

**GENERAL NOTES**

- ALL ITEMS SHOWN ON THIS DRAWING ARE NEW CONSTRUCTION, UNLESS NOTED OTHERWISE AS EXISTING.
- THE CONTRACTOR SHALL COORDINATE AND VERIFY ALL DIMENSION PRIOR TO STARTING CONSTRUCTION AND ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER.
- CONTRACTOR SHALL COORDINATE ALL ASPECTS OF DEMOLITION AND RENOVATION WORK TO INSURE NEAT AND PROPER REMOVAL OF EXISTING FINISHES, STRUCTURE, ETC. AS NOTED. INSTALL NEW CONSTRUCTION AS INDICATED ON PLANS, ALIGNING WITH EXISTING EDGES OR SURFACES AS REQUIRED. PATCH ALL SURFACES DAMAGED OR OTHERWISE IN NEED OF REPAIR.
- CONTRACTOR SHALL CONDUCT DEMOLITION AND REMOVAL IN A CAREFUL MANNER AND SHALL PROVIDE BRACING AND SUPPORT AS REQUIRED TO PREVENT DAMAGE, SETTLEMENT, OR COLLAPSE OF EXISTING STRUCTURES TO REMAIN.
- 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 PLACE IN THE STRUCTURAL WORK.
- THE CONTRACTOR SHALL EXERCISE ALL PRECAUTIONS NECESSARY TO MAINTAIN ALL AREAS OF WORK IN A SAFE CONDITION THROUGHOUT CONSTRUCTION.
- UNDER NO CIRCUMSTANCES SHALL THE CONTRACT DRAWINGS BE REPRODUCED AND USED AS SHOP DRAWINGS.

**BASIS FOR DESIGN - STRUCTURAL**

- THE STRUCTURE WAS DESIGNED IN ACCORDANCE WITH THE 2012 INTERNATIONAL BUILDING CODE (IBC 2012) WITH AMENDMENTS. THE FOLLOWING LOADS, IN ADDITION TO THE DEAD LOADS OF THE PERMANENT MATERIALS AND CONSTRUCTION WERE USED.
  - A. LIVE LOAD:
    - ROOF (RISE < 4 IN 12) 20 PSF
  - B. SNOW LOAD:
    - a. GROUND SNOW LOAD, PG 25 PSF
    - b. SNOW EXPOSURE FACTOR 0.9
    - c. THERMAL FACTOR, CT 1.0
    - d. SNOW IMPORTANCE FACTOR, I 1.0
    - e. FLAT ROOF SNOW LOAD 25 PSF
  - C. Wind Load
    - a. RISK CATEGORY IV
    - b. BASIC WIND SPEED, V 120 MPH
    - c. WIND IMPORTANCE FACTOR, Iw 1.0
    - d. WIND DIRECTIONALITY FACTOR, KD 0.85
    - e. EXPOSURE CATEGORY: B
    - f. TOPOGRAPHIC FACTOR, Kzt 1.0
    - g. GUST EFFECTIVE FACTOR, G 0.85
    - h. DESIGN METHOD- MWFRS: ASCE 7-10, CH. 27, PART 1- ENVELOPE PROCEDURE COMPONENTS AND CLADDING- SEE BELOW
  - D. SEISMIC LOADS: EQUIVALENT LATERAL FORCE METHOD
    - a. RISK CATEGORY IV
    - b. SEISMIC IMPORTANCE FACTOR, Ie 1.5
    - c. MAPPED SPECTRAL RESPONSE ACCELERATIONS
      - i. SHORT PERIOD- 0.2 SECOND, Ss 0.160
      - ii. LONG PERIOD- 1SECOND, SD1 0.065
    - d. SEISMIC DESIGN CATEGORY C
    - e. SITE CLASS: (CODE DEFAULT) D
    - f. SPECTRAL RESPONSE COEFFICIENTS
      - i. SHORT PERIOD- 0.2 SECOND, SDs 0.171
      - ii. LONG PERIOD- 1 SECOND, SD1 0.104
    - g. SEISMIC DESIGN CATEGORY C
    - h. RESPONSE MODIFICATIONS FACTOR, R: 3
    - i. SEISMIC RESPONSE COEFFICIENT, CS 0.85
    - j. DESIGN BASE SHEAR, V (WIND CONTROLS) .085 x W

