

## **CODES OF RECORD**

PLANNING AND CONSTRUCTION OF BUILDINGS SHALL BE REGULATED BY:

**REVIEWED**

*By Shawn Yocom at 1:51 pm, Nov 03, 2021*

INTERNATIONAL CODE COUNCIL (ICC)  
2018 INTERNATIONAL RESIDENTIAL CODE (IRC)

ISSUANCE OF PERMITS SHALL NOT BE CONSTRUED AS APPROVAL OF VIOLATIONS OF THE CODE OR OTHER LAWS AND SHALL NOT PREVENT THE BUILDING OFFICIAL FROM REQUIRING CORRECTION OF ERRORS IN PLANS, CONSTRUCTION, OR OTHER VIOLATIONS.

FOR ADDITIONAL INFORMATION VISIT THE  
KNOX COUNTY CODE ADMINISTRATION WEBSITE:

<https://knoxcounty.org/codes/constructionhandouts>

**ELECTRICAL PERMITS** SHALL BE OBTAINED FROM THE STATE OF TN ELECTRICAL INSPECTOR AT THE LOCAL UTILITY:

- KUB 865-558-2504
- LCUB 865-988-0720
- CUB 865-457-9232

**PRE-ENGINEERED COMPONENTS (R502.1.4; R502.8; AND502.11.1)**

- INSTALLED ACCORDING TO MFG. INSTRUCTIONS.
- **NOT** DRILLED, NOTCHED, CUT, OR MODIFIED IN DESIGN OR ARRANGEMENT WITHOUT WRITTEN APPROVAL OF DESIGN ENGINEER.



**GENERAL NOTES**

**DESIGN NOTES**

1. Floor: 40 lbs. Live load, 15 lbs. Dead load
2. Roof: 30 lbs. Live load, 20 lbs. Dead load
3. Soil bearing capacity-2000 PSF
4. Live loads, dead loads, wind loads, snow loads, lateral loads, seismic zoning and any specialty loading conditions will need to be confirmed before construction and adjustments to plans made accordingly. See your local building officials for verification of your specific load data, zoning restrictions and site conditions.

**CONCRETE AND FOUNDATIONS**

1. All slabs on grade shall be 4 inch 3000 PSI (28-day compressive strength concrete), unless noted otherwise.
2. All slabs on grade shall bear on four inch compacted granular fill with 6 by 6 10-10 welded wire mesh.
3. Interior slabs shall have 6 mil, polyethylene vapor barrier underneath.
4. Provide proper expansion joints and control joints as per local requirements.
5. Provide additional bearing points as required by floor joist manufacturer, and loading transfers.
6. Foundation details may vary with local codes and conditions, verify with contractor or engineer.
7. Provide foundation access and vents as required by local codes and conditions.
8. Foundation wall and footing sizes reinforcing must conform with your local building requirements.
9. Foundation walls are not to be backfilled until house is completely framed and roof is in place.
10. Verify depth of footings with your local codes.
11. Provide termite protection as required by HUD minimum property standards.

**BASEMENT**

1. Basement stairs are calculated as 10 inch treads with 1 inch nosing (11 inch total) and 7.75 inch risers.
2. Water heater and air conditioner may be located in basement when using basement option.
3. Provide sump pumps as required.
4. Some soil conditions may require a 12 inch concrete retaining wall, verify with contractor or engineer.
5. Provide exterior windows and door as grade allows.
6. Provide venting as local codes and conditions dictate.

**FRAMING**

1. Contractor to confirm the size, spacing and species of all framing and structural members to meet your local code requirements.
2. Any structural or framing members not indicated on the plan are to be sized by the contractor.
3. Double floor joists under all partition walls, unless otherwise noted.
4. All angled walls are 45 degree angles unless noted otherwise.
5. Provide collar ties, cross-bridging and bracing as required.
6. Provide additional bearing points as required by loading transfers.
7. Framing lay-out and size may vary with local codes and conditions.
8. Roof framing plan is for general layout only, do not use for rafter count.

**MISC. NOTES**

1. Prefabricated fireplaces and flues are to be U.L. approved and installed per manu. specifications.
2. All materials, supplies and equipment to be installed per manu. specifications and local codes.
3. Provide type "x" firecode sheetrock on garage walls and ceilings.
4. Confirm window openings for your local egress requirements and minimum light and venting.
5. The mechanical and electrical layouts are suggested only. Consult your mechanical and electrical contractors for exact specifications, locations and sizes.
6. Minor alterations to this plan can be made by the builder. Please contact our drafting department for information price quotes if major changes are required.

This plan was designed and drafted by W.L. Martin Home Designs to meet average conditions and codes in the state of Oklahoma at the time it was designed. Because codes and regulations can change and may vary from jurisdiction to jurisdiction, W.L. Martin Home Designs cannot warrant compliance with any special code or regulation. Consult your local building official to determine the suitability of these plans for your specific site and application. This plan can be adapted to your local building codes and requirements, but also, it is the responsibility of the purchaser and/or builder of this plan to see that the structure is built in strict compliance with all governing municipal codes [city, county, state and federal]. The purchaser and/or builder of this plan releases W.L. Martin Home Designs, its owner and employees from any claims or lawsuits that may arise during the construction of this structure or any time thereafter.

**CODES :**

Project is to be constructed in accordance to 2018' IBC /RBC..  
 1. Exterior Walls are to achieve a R-21 insulation value and Ceiling is to achieve an R-49 Insulation Value. All Windows and Doors are to have a U=.03 value.  
 2. Installation of a Radon Vent is required from under Vapor Barrier of Slab Floor up through the Roof of the structure.



**FRONT ELEVATION**

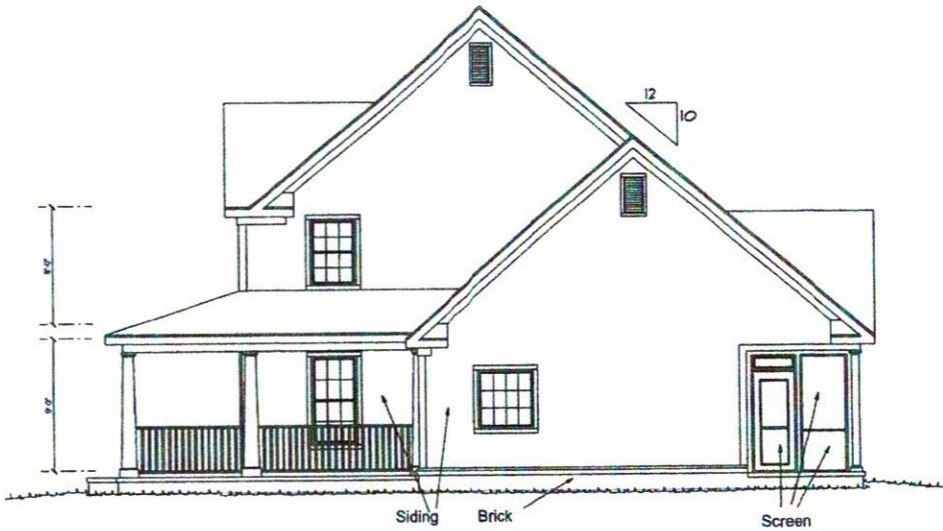
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Code Update	RH

# 24154 - " Stendal "  
 Modified For Stokes

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Date
Scale 1/4" = 1'-0"
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Job
Sheet 1
Of 8 Sheets

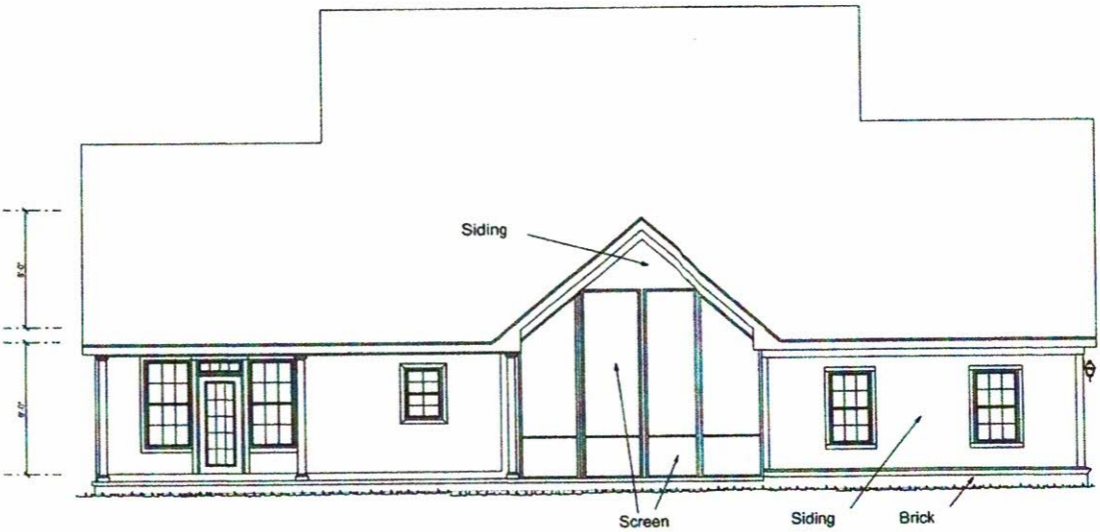




**RIGHT SIDE ELEVATION** 1/8" = 1'-0"



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



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

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# FLOOR PLAN SPECS

## GARAGE DOOR HEADERS (OVER 6 FT WIDE)

- (2) 2 IN. X 12 IN. W/ 4 IN. STEEL PLATE BETWEEN, BOLTED AT 2 FT. O.C., STAGGERED OR
- PRE-ENGINEERED BEAM.

## GARAGES AND ROOMS W/ ≥ 6 FT EXTERNAL DOORS (R302/R501)

- 1/2 IN. GYPSUM BOARD ON CEILING.
- 1/2 IN. GYPSUM BOARD ON WALLS ADJOINING DWELLING.
- 1/2 IN. GYPSUM BOARD OR 2 COATS FIRE RETARDANT PAINT ON ATTIC ACCESS.
- TYPE X GYPSUM BOARD ON CEILING IF A ROOM ABOVE.
- 1 3/8 IN. SOLID CORE WOOD, HONEY COMB CORE STEEL, OR 20 MIN. FIRE RATED DOORS FROM GARAGE TO DWELLING.
- GAS APPLIANCES ≥ 18 IN. ABOVE FLOOR.
- DUCTS ≥ 26 GA STEEL W/ AUTOMATIC FIRE DAMPENERS ON ALL OPENINGS INTO GARAGE.

## STAIRWAYS (R311.7.1; R311.7.2; R3.11.7.3; R311.7.6 AND R311.7.9):

- ≥ 36 IN. WIDTH. (≥ 31.5 IN. W/ HANDRAILS.)
- ≥ 80 IN. CEILING HEIGHT. (NOSINGS PLANE TO CEILING.)
- ≤ 151 IN. TOTAL STAIRWAY HEIGHT.
- ≥ 36 IN. LANDING AT BOTTOM.
- ILLUMINATED AS PER SECTION R303.7 AND R303.8.

## RISERS, TREADS, AND NOSING PROJECTIONS (R311.7.5):

- ≤ 7 3/4 IN. RISER HEIGHT. (+/- 3/8 IN. RANGE.)
- ≥ 10 IN. TREAD DEPTH. (+/- 3/8 IN. RANGE.)
- 3/4 TO 1 1/4 IN. NOSING PROJECTION. (+/- 3/8 IN. RANGE.)
- WINDERS / SPIRAL STAIRCASE TREAD DEPTH:
  - ≥ 6 IN. AT NARROW END. (+/- 3/8 IN. RANGE.)
  - ≥ 10 IN. (12 IN. FROM NARROW END. +/- 3/8 IN. RANGE.)

## HAND RAILS (R 311.7.8 AND R312.1.3):

- REQ'D, IF ≥ 4 RISERS.
- 34 TO 38 IN. ABOVE NOSING PLANE.
- ≤ 4 3/8 IN. PICKET SPACING.
- ≤ 6 IN. TRIANGULAR SPACES BELOW RAIL.
- TERMINATE IN POSTS OR WALL.

## HEARTHES (R1001.9)

- CONSTRUCTED AND SUPPORTED WITH NON-COMBUSTIBLE MATERIAL ≥ 4 IN. THICK.

## HEARTH EXTENSIONS (R1001.9)

- CONSTRUCTED OF AND SUPPORTED BY NON-COMBUSTIBLE MATERIAL ≥ 2 IN. THICK
- FIREPLACE OPENINGS < 6 SQFT;
  - EXTEND ≥ 16 IN. IN FRONT.
  - EXTEND ≥ 8 IN. ON SIDES.
- FIREPLACE OPENINGS ≥ 6 SQFT;
  - EXTEND ≥ 20 IN. FRONT.
  - EXTEND ≥ 12 IN. ON SIDES.

## FIREPLACES / CHIMNEYS (R1004.1 AND R1102.4.2):

- INSTALL AS PER CODE AND MFG'S INSTR.
- NEW WOOD-BURNING FIRE PLACES REQ:
  - TIGHT FITTING FLUE DAMPERS OR DOORS (UL-127).

