GENERAL REQUIREMENTS:

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LAYOUT BEFORE CONSTRUCTION. IF EXISTING CONDITIONS DIFFER FROM THAT SHOWN ON THE ATTACHED DRAWINGS, NOTIFY ENGINEER BEFORE PROCEEDING.

FIELD VERIFY LOCATION OF ALL UTILITIES. UTILITY RELOCATION AND/OR REROUTING MAY BE REQUIRED. LOCATIONS OF UTILITIES ARE NOT SHOWN ON THE DRAWINGS.

CONTRACTOR SHALL COORDINATE ALL WORK WITH OWNER WITH RESPECT TO WORK HOURS, AVAILABLE WORK AREAS, ETC.

DURING THE WORK, CONTRACTOR SHALL MINIMIZE DISTURBANCE TO OWNER'S DAILY OPERATIONS DUE TO DUST, DEBRIS, EXCESSIVE NOISE, ETC. PROVIDE TEMPORARY BARRICADES AND OTHER FORMS OF PROTECTION AS NECESSARY TO PROTECT THE OWNER'S PERSONNEL, PROPERTY AND THE GENERAL PUBLIC FROM INJURY.

ALL MATERIAL SHALL BE FURNISHED BY THE CONTRACTOR, UNLESS NOTED OTHERWISE.

CARE SHALL BE TAKEN WHEN WORKING WITH OR AROUND ALL EXISTING MATERIALS. DAMAGE TO EXISTING MATERIALS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER. RESTORE ALL AREAS DISTURBED BY THE WORK TO MATCH EXISTING CONSTRUCTION/FINISH.

THE CONTRACTOR SHALL OBTAIN ALL STATE, LOCAL, UTILITY, ETC. PERMITS REQUIRED FOR COMPLETION OF WORK. ANY AND ALL FEES ASSOCIATED WITH THIS WORK ARE THE RESPONSIBILITY OF THE CONTRACTOR.

ANY WORK DETERMINED TO BE DEFECTIVE/INCOMPLETE BY THE ENGINEER SHALL BE REPAIRED, REWORKED AND/OR COMPLETED AS PER THE APPