GENERAL NOTES:

1. THE STRUCTURE WAS DESIGNED IN ACCORDANCE WITH THE 2003 EDITION OF THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE (VUSBC), WHICH REFERENCES THE 2003 EDITION OF THE INTERNATIONAL RESIDENTIAL CODE (IRC). THE FOLLOWING LOADS, IN ADDITION TO THE DEAD LOADS OF THE PERMANENT MATERIALS AND CONSTRUCTION, WERE USED.

ROOF LIVE LOAD . . . . . 20 PSF

FLOOR LIVE LOADS:
- FIRST FLOOR LIVE LOAD . . . . . 100 PSF
- ATTIC SPACE . . . . . 40 PSF

WIND LOAD:
- BUILDING CATEGORY I
- BASIC WIND SPEED (3 SEC. GUSTS) . . . . . 110 MPH
- WIND IMPORTANCE FACTOR 1.0
- WIND EXPOSURE . . . . . B
- ENCLOSURE CLASSIFICATION . . . . . ENCLOSED
- INTERNAL PRESSURE COEFFICIENT . . . . . ±0.18

SEISMIC LOADS:
- SEISMIC USE GROUP 1
- SPECTRAL RESPONSE COEFFICIENT.
  - S_{DS} 149
  - S_{D1} 041
- SITE CLASS . . . . . D
- BASIC SEISMIC-FORCE RESISTING SYSTEMS . . . . . ORDINARY WOOD FRAMED SHEARWALL WITH WOOD SHEATHING
- ANALYSIS PROCEDURE . . . . . EQUIVALENT LATERAL FORCE PROCEDURE

2. THE CONTRACTOR SHALL COORDINATE AND VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER.

3. THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL DRAWINGS THAT COMPRISE THE COMPLETE DOCUMENT SET FOR THIS PROJECT. THE CONTRACTOR SHALL VERIFY THE REQUIREMENTS OF OTHER TRADES AS TO SLEEVES, CHASES, ANCHORS, INSERTS, HANGERS, HOLES, ETC. TO BE PLACED IN THE STRUCTURAL WORK.

4. THE CONTRACTOR SHALL EXERCISE ALL PRECAUTIONS NECESSARY TO MAINTAIN ALL AREAS OF WORK IN A SAFE CONDITION THROUGHOUT CONSTRUCTION.

5. UNDER NO CIRCUMSTANCES SHALL THE CONTRACT DRAWINGS BE REPRODUCED AND USED AS SHOP DRAWINGS.

6. THE REFERENCE DATUM (ELEVATION = 0'-0") FOR ELEVATIONS SHOWN ON THESE DRAWINGS SHALL BE FINISH GROUND FLOOR ELEVATION. SEE CIVIL DRAWINGS FOR ACTUAL ELEVATION.

FOUNDATION NOTES:

1. THE FOUNDATIONS WERE DESIGNED FOR A MAXIMUM ALLOWABLE NET SOIL BEARING PRESSURE OF 1,500 PSF IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. THE SOILS BENEATH THE PROPOSED FOOTINGS SHALL BE CAPABLE OF SAFELY SUPPORTING THIS LOAD WITHOUT EXCESSIVE SETTLEMENT. ANY UNUSUAL SOIL CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER. GEOTECHNICAL REPORT BY FROEHLING & ROBERTSON, INC. DATED JUNE 11, 2007 (F & R REPORT SERIAL NO. J039G-1). THE CONTRACTOR SHALL REVIEW THE GEOTECHNICAL REPORT PRIOR TO CONSTRUCTION.

2. EXCAVATION DEPTHS ARE A MINIMUM AND SHALL BE LOWERED IF APPROVED BY THE ARCHITECT/ENGINEER TO OBTAIN THE DESIGN BEARING PRESSURE.

3. SOFT, AND OTHERWISE UNSATISFACTORY, SOILS BENEATH PROPOSED FOUNDATION ELEMENTS SHALL BE REMOVED AT THE DIRECTION OF THE ARCHITECT/ENGINEER AND BACKFILLED WITH PROPERLY COMPACTED MATERIALS.

4. EARTH FORMED FOOTINGS SHALL CONFORM TO THE SHAPE, LINES AND DIMENSIONS AS SHOWN ON THE FOUNDATION PLAN. BEFORE PLACING CONCRETE, ALL EMBEDDED ITEMS SHALL BE PROPERLY PLACED, ACCURATELY POSITIONED, AND MAINTAINED SECURELY IN PLACE.

5. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT STORMWATER FROM ENTERING FOUNDATION EXCAVATIONS. ALL WATER SHALL BE REMOVED BEFORE DEPOSITING CONCRETE. CONCRETE SHALL NOT BE PLACED ON SOFT OR SATURATED SOIL.

6. WALL FOOTINGS SHALL BE CENTERED ON THE WALLS AND COLUMN FOOTINGS SHALL BE CENTERED ON THE COLUMNS, UNLESS OTHERWISE NOTED.

6. STRIP THE BUILDING FOOTPRINT AND PLACE COMPACTED FILL IN PRESENCE OF THE GEOTECHNICAL ENGINEER OF RECORD. REFER TO GEOTECHNICAL REPORT FOR COMPLETE INFORMATION.

CONCRETE NOTES:

1. ALL CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 301 "STRUCTURAL CONCRETE FOR BUILDINGS" AND ACI 318/318R "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE."

2. CONCRETE PROTECTION FOR REINFORCING STEEL AND OTHER GENERAL REQUIREMENTS OF PLACING AND FABRICATION OF REINFORCING SHALL BE IN ACCORDANCE WITH "THE AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS" (ACI 318).

3. ALL CAST-IN-PLACE CONCRETE SHALL BE NORMAL WEIGHT. CONCRETE SHALL ATTAIN THE FOLLOWING MINIMUM COMPRESSIVE STRENGTH (f'c):

ALL OTHER . . . . . 3,500 PSI

4. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60 DEFORMED BARS UNLESS OTHERWISE NOTED. ALL REINFORCING STEEL MARKED CONTINUOUS (CONT.) SHALL BE LAPPED 42 BAR DIAMETERS AT SPLICES (PER CHART BELOW), UNLESS OTHERWISE NOTED.

REQUIRED STEEL REINFORCING BAR LAPS IN CAST-IN-PLACE CONCRETE

BAR SIZE	BAR DIAMETER	X42 BAR DIAMETER	REQUIRED SPLICE
#4	0.500"	X42	21.00"
#5	0.625"	X42	26.25"

5. ALL WELDED WIRE FABRIC SHALL BE IN ACCORDANCE WITH ASTM A185 (FLAT SHEETS ONLY). PLACE WELDED WIRE FABRIC AT MID-DEPTH OF SLAB UNLESS OTHERWISE NOTED.

6. THE SLUMP OF CAST-IN-PLACE CONCRETE SHALL NOT EXCEED 4 INCHES WITHOUT A HIGH RANGE WATER REDUCING ADMIXTURE. THE SLUMP OF CAST-IN-PLACE CONCRETE WITH THE USE OF A HIGH RANGE WATER REDUCING ADMIXTURE SHALL NOT EXCEED 8 INCHES. ALL CONCRETE EXPOSED TO WEATHER SHALL BE AIR-ENTRAINED 5% TO 7%.

7. ALL REINFORCING STEEL AND EMBEDDED ITEMS SUCH AS ANCHOR BOLTS AND WELD PLATES SHALL BE ACCURATELY PLACED IN THE POSITIONS SHOWN AND ADEQUATELY TIED AND SUPPORTED BEFORE CONCRETE IS PLACED TO PREVENT DISPLACEMENT BEYOND PERMITTED TOLERANCES.

8. MINIMUM CONCRETE COVER FOR PROTECTION OF REINFORCEMENT SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE NOTED:

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH . . . . . 3 INCHES

CONCRETE CAST AGAINST FORMWORK AND PERMANENTLY EXPOSED TO EARTH OR WEATHER . . . . . 1 1/2 INCHES

CONCRETE CAST AGAINST FORMWORK AND NOT EXPOSED TO WEATHER OR IN CONTACT WITH EARTH. . . . . 3/4 INCH

9. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS, CATALOG DATA, AND TEST REPORTS FOR THE FOLLOWING ITEMS:

   A. CONCRETE MIX DESIGN MUST INCLUDE ALL PROPERTIES OF THE MIX MATERIALS USED IN THE CONCRETE.

   B. CONTRACTOR SHALL ENGAGE THE SERVICES OF A QUALIFIED TESTING LABORATORY TO TEST THE CONCRETE FOR SLUMP, COMPRESSIVE STRENGTH, AIR ENTRAINMENT, ETC. AND PROVIDE TEST RESULTS TO THE ARCHITECT/ENGINEER.

