-10	R-10/15



SECOND FLOOR PLAN

1/4" = 1'-0" *CEILING HT. = 9'-0"*

Project #:
21-128
Date:
4-27-21
Drawn/Design By:
KBB
Scale:
1/4" = 1'-0"

REVISIONS

No.	Date:	Remarks
1		
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K&A HOME DESIGN Inc.

Project Name: *DiEmma Job*

Client Name: *Triangle Home Pros LLC*
6312 Lauraca Lane
Fuquay Varina, NC 27526

SECOND FLOOR

Sheet Number
3
of 3

STRUCTURAL NOTES

1. ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF SYSTEM. ENGINEER'S SEAL DOES NOT APPLY TO I-JOIST OR FLOOR/ROOF TRUSS LAYOUT DESIGN AND ACCURACY.

2. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE NORTH CAROLINA RESIDENTIAL CODE (NCRC), 2018 EDITION AND ALL LOCAL CODES AND REGULATIONS. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR, AND WILL NOT HAVE CONTROL OF, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION WORK.

3. DESIGN LOADS (R301)

	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION (LL)
ROOMS OTHER THAN SLEEPING ROOMS	40	10	L/360
SLEEPING ROOMS	30	10	L/360
ATTIC WITH LIMITED STORAGE	20	10	L/240
ATTIC WITHOUT STORAGE	10	10	L/360
STAIRS	40	10	L/360
EXTERIOR BALCONIES	40	10	L/360
DECKS	40	10	L/360
HANDRAILS 200 LB OR 50 PLF		10	L/360
PASSENGER VEHICLE GARAGES	50	10	L/360
FIRE ESCAPES	40	10	L/360
GROUND SNOW LOAD	20		

WIND LOAD PER SECTION R301.2. (MEAN ROOF HEIGHT <35 FEET, EXPOSURE B)

- I-JOIST FLR. SYSTEMS DESIGNED WITH 12 PSF DL AND L/480 DEFLECTION.
- FLOOR TRUSS FLR. SYSTEMS DESIGNED WITH 15 PSF DL AND L/480 DEFLECTION.

4. THE STRUCTURE IS DESIGNED FOR 120 MPH ULTIMATE DESIGN WIND SPEEDS.

5. WALL CLADDING DESIGNED FOR +15.5 PSF AND -20 PSF (+/- INDICATE POSITIVE / NEGATIVE PRESSURE (TYP).

6. ROOF CLADDING DESIGNED FOR +14.2 PSF AND -18 PSF FOR ROOF PITCHES 7/12 TO 12/12 AND +10 PSF AND -36 PSF FOR ROOF PITCHED 2.25/12 TO 7/12.

7. THE POSITIVE AND NEGATIVE DESIGN PRESSURE FOR DOORS AND WINDOWS FOR A MEAN ROOF HEIGHT OF 35 FEET OR LESS IS 25 PSF.

8. FOUNDATION DESIGN BASED ON A MINIMUM ALLOWABLE BEARING CAPACITY OF 2000 PSF. CONTACT ENGINEER IF ALLOWABLE BEARING CAPACITY CAN NOT BE ACHIEVED.

9. FOUNDATION ANCHORAGE TO COMPLY WITH SECTION R403.1.6 OF THE 2018 NCRC.

10. FOR ALL CONCRETE SLABS AND FOOTINGS, THE AREA WITHIN THE PERIMETER OF THE BUILDING ENVELOPE SHALL HAVE ALL VEGETATION, TOP SOIL AND FOREIGN MATERIAL REMOVED. FILL MATERIAL SHALL BE FREE OF VEGETATION AND FOREIGN MATERIAL. THE FILL SHALL BE COMPACTED TO 95% TO ASSURE UNIFORM SUPPORT OF THE SLAB, AND EXCEPT WHERE APPROVED, THE FILL DEPTHS SHALL NOT EXCEED 24" FOR CLEAN SAND OR GRAVEL. A 4" THICK BASED COURSE CONSISTING OF CLEAN GRADED SAND OR GRAVEL SHALL BE PLACED. A BASE COURSE IS NOT REQUIRED WHERE A CONCRETE SLAB IS INSTALLED ON WELL-DRAINED OR SAND-GRAVEL MIXTURE SOILS CLASSIFIED AS GROUP 1, ACCORDING TO THE UNITED SOIL CLASSIFICATION SYSTEM IN ACCORDANCE WITH TABLE R405.1 OF THE NCRC, 2018 EDITION.

11. CONCRETE SHALL CONFORM TO SECTION R402.2 OF THE NCRC, 2018 EDITION. CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 3000 PSI. CONCRETE REINFORCING STEEL SHALL BE ASTM A615 GRADE 60. WELDED WIRE FABRIC SHALL BE ASTM A185. MAINTAIN A MINIMUM CONCRETE COVER AROUND REINFORCING STEEL OF 3" IN FOOTINGS AND 1 1/2" IN SLABS.

12. MASONRY UNITS TO CONFORM TO ACE 530/ASCE 5/TMS 402. MORTAR SHALL CONFORM TO ASTM C270.

13. THE UNSUPPORTED HEIGHT OF MASONRY PIERS SHALL NOT EXCEED FOUR TIMES THEIR LEAST DIMENSION FOR UNFILLED HOLLOW CONCRETE MASONRY UNITS AND TEN TIMES THEIR LEAST DIMENSION FOR SOLID OR SOLID FILLED PIERS. PIERS MAY BE FILLED SOLID WITH CONCRETE OR TYPE M OR S MORTAR. PIERS AND WALLS SHALL BE CAPPED WITH 8" OF SOLID MASONRY.

14. THE CENTER OF EACH PIER SHALL BEAR IN THE MIDDLE THIRD OF ITS RESPECTIVE FOOTING. EACH GIRDER SHALL BEAR IN THE MIDDLE THIRD OF EA. PIER.

15. ALL CONCRETE AND MASONRY FOUNDATION WALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF SECTION R404 OF THE 2018 NCRC, OR IN ACCORDANCE WITH ACI 318, ACI 332, NCMA TR68-A OR ACE 530/ASCE 5/TMS 402. MASONRY FOUNDATION WALLS SHALL BE REINFORCED PER TABLE R404.1.1(1), R404.1.1(2), R404.1.1(3), OR R404.1.1(4) OF THE 2018 NCRC. CONCRETE FOUNDATION WALLS SHALL BE REINFORCED PER TABLE R404.1.1(5) OF THE NCRC, 2018 EDITION. STEP FOUNDATION WALLS TO 2 x 6 FRAMED WALLS AT 16" O.C. WHERE GRADE PERMITS (UNO).

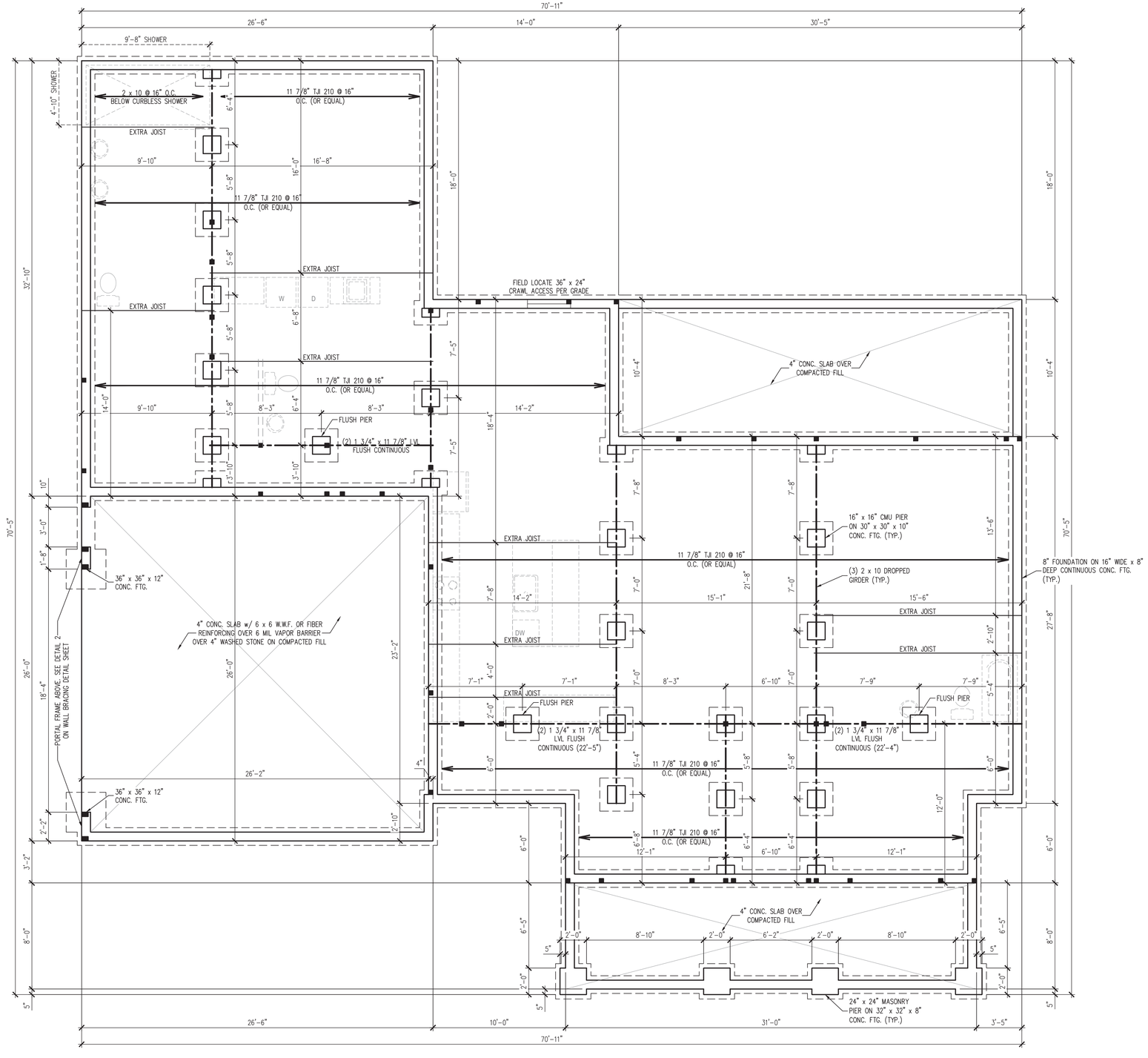
16. ALL FRAMING LUMBER SHALL BE SPF #2 AND ALL TREATED LUMBER SHALL BE SYP #2 (UNO).

17. LAMINATED VENEER LUMBER (LVL) SHALL HAVE THE FOLLOWING MIN. PROPERTIES: Fb = 2600 PSI, Fv = 285 PSI, E = 1900000 PSI. INSTALL ALL CONNECTIONS PER MANUFACTURER'S SPECIFICATIONS.

18. ALL LOAD BEARING HEADERS SHALL CONFORM TO TABLES R602.7(1) AND R602.7(2) OF THE 2018 NCRC UNLESS NOTED OTHERWISE ON THE PLANS. ALL HEADERS SHALL BE SUPPORTED WITH (1) JACK STUD AND (1) KING STUD EACH END (UNO). SECURE THE FIRST KING STUD EACH SIDE OF THE HEADER TO THE HEADER WITH (4) 16d END-NAILS. INSTALL KING STUDS PER SECTION R602.7.5 OF THE 2018 NCRC (UNO).

19. ALL I-JOIST AND TRUSS LAYOUTS SHALL BE IN COMPLIANCE WITH THE OVERALL DESIGN SPECIFIED ON THE PLANS. IF ALTERNATE I-JOISTS ARE USED, THE JOISTS MUST HAVE EQUIVALENT STRUCTURAL PROPERTIES TO THOSE SPECIFIED ON THE PLANS. ALL DEVIATIONS TO I-JOIST OR TRUSS LAYOUTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION.

20. ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER II OF THE NCRC, 2018 EDITION.



CRAWL SPACE STRUCTURAL NOTES

1. ALL FRAMING LUMBER TO BE #2 SPF (UNO). ALL TREATED LUMBER TO BE #2 SYP (UNO).
2. INSTALL AN EXTRA OR DOUBLE JOIST UNDER WALLS PARALLEL TO THE FLOOR JOISTS WHERE NOTED ON THE PLANS.
3. SHADED PIERS TO BE FILLED SOLID.
4. INSTALL 1/2" ANCHOR BOLTS 6'-0" O.C. AND WITHIN 1'-0" FROM END OF EACH CORNER. (MIN (2) ANCHORS PER PLATE SECTION.) ANCHOR BOLTS MUST EXTEND A MINIMUM OF 7" INTO MASONRY OR CONCRETE. LOCATE BOLT WITHIN MIDDLE THIRD OF PLATE WIDTH.
5. INSTALL JOINT REINFORCEMENT @ 16" O.C. TO SECURE MULTIPLE WYTHE FOUNDATION WALLS TOGETHER.
6. REFER TO NOTES AND DETAIL PAGES FOR ADDITIONAL INFORMATION.

LEGEND

■	STUD COLUMN ON FLOOR ABOVE THAT REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION.
	PLUMBING OR APPLIANCES ON THE FLOOR ABOVE TO HELP ELIMINATE FRAMING CONFLICTS WITH UTILITIES. (FOR REFERENCE ONLY, SEE ARCHITECTURAL DRAWINGS)
	NEW BEAM OR GIRDER AS NOTED
(UNO)	UNLESS NOTED OTHERWISE

PREPARED UNDER THE SUPERVISION OF:

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 038485 5/24/2021 JACOB ERNEST SMITH

J. SMITH STRUCTURAL ENGINEERING, PLLC
1532 CONE AVE. • APEX, NC 27502
(919) 864-1430 • jsmithstructural@gmail.com
N.C. CERTIFICATE NUMBER: P-2212

DiEmma RESIDENCE
TRIANGLE HOME PROS, LLC

REVISIONS:

DRAWN BY: K&A HOME DESIGN, INC.

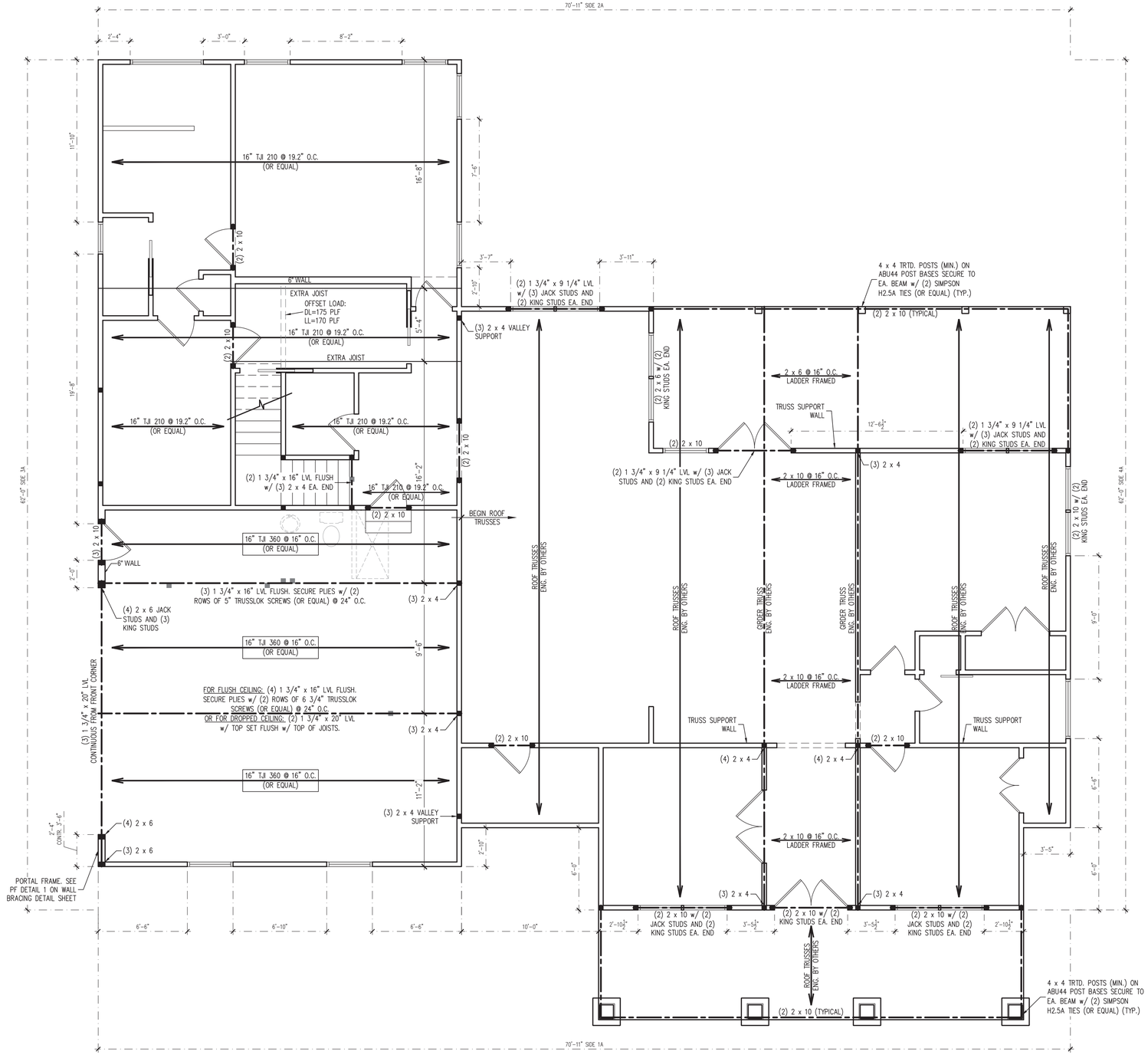
ENGINEERED BY: J. SMITH

SCALE: 1/4" = 1'-0"

