NOTICE TO CONTRACTOR
All construction must comply with current NC Building Codes
and is subject to field inspection and verification.

APPROVED

APPROVED

Limited building only review

Permit holder responsible for full compliance with the code



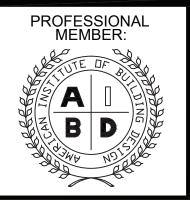


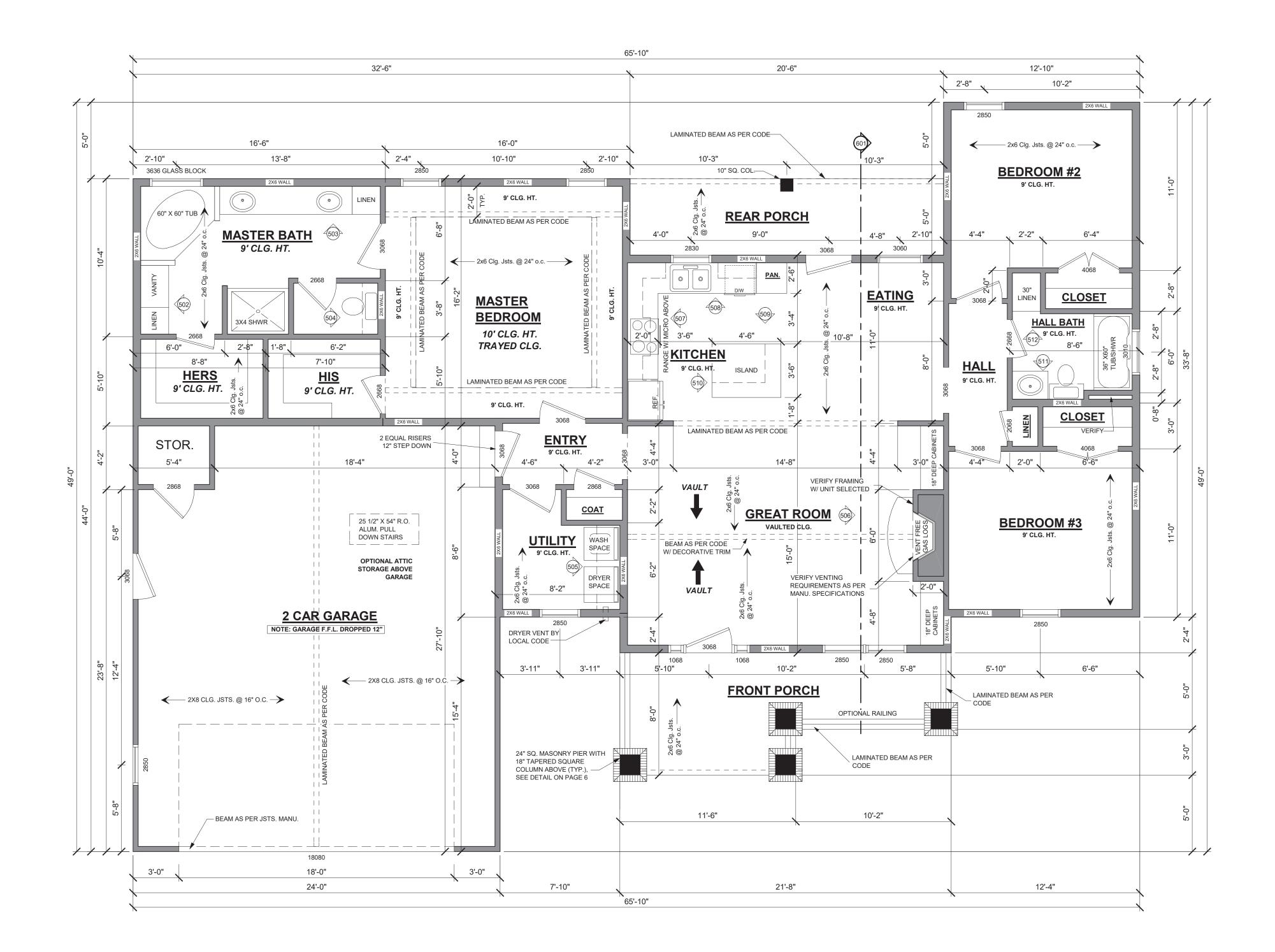
05/29/2020



SHEET NUMBER

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## **FLOOR PLAN NOTES**

DOOR AND WINDOW SIZES ARE GIVEN IN FEET AND INCHES IN WIDTH AND HEIGHT RESPECTIVELY. EXAMPLE SIZE - 2860 IS 2'-8" WIDE BY 6'-0"

CONTRACTOR SHALL VERIFY CLEARANCE OF ALL TRIM SIZES SELECTED BY OWNER, AND ADJUST AS NECESSARY.

ADJUST FINISH FLOOR HEIGHT AS NEEDED FOR PROPER DRAINAGE ONSITE.

ALL WINDOW AND DOOR SIZES GIVEN ARE NOMINAL. REFER TO MANUF. SPECS FOR ROUGH OPENING DIMENSIONS.

# **HPG-1604C**

AREAS:	1604	S.F. HEATED
	910	S.F. UNHEATED (MAIN FLOOR)
	2514	S.F. TOTAL UNDER ROOF
		**MASONRY NOT INCLUDED**



JEROME RUFARO REDMOND, PE BUILDING ENGINEERING & DESIGN 8209A MARKET ST. STE 222 WILMINGTON, NC 28411 P: 910.915.6529 JREDNC5@YAHOO.COM

DATE:

10/07/10

DRAWN BY:

A.L.B.

CHECKED BY: G.S.M.

