

**GENERAL NOTES**

- THE NOTES ON THESE DRAWINGS ARE NOT INTENDED TO REPLACE SPECIFICATIONS. SEE SPECIFICATIONS FOR REQUIREMENTS IN ADDITION TO GENERAL NOTES. INCONSISTENCIES BETWEEN THESE DRAWINGS AND THE SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO PROCEEDING WITH THE AFFECTED PORTION OF THE WORK.
- STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH JOB SPECIFICATIONS AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND SITE DRAWINGS. CONSULT THESE DRAWINGS FOR LOCATIONS AND DIMENSIONS OF OPENINGS, CHASES, INSERTS, REGLETS, SLEEVES, DEPRESSIONS, AND OTHER DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS.
- ALL DIMENSIONS, EXISTING CONDITIONS, AND AS-BUILT CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.
- THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE ONLY AFTER THE STRUCTURAL WORK CONTAINED IN THE S- DRAWINGS IS COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO ENSURE THE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING ERECTION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIEDOWNS. SUCH MATERIAL SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER COMPLETION OF THE PROJECT.
- SECTIONS AND DETAILS SHOWN ON ANY STRUCTURAL DRAWINGS SHALL BE CONSIDERED TYPICAL FOR SIMILAR CONDITIONS AS DETERMINED BY THE STRUCTURAL ENGINEER. THE STRUCTURAL ENGINEER RESERVES THE RIGHT TO INTERPRET DETAILS TO ADDRESS OTHER PROJECT CONDITIONS.
- 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 INCLUDING, BUT NOT LIMITED TO, DEMOLITION OF EXISTING STRUCTURE, OR FABRICATION OR ERECTION OF NEW STRUCTURAL ELEMENTS, SHALL COMMENCE WITHOUT REVIEW OF THE SHOP DRAWINGS BY THE ARCHITECT AND ENGINEER. SUBMIT ELECTRONIC COPIES PER THE PROJECT SPECIFICATIONS.
- ALL APPLICABLE FEDERAL, STATE, AND MUNICIPAL REGULATIONS SHALL BE FOLLOWED, INCLUDING THE FEDERAL DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ACT.
- IN ACCORDANCE WITH THE MAINE UNIFORM BUILDING AND ENERGY CODE/INTERNATIONAL BUILDING CODE (2009 EDITION, SECTION 1704.1), A STATEMENT OF SPECIAL INSPECTIONS IS REQUIRED AS A CONDITION FOR PERMIT ISSUANCE BY THE LOCAL CODE OFFICIAL. THIS STATEMENT SHALL INCLUDE A COMPLETE LIST OF MATERIALS AND WORK REQUIRING SPECIAL INSPECTIONS, THE INSPECTIONS TO BE PERFORMED AND A LIST OF THE INDIVIDUALS, APPROVED AGENCIES AND FIRMS INTENDED TO BE RETAINED FOR CONDUCTING SUCH INSPECTIONS.
- REFERENCE THE PROJECT SPECIFICATIONS FOR ALL TESTING REQUIREMENTS.

**DESIGN LOADS**

- BUILDING CODE:**  
MAINE UNIFORM BUILDING AND ENERGY CODE  
INTERNATIONAL BUILDING CODE, 2009 EDITION  
ASCE 7-05 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
- DESIGN FLOOR LIVE LOADS:**  
RETAIL: 100 PSF
- DESIGN ROOF SNOW LOAD:**  
GROUND SNOW LOAD (Pg): 60 PSF  
SNOW EXPOSURE FACTOR (Ce): 1.1  
SNOW LOAD IMPORTANCE FACTOR (Is): 1.0  
SNOW LOAD THERMAL FACTOR (Ct): 1.1  
FLAT ROOF SNOW LOAD (Pf): 55 PSF + DRIFT
- DESIGN WIND LOAD:**  
BASIC WIND SPEED: 100 MPH  
WIND LOAD IMPORTANCE FACTOR (Iw): 1.0  
WIND EXPOSURE: B  
INTERNAL PRESSURE COEFFICIENT: ±0.18  
COMPONENTS & CLADDING PER ASCE 7-05
- DESIGN SEISMIC LOADS:**  
EQUIVALENT LATERAL FORCE PROCEDURE  
SEISMIC OCCUPANCY CATEGORY: II  
SEISMIC IMPORTANCE FACTOR (Ie): 1.0  
MAPPED SPECTRAL RESPONSE ACCELERATIONS:  
Ss: 0.314  
S1: 0.077  
D: 0.123  
SEISMIC SITE CLASS: D  
SPECTRAL RESPONSE COEFFICIENTS:  
Ss: 0.324  
S1: 0.123  
SEISMIC DESIGN CATEGORY: B  
BASIC STRUCTURAL SYSTEM: BEARING WALL SYSTEM  
MOMENT RESISTING FRAME SYSTEM  
BASIC SEISMIC FORCE RESISTING SYSTEM: ORDINARY REINF CONC SHEARWALLS  
RESPONSE MODIFICATION FACTOR (R): 4.0  
SEISMIC RESPONSE COEFFICIENT (Cs): 0.0785

**FOUNDATION NOTES (SOIL SUPPORTED)**

- FOUNDATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH A REPORT ENTITLED "EXPLORATION AND GEOTECHNICAL ENGINEERING SERVICES, PROPOSED CANAL PLAZA, MIDDLE STREET AND UNION STREET, PORTLAND, MAINE" PREPARED BY S.W. COLE ENGINEERING INC., DATED 02/25/2016. THE RECOMMENDATIONS OF THE REPORT ARE PART OF THIS WORK. REFER TO THIS REPORT FOR SPECIFIC RECOMMENDATIONS.
- FOUNDATION DESIGN IS BASED ON DRILLED PIERS SOCKETED INTO BEDROCK. REFER TO THIS REPORT FOR SPECIFIC BEARING RECOMMENDATIONS.
- DESIGN BEARING CAPACITY 10 KSF AT BEDROCK
- NO FILL FOR BUILDING SUPPORT SHALL BE PLACED UNTIL SUBGRADES HAVE BEEN OBSERVED AND APPROVED BY THE GEOTECHNICAL ENGINEER.
- REFERENCE THE GEOTECHNICAL REPORT FOR ALL EXCAVATION, BACKFILL, COMPACTION, CONSTRUCTION DEWATERING AND PERMANENT DRAINAGE REQUIREMENTS.
- 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 AND APPROPRIATE DEWATERING MEASURES SHALL BE EMPLOYED.
- EXCAVATIONS FOR BUILDING CONSTRUCTION SHALL BE IN ACCORDANCE WITH OSHA REQUIREMENTS. BRACED EXCAVATIONS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MAINE. DO NOT UNDERMINE EXISTING FOUNDATIONS OF ANY ADJACENT STRUCTURES. REFER TO THE GEOTECHNICAL REPORT FOR ADDITIONAL AND/OR MORE SPECIFIC REQUIREMENTS.

**CONCRETE NOTES**

- CONCRETE WORK SHALL CONFORM TO "ACI MANUAL OF CONCRETE PRACTICE", 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. EXTERIOR AND SITE CONCRETE 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.
- STRUCTURAL CONCRETE WALLS, SLABS AND BEAMS SHALL CONSIST OF SHELF-CONSOLIDATING CONCRETE WITH A 28-DAY COMPRESSIVE STRENGTH OF 6000 PSI.
- CONCRETE SHALL NOT BE PLACED IN WATER OR ON FROZEN GROUND.
- PROVIDE PVC SLEEVES WHERE PIPES PASS THROUGH EXTERIOR CONCRETE, OR SLABS.
- 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.
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185 AND BE PROVIDED IN FLAT SHEETS.
- FIBER REINFORCEMENT SHALL BE TYPE III SYNTHETIC VIRGIN HOMOPOLYMER POLYPROPYLENE FIBERS CONFORMING TO ASTM C1116.
- 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"  
C. SURFACES NOT IN CONTACT WITH EARTH OR EXPOSED TO WEATHER WALLS, SLABS, JOISTS #11 BARS AND SMALLER, 1" 0"  
BEAMS, GIRDBERS, 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 PLAN.
- WELDING OF REINFORCEMENT IS NOT PERMITTED
- FOR ALL OPENINGS IN CONCRETE WALLS AND SLABS, PROVIDE SUPPLEMENTAL REINFORCING AROUND OPENINGS 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 SUBMITAL 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 HORIZONTAL CONSTRUCTION JOINTS EXCEPT WHERE SHOWN OR NOTED. VERTICAL CONSTRUCTION JOINTS AND STOPS IN CONCRETE BEAMS/ GRADE BEAMS SHALL BE MADE AT MIDSPAN OR AT POINTS OF MINIMUM SHEAR, UNLESS NOTED OTHERWISE.
- SPACING OF CONSTRUCTION JOINTS, UNLESS NOTED OTHERWISE SHALL BE AS FOLLOWS:  
A. FOOTINGS AND FOUNDATION WALLS  
MAX LENGTH 40'-0" OR 15'-0" FROM ANY CORNER\*\*  
B. STRUCTURAL WALLS, SLABS & BEAMS EXPOSED TO VIEW SHALL BE PLACED SO THAT JOINTS AND REVEALS MATCH THE ARCHITECTURAL DRAWINGS.  
\*\* EXCEED ONLY WHERE INTERMEDIATE CONTRACTION JOINTS ARE PROVIDED. MINIMUM OF 72 HOURS SHALL ELAPSE BETWEEN ADJACENT CONCRETE PLACEMENTS.
- 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.
- 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.
- 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.

**POST-TENSIONING NOTES**

- FIELD FOREMAN: THE FIELD FOREMAN RESPONSIBLE FOR THE PLACEMENT OF ALL POST-TENSIONING SHALL HAVE A MINIMUM OF THREE (3) YEARS EXPERIENCE IN THIS CAPACITY FOR THIS TYPE OF CONSTRUCTION.
- PT STEEL QUALITY: ONE SAMPLE OF EACH REEL OR HEAT SHALL BE TESTED BY AN APPROVED LABORATORY. TEST RESULTS OR MILL CERTIFICATES SHALL BE SUBMITTED TO THE ENGINEER BEFORE STRESSING OF TENDONS. POST-TENSIONING TENDONS SHALL BE STRESS-RELIEVED OR BE OF LOW-RELAXATION QUALITY, AND SHALL CONFORM TO THE FOLLOWING:  
SEVEN WIRE STRAND ASTM DESIGNATION .....A-416  
0.5" DIAMETER TENDON AREA .....0.153 IN SQ.  
0.6" DIAMETER TENDON AREA .....0.217 IN SQ.  
ULTIMATE STRENGTH .....270 KSI  
TENDON STRESSES SHALL CONFORM TO THE FOLLOWING:  
MAXIMUM JACKING STRESS .....216 KSI  
MAXIMUM STRESS IMMEDIATELY AFTER PRESTRESS TRANSFER .....200 KSI  
MAXIMUM ANCHORAGE STRESS IMMEDIATELY AFTER PRESTRESS TRANSFER .....189 KSI
- EFFECTIVE FORCE: EFFECTIVE POST TENSIONING FORCES, AFTER LOSSES, ARE INDICATED ON THE DRAWINGS. DESIGNER SHALL ENSURE THESE MINIMUM FORCES ARE ACHIEVED AFTER ALL LOSSES ARE APPLIED.
- PT HARDWARE QUALITY: ALL ANCHORAGES, COUPLERS AND MISCELLANEOUS HARDWARE SHALL BE STANDARD AND APPROVED BY THE ENGINEER.
- TENDONS: UNBONDED STRANDS SHALL BE ENCASED IN SLIPPAGE SHEATHING WHICH SHALL CONSIST OF A SEALED DURABLE WATERPROOF PLASTIC TUBING CAPABLE OF PREVENTING THE PENETRATION OF MOISTURE AND CEMENT PASTE, AND WHICH WILL CONTAIN A RUST-INHIBITING GREASE COATING. TEARS IN THE SHEATHING SHALL BE REPAIRED TO RESTORE THE WATERTIGHTNESS OF THE SHEATHING. HEAT-SEALED SHEATHING SHALL NOT BE USED UNLESS THE WATERTIGHTNESS OF THE SHEATHING IS GUARANTEED BY THE CONTRACTOR.
- SHOP DRAWINGS: THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING TENDON LAYOUT, DEAD-END AND STRESSING- END LOCATIONS, AND TENDON SUPPORT LAYOUTS WITH DETAILS NECESSARY FOR INSTALLATION FOR THE ENGINEER'S APPROVAL.  
DESIGN CALCULATIONS: SUBMIT CALCULATIONS PREPARED BY PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MAINE FOR DESIGN OF POST-TENSIONING. DESIGN SHALL INCLUDE THE FOLLOWING:  
A. QUANTITY AND SIZE OF STRANDS/TENDONS TO BE USED TO ACHIEVE EFFECTIVE POST-TENSIONING FORCES.  
B. JACKING FORCES FOR EACH MEMBER.  
C. ESTIMATE OF LOSSES.  
D. EFFECTIVE POST-TENSIONING FORCE AFTER ALL LOSSES.  
E. ANCHORS, COUPLERS & STRESSING HARDWARE.  
F. ANCHORAGE ZONE REINFORCEMENT.
- TENDON PLACEMENT: CARE SHALL BE TAKEN THAT TENDONS ARE LOCATED AND HELD IN THEIR DESIGNED POSITIONS. TOLERANCES FOR THE LOCATION OF THE PRESTRESSING STEEL SHALL NOT BE MORE THAN ± 1/8" VERTICALLY, EXCEPT AS NOTED OR APPROVED BY THE ENGINEER. ACCESS TO STRESSING ENDS SHALL BE MAINTAINED WHERE SHOWN.  
TENDON ADJUSTMENTS: SLIGHT DEVIATIONS IN THE HORIZONTAL SPACING OF THE SLAB TENDONS WILL BE PERMITTED WHEN REQUIRED TO AVOID OPENINGS, INSERTS AND DOWELS WHICH ARE SPECIFICALLY LOCATED. WHERE LOCATIONS OF TENDONS SEEM TO INTERFERE WITH EACH OTHER, ONE TENDON MAY BE MOVED HORIZONTALLY IN ORDER TO AVOID THE INTERFERENCE.
- TWISTING: TWISTING OR ENTWINING OF INDIVIDUAL WIRES OR STRANDS WITHIN A BUNDLE OR A BEAM SHALL NOT BE PERMITTED.
- STRAND BUNDLES: STRANDS TO BE BUNDLED SHALL BE SUBMITTED TO ENGINEER FOR FINAL APPROVAL.
- PROFILES: PROFILES SHALL CONFORM TO CONTROLLING POINTS SHOWN ON THE DRAWINGS AND SHOULD BE IN AN APPROXIMATE PARABOLIC DRAPE BETWEEN SUPPORTS, UNLESS NOTED OTHERWISE. LOW POINTS ARE AT MIDSPAN UNLESS NOTED OTHERWISE.
- PRESTRESS COVER: ALL DIMENSIONS SHOWING THE LOCATION OF PRESTRESSING TENDONS ARE TO THE CENTER OF GRAVITY OF THE TENDON (CGS) UNLESS NOTED OTHERWISE.
- MINIMUM CHAIRING: TENDONS SHALL BE SECURED TO A SUFFICIENT NUMBER OF POSITIONING DEVICES TO ENSURE CORRECT LOCATION DURING AND AFTER THE PLACING OF THE CONCRETE, AND SHALL BE SUPPORTED AT A MAXIMUM OF 3'-6" ON CENTER. CHAIRS GREATER THAN 2.5" IN SIZE SHALL BE STAPLED TO THE FORMWORK.
- ANCHORS: PLACE TWO (2) CONTINUOUS #4 BARS BEHIND ALL ANCHORAGES, UNLESS NOTED OTHERWISE. SPLICES SHALL BE 24" MINIMUM AND STAGGERED.
- BLOCKOUTS: ALL POCKETS OR BLOCKOUTS REQUIRED FOR ANCHORAGE SHALL BE ADEQUATELY REINFORCED SO AS NOT TO DECREASE THE STRENGTH OF THE STRUCTURE. ALL POCKETS SHOULD BE WATERPROOFED TO ELIMINATE WATER LEAKAGE THROUGH OR INTO THE POCKET.
- PENETRATIONS: PENETRATIONS SHALL NOT BE PERMITTED IN BEAMS EXCEPT AS SHOWN IN PT DRAWINGS OR TYPICAL DETAILS.
- INSERTS: ALL INSERTS AND SLEEVES SHALL BE CAST IN PLACE WHENEVER POSSIBLE. DRILLED AND POWER-DRIVEN FASTENERS WILL BE PERMITTED ONLY WHEN IT CAN BE SHOWN THAT THE INSERTS WILL NOT SPALL THE CONCRETE AND ARE LOCATED TO AVOID THE TENDONS AND ANCHORAGES. THE CONTRACTOR MUST LOCATE TENDONS ON THE SURFACE SLAB.
- CHLORIDES: GROUT OR CONCRETE CONTAINING CHLORIDES SHALL NOT BE USED.
- PUMPED CONCRETE: IF CONCRETE IS PLACED BY THE PUMP METHOD, THEN HORSES SHALL BE PROVIDED TO SUPPORT THE HOSE. THE HOSE SHALL NOT BE ALLOWED TO RIDE ON THE TENDONS.
- CONCRETE CONSOLIDATION: THE CONTRACTOR SHALL TAKE PRECAUTIONS TO ASSURE COMPLETE CONSOLIDATION AND DENSIFICATION OF CONCRETE BEHIND ALL POST-TENSIONING ANCHORAGES.
- CONCRETE STRENGTH AT STRESSING: AT TRANSFER OF PRESTRESS, CONCRETE SHALL BE 4,000 PSI MINIMUM FOR ANY GIVEN CYLINDER COMPRESSION TEST.
- TENDON STRESSING: TENSIONING SHALL BE DONE BY JACKING UNDER IMMEDIATE CONTROL OF A PERSON EXPERIENCED IN THIS TYPE OF WORK. CONTINUOUS INSPECTION AND RECORDING OF ELONGATIONS IS REQUIRED DURING ALL STRESSING OPERATIONS.
- CALIBRATION: THE RAM AND ATTENDANT GAUGE USED SHALL HAVE BEEN CALIBRATED WITHIN SIXTY (60) DAYS OF THEIR USE.
- STRESSING SEQUENCE: UNIFORMLY DISTRIBUTED TENDONS SHALL BE STRESSED BEFORE CONCENTRATED BEAM STRIP (BANDED) TENDONS, AND SLAB TENDONS SHALL BE STRESSED BEFORE BEAM TENDONS.
- ELONGATIONS: INDIVIDUAL TENDON FIELD READINGS OF ELONGATIONS AND/OR STRESSING FORCES SHALL NOT VARY BY MORE THAN ±7% FROM CALCULATED REQUIRED VALUES SHOWN ON THE SHOP DRAWINGS. IF THE MEASURED ELONGATIONS VARY FROM CALCULATED VALUES BY MORE THAN ±7%, THE CONTRACTOR SHALL PROVIDE FRICTION CALCULATIONS AND/OR OTHER JUSTIFICATION TO THE SATISFACTION OF THE ENGINEER.
- MEMBER FORCES: THE POST-TENSIONED FORCE PROVIDED IN THE FIELD FOR EACH STRUCTURAL MEMBER SHALL NOT BE LESS THAN THE VALUES NOTED ON THE STRUCTURAL DRAWINGS. IN THIS CONTEXT, STRUCTURAL MEMBERS ARE BEAMS OR SLABS, WHETHER WITH BANDED OR DISTRIBUTED TENDONS, EACH SERVING THEIR RESPECTIVE TRIBUTARY.
- TENDON ENDS: DO NOT BURN OFF TENDON ENDS UNTIL THE ENTIRE FLOOR SYSTEM HAS BEEN SATISFACTORILY STRESSED AND THE ENGINEER'S APPROVAL IS OBTAINED. THE STRESSING END ANCHORS AND WEDGES SHALL BE SPRAY PAINTED WITH RUST-OLEUM OR A SIMILAR COATING FOR CORROSION PROTECTION. INSTALL GREASE CAPS WITHIN THE FOLLOWING 24-HOUR PERIOD.
- GROUTING OF STRESSING POCKETS: STRESSING POCKETS SHALL BE FILLED WITH NON-SHRINK GROUT AFTER STRESSING, PAINTING & GREASE-CAPPING TO STOP MOISTURE PENETRATION.
- DE-SHORING: SLABS OR BEAMS MAY BE DE-SHORED WHEN ALL TENDONS HAVE BEEN SATISFACTORILY STRESSED AND THE ENGINEER'S APPROVAL IS OBTAINED, UNLESS SHORING IS REQUIRED TO CARRY FLOORS ON ABOVE LEVELS.

**ABBREVIATIONS**

- A.B. ANCHOR BOLT
- ABV ABOVE
- ACI AMERICAN CONCRETE INSTITUTE
- ACT ACoustical CEILING TILE
- ADDL ADDITIONAL
- AESS ARCHITECTURAL EXPOSED STRUCTURAL STEEL
- A.F.F ABOVE FINISH FLOOR
- ALTERNATE ALTERNATE
- ALUM ALUMINUM
- APA AMERICAN PLYWOOD ASSOCIATION
- L APPROX APPROXIMATE
- A.R. ANCHOR ROD
- ARCH ARCHITECT OR ARCHITECTURAL
- BAL BALANCE
- B.C.X. BOTTOM CHORD EXTENSION
- BD BOARD
- B.F. BRACED FRAME
- BLDG BUILDING
- BLKG BLOCKING
- BM BEAM
- BIT BITUMINOUS
- B.O. BOTTOM OF/ BY OTHERS
- BOOT BOTTOM
- B.P. BEAM POCKET
- B.PL. BASE PLATE
- BRG BEARING
- B.S. BOTH SIDES
- BSMT BETWEEN
- B.TWN BETWEEN
- CC CENTER TO CENTER
- CHANNEL CHANNEL
- CFMF COLD FORM METAL FRAMING
- C.I.P. CAST IN PLACE
- C.J. CONTRACTION/CONST. JOINT
- CL CENTER LINE
- CLG CEILING
- CLR CLEAR
- CONJ CONCRETE MASONRY UNIT
- COL COLUMN
- CONC CONCRETE
- CONN CONNECTION
- CONST CONSTRUCTION
- CONTR CONTRACTION FORCES
- COORD COORDINATE
- CTR(D) CENTER(ED)
- d PENNY
- DBL DOUBLE
- DIA OR " DIAMETER
- DIAG DIAGONAL
- DIM DIMENSION
- DL DEAD LOAD
- DN DOWN
- DO/O DOOR OVER
- DP DRILLED PIER OR DEEP
- DTL(S) DRAINING(S)
- DWG(S) DWEL(S)
- DWL(S) DWEL(S)
- (E) OR EXIST EXISTING
- EA EACH
- EE EACH END
- E.F. EACH FACE
- E.J. EXPANSION JOINT
- EL ELEVATION
- ELV ELEVATION
- ELEC ELECTRICAL
- EMBED EMBEDMENT
- ENGR ENGINEER
- E.O.P. EDGE OF DECK
- E.O.R. ENGINEER OF RECORD
- E.O.S. EDGE OF SLAB
- EQ EQUAL
- EQ SP EQUALLY SPACED
- EQUIP EQUIPMENT
- E.S. EACH SIDE
- E.W. EACH WAY
- E.W.B. EACH WAY BOTTOM
- EXIST/EX EXISTING
- EXP ANCHOR EXPANSION ANCHOR
- EXP EXPANSION
- EXT EXTERIOR
- FB FLAT BAR
- F.D. FLOOR DRAIN
- FDN FOUNDATION
- FIN. FL. FINISH FLOOR
- F.F. FINISH FLOOR/ FAR FACE
- FLG FLANGE
- FLR FLOOR
- F.F.E. FINISH FLOOR ELEVATION
- F.O.B. FACE OF BRICK
- F.O. FACE OF
- F.F. FACE OF
- FRMG FRAMING
- F.S. FLOOR SIDE
- F.T. FOOT OR FEET
- FTG FOOTING
- GA GAGE/GAUGE
- GALV GALVANIZED
- GLU GLU-LAM
- G.B. GRADE BEAM
- G.C. GENERAL CONTRACTOR
- GR GRADE OR GRIND
- GWB GYPSUM WALL BOARD
- H.D. HOLDOWN
- H.D. GALV HOT DIPPED GALVANIZED
- HK HOOK
- HORIZ HORIZONTAL
- HT HEIGHT
- HVAC HEATING VENTILATION & COOLING
- HSS HOLLOW STRUCTURAL SHAPE

**ABBREVIATIONS**

- I.D. INSIDE DIAMETER
- INFO INFORMATION
- I.F. INSIDE FACE
- IN INCH
- INSUL INSULATION
- INTL INTERIOR
- JOIST JOIST
- JOINT JOINT
- K KIPS (1K=1000LBS)
- L LENGTH
- LG LONG LEG VERT
- LB(S) POUNDS(S)
- LL LIVE LOAD
- LLBB LONG LEGS BACK TO BACK
- LLH LONG LEG HORIZ
- LLV LONG LEG VERT
- LOC(S) LOCATION(S) OR LOCATE
- LONG LONGITUDINAL
- LSL LAMINATED STRAND LUMBER
- LT LIGHT
- LTS TENSION LAP SPLICE LENGTH
- LTV LIGHTWEIGHT
- LVL LEVEL OR LAMINATE VENEER LUMBER
- MACH MACHINE
- MACH RM MACHINE ROOM
- MAS MASONRY
- MATL MATERIAL
- MAX MAXIMUM
- MECH MECHANICAL
- M.E.P. MECHANICAL/ELECTRICAL/PLUMBING
- MANUF MANUFACTURER
- MIN MINIMUM
- MISC MISCELLANEOUS
- MICRO-LAM MICRO-LAM
- M.O. MASONRY OPENING
- MTL METAL
- N NORTH
- N.I.C. NOT IN CONTRACT
- NO OR # NUMBER
- NOM NOMINAL
- N.S. NORTH-SOUTH
- N.S. NEAR SIDE
- N.T.S. NOT TO SCALE
- O.C. ON CENTER
- O.D. OUTSIDE DIAMETER
- O.F. OUTSIDE FACE
- O.H. OPENING HAND
- OPNG OPENING
- OPP OPPOSITE
- P.A.F. POWDER ACTUATED FASTENER
- P.C. PILE CAP
- PCA PORTLAND CONCRETE ASSOCIATION
- PEN PENETRATION
- PERP PERPENDICULAR
- PL PLATE
- PLCS PLACES
- PLF POUNDS PER LINEAR FOOT
- PSF POUNDS PER SQUARE FOOT
- PSI POUNDS PER SQUARE INCH
- PREFAB PREFABRICATION
- PRELIM PRELIMINARY
- P.T. PRESSURE TREATED
- PVC POLYVINYL CHLORIDE
- QTY QUANTITY
- R RADIUS
- RE OR REF REFER TO REFERENCE
- R.D. ROOF DRAIN
- REINF REINFORCE(ING)(D)(MENT)
- REQD REQUIRED
- REQMNTS REQUIREMENT(S)
- R.O. ROUGH OPENING
- RTU ROOF TOP UNIT
- S.C. SLIP CRITICAL
- SCHED SCHEDULE
- SECT SECTION
- S.F. SQUARE FOOT
- SHT SHEET
- SIM SIMILAR
- SLH SHORT LEG HORIZONTAL
- SLV SHORT LEG VERTICAL
- S SOUTH
- SP @ SPACE AT
- SP(S) SPACE(S)
- SPECS SPECIFICATIONS
- S.K. SHEAR KEY
- S.L. SHEAR LUG
- S.S. STAINLESS STEEL
- SSLT SHORT SLOT
- STD STANDARD
- STL STEEL
- STRUCT STRUCTURAL
- STIFF STIFFENER
- S.W. SHEARWALL
- SYM SYMMETRICAL
- T TOP
- T&B TOP AND BOTTOM
- T.C.F. TOP CHORD EXTENSION
- THK THICK
- TL TOTAL LOAD
- T.J. TIE JOIST
- T.O. OR T/ TOP OF
- T.O.S. T/SL TOP OF STEEL etc
- TRANS TRANSVERSE
- TYP TYPICAL
- U.N.O. UNLESS NOTED OTHERWISE
- VERT VERTICAL
- V.I.F. VERIFY IN FIELD
- W/ WITH
- W/O WITHOUT
- WD WIDTH OR WOOD
- WF WIDE FLANGE
- W.P. WORK POINT
- WT WEIGHT
- W.W.F. WELDED WIRE FABRIC

Project Title

**CANAL ZERO**

CS Project No. 3709



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Mark Date Description

Project Status

09-19-16

FOR CONSTRUCTION

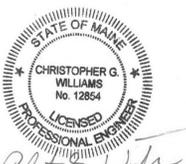
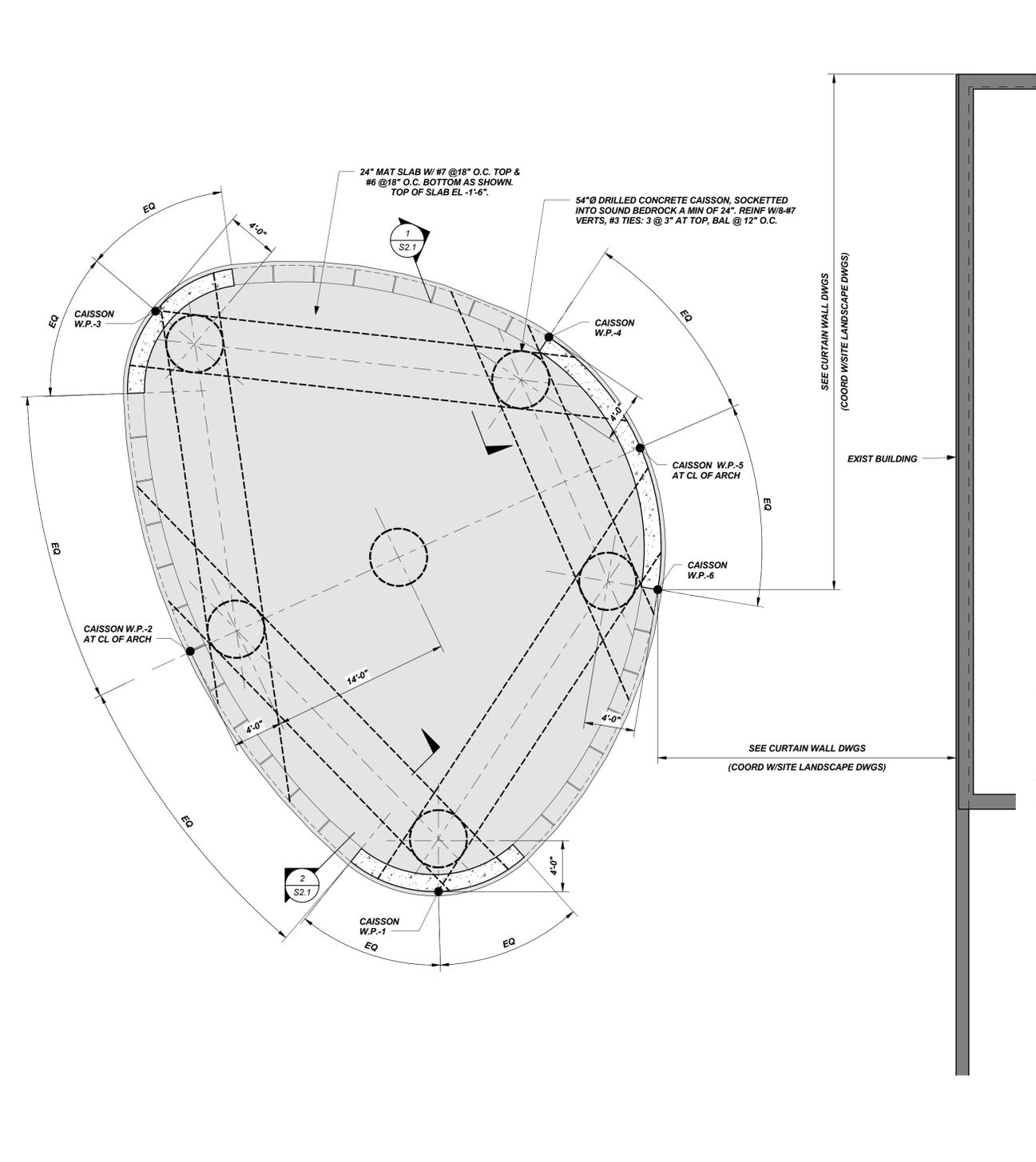
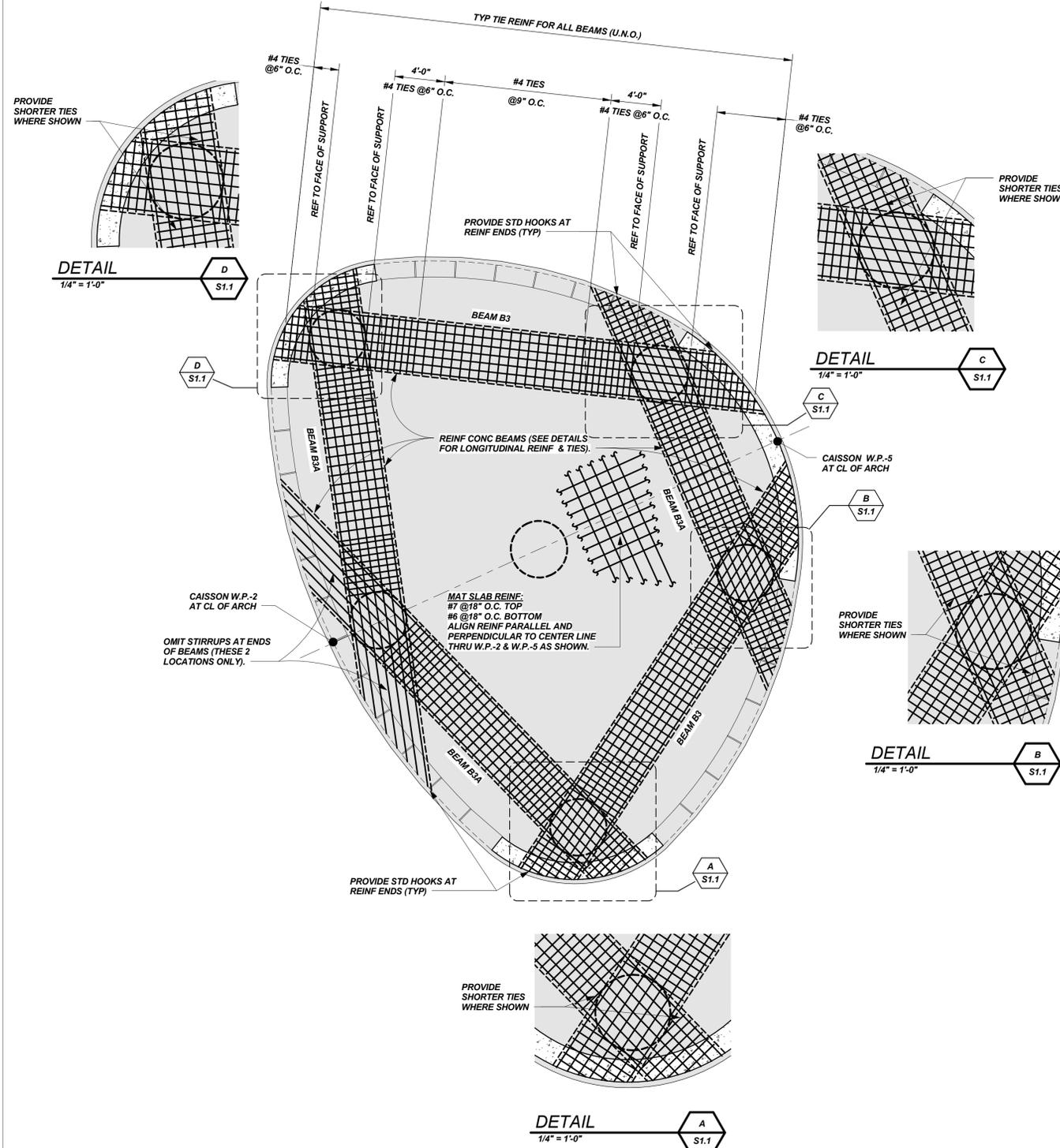
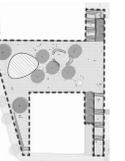
Drawing Title

**GENERAL NOTES**

Scale: 1/8" = 1'-0"

Drawing Number

**S1.0**



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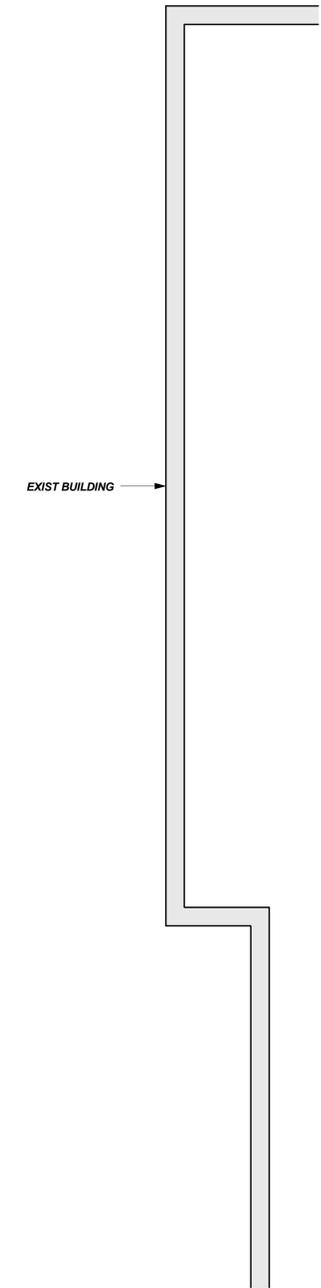
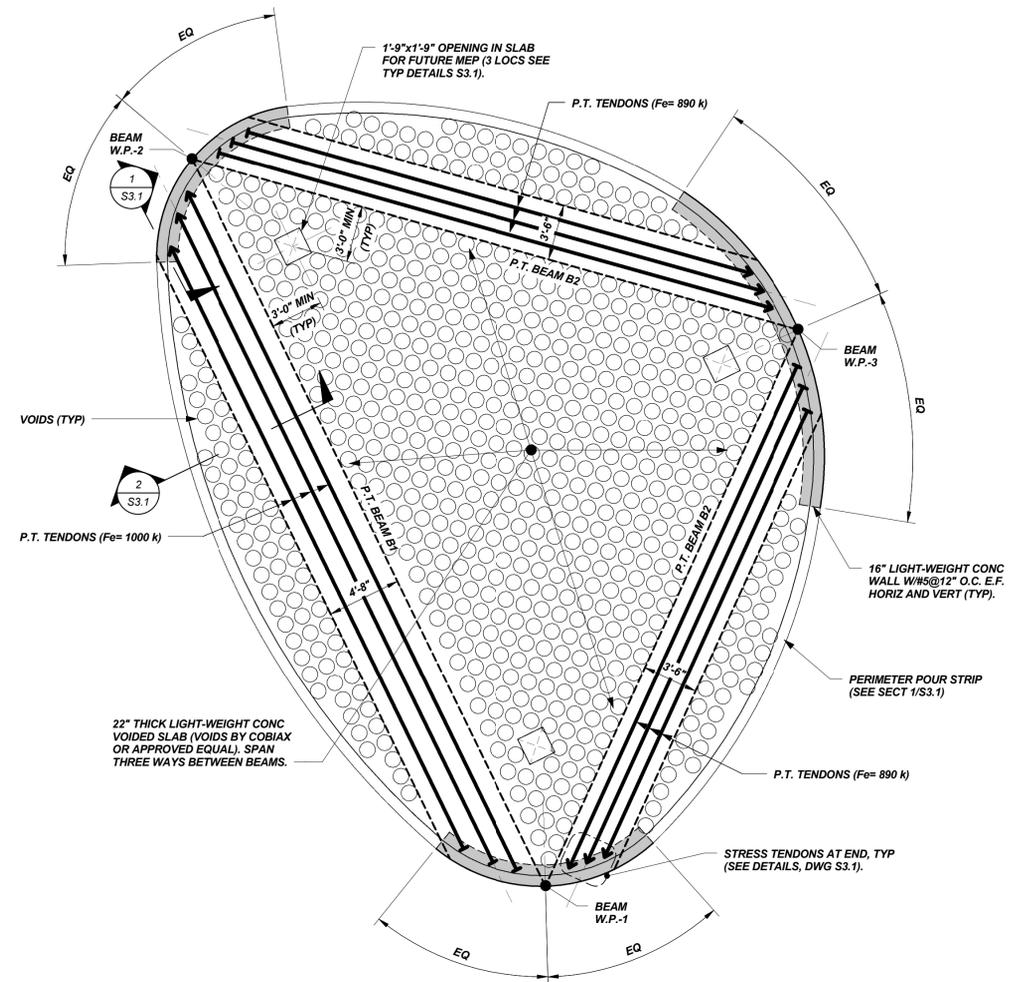
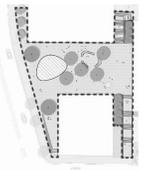
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**FOUNDATION PLANS**

Scale: As indicated

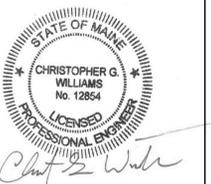
Drawing Number

**S1.1**



**ROOF FRAMING PLAN**  
3/16" = 1'-0"

- NOTES:**
1. --- INDICATES EXTENTS OF SOLID CONCRETE BEAM INTEGRAL W/SLAB.
  2. SEE NOTE 1 FOR CONC BEAM WORKPOINTS IDENTIFIED AT BEAM W.P.-1, W.P.-2, ETC.
  3. Fe INDICATES "EFFECTIVE PRESTRESSING FORCE" AFTER LOSSES.



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Mark	Date	Description

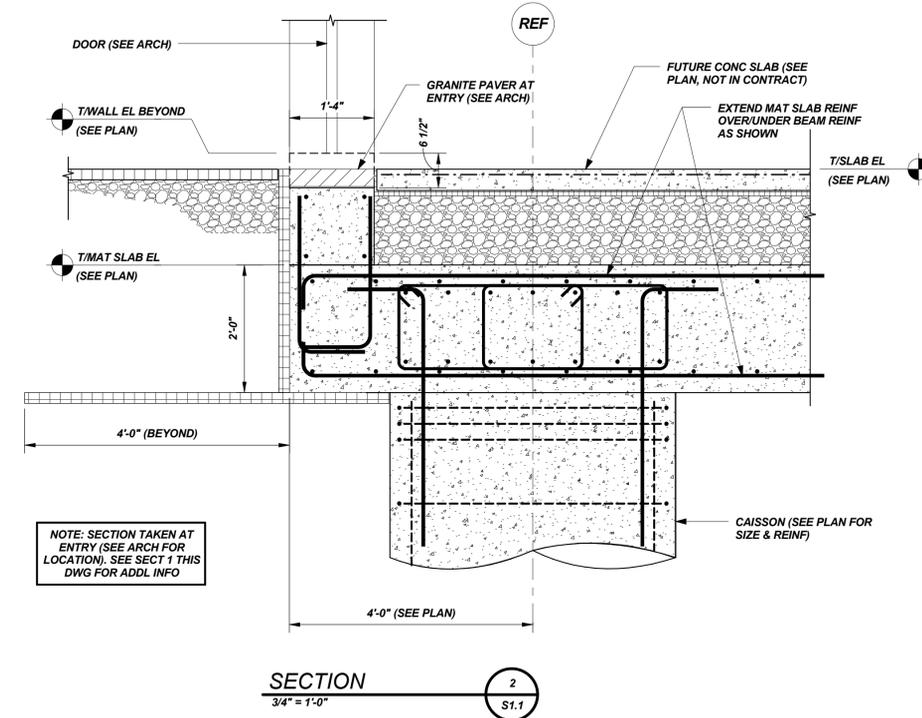
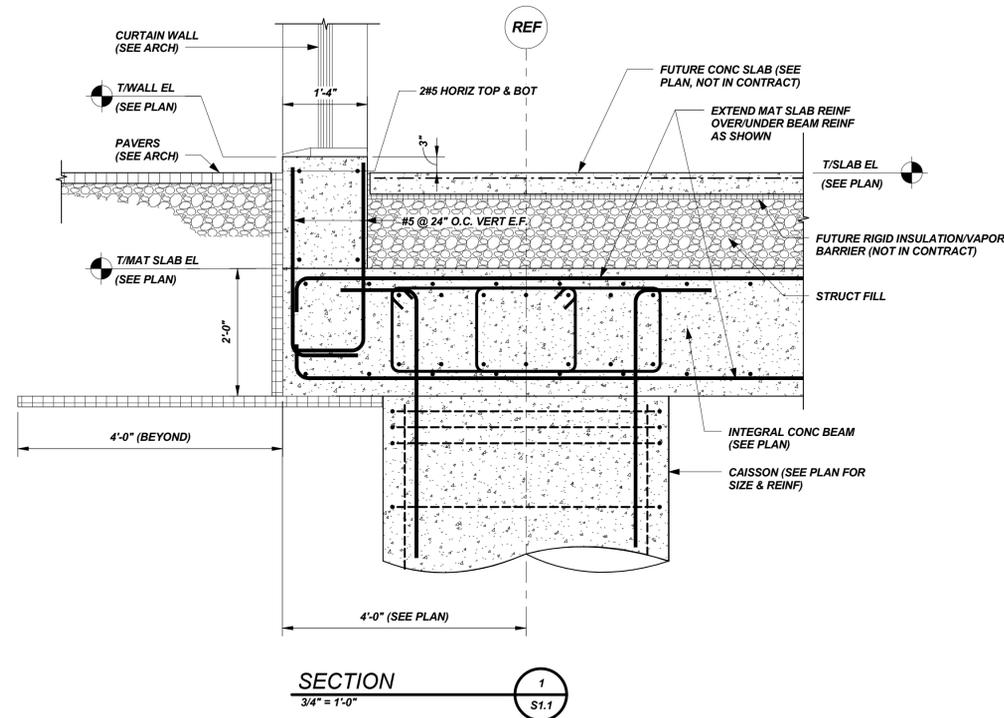
Project Status
09-19-16
FOR CONSTRUCTION

Drawing Title
ROOF FRAMING PLAN

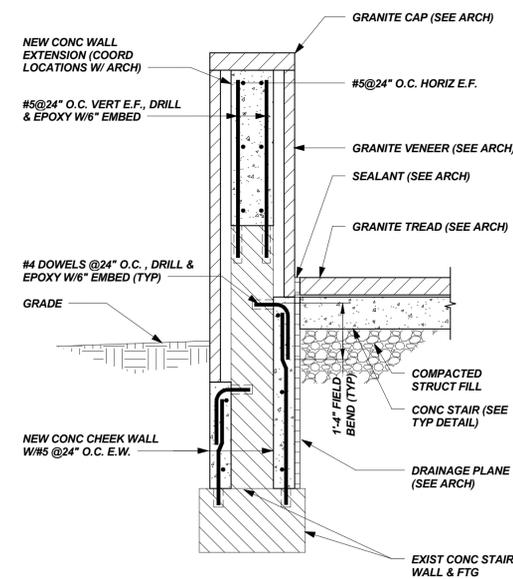
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Drawing Number
S1.2



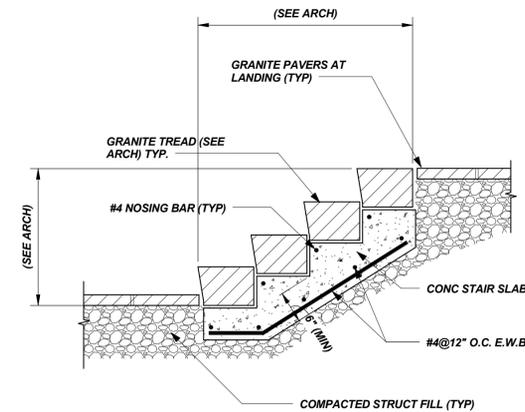


NOTE: SECTION TAKEN AT ENTRY (SEE ARCH FOR LOCATION). SEE SECT 1 THIS DWG FOR ADDL INFO



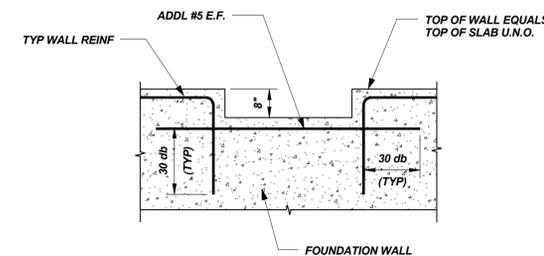
**TYP SITE STAIR WALL DETAIL**

N.T.S.



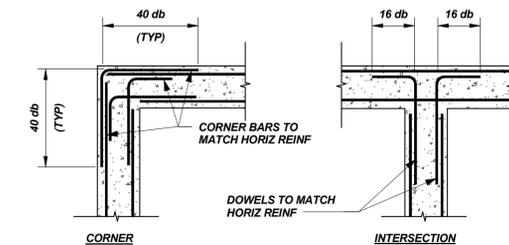
**TYP SITE STAIR DETAIL**

3/4" = 1'-0"



**TYP WALL DEPRESSION DETAIL @ DOOR**

N.T.S.



**TYP WALL REINF DETAILS**

N.T.S.



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Mark Date Description

Project Status

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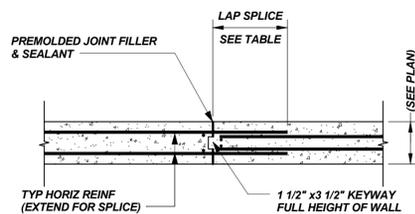
Drawing Title

**FOUNDATION SECTIONS & DETAILS**

Scale: As indicated

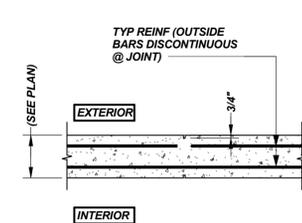
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**S2.1**



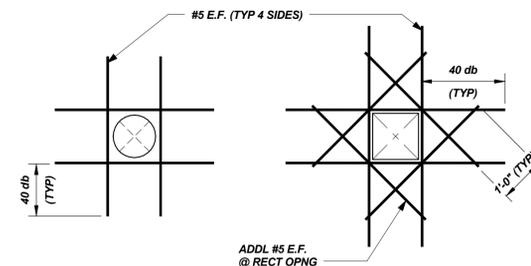
**TYP CONSTRUCTION JOINT IN WALL**

N.T.S.



**TYP CONTROL JOINT IN WALL**

N.T.S.



**TYP OPENING IN WALL OR SLAB DETAIL**

N.T.S.

BAR SIZE	LAP LENGTH	
	3,500 PSI	5,000/6,000 PSI
#3	30"	24"
#4	36"	32"
#5	42"	42"
#6	48"	48"
#7	66"	56"
#8	74"	64"
#9	84"	74"
#10	96"	84"

