

GENERAL NOTES

1. THE NOTES ON THESE DRAWINGS ARE NOT INTENDED TO REPLACE SPECIFICATIONS OR REQUIREMENTS FOR THE WORK. THE NOTES TO GENERAL NOTES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO PROCEEDING WITH THE AFFECTED PORTION OF THE WORK.
2. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH JOB SPECIFICATIONS AND CITY ORDINANCES. CONSULT THESE DRAWINGS AND DIMENSIONS OF OPENINGS, CHASES, INSERTS, REGLETTS, SLEEVES, DEPRESSIONS, AND OTHER DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS.
3. ALL DIMENSIONS, EXISTING CONDITIONS, AND AS-BUILT CONDITIONS MUST BE SHOWN ON THE DRAWINGS. THE STRUCTURAL ENGINEER RESERVES THE RIGHT TO INTERPRET DETAILS TO ADDRESS OTHER PROJECT CONDITIONS.
4. THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE ONLY AFTER THE STRUCTURAL WORK CONTAINED IN THE STRUCTURAL DRAWINGS IS COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE PROVISIONS FOR STABILIZATION DURING ERECTION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUY'S OR TIEDOWNS, SUCH MATERIAL SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER COMPLETION OF THE PROJECT.
5. SECTIONS AND DETAILS SHOWN ON ANY STRUCTURAL DRAWINGS SHALL BE CONSIDERED TYPICAL UNLESS OTHERWISE SPECIFIED. THE STRUCTURAL ENGINEER RESERVES THE RIGHT TO INTERPRET DETAILS TO ADDRESS OTHER PROJECT CONDITIONS.
6. PROVIDE AND INSTALL NECESSARY MATERIAL TO CONNECT ELEVATOR SUPPORT BEAMS AND GUIDE PULLEY LATCHING AND STEEL MEMBERS AND ANY INSERTS REQUIRED SHALL BE DETERMINED BY THE ELEVATOR MANUFACTURER.
7. THE CONTRACTOR SHALL SUBMIT COMPLETE SHOP DRAWINGS FOR ALL PARTS OF THE WORK, INCLUDING DESCRIPTION OF SHORING, AND CONSTRUCTION METHODS AND SEQUENCING WHERE APPLICABLE, NO PERFORMANCE OF THE WORK SHALL BE PERMITTED UNTIL THE STRUCTURAL DRAWINGS HAVE BEEN REVIEWED AND APPROVED BY THE ARCHITECT AND ENGINEER. WITHOUT REVIEW OF THE SHOP DRAWINGS BY THE ARCHITECT AND ENGINEER, SUBMIT ONE COPY AND ONE SEPA. COPY WILL BE REVIEWED AND SEPA WILL BE RETURNED. FOR SHOP DRAWINGS AND SUBMITTALS REQUIRED, REFERENCE THE PROJECT SPECIFICATIONS.
8. ALL APPLICABLE FEDERAL, STATE AND MUNICIPAL REGULATIONS SHALL BE FOLLOWED, INCLUDING THE FEDERAL DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ACT.
9. IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE (2006 EDITION, SECTION 704.1), A STATEMENT OF SPECIAL INSPECTIONS IS REQUIRED AS A CONDITION FOR COMPLETION OF THE WORK. THE LOCAL CODE OF REGULATIONS SHALL INCLUDE A LIST OF SPECIAL INSPECTIONS TO BE PERFORMED AND A LIST OF THE INDIVIDUALS, APPROVED AGENCIES AND FIRMS INTENDED TO BE RETAINED FOR CONDUCTING SUCH INSPECTIONS.
10. REFERENCE THE PROJECT SPECIFICATIONS FOR ALL TESTING REQUIREMENTS.

DESIGN LOADS

1. BUILDING CODE: BUILDING CODE 2006 EDITION (NUMBER FROM CITY ISSUED) AND ALL APPLICABLE MUNICIPAL DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES INTERNATIONAL EXISTING BUILDING CODE, 2006 EDITION
2. DESIGN FLOOR LIVE LOADS: ALL NEW INTERIOR SPACES: 100 PSF
3. DESIGN ROOF SNOW LOAD: GROUND SNOW LOAD (Pg): 60 PSF
SNOW EXPOSURE FACTOR (Ce): 0.9
SNOW LOAD IMPACT FACTOR (Is): 1.2
SNOW LOAD THERMAL FACTOR (Ct): 1.1
FLAT ROOF SNOW LOAD (Pf): 50 PSF + DRIFT
4. DESIGN WIND LOAD: BASIC WIND SPEED: 100 MPH
WIND LOAD IMPORTANCE FACTOR (Iw): 1.15
WIND EXPOSURE: B
INTERNAL PRESSURE COEFFICIENT: ±0.18
COMPONENTS & CLADDING LOADS PER ASCE 7-05
5. DESIGN SEISMIC LOADS: SEISMIC BASE SHEAR NOT INCREASED BY MORE THAN 10% PER 2006 IBC / 2006 INTERNATIONAL EXISTING BUILDING CODE FOR LEVEL 2 ALTERNATE SEISMIC UPGRADE OF COMPLETE BUILDING IS NOT REQUIRED. LATERAL SYSTEM ESTABLISHED / UPGRADED AT SELECT AREAS OF IMPACT BASED ON THE FOLLOWING:
EQUIVALENT LATERAL FORCE PROCEDURE
EQUIVALENT LATERAL FORCE CAPACITY
SEISMIC IMPORTANCE FACTOR (I_s): 1.5
MAPPED SPECTRAL RESPONSE ACCELERATIONS:
S_s: 0.317
S₁: 0.077
SEISMIC SITE CLASS: C (BASED ON FOUNDATION DATA PROVIDED IN ORIGINAL 1972 STRUCTURAL DRAWINGS)
1972 STRUCTURAL DRAWINGS
SPECTRAL RESPONSE COEFFICIENTS:
S₁: 0.087
SEISMIC DESIGN CATEGORY: C
BASIC STRUCTURAL SYSTEM: MOMENT RESISTING FRAME SYSTEM
BASIC SEISMIC FORCE RESISTING SYSTEM: SEISMICALLY DETAILED FOR SEISMIC RESISTANCE STRAINING STEEL SYSTEMS
STRAINING ADAPTATION FACTOR (R_s): 3.0
SEISMIC RESPONSE COEFFICIENT (C_s): 0.086

FOUNDATION NOTES (SOIL SUBMITTED)

1. 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.
2. PRESUMPTIVE BEARING CAPACITY 3,000 PSF.
3. EXCAVATIONS FOR BUILDING CONSTRUCTION SHALL BE IN ACCORDANCE WITH OSHA REQUIREMENTS. DO NOT UNDERMINE EXISTING FOUNDATIONS OR ANY ADJACENT STRUCTURES.

CONCRETE NOTES

1. CONCRETE WORK SHALL CONFORM TO "ACI MANUAL OF CONCRETE PRACTICE", LATEST EDITION. THIS PUBLICATION IS AVAILABLE THROUGH THE AMERICAN CONCRETE INSTITUTE (248) 848-5800.
2. ALL CONCRETE SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI. U.N.O. EXTERIOR SLAB-ON-GRADE SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 4,500 PSI. ADDITIONAL CONCRETE MIX PERFORMANCE DATA INCLUDING AIR CONTENT, WATER-CEMENT RATIO, AIR CONTENT, AGGREGATE SIZE, SLUMP, ETC. MUST BE SUBMITTED WITH PROJECT SPECIFICATIONS. SEE THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
3. CONCRETE SHALL NOT BE PLACED IN WATER OR ON FROZEN GROUND.
4. REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60 DEFORMED BARS LATEST EDITION, FABRICATED AND PLACED IN ACCORDANCE WITH ACI 315, LATEST EDITION.
5. 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) FORMER SURFACES IN CONTACT WITH EARTH EXPOSED TO WEATHER #8 BARS: 2.0" DIAMETER WIRE, AND SMALLER, 1.5"
#8 THROUGH #11 BARS, 2.0"
6. WELDING OF REINFORCEMENT IS NOT PERMITTED.
7. ANCHOR RODS SHALL BE HEADED RODS CONFORMING TO ASTM F1554, GRADE 36 KSI WELDABLE STEEL, UNLESS NOTED OTHERWISE ON DRAWINGS.
8. ALL GROUT BENEATH BASE PLATES & BEARING PLATES SHALL BE "S-STAR" 5000-PSI NON-SHRINK GROUT BY U.S. GROUT CORP.
9. SLAB THICKNESSES INDICATED ON THE DRAWINGS ARE MINIMUMS. PROVIDE SUFFICIENT CONCRETE TO ACCOUNT FOR STRUCTURE DEFLECTION, SUBGRADE SETTLEMENT, AND TO MAINTAIN THE SPECIFIED SLAB ELEVATION AT THE FINISHNESS AND LEVELNESS INDICATED.
10. 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.
11. 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 POSITION OF EMBEDMENTS. "WET SETTING" OF EMBEDMENTS INTO CONCRETE IS PROHIBITED.

STRUCTURAL STEEL NOTES

1. STRUCTURAL STEEL FABRICATION, ERECTION, AND CONNECTION DESIGN SHALL CONFORM TO AISC "SPECIFICATION FOR THE DESIGN FABRICATION, AND ERECTION OF STRUCTURAL STEEL," 13TH EDITION, AND THE CODE OF STANDARD PRACTICE, LATEST EDITION.
2. STRUCTURAL STEEL: STEEL PLATES, SHAPES, AND BARS CONFORM TO ASTM A36 UNLESS NOTED OTHERWISE (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 MARCH, 1997)
3. STRUCTURAL TUBING: CONFORM TO ASTM A500 GRADE B46 KSI.
4. FIELD CONNECTIONS SHALL BE BOLTED USING ASTM A325U HIGH STRENGTH BOLTS (A307 EXCEPT WHERE SHIP OFFSHORE CONNECTIONS ARE REQUIRED AND NOTED BY A325 (S)) ON THE DRAWINGS. PROVIDE SLIP CRITICAL (SC) CONNECTIONS AT ALL MOMENT CONNECTIONS, BRACED FRAMES, RELAYING ANGLES AND AS OTHERWISE NOTED. USE A490 BOLTS WHERE INDICATED.
5. WHERE WELDING IS INDICATED, ALL WELDING SHALL CONFORM TO AWS D1.1- LATEST EDITION. ELECTRODES SHALL BE CONFORM TO AWS A5.1 E70XX SERIES WITH FROPER ROD TO PRODUCE OPTIMUM WELD (LOW HYDROGEN).
6. SEE CONCRETE NOTES AND DRAWINGS FOR ANCHOR BOLT INFORMATION, TYP.
7. PROVIDE 3/8" MINIMUM STIFFENER PLATES EACH SIDE OF BEAM WEB AT BEAMS FRAMING OVER COLUMNS AND AT BEAMS SUPPORTING COLUMNS ABOVE.
8. PROVIDE ALL MISCELLANEOUS ANGLES, PLATES, ANCHORS, BOLTS, ETC. SHOWN ON ARCHITECTURAL DRAWINGS FOR SUPPORT OF BLOCKING, PARAPETS, FINISHES, ETC. COORDINATE WITH MISCELLANEOUS METAL FABRICATOR TO ENSURE COMPLETE COVERAGE OF ALL ITEMS.
9. PROVIDE 1/4 x 4 x 4 x 1/4 SLAB SUPPORT ANGLE AS REQUIRED AT COLUMNS WHERE STRUCTURAL MEMBERS DO NOT FRAME IN AT ALL FOUR SIDES.

METAL DECK

1. THE METAL ROOF AND FLOOR DECK SHALL BE FORMED OF STEEL SHEETS CONFORMING TO ASTM STANDARD A911.
2. FLOOR AND ROOF DECK SHALL BE AS NOTED ON THE DRAWINGS (OR EQUIVALENT).
3. FOR DECK ATTACHMENTS, PENETRATIONS AND ACCESSORIES, REFER TO SPECIFICATIONS.

LINTELS

1. THE FOLLOWING LINTELS SHALL BE USED FOR MASONRY OPENINGS, U.N.O. ON DRAWINGS:
MASONRY OPENING Lintel Size
UP TO 3'-0" 1 3/2 x 3 1/2 x 5/16
3'-1" TO 4'-6" 1 4 x 3 1/2 x 5/16 (LL)
4'-7" TO 6'-0" 1 5 x 3 1/2 x 5/16 (LL)
6'-1" TO 8'-0" 1 6 x 3 1/2 x 5/16 (LL)
2. PROVIDE ONE ANGLE FOR EACH 4" WALL THICKNESS, PROVIDE 6" WALL THICKNESS, PROVIDE WT OR BUILT-UP SECTION WITH PROPERTIES EQUAL TO OR GREATER THAN 1 1/2 TIMES THE ANGLE PROPERTIES FOR A 4" WALL THICKNESS.
3. PROVIDE 8" OF BEARING AT EACH END OF ALL LINTELS.
4. ALL EXTERIOR LINTELS SHALL BE HOT-DIPPED GALVANIZED.



City of Portland
PUBLIC SAFETY
BUILDING
Crime Lab Project

Architect
Winton Scott Architects
Portland, Maine

Structural Engineering
Becker Structural Engineers
Portland, Maine

Mechanical Engineering
Mechanical Systems Engineers
Yamouth, Maine

Electrical Engineering
Bartlett Design
Barr, Maine

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