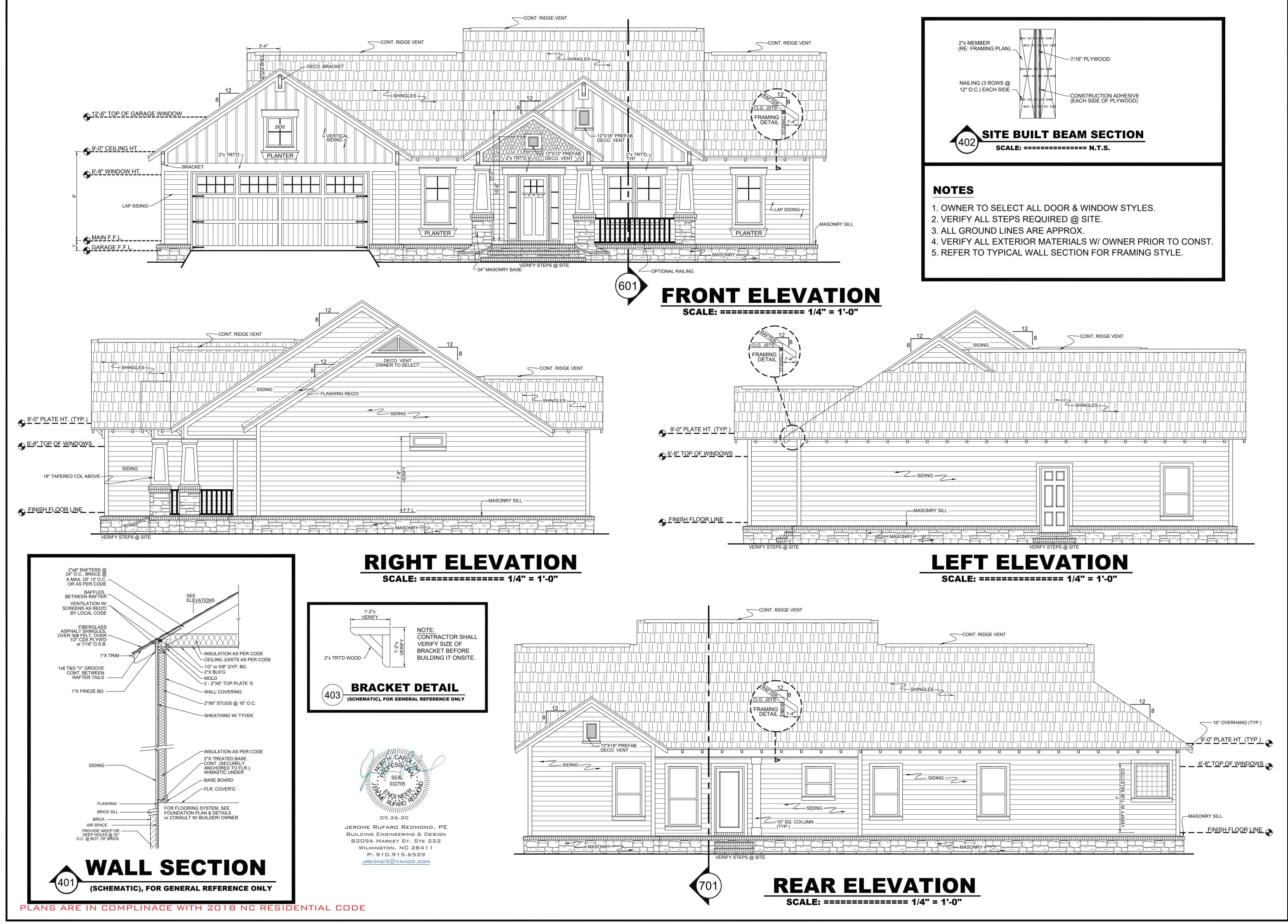
PLAN NUMBER

1604C

FLOOR PLAN

SHEET NUMBER

FLOOR PLAN 



DATE: 10/07/10 DRAWN BY:

A.L.B.

CHECKED BY:

G.S.M.

PLAN NUMBER HPG-1604C

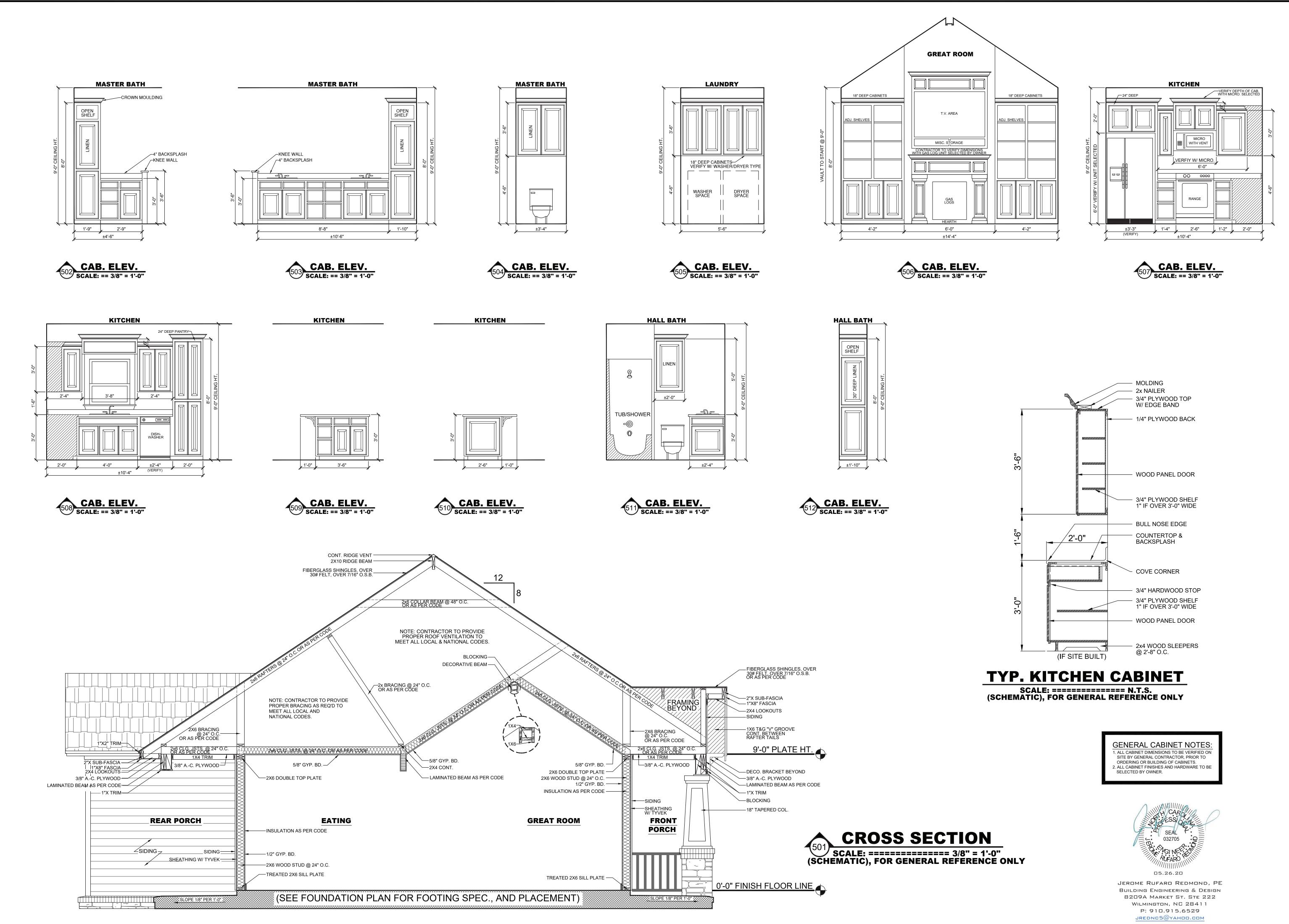
ELEVATIONS

SHEET NUMBER

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PROFESSIONAL MEMBER:

A DIVING B D STANDARD B D STANDARD



S 39402 FAX: (601) 2

264

DATE: 10/07/10 DRAWN BY:

A.L.B. CHECKED BY:

G.S.M.

