

- 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
- 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.
- 4. 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
- 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.

PROPERTY OF THE CONTRACTOR AFTER COMPLETION OF THE PROJECT.

- 6. 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.
- 7. ALL APPLICABLE FEDERAL, STATE, AND MUNICIPAL REGULATIONS SHALL BE FOLLOWED, INCLUDING THE FEDERAL DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH
- 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:

DESIGN ROOF SNOW LOAD: GROUND SNOW LOAD (Pg): SNOW EXPOSURE FACTOR (Ce): SNOW LOAD IMPORTANCE FACTOR (Is): 1.0 SNOW LOAD THERMAL FACTOR (Ct): FLAT ROOF SNOW LOAD (Pf): 55 PSF + DRIFT DESIGN WIND LOAD: 100 MPH BASIC WIND SPEED. WIND LOAD IMPORTANCE FACTOR (Iw): WIND EXPOSURE: INTERNAL PRESSURE COEFFICIENT: ±0.18 COMPONENTS & CLADDING PER ASCE 7-05 DESIGN SEISMIC LOADS: EQUIVALENT LATERAL FORCE PROCEDURE SEISMIC OCCUPANCY CATEGORY: SEISMIC IMPORTANCE FACTOR (Ie) MAPPED SPECTRAL RESPONSE ACCELERATIONS: 0.077 SEISMIC SITE CLASS: SPECTRAL RESPONSE COEFFICIENTS: 0.123

FOUNDATION NOTES (SOIL SUPPORTED)

SEISMIC DESIGN CATEGORY:

BASIC STRUCTURAL SYSTEM:

BASIC SEISMIC FORCE RESISTING SYSTEM:

RESPONSE MODIFICATION FACTOR (R):

SEISMIC RESPONSE COEFFICIENT (Cs):

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 FORMED AND CAST PIERS AND FOOTINGS BEARING ON SOUND

BEARING WALL SYSTEM

0.0785

ORDINARY REINF CONC SHEARWALLS

BEDROCK. REMOVAL OF LOOSE MATERIAL/ROCK DOWN TO SOUND BEDROCK MAY BE REQUIRED.
REFER TO GEOTECH REPORT FOR SPECIFIC BEARING RECOMMENDATIONS.
DESIGN BEARING CAPACITY 12 KSF AT SOUND BEDROCK

- NO FILL FOR BUILDING SUPPORT SHALL BE PLACED UNTIL SUBGRADES AND EXISTING LEDGE
 BEARING SURFACES HAVE BEEN OBSERVED AND APPROVED BY THE GEOTECHNICAL ENGINEER.
- 5. REFERENCE THE GEOTECHNICAL REPORT FOR ALL EXCAVATION, BACKFILL, COMPACTION, CONSTRUCTION DEWATERING AND PERMANENT DRAINAGE REQUIREMENTS.
- 6. 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.
- 7. 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.
- 8 EXTEND BOTTOM OF EXTERIOR FLOOTINGS AT LEAST 4'-6" BELOW THE FINAL EXTERIOR GRADE FOR PROTECTION AGAINST FROST.

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) 848-3800.

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CONCRETE FOUNDATIONS SHALL HAVE THE FOLLOWING MINIMUM 28-DAY
COMPRESSIVE STRENGTHS:

A. FOUNDATIONS:

3500 PSI

B. STRUCTURAL CONRETE ABOVE FOUNDATIONS:

C. SITE AND ALL OTHER EXPOSED CONCRETE: 5000 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.

 3. 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.

 6. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185 AND BE PROVIDED IN FLAT
- SHEETS.
 7. FIBER REINFORCEMENT SHALL BE TYPE III SYNTHETIC VIRGIN HOMOPOLYMER
- POLYPROPYLENE FIBERS CONFORMING TO ASTM C1116.

 8. MINIMUM CONCRETE PROTECTIVE COVERING FOR REINFORCEMENT, UNLESS
 - A. SURFACES CAST AGAINST AND PERMANENTLY IN CONTACT WITH EARTH, 3.0"
 B. FORMED SURFACES EXPOSED TO 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, GIRDERS, AND COLUMNS; ALL REINFORCEMENT, 1.5"
- 9. 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
- 10. WELDING OF REINFORCEMENT IS NOT PERMITTED.

