<u>DESIGN LOADS</u>

BUILDING CODE: MAINE UNIFORM BUILDING AND ENERGY CODE INTERNATIONAL BUILDING CODE, 2009 EDITION INTERNATIONAL EXISTING BUILDING CODE, 2009 EDITION ASCE 7-05 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES DESIGN ROOF SNOW LOAD: GROUND SNOW LOAD (Pg): SNOW EXPOSURE FACTOR (Ce): SNOW LOAD IMPORTANCE FACTOR (Is): SNOW LOAD THERMAL FACTOR (Ct): 46 PSF + DRIFT FLAT ROOF SNOW LOAD (Pf): DESIGN WIND LOAD: BASIC WIND SPEED: 100 MPH WIND LOAD IMPORTANCE FACTOR (Iw): WIND EXPOSURE: INTERNAL PRESSURE COEFFICIENT: COMPONENTS & CLADDING PER ASCE 7-05 DESIGN SEISMIC LOADS: EQUIVALENT LATERAL FORCE PROCEDURE SEISMIC OCCUPANCY CATEGORY: SEISMIC IMPORTANCE FACTOR (Ie): MAPPED SPECTRAL RESPONSE ACCELERATIONS:

REFERENCE THE PROJECT SPECIFICATIONS FOR ALL TESTING REQUIREMENTS.

FOUNDATION NOTES (SOIL SUPPORTED)

SEISMIC SITE CLASS:

SPECTRAL RESPONSE COEFFICIENTS:

SEISMIC DESIGN CATEGORY:

SPECIFIC REQUIREMENTS.

FOUNDATION DESIGN IS BASED ON SHALLOW SPREAD FOOTINGS BEARING ON SUITABLE UNDISTURBED NATIVE SOILS AND/OR NEW COMPACTED STRUCTURAL FILL EXTENDING TO UNDISTURBED NATIVE SOIL. PRESUMPTIVE BEARING CAPACITY 1000 P.S.F. EXTEND BOTTOM OF EXTERIOR FOOTINGS AT LEAST 4.5 FEET BELOW THE FINAL EXTERIOR GRADE FOR PROTECTION AGAINST FROST. NO FILL FOR BUILDING SUPPORT SHALL BE PLACED UNTIL SUBGRADES HAVE BEEN OBSERVED AND APPROVED BY A LICENSED GEOTECHNICAL ENGINEER IN THE STATE OF MAINE, ENGAGED BY THE OWNER. GEOTECHNICAL ENGINEER SHALL VERIFY ITEMS 1-3 ABOVE. SOILS EXPOSED AT THE BASE OF ALL SATISFACTORY FOUNDATION EXCAVATIONS SHOULD BE PROTECTED AGAINST ANY DETRIMENTAL CHANGE IN CONDITION, SUCH AS DISTURBANCE FROM RAIN OR FROST. SURFACE RUNOFF SHALL BE DRAINED AWAY FROM THE EXCAVATIONS AND NOT BE ALLOWED TO POND. FOUNDATION EXCAVATIONS SHALL BE ADEQUATELY PROTECTED FROM

RAINFALL OR FREEZING CONDITIONS. GROUNDWATER SHOULD BE ANTICIPATED FOR

EXCAVATIONS FOR BUILDING CONSTRUCTION SHALL BE IN ACCORDANCE WITH OSHA

REQUIREMENTS. BRACED EXCAVATIONS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER

ADJACENT STRUCTURES. REFER TO THE GEOTECHNICAL REPORT FOR ADDITIONAL AND/OR MORE

REGISTERED IN THE STATE OF MAINE. DO NOT UNDERMINE EXISTING FOUNDATIONS OF ANY

EXCAVATIONS AND APPROPRIATE DEWATERING MEASURES SHALL BE EMPLOYED.