PLAN NUMBER 1604C

**ELEVATIONS** 

SHEET NUMBER

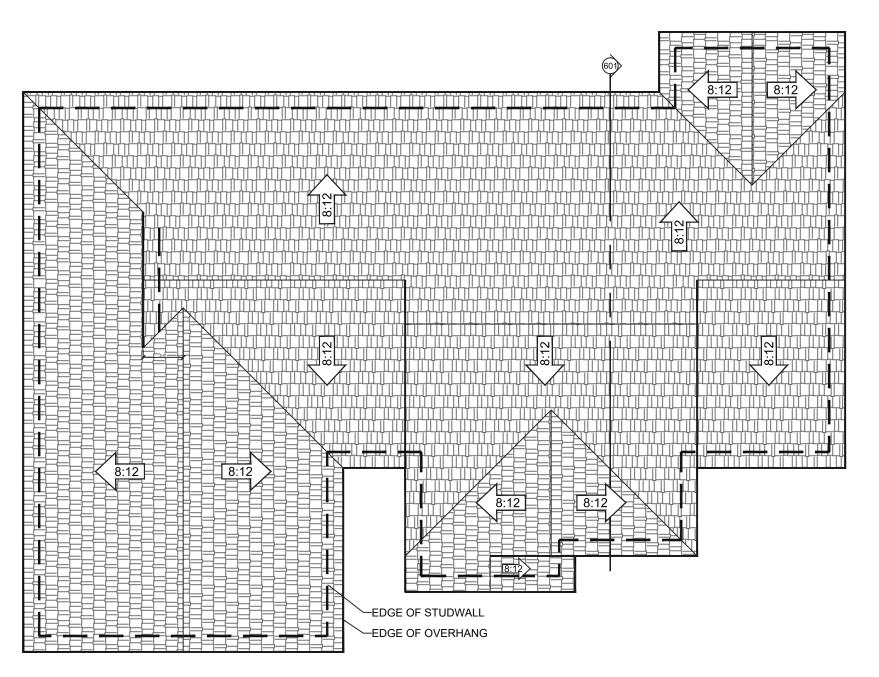
PROFESSIONAL MEMBER:

U5.26.20

JEROME RUFARO REDMOND, PE
BUILDING ENGINEERING & DESIGN
B209A MARKET ST. STE 222

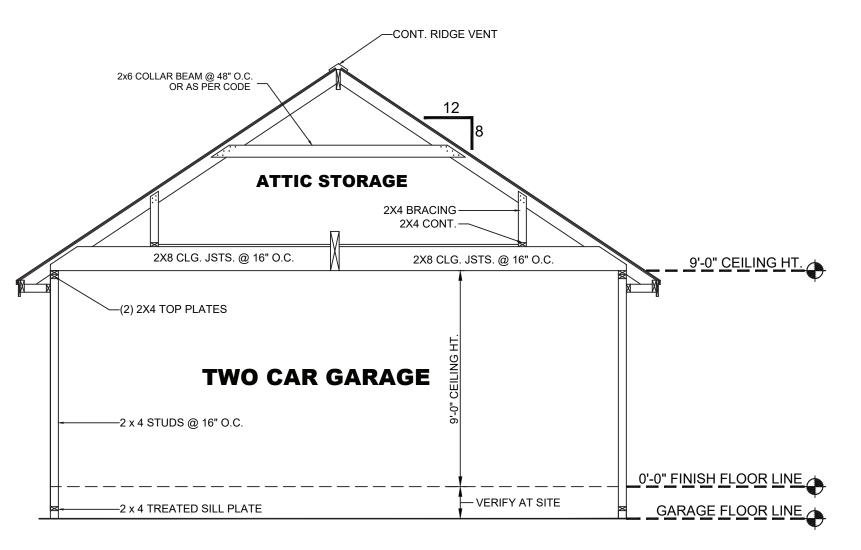
WILMINGTON, NC 28411
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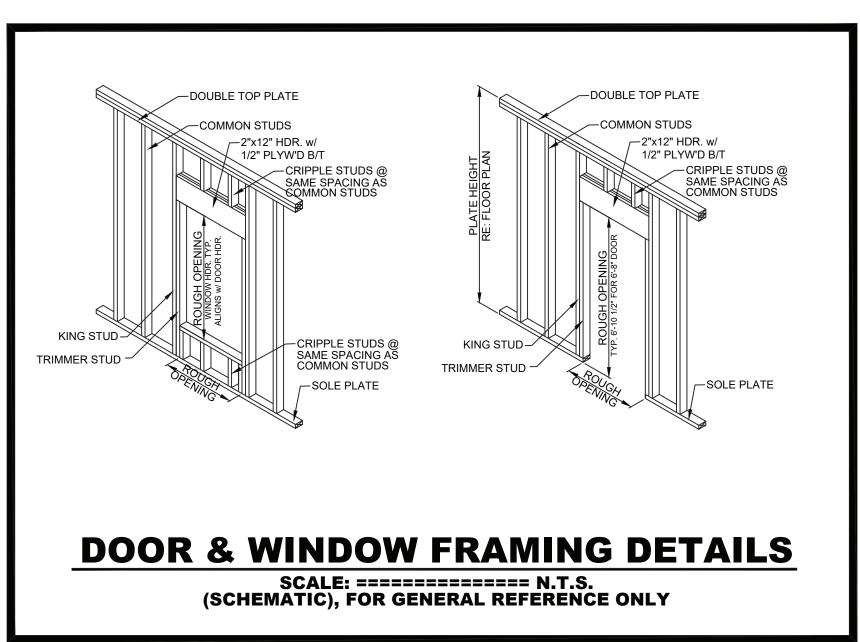