NOTED OTHERWISE, SHALL BE AS FOLLOWS:

- 1. 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 STRUCTURAL ENGINEER.
- 12. 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 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.
- 3. 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
- 14. 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.
- 15. 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, SHELF BULK HEADS AND POST TENSIONING ANCHORS.

POST-TENSIONING NOTES

6000 PSI

 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. **ABBREVIATIONS**

ADDL

AESS

ALUM

ARCH

B.C.X.

BLDG

B.O.

BO1

B.PL

BTWN

C.I.P.

C.J.

COL

CONC

CONN

CONT

CONST

CONTR

COORD

CTR(D)

DIA OR Ø

DIM

DO/do

DTL(S)

DWG(S)

DWL(S)

ELEC

E.O.S.

EQ SP

EQUIP

E.W.B.

EXT

F.D.

FDN

F.F.

FLG

FLR

F.O.B.

FRMG

F.O.

F.S.

F.T.

FTG

GALV

G.B.

GWB

H.D. GALV

HORIZ

HVAC

FIN. FL.

EXIST/EX

EXP ANCHOR

E.S.

EMBEL

(E) OR EXIS

APPROX

APA

A.F.F

ANCHOR BOLT

ADDITIONAL

ALTERNATE

APPROXIMATE

BRACED FRAME

ANCHOR ROD

ALUMINUM

BALANCE

BUILDING

BLOCKING

BITUMINOUS

BEAM POCKET

BASE PLATE

BOTH SIDES

BASEMENT

BETWEEN

CHANNEL

CEILING

COLUMN

CONCRETE

CONNECTION

CONTINUOUS

CONTRACTOR

COORDINATE

CENTER(ED)

DIAMETER

DIAGONAL

DIMENSION

DEAD LOAD

DETAIL(S)

DRAWING(S)

DOWEL(S)

EXISTING

EACH END

EACH FACE

ELEVATION

ELEVATOR

ELECTRICAL

EMBEDMEN7

EDGE OF DECK

EDGE OF SLAB

EQUIPMENT

EACH SIDE

EACH WAY

EXPANSION

EXTERIOR

FLAT BAR

FLANGE

FACE OF

FRAMING

FAR SIDE

FOOTING

GLU-LAM

HOLDOWN

HORIZONTAL

HOOK

HEIGHT

FLOOR

FLOOR DRAIN

FINISH FLOOR

FACE OF BRICK

FOOT OR FEET

GAGE/GAUGE

GALVANIZED

GRADE BEAM

GENERAL CONTRACTOR

HOT DIPPED GALVANIZED

HEATING VENTILATION & COOLING

HOLLOW STRUCTURAL SHAPE

GYPSUM WALL BOARD

GRADE OR GRIND

FINISH FLOOR/ FAR FACE

FINISH FLOOR ELEVATION

FOUNDATION

EXISTING

EQUALLY SPACED

EACH WAY BOTTOM

EXPANSION ANCHOR

ENGINEER OF RECORL

ENGINEER

EXPANSION JOINT

FACH

DITTO/DO OVER

DRILLED PIER OR DEEP

CONSTRUCTION

CENTER TO CENTER

CAST IN PLACE

CENTER LINE

COLD FORM METAL FRAMING

CONTRACTION/CONST. JOINT

CONCRETE MASONRY UNIT

BEARING

AMERICAN CONCRETE INSTITUTE

AMERICAN PLYWOOD ASSOCIATION

ARCHITECT OR ARCHITECTURAL

BOTTOM CHORD EXTENSION

BOTTOM OF/ BY OTHERS

ARCHITECTURAL EXPOSED STRUCTURAL STEEL

ACOUSTICAL CEILING TILE

ABOVE FINISH FLOOR

2. 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 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 KS
MAXIMUM ANCHORAGE STRESS IMMEDIATELY
AFTER PRESTRESS TRANSFER......189 KS

- 3. 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.
- 4. PT HARDWARE QUALITY: ALL ANCHORAGES, COUPLERS AND MISCELLANEOUS
- HARDWARE SHALL BE STANDARD AND APPROVED BY THE ENGINEER.