**CONCRETE NOTES:**

- ALL CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 301 "STRUCTURAL CONCRETE FOR BUILDINGS" AND ACI 318/318R "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".
- CONCRETE PROTECTION FOR REINFORCING STEEL AND OTHER GENERAL REQUIREMENTS OF PLACING AND FABRICATION OF REINFORCING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "THE AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS" (ACI 318-02)
- ALL CAST-IN-PLACE CONCRETE SHALL BE NORMAL WEIGHT CONCRETE AND ATTAIN AN ULTIMATE COMPRESSIVE STRENGTH OF 3500 PSI AT AN AGE OF 28 DAYS.
- 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, UNLESS OTHERWISE NOTED.
- ALL WELDED WIRE FABRIC SHALL BE IN ACCORDANCE WITH ASTM A185 (FLAT SHEETS ONLY).
- THE SLUMP OF CAST-IN-PLACE SHALL NOT EXCEED 4 INCHES WITHOUT A HIGH RANGE WATER REDUCING ADMIXTURE. ALL CONCRETE EXPOSED TO WEATHER SHALL BE AIR-ENTRAINED 5% TO 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.
- MINIMUM CONCRETE COVER FOR PROTECTION OF REINFORCEMENT SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:
  - CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH.....3 INCHES
  - CONCRETE EXPOSED TO EARTH OR WEATHER.....1 1/2 INCHES
  - CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND.....3/4 INCHES
- THE CONTRACTOR SHALL PROVIDE SHOW DRAWINGS OF CONCRETE MIX DESIGN AND TEST REPORTS. THE MIX DESIGN SHALL INCLUDE ALL PROPERTIES OF THE MIX, MATERIALS USED IN THE CONCRETE AND ACTUAL CONCRETE STRENGTH. SHOP DRAWINGS FOR CONCRETE REINFORCEMENT SHALL ALSO BE PROVIDED INCLUDING REINFORCING AND WELDED WIRE FABRIC.
- ALL LIGHTWEIGHT CAST-IN-PLACE CONCRETE SHALL ATTAIN AN ULTIMATE COMPRESSIVE STRENGTH OF 3000 PSI AT AN AGE OF 28 DAYS. THE DRY UNIT WEIGHT OF ALL LIGHTWEIGHT CONCRETE SHALL NOT EXCEED 115 PCF.

**MASONRY NOTES:**

- ALL MASONRY CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 530-96, "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" AND ACI 530.1-95, "SPECIFICATIONS FOR MASONRY STRUCTURES."
- ALL CONCRETE MASONRY UNITS SHALL BE IN ACCORDANCE WITH ASTM C-90 "SPECIFICATIONS FOR HOLLOW LOAD-BEARING UNITS" AND SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF  $f_m = 1500$  PSI.
- ALL MORTAR FOR USE IN ENGINEERED MASONRY BEARING WALLS SHALL BE IN ACCORDANCE WITH ASTM C-270 TYPES "S" MORTAR. ALL MASONRY GROUT SHALL BE IN ACCORDANCE WITH ASTM C476 AND SHALL OBTAIN A 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI.
- ALL REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM A615, GRADE 60 DEFORMED BARS. CENTER REINFORCING BARS IN BLOCK CELLS UNLESS OTHERWISE NOTED.
- LAP ALL REINFORCING 48 BAR DIAMETERS MINIMUM AT SPLICES. FULLY GROUT ALL REINFORCED CELLS.
- PROVIDE GALVANIZED HORIZONTAL LADDER (EXTERIOR CONDITION)/TRUSS (INTERIOR CONDITION) TYPE JOINT REINFORCING WITH NO.9 GAGE CROSS RODS AT 16" O/C ON ALL WALLS.
- DIMENSION SHOWN FOR CMU WALLS ARE NOMINAL BLC HOLD DIMENSIONS TO OUTSIDE FACE OF CMU.
- REFER TO ARCHITECTURAL DRAWINGS FOR ANY ADDITIONAL GROUTING REQUIREMENTS.
- VERTICAL REINFORCEMENT SHALL BE HELD IN POSITION AT TOP AND BOTTOM AND AT INTERVALS NOT EXCEEDING 192 BAR DIAMETERS OF THE REINFORCEMENT.
- PROVIDE ONE VERTICAL BAR AT THE SIZE AS WALL REINFORCING AT CORNER AND ENDS OF WALLS. SEE TYPICAL WALL REINFORCING DETAILS ON SHEET S-5.