CONCRETE NOTES

STRUCTURAL STEEL FABRICATION, ERECTION, AND CONNECTION DESIGN SHALL CONCRETE WORK SHALL CONFORM TO "ACI MANUAL OF CONCRETE PRACTICE", CONFORM TO AISC "SPECIFICATION FOR THE DESIGN FABRICATIONS, AND ERECTION OF STRUCTURAL STEEL" LATEST EDITION, AND THE "CODE OF STANDARD PRACTICE", LATEST EDITION. STRUCTURAL STEEL: STEEL PLATES, SHAPES, AND BARS, CONFORM TO ASTM A36

> UNLESS NOTED OTHER WISE (U.N.O.). STRUCTURAL STEEL SHAPES DESIGNATED ON THE DRAWINGS FOR WIDE-FLANGE SECTIONS: ASTM A992 (ASTM A572 GRADE 50 WITH SPECIAL REQUIREMENTS PER AISC TECHNICAL BULLETIN #3 DATED STRUCTURAL TUBING: CONFORM TO ASTM A500 GRADE B46 KSI. FIELD CONNECTIONS SHALL BE BOLTED USING ASTM A325N HIGH STRENGTH BOLTS (U.N.O.) EXCEPT WHERE SLIP CRITICAL CONNECTIONS ARE REQUIRED AND NOTED BY A325 (SC) ON THE DRAWINGS. PROVIDE SLIP CRITICAL (SC) CONNECTIONS AT ALL MOMENT CONNECTIONS, BRACED FRAMES, RELIEVING

ANGLES AND AS OTHERWISE NOTED. USE A490 BOLTS WHERE INDICATED. WHERE WELDING IS INDICATED. ALL WELDING SHALL CONFORM TO AWS D1.1-LATEST EDITION. ELECTRODES SHALL CONFORM TO AWS A5.1 E70XX SERIES WITH PROPER ROD TO PRODUCE OPTIMUM WELD (LOW HYDROGEN) SEE CONCRETE NOTES AND DRAWINGS FOR ANCHOR BOLT INFORMATION, TYP. PROVIDE 1/4" THICK LEVELING PLATE UNDER ALL COLUMN BASE PLATES UNLESS OTHERWISE NOTED. LEVELING PLATES SHALL BE SET AND GROUTED PRIOR TO

PROVIDE ALL MISCELLANEOUS ANGLES, PLATES, ANCHOR BLOTS ETC., SHOWN ON

ARCHITECTURAL DRAWINGS FOR SUPPORT OF BLOCKING, PARAPETS, FINISHES,

ETC. COORDINATE WITH MISCELLANEOUS METAL FABRICATOR TO ENSURE

COMPLETE COVERAGE OF ALL ITEMS.

<u>METAL DECK</u>

STRUCTURAL STEEL NOTES

THE METAL ROOF AND FLOOR DECK SHALL BE FORMED OF STEEL SHEETS CONFORMING TO THE FOLLOWING STANDARDS:

A. ROOF DECKING: ASTM A1008, GRADE C, D OR ASTM A653, STRUCTURAL QUALITY, GRADE 33 OR HIGHER ROOF DECK SHALL BE AS NOTED ON THE DRAWINGS (OR EQUIVALENT). FOR DECK ATTACHMENTS, PENETRATIONS AND ACCESSORIES REFER TO SPECIFICATIONS.

