

**GENERAL NOTES:**

- ALL DESIGN AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE MAINE UNIFORM BUILDING AND ENERGY CODE.
- COORDINATE THE FOUNDATION WORK WITH THE MECHANICAL, ELECTRICAL AND PIPING WORK. CONTRACTOR IS RESPONSIBLE FOR VERIFYING IN THE FIELD THE EXISTENCE AND LOCATION OF OVERHEAD, BURIED, AND/OR EMBEDDED UTILITIES, AND FOR VERIFYING LOCATIONS OF ALL EMBEDDED MECHANICAL, ELECTRICAL, AND PLUMBING SYSTEMS AFFECTED BY THE WORK OF THIS PROJECT.
- NOTIFY THE ENGINEER OF ANY CONDITIONS ENCOUNTERED IN THE FIELD CONTRADICTORY TO THOSE SHOWN ON THE FOUNDATION DRAWING.
- VERIFY ALL DIMENSIONS IN THE FIELD DURING ERECTION AND CONSTRUCTION PHASES, PROVIDE ADEQUATE SHORING AND TEMPORARY BRACING AS NECESSARY.
- GENERAL DESIGN LOADS:  
DEAD LOADS:  
WEIGHTS OF BUILDING COMPONENTS  
LIVE LOADS:  
SECOND FLOOR CLASSROOMS: 40psf  
SECOND FLOOR CORRIDORS: 80psf  
SNOW LOADS:  
GROUND SNOW LOAD pg: 50psf  
SNOW LOAD IMPORTANCE FACTOR Is: 1.0  
EXPOSURE FACTOR Ce: 1.0  
THERMAL FACTOR Ct: 1.0  
WIND LOADS:  
BASIC WIND SPEED: V=100mph  
EXPOSURE CATEGORY: B  
OCCUPANCY CATEGORY: II  
IMPORTANCE FACTOR: 1.0  
EARTHQUAKE LOADS (PER EQUIVALENT LATERAL FORCE METHOD):  
0.2s SPECTRAL RESPONSE PARAMETER: S<sub>s</sub> = 0.319g  
1.0s SPECTRAL RESPONSE PARAMETER: S<sub>1</sub> = 0.078g  
DESIGN SPECTRAL RESPONSE PARAMETER SDS = 0.329g  
DESIGN SPECTRAL RESPONSE PARAMETER SD1 = 0.124g  
SITE CLASS = D (ASSUMED)  
OCCUPANCY CATEGORY = II  
SEISMIC DESIGN CATEGORY = B

**SOILS:**

- ALLOWABLE BEARING CAPACITY OF SOIL FOR SHALLOW FOUNDATION DESIGN IS ASSUMED TO BE 2,000 PSF. IF POOR BEARING MATERIALS ARE ENCOUNTERED, NOTIFY ENGINEER FOR REPLACEMENT FILL RECOMMENDATION.
- ALL NEW FOUNDATION ELEMENTS AND SLABS SHALL BEAR ON NEW COMPACTED SELECT FILLS OVER NATIVE SOILS. SELECT FILL SHALL CONSIST OF MATERIALS COMPLYING WITH MDT TYPE 'A' REQUIREMENTS.
- WHEN COMPACTED FILL IS REQUIRED, IT SHALL BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY.
- THE CONTRACTOR SHALL DESIGN AND PROVIDE ALL TEMPORARY EARTH SUPPORT, SHORING, BRACING, AND DEWATERING, AND SHALL PROTECT ALL WORK AGAINST INSTABILITY AND OVERLOAD DURING CONSTRUCTION.