**STRUCTURAL STEEL NOTES:**

- ALL STRUCTURAL STEEL WIDE FLANGE SHAPES SHALL BE IN ACCORDANCE WITH ASTM A992 GRADE 50 KSI SPECIFICATIONS UNLESS OTHERWISE NOTED. ALL STRUCTURAL STEEL ANGLES, PLATES AND MISCELLANEOUS MEMBERS SHALL BE IN ACCORDANCE WITH ASTM A36 GRADE 36 KSI SPECIFICATIONS. ALL STRUCTURAL PIPING SHALL BE IN ACCORDANCE WITH ASTM A500, GRADE B.
- ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE NINTH EDITION OF THE MANUAL OF STEEL CONSTRUCTION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
- ALL FIELD BOLTED SHEAR CONNECTIONS SHALL BE BEARING TYPE CONNECTIONS (THREADS INCLUDED IN THE SHEAR PLANE) WITH A MINIMUM OF 2-3/4 INCH DIAMETER ASTM A325 HIGH STRENGTH BOLTS UNLESS OTHERWISE NOTED. ALL SHEAR CONNECTIONS SHALL BE DESIGNED TO SUPPORT HALF OF TOTAL UNIFORM LOAD CAPACITY SHOWN ON TABLES "ALLOWABLE LOADS ON BEAMS" OF THE AISC MANUAL OF STEEL CONSTRUCTION FOR THE GIVEN SPAN AND STEEL SPECIFIED, UNLESS THE END REACTIONS IS NOTED ON DRAWINGS. SINGLE SHEAR CONNECTION TO PLATES THROUGH COLUMNS SHALL BE IN ACCORDANCE WITH TABLE "D" OF THE AISC MANUAL.
- ALL STRUCTURAL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123, UNLESS OTHERWISE NOTED.
- ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1, "STRUCTURAL WELDING CODE - STEEL". WELD ELECTRODES SHALL BE E70XX.