 5. 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.
- 6. 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
- 7. 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. CALCULATION OF LOSSES.
 - D. EFFECTIVE POST-TENSIONING FORCE AFTER ALL LOSSES
 - (E. INTENDED ELONGATION OF EACH STRAND AFTER STRESSING.) F. ANCHORS, COUPLERS & STRESSING HARDWARE.
 - F. ANCHORS, COUPLERS & STRESSING HARDWARE.` G. ANCHORAGE ZONE REINFORCEMENT.
- 8. 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.
- 9. 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.
- 10. TWISTING: TWISTING OR ENTWINING OF INDIVIDUAL WIRES OR STRANDS WITHIN A BUNDLE OR A BEAM SHALL NOT BE PERMITTED.
- 11. STRAND BUNDLES: STRANDS TO BE BUNDLED SHALL BE SUBMITTED TO ENGINEER FOR
- 12. PROFILES: PROFILES SHALL CONFORM TO CONTROL POINTS SHOWN ON THE DRAWINGS AND SHOULD BE IN AN APPROXIMATE PARABOLIC DRAPE BETWEEN SUPPORTS, UNLESS NOTED OTHERWISE. LOW POINTS ARE AT MIDSPAN UNLESS
- 13. 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
- 14. ANCHORS: PLACE TWO (2) CONTINUOUS #4 BARS BEHIND ALL ANCHORAGES, UNLESS NOTED
- OTHERWISE. SPLICES SHALL BE 24" MINIMUM AND STAGGERED.

 15. 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.
- 16. PENETRATIONS: PENETRATIONS SHALL NOT BE PERMITTED IN BEAMS EXCEPT AS SHOWN IN PT DRAWINGS OR TYPICAL DETAILS.
- 17. 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 OF THE SLAB.
- 18. CHLORIDES: GROUT OR CONCRETE CONTAINING CHLORIDES SHALL NOT BE USED.
 19. 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.

 20. CONCRETE CONSOLIDATION: THE CONTRACTOR SHALL TAKE PRECAUTIONS TO ASSURE COMPLETE CONSOLIDATION AND DENSIFICATION OF CONCRETE BEHIND ALL POST-TENSIONING ANCHORAGES.
- 21. CONCRETE STRENGTH AT STRESSING: AT TRANSFER OF PRESTRESS, CONCRETE
- SHALL BE 4,000 PSI MINIMUM FOR ANY GIVEN CYLINDER COMPRESSION TEST.

 22. TENDON STRESSING: TENSIONING SHALL BE DONE BY JACKING UNDER IMMEDIATE
- CONTROL OF A PERSON EXPERIENCED IN THIS TYPE OF WORK AND CERTIFIED BY PTI. CONTINUOUS INSPECTION AND RECORDING OF ELONGATIONS IS REQUIRED DURING ALL STRESSING
- OPERATIONS.

 23. CALIBRATION: THE RAM AND ATTENDANT GAUGE USED SHALL HAVE BEEN CALIBRATED WITHIN SIXTY (60) DAYS OF THEIR USE. PROOF OF CALIBRATION MUST BE SUBMITTED.
- 24. STRESSING SEQUENCE: UNIFORMLY DISTRIBUTED TENDONS SHALL BE STRESSED BEFORE CONCENTRATED BEAM STRIP (BANDED) TENDONS, AND SLAB TENDONS SHALL BE STRESSED BEFORE BEAM TENDONS.
- 25. 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 STAIRWALL ENGINEER.
- 26. 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.
- 27. 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.
- 28. GROUTING OF STRESSING POCKETS: STRESSING POCKETS SHALL BE FILLED WITH NON-SHRINK GROUT (CIP CONCRETE TO MATCH SLAB MIX DESIGN) AFTER STRESSING, PAINTING & GREASE-CAPPING TO STOP
- MOISTURE PENETRATION.

 29. 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.

BECKEF STRUCTURAL ENGINEE

<u>ABBREVIATIONS</u>

INFO

INSUL

INT

LLV

LTWT

MACH

MAS

MATL

MAX

MECH

M.E.P.

MISC

M.O.

MTL

N.I.C

NOM

N-S

N.S.

O.C.

O.H.

OPNG

P.A.F.

PEN

PERP

PLCS

PSF

P.T.

PVC

QTY

REQMNTS

R.O.

RTU

S.C.

S.F.

SH1

SLH

SLV

SP @

SPECS

S.S. SSLT

STD

STL

STIFF

S.W.

SYM

T&B

THK

T.C.F.

T.O. OR T/

TRANS

TYP

U.N.O.

VERT

V.I.F.

W/

WD

WF

WT

W.P.

W.W.F.