**TIMBER NOTES:**

- UNLESS NOTED OTHERWISE, ALL TIMBER FRAMING SHALL COMPLY WITH THE "AMERICAN INSTITUTE OF TIMBER CONSTRUCTION - (AITC)" AND THE "AMERICAN FOREST & PAPER ASSOCIATION - NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" (NDS).
- PROVIDE TIMBER GRADED BY AN ACCEPTED AGENCY, WITH RULES AND SERVICES COMPLYING WITH REQUIREMENTS & PROCEDURES OF AMERICAN SOFTWOOD LUMBER STANDARD: VOLUNTARY PRODUCT STANDARD PS20-15.
- KEEP STRUCTURAL TIMBER PROTECTED DURING DELIVERY, STORAGE, HANDLING AND ERECTION. DO NOT STORE ON BARE SOIL OR IN AREAS WITH EXCESSIVELY HIGH OR LOW HUMIDITY.
- ALL GRADES OF 2x TIMBER MUST BE SPRUCE PINE FIR (SPF) #2 OR BETTER AND FULFILL THE REQUIREMENTS SHOWN BELOW:  
PROVIDE TIMBER WHICH HAS EITHER BEEN GRADED OR TESTED AND CERTIFIED WITH ALLOWABLE STRESS RATINGS (PSI) OF:  
F<sub>b</sub> = 875 psi  
F<sub>t</sub> = 450 psi  
F<sub>c</sub>(||) = 1150 psi  
F<sub>c</sub>(perp) = 425 psi  
F<sub>v</sub> = 135 psi  
E = 1,400,000 psi
- PRESSURE TREATED LUMBER & 2x PLATES:  
SOUTHERN PINE #2 OR BETTER: F<sub>b</sub> = 1,250PSI, E = 1,600,000 PSI
- ENGINEERED LUMBER: BOISE CASCADE VERSA-LAM  
- PSL COLUMNS: F<sub>b</sub> = 2,750psi, E = 1,800,000psi  
- LVL BEAMS: F<sub>b</sub> = 3,100 PSI, E = 2,000,000psi
- WOOD CONNECTORS:  
SIMPSON STRONG-TIE OR EQUAL AS INDICATED. SUGGESTED MODELS:  
2x6: LU26  
(2)2x6: HU26-2  
2x10: JB210A OR LU210  
(2)2x10: HU210-2  
STAIR STRINGER: LRU210Z
- ALL WOOD IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED.
- PROVIDE SILL SEALS AT ALL SILLS RESTING ON CONCRETE.

**CONCRETE NOTES:**

- CONCRETE WORK SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318)," AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE (ACI 301)," GENERAL CONTRACTOR, CONSTRUCTION MANAGER AND/OR OWNER'S CLERK OF THE WORKS SHALL HAVE AVAILABLE ON SITE AT ALL TIMES A COPY OF ACI "FIELD REFERENCE MANUAL SP-15".
- PORTLAND CEMENT SHALL CONFORM TO ASTM C150 TYPE I OR II. AGGREGATES SHALL CONFORM TO ASTM C33 CLASS 3S.
- READY-MIX CONCRETE SHALL COMPLY WITH THE REQUIREMENTS OF ASTM C94, AND AS SPECIFIED HEREIN. PROVIDE BATCH TICKET FOR EACH BATCH DISCHARGED AND USED IN WORK, INDICATING PROJECT NAME, MIX TYPE, MIX TIME, BATCH QUANTITY, AND PROPORTIONS OF INGREDIENTS. JOB-SITE MIXING WILL NOT BE PERMITTED.
- IN LIEU OF DESTRUCTIVE TESTING FOR PLACEMENTS OF LESS THAN 50cy, SUBMIT EVIDENCE OF SATISFACTORY STRENGTH FOR EACH CLASS OR MIX DESIGN OF CONCRETE TO BE USED TO