<u>ABBREVIATIONS</u> **ABBREVIATIONS** ANCHOR BOLT H.D. GALV HOT DIPPED GALVANIZED AMERICAN CONCRETE INSTITUTE HORIZ HORIZONTAL ACOUSTICAL CEILING TILE ARCHITECTURAL EXPOSED STRUCTURAL STEEL HVAC **HEATING VENTILATION & COOLING** ABOVE FINISH FLOOR HOLLOW STRUCTURAL SHAPE ALTERNATE INSIDE DIAMETER ALUMINUM INFORMATION AMERICAN PLYWOOD ASSOCIATION INSIDE FACE **APPROXIMATE** ANCHOR ROD INSULATION ARCHITECT OR ARCHITECTURAL INTERIOR BALANCE JOIST **BOTTOM CHORD EXTENSION** JOINT KIPS (1K=1000LBS) BRACED FRAME BUILDING LENGTH BLOCKING BLKG POUND(S) LIVE LOAD BITUMINOUS LLBB LONG LEGS BACK TO BACK BOTTOM OF/BY OTHERS LONG LEG HORIZ LONG LEG VERT **BEAM POCKET** LOCATION(S) OR LOCATE LOC(S) BASE PLATE LONG LONGITUDINAL BEARING B.S. **BOTH SIDES** BASEMENT LTS BTWN BETWEEN LIGHTWEIGHT CENTER TO CENTER LVLMACH MACHINE COLD FORM METAL FRAMING MACH RM **MACHINE ROOM** CAST IN PLACE MAS MASONRY CONTRACTION/CONST. JOINT MATERIAL CENTER LINE MAX MAXIMUM MECH MECHANICAL M.E.P. CONCRETE MASONRY UNIT MANUF MANUFACTURER COLUMN MINIMUM MIN CONCRETE MISC MISCELLANEOUS CONNECTION MICRO-LAM CONSTRUCTION M.O. MASONRY OPENING CONTINUOUS MTL METAL CONTRACTOR COORDINATE NORTH CENTER(ED) N.I.C NOT IN CONTRACT NO OR # NUMBER PENNY NOM NOMINAL DOUBLE NORTH-SOUTH N-S DIAMETER NEAR SIDE DIAGONAL N.T.S. NOT TO SCALE DIMENSION ON CENTER DEAD LOAD OUTSIDE DIAMETER OUTSIDE FACE DITTO/DO OVER DO/do DRILLED PIER OR DEEP OPPOSITE HAND DTL(S) DETAIL(S) OPPOSITE DRAWING(S) DWL(S) DOWEL(S) P.A.F. (E) OR EXIST **EXISTING** PCAPEN PENETRATION EACH END PERPENDICULAR EACH FACE PLATE EXPANSION JOINT **PLCS** PLACES ELEVATION POUNDS PER LINEAR FOOT ELEVATOR POUNDS PER SQUARE FOOT **ELECTRICAL** POUNDS PER SQUARE INCH **EMBEDMENT PREFAB** PREFABRICATION ENGINEER PRELIMINARY E.O.P. EDGE OF DECK PRESSURE TREATED E.O.R. ENGINEER OF RECORD POLYVINYL CHLORIDE EDGE OF SLAB E.O.S. QTY QUANTITY **EQUALLY SPACED EQUIPMENT** RE OR REF REFER TO REFERENCE EACH SIDE **ROOF DRAIN** E.W. EACH WAY REINF REINFORCE(ING)(D)(MENT) E.W.B. EACH WAY BOTTOM REQD REQUIRED EXIST/EX EXISTING REQMNTS REQUIREMENT(S) EXP ANCHOR EXPANSION ANCHOR ROUGH OPENING **EXPANSION** RTU **ROOF TOP UNIT** EXT **EXTERIOR** S.C. SCHED SLIP CRITICAL FLAT BAR SCHEDULE F.D. FLOOR DRAIN SECT SECTION FDN FOUNDATION SQUARE FOOT FIN. FL. FINISH FLOOR SHEET FINISH FLOOR/ FAR FACE SIMII AR FLG FLANGE SLH SHORT LEG HORIZONTAL SHORT LEG VERTICAL F.F.E. FINISH FLOOR ELEVATION F.O.B. FACE OF BRICK SP @ SPACE AT F.O. FACE OF SPACE(S) FRAMING SPECS SPECIFICATIONS FAR SIDE SHEAR KEY FOOT OR FEET SHEAR LUG FTG FOOTING STAINLESS STEEL SHORT SLOT GAGE/GAUGE STANDARD GALV GALVANIZED GLU-LAM STRUCT STRUCTURAL GRADE BEAM STIFFENER GENERAL CONTRACTOR S.W. SHEARWALL GRADE OR GRIND SYM SYMMETRICAL *GWB* GYPSUM WALL BOARD TOP AND BOTTOM T.C.F. TOP CHORD EXTENSION THK TOTAL LOAD