## CHIMNEYS (R1001 AND R1005.8):

- EXTEND ≥ 3 FT ABOVE ROOF LINE
- EXTEND ≥ 2 FT ABOVE ROOF W/IN 10 FT OF CHIMNEY.
- REQ'S ≥ 0.0187 IN. (#26 GAGE) STEEL INSULATION SHIELD. IN ATTICS SHEILD MUST EXTEND ≥ 2 IN ABOVE INSULATION AND BE SECURED.

## TEMPERED GLAZING REQ'D: (R308.4.2; R308.4.5; R308.4.6; AND R308.4.7.):

- DOORS: ≤ 60 IN. ABOVE FLOOR AND ≤ 24 IN. HORIZ.. (EXCEPT INTERIOR GLAZING ≤ 180° FROM PLANE OF CLOSED DOOR, OPPOSITE HINGE SIDE.)
- WET SURFACES (TUBS, SPAS, SHOWERS, ETC.): ≤ 60 IN. ABOVE FLOOR AND ≤ 60 IN. HORIZ..
- STAIRS AND RAMPS: ≤ 36 IN. ABOVE AND ≤ 36 IN. HORIZ. OF WALKING SURFACE. (UNLESS PROTECTED BY RAILING.)
- BOTTOM STAIR LANDINGS: ≤ 60 IN. HORIZ. OF BOTTOM STAIR TREAD NOSING.

## BATHROOM VENTS (R1501.1)

- TERMINATE TO THE OUTSIDE.

## DRYER VENTS (R1501.1; AND R1501.2)

- INDEPENDENT OF OTHER EXHAUST SYSTEMS.
- ≥ 12.5 SQIN. (4 IN. DIA.), THROUGHOUT
- ≤ 35 FT. (EACH 90° BEND = 5 FT.)
- TERMINATE TO OUTSIDE.
- BACKDRAFT DAMPER AT DUCT TERMINATION. (SCREENS NOT ALLOWED)
- JOINTS SEALED W/ RIVETS OR APPROVED, REINFORCED ALUMINUM TAPE. (NO SCREWS INSIDE VENT.)

## WINDOW EFFICIENCY RATINGS (R1102.1.2)

- ≤ U-0.32. (TABLE 1102.1.4)

## MECHANICAL SYSTEMS (R1302 AND R1303)

- MUST BE LISTED AND LABELED.

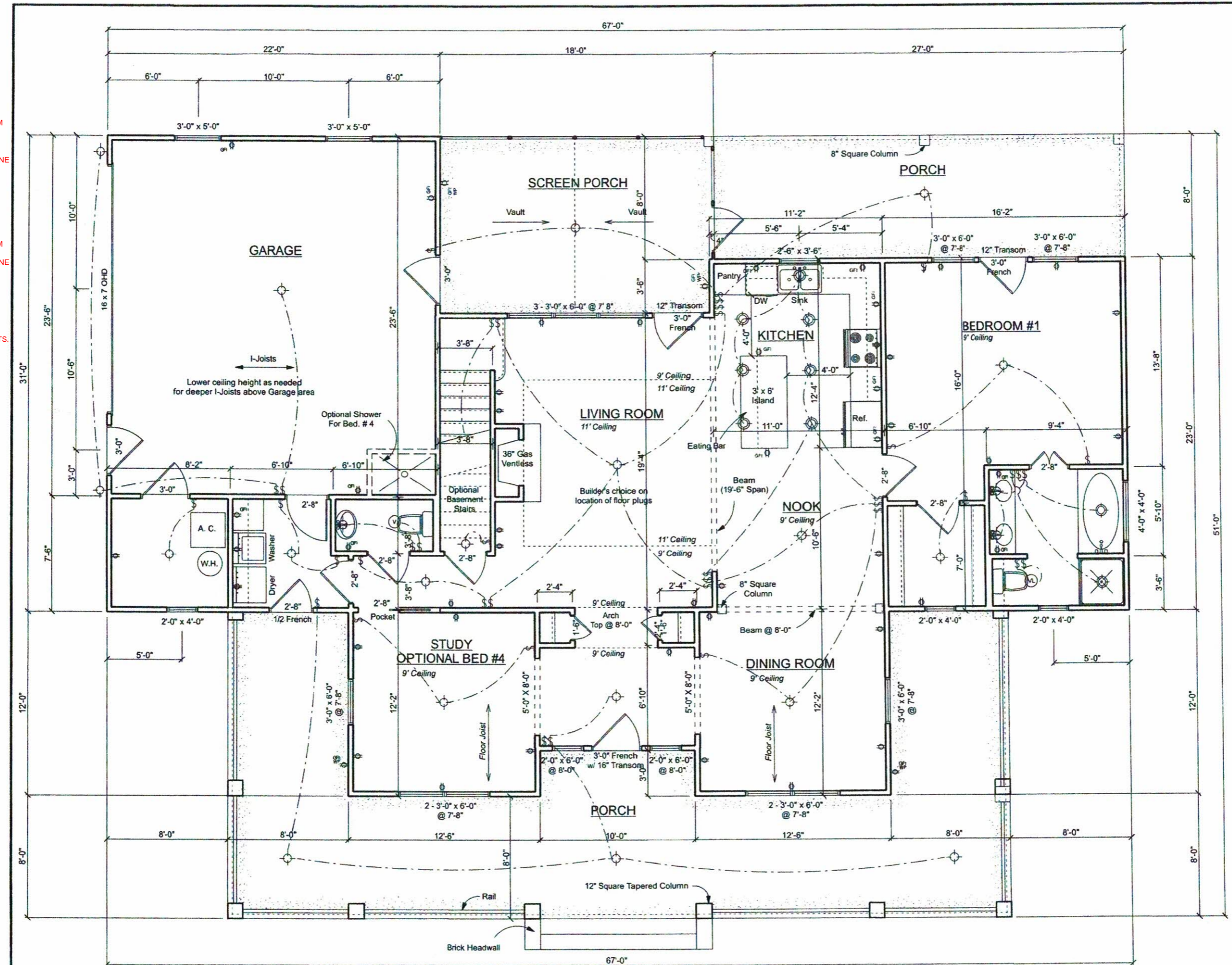


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1st Floor Plan

1467 Square Feet Heat & Cool 1st Floor  
513 Square Feet Heat & Cool 2nd Floor  
1980 Square Feet Total Heat & Cool

- SMOKE ALARMS (R 314):**
- REQ'D IN EACH SLEEPING ROOM.
  - REQ'D OUTSIDE EACH SLEEPING ROOM (W/IN 20 FT. OF DOOR.).
  - REQ'D IN GARAGES.
  - REQ'D ON EACH STORY.
  - INTERCONNECTED (ACTUATION OF ONE ACTUATES ALL. WIRELESS OK).
  - PRIMARY POWER - BUILDING WIRING;
  - BACKUP POWER - BATTERY.
  - NOT W/IN 3 FT. OF AIR VENTS.