   C. FILL MATERIALS

   D. VAPOR BARRIER

10. THE CONTRACTOR SHALL SUBMIT RECORD DRAWINGS.

MASONRY NOTES:

1. ALL MASONRY CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 530, "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" AND ACI 530.1, "SPECIFICATIONS FOR MASONRY STRUCTURES."

2. ALL CONCRETE MASONRY UNITS SHALL BE IN ACCORDANCE WITH ASTM C-90 "SPECIFICATIONS FOR HOLLOW LOAD-BEARING UNITS" AND SHALL BE ESTABLISHED BY ASTM C140 TO PRODUCE AN ASSEMBLAGE STRENGTH f'm OF 1500 PSF.

3. ALL MORTAR FOR USE IN ENGINEERED MASONRY BEARING WALLS SHALL BE IN ACCORDANCE WITH ASTM C-270 TYPE "S" MORTAR. ALL MASONRY GROUT SHALL BE IN ACCORDANCE WITH ASTM C476 AND SHALL OBTAIN A 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI.

4. DIMENSIONS SHOWN FOR CMU WALLS ARE NOMINAL BLOCK. HOLD DIMENSIONS TO OUTSIDE FACE OF CMU, UNLESS OTHERWISE NOTED.

DIAPHRAGM SHEATHING NOTES:

1. UNLESS OTHERWISE NOTED, ALL EXTERIOR WALL SHEATHING SHALL BE 1/2" OSB OR PLYWOOD SHEATHING ATTACHED TO STUDS WITH 8d NAILS AT 4" ON CENTER AT TOP AND BOTTOM PLATES AND AROUND EACH WINDOW AND DOOR OPENING. PROVIDE 8d NAILS AT 6" ON CENTER AT PANEL EDGES AND AT 12" ON CENTER FIELD NAILING, UNLESS OTHERWISE NOTED. EXTERIOR WALL DIAPHRAGMS ARE UNBLOCKED.

2. UNLESS OTHERWISE NOTED, ROOF SHEATHING SHALL BE 3/4" APA RATED TONGUE AND GROOVE PLYWOOD SHEATHING ATTACHED TO FRAMING WITH 8D NAILS AT 6" ON CENTER AT PANEL EDGES AND 12" ON CENTER FIELD NAILING. ROOF DIAPHRAGM IS UNBLOCKED.

3. UNLESS OTHERWISE NOTED, ATTIC FLOOR SHEATHING SHALL BE 3/4" APA RATED PLYWOOD TONGUE AND GROOVE SHEATHING ATTACHED TO FRAMING WITH WOOD ADHESIVE AND 8d NAILS AT 6" ON CENTER AT PANEL EDGES AND 12" ON CENTER FIELD NAILING.

WOOD FRAMING NOTES:

1. ALL STRUCTURAL LUMBER SHALL BE IN ACCORDANCE WITH S.P.I.B. SPECIFICATIONS AND SHALL BE NO. 2 SOUTHERN PINE AND USED AT 15% MAXIMUM MOISTURE CONTENT OR EQUAL.

2. NAILING OF ALL STRUCTURAL LUMBER SHALL CONFORM TO THE "FASTENING SCHEDULE", TABLE 2304.9.1 OF THE 2003 INTERNATIONAL RESIDENTIAL CODE (IRC).

3. THE DESIGN, FABRICATION AND ERECTION OF ALL TIMBER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2003 MANUAL FOR WOOD FRAMING CONSTRUCTION DATA #1 BY NATIONAL FOREST PRODUCTS ASSOCIATION (NFPA) AND THE 2001 EDITION OF THE NATIONAL DESIGN SPECIFICATION (NDS).

4. ALL WOOD FRAMING MEMBERS PERMANENTLY EXPOSED TO THE WEATHER AND SILL PLATES AROUND THE BUILDING PERIMETER SHALL BE PRESERVATIVE TREATED IN ACCORDANCE WITH THE SPECIFICATIONS. BOLT HEADS AND NUTS BEARING ON WOOD SHALL BE PROVIDED WITH STANDARD CUT WASHERS. ALL BOLTS OR NAILS EXPOSED TO THE WEATHER OR EMBEDDED IN CONCRETE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123.