**BUILDING OFFICIAL FOR APPROVAL.**

- REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60 DEFORMED BARS AND SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH ACI 315, LATEST EDITION. WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED.
- CONCRETE MIX DESIGN  
a. STRENGTH: 4000 PSI @28 DAYS FOR STRUCTURAL CONCRETE. (NON-STRUCTURAL SITE CONCRETE TO HAVE COMPRESSIVE STRENGTH OF 3000 PSI AND MAX. W/C RATIO OF 0.55)  
b. AGGREGATE: 3/4 INCH NOMINAL MAXIMUM  
c. WATER-CEMENT RATIO: 0.45 MAXIMUM  
d. ENTRAINED AIR: 6% ± 1/2% FOR CONCRETE EXPOSED TO WEATHER OR SOIL, MAXIMUM 3% ENTRAPPED AIR OTHERWISE  
e. SLUMP: 1-5 INCHES BEFORE ADDITION OF HIGH RANGE WATER REDUCER OR PLASTICIZER  
f. ADD AIR ENTRAINING ADMIXTURE AT MANUFACTURER'S PRESCRIBED RATIO TO RESULT IN CONCRETE AT POINT OF PLACEMENT HAVING THE ABOVE NOTED AIR CONTENTS.  
g. ADDITIONAL SLUMP MAY BE ACHIEVED BY THE ADDITION OF A MIDRANGE OR HIGH RANGE WATER REDUCING ADMIXTURE. MAXIMUM SLUMP AFTER ADDITION OF ADMIXTURE SHALL BE 8 INCHES.  
h. MIX ADJUSTMENTS MAY BE REQUESTED BY THE CONTRACTOR, WHEN CHARACTERISTICS OF THE MATERIALS, JOB CONDITIONS, WEATHER OR OTHER CIRCUMSTANCES WARRANT, AT NO ADDITIONAL COST TO THE OWNER AND AS ACCEPTED BY THE ENGINEER. LABORATORY TEST DATA FOR THE REVISED MIX DESIGN AND STRENGTH DATA SHALL BE SUBMITTED AND ACCEPTED BY THE ENGINEER BEFORE USING IN WORK.  
i. WATER MAY BE ADDED AT THE PROJECT SITE ONLY IF THE MAXIMUM SPECIFIED WATER-CEMENT RATIO AND SLUMP ARE NOT EXCEEDED. CONTRACTOR SHALL HAVE BATCH TICKET INDICATING WATER AND CEMENT MIXED IN THE PLANT, AND SHALL RECORD THE WATER ADDED AS EVIDENCE THAT THE WATER-CEMENT RATIO HAS NOT BEEN EXCEEDED.  
j. ADDITIONAL DOSES OF SUPER PLASTICIZER MAY BE USED WHEN DELAYS OCCUR AND REQUIRED SLUMP HAS NOT BEEN MAINTAINED. A MAXIMUM OF TWO ADDITIONAL DOSAGES ARE PERMITTED PER ACI 212.3R RECOMMENDATIONS.
- CONCRETE SHALL NOT BE PLACED IN WATER OR ON FROZEN SUBGRADE. CONCRETE SHALL BE PLACED WITHOUT HORIZONTAL CONSTRUCTION JOINTS EXCEPT WHERE SHOWN OR NOTED. VERTICAL CONSTRUCTION JOINTS AND STOPS IN CONCRETE WORK SHALL BE MADE AT MIDSPAN OR AT POINTS OF MINIMUM SHEAR.
- MINIMUM CONCRETE PROTECTIVE COVERING FOR REINFORCEMENT SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:  
a. SURFACES CAST AGAINST AND PERMANENTLY IN CONTACT WITH EARTH: 3 INCHES  
b. FORMED SURFACES IN CONTACT WITH EARTH OR EXPOSED TO WEATHER: 2 INCHES  
c. SURFACES NOT IN CONTACT WITH EARTH OR EXPOSED TO WEATHER: 1 1/2 INCHES
- INSTALLATION OF REINFORCEMENT SHALL BE COMPLETED AT LEAST 24 HOURS PRIOR TO THE SCHEDULED CONCRETE PLACEMENT. NOTIFY ENGINEER FOR INSPECTION AT LEAST 24 HOURS PRIOR TO THE SCHEDULED COMPLETION OF THE INSTALLATION OF REINFORCEMENT.



				PORTLAND HOUSING AUTHORITY PORTLAND, MAINE	
				PHA RIVERTON HEAD START BUILDING 14, UNITS 102 AND 104	
				STRUCTURAL GENERAL NOTES	
0	ISSUED FOR BID	BCH	SJT	05/10/17	
REV	DESCRIPTION	OWN	APP	DATE	
		ANSI D		PROJECT NO.	218.021.001
		DATE		DES BY	SJT
		SIZE		DWN BY	BCH
		SHEET		CHKD BY	BJB
		DRAWING NO.		04 OF 18	

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