DATE: 5-24-2021

SHEET: 1 OF: 5

S-1
CRAWLSPACE FOUNDATION PLAN



BRACED WALL DESIGN NOTES:

1. BRACED WALL DESIGN PER SECTION R602.10 OF THE NCRC 2018 EDITION.
2. CS-WSP REFERS TO THE "CONTINUOUS SHEATHING – WOOD STRUCTURAL PANELS" WALL BRACING METHOD. 7/16" OSB SHEATHING SHALL BE INSTALLED ON ALL SHEATHABLE SURFACES OF ALL EXTERIOR WALLS ATTACHED w/ 6d COMMON NAILS OR 8d (2 1/2" LONG x 0.113" DIA.) NAILS SPACED 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD (UNO).
3. SEE NOTES AND DETAIL SHEETS FOR ADDITIONAL BRACED WALL INFORMATION.

BRACED WALL DESIGN SUMMARY:

SIDE 1A
METHOD: CS-WSP
REQUIRED LENGTH: 8.3'
PROVIDED LENGTH: 45.9'

SIDE 2A
METHOD: CS-WSP
REQUIRED LENGTH: 8.3'
PROVIDED LENGTH: 33.5'

SIDE 3A
METHOD: CS-WSP/PF
REQUIRED LENGTH: 9.6'
PROVIDED LENGTH: 50.16'

SIDE 4A
METHOD: CS-WSP
REQUIRED LENGTH: 9.6'
PROVIDED LENGTH: 27.5'

SECOND FLOOR FRAMING STRUCTURAL NOTES:

1. ALL FRAMING LUMBER TO BE SPF #2 (UNO). ALL TREATED LUMBER TO BE SYP #2 (UNO.)
2. ALL LOAD BEARING HEADERS TO BE (2) 2 x 10 (UNO).
3. WINDOW AND DOOR HEADERS TO BE SUPPORTED w/ (1) JACK STUD AND (1) KING STUD EA. END (UNO.)
4. INSTALL AN EXTRA JOIST UNDER WALLS PARALLEL TO FLOOR JOISTS WHERE NOTED ON THE PLANS.
5. SECURE 4 x 4 OR 6 x 6 POSTS TO CONCRETE/MASONRY w/ SIMPSON ABU44 OR ABU66 POST BASES. SECURE 4 x 4 OR 6 x 6 POSTS TO HEADERS/BEAMS w/ 700 LB CAPACITY UPLIFT CONNECTORS (UNO).
6. REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

LEGEND

■	STUD COLUMN AT POINT LOADS THAT REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION. AT DROPPED HEADERS: (1) JACK STUD AND (1) KING STUD (UNO). AT FLUSH BEAMS: (2) STUDS (UNO)
■	OFFSET POINT LOAD FROM FLOOR ABOVE. MUST BE SUPPORTED BY BEAM, JOIST, OR BLOCKING AS NOTED ON THE PLANS.
	BEAM OR HEADER AS NOTED
	THIS LINE TYPE INDICATES PLUMBING OR APPLIANCES ON THE FLOOR ABOVE TO HELP ELIMINATE FRAMING CONFLICTS WITH UTILITIES. (FOR REFERENCE ONLY, SEE ARCHITECTURAL DRAWINGS)
X'-X"	BRACED WALL DIMENSIONS (FOR REFERENCE ONLY)
(UNO)	UNLESS NOTED OTHERWISE

PREPARED UNDER THE SUPERVISION OF:

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 038485 5/24/2021 JACOB ERNEST SMITH

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(919) 864-1430 • jsmithstructural@gmail.com
N.C. CERTIFICATE NUMBER: P-2212

DiEmma RESIDENCE
TRIANGLE HOME PROS, LLC

REVISIONS:

DRAWN BY: K&A HOME DESIGN, INC.