- CARBON MONOXIDE (CO) ALARMS (R 315):**  
(DWELLINGS W/ GARAGES OR FUEL-FIRED APPLIANCES.)
- REQ'D OUTSIDE EACH SLEEPING ROOM (W/IN 20 FT. OF DOOR.).
  - INTERCONNECTED (ACTUATION OF ONE ACTUATES ALL. WIRELESS OK).
  - PRIMARY POWER - BUILDING WIRING;
  - BACKUP POWER - BATTERY.
  - NOT W/IN 3 FT. OF AIR VENTS.

- EMERGENCY ESCAPES (R310):**
- REQ'D IN ALL BEDROOMS AND BASEMENTS.
  - EXIT DIRECTLY TO OUTSIDE.
  - DOOR OR WINDOW CLEAR OPENING
    - o ≥ 5 SQFT. ON GRADE FLOOR.
    - o ≥ 5.7 SQFT. ON OTHER FLOORS.
    - o ≥ 20 IN. CLEAR WIDTH.
    - o ≥ 24 IN. CLEAR HEIGHT.
    - o ≤ 44 IN. SILL HEIGHT.



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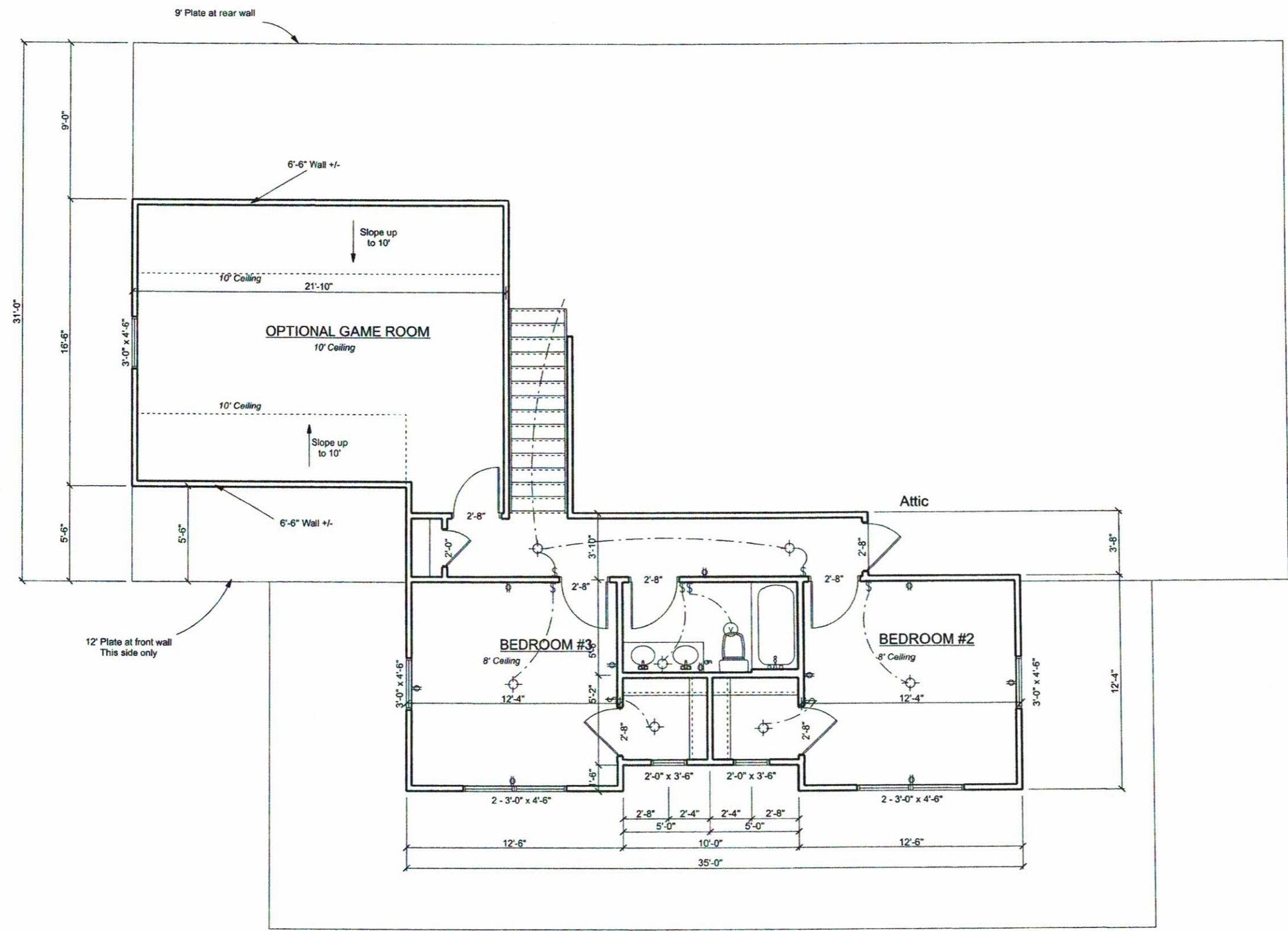
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- SMOKE ALARMS (R 314):**
- REQ'D IN EACH SLEEPING ROOM.
  - REQ'D OUTSIDE EACH SLEEPING ROOM (W/IN 20 FT. OF DOOR.).
  - REQ'D IN GARAGES.
  - REQ'D ON EACH STORY.
  - INTERCONNECTED (ACTUATION OF ONE ACTUATES ALL. WIRELESS OK).
  - PRIMARY POWER - BUILDING WIRING; BACKUP POWER - BATTERY.
  - NOT W/IN 3 FT. OF AIR VENTS.

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(DWELLINGS W/ GARAGES OR FUEL-FIRED APPLIANCES.)
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- REQ'D IN ALL BEDROOMS AND BASEMENTS.
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    - o ≥ 5 SQFT. ON GRADE FLOOR.
    - o ≥ 5.7 SQFT. ON OTHER FLOORS.
    - o ≥ 20 IN. CLEAR WIDTH.
    - o ≥ 24 IN. CLEAR HEIGHT.
    - o ≤ 44 IN. SILL HEIGHT.