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No. Date Description

No. 12854

CGW MSK

PERMIT SET-95% CONSTRUCTION DOCUMENTS

LATEST EDITION. THIS PUBLICATION IS AVAILABLE THROUGH THE AMERICAN CONCRETE INSTITUTE (248) 848-3800. CONCRETE FOUNDATIONS SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,500 PSI. CONCRETE SLABS SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI, U.N.O. EXTERIOR SLAB-ON-GRADE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 5,000 PSI. ADDITIONAL CONCRETE MIX PERFORMANCE DATA INCLUDING AIR CONTENT, WATER-CEMENT RATIO. AGGREGATE SIZE. SLUMP, ETC. HAS BEEN INCLUDED IN THE PROJECT

SPECIFICATIONS. SEE THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. CONCRETE SHALL NOT BE PLACED IN WATER OR ON FROZEN GROUND. PROVIDE PVC SLEEVES WHERE PIPES PASS THROUGH EXTERIOR CONCRETE, OR

REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60 DEFORMED BARS AND SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH ACI 315, WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185 AND BE PROVIDED IN FLAT

MINIMUM CONCRETE PROTECTIVE COVERING FOR REINFORCEMENT, UNLESS NOTED OTHERWISE, SHALL BE AS FOLLOWS: A. SURFACES CAST AGAINST AND PERMANENTLY IN CONTACT WITH EARTH, 3.0" B. FORMED SURFACES IN CONTACT WITH EARTH OR EXPOSED TO WEATHER #5 BARS, 5/8" DIAMETER WIRE AND SMALLER, 1.5"

#6 THROUGH #11 BARS, 2.0"

B. SLABS ON GRADE

C. SURFACES NOT IN CONTACT WITH EARTH OR EXPOSED TO WEATHER WALLS, SLABS, JOISTS #11 BARS AND SMALLER, 1.0" BEAMS, GIRDERS, AND COLUMNS; ALL REINFORCEMENT, 1.5" REINFORCEMENT SHALL BE CONTINUOUS AROUND CORNERS AND AT INTERSECTIONS. PROVIDE LAPPED BARS AT NECESSARY SPLICES OR HOOKED BARS AT DISCONTINUOUS ENDS. PROVIDE TENSION LAP SPLICES PER THE

SCHEDULE THIS DRAWING, FOR ALL REINFORCING UNLESS OTHERWISE SHOWN ON WELDING OF REINFORCEMENT IS NOT PERMITTED FOR ALL OPENINGS IN CONCRETE WALLS AND SLABS, PROVIDE SUPPLEMENTAL REINFORCING AROUND OPENING AS SHOWN ON THE CONTRACT DOCUMENTS TYPICAL DETAILS. NO PENETRATIONS SHALL BE MADE THROUGH FOOTINGS

WITHOUT WRITTEN PERMISSION FROM ENGINEER. CONSTRUCTION JOINTS SHOWN ON DRAWINGS ARE MANDATORY. OMISSIONS, ADDITIONS. OR CHANGES SHALL NOT BE MADE EXCEPT WITH THE SUBMITTAL OF A WRITTEN REQUEST TOGETHER WITH DRAWINGS OF THE PROPOSED JOINT LOCATIONS FOR APPROVAL OF THE STRUCTURAL ENGINEER. WHERE CONSTRUCTION JOINTS ARE NOT SHOWN, OR WHEN ALTERNATE LOCATIONS ARE PROPOSED, DRAWINGS SHOWING LOCATION OF CONSTRUCTION AND CONTROL JOINTS AND CONCRETE PLACING SEQUENCE SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO PREPARATION OF THE REINFORCEMENT SHOP DRAWINGS. CONCRETE SHALL BE PLACED WITHOUT