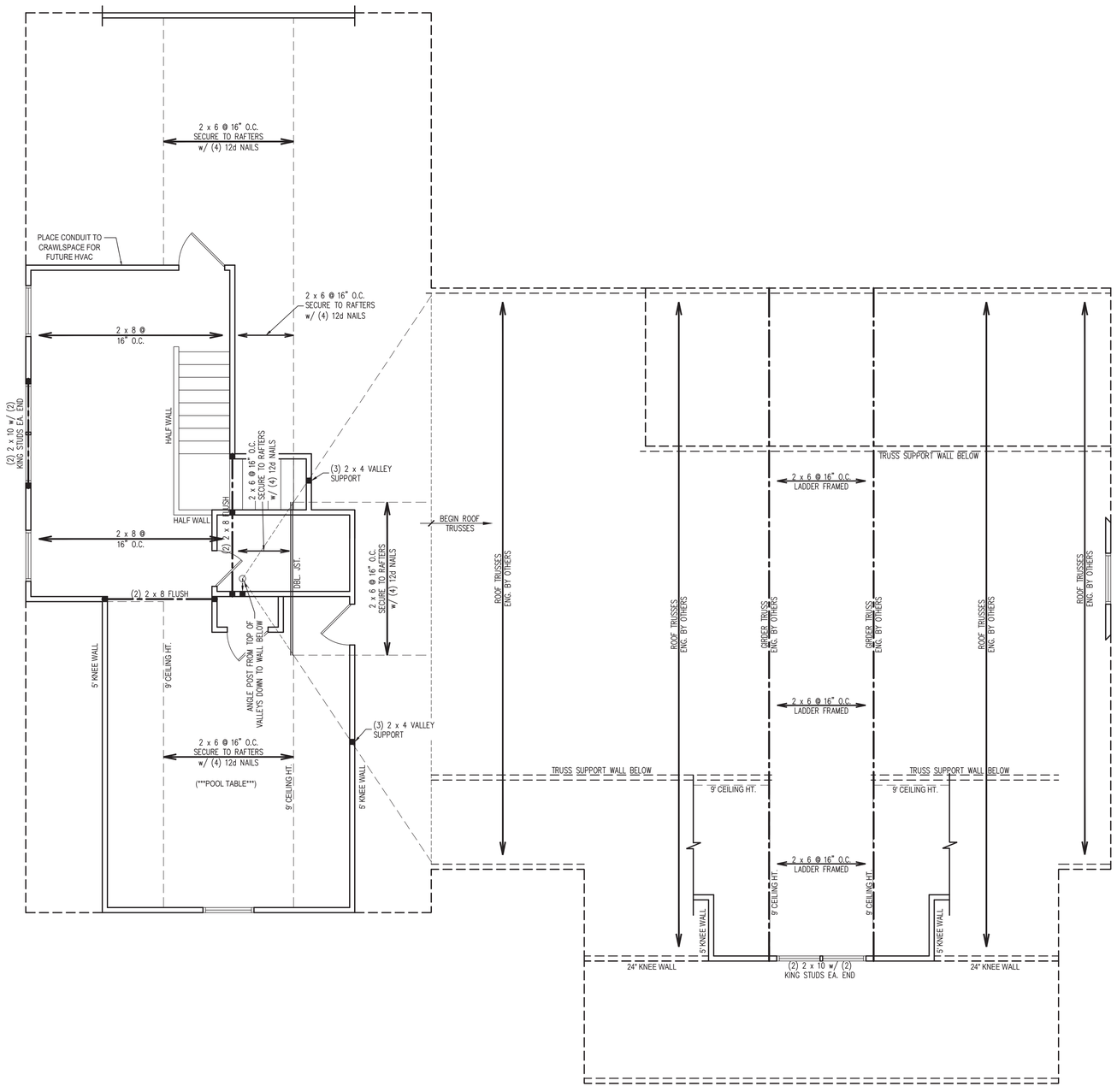
ENGINEERED BY: J. SMITH

SCALE: 1/4" = 1'-0"

DATE: 5-24-2021

SHEET: 2 OF: 5

S-2
SECOND FLOOR FRAMING PLAN



BRACED WALL DESIGN NOTES:

1. BRACED WALL DESIGN PER SECTION R602.10 OF THE NCRC 2018 EDITION.
2. PER TABLE R602.10.3 OF THE 2018 NCRC, THE 2ND FLOOR IS CONTAINED WHOLLY WITHIN THE ROOF SYSTEM AND WALL BRACING ANALYSIS IS NOT REQUIRED ON THE 2ND FLOOR. IN ADDITION, THE 2ND FLOOR NEED NOT BE CONSIDERED A STORY IN THE FIRST FLOOR WALL BRACING ANALYSIS.
3. CS-WSP REFERS TO THE "CONTINUOUS SHEATHING – WOOD STRUCTURAL PANELS" WALL BRACING METHOD. 7/16" OSB SHEATHING SHALL BE INSTALLED ON ALL SHEATHABLE SURFACES OF ALL EXTERIOR WALLS ATTACHED w/ 6d COMMON NAILS OR 8d (2 1/2" LONG x 0.113" DIA.) NAILS SPACED 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD (UNO).
4. SEE NOTES AND DETAIL SHEETS FOR ADDITIONAL BRACED WALL INFORMATION.

CEILING FRAMING STRUCTURAL NOTES:

1. ALL FRAMING LUMBER TO BE SPF #2 (UNO). ALL TREATED LUMBER TO BE SYP #2 (UNO.)
2. ALL LOAD BEARING HEADERS TO BE (2) 2 x 10 (UNO).
3. WINDOW AND DOOR HEADERS TO BE SUPPORTED w/ (1) JACK STUD AND (1) KING STUD EA. END (UNO.)
4. REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

LEGEND	
■	STUD COLUMN AT POINT LOADS THAT REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION. AT DROPPED HEADERS: (1) JACK STUD AND (1) KING STUD (UNO). AT FLUSH BEAMS: (2) STUDS (UNO)
———	BEAM OR HEADER AS NOTED
(UNO)	UNLESS NOTED OTHERWISE

PREPARED UNDER THE SUPERVISION OF:

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 038485 5/24/2021 JACOB ERNEST SMITH

J. SMITH STRUCTURAL ENGINEERING, PLLC
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N.C. CERTIFICATE NUMBER: P-2212

DiEmma RESIDENCE
TRIANGLE HOME PROS, LLC

REVISIONS:

DRAWN BY: K&A HOME DESIGN, INC.

ENGINEERED BY: J. SMITH

SCALE: 1/4" = 1'-0"