**2nd Floor Plan**

- Notes:
1. A/C May be Relocated as Required by Mechanical Contractor.
  2. Builders Choice on 6" Plumb Wall Locations.
  3. Co-ordinate Floor Truss Chase with Mechanical Contractor.
  4. Provide Safety Glass where Required by Local Code.

513 Square Feet Heat & Cool

# ROOF / WALLS

## ROOF / CEILING CONSTRUCTION (R800)

- RIDGE BOARDS (R802.3)
  - ≥ 1 IN THICK.
  - ≥ DEPTH OF CUT ENDS OF RAFTERS.
- RAFTER TIES
  - IN LOWER 1/3 OF ATTIC IF CEILING JOISTS NOT PARALLEL TO RAFTERS.
- COLLAR TIES / RIDGE STRAPS (R802.3.1)
  - IN UPPER 1/3 OF ATTIC.
- UNDERLAYMENT (R9052.2.3)
  - REQUIRED UNDER SHINGLES.

## ATTICS (≥ 30 SQFT AND ≥ 30 IN TALL) (R807)

- ACCESS: ≥ 22 IN. X 30 IN.
- VERTICAL CLEARANCE: ≥ 30 IN.
- R-38 INSULATION (1 DEPTH MARKER / 300 SQFT.).
- INSULATE WATER PIPES.
- 1 SQFT. VENT AREA / 150 SQFT ATTIC AREA.
- 1 SQFT. VENT AREA / 300 SQFT. IF 50-80% VENT AREA IN UPPER ATTIC SPACE.
- INSULATE WATER PIPES.

## DRIP EDGES (905.2.8.5)

- OVERLAP ≥ 2IN..
- EXTEND ≥ ¼ IN. BELOW ROOF SHEATHING.
- EXTEND ≥ 2 IN. UP THE ROOF DECK.
- MECHANICALLY FASTENED ≤ 12 O.C.. (R 905.2.5)
- EAVES: DRIP EDGE UNDER UNDERLAYMENT.
- RAKE EDGES (GABLES): DRIP EDGE OVER UNDERLAYMENT.

**ROOF GUTTERS AND DOWNSPOUTS (2912.5 AND 2912.6):**  
PROPERLY SIZED GUTTER AND DOWNSPOUTS SHALL BE INSTALLED AS PER SECTION 2912.5 AND 2912.6 OF THE 2018 IRC.

**ROOF FLASHING FOR ASPHALT SHINGLES (905.2.8):**  
INSTALL ROOF FLASHING FOR ASPHALT SHINGLES AS PER SECTION 905.2.8 OF THE 2018 IRC.

## WINDOW EFFICIENCY RATINGS (R1102.1.2)

- ≤ U-0.32. (TABLE 1102.1.4)

## MECHANICAL SYSTEMS (R1302 AND R1303)

- MUST BE UL LISTED AND LABELED.

## INSULATION (N1101 AND N1102)

- SLAB: ≥ R-10 (2 IN.X 24 IN. RIGID @ PERIM.).
- CRAWL SPACE FLOOR SYSTEM: ≥ R-19.
- BASEMENT WALLS: ≥ R-10 CONT. OR R-13 CAVITY.
- FLOOR: ≥ R-19.
- WALL: ≥ R-13.
- ATTIC: ≥ R-38 (1 DEPTH MARKER / 300 SQFT.).
- ATTIC DUCTS: ≥ R-8.
- OTHER DUCTS: ≥ R-6.
- REFRIGERANT PIPES: ≥ R-3.
- INSULATE WATER PIPES IN CRAWL SPACE / ATTIC.

## PRE-ENGINEERED COMPONENTS (R502.1.4; R502.8; AND 502.11.1)

- INSTALLED ACCORDING TO MFG. INSTRUCTIONS.
- **NOT** DRILLED, NOTCHED, CUT, OR MODIFIED IN DESIGN OR ARRANGEMENT WITHOUT WRITTEN APPROVAL OF DESIGN ENGINEER.

## FIRE BLOCKING IN CONCEALED DRAFT OPENINGS (R302.11)

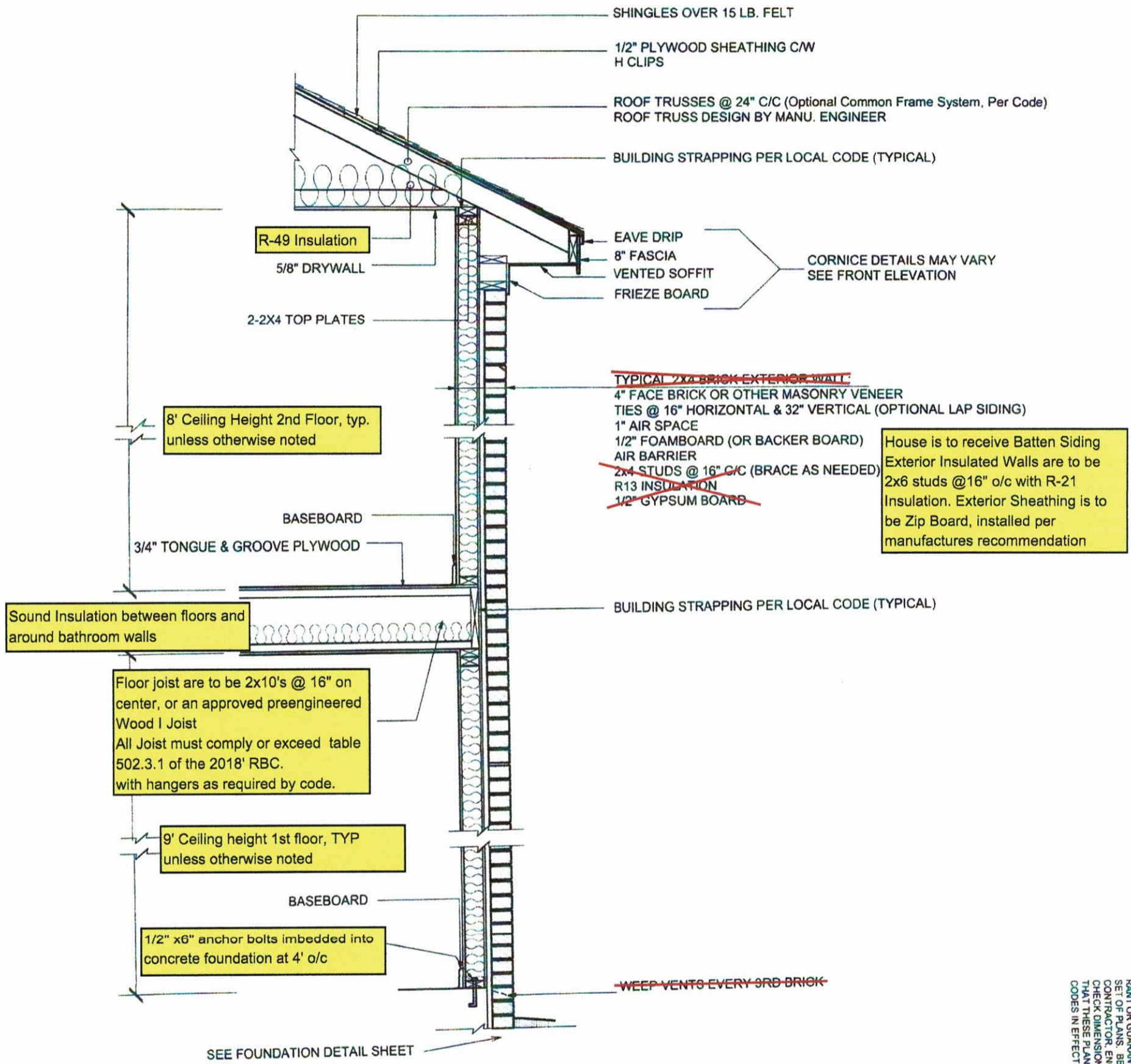
- VENTS: FLOORS AND CEILINGS.
- PIPES: FLOORS AND CEILINGS.
- DUCTS: FLOORS AND CEILINGS.
- WIRING: FLOORS AND CEILINGS.
- CHIMNEYS: FLOORS AND CEILINGS.
- CHASES: FLOORS AND CEILINGS.
- STAIRS: TOP AND BOTTOM.
- 10 FT. INTERVALS IN TALL WALLS.

## BRICK / STONE VENEER WALLS (R703.2; R703.7)

- TIES SPACED ≤ 32IN. HORIZONTALLY
- TIES SUPPORTING ≤ 2.67 SQFT. OF WALL AREA.
- WATER-RESISTIVE BARRIER (HOUSEWRAP / FELT) UNDER EXTERIOR WALL FINISHES.
- 1 IN. AIR SPACE.
- FLASHING W/ WEEPHOLES IN 1<sup>ST</sup> COURSE ABOVE GRADE AND OVER ALL OPENINGS.
- NON-COMBUSTIBLE SUPPORTS REQUIRED.
- STEEL LINTELS SIZED PER CODE.



NOTE: ALL STRUCTURAL MEMBERS MUST COMPLY W/ LOCAL BUILDING CODES.



## TYPICAL BUILDING SECTION

W. L. MARTIN HOME DESIGNS DOES NOT WARRANT OR GUARANTEE THE ACCURACY OF THIS SET OF PLANS. BEFORE CONSTRUCTION THE CONTRACTOR, ENGINEER OR ARCHITECT MUST CHECK DIMENSIONS AND LOADS, AND VERIFY THAT THESE PLANS COMPLY WITH ALL BUILDING CODES IN EFFECT AT CONSTRUCTION LOCATION.

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# 24154  
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# ALL FOUNDATIONS

## FOOTINGS (R403.1.1; R403.1.4; AND R403.1.6)

- ≥ 2500 PSI CONCRETE.
- ON UNDISTURBED OR ≥ 90% COMPACTED SOIL.
- ≥ 8 IN. THICK.
- EXTEND ≥ 12 IN. BELOW GRADE.
- ≥ 16 IN. WIDE: 8 IN. HOLLOW CMU - WOOD FRAME UP TO 2 STRY.
- ≥ 24 IN. WIDE: SOLID OR FILLED CMU - WOOD FRAME UP TO 3 STRY.
- EXTEND ≥ 2 IN., BUT ≤ FOOTING THICKNESS ON BOTH SIDES OF FND. WALL.

## FOUNDATION WALLS (R404.1; R404.6.1)

- EXTEND ≥ 4 IN. ABOVE GRADE: MASONRY VENEER.
- EXTEND ≥ 6 IN. ABOVE GRADE: ALL OTHERS.
- SIZED AND REINFORCED (WALL HEIGHT VS BACKFILL).
- BRACED TO FLOOR DIAPHRAGM ON TOP ON ALL SIDES.
- ENGINEERING REQUIRED FOR HYDROSTATIC PRESSURE (GROUNDWATER), UNSTABLE SOILS, OR NO PERMANENT LATERAL SUPPORT (TOP, BOTTOM, ALL SIDES.)

## ANCHOR BOLTS (R403.1.6)

- ≥ ½ IN. DIAMETER BOLTS.
- EMBEDDED ≥ 7 IN. INTO CONCRETE OR GROUT FILLED CMU.
- ≤ 6 FT. O.C. OR CODE APPROVED ALTERNATIVE.
- NUT AND WASHER ON EACH BOLT
- ≥ 2 BOLTS / SILL PLATE.
- 1 BOLT ≥ 12 IN. AND ≥ 3.5 IN. AT EACH END.

## INSULATION (N1101 AND N1102)

- SLAB: ≥ R-10 (2 IN. X 24 IN. RIGID @ PERIM.).
- CRAWL SPACE FLOOR SYSTEM: ≥ R-19.
- BASEMENT WALLS: ≥ R-10 CONT. OR R-13 CAVITY.
- FLOOR: ≥ R-19.
- WALL: ≥ R-13.
- ATTIC: ≥ R-38 (1 DEPTH MARKER / 300 SQFT.).
- ATTIC DUCTS: ≥ R-8.
- OTHER DUCTS: ≥ R-6.
- REFRIGERANT PIPES: ≥ R-3.
- INSULATE WATER PIPES IN CRAWL SPACE / ATTIC.

# BASEMENTS

## FIRE PROTECTION OF FLOORS (R302.13)

½ IN. GYPSUM WALLBOARD OR ¾ IN. WOOD STRUCTURAL PANELS ARE REQ'D ON UNDERSIDE OF FLOOR ASSEMBLIES WHEN TRUSSES, I-JOISTS, OR JOISTS ≤ 2 IN. x 8 IN. ARE USED; **UNLESS** THE FLOOR ASSEMBLY IS:

- OVER A CRAWL SPACE **NOT** INTENDED FOR STORAGE OR FUEL-FIRED OR ELECTRIC-POWERED HEATING APPLIANCES.
- PROTECTED BY AN AUTOMATIC SPRINKLER SYSTEM (P2904); OR
- SEPARATED BY FIRE BLOCKING FROM OTHER FLOOR ASSEMBLIES **AND** COVERING LESS THAN 80 SQFT..

## RADON VENT PIPE (APPENDIX F)

- REQ'D EXCEPT IN CRAWL SPACES W/ VENTILATION.
- 3 IN. PIPE FROM "TEE" UNDER SLAB OR MEMBRANE TO ATTIC
- VENT ABOVE ROOF WHEN HIGH RADON DETECTED.
- SEAL POTENTIAL RADON ENTRY ROUTES.
  - FLOOR OPENINGS.
  - CONCRETE JOINTS.
  - SUMP PITS.
  - TOPS OF HOLLOW CMU FOUNDATION WALLS.

# SLABS

## RADON VENT PIPE (APPENDIX F)

- REQ'D EXCEPT IN CRAWL SPACES W/ VENTILATION.
- 3 IN. PIPE FROM "TEE" UNDER SLAB OR MEMBRANE TO ATTIC
- VENT ABOVE ROOF WHEN HIGH RADON DETECTED.
- SEAL POTENTIAL RADON ENTRY ROUTES.
  - FLOOR OPENINGS.
  - CONCRETE JOINTS.
  - SUMP PITS.
  - TOPS OF HOLLOW CMU FOUNDATION WALLS.

# CRAWL SPACES

## FIRE PROTECTION OF FLOORS (R302.13)

½ IN. GYPSUM WALLBOARD OR ¾ IN. WOOD STRUCTURAL PANELS ARE REQ'D ON UNDERSIDE OF FLOOR ASSEMBLIES WHEN TRUSSES, I-JOISTS, OR JOISTS ≤ 2 IN. x 8 IN. ARE USED; **UNLESS** THE FLOOR ASSEMBLY IS:

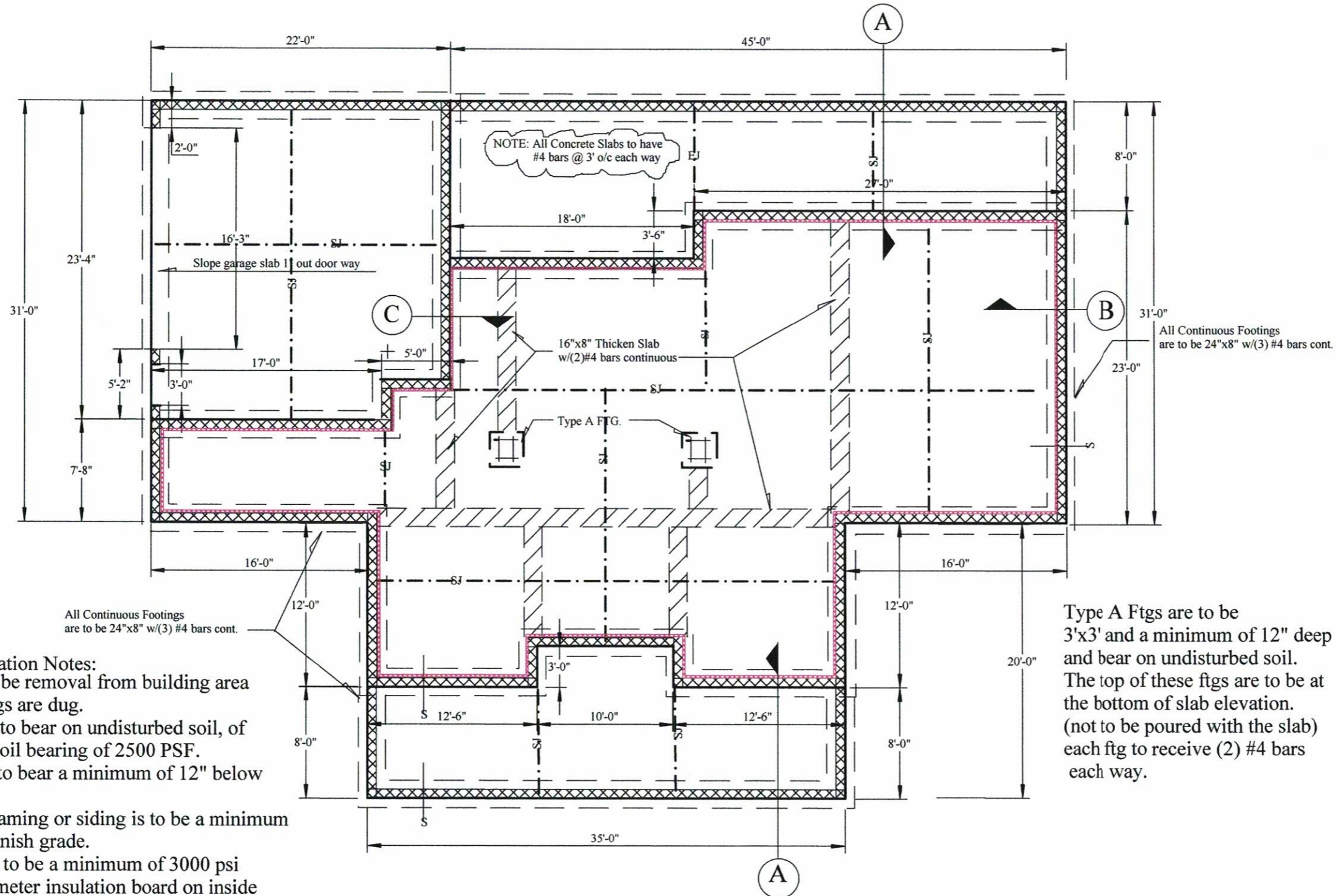
- OVER A CRAWL SPACE **NOT** INTENDED FOR STORAGE OR FUEL-FIRED OR ELECTRIC-POWERED HEATING APPLIANCES.
- PROTECTED BY AN AUTOMATIC SPRINKLER SYSTEM (P2904); OR
- SEPARATED BY FIRE BLOCKING FROM OTHER FLOOR ASSEMBLIES **AND** COVERING LESS THAN 80 SQFT..

## PIER HEIGHT (R404.1.9)

- ≤ 4 X LEAST DIMENSION (HOLLOW CMU).
- ≤ 10 X LEAST DIMENSION (SOLID OR FILLED CMU.)

## CRAWL SPACE (R408)

- ≥ 18 IN. X 24 IN. ACCESS.
- ≥ 18 IN. HEIGHT.
- **VENTED CRAWL SPACE (R408.1):**
  - 1 SQFT. VENT AREA PER 150 SQFT. OF CRAWL SPACE AREA (W/O VAPOR BARRIER).
  - 1 SQFT. VENT AREA PER 1500 SQFT. OF CRAWL SPACE AREA (W/ VAPOR BARRIER).
  - 1 SQFT. VENT AREA W/IN 3 FT. OF EACH CORNER.
- **UNVENTED CRAWL SPACE (R408.3):**
  - AS PER R408.3.



