STRUCTURAL DESIGN CRITERIA

1. STRUCTURAL DESIGN IS IN ACCORDANCE WITH THE MAINE UNIFORM BUILDING AND ENERGY CODE.

2. DECK AND STAIR LOADS:
   A. FLOOR FRAMING AND STAIRS 100 PSF
   B. LATERAL LOAD ON RAILINGS - 200 POUNDS OR
      50 POUNDS PER LINEAL FOOT ANY DIRECTION.

3. SNOW LOAD IS BASED UPON A GROUND SNOW LOAD OF 60 PSF.
   ON AN UNHEATED STRUCTURE (THE DECK) OR
   IN A VENTILATED COLD ROOF STRUCTURE (THE MAIN ATTIC).
   NET FLAT ROOF SNOW LOAD IS 46.2 PSF.

4. WIND LOAD: PER IBC SECTION 1609.01/ASCE 7-02 CHAPTER 6

BASIC WIND SPEED, 3 SECOND GUST	100 mph
IMPORTANCE FACTOR Iw	1.0
EXPOSURE CATEGORY	C
BUILDING CLASSIFICATION	II
BASIC WIND PRESSURE	20 psf
COMPONENT AND CLADDING PRESSURE	+22.7, -36.8 psf

SEISMIC LOAD: IBC SECTION 1615.0, EARTHQUAKE DATA PER SECTIONS 1616.3:

SEISMIC USE GROUP	II
OCCUPANCY IMPORTANCE FACTOR, Ie	1.0
SHORT PERIOD ACCELERATION Ss	0.314
1.0 SECOND ACCELERATION S1	0.077g
SITE CLASSIFICATION SOIL TYPE	D
MAXIMUM CONSIDERED EQ. ACCEL. PARAMETER Fa	1.35
MAXIMUM CONSIDERED EQ. ACCEL. PARAMETER Fv	2.40
SHORT PERIOD ACCELERATION (ASCE 9.4.1.2.4-1, Sms)	0.436g
1.0 SECOND ACCELERATION (ASCE 9.4.1.2.4-1, Sm1)	0.184g
SHORT PERIOD DESIGN SPECTRAL RESPONSE ACC.	0.324g, SDC B
1.0 SECOND DESIGN SPECTRAL RESPONSE ACC.	0.123g, SDC B

FOUNDATION REQUIREMENTS and EXCAVATION STABILITY

1. NO GEOTECHNICAL INVESTIGATION HAS BEEN PERFORMED AT THIS SITE. NOTIFY ENGINEER DURING EXCAVATION SO THAT ENGINEER MAY OBSERVE SOIL CONDITIONS ENCOUNTERED ONSITE. ENGINEER MAY ELECT TO REQUIRE SOIL INVESTIGATION BY A GEOTECHNICAL ENGINEER.

2. PROOF ROLL EXISTING UNDISTURBED SOIL PRIOR TO PLACING FOUNDATION BACKFILL OR CONSTRUCTION FOOTINGS. PROOF ROLLING SHOULD CONSIST OF A MINIMUM OF THREE PASSES IN A NORTH-SOUTH DIRECTION AND THEN THREE PASSES IN AN EAST-WEST DIRECTION USING A VIBRATORY PLATE COMPCTOR.

3. FOR FROST PROTECTION, BACKFILL FOOTINGS WITH FOUNDATION BACKFILL HAVING A MAXIMUM PARTICLE SIZE LIMITED TO 6 INCHES. THE PORTION PASSING THROUGH A 3-INCH SIEVE SHALL MEET THE GRADATION SPECIFICATIONS OF MDOT SPECIFICATION 703.06, TYPE F.

4. FOUNDATION BACKFILL SHOULD BE PLACED IN 6 TO 12-INCH LIFTS AND SHOULD BE COMPACTED TO 95 PERCENT OF ITS MAXIMUM DRY DENSITY DETERMINED IN ACCORDANCE WITH ASTM D1557.

ROUGH CARPENTRY MATERIALS

1. DIFFERING LUMBER AND COMPOSITE LUMBER MATERIALS ARE SPECIFIED AT VARIOUS LOCATIONS. MATERIAL GRADES SHALL CONFORM TO THE FOLLOWING SPECIES AND GRADES:

   PERIMETER SILLS (WALL SILLS): PRESSURE-TREATED SOUTHERN YELLOW PINE, SUITABLE FOR GROUND CONTACT PLACED ON TOP OF CONCRETE.

   EXPOSED FINISH TIMBERS; (EXPOSED EXTERIOR POSTS) PRESSURE-TREATED SOUTHERN YELLOW PINE.

   PRESSURE-TREATED LUMBER: SOUTHERN YELLOW PINE NO. 1 GRADING

   COMPOSITE LUMBER: VERSA-LAM BY BOISE-CASCADE, Fb=3,100 psi, E=2000ksi (INTERIOR FRAMING AS NOTED).
   ANTHONY POWER-PRESERVED BEAMS FOR EXTERIOR USE.