W/O

T.O.S. T/STL

STRUCT

SCHED

SECT

PREFAB

PRELIM

OPP

N.T.S.

NO OR #

MANUF

MACH RM

LVL

INSIDE DIAMETER

KIPS (1K=1000LBS)

LONG LEG HORIZ

LONG LEG VERT

LONGITUDINAL

LIGHTWEIGHT

MACHINE ROOM

MANUFACTURER

MISCELLANEOUS

MASONRY OPENING

NOT IN CONTRACT

NORTH-SOUTH

NOT TO SCALE

OUTSIDE FACE

PENETRATION

PLACES

QUANTITY

ROOF DRAIN

REQUIREMENT(S)

ROUGH OPENING

ROOF TOP UNIT

SLIP CRITICAL

SQUARE FOOT

SCHEDULE

SECTION

SHEET

SIMILAR

SPACE AT

SHEAR KEY

SHEAR LUG

SHORT SLOT

STRUCTURAL

STANDARD

STIFFENER

SHEARWALL

SYMMETRICAL

TOTAL LOAD

TRANSVERSE

TIE JOIST

TOP OF

VFRTICAL

WITHOUT

WEIGHT

TOP AND BOTTOM

TOP OF STEEL etc.

VERIFY IN FIELD

WIDTH OR WOOD

WELDED WIRE FABRIC

WIDE FLANGE

WORK POINT

TOP CHORD EXTENSION

UNLESS NOTED OTHERWISE

STEEL

SPECIFICATIONS

STAINLESS STEEL

SPACE(S)

REQUIRED

PERPENDICULAR

PREFABRICATION

PRESSURE TREATED

POLYVINYL CHLORIDE

REFER TO REFERENCE

REINFORCE(ING)(D)(MENT)

SHORT LEG HORIZONTAL

SHORT LEG VERTICAL

OPPOSITE HAND

OUTSIDE DIAMETER

POWDER ACTUATED FASTENER

POUNDS PER LINEAR FOOT

POUNDS PER SQUARE FOOT

POUNDS PER SQUARE INCH

PORTLAND CONCRETE ASSOCIATION

MASONRY

MATERIAL

MAXIMUM

MINIMUM

NUMBER

NOMINAL

NEAR SIDE

ON CENTER

OPENING

OPPOSITE

MECHANICA

MICRO-LAM

LONG LEGS BACK TO BACK

LOCATION(S) OR LOCATE

LAMINATED STRAND LUMBER

TENSION LAP SPLICE LENGTH

LEVEL OR LAMINATE VENEER LUMBER

MECHANICAL/ELECTRICAL/PLUMBING

INFORMATION

INSIDE FACE

INSULATION

INTERIOR

JOIST

ANGLE

LENGTH

POUND(S)

LIVE LOAD

STRUCTURAL ENGINEERS

75 York Street, Portland, Maine 04101
207.879.1838 • beckerstructural.com

Architecture / Planning / Interior Design

207 553 2115
One Canal Plaza, Suite 888
Portland, Maine 04101

canal**5**studio.com

roject Title

C5S Project No.

CANAL ZERO

CHRISTOPHER G. WILLIAMS
No. 12854

CENSE

ONAL BRITTOPHER G. WILLIAMS
No. 12854

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 1
 10-11-2016
 ADDENDUM 1

 Mark
 Date
 Description

Project Status

ISSUED FOR CONSTRUCTION

SEP. 19, 2016

Drawing Title

GENERAL NOTES

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

Drawing Number

S_{1.0}



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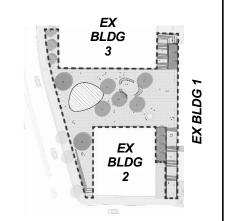
207 553 2115
One Canal Plaza, Suite 888
Portland, Maine 04101

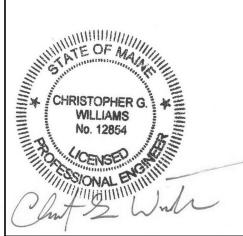
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Project Title