VERTICAL CONSTRUCTION JOINTS AND STOPS IN CONCRETE BEAMS/ GRADE BEAMS SHALL BE MADE AT MIDSPAN OR AT POINTS OF MINIMUM SHEAR, UNLESS NOTED OTHERWISE. 12. SPACING OF CONSTRUCTION JOINTS, UNLESS NOTED OTHERWISE SHALL BE AS A. FOOTINGS AND WALLS MAX LENGTH 40'-0" OR 15'-0" FROM ANY CORNER**

HORIZONTAL CONSTRUCTION JOINTS EXCEPT WHERE SHOWN OR NOTED.

SEE FOUNDATION PLAN ** EXCEED ONLY WHERE INTERMEDIATE CONTRACTION JOINTS ARE PROVIDED. MINIMUM OF 72 HOURS SHALL ELAPSE BETWEEN ADJACENT CONCRETE PLACEMENTS.

ANCHOR RODS SHALL BE HEADED RODS CONFORMING TO ASTM F1554, GRADE 36 KSI WELDABLE STEEL, UNLESS NOTED OTHERWISE ON DRAWINGS. ANCHOR RODS THAT ARE TO BE IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE HOT-DIPPED GALVANIZED. 14. ALL GROUT BENEATH BASE PLATES & BEARING PLATES SHALL BE "5-STAR" 5000-PSI

NON-SHRINK GROUT BY U.S. GROUT CORP. SLAB THICKNESSES INDICATED ON THE DRAWINGS ARE MINIMUMS. PROVIDE SUFFICIENT CONCRETE TO ACCOUNT FOR STRUCTURE DEFLECTION, SUBGRADE FLUCTUATIONS, AND TO OBTAIN THE SPECIFIED SLAB ELEVATION AT THE FLATNESS AND LEVELNESS INDICATED. 16. INSTALLATION OF REINFORCEMENT SHALL BE COMPLETED AT LEAST 24 HOURS

PRIOR TO THE SCHEDULED CONCRETE PLACEMENT. NOTIFY ARCHITECT AND

STRUCTURAL ENGINEER OF COMPLETION AT LEAST 24 HOURS PRIOR TO THE SCHEDULED COMPLETION OF THE INSTALLATION OF REINFORCEMENT. 17. ALL ITEMS TO BE EMBEDDED INTO CONCRETE SHALL BE INSTALLED PRIOR TO PLACEMENT OF CONCRETE. PROVIDE ADDITIONAL REINFORCEMENT AND/OR TEMPLATES AS REQUIRED TO ENSURE THE CORRECT POSITIONS OF EMBEDMENTS "WET SETTING" OF EMBEDMENTS INTO CONCRETE IS STRICTLY PROHIBITED. EMBEDMENTS INCLUDE, BUT NOT BY LIMITATION, REINFORCEMENT, REINFORCING DOWELS, EMBEDDED PLATES, ANCHOR RODS, ANCHOR INSERTS, SLEEVES, LOAD TRANSFER PLATES, DIAMOND DOWELS, AND SHELF BULK HEADS.

ABV ADDL *AESS* A.F.F**APPROX** ARCH

> CMU COL CONC CONN CONST CONTR COORD CTR(D)

LAMINATED STRAND LUMBER

TENSION LAP SPLICE LENGTH LEVEL OR LAMINATE VENEER LUMBER MECHANICAL/ELECTRICAL/PLUMBING

POWDER ACTUATED FASTENER PORTLAND CONCRETE ASSOCIATION

TIE JOIST T.O. OR T/ T.O.S. T/STL TOP OF STEEL etc. TRANSVERSE TYPICAL UNLESS NOTED OTHERWISE

TYP

U.N.O.

VERT V.I.F.

W/O

W.P.

W.W.F.

VERIFY IN FIELD WITH WITHOUT WIDTH OR WOOD WIDE FLANGE **WORK POINT** WELDED WIRE FABRIC

Revision Schedule

SCALE:

GENERAL NOTES