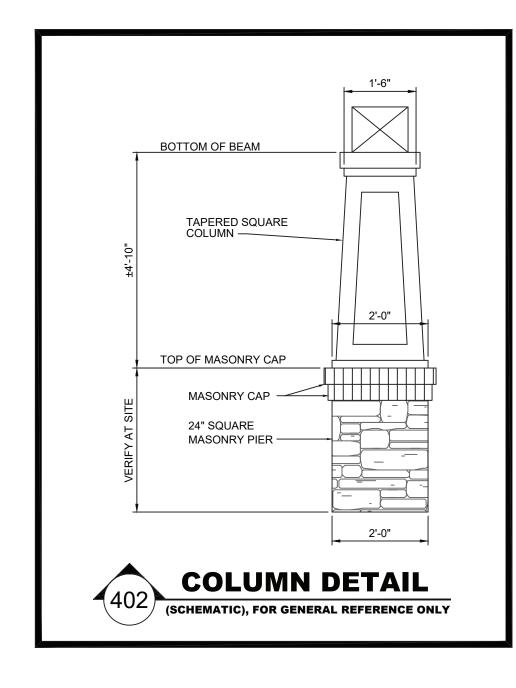
# **ROOF DRAINAGE PLAN**

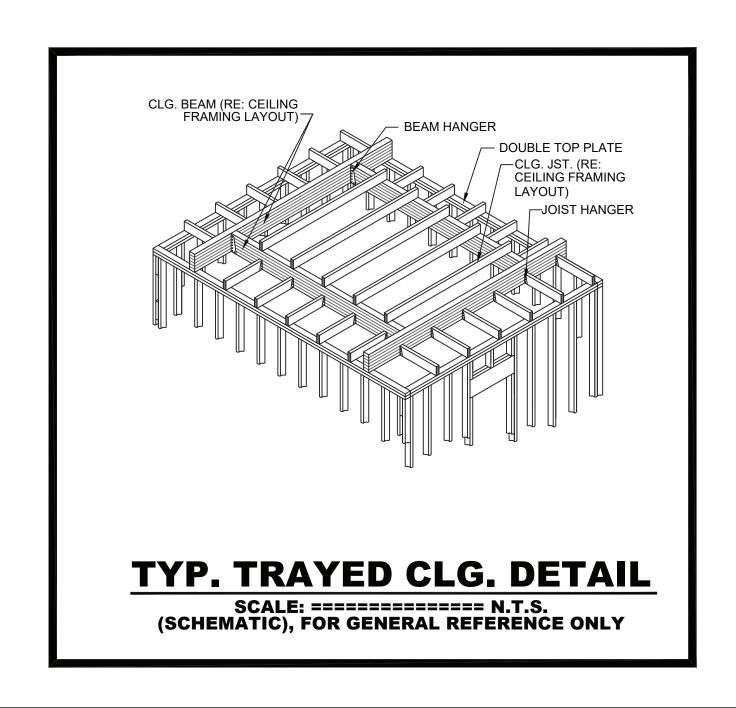
SCALE: ========== 1/8" = 1'-0"



# **GARAGE SECTION**







# SEE S3 FOR ROOF FRAMING PLAN

ATTIC VENTILATION ANALYSIS 1203.2			
ATTIC AREA, A (FT <sup>2</sup> )	2300		
NET FREE VENT AREA, A <sub>VNET</sub> =A/300 (FT <sup>2</sup> )	7.67		
50% of Ventilation, A <sub>u</sub> =A <sub>L</sub> =.5*A <sub>VNET</sub> (FT <sup>2</sup> )	3.83		
RIDGE LENGTH, L <sub>R</sub> (FT)	65		
RIDGE VENTILATION, AUR=LR*.125 FT2/FT (FT2)	8.125		
REMAINING SOLAR POWERED VENTILATION A <sub>U</sub> -A <sub>UR</sub> =A <sub>US</sub> (FT <sup>2</sup> )			
REQUIRED LENGTH 3" SOFFIT, LS = $A_L/.25$ (FT)	15.33		
REQUIRED LENGTH 6" SOFFIT, LS=AL/.5 (FT)	7.67		

HOUSE PLAN GALLEI

DATE: 10/07/10

DRAWN BY:
A.L.B.

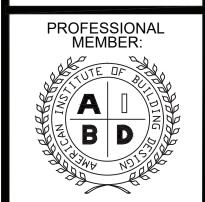
CHECKED BY: G.S.M.

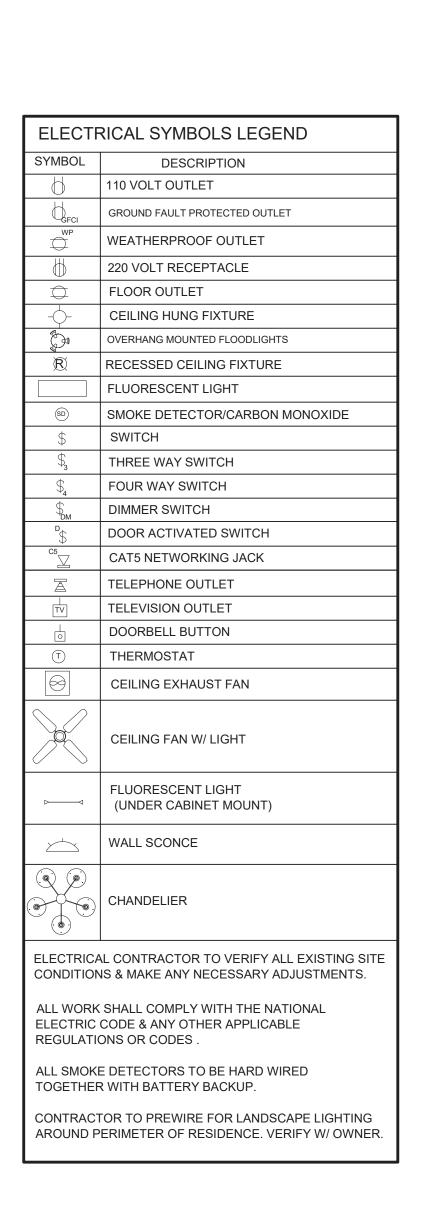
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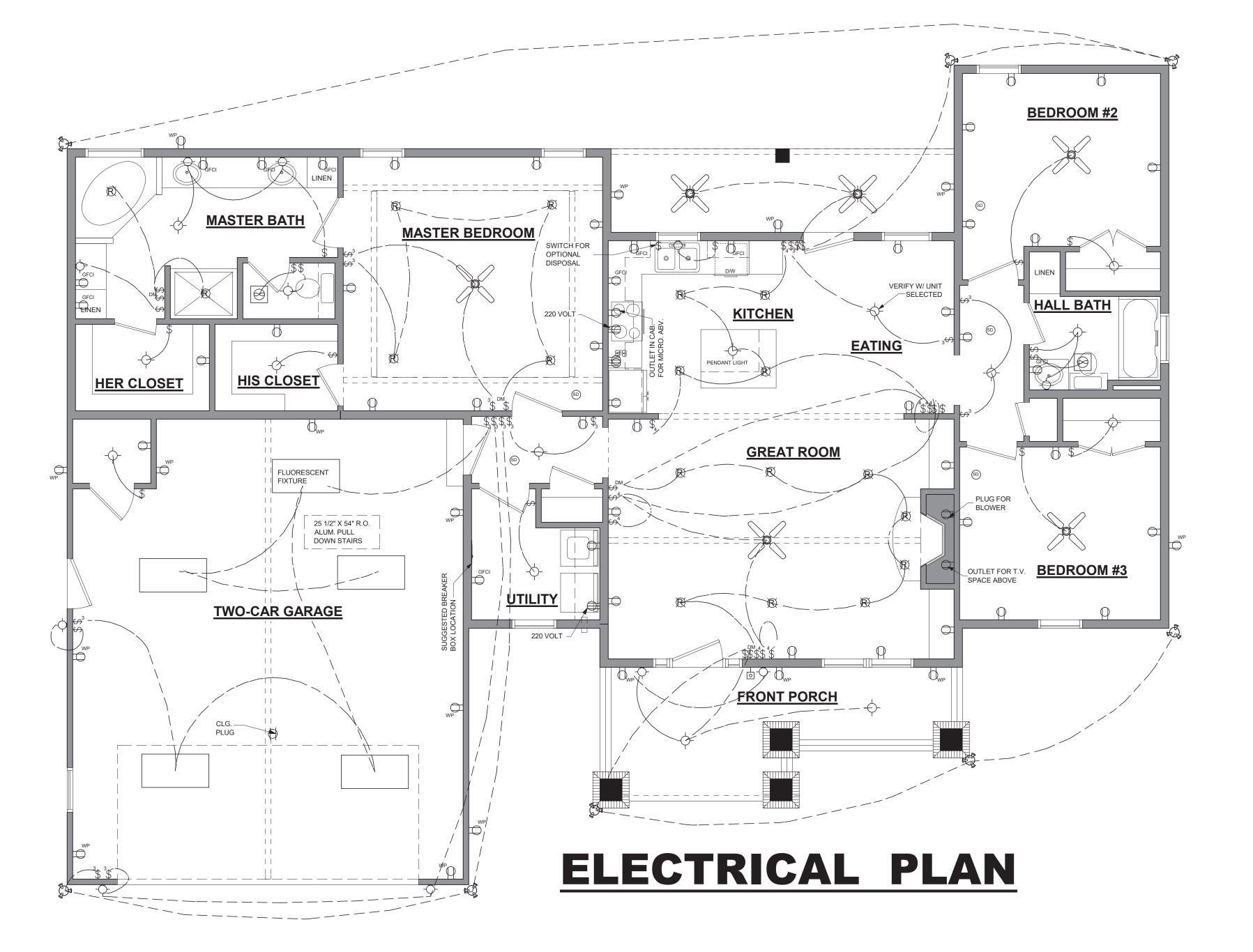
FRAMING

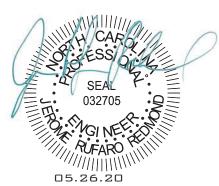
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DATE:

10/07/10

DRAWN BY: A.L.B.

CHECKED BY:

G.S.M.

PLAN NUMBER

### GENERAL NOTES:

GENERAL: ALL NOTES ARE FOR SUPPLEMENTING THE PLANS AND SPECIFICATIONS AND ARE IN NO WAY TO BE CONSIDERED AS EXCLUDING ANY ITEM IN THEM.

CONTRACTOR TO OBTAIN ALL MISC. UTILITIES AND UTILITY CLEARANCES AND EXCAVATION PERMITS.

CODE: DESIGN AND CONSTRUCTION TO BE IN ACCORD WITH THE 2018 NC RESIDENTIAL CODE (NCRC) AND THE PARTICULAR CODES AS REFERENCED IN NCRC.

DESIGN CRITERIA:

FLOOR LIVE: 40 PSF 20 PSF ROOF LIVE: ATTIC LOAD: 20 PSF WIND SPEED: 110 MPH WALL COMPONENT: 24 PSF NET UPLIFT: 20 PSF

FOUNDATION: EXCAVATION FOR AND BEARING MATERIAL FOR FOUNDATIONS SHOULD BE SUPERVISED AND APPROVED BY PWD PRIOR TO FOOTING INSTALLATION.

MATERIAL SATISFACTORY FOR CONTROLLED FILL AND BACKFILL MATERIAL AROUND AND ABOVE FOOTINGS SHALL INCLUDE CLEAN SOIL OR BANKRUN SAND AND GRAVEL (GW, GC, SC, SM, ML & CL), BUT EXCLUDE HIGHLY PLASTIC CLAYS (MH & CH) OR HIGH SHRINK SWELL SOILS. THE FILL MATERIALS SHALL BE FREE FROM TOPSOIL. ORGANIC CONTAMINATED SOIL AND ROCK FRAGMENTS HAVING A MAJOR DIMENSION GREATER THAN FOUR (4) INCHES, AND SHALL CONTAIN NO ICE OR SNOW.

FOOTINGS ARE DESIGNED FOR AN ASSUMED SOIL BEARING PRESSURE OF 2000 PSF.

CARE SHOULD BE TAKEN TO ASSURE THAT DURING PLACING OF CONCRETE FOOTINGS ON GRADE NO ORGANIC MATTER, SALTS, OR CLAYS ARE MIXED WITH THE CONCRETE.

CONCRETE: REINFORCED CONCRETE TO HAVE THE FOLLOWING COMPRESSIVE STRENGTH (F'C)

SLAB ON GRADE: 3000 PSI FOOTINGS: 3000 PSI

EXPOSED CONCRETE SHALL BE AIR-ENTRAINED.

GROUT FOR BASE PLATES SHALL BE NON-SHRINKABLE GROUT AND SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH AT 28 DAYS OF 5,000 P.S.I.

REINFORCING STEEL: ASTM A615 GRADE 60.

WELDED WIRE FABRIC SHALL CONFORM TO ASTM A- 185.

REINFORCING STEEL MARKED CONTINUOUS (CONT.) SHALL BE LAPPED 48 X BAR DIAMETER AT SPLICES.

ALL REINFORCING STEEL SHALL BE HELD SECURELY IN PLACE TO PREVENT DISLOCATION DURING THE POURING OPERATION.

SLAB REINFORCING BARS SHALL BE SUPPORTED ON HIGH CHAIRS AND BAR SPACERS OF SUITABLE DESIGN. "HOOKING" OF WELDED WIRE FABRIC SHALL NOT BE PERMITTED.

DETAILING OF ALL CONCRETE STEEL REINFORCEMENT SHALL BE IN ACCORDANCE WITH THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES (A.C.I. 315-89).

NO CONCRETE SHALL BE PLACED UNTIL ALL EMBEDDED WORK HAS BEEN INSTALLED, TESTED AND INSPECTED.

EXCEPT AS OTHERWISE SHOWN, MINIMUM PROTECTION (CONCRETE COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

CONCRETE SURFACES EXPOSED TO SOIL: 1 1/2" FOR SLABS 3" FOR FOOTINGS

INTERIOR CONCRETE SURFACES: 3/4" FOR SLABS

CONCRETE SURFACES EXPOSED TO WEATHER: 1 1/2" FOR SLABS

WOOD: ALL WOOD TO BE SOUTHERN YELLOW PINE (SYP) NO. 2 OR HIGHER. ALL FASTENERS AND HANGERS TO BE HOT DIPPED GALVANIZED (AT A MINIMUM). PRESERVATIVE PRESSURE TREATMENT TO BE IN ACCORDANCE WITH AWPA STANDARD M4-06 & U1-07. MINIMUM PRESERVATION TREATMENTS:

POSTS: UC4A ALL OTHER WOOD MEMBERS: UC3B

ROOF SHEATHING C-D GRADE "APA" EXTERIOR STRUCTURAL PANELS OR APPROVED EQUAL. PLACE WITH LONG DIMENSION PERPENDICULAR TO FRAMING. STAGGER END JOINTS. FASTEN WITH 8D HOT-DIPPED GALVANIZED BOX NAILS AT 6" O.C. AT ALL SUPPORTED EDGES, EXCEPT WITHIN THE FIRST 4' FROM ROOF EDGE. FASTENERS WITHIN THE FIRST 4' SHALL BE AT 4" O.C.

ALL MULTI-PLY LAMINATED VENEER LUMBER (LVL) HEADERS LINTELS & STUD COLUMNS SHALL BE CONNECTED SUCH THAT THEY ACT AS A SINGLE MEMBER.

LVL SPECS: FB=2900 PSI FV=285 PSI E=1,900,000 PSI

1. TRUSS FABRICATOR TO VERIFY FIELD DIMENSIONS WITH GENERAL CONTRACTOR.

2. ALL TIMBER TRUSSES SHALL BE DESIGNED FOR: 110 MPH WIND SPEED

TOP CHORD LL = 30 PSF

TOP CHORD DL = 10 PSF

BOT CHORD LL = 20 PSF (GENERAL ATTIC) BOT CHORD DL = 15 PSF

NET UPLIFT = 25 PSF

IN ACCORDANCE WITH GOVERNING LOAD COMBINATIONS PER IBC 1605.

3. TRUSS SUPPLIER SHALL SUBMIT SHOP DRAWINGS WITH NORTH CAROLINA REGISTERED ENGINEER SEAL BEFORE FABRICATION.

4. ALL MEMBERS TO BE SYP NO. 2 OR HIGHER

MASONRY: LOAD BEARING CONCRETE MASONRY CONSTRUCTION TO BE IN ACCORDANCE WITH ASCE 5/ACI 530/TMS 402-08, "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES", AND ASCE 6/ACI 530.1/TMS/602-08, SPECIFICATIONS FOR MASONRY STRUCTURES." BEARING WALLS AND PIERS TO CONSIST ENTIRELY OF LOAD BEARING UNITS.

ALL MASONRY CONSTRUCTION TO BE IN ACCORDANCE WITH ACCEPTABLE INDUSTRY STANDARDS AND METHODS OF CONSTRUCTION.

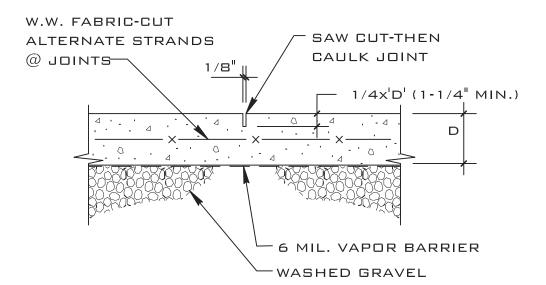
PROVIDE DUR O WAL OR EQUAL EVERY BLOCK COURSE BELOW FINISHED FLOOR AND EVERY OTHER COURSE ABOVE FINISHED FLOOR UNLESS OTHERWISE SHOWN ON THE ARCHITECTURAL SECTION. ALL HORIZONTAL WALL REINFORCING TO BE TRUSSED AND GALVANIZED. AT CORNERS AND INTERSECTIONS HORIZONTAL WALL REINFORCING TO BE FULLY LAPPED WITH TRUSSED GALVANIZED CORNERS AND TEES.

HOLLOW LOAD BEARING MASONRY UNITS SHALL CONFORM TO ASTM C90 REGULAR WEIGHT (UNLESS NOTED OTHERWISE). SOLID LOAD BEARING CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C145. THE UNIT MASONRY SHALL HAVE A NET UNIT COMPRESSIVE STRENGTH OF 2,000 PSI. THE COMPRESSIVE STRENGTH OF THE UNITS SHALL BE DETERMINED IN ACCORDANCE WITH ASTM C140 70, STANDARD METHODS OF SAMPLING AND TESTING CONCRETE MASONRY UNITS. A 28 DAY PRISM STRENGTH VALUE OF 1500 PSI HAS BEEN USED IN THE DESIGN.

MORTAR FOR CONCRETE MASONRY SHALL CONFORM TO THE REQUIREMENTS OF THE ASTM SPECIFICATION FOR MORTAR UNIT MASONRY ASTM C270, TYPE M OR S. GROUT SHALL CONFORM TO ASTM C476. CONCRETE GROUT USED TO FILL CORES IN MASONRY UNITS SHALL HAVE A 28 DAY STRENGTH OF 3,000 PSI MIN.

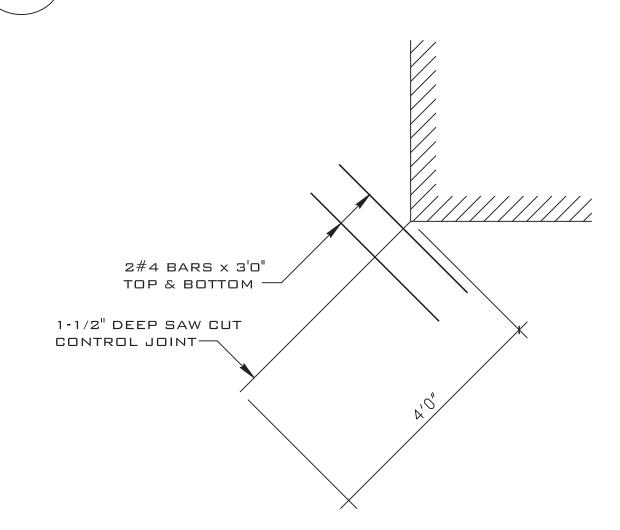
ALL MASONRY TO BE LAID IN TYPE M OR S MORTAR WITH FULL HEAD AND BED JOINT.

### D = SLAB THICKNESS

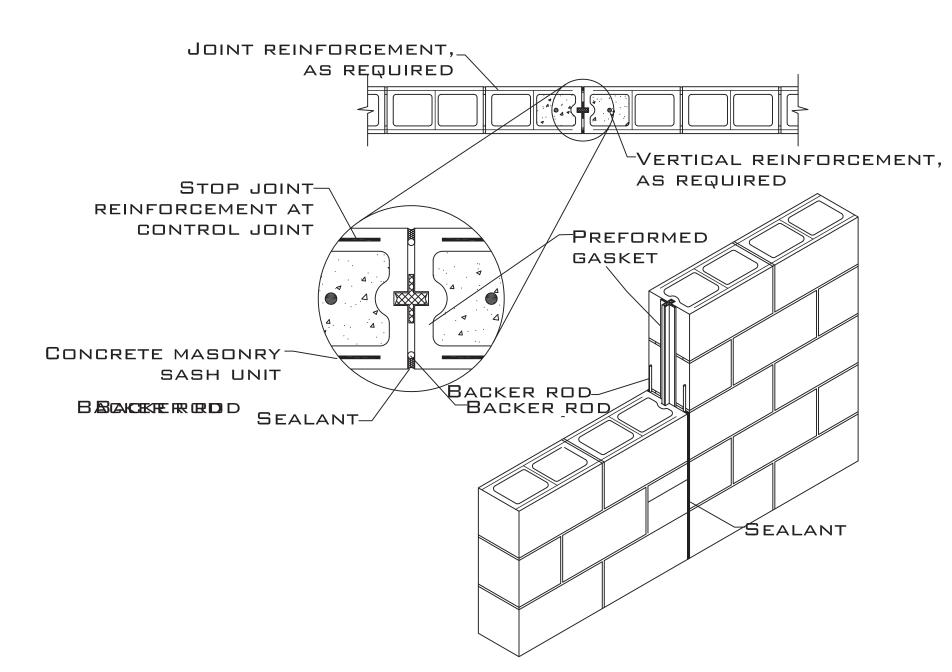


PROVIDE CONTROL JOINTS BETWEEN CONSTRUCTION JOINTS WITH SPACING NOT TO EXCEED IN FEET 3 TIMES THE SLAB THICKNESS IN INCHES IN EACH DIRECTION. CONTROL JOINTS TO BE FORMED WHILE CONCRETE IS STILL PLASTIC OR SAW CUT WITHIN 8 HOURS OF PLACING CONCRETE.

# SAWED CONTROL JOINT (S.J.) DET



DIB TYPICAL DIAGONAL SAW CUT DET SLAB CONTROL JOINT DETAIL



D40 MASONRY CONTROL JOINT PROVIDE AT 16' INTERVAL MAX

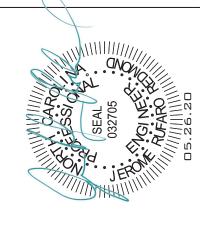


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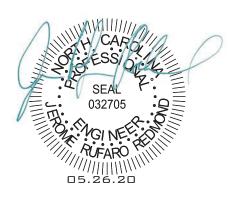
DRAWING TITLE GENERAL NOTES

DRAWN BY: CHECKED BY: JRR SCALE: AS SHOWN

06.02.19

DATE: SHEET PROJECT S<sup>1</sup>

02019173A



JEROME RUFARO REDMOND, PE Building Engineering & Design 8209A MARKET ST. STE 222 32'-6" 20'-6" WILMINGTON, NC 28411 P: 910.915.6529 16'-4" JREDNC5@YAHOO.COM /\_\_ REINFORCED \_\_ CONCRETE SLAB / STEP DOWN ONTO PORCH (VERIFY HT.) - REINFORCED -REINFORCED — CONCRETE SLAB / CONCRETE SLAB / THICKENED FTG. THICKENED FTG. THICKENED FTG. - REINFORCED OPTIONAL 23'-8" 12'-8" NOTE: FOUNDATION IS SHOWN FOR GAS LOGS ONLY. IF CONVENTIONAL FIREPLACE IS DESIRED, CONTRACTOR 12" STEP DOWN INTO -UPSET AS REQ'D GARAGE (VERIFY @ SITE) TO MAKE NECESSARY ADJUSTMENTS THICKENED FTG. CONCRETE SLAB / OPTIONAL CONCRETE SLAB / THICKENED FTG. OPTIONAL L-+-------------STEP DOWN ONTO UPSET AS REQ'D /\_\_ REINFORCED \_\_\_ CONCRETE SLAB / CONCRETE SLAB / -UPSET AS REQ'D 10'-2" 41'-10" 65'-10"

# RAISED SLAB FOUNDATION

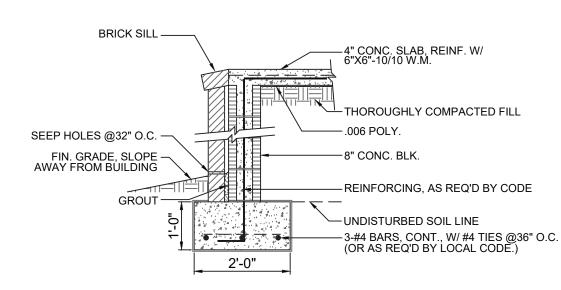
**SCALE:** ========= 1/4" = 1'-0"

# FOUNDATION NOTES:

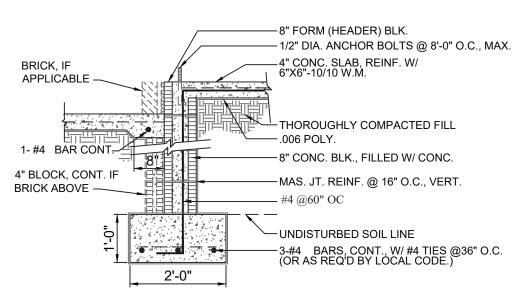
- 1. FLOOR LIVE LOAD 40 PSF
- 2. ROOF LIVE 20 PSF
- 3. WF2.0 2'-0"WX16"D CONT. WALL FOOTING W/3 #4 or 2 # 5 CONT.
- WF1.8 1'-8"WX16"D CONT. WALL FOOTING W/3 #4 OR 2 # 5 CONT.
- F3.D 36"X36"X12"D W/ 4 #4 EW
- 4. WALL: 2X4@16" OC 5. WOOD: SPF NO. 2 OR HIGHER
- 6. CONCRETE: f'c = 3000 PSI
- 7. MASONRY:  $f^{l}M = 1500 PSI$
- 8. ASSUMED SOIL BEARING: 2000 PSF
- 9. 4" CONCRETE SLAB ON GRADE

CONCRETE W/6X6-W1.4XW1 4 REINFORCING OVER 6 MIL VAPOR BARRIER ON COMPACTED FILL

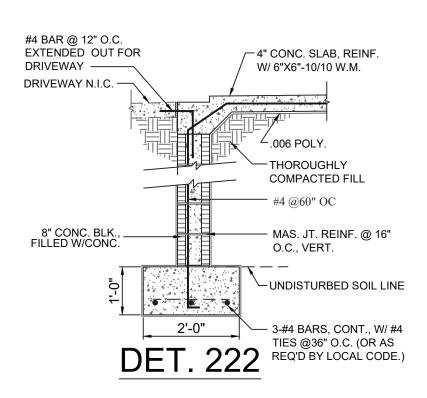
10. SLAB PERIMETER INSULATION: R-15 FOR 24"

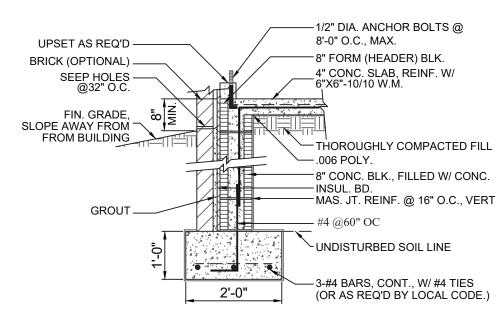


DET. 225

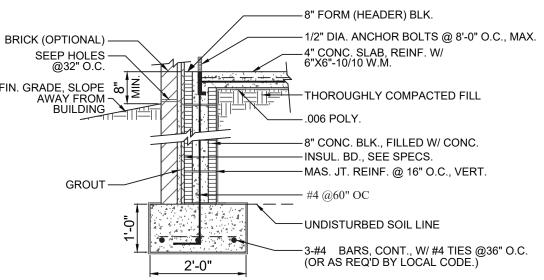


DET. 224

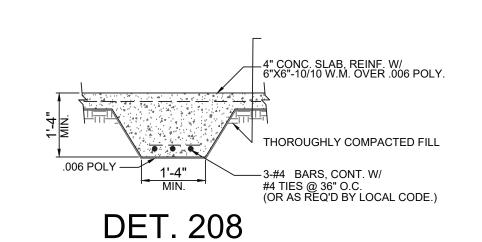




DET. 221



DET. 220



DATE: 10/07/10

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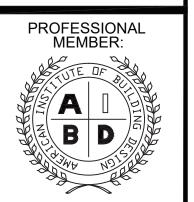
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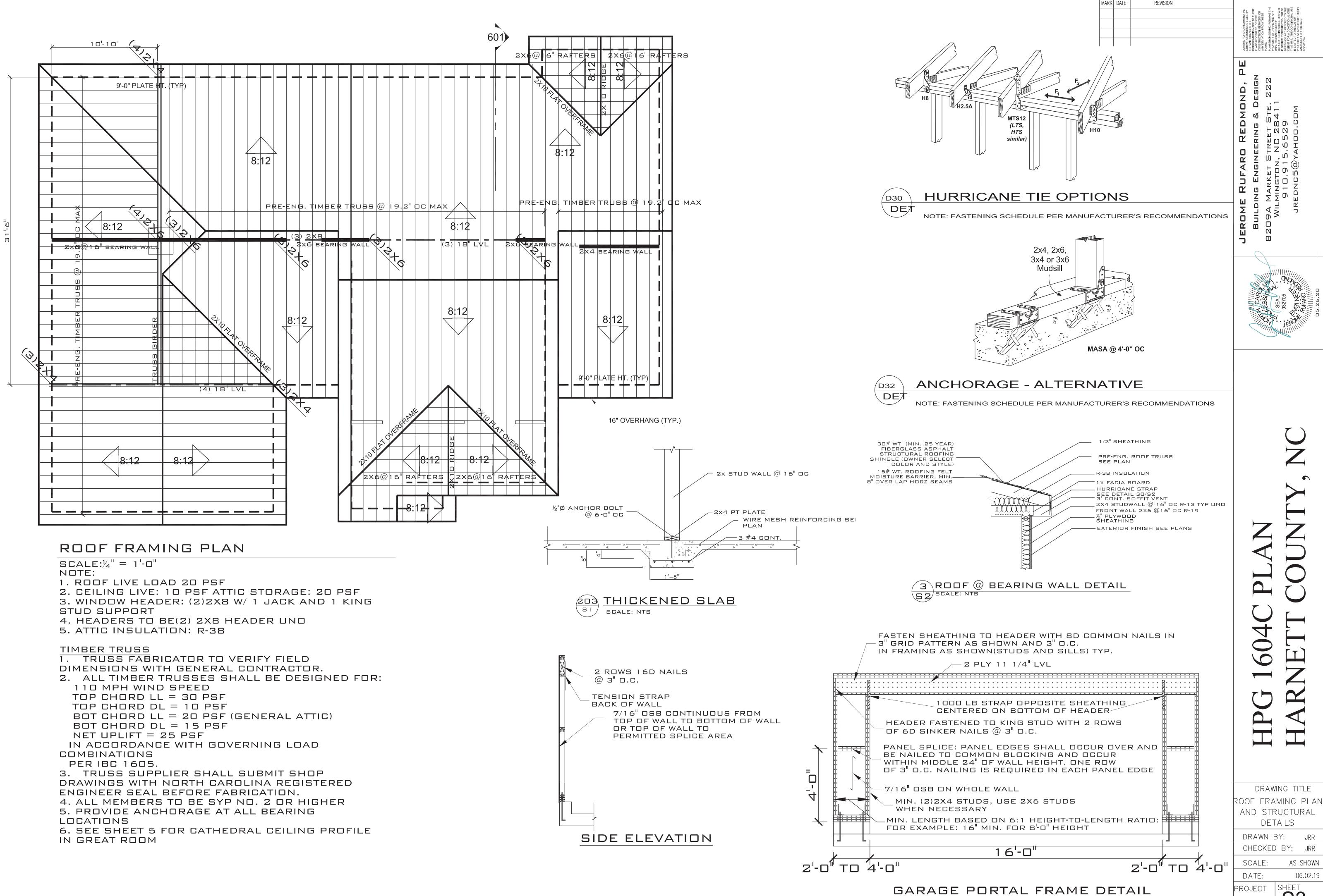
PLAN NUMBER HPG-1604C

CHAINBLOCK FOUNDATION

SHEET NUMBER

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DRAWING TITLE

DETAILS

DRAWN BY: JRR

CHECKED BY: JRR

AS SHOWN

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06.02.19

SCALE:

DATE:

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