5. ADDITIONAL ALLOWANCES MUST BE MADE FOR OVERLAY FRAMING IN APPROPRIATE ROOF AREAS. THIS OVERLAY LOADING SHALL BE 10 PSF DISTRIBUTED EVENLY ACROSS THE AREA. SEE ROOF FRAMING PLAN FOR LOCATIONS.

PREFABRICATED WOOD ROOF TRUSS NOTES:

1. IT IS THE RESPONSIBILITY OF THE TRUSS MANUFACTURER TO DESIGN ALL TRUSSES. THE TRUSS MANUFACTURER SHALL HAVE IN HIS POSSESSION THE DESIGN LOADS, THE MECHANICAL DRAWINGS, AND TRUSS PLAN BEFORE THE TRUSSES ARE DESIGNED.

2. THE DESIGN, FABRICATION AND ERECTION OF ALL TIMBER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION'S "TIMBER CONSTRUCTION STANDARDS", A.I.T.C. 10065.

3. TIMBER TRUSSES SHALL BE PREFABRICATED BY A WOOD TRUSS MANUFACTURER AND SHALL BE FABRICATED USING LIGHT GAGE METAL PLATE CONNECTIONS AND CONSTRUCTED OF THE FOLLOWING MATERIALS:

   A. TOP AND BOTTOM CHORDS SHALL BE GRADE #2 OR BETTER KILN DRIED TO 15% MAXIMUM MOISTURE CONTENT (MINIMUM GRADE).

   B. WEB MEMBERS SHALL BE GRADE #3 OR BETTER, 15% MAX. MOISTURE CONTENT.

   C. CONNECTOR PLATES SHALL BE GALVANIZED SHEET STEEL CONFORMING TO GRADE ASTM A446 WITH EXTENDED TEETH OR PLUGS WHICH ARE EMBEDDED INTO WOOD FOR THE PURPOSE OF TRANSMITTING LOADS.

   D. ALL BOTTOM CHORD MEMBERS SHALL BE 2x6 NO. 2 SOUTHERN PINE MATERIAL.

4. PROVIDE SHOP DRAWINGS FOR ALL WOOD ROOF TRUSSES INCLUDING SIZES, LOCATIONS AND ALLOWABLE LOADS AS WELL AS CONNECTIONS BETWEEN TRUSSES AND HOLD DOWNS. TRUSS CONNECTOR PLATES SHALL BE DESIGNED FOR AXIAL LOADS, ECCENTRICITY, AND NET SECTION OF METAL. CONTRACTOR SHALL APPROVE ALL TRUSS CONNECTIONS INCLUDING HOLD DOWN REQUIREMENTS. SHOP DRAWINGS SHALL BE SIGNED AND STAMPED BY A STRUCTURAL ENGINEER LICENSED TO PRACTICE IN THE COMMONWEALTH OF VIRGINIA. PROPOSED TRUSS FRAMING LAYOUT SHOWN CAN BE ALTERED BY THE TRUSS SUPPLIER, SUBMIT SHOP DRAWINGS TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO STARTING TRUSS FABRICATION.

5. PROVIDE BRACING AS SHOWN ON THE DRAWINGS AND AS REQUIRED BY TRUSS MANUFACTURER. TEMPORARY BRACING SHALL BE INSTALLED IN ACCORDANCE WITH TPI PUBLICATION HIB-91. ALL TEMPORARY BRACING SHALL REMAIN IN PLACE AND BECOME PERMANENT.

6. DESIGN LOADS FOR WOOD ROOF TRUSSES ARE AS FOLLOWS:

TOP CHORD DEAD LOAD . . . . . 10 PSF
TOP CHORD LIVE LOAD . . . . . 20 PSF
BOTTOM CHORD DEAD LOAD . . . . . 10 PSF

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FOR HNN CSB

SEPT. 3, 2008

COMMONWEALTH OF VIRGINIA
RONNIE W. ROSS
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9.3.03
PROFESSIONAL ENGINEER

GENERAL NOTES

JOB NUMBER 0704

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