- General Foundation Notes:
1. Topsoil is to be removal from building area before footings are dug.
  2. Footings are to bear on undisturbed soil, of a minimum soil bearing of 2500 PSF.
  3. All footings to bear a minimum of 12" below finish grade.
  4. Any wood framing or siding is to be a minimum of 6" above finish grade.
  5. All Concrete to be a minimum of 3000 psi
  6. Provide perimeter insulation board on inside of all foundation walls and under slab as directed by local code.
  7. All concrete procedures are to be per ACI standards.
  8. Provide a 4" reinforced concrete slab over .006 mil poly vapor barrier , over compacted crushed stone.
  9. Provide a Radon Vent , from under slab and install through Roof. ( see Detail )

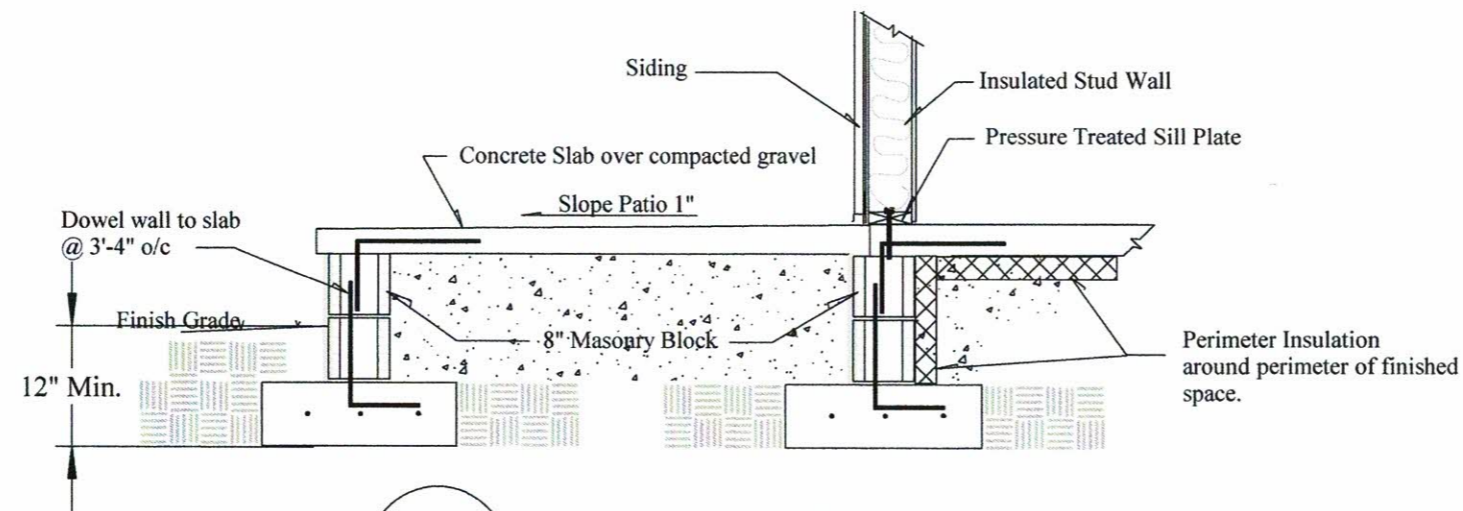
# FOUNDATION PLAN

**Harbin CDS**  
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 7615 Rio Grande Dr, Powell, TN 37849  
 865-755-2546 email: harbin.cds@comcast.net  
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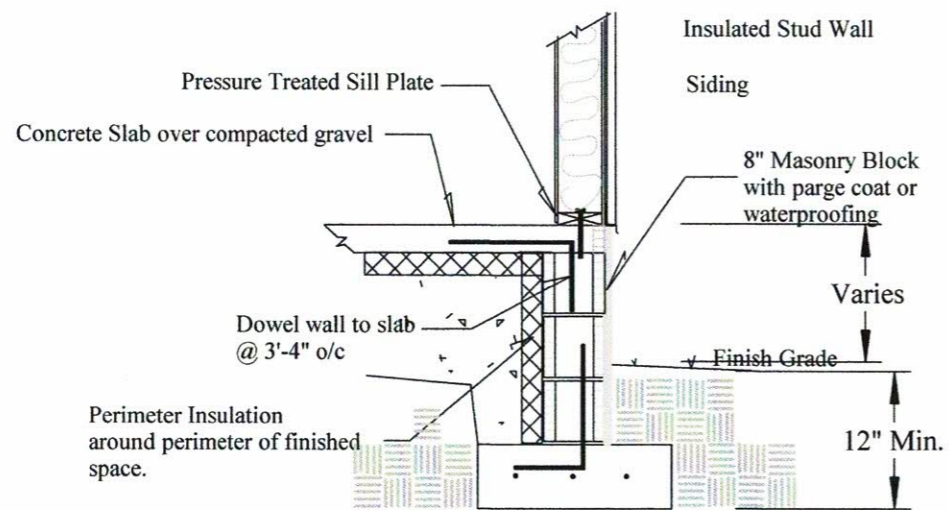
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**FI**

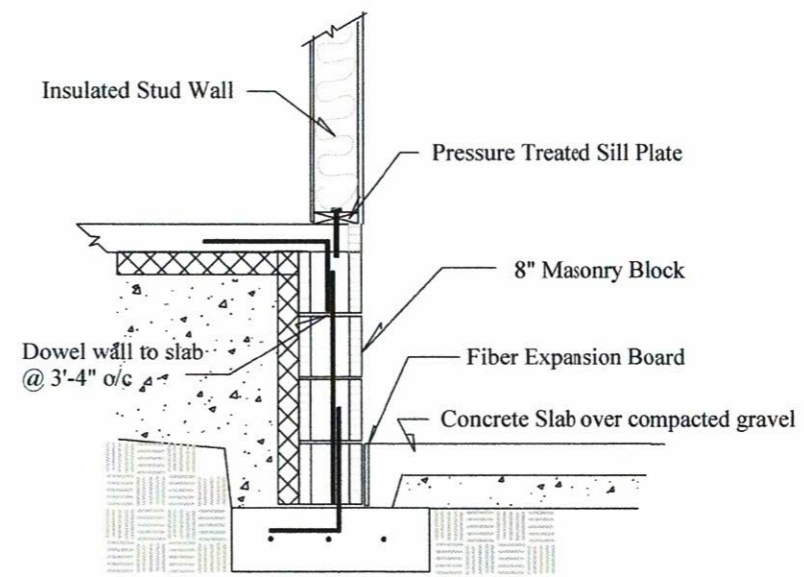




**A** Porch Foundation Section



**B** Typ. Exterior Wall Detail



**C** Garage Wall Detail

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