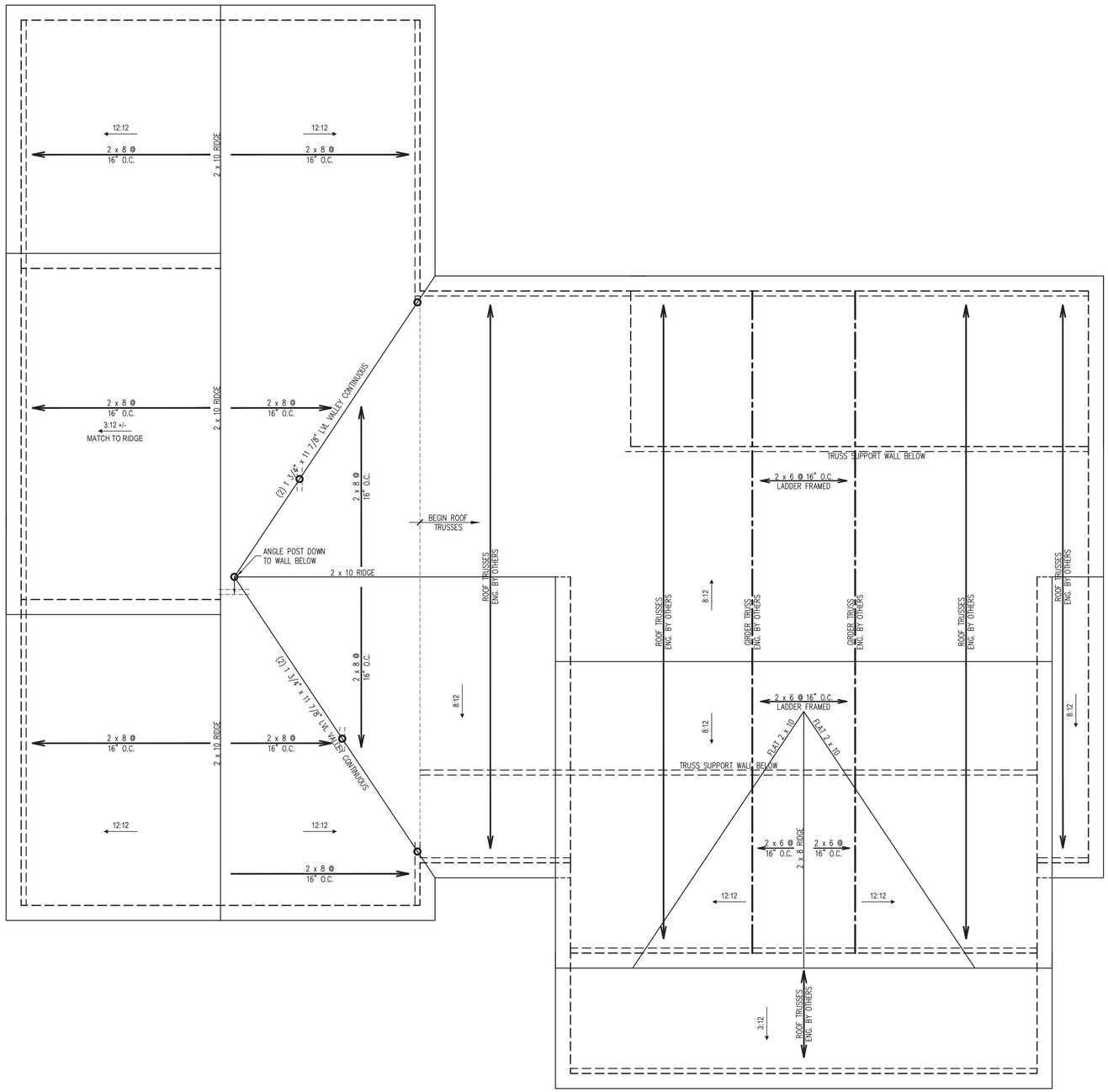
DATE: 5-24-2021

SHEET: 3 OF: 5

S-3
CEILING FRAMING PLAN

ROOF FRAMING STRUCTURAL NOTES:

1. ALL FRAMING LUMBER TO BE #2 SPF (UNO).
2. SHEATH ROOF w/ 7/16" OSB SHEATHING SECURED w/ 8d NAILS @ 6" O.C. ALONG EDGES AND 12" O.C. IN THE FIELD.
3. CIRCLES DENOTE (3) 2 x 4 POSTS FOR ROOF SUPPORT.
4. STICK FRAME OVER-FRAMED ROOF SECTIONS W/ 2 x 8 RIDGES, 2 x 6 RAFTERS @ 16" O.C. AND FLAT 2 x 10 VALLEYS OR USE VALLEY TRUSSES.
5. FASTEN FLAT VALLEYS TO RAFTERS OR TRUSSES WITH SIMPSON H2.5A HURRICANE TIES @ 32" O.C. MAX. PASS HURRICANE TIES THROUGH NOTCH IN ROOF SHEATHING IF REQUIRED. SECURE RAFTERS TO FLAT VALLEYS WITH A MIN. OF (6) 12d TOE NAILS.
6. TRUSS TO TRUSS CONNECTION PER TRUSS DESIGNER.
7. INSTALL (1) SIMPSON H2.5A HURRICANE TIE (OR EQUAL) @ EA. RAFTER/TRUSS BEARING.
8. REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.



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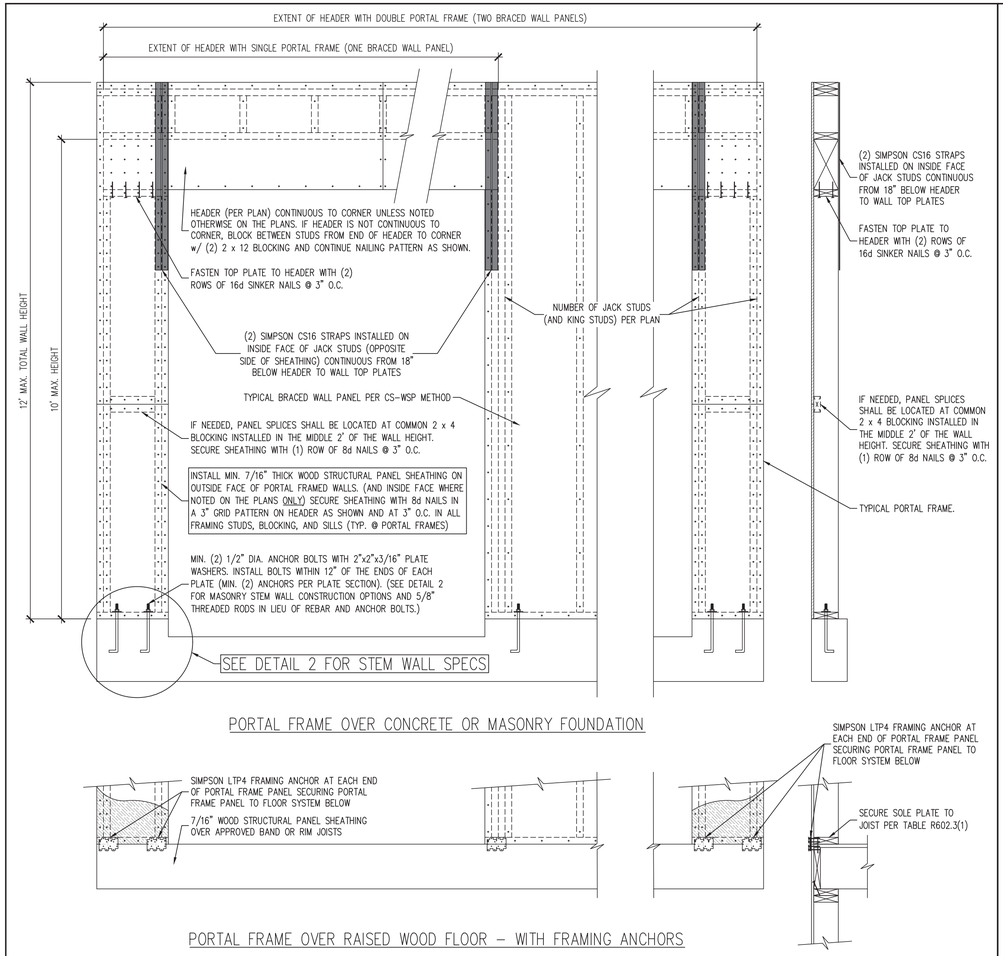
S-4
ROOF FRAMING PLAN

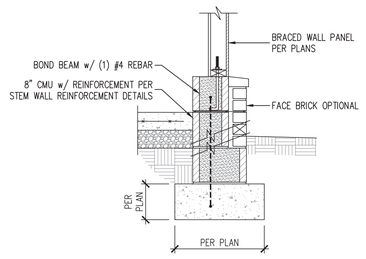


PORTAL FRAME OVER CONCRETE OR MASONRY FOUNDATION

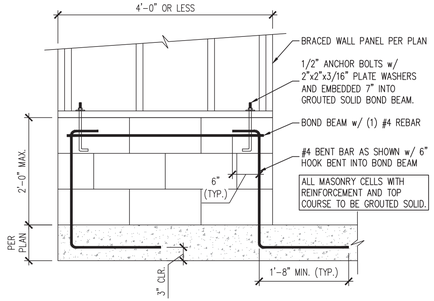
PORTAL FRAME OVER RAISED WOOD FLOOR – WITH FRAMING ANCHORS

1 PF PORTAL FRAME DETAIL

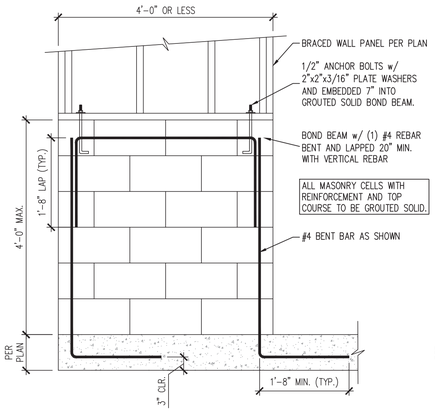
SCALE: 3/4" = 1'-0" (REFERENCE FIGURE R602.10.1)



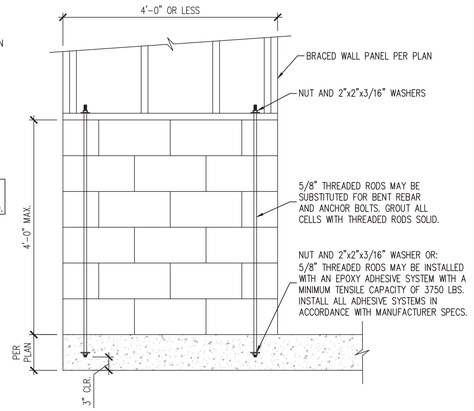
TYPICAL STEM WALL SECTION



SHORT STEM WALL REINFORCEMENT



TALL STEM WALL REINFORCEMENT



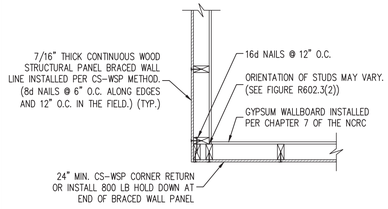
OPTIONAL STEM WALL REINFORCEMENT IN LIEU OF BENT REBAR AND ANCHOR BOLTS

2 MASONRY STEM WALL DETAILS FOR WALLS 48" LONG OR LESS

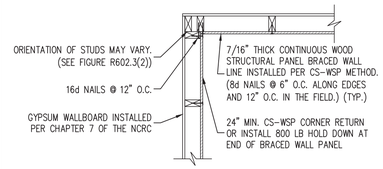
SCALE: 3/4" = 1'-0" (REFERENCE FIGURE R602.10.4.3)

GENERAL WALL BRACING NOTES:

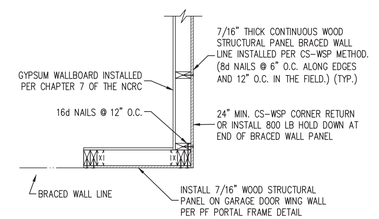
1. WALL BRACING DESIGNED IN ACCORDANCE WITH CHAPTER 6 OF THE 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE (NCRC). TABLES AND FIGURES REFERENCED ARE FROM THE 2018 NCRC. REFER TO THE 2018 NCRC FOR ADDITIONAL INFORMATION AS NEEDED.
2. SEE STRUCTURAL SHEETS FOR THE BRACED WALL DESIGN SUMMARY WHICH SPECIFIES THE TOTAL AMOUNT OF BRACING REQUIRED AND PROVIDED ALONG EACH BRACED WALL LINE ON EACH FLOOR (WHERE REQUIRED). THE LENGTH AND LOCATION OF BRACED WALLS, HOLD DOWN(S) TYPE AND LOCATIONS, AND ANY SPECIAL NOTES OR REQUIREMENTS DETERMINED BY ENGINEERED DESIGN ARE INCLUDED ON EACH STRUCTURAL FLOOR PLAN (WHERE REQUIRED).
3. ALL EXTERIOR WALLS ARE TO BE SHEATHED ON THE EXTERIOR FACE WITH 7/16" OSB WOOD STRUCTURAL PANELS IN ACCORDANCE WITH THE CS-WSP METHOD AS SPECIFIED IN SECTION R602.10.3 OF THE 2018 NCRC UNLESS NOTED OTHERWISE (UNO).
4. CS-WSP REFERS TO THE "CONTINUOUS SHEATHING – WOOD STRUCTURAL PANELS" WALL BRACING METHOD. 7/16" OSB SHEATHING SHALL BE INSTALLED ON ALL SHEATHABLE SURFACES OF ALL EXTERIOR WALLS ATTACHED w/ 6d COMMON NAILS OR 8d (2 1/2" LONG x 0.113" DIAMETER) NAILS SPACED 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD (UNO).
5. THE INTERIOR SIDE OF ALL EXTERIOR WALLS AND BOTH SIDES OF INTERIOR WALLS SHALL BE SHEATHED WITH 1/2" GYPSUM WALL BOARD. WHEN NOT USING BRACING METHOD "GB", GYPSUM WALL BOARD SHALL BE FASTENED PER TABLE R702.3.5. BRACING METHOD "GB" WALL BOARD SHALL BE FASTENED PER TABLE R602.10.1
6. "GB" REFERS TO THE "GYPSUM BOARD" WALL BRACING METHOD. WHERE NOTED ON THE PLANS, 1/2" (MIN.) GYPSUM WALL BOARD SHALL BE INSTALLED ON BOTH SIDES OF THE BRACED WALL FASTENED WITH 1 1/4" #6 SCREWS OR 1 5/8" 5d COOLER NAILS SPACED 7" O.C. ALONG PANEL EDGES AND 7" O.C. ALONG INTERMEDIATE SUPPORTS (UNO).
7. THE REQUIRED BRACED WALL LENGTHS FOR EACH SIDE OF THE CIRCUMSCRIBED RECTANGLE ARE INTERPOLATED PER TABLE R602.10.3. METHOD CS-WSP CONTRIBUTES ITS ACTUAL LENGTH, METHOD GB CONTRIBUTES .5 ITS ACTUAL LENGTH, AND METHOD PF CONTRIBUTES 1.5 TIMES ITS ACTUAL LENGTH.



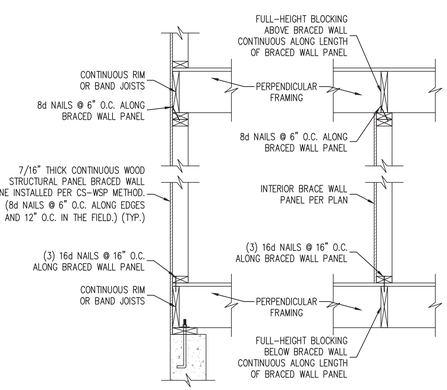
CS-WSP OUTSIDE CORNER DETAIL



CS-WSP INSIDE CORNER DETAIL

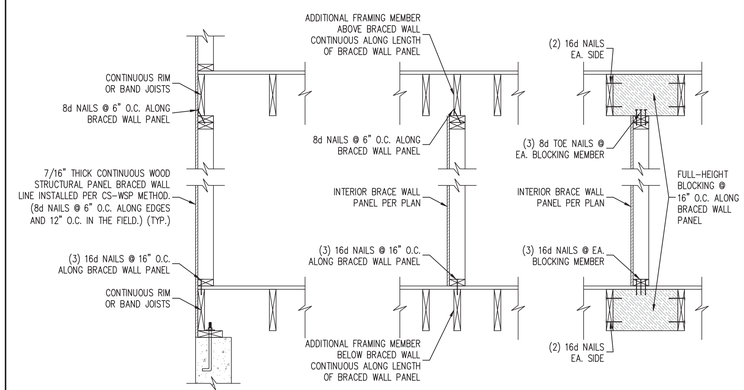


CS-WSP GARAGE DOOR CORNER DETAIL



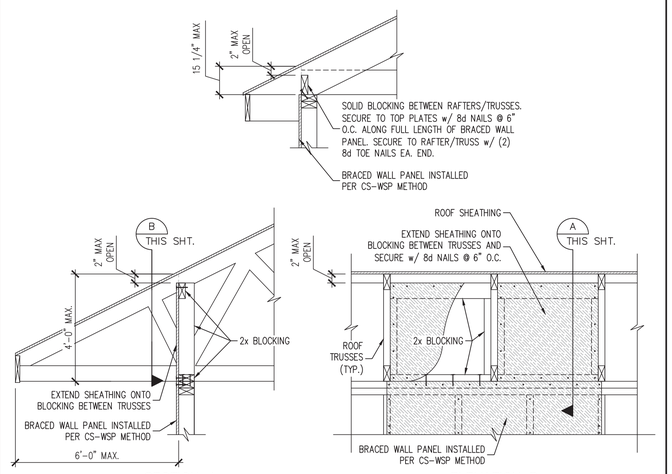
3 BRACED WALL PANEL CONNECTION WHEN PERPENDICULAR TO FLOOR/CEILING FRAMING

SCALE: NTS (REFERENCE FIGURE R602.10.4.4(1))



4 BRACED WALL PANEL CONNECTION WHEN PARALLEL TO FLOOR/CEILING FRAMING

SCALE: NTS (REFERENCE FIGURE R602.10.4.4(2))



SECTION A ELEVATION B

5 BRACED WALL PANEL CONNECTION TO PERPENDICULAR RAFTERS OR TRUSSES

SCALE: NTS (REFERENCE FIGURES R602.10.4.5(1) AND (3))

6 TYPICAL EXTERIOR CORNER FRAMING DETAILS

SCALE: 3/4" = 1'-0" (REFERENCE FIGURES R602.10.3(4) AND (5))

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S-5
WALL BRACING NOTES AND DETAILS