**LIGHT GAGE FRAMING NOTES:**

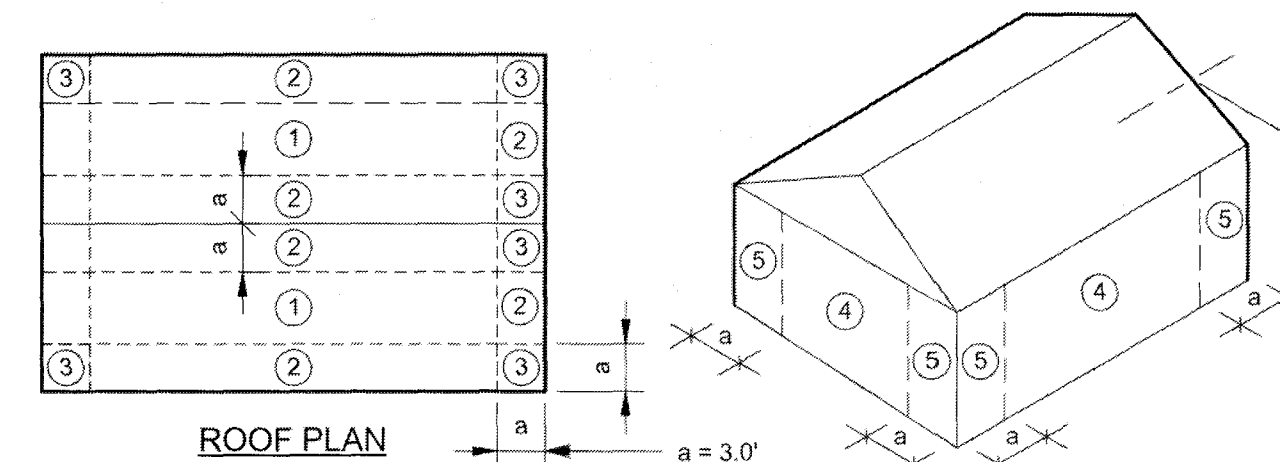
- ALL STRUCTURAL PROPERTIES OF LIGHT GAGE METAL FRAMING SHALL BE COMPUTED IN ACCORDANCE WITH AISI "SPECIFICATIONS FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS" AND THE PROPERTIES SHALL BE PUBLISHED IN THE MANUFACTURERS CATALOG.
- WELDING SHALL BE PERFORMED ONLY BY QUALIFIED WELDERS USING PROPER EQUIPMENT FOR THE PARTICULAR TYPE OF WORK REQUIRED.
- ALL WELDS SHALL CONFORM TO THE AWS D1.3 SPECIFICATIONS FOR WELDING SHEET STEEL IN STRUCTURES. WELDING ELECTRODES SHALL BE IN ACCORDANCE WITH AWS A5.1, A5.5 OR A5.18 SERIES E60.
- ALL STRUCTURAL FRAMING MEMBERS 16 GAGE AND HEAVIER SHALL BE IN ACCORDANCE WITH ASTM A 446 GRADE D, FY = 33,000 PSI.
- ALL STRUCTURAL FRAMING MEMBERS 18 GAGE AND LIGHTER SHALL BE IN ACCORDANCE WITH ASTM A653, GRADED A, FY = 33,000 PSI.
- ALL TRACK AND BRIDGING MATERIALS SHALL HAVE FY = 33,000 PSI MINIMUM
- ALL FRAMING MEMBERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A525. THE COATING SHALL BE GRADE 60.
  - 3 5/8" - 16 GA. IX=1.030 SX=0.568 A=0.479
  - 8" - 16 GA. IX=5.736 SX=1.434 A=0.670
  - 6" - 16 GA. IX=2.80 SX=0.887 A=0.548
- CUT ALL FRAMING COMPONENTS TO FIT SQUARELY AGAINST ABUTTING MEMBERS AND HOLD FIRMLY IN POSITION UNTIL PROPERLY FASTENED.
- ALL PANELS SHALL BE SQUARE AND BRACED AGAINST RACKING.
- WIRE TYING OF STRUCTURAL FRAMING COMPONENTS IS NOT PERMITTED.
- SPLICES IN STRUCTURAL FRAMING MEMBERS ARE NOT PERMITTED WITHOUT APPROVAL OF THE ARCHITECT/ENGINEER.
- CONTRACTOR SHALL NOT ALLOW AXIAL LOADS TO STUDS UNTIL ALL BRIDGING, CONNECTIONS, AND ATTACHMENT OF COLLATERAL MATERIALS ARE COMPLETE.
- ATTACH TRACK SECURELY TO THE FLOOR AND OVERHEAD STRUCTURE. SEAT STUDS SQUARELY TO THE FLOOR AND OVERHEAD TRACK AND ATTACH SECURELY.

**STEEL DECK NOTES:**

- ALL STEEL DECKING SHALL CONFORM TO THE PROVISION OF THE LATEST EDITION OF THE STEEL DECK INSTITUTE (SDI) "DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS, AND ROOF DECKS."
- ALL STEEL DECKING PANELS SHALL BE 36 INCH WIDE PANELS IN LENGTHS SUFFICIENT TO SPAN THREE OR MORE FRAMING SPACES IN CONTINUOUS FASHION, UNLESS OTHERWISE NOTED.
- ALL SIDE LAPS BETWEEN ROOF DECKING PANELS SHALL BE CONNECTED USING #12 SELF-DRILLING/SELF-TAPPING SCREWS AT MIDSPAN BETWEEN ROOF FRAMING MEMBERS.
- ALL FORM DECK FOR CONCRETE FLOOR SLAB CONSTRUCTION SHALL BE 9/16" DEEP, 22 GAGE GALVANIZED FORM DECK.
- ALL WELDING SHALL BE IN COMPLIANCE WITH AWS D1.3-94, "STRUCTURAL WELDING CODE - SHEET STEEL"
- ALL STEEL DECKING SHALL BE GALVANIZED WITH G60 COATING IN CONFORMANCE WITH ASTM A525.