   CONVENTIONAL LUMBER: S-P-F-s NO. 2 OR BETTER

2. ALL LEDGER BOLTS EXTENDING THROUGH PRESSURE-TREATED LUMBER SHALL BE STAINLESS STEEL.

3. ALL LUMBER AND TIMBER FRAMING MATERIAL SHALL BE STORED IN A PROTECTED, DRY AREA OFF OF THE GROUND AND GROUND FLOOR SURFACES. STORE MATERIAL OUT OF DIRECT SUNLIGHT TO PREVENT DIFFERENTIAL DRYING AND WARPING.

4. JOIST HANGERS SHALL BE MANUFACTURED BY SIMPSON STRONG-TIE, INC. WHERE NOTED, HANGERS SHALL BE STAINLESS STEEL, ATTACHED WITH STAINLESS STEEL 10d x 1 1/2" HANGER NAILS INSTALLED IN PREDRILLED HOLES AS REQUIRED OR DIRECTED BY ENGINEER. REFER TO PLAN SHEETS AND SCHEDULE FOR HANGERS AND LOCATIONS.

5. REFER TO STRUCTURAL DRAWINGS FOR APPROPRIATE SELF-DRIVING FASTENERS, EITHER MANUFACTURED BY FASTENMASTER, INC. OR BY GRK, INC. INSTALL FASTENERS AS INDICATED ON DRAWINGS.

6. DO NOT NOTCH JOISTS IN THE MIDDLE-THIRD OF THEIR SPANS, AND PROVIDE TAPERED CUTS AT ENDS OF JOISTS WHERE NOTED, TO PREVENT SPLITTING OF LUMBER AT STRESS CONCENTRATION POINTS.

7. FLOOR SHEATHING SHALL BE ADVANTEK SHEATHING, IN THICKNESS INDICATED ON DRAWINGS. GLUE AND NAIL FLOOR DECKING TO SHEATHING AS NOTED. PROVIDE 1/8" SPACING BETWEEN SHORT ENDS OF PANELS AS REQUIRED BY MANUFACTURER.

CAST-IN-PLACE CONCRETE

1. ALL CONCRETE WORK AND REINFORCING BAR DETAILS SHALL CONFORM TO THE LATEST ACI STANDARDS, ACI 301 AND 318.

2. FOUNDATION CONCRETE SHALL BE AIR-ENTRAINED, (5 TO 7%), AND HAVE A 28-DAY COMPRESSIVE STRENGTH OF 4,000 psi. PROVIDE BATCH TICKETS TO ENGINEER FOR REVIEW.

3. SLAB CONCRETE SHALL BE AIR-ENTRAINED, (5 TO 7%), AND HAVE A 28-DAY COMPRESSIVE STRENGTH OF 4,000 psi. REINFORCE SLAB CONCRETE WITH WIRE REINFORCING IN ACCORDANCE WITH ASTM A185. PROVIDE A 15-MIL STEGOWRAP VAPOR BARRIER DIRECTLY BELOW ALL SLABS ON GRADE. OVERLAP SEAMS AND TAPE ADJACENT PIECES TO PREVENT MOVEMENT. .

4. PLACE NO CONCRETE WITHOUT REVIEW AND APPROVAL OF THE REINFORCING AND EMBEDDED ITEMS BY THE CITY AND BY THE ENGINEER.

5. ALL CONCRETE MATERIALS, REINFORCEMENT, AND FORMS SHALL BE FREE OF FROST OR DEBRIS.

6. CONSOLIDATE ALL CONCRETE WITH A VIBRATOR OR OTHER MEANS RECOMMENDED BY ACI 301.

7. PROVIDE DIAGONAL REINFORCING BARS AROUND INSIDE CORNERS OF ALL OPENINGS IN CONCRETE.

8. MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

CONCRETE CAST AGAINST EARTH	3 INCHES
FORMED CONCRETE EXPOSED TO EARTH OR WEATHER	1 1/2 INCHES #6 BARS 2 INCHES #6 OR GREATER

9. CALCIUM CHLORIDE IS PROHIBITED FROM ALL CONCRETE MIXES.

10. PLACE WALL CONTROL JOINTS AS SHOWN ON DRAWINGS OR AT A MAXIMUM OF 40 FEET ON CENTER.

11. BACKFILL BOTH SIDES OF FOUNDATION WALLS SIMULTANEOUSLY TO PREVENT UNEVEN LATERAL LOADING.

LICENSED ARCHITECT
TRACIE J. REED
No. 4139
STATE OF MAINE

61 FALMOUTH STREET

RENOVATION OF EXISTING TWO UNIT BUILDING W/NON-CONFORMING THIRD UNIT

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No.	Description	Date

STRUCT. NOTES

Project No.	17-14_61 Falmouth ST
Date	10.07.17
Drawn by	Author
Checked by	Checker

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Scale

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