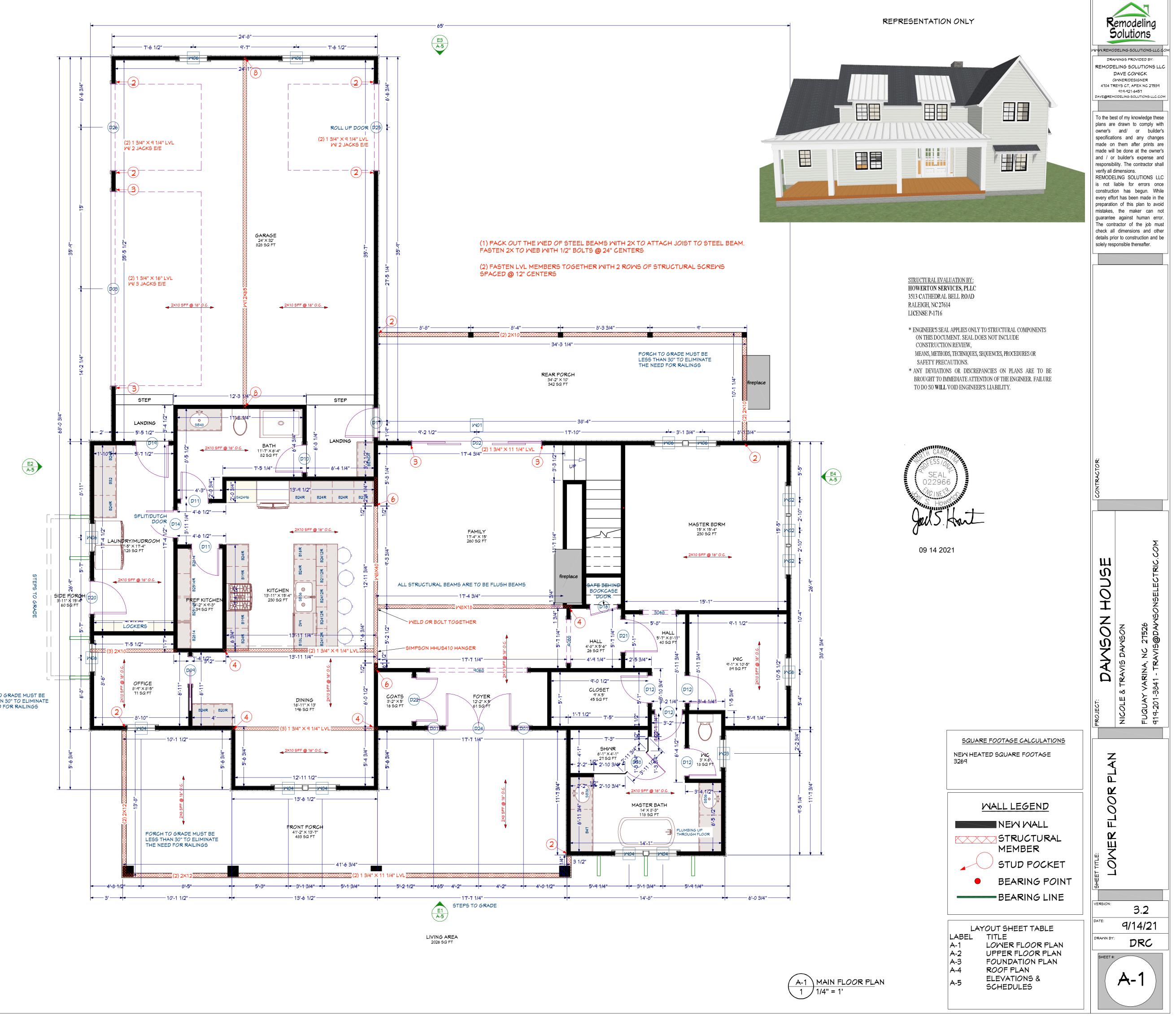
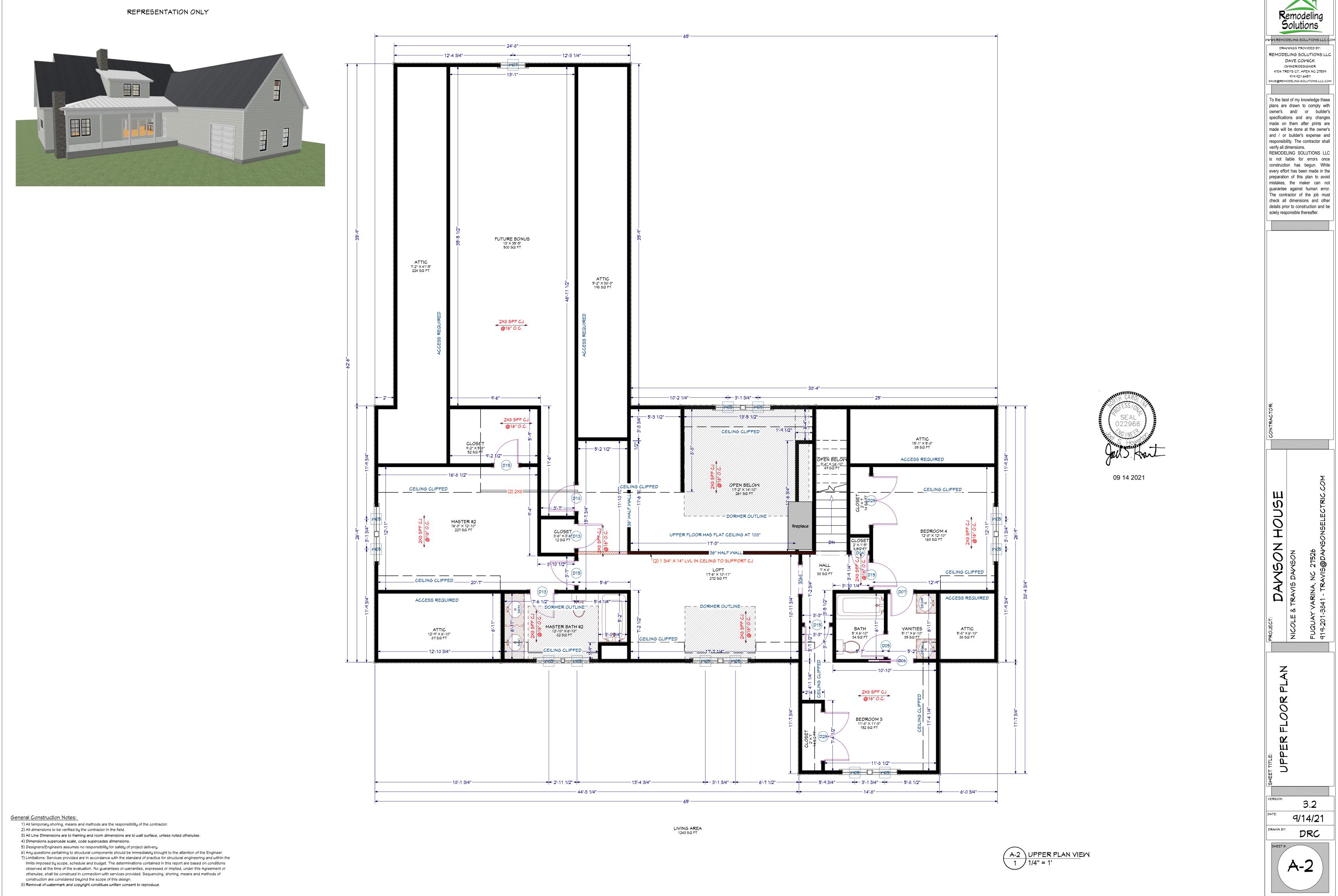
VITH NC RESIDENTIAL CODE. 2018					
ESIGN DRAWINGS DO NOT EXCEED 15% OR WALLS. THIS STRUCTURE MEETS THE					
SIDENTIAL BUILDING, TYPE A-1. 1 #SF OR GREATER					
L BE INSUIATED IN ACCORDANCE WITH					
LIVE 40 PSF 40 PSF					
30 PSF 20 PSF					
20 PSF					
.S SHALL BE DOUBLE 2X10 U.O.N. N. ER WALLS ABOVE.					
6" OF EACH CORNER.					
CTION R602.10.1 2018 NCBC RESIDENTIAL CODE					
THE EXTERIOR WALLS ARE REGOMED FER SECTION ROUSLY SHEATHED, FULL HEIGHT WITH MIN. THICKNESS 7/16" OSB. THESE WALLS SHALL BE CONSTRUCTED IN CONFORMANCE TO					
OR LOCATION OF REQUIRED BRACING (ALL BRACING LABELED IN LINEAR FEET.					
ACED PER INDICATED METHOD IN , TABLE R602.10.2.					
ETAL STRAPPING AT 45 DEGREES TO 60					
LATE ACROSS STUDS WITH MAXIMUM STUD AS INDICATED IN CODE SECTION.					
RTICALLY AND CONTINUOU FROM TOP PLATE					
TO FRAMING USING SPACING CRITERIA AS					
) IN THE CODE AND ALLOWED WHERE REMENTS FOR SUPPORT.					
RECT NUMBER OF KING					
ant with minimum requirements set forrth in NCRC 2018 or per CS-WSP, R602.10.3 which includes 2x4 (min) studs	PORCH TO GRADE LESS THAN 30" TO				
(1)êd nail at 12" o.c. field. clude 36" long CS16 straps fully populated with 10d nails,	THE NEED FOR RAI				
al panel unless otherwise noted.					
de) L					
4					
1					
4					
r applicable size). fully populated with 3" long #9 screws. a clips.					
04.1(1)					
e f	responsibility of the contractor. e field. nsions are to wall surface, unless noted otherwise.				

- 6) Any questions pertaining to structural components should be immediately brought to the attention of the Engineer.
- 7) Limitations: Services provided are in accordance with the standard of practice for structural engineering and within the
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- 4) Dimensions supercede scale, code supercedes dimensions.
- 5) Designers/Engineers assumes no responsibility for safety of project delivery.
- limits imposed by scope, schedule and budget. The determinations contained in this report are based on conditions
- otherwise, shall be construed in connection with services provided. Sequencing, shoring, means and methods of
- δ) Removal of watermark and copyright constitues written consent to reproduce.



GENERAL FOUNDATION NOTES:

- 1. THIS PLAN DESIGNED IN ACCORDANCE WITH NC RESIDENTIAL
- CODE, 2018 EDITION.
- 2. EXTERIOR WALL FOOTING TO BE 20" X 8" 3000 PSI STRUCTURAL CONCRETE WITH 2- #4 BARS UNLESS OTHERWISE NOTED. CONCRETE TO BE PREPARED AND PLACED IN ACCORDANCE WITH ACI 318. FOR FOUNDATION WALL HEIGHT, THICKNESS AND BACKFILL REQUIREMENTS, REFER TO STATE AND LOCAL BUILDING CODES. NOTE: ASSUMED SOIL BEARING CAPACITY=2000 PSF. CONTRACTOR MUST VERIFY SITE CONDITIONS AND CONTACT SOIL ENGINEER IF MARGINAL OR UNSTABLE SOILS ARE ENCOUNTERED.
- FOOTINGS TO BEAR ON UNDISTURBED EARTH A MIN. OF 12" BELOW ADJACENT FINISH GRADE OR AS OTHERWISE DIRECTED BY LOCAL INSPECTOR.
- 4. FOUNDATION DRAINAGE SHALL BE IN ACCORDANCE WITH SECTION
- R405 OF THE CODE "FOUNDATION DRAINAGE".
 5. THE FOUNDATION SHAIL BE TREATED IN ACCORDANCE W/SECTION R406 OF THE CODE "FOUNDATION
- WATERPROOFING AND DAMPPROOFING". 6. THIS FOUNDATION DESIGN IS VALID FOR 120 MPH WIND ZONES.
- FOUNDATION WALLS SHAIL BE 12" IN WIDTH WHERE SUPPORTING FRAMING WITH BRICK VENEER.
 PORCH POST FOOTINGS SHALL BE 24"X24"X10" WITH 2- #4 BARS
- EACH WAY.

	Live Load (PSF)	Dead Load (PSF)	Deflection(DL&L L)
All Floors	40	10	L/360
Attic Platforms	25	10	L/360
Ceiling	10	10	L/360
Decks/Balconies	60	10	L/240
Roof	20	15	L/240
Wind Load	115 MPH(UNO)	115 MPH(UNO)	L/240

VENTING CALCULATIONS IF NOT A SEALED CRAWL: 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

2310 SQ. FT. CRAVL SPACE AREA <u>/150</u> 15.4 SQ. FT. NET FREE AREA REQUIRED

*MAY BE REDUCED BY 50% WITH VAPOR BARRIER

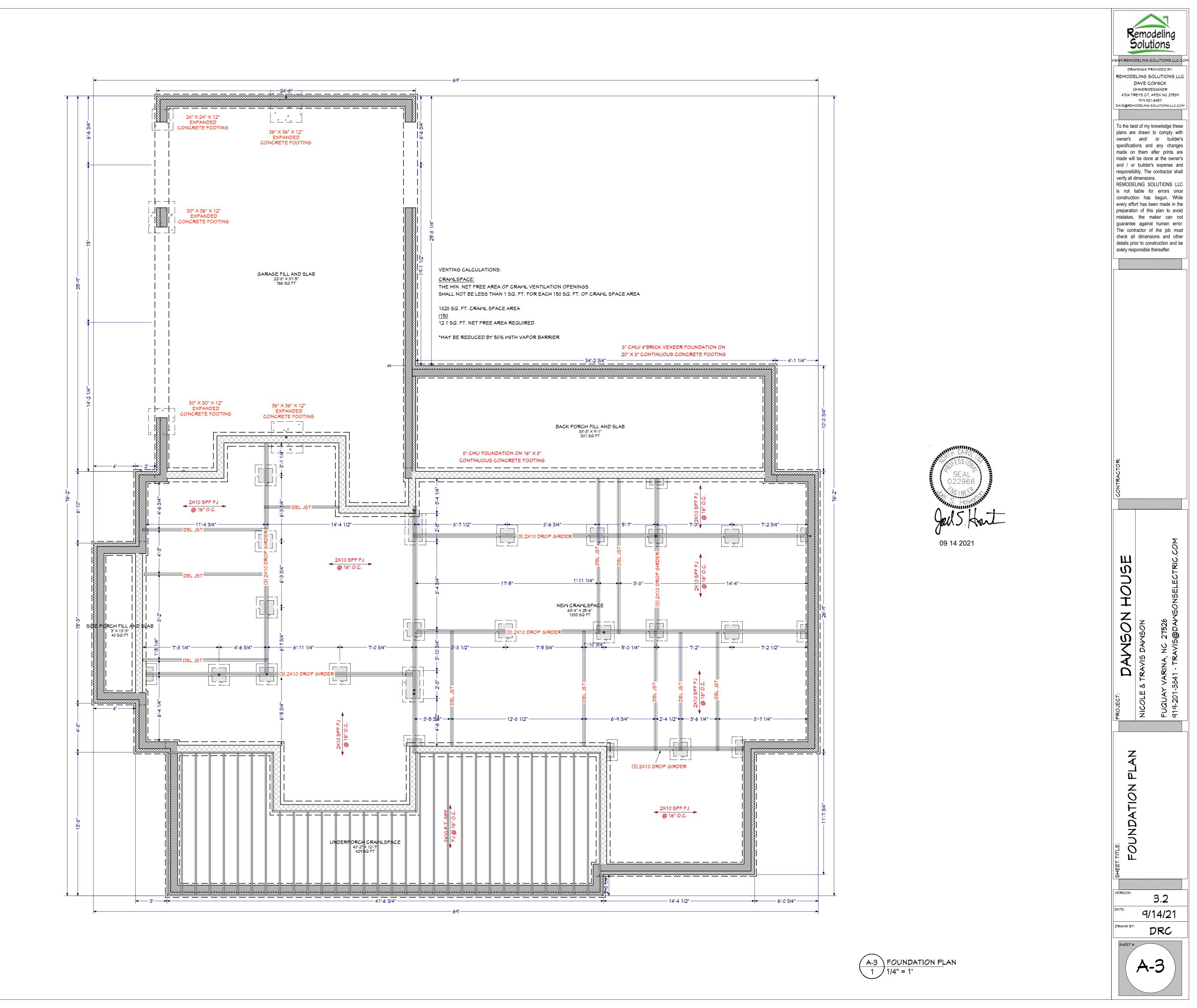
Foundation Notes:

5) Anchor Bolts per R4031.16

Assumed soil load bearing capacity = 2000 PSF
 Minimum 28 day fc of concrete = 3000 PSI
 Foundations to be built in accordance with NCRC 2018, Chapter 4
 "Tie-In" (if applicable) shall be (2) 16" long #4 epoxy bonded dowels half embedded mid-depth into existing footings.

General Construction Notes:

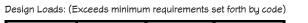
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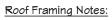
GENERAL ROOF NOTES:

1.	THIS PLAN DESIGNED IN ACCORDANCE WITH NC RESIDENTIAL CODE, 2018 EDITION.
2.	ROOF CLADDING DESIGN VALUES (POSITIVE/NEGATIVE) SHALL BE AS FOLLOWS:
	45.5 #/SF FOR ROOF PITCHES FROM 0/12 TO 2.25/12
	34.5 #/SF FOR ROOF PITCHES FROM 2.25/12 TO
	7/12 21 #/SF FOR ROOF PITCHES FROM 7/12 TO
2	ALL DOOFING FLEMENTS SUALL MEET THE DEOLIDEMENTS OF CHADTED S OF TH

- ALL ROOFING ELEMENTS SHALL MEET THE REQUIREMENTS OF CHAPTER 8 OF THE CODE.
 AII LUMBER SHALL BE #2 SPF OR BETTER. RAFTERS MAY BE FINGER JOINTED
- PER NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION, AND MUST HAVE THE STRUCTURAL CERTIFICATION STAMPED ON THE MEMBER.
- 5. RAFTER SIZES, SPANS AND SPACING SHALL NOT EXCEED THE FOLLOWING: SIZE 2X6 2X8 2X10 SPACING 12" O.C. 16-3" 21'-0" 25'-8" SPACING 16" O.C. 14'-4" 18'-2" 22'-3"
- 6. All RAFTERS TO BE 2X8 @ 16" O.C. #2 SPF UNLESS NOTED OTHERWISE.
- 2-2X10 HIPS MAY BE SPLICED WITH A MIN. 6'-0" OVERLAP.
 PROVIDE DOUBLE RAFTER EACH SIDE OF DORMERS WITH DOUBLE HEADER.
- ATTACH VAULTED RAFTERS WITH HURRICANE CUP SIMPSON "H-5" OR EQUIVALENT. PROVIDE DOUBLE OPPOSING RAFTERS WHERE NOTED.
- 10. 2X8 RAFTERS O CATHEDRAL OR VAULTED CEILINGS TO BE FURRED DOWN 2" OR USE 2X10 RAFTERS FOR INSUIATION PER CODE.
- 11. PROVIDE 2X4 COLLAR TIES EVERY SECOND RAFTER (TYPICAL)
- 12. PROVIDE 2X4 RAFTER TIES **O** 32" O.C. (TYPICAL) 13. FRAME RAFTERS ON 2X4 PLATE ON TOP OF CEILING JOISTS UNLESS
- NOTED OTHERWISE.
- 14. SHINGLES ASSUMED TO BE 240 LB. FIBERGIASS, OR EQUAL MINIMUM ROOF PITCH TO BE AS INDICATED ON ARCHITECTURAL PLAN SHEETS.
- PROVIDE DOUBLE LAYER OF ROOF FELT WHERE ROOF PITCH IS LESS THAN 4 /12.
 THESE DESIGN DRAWINGS WERE PRODUCED BY HOWERTON SERVICES, PLLC
- AND ASSUMES NO LIABILITY FOR THE CORRECTNESS OF ARCHITECTURAL FEATURES, DIMENSIONS OR FIXTURES. 17. AII HIP RIDGES AND VALLEYS SHALL BE DOUBLE 2X10 UNLESS NOTED OTHERWISE. 18. CONTRACTOR IS RESPONSIBLE FOR REVIEWING DRAWINGS FOR
- CONSTRUCTABILITY PRIOR TO BEGINNING CONSTRUCTION.
- 19. VALLEY RAFTERS WITH SPANS LONGER THAN 15' SHALL BE LVLs SUPPORTED AS NOTED. PROVIDE TEMPORARY STIFF KNEE SUPPORT UNTIL AII SHEATHING AND RAFTER TIES/COLLARS ARE INSTALLED
- AND RAFTER TIES/COLLARS ARE INSTALLED. 20. DO NOT SCALE THESE DRAWINGS. IF DESCREPANCIES ARE NOTED, CONTACT THE ENGINEER.
- 21. DESIGN BASIS PROVIDED BY ARCHITECT AND ARCHITECT IS RESPONSIBLE FOR All ARCHITECTURAL FEATURES, DIMENSIONS, COMPLIANCE WITH All ACCESSÆGRESS REQUIREMENTS, FIRE CODE AND LIFE SAFETY DESIGN ISSUES.



	Live Load (PSF)	Dead Load (PSF)	Deflection(DL&L L)	
All Floors	40	10	L/360	
Attic Platforms	25	10	L/360	VENTING CALCULATIONS ATTIC: 3511 SQ. FT. OF ATTIC <u>1300</u>
Ceiling	10	10	L/360	
Decks/Balconies	60	10	L/240	
Roof	20	15	L/240	11.7 SQ. FT. OF INLET AND OUTL
Wind Load	115 MPH(UNO)	115 MPH(UNO)	L/240	



All roof framing shall be in accordance with NCRC 2018 Chapter 9.
 All lumber to be Spruce Fine Fur No.2 or better.

3) All three roles of over-framed roofs shall be attached using (3) 3" long #9 screws at each main rafter.

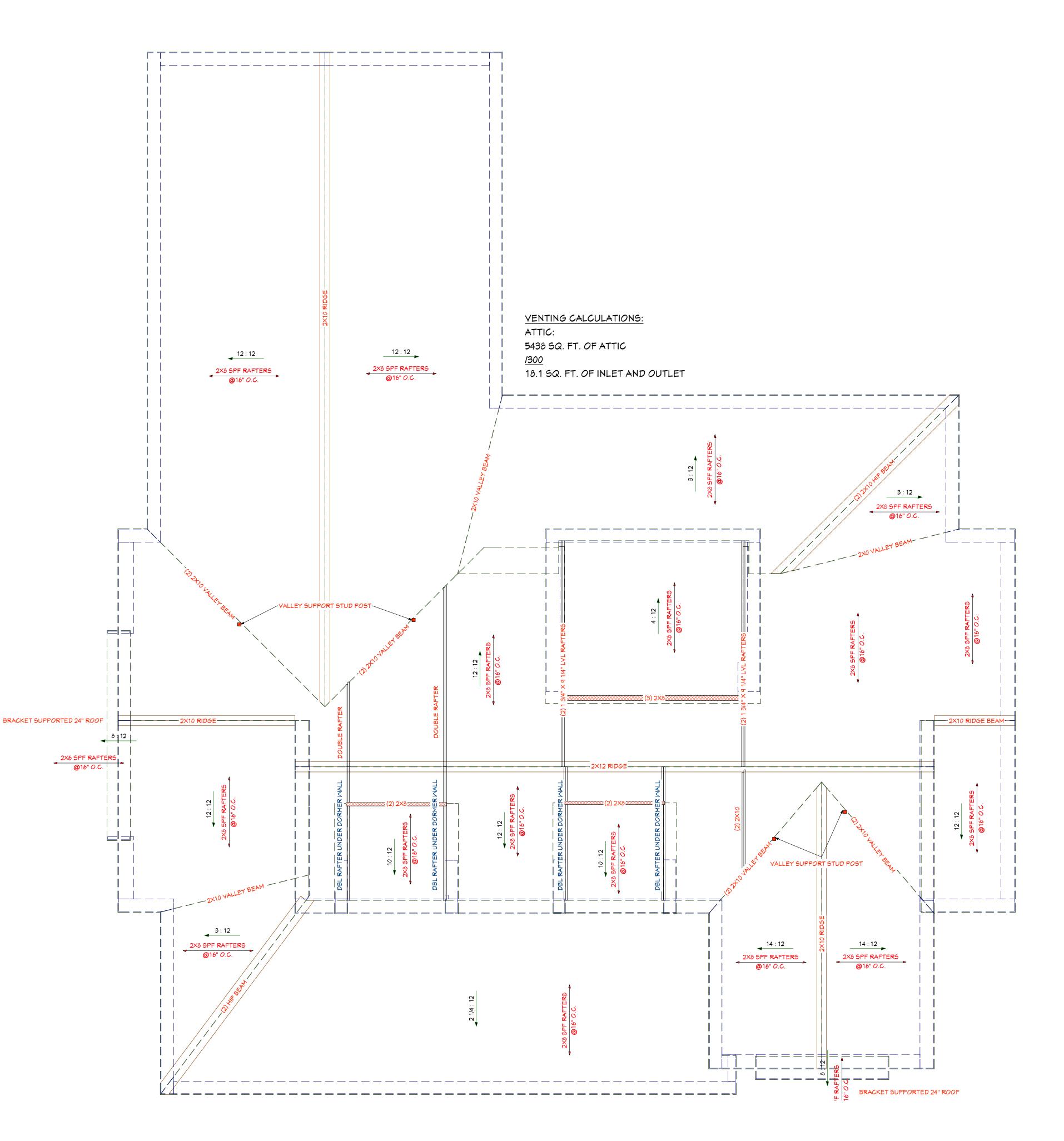
4) King studs shall be in accordance with schedule shown or R602.3(5) subnote D.
5) All collar ties to be installed no higher than 1/3rd height eave to ridge up from eave nailed with (5) 10d nails at each end, unless otherwise noted.
6) Roof trusses per others; installation per supplier guidelines.

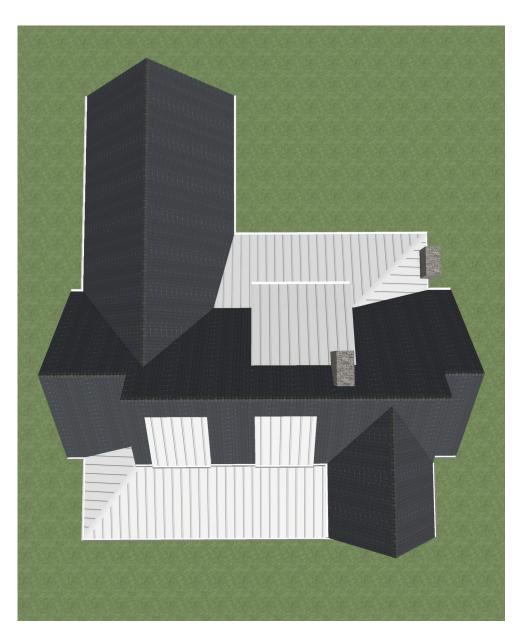
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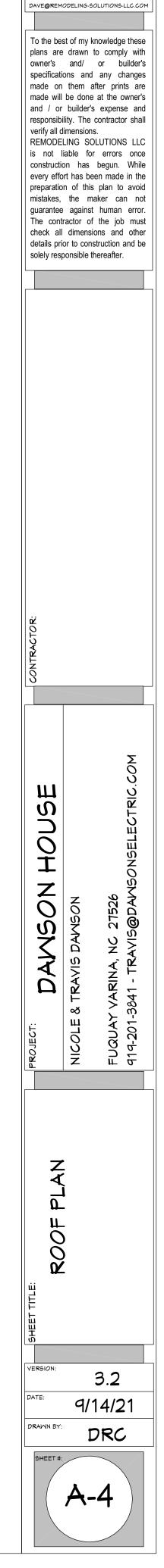




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