**STEEL JOIST NOTES:**

- ALL STEEL JOISTS SHALL CONFORM TO THE 1995 SJI "STANDARD SPECIFICATIONS, LOAD TABLES AND WEIGHT TABLES FOR STEEL JOISTS AND JOIST GIRDERS."
- ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1-94 "STRUCTURAL WELDING CODE - STEEL"
- JOIST BRIDGING SHALL CONFORM TO S.J.I. SPECIFICATIONS WITH CROSS BRIDGING WHERE NOTED THUS, (<>). PROVIDE THE NUMBER OF ROWS OF BRIDGING INDICATED ON PLAN EQUALLY SPACED, UNLESS OTHERWISE NOTED.



LOCATION	ROOF			OVERHANG			WALLS	
	POSITIVE	NEGATIVE	NEGATIVE	POS	NEG	POS	NEG	
ZONE	① ② ③	① ② ③	② ③	④ ⑤	④ ⑤	④	⑤	
EFFECTIVE AREA	10	21.8	-25.9 -16.0 -65.4	-41.3 -65.4	25.9	-28.1	-34.5	
	50	20.4	-24.4 -16.0 -39.3	-41.3 -34.7	23.2	-25.4	-29.3	
	500 +	19.8	-23.7 -28.1 -28.1	-28.1 -21.5	19.3	-21.5	-21.5	

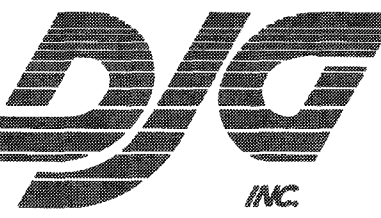
NOTE: FOR EFFECTIVE AREAS BETWEEN THOSE GIVEN ABOVE, THE LOAD IS PERMITTED TO BE INTERPOLATED. OTHERWISE, USE THE LOAD ASSOCIATED WITH THE LOWER EFFECTIVE AREA.

**GABLE ROOF - SLOPE 0 TO 7 DEGREES**

LOCATION	ROOF			OVERHANG			WALLS	
	POSITIVE	NEGATIVE	NEGATIVE	POS	NEG	POS	NEG	
ZONE	① ② ③	① ② ③	② ③	④ ⑤	④ ⑤	④	⑤	
EFFECTIVE AREA	10	16.0	-23.7 -41.3 -61.0	-52.2 -85.2	25.9	-28.1	-34.7	
	50	16.0	-22.2 -33.6 -51.8	-52.2 -66.8	23.2	-25.4	-29.3	
	500 +	16.0	-21.5 -30.3 -47.9	-52.2 -58.8	19.3	-21.5	-21.5	

NOTE: FOR EFFECTIVE AREAS BETWEEN THOSE GIVEN ABOVE, THE LOAD IS PERMITTED TO BE INTERPOLATED. OTHERWISE, USE THE LOAD ASSOCIATED WITH THE LOWER EFFECTIVE AREA.

**GABLE ROOF - SLOPE 7 TO 27 DEGREES**



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COUNTY OF ALBEMARLE

**PANTOPS  
PUBLIC SAFETY  
FACILITY**

IFB # 2017-11223-20

CHARLOTTESVILLE,  
VIRGINIA

**REVISIONS**

NO.	DATE	DESCRIPTION

COMMISSION NUMBER  
**2160310**

SCALE: 1/4" = 1'-0"  
DESIGNED: DDB  
DRAWN: DDB  
CHECKED: DFB  
DATE: 10.28.2016

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SHEET TITLE

**GENERAL NOTES**

SHEET NUMBER

**S-001**

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