CANAL ZERO

C5S Project No. 3709





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 Description

 Project Status

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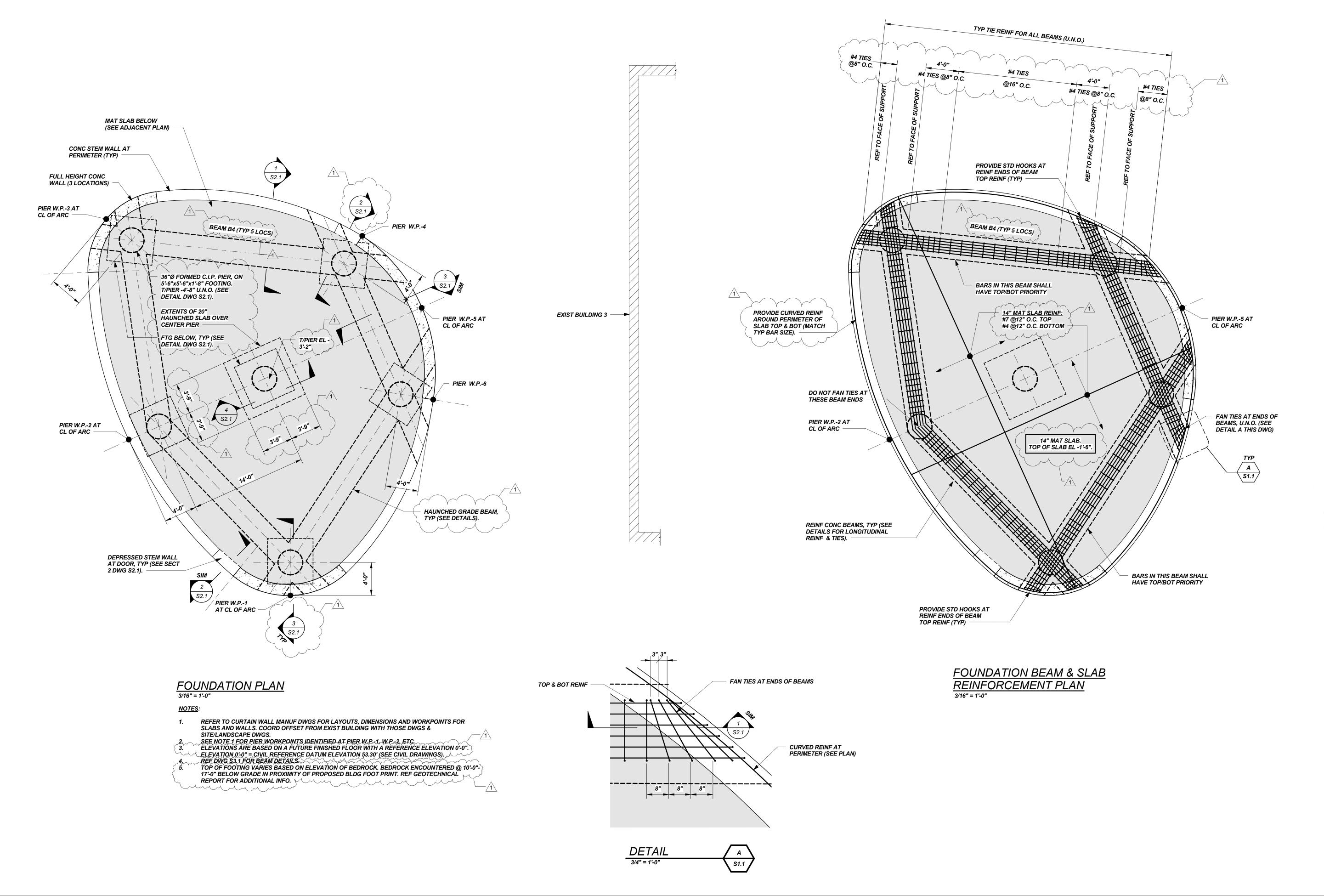
Drawing Title

FOUNDATION PLANS

Scale: As indicated

Drawing Number

S1.1







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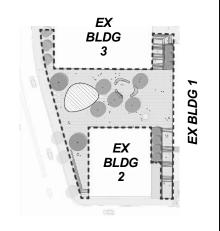
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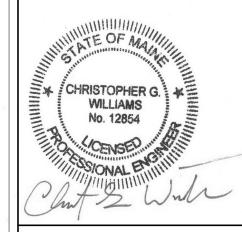
Project Title

CANAL ZERO

C5S Project No.



3709



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1 10-11-2016 ADDENDUM 1
Mark Date Description Project Status

ISSUED FOR CONSTRUCTION SEP. 19, 2016

ROOF FRAMING PLAN

Scale: As indicated

Drawing Number

S1.2

