



**OWNER / CONTRACTOR NOTES:**

1. THE SEALING OF THIS PLAN AUTHORIZES THE CONSTRUCTION FROM THESE PLANS FOR ONE HOUSE ON ONE LOT. UNSEALED PLANS MUST NOT BE USED FOR CONSTRUCTION. CONSTRUCTION FROM THESE PLANS MUST BE FROM THE LATEST APPROVED DATE PLANS, INCLUDING REVISIONS AND ADDENDA.
2. CONSTRUCTION DEVIATING FROM THESE PLANS WILL INVALIDATE THEIR PLANS REVIEW PERMITTED USE. THE DESIGNER MUST BE NOTIFIED IMMEDIATELY OF CONSTRUCTION DEVIATING FROM DEPICTED OR IMPLIED INFORMATION HEREIN. LETTER FROM THE ARCHITECT/ENGINEER MAY BE OBTAINED FOR A FEE TO VERIFY THE FEASIBILITY AND COMPLIABILITY OF ANY CHANGES. HOWEVER, THE OWNER/CONTRACTOR ASSUMES ALL RISK FROM DEVIATING FROM THESE PLANS.
3. DO NOT SCALE DRAWINGS, BUT RATHER INQUIRE OF DESIGNER. REPRODUCTION OF THESE DRAWINGS ARE PROHIBITED UNLESS GRANTED WRITTEN CONSENT FROM DESIGNER.
4. THE OWNER AND/OR CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE FOLLOWING INFORMATION (NON-EXHAUSTIVE): BUILDING PERMITS, SITE ENGINEERING INCLUDING SURVEYING, TOPOGRAPHIC STUDIES, GEOTECHNICAL REPORTS, AND SEPTIC PERMITS; INTERIOR CASEWORK DESIGN; PLUMBING, MECHANICAL, AND ELECTRICAL DESIGN.

**BUILDING CODE NOTES**

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

APPLICABLE CODES:  
 N.C. FIRE CODE, 2018  
 N.C. MECHANICAL CODE, 2018  
 N.C. PLUMBING CODE, 2018  
 N.C. ENERGY CODE, 2018  
 NATIONAL ELECT. CODE, 2017  
 N.C. GAS CODE 2018

**CONSTRUCTION NOTES:**

- THE FOLLOWING IS A NON-EXHAUSTIVE LIST OF SOME COMMONLY MISSED CODE REQUIREMENTS AND ARE ENFORCEABLE IN THE CONSTRUCTION FROM THESE PLANS. SEE THE N.C. RESIDENTIAL CODE BOOK FOR MORE INFO.
1. (R308.4) ALL GLAZING WITHIN 24" OF EITHER SIDE OF A DOOR IN A CLOSED POSITION, AND ON THE SAME WALL PLANE SHALL BE TEMPERED. ALL WINDOWS THAT MEET ALL OF THE FOLLOWING CONDITIONS SHALL BE TEMPERED: A) INDIVIDUAL PANE OF MIN. 9 S.F. B) BOTTOM EDGE IS WITHIN 18" OF FLOOR. C) TOP EDGE IS AT LEAST 36" ABOVE FLOOR. AND D) GLAZING IS WITHIN 36" HORIZ. OF WALKING SURFACE. TEMPERED GLAZING IS ALSO REQUIRED WITHIN 60" OF HOT TUBS OR STAR LEADING AND FINISH EDGES. TEMPERED WINDOWS ALSO REQUIRED PER REMAINDER OF THIS CODE SECTION.
  2. (R310.1) ALL SLEEPING ROOMS AND BASEMENTS WITH HABITABLE SPACE SHALL HAVE AT LEAST ONE EGRESS WINDOW CONFORMING TO THE FOLLOWING: A) MIN. 4.0 S.F. CLEAR OPENING B) MIN. TOTAL GLASS AREA OF 5.0 SQ (GROUND FLOOR WINDOW) AND 5.7 S.F. (UPPER STORY WINDOW). IT IS THE CONTRACTOR'S RESPONSIBILITY TO CHOOSE THE PROPER CONFORMING WINDOW, AND HAVE EGRESS WINDOWS PROPERLY DISTRIBUTED AND INSTALLED AS REQUIRED.
  3. (R311.2) ALL INTERIOR EGRESS DOORS AND A MINIMUM OF ONE EXTERIOR EGRESS DOOR SHALL BE READILY OPERABLE FROM THE EGRESS SIDE WITHOUT USE OF A KEY OR SPECIAL KNOWLEDGE.
  4. (R311.7.5) MAXIMUM STAIR RISER HEIGHT SHALL BE 8-1/4" AND MINIMUM TREAD SHALL BE 9".
  5. (R314.3) SMOKE ALARMS SHALL BE INSTALLED AND INTERCONNECTED, WITH BATTERY BACK-UP IN THE FOLLOWING AREAS. EACH SLEEPING ROOM; IN THE AREA (HALLWAY) RIGHT OUTSIDE THE SLEEPING ROOMS; AND EACH STORY. THE ONE OUTSIDE THE SLEEPING ROOMS WILL SATISFY THAT STORY.
  6. (R402.1.2) ALL LUMBER SHALL BE PRESSURE TREATED AND DRIED AFTER TREATMENT IN ACCORDANCE WITH AWPA U1 AND SHALL BEAR THE LABEL OF AN ACCREDITED AGENCY.
  7. (R406.1) BITUMINOUS DAMPPROOFING SHALL BE APPLIED TO EXTERIOR FOUNDATIONS OF ALL HABITABLE AND USABLE (STORAGE, ETC) SPACES.
  8. (R408.1.2) INSTALL ONE FOUNDATION VENT WITHIN 3' OF EACH CORNER (NOT ONE EACH SIDE OF EACH CORNER).
  9. (R703.4) FLASH ALL VALLEYS AND WALL/ROOF INTERSECTIONS, AND CHIMNEY AND OTHER ROOF PENETRATIONS. USE ICE AND WATER SHIELD ON ALL ROOFS LESS THAN 4:12 SLOPE. FLASHING IS TO BE NON-CORROSIVE.
  10. (R807.1) BUILDER TO LOCATE 2"x30" ATTIC CESS IN ALL ATTICS WITHOUT STAIR ACCESS. LOCATE ACCESS TO PROVIDE A 30" CLEAR SPACE ABOVE ACCESS DOOR-TYP.
  11. (R1011) MASONRY FIREPLACE WALLS TO BE MIN. 8" THICK AND MIN. 2" TO FRAMING. Poured HEARTH TO HAVE MIN 4#8 12" O.C. EACH WAY. HEARTHS TO BE MIN. 20" FROM FIREBOX AND HAVE MIN. 12" WIDER THAN FIREBOX ON EACH SIDE.
  12. (R403.1.6) ANCHOR BOLTS SHALL BE MIN. 1/2" DIAMETER & SHALL EXTEND A MINIMUM 7" INTO MASONRY OR CONCRETE. ANCHOR BOLTS TO BE NO MORE THAN 4" O.C. AND WITHIN 12" OF THE CORNER.
  13. (R319) INSTALL APPROVED CARBON MONOXIDE ALARM OUTSIDE EACH BEDROOM AND IN IMMEDIATE VICINITY OF EACH SEPARATE SLEEPING AREA.

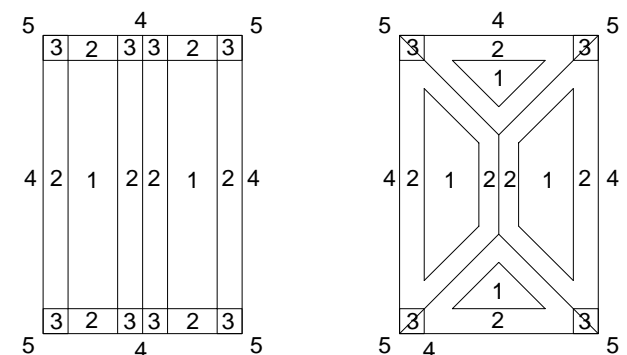
CLIMATE ZONE	FENESTRATION U-FACTOR	FENEST. SHGC	CEILING R-VALUE	FRAME WALL R-VALUE	FLOOR WALL R-VALUE	BASEMENT WALL R-VALUE	SLAB R-VALUE	CRAWL WALL R-VALUE
3	0.35	0.30	38 or 30ci	15, 13+2.5	19	5/13	1	5/13
4	0.35	0.30	38 OR 30 CI	15, 13+2.5	19	10/15	10	10/13
5	0.35	NR	38 OR 30 CI	19, 13+5, OR 15+3	30	10/15	10	10/19

**CLIMATIC AND GEOGRAPHIC NOTES:**

SOIL TYPE	WIND SPEED (MPH) (FIGURE 301.2.4)	SEISMIC DESIGN CATEGORY	SUBJECT TO DAMAGE FROM	WINTER DESIGN TEMP	FLOOD HAZARDS
3	3 SEC. GUST: 115	B	MECHANICAL, FROST LINE, THERM. SHOCK	20	N/A
25	FASTEST MILE: 132	(REF. FIG. 310.3(2))	MOD TO HEAVY	MOD	

Wind Load: Basic Wind Speed 120 MPH (3-SECOND GUST)  
 Exposure Category B (Suburban)

**Wind Zone Exposure Plans:**



Note: 3 = 4' Long (Typ.)

**Component and Cladding Loads:**

Exposure Zone	Up to 30'		30'-1" - 30'		35'-1" - 40'		40'-1" - 45'	
	Design Pressure	Uplift Force	Design Pressure	Uplift Force	Design Pressure	Uplift Force	Design Pressure	Uplift Force
Zone 1	16.7 psf	-18.0 psf	17.5 psf	-18.0 psf	18.2 psf	-19.8 psf	18.7 psf	-20.2 psf
Zone 2	16.7 psf	-21.0 psf	17.5 psf	-21.1 psf	18.2 psf	-22.9 psf	18.7 psf	-23.5 psf
Zone 3	16.7 psf	-24.0 psf	17.5 psf	-24.1 psf	18.2 psf	-25.9 psf	18.7 psf	-26.5 psf
Wall Zone 4	18.2 psf	-19.0 psf	19.1 psf	-20.0 psf	19.8 psf	-20.7 psf	20.4 psf	-21.3 psf
Wall Zone 5	18.2 psf	-24.0 psf	19.1 psf	-25.2 psf	19.8 psf	-20.7 psf	20.4 psf	-26.9 psf

Windows:  
 \*\*\*All windows shall be labeled to conform with AAMA/WDMA/GSA 101/1 S.2/A440  
 \*\*\*All windows shall be rated with Impact Glazing if windspeeds are equal to or exceed 145 MPH

REV: 03/01/21

**PROJECT DATA:**

DESIGNER	FIRM	NAME	License #	Telephone #
Architectural		Gabe Reyes		(919) 491-5855
Structural		Marc W. Mills, R.A.	7579	(919) 795-3845
Landscape	-	-	-	(---) --- --
Interiors	-	-	-	(---) --- --
Other	-	-	-	(---) --- --

**DESIGN DATA:**

**PROJECT SQUARE FOOTAGES**

SQUARE FOOTAGE	
ADDED HEATED =	587
EXISTING HEATED =	1,006
TOTAL HEATED =	1,593

**BUILDING DATA:**

Construction Type: V-B  
 Use Group: R-3  
 Building Height: NEW 19'-6"  
 Mean Roof Height: 12'-8"  
 Number of Stories: 1  
 Structure: \_\_\_\_\_  
 Basic Structural System: Bearing Wall  
 Lateral Design Control: Earthquake  Wind   
 Soil Bearing Capacity: 2,000 psf (Presumptive)

**INDEX OF DRAWINGS:**

CS	SHEET NAME
CS	Cover Sheet
A-1	Elevations/Sections/Details
A-2	First Floor Plan
AS-1	Crawl Foundation Plan/First Floor Framing
AS-2	Attic Floor Framing /Roof Framing

STRUCTURAL DESIGN BY  
**MARC W. MILLS, RA**  
 DATE SEALED:  
 INVALID IF UNSEALED  
 NORTH CAROLINA LICENSE # 7579

4. GABRIEL DESIGN WILL NOT ASSUME ANY LIABILITY FOR DEFENSE ASSOCIATED WITH ERRORS AND OMISSIONS IN THESE DRAWINGS UNLESS SUCH DEFENSE IS REQUIRED BY A COURT OF LAW.  
 5. GABRIEL DESIGN SHALL NOT BE RESPONSIBLE FOR OBTAINING ANY PERMITS OR APPROVALS FROM ANY AGENCIES.  
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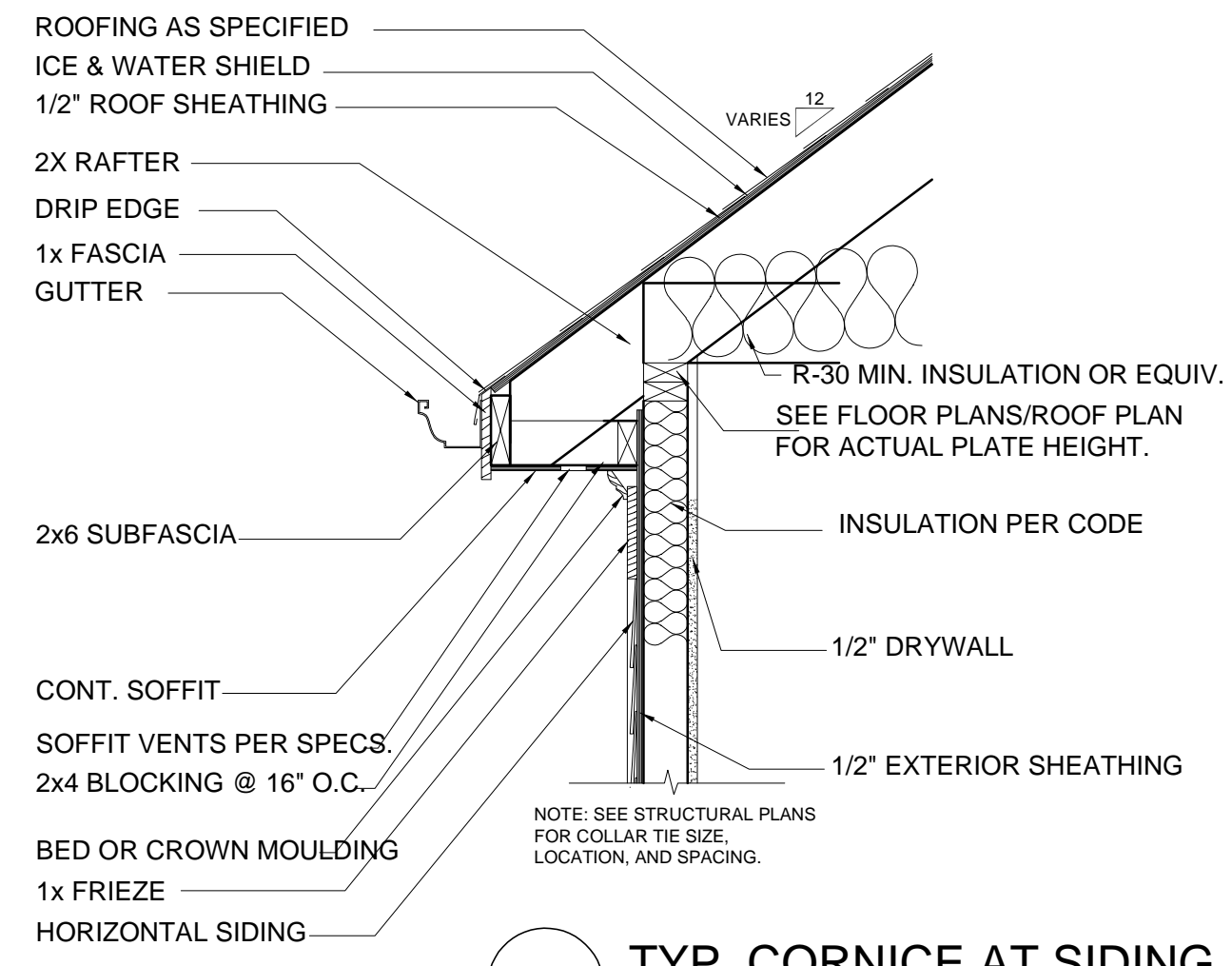
**gabe reyes design**  
 raleigh, nc  
 email:gabreyesdesign@gmail.com  
 phone: (919) 491-5855

**Jesus Bautista**  
**House Rear Addition/Renovation**  
**61 Pope St, Coats, NC 27521**  
**Permit/Construction Set**

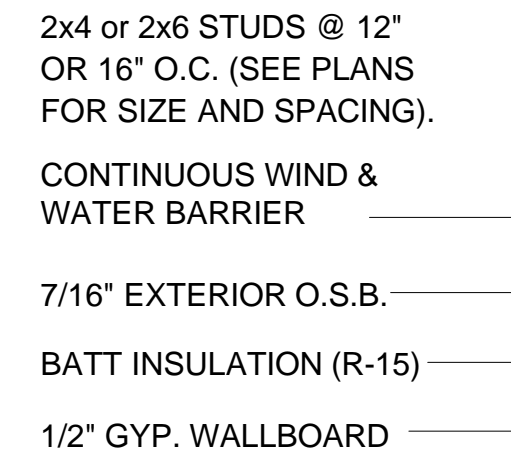
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 ISSUE DATE: 06-14-21  
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 CHECKED BY: MM  
 REVISIONS  
 DATE BY: DESCRPT.

Cover Sheet  
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 PLAN NO. 02721

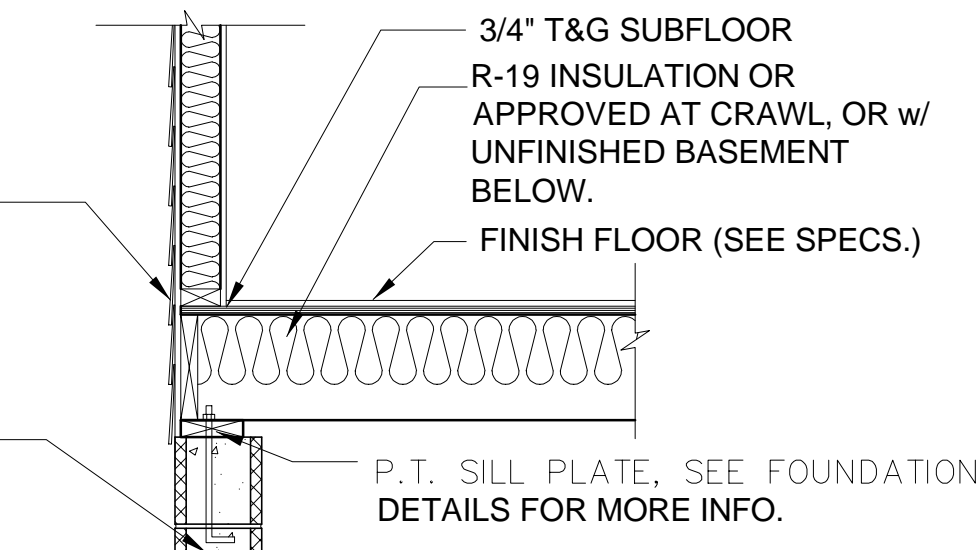
ALL RIGHTS RESERVED. 2021  
 THIS DRAWING IS THE PROPERTY OF GABRIEL DESIGN. IT IS TO BE USED ONLY FOR THE PROJECT IDENTIFIED HEREIN. IT IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN PERMISSION OF GABRIEL DESIGN.



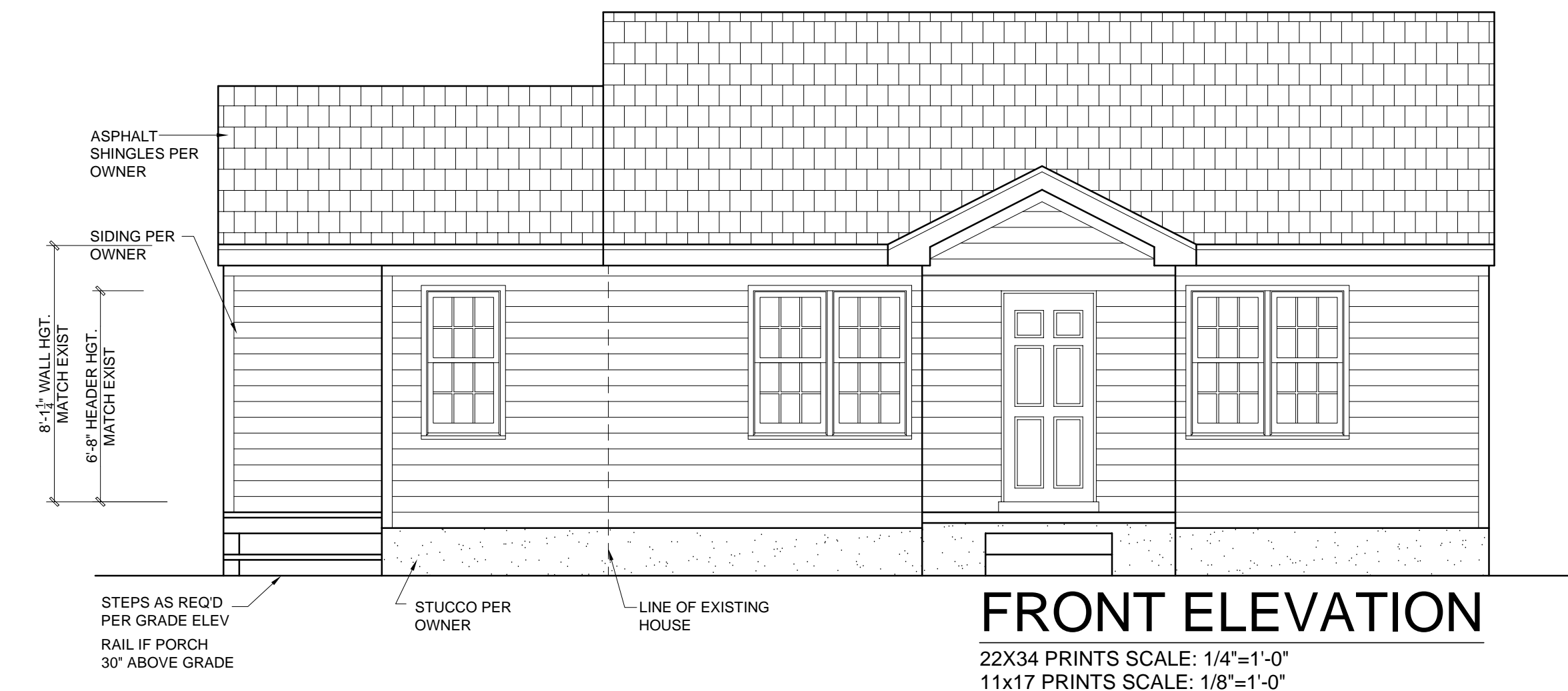
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 1"=1'-0"  
 DT0014



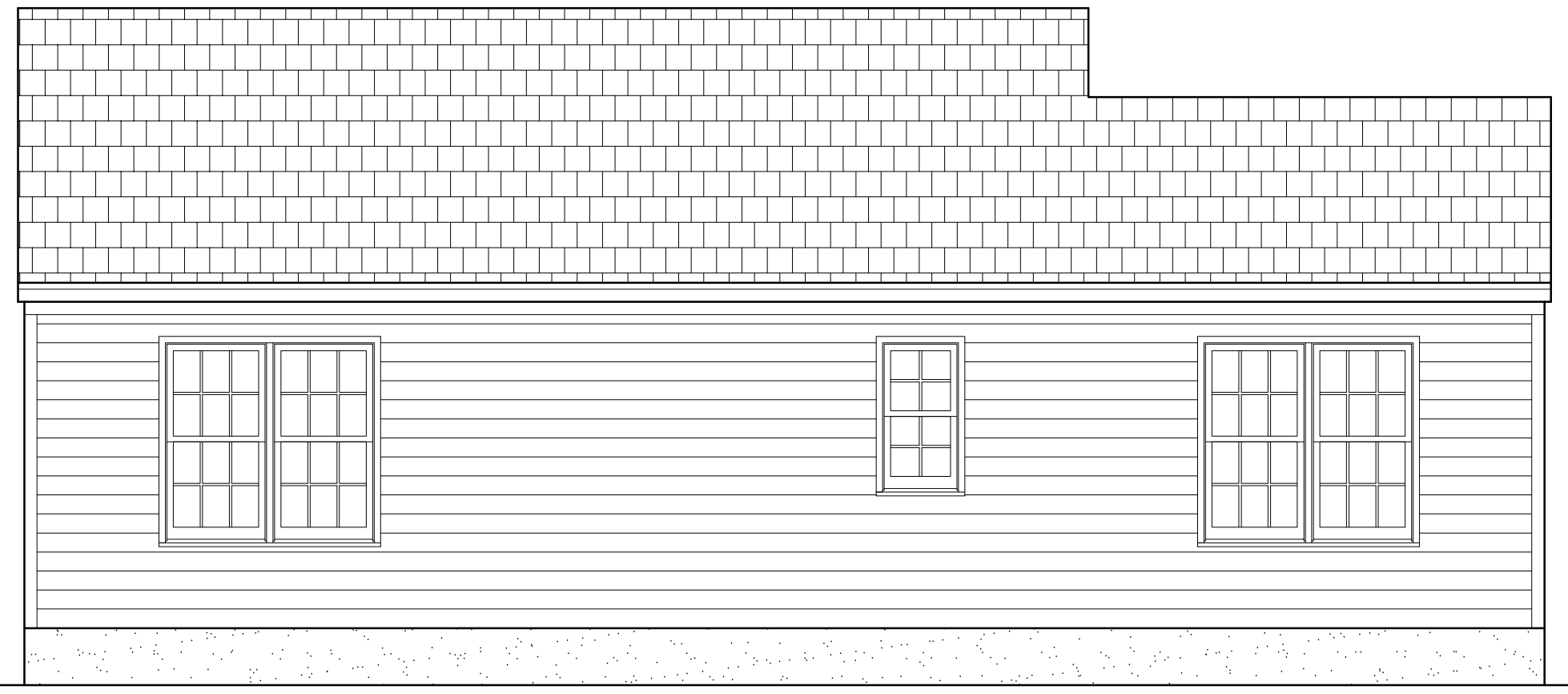
**2 TYP. WALL SECTION**  
 NTS



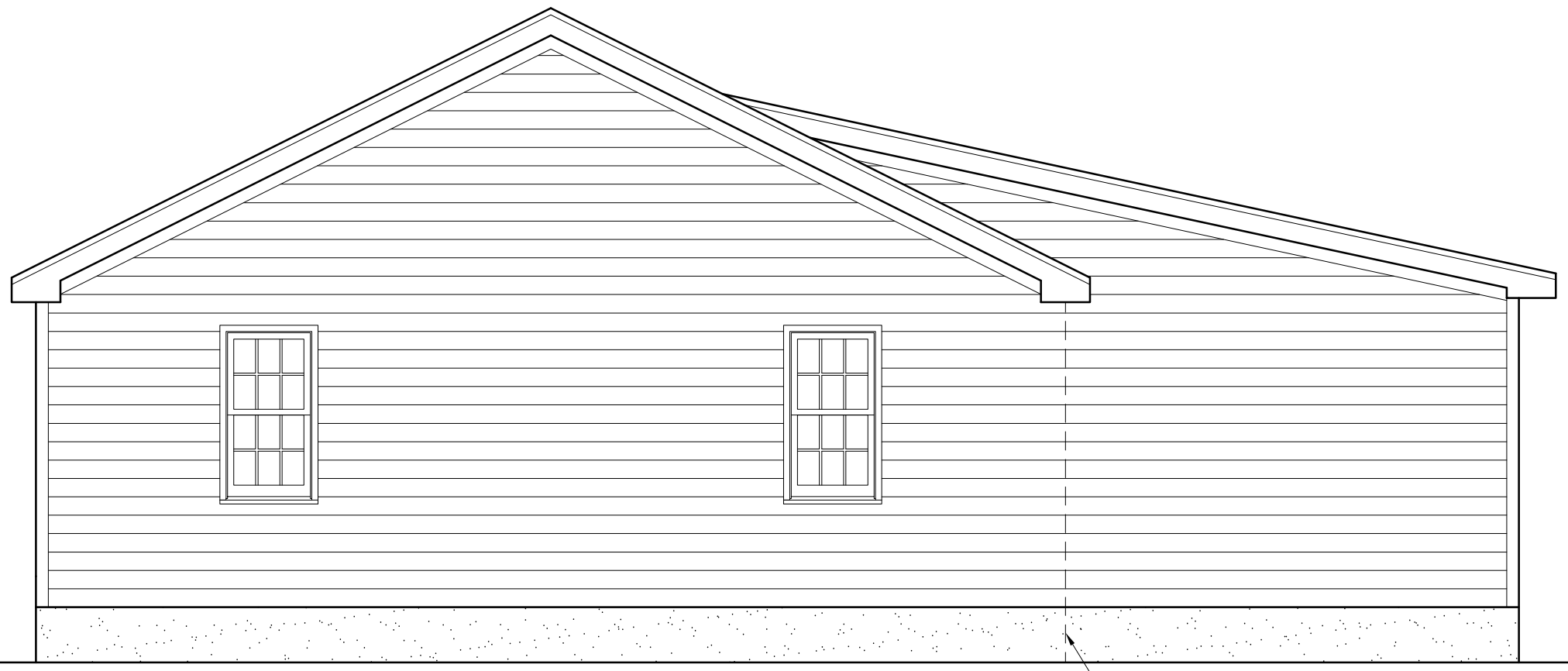
**TYP. FOUNDATION DETAIL**



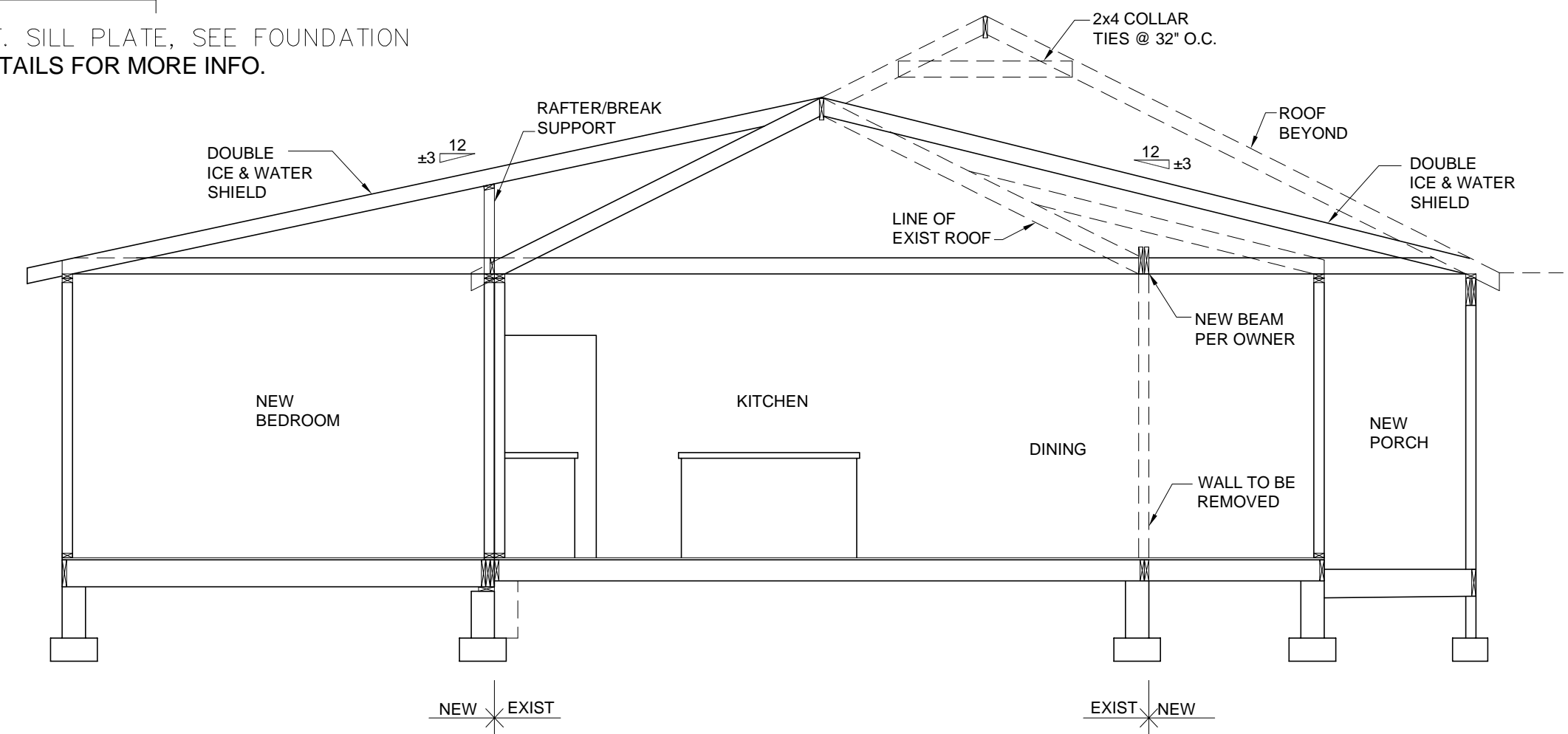
**FRONT ELEVATION**  
 22X34 PRINTS SCALE: 1/4"=1'-0"  
 11X17 PRINTS SCALE: 1/8"=1'-0"



**REAR ELEVATION**  
 22X34 PRINTS SCALE: 1/4"=1'-0"  
 11X17 PRINTS SCALE: 1/8"=1'-0"



**RIGHT ELEVATION**  
 22X34 PRINTS SCALE: 1/4"=1'-0"  
 11X17 PRINTS SCALE: 1/8"=1'-0"



**1 FAMILY-KITCHEN SECTION**  
 SCALE: NTS

**\*\*NOTE: DETAILS PROVIDED ARE FOR PLATE DETAILS ONLY. REFER TO STRUCTURAL SHEETS TO CONFIRM FLOOR MEMBER SIZE & DIRECTIONS, RAFTER SIZE & DIRECTIONS, AND ROOF OVERHANGS.**



**LEFT ELEVATION**  
 22X34 PRINTS SCALE: 1/4"=1'-0"  
 11X17 PRINTS SCALE: 1/8"=1'-0"

- REQUIRED FLASHING LOCATIONS**
- 1) ALL MATERIAL CHANGE INTERSECTIONS.
  - 2) ALL WINDOW / DOOR OPENINGS.
  - 3) ALL ROOF VALLEYS.
- BUILDER TO VERIFY ON SITE FLASHING IS INSTALLED TO MEET CODE REQUIREMENTS.
- GENERAL NOTES**
- ROOFS**  
 \*USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.  
 SEE FLOOR PLANS, ROOF PLAN, AND/OR ROOF FRAMING DETAIL SHEET FOR PLATE HEIGHTS AT RAFTER AND/OR TRUSS BEARING LOCATIONS.
- ROOF VENTILATION**  
 SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATIONS.

4. GABRIEL DESIGN WILL NOT ASSUME ANY LIABILITY FOR DAMAGES ASSOCIATED WITH ERRORS AND OMISSIONS OR THESE DRAWINGS UNLESS SUCH DAMAGES ARE CAUSED BY GABRIEL DESIGN'S NEGLIGENCE.  
 5. GABRIEL DESIGN ASSUMES OWNERSHIP OF ALL OF DESIGNS DEPICTED AND IMPLIED HEREIN.  
 6. GABRIEL DESIGN IS NOT RESPONSIBLE FOR ESTIMATING, OBTAINING, OR REGULATING CONSTRUCTION COSTS ASSOCIATED WITH THESE PLANS.

GENERAL NOTES:  
 1. CONTRACTOR IS TO BE COOPERATED WITH ALL SITE INFORMATION BY OWNER AND CONTRACTOR AND APPROVABLE CODES.  
 2. CONTRACTOR IS TO VERIFY REGARDLESS IMMEDIATELY OF CONDITIONS OR ITEMS ARISING FROM DEPICTED INFORMATION.  
 3. GABRIEL DESIGN IS NOT RESPONSIBLE FOR CONSTRUCTION VARIATIONS FROM THE INFORMATION DEPICTED.

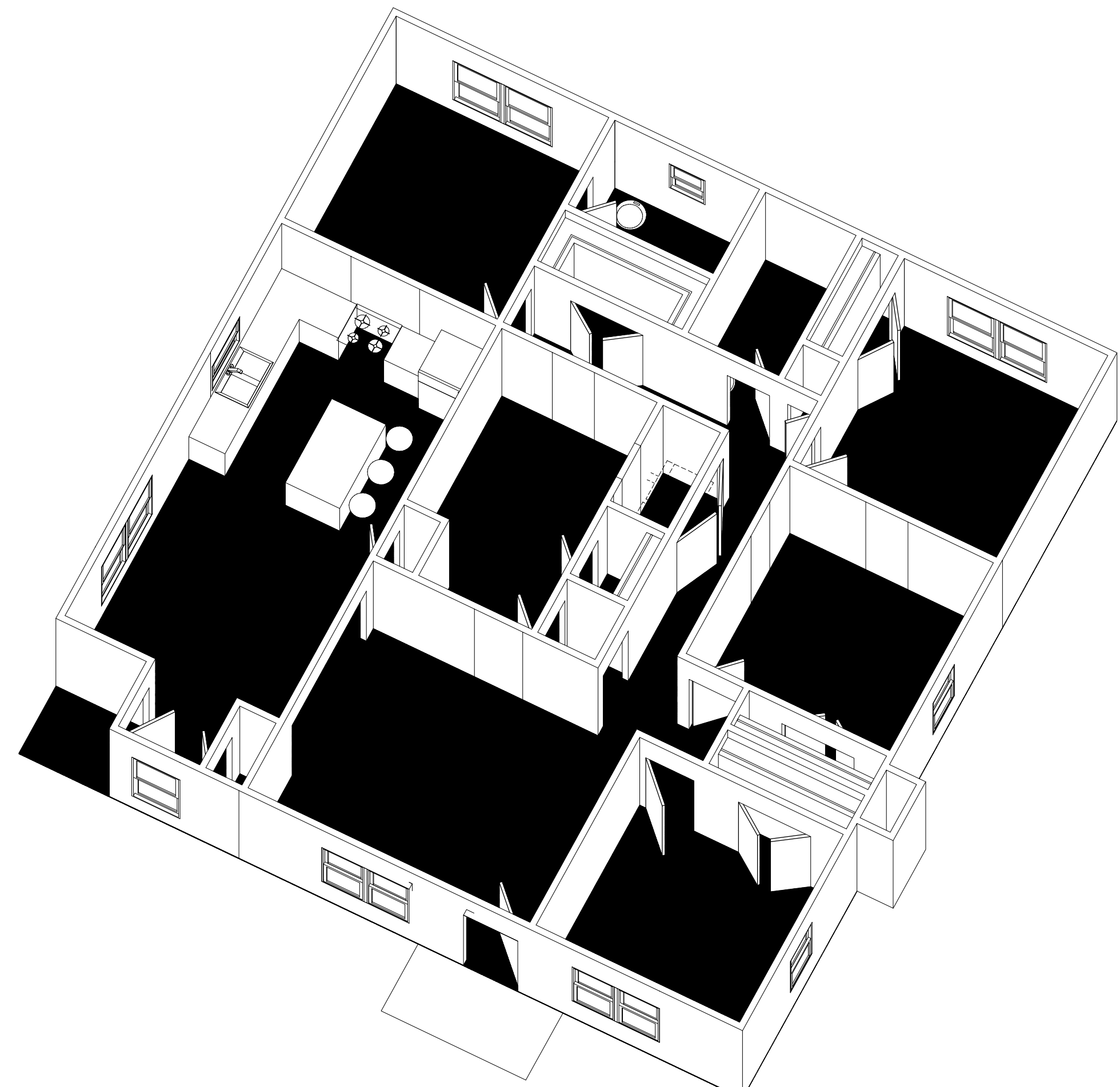
**gabe reyes design**  
 Raleigh, NC  
 email:gabreyesdesign@gmail.com  
 phone: (919) 491-5855

**Jesus Bautista**  
**House Rear Addition/Renovation**  
 61 Pope St, Coats, NC 27521  
 Permit/Construction Set

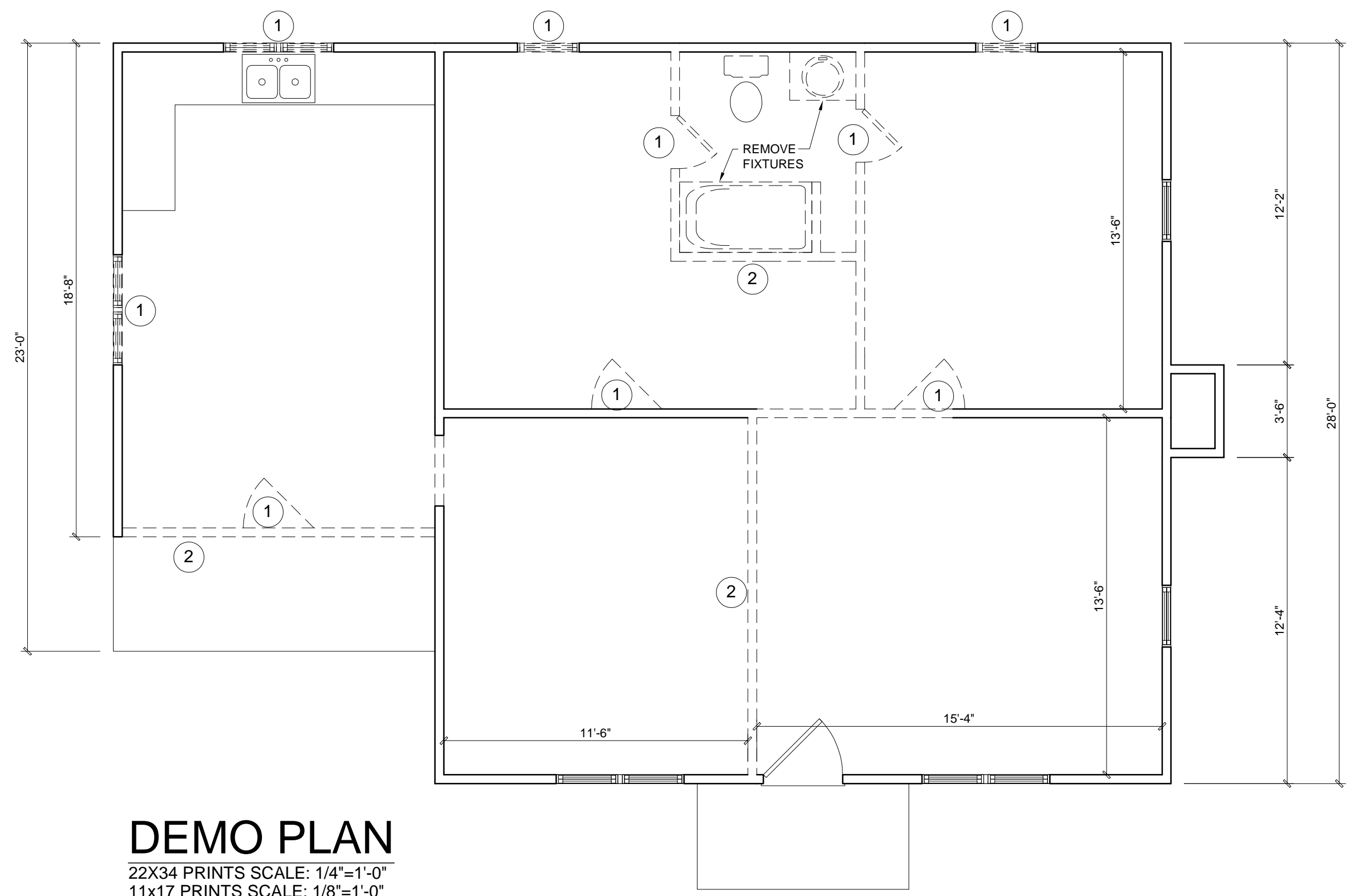
PROGRESS DATE:	
ISSUE DATE:	06-14-21
DRAWN BY:	GR
CHECKED BY:	MM
REVISIONS	
DATE	BY
	DESCRIP.

Elevations/Section  
 -  
 SHEET NO.  
**A-1**  
 PLAN NO.  
**02721**

2021  
 ALL RIGHTS RESERVED.  
 THIS IS A DESIGN PROFESSIONAL'S PROPERTY.  
 PLANS MAY BE USED ONCE BY CLIENT, UNAUTHORIZED USE STRICTLY PROHIBITED.



**SOUTHEAST VIEW**  
NTS



**DEMO PLAN**  
22X34 PRINTS SCALE: 1/4"=1'-0"  
11X17 PRINTS SCALE: 1/8"=1'-0"

**GENERAL NOTES**

**WALL THICKNESS / ANGLES**  
ALL EXTERIOR STUD WALLS ARE DRAWN 4" THICK U.N.O.  
ALL INTERIOR STUD WALLS ARE DRAWN 4" THICK U.N.O.  
ANGLED WALLS ARE DRAWN @ 45° U.N.O.

**EGRESS**  
ALL BEDROOMS MUST HAVE AT LEAST ONE WINDOW WHICH CONFORMS TO EGRESS REQUIREMENTS FOR CLEAR OPENING HEIGHT AND WIDTH. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY EGRESS SIZING PER CODE BASED ON CHOSEN MANUFACTURER, AS PRODUCT SIZES MAY VARY.

**WALL/CEILING HEIGHTS**  
WALL AND CEILING HEIGHTS NOTES ARE BASED ON NOMINAL WALL SIZE (I.E. A 10'-1 1/8" ACTUAL WALL HEIGHT IS LABELED 10'0" ON THE PLANS).

ALL VAULTED OR SLOPED CEILINGS ARE TO BE FURRED DOWN TO ACCOMMODATE REQUIRED CEILING INSULATION AND 1" AIRSPACE. VERIFY CODES FOR INFORMATION ON INSULATION REQUIREMENTS.

**STAIRS**  
STAIR TREADS ARE MEASURED FROM NOSING TO NOSING (N/N). MAXIMUM STAIR RISE HEIGHT TO BE NO GREATER THAN 8'-1/4"

**ADDITION / RENOVATION NOTES**

- CONTRACTOR IS TO FIELD VERIFY ALL CONDITIONS BEFORE CONSTRUCTION COMMENCEMENT.
- PATCH ALL DISTURBED AREAS TO MATCH EXIST.
- EXTEND EXIST. UTILITIES AS REQUIRED.
- UNLESS SPECIFIED ON THE DRAWINGS, ALL MILLWORK, APPLIANCES, FIXTURES, FITTINGS, LIGHTS, ACCESSORIES, AND FINISHES ARE TO BE SELECTED BY THE OWNER.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO:
  - SECURE ALL NECESSARY PERMITS.
  - CONFORM TO ALL GOVERNING REGULATIONS.
  - MAN AND SCHEDULE THE PROJECT.
  - CARRY APPROPRIATE LIABILITY INSURANCE.
  - MAINTAIN SAFETY MEASURES PER OSHA.
  - CONTRACT APPROPRIATE LICENSED INDIVIDUALS.
  - MAINTAIN A DAILY CLEAN-UP ROUTINE.
  - USE A DUMPSTER IN AN APPROVED LOCATION.
  - USE OWNER'S UTILITIES AS APPROVED.
  - CONSTRUCT/ENGINEER ALL TEMPORARY SUPPORTS.
  - MAINTAIN SOIL EROSION MEASURES AS NECESSARY, AND
  - REPAIR ALL DAMAGED AREAS TO OWNER'S APPROVAL.
- ALIGN ALL NEW FINISHED FLOORS, CEILINGS, WALLS, SOFFITS, AND ROOFS WITH EXISTING AS NECESSARY.

**ARCHITECTURAL PLANS WALL LEGEND**

— = NEW STANDARD STUD WALL INT OR EXT  
IF EXT SEE ELEVATIONS FOR SIDING STYLE THICKNESS OF WALL NOTED IN PLAN NOTES OR AT WALL LOCATIONS

**WALL KEY**

— = EXISTING WALLS  
— = NEW WALLS  
— = WALL TO BE FILLED IN  
- - - = EXISTING WALLS TO BE REMOVED

**RENOVATION KEY**

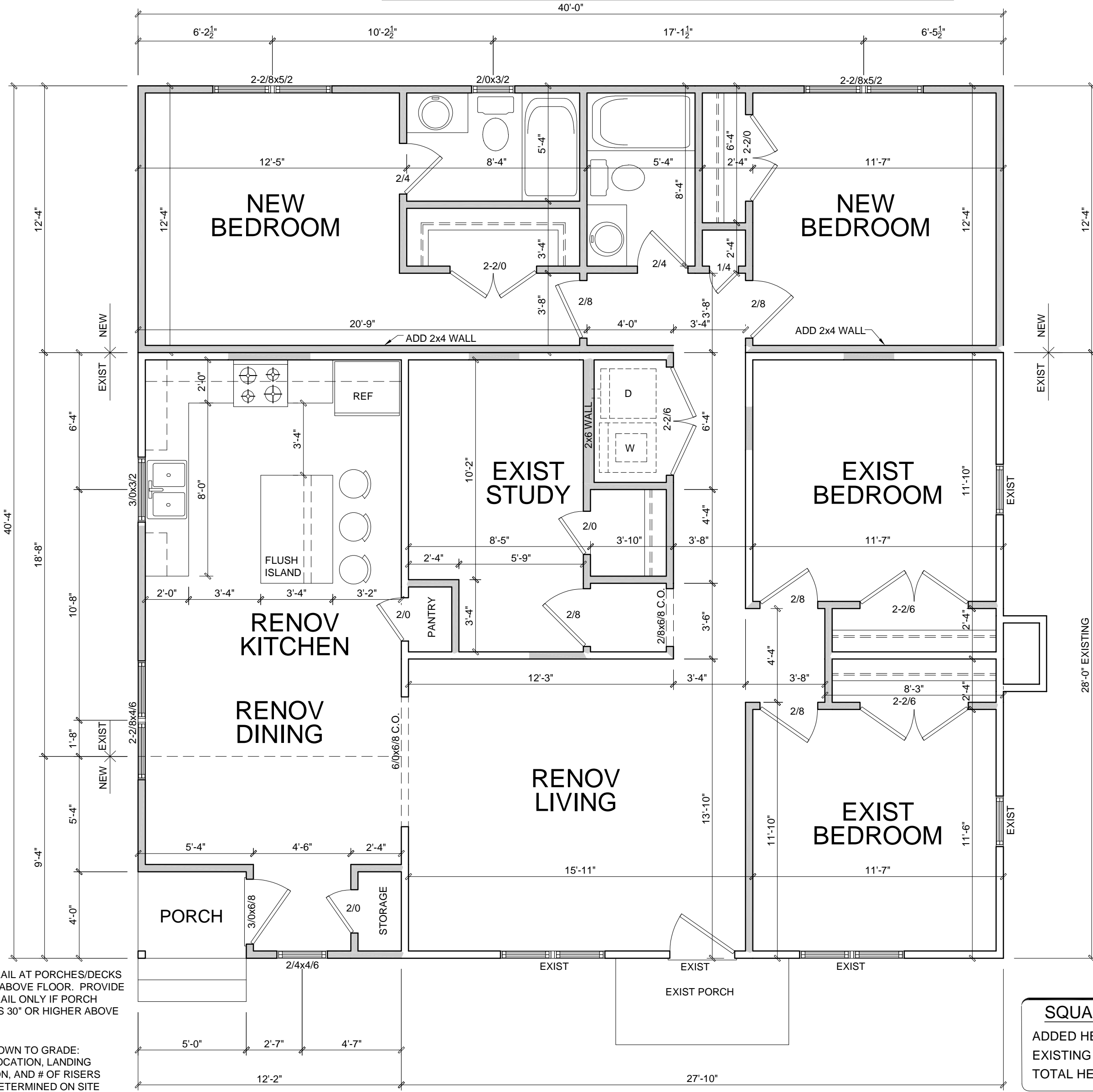
1 = REMOVE EXISTING DOOR / WINDOW  
2 = REMOVE WALL

**WINDOW FALL PREVENTION PROTECTION**  
IF ANY PART OF THE CLEAR OPENING OF THE OPERABLE PORTION OF A WINDOW IS LOCATED MORE THAN 72" ABOVE THE EXTERIOR GRADE THEN THE LOWEST PART OF THE CLEAR OPENING MUST BE AT LEAST 24" ABOVE THE FLOOR OF THE ROOM IN WHICH IT IS LOCATED.

**EXCEPTIONS:**

- THE WINDOW IS A FIXED UNIT
- THE OPENING DOES NOT ALLOW THE PASSAGE OF A 4-INCH DIAMETER SPHERE.
- THE WINDOW IS EQUIPPED WITH A WINDOW FALL PREVENTION DEVICE MEETING ASTM F2090.
- THE WINDOW IS EQUIPPED WITH AN APPROVED WINDOW OPENING LIMITING DEVICE.

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



**FIRST FLOOR PLAN**  
22X34 PRINTS SCALE: 1/4"=1'-0"  
11X17 PRINTS SCALE: 1/8"=1'-0"

GENERAL NOTES:  
1. CONTRACTOR SHALL VERIFY ALL CONDITIONS BEFORE CONSTRUCTION COMMENCEMENT.  
2. CONTRACTOR IS TO FIELD VERIFY ALL CONDITIONS BEFORE CONSTRUCTION COMMENCEMENT.  
3. CONTRACTOR IS TO FIELD VERIFY ALL CONDITIONS BEFORE CONSTRUCTION COMMENCEMENT.  
4. CONTRACTOR SHALL VERIFY ALL CONDITIONS BEFORE CONSTRUCTION COMMENCEMENT.  
5. CONTRACTOR SHALL VERIFY ALL CONDITIONS BEFORE CONSTRUCTION COMMENCEMENT.  
6. CONTRACTOR SHALL VERIFY ALL CONDITIONS BEFORE CONSTRUCTION COMMENCEMENT.

**Jesus Bautista**  
House Rear Addition/Renovation  
61 Pope St, Coats, NC 27521  
Permit/Construction Set

PROGRESS DATE:	06-14-21
ISSUE DATE:	06-14-21
DRAWN BY:	GR
CHECKED BY:	MM
REVISIONS:	
DATE:	BY:
	DESCRIP.

First Floor Plan/  
Demo Plan  
SHEET NO.  
**A-2**  
PLAN NO.  
**02721**

**gabe reyes design**  
raleigh, nc  
email:gabereydesign@gmail.com  
phone: (919) 491-5855



STRUCTURAL NOTES REV: 6/07/19

- A. GENERAL NOTES**
- Contractor assumes all responsibility for deviating from depicted or implied structural information. Architect/Structural Engineer must be notified immediately about alternate construction or problem areas before contractor proceeds.
  - Only sealed drawing with latest revisions are applicable for construction.
  - All construction, workmanship, and materials to comply with 2018 N.C. State Residential Code and local regulations.
  - Design Loads:
 

Structural System	LL	DL	TL	Structural System	LL	DL	TL
Dwelling Units (general)	40	10	50	Stairs	40	5	45
Sleeping Rooms	30	10	40	Guardrails and Handrails	200	0	200
Balconies (external)	60	10	70	Roof Systems	20	10	30
Decks	40	10	50	Cathedral Ceilings	20	15	35
Attics (with attic storage)	10	10	20	Internal Partition Walls	9	9	9
Attics (with storage)	20	10	30	Passenger Garage	50	0	emp.
Attics (with fixed stairways)	40	10	50				
  - Deflection: Floors: L/360, Roofs: L/240, L/480 for engineered flooring and under tiled areas, L/600 for vertical masonry support.
  - Do not scale drawings. Contractor shall contact architect for queries on non-labeled items.
  - Owner or builder is responsible for information on soil bearing capacity, min. assumed = 2,000 psf.

**B. FOOTINGS AND FOUNDATION**

- Minimum Spread Footing Sizes: (28 day strength; min 2500 psi)
 

Shoring	Wood Frame			Block Frame + Face Brick			Masonry		
	Min. Ftg. Width	Min. Ftg. Depth	Min. Ftg. Area	Min. Ftg. Width	Min. Ftg. Depth	Min. Ftg. Area	Min. Ftg. Width	Min. Ftg. Depth	
1	16"	8"	128"	16"	8"	128"	16"	8"	
2	18"	10"	180"	18"	10"	243"	18"	10"	
3	24"	12"	288"	24"	12"	288"	24"	12"	
- Footings shall be min 2" wider overhang on each side than the foundation above. Minimum footing depth 12" below grade, u.s.a. Footings for closer column/pier spacings can be combined.
- Grids and piers shall bear on center 1/3 of pier and footing optimally, but no less than 4" from pier or footing edge.
- Maximum height of unbalanced fill and reinforcing to conform with Tables R404.1.1(2), (3), (4), & (5) with variables of total wall height, and soil classification, amount and placement of rebar are per tables.
- Multiple wythe masonry walls shall have galvanized ties every 24" max. vertical and 36" horizontal.
- Anchor bolts to be min. 1/2" dia. @ 6'-0" max. o.c. and max 12" from corners, and splices. Bolts shall extend min. 7" into concrete or masonry. Compression type anchors can be substituted in a case where an occasional anchor bolt is missing or misplaced.
- Concrete Pier Sizes: (Note: the larger of the two chart's requirements governs)
 

Size	Height	Width	Height	Width	Height	Width
8x16	up to 32' high	up to 5'-0" high	16x16	up to 64' high	up to 12'-0" high	
12x16	up to 48' high	up to 9'-0" high	24x16	up to 96' high	up to 15'-0" high	
- Typical lag footing to be 20" x 10" deep, u.s.a.
- Poured concrete walls shall be min 10" thick. If retaining under 6' of unbalanced fill reinforcement will vertically w/ #4 @ 16" o.c. and horizontal bars: #4 @ 16" o.c. If retaining over 6' unbalanced fill use #4@12" o.c. hooked into footing, and horizontal bars: #4 @ 12" o.c.

**C. FRAMING** REV: 09/05/12

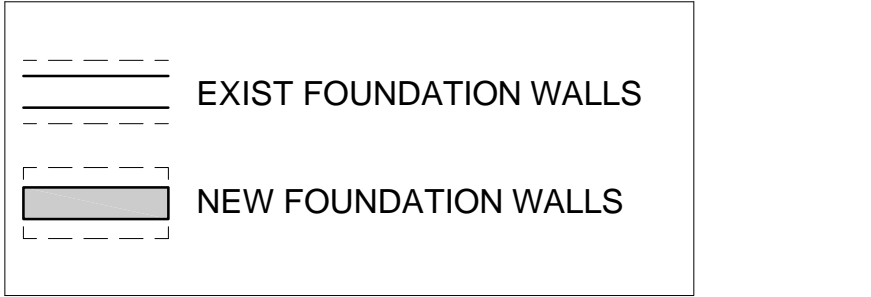
- Crawl space girders are (3) 2x10 #2 spruce/pine/fir, dropped, u.s.a.
- All framing lumber shall be #2 SPF (modulus of elasticity 1,400,000 psi, fb 950) or better. All beams and joists shall be #2 SPF, E=1,400,000, fb=1100 min. Studs min #2 or stud grade.
  - 1. joists: min 1-3/4" joist bearing, min 3-1/2" at intermediate supports. Max 3,200 ft-lb moment.
  - 2. Gir: 165,000,000, max 1,050' vert. shear, max 1,015' end reaction.
  - 3. LVL's to be 2.0E grade, fb=2850, L/360 max. deflection.
- Use hangers for all beam to beam connections. Structural fastening as per R602.3(1). Adequate connections is the sole responsibility of the general contractor and his subs.
- Provide double top plates in all exterior walls. Stagger joints min 48", w/ (8) 16d.
- Set all joists and beams with natural comb up. Ends lapped min. 6" over bearing shall be securely spiked together. Provide at least 1-1/2" bearing on all joists and 3" for beams (U.N.O.).
- All framing exposed to masonry or weather to be pressure treated. Sills min. 2x6.
- Structural member fastening to conform to Table R602.3(1) and (2).
- With 2x framing members, use double joists: (4) under parallel partitions; (6) under opening multiple jacks (C) under lugs if joist spans > 12'. I-joists and floor trusses do not have to be doubled unless shown on the structural plans.
- Provide 2x6 attic collar ties at 32" o.c. at upper 1/3 of attic space, u.s.a.
- Studs and joists shall not be cut for plumbing/electrical/mechanical runs without adding strapping to each side per R602.6. Architect/Structural Engineer is not responsible for failures in cut members. Do not cut beams or girders.
- Balloon frame gable end vaulted walls and all walls higher than 12' w/ 2x6 @ 16" o.c. or dbl. 2x4 @ 12", or platformed 2x4 with dbl 2x10 band with Simpson CS16 x 36 @ 32" o.c., top studs to bottom studs.
- All exterior headers to be (2) 2x10 u.s.a. w/ dbl. joist for all openings > 5'-0".
- All interior bearing headers to be (2) 2x10 u.s.a. w/ dbl. joist for all openings > 6'-0".
- All interior non-bearing headers to be min. (2) 2x4 flat u.s.a.
- Fireblock to conform with R602.8.

**17. Roof Framing Notes** REV: 09/05/12

- Double tier may be applied with a minimum 6" overlap at center. No valley splices.
  - Use 2x10 or fir down rafters for vaulted areas.
  - Attach vaulted rafters with hurricane connectors: Simpson H-2.5, H-5 or approved equal.
  - Align all rafters under studs below.
- Brick above low roofs to have triple rafter at low roof with L4"x3-1/2"x1/4" and 16d nails @ 12" o.c. Low end to have 3"x3-1/4" welded plate dam.
  - All point loads to be columned/blocked (through joists) down to foundation.
  - Hanger Schedule (Simpson hangers) for beam to beam connections (unless noted otherwise):
    - (2) 2x10: LUG210-2
    - (3) 2x10: LUG210-3
    - (2) 9-1/4" LVL: HUS410
  - Deck joists min. 4'-0" above grade are to be knee or diagonally braced per Appendix M. Fastening to house will be by nailing with 5/8" bolts @ 20" o.c. and (3) 12d flat dipped galv. @ 6" o.c.
  - Truss drawings must be sealed by the truss manufacturer and reviewed by Planworx Architecture. Truss drawings to design and document all required beams, hangers, and point load reactions. Truss drawing package to supply all information required under R502.11.4.
  - Corers shall be braced with one of the approved methods as outlined in R602.10.3.
  - Multiple LVL's up to a 3-ply shall be connected by min. 3-16d nails per row 12" on center on each side. Also, for double 14" LVL's or deeper, connect beams with min. 4-10d nails per row at 12" on center. (unless noted otherwise) Please refer to manufacturer specifications for further instructions for proper nailing on specific products. All 4-ply LVL's shall be through bolted with 1/2" bolts @ 18" o.c. staggered or 5/8" bolts @ 24" o.c. staggered.

**D. STEEL**

- BRICK VENER INTL ATTACHMENT:
  - Use Min. (2) 7/16"x4" lag screws into double studs @ 16" o.c.
- All bolts shall be high strength conforming to ASTM A-325.
- Structural steel shall be ASTM grade A-36 supported across full width of flange. Provide min. 3-1/2" bearing, or more if indicated. Steel beams shall be anchored at each end with min. (4) 16d nails or (2) 1/2" x 4" lag bolts and laterally supported.
- Fitch beams to be fastened together using 1/2" inch diameter A307 bolts with washers under threaded end of bolt, square washers preferred. Bolts will be spaced at 24" maximum staggered top and bottom of beam.

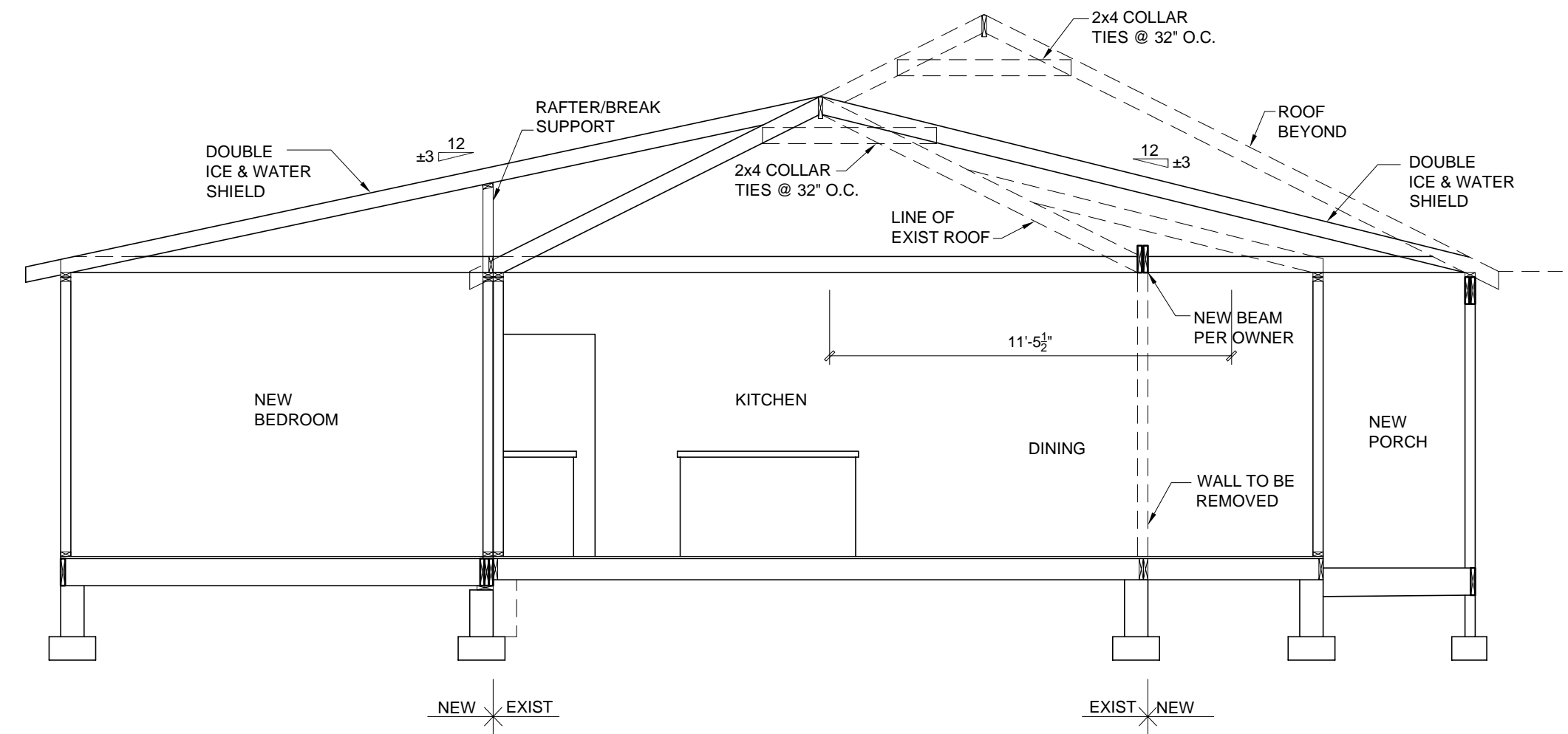


**GENERAL FOUNDATION NOTES**

- FOUNDATION WALL SIZES & COMPOSITION MUST BE VERIFIED BY BUILDER AND/OR STRUCTURAL ENGINEER, AND MUST COMPLY WITH N.C. BUILDING CODES.
- THE SIZE OF CONCRETE PADS AT STEPS TO GRADE FROM PORCHES, DECKS, STOOPS, ETC. IS TO BE DETERMINED BY BUILDER ON SITE.

**GENERAL CRAWL SPACE NOTES**

- FOUNDATION VENTS: BUILDER TO SIZE AND LOCATE FOUNDATION VENTS PER N.C. BUILDING CODES. VENT LOCATION AND SPACING SHOWN ON THESE PLANS MAY NOT REFLECT THE FINAL LAYOUT. A VENT MUST BE LOCATED WITHIN 36" OF EACH CORNER.



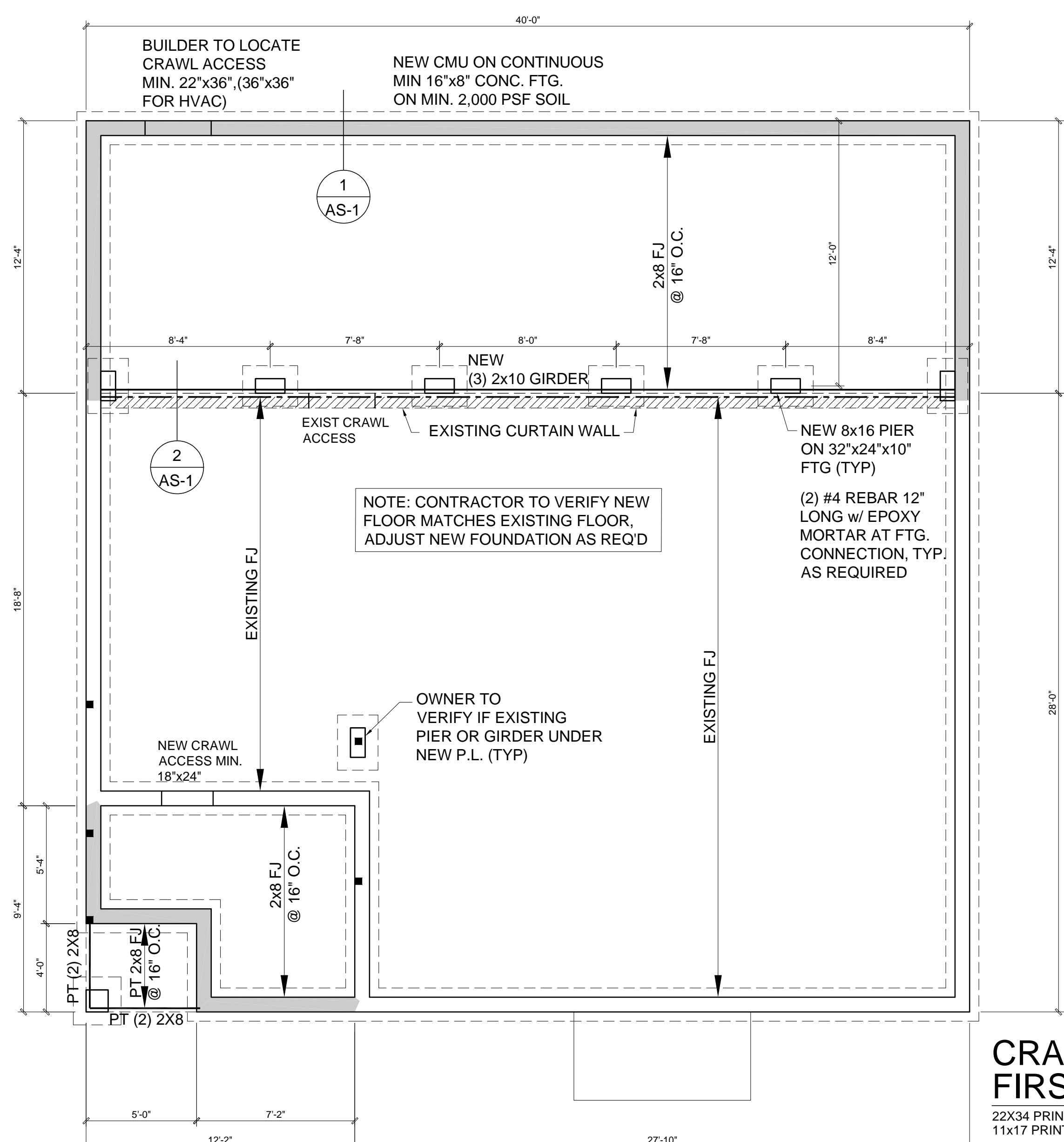
**2 FAMILY-KITCHEN SECTION**  
SCALE: NTS

\*NOTE: DETAILS PROVIDED ARE FOR PLATE DETAILS ONLY. REFER TO STRUCTURAL SHEETS TO CONFIRM FLOOR MEMBER SIZE & DIRECTIONS, RAFTER SIZE & DIRECTIONS, AND ROOF OVERHANGS.

X.J. = EXTRA JOIST  
D.J. = DOUBLE JOIST  
U.W. = UNDER WALL

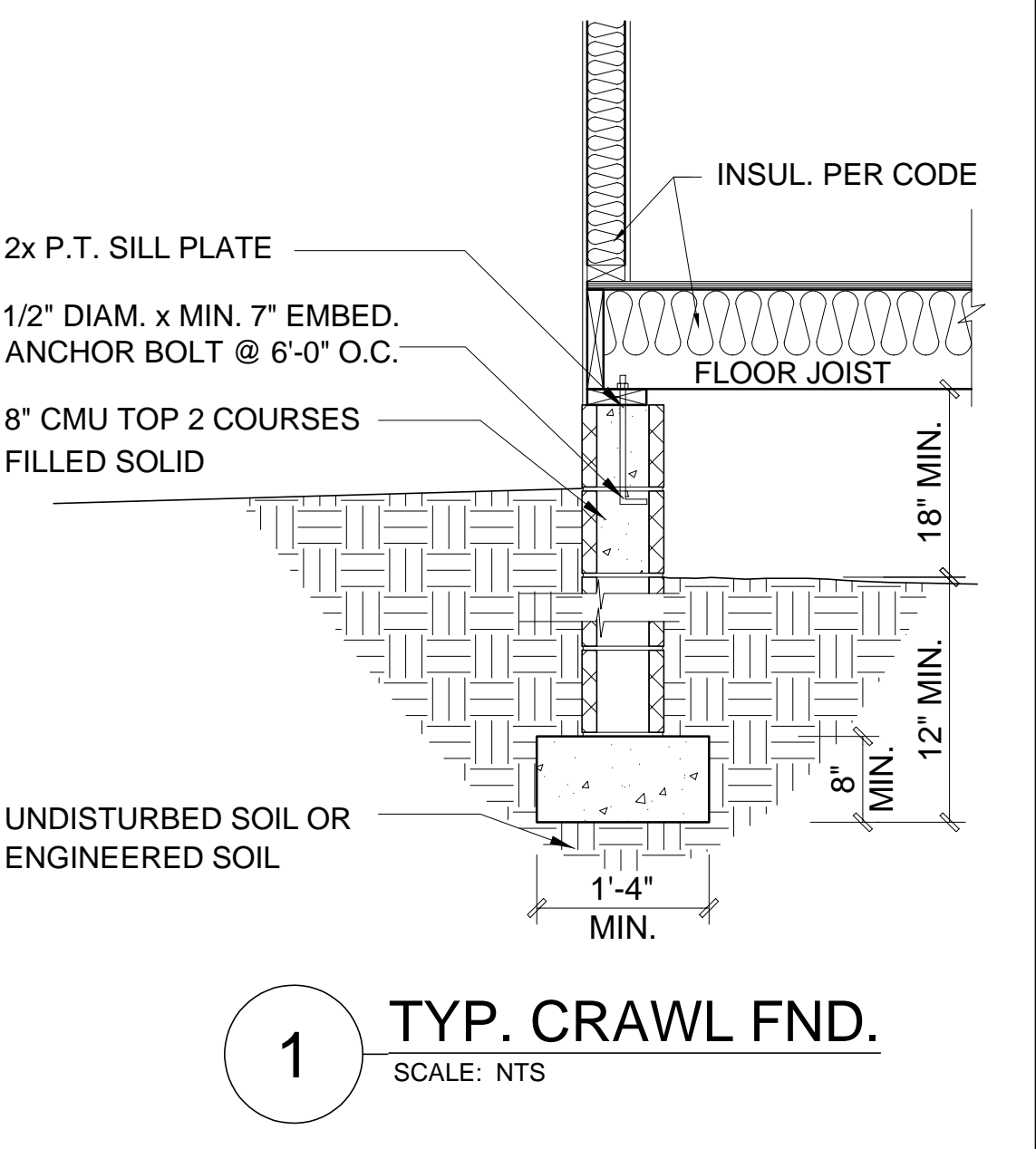
NOTE: ■■■ INDICATES SIGNIFICANT POINT LOAD, BLOCK SOLID DOWN TO FOUNDATION, PIER, OR SUPPORT BEAM.

NOTE: OWNER/BUILDER TO VERIFY THAT EXISTING STRUCTURE IS ADEQUATE/UP TO CODE TO SUPPORT NEW ADDITION/RENOVATION. OWNER/BUILDER TO NOTIFY ARCHITECT/DESIGNER WITH ANY VARIATION FROM THESE PLANS. EXISTING STRUCTURE AT THE EXISTING HOUSE SHALL REMAIN OWNER'S LIABILITY. GABE REYES IS NOT LIABLE FOR ANY WORK BEING DONE AT EXISTING HOUSE.



NOTE: CONTRACTOR TO VERIFY NEW FLOOR MATCHES EXISTING FLOOR, ADJUST NEW FOUNDATION AS REQ'D

OWNER TO VERIFY IF EXISTING PIER OR GIRDER UNDER NEW P.L. (TYP)



**1 TYP. CRAWL FND.**  
SCALE: NTS

New Crawlspace Vent Calculations		
A	Crawl Space Area	587
B	Ventable Area Required by Code (without vapor barrier)	3.9
C	Number of vents required	8.3
D	Actual number of vents required	9.0
E	Number of vents with vapor barrier reduction	5.0

Formulas:  
 $B = A / 150$   
 $C = B / 0.47$  (sqft - net venting area per vent)  
 $E = D / 2$

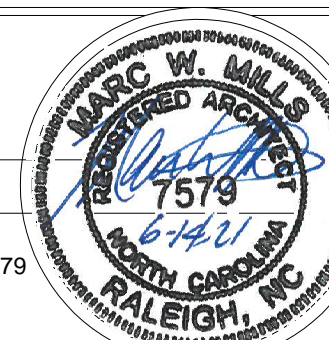
Notes:  
 1. Builder must adjust ventilation calculations if using vents with a net area that is different than 0.47 sqft per vent.  
 2. One foundation vent must be placed within 3 feet of each major corner in the building  
 3. Foundation vents must be placed to allow for cross ventilation

**CRAWL FOUNDATION/ FIRST FLOOR FRAMING**

22X34 PRINTS SCALE: 1/4"=1'-0"  
11X17 PRINTS SCALE: 1/8"=1'-0"

THESE PLANS ARE SEALED FOR A SINGLE LOT ONLY.

STRUCTURAL DESIGN BY  
MARC W. MILLS, RA  
DATE SEALED:  
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 5. GABE REYES DESIGNING MEMBERSHIP OF A.I.T. OF DESIGN SPECIFIED AND IMPLIED HEREIN.  
 6. GABE REYES IS NOT RESPONSIBLE FOR ESTIMATING, MAINTAINING, OR REGULATING CONSTRUCTION COSTS ASSOCIATED WITH THESE PLANS.

GENERAL NOTES:  
 1. ALL DIMENSIONS ARE TO BE COORDINATED WITH ALL SITE INFORMATION BY OWNER AND CONTRACTOR AND APPROXIMATE CODES.  
 2. CONTRACTOR IS TO NOTIFY DESIGNER IMMEDIATELY OF ANY CONDITIONS OR ITEMS ARISING FROM DERIVED INFORMATION.  
 3. GABE REYES IS NOT RESPONSIBLE FOR CONSTRUCTION VARIATIONS FROM THE INFORMATION DERIVED.

**gabe reyes design**  
planworx architecture p.a.  
raleigh, nc  
email: gabereyesdesign@gmail.com  
phone: (919) 491-5655

**Jesus Bautista**  
House Rear Addition/Renovation  
61 Pope St, Coats, NC 27521  
Permit/Construction Set

PROGRESS DATE:	06-14-21
ISSUE DATE:	06-14-21
DESIGNED BY:	GR
CHECKED BY:	MM
REVISIONS:	
DATE:	BY:
DESCRIP.	

Crawl Foundation/  
First Floor Framing  
SHEET NO.  
**AS-1**  
PLAN NO.  
**02721**



**WALL BRACING DESIGN SPEC'S**

BASED ON 2018 NCSCB

- THIS HOUSE IS DESIGNED USING THE METHOD #3 ENGINEERING PRACTICE PER R602.10.4, USING CONTINUOUS SHEATHING METHOD.
- BASIC WIND SPEED DOES NOT EXCEED 110 (MPH).
- EAVE TO RIDGE HEIGHT DOES NOT EXCEED 20'-0".
- EXTERIOR WALLS HAVE BEEN SHEATHED ON ALL SHEATHABLE SURFACES W/ 5/8" OSB INCLUDING WALL AREAS BETWEEN BRACED WALL PANELS, ABOVE AND BELOW OPENINGS, AND ON ALL GABLE END WALLS. NAIL W/ 6d AT 6" O.C. AT PANEL EDGES AND 12" AT INTERMEDIATE SUPPORTS.
- ALL INTERIOR OF SIDES OF EXTERIOR CS-WSP WALLS ARE CONTINUOUSLY SHEATHED WITH MIN 1/2" THICK GYPSUM WALL BOARD ATTACHED PER NCSCB TABLE R702.3.5
- GARAGE PORTAL FRAME SPECIFICATIONS USED PER DETAIL #1 ON SHEET AS-2, IF APPLICABLE
- SPECIAL CORNER REINFORCEMENT (IF REQUIRED) IS SHOWN ON PLAN WITH A DIAMOND SYMBOL = THE NUMBER INSIDE SYMBOL DESIGNATES LENGTH OF SIMPSON CS-16 STRAP CONTINUOUS LENGTH OF UPPER FLOOR STUDS OVER INTERMEDIATE FLOOR BAND ONTO LOWER FLOOR STUDS BELOW. AT FLOOR TO FOUNDATION CONNECTION USE EITHER (a) SIMPSON MAS OR MASB (b) SIMPSON DTT22 (1800lb UPLIFT RESISTANCE) W/ (MIN) 1/2" ANCHOR BOLT W/ (MIN) 6" EMBEDMENT.
- IN LIEU OF THE STRAPPING USE OSB ON BOTH SIDES OF GARAGE WALLS. THIS WILL BE NAILED WITH EITHER 6d DEFORMED OR 8d COMMON NAILS AT 6" O.C. AT EDGES AND 12" O.C. IN FIELD. PER NCRC TABLE R602.3(1).

**WALL BRACING AT ADDITION  
REQUIRED/PROVIDED**

FIRST FLOOR AT ADDITION	13.1'	REQUIRED
	50.0'	PROVIDED
THEREFORE COMPLIES		

**WALL BRACING REQUIREMENTS**

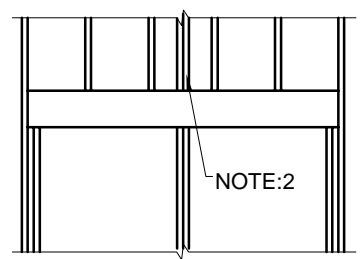
BASED ON 2018 NCSCB

- METHOD USED: 2018 INTERNATIONAL RESIDENTIAL CODE ALL CODE REFERENCES REFER TO 2018 NCRC.
- BRACING MATERIALS & METHODS SHALL COMPLY WITH SECTION R602.10.1 AND LOAD PATH DETAILING IN ACCORDANCE WITH SECTION R602.10.5.
- WALL FRAMING SHALL BE CONSTRUCTED PER R602.3(1).
- EXTERIOR WALL BRACING, UNLESS SPECIFIED OTHERWISE, SHALL BE CONTINUOUS SHEATHING METHOD (CS-WSP) AS SPECIFIED IN TABLE R602.10.1 W/ 6d COMMON NAILS (OR EQUAL) @ 6" OC AT PANEL EDGES & 12" O.C. AT PANEL INTERMEDIATE SUPPORTS.
- INTERIOR WALL BRACING PANELS, UNLESS SPECIFIED OTHERWISE, SHALL BE GYPSUM BOTH SIDES AS SPECIFIED IN TABLE R602.10.1
- EXTERIOR AND INTERIOR BRACED WALL PANEL IF SPECIFIED SHALL BE ATTACHED TOP AND BOTTOM PER R602.10.5.4 AND FIGURES CR602.10.5.4(1) OR CR602.10.5.4(2).
- EXTERIOR WALL BRACING PORTAL FRAMES, IF SPECIFIED WITHOUT HOLD DOWNS, SHALL BE INSTALLED PER FIGURE R602.10.1 OR ALTERNATE APPROVED METHODS.

**OPENING KING STUD REQUIREMENTS**

PER NCRC TABLE R602.3(5) FOOTNOTE d

- HEADERS IN NON LOAD BEARING WALLS ARE NOT LABELED.
- KING STUDS EXTERIOR WALLS: SINGLE KING STUDS FOR 6'-0" MAX. OPENING. DOUBLE KING STUDS FOR 10'-0" MAX. OPENING. TRIPLE KING STUDS FOR 14'-0" MAX. OPENING. QUAD KING STUDS FOR 18'-0" MAX. OPENING. FOR 2x6 STUD WALLS, ON HALF THE AMOUNT OF KING STUDS REQUIRED (ROUND UP) U.N.O.
- FOR PORTAL FRAME WALL REFER TO DETAIL #1 SHEET D-4.
- FOR WINDOW GROUPS DIVIDED BY STUD POCKETS, DOUBLE CRIPPLE STUDS IN LINE WITH STUD POCKETS. END KING STUDS ARE THEN DETERMINED BY THIS CHART AS LAST OPENING ON EITHER SIDE.



NOTE: TEMPORARY SUPPORT CEILING JOISTS/RAFTERS ABOVE WHEN REMOVING LOAD BEARING WALLS AS REQ'D

NOTE: OWNER/BUILDER TO VERIFY THAT EXISTING STRUCTURE IS ADEQUATE/UP TO CODE TO SUPPORT NEW ADDITION/RENOVATION. OWNER/BUILDER TO NOTIFY ARCHITECT/DESIGNER WITH ANY VARIATION FROM THESE PLANS. EXISTING STRUCTURE AT THE EXISTING HOUSE SHALL REMAIN OWNER'S LIABILITY. GABE REYES IS NOT LIABLE FOR ANY WORK BEING DONE AT EXISTING HOUSE.

NOTE: AREA OF EXISTING ROOF FRAMING MAY REQUIRE FLASHING/ICE WATER SHIELD. OWNER WILL REMAIN LIABLE FOR WATER ISSUES.

NOTE: ■■■■ INDICATES SIGNIFICANT POINT LOAD, BLOCK SOLID DOWN TO FOUNDATION, PIER, OR SUPPORT BEAM.

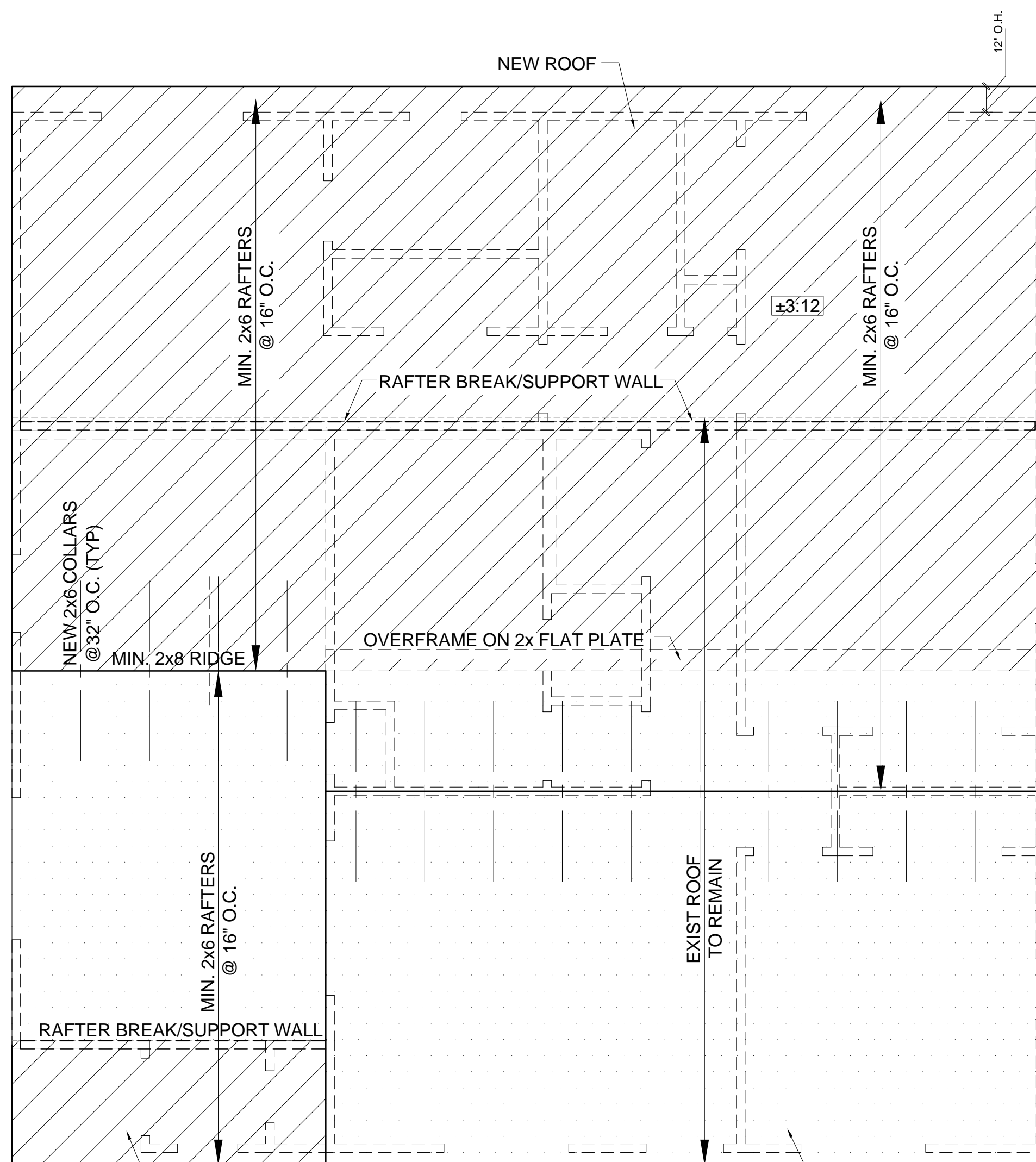
WALL FRAMING: MIN. 2x4 SPF #2 @ 16" O.C., UNO WALL SHEATHING: MIN. 1/2" APA RATED SHEATHING

ROOF SHEATHING: MIN. 1/2" APA RATED SHEATHING BRACED WALL PANELS SHALL BE CONNECTED TO ROOF FRAMING PER R602.10.5.5

**HEADER SCHEDULE**

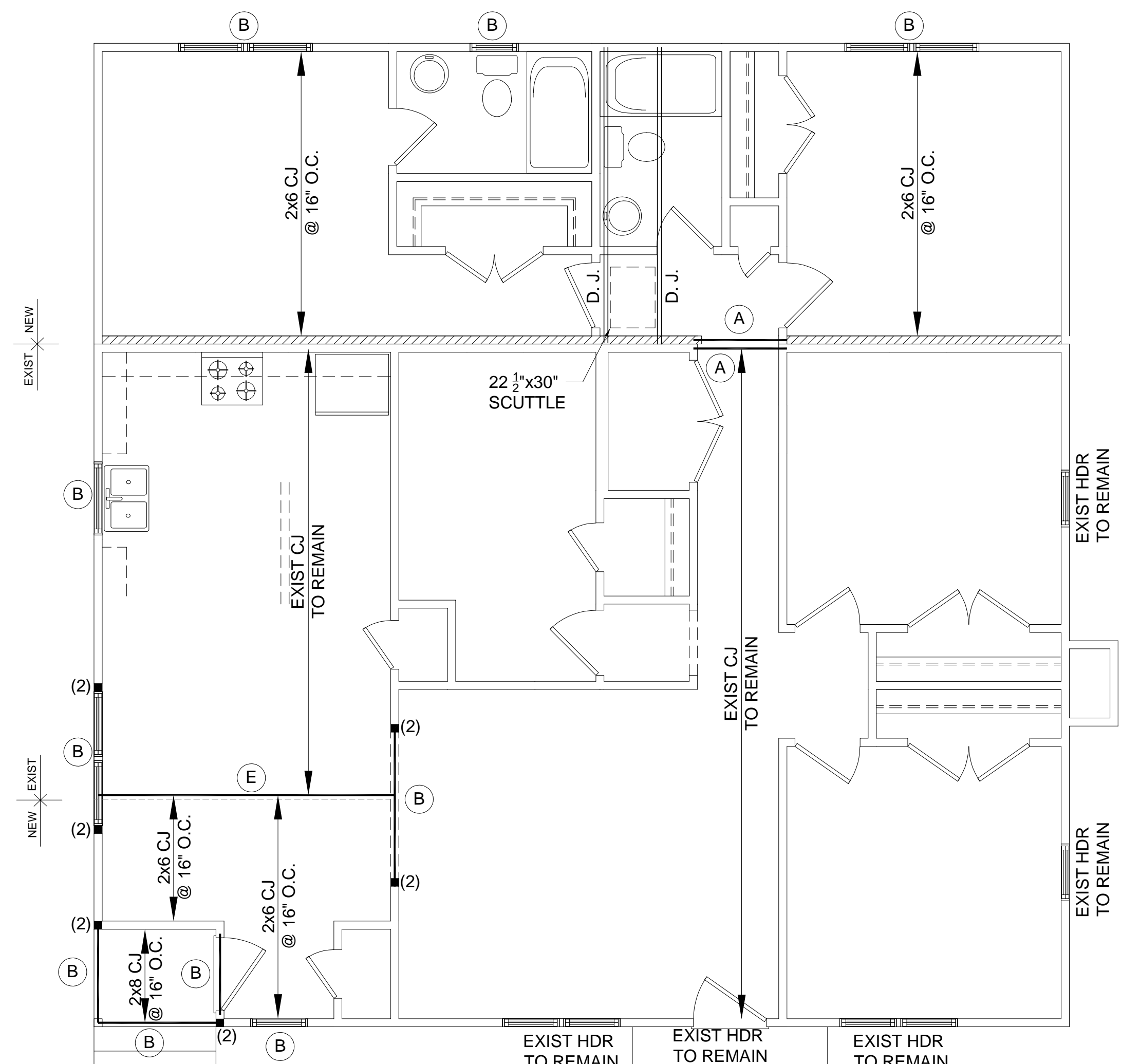
- (A) (2) 2x10 FLUSH
- (B) (2) 2x10 DROPPED
- (C) (2) 2x8 FLUSH
- (D) (2) 2x8 DROPPED
- (E) (2) 9 1/4" LVL FLUSH
- (F) (2) 9 1/4" LVL DROPPED
- (G) (3) 2x10 TOP FLUSH
- (H)

LOAD BEARING WALL



**ROOF FRAMING**

22X34 PRINTS SCALE: 1/4"=1'-0"  
11x17 PRINTS SCALE: 1/8"=1'-0"



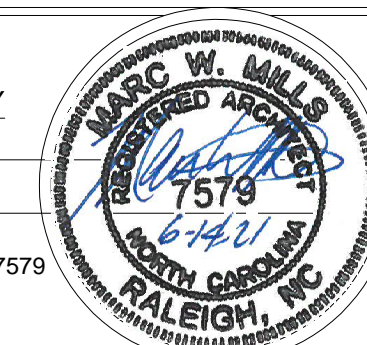
**ATTIC FLOOR FRAMING**

22X34 PRINTS SCALE: 1/4"=1'-0"  
11x17 PRINTS SCALE: 1/8"=1'-0"

New Roof Ventilation		
A	Ceiling area (square footage)	608
B	Sqft. of ventilation required	4.1
Formulas: B = A / 150		
Notes: Builder to calculate quantities and types of vents to make up the minimum requirement. Attic ventilation shall be approximately 50% soffit, and 50% high (gable end or ridge vents).		

THESE PLANS ARE SEALED FOR A SINGLE LOT ONLY.

STRUCTURAL DESIGN BY  
MARC W. MILLS, RA  
DATE SEALED:  
INVALID IF UNSEALED  
NORTH CAROLINA LICENSE # 7579



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GENERAL NOTES:  
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2. CONTRACTOR IS TO NOTIFY DESIGNER IMMEDIATELY OF CONDITIONS OR ITEMS VARYING FROM DEPICTED INFORMATION.  
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GABE REYES DESIGN ARCHITECTURE ASSOCIATES, INC. 1000 W. GARDNER STREET, SUITE 100, RALEIGH, NC 27603  
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Jesus Bautista  
House Rear Addition/Renovation  
61 Pope St, Coats, NC 27521  
Permit/Construction Set

PROGRESS DATE:	06-14-21
ISSUE DATE:	06-14-21
DESIGNED BY:	GR
CHECKED BY:	MM
DATE:	
BY:	
DESCRIP.:	

Attic Floor Framing/  
Roof Framing  
SHEET NO.  
**AS-2**  
PLAN NO.  
**02721**

**gabe reyes design**  
planworx architecture p.a.  
raleigh, nc  
email: gabereyesdesign@gmail.com  
phone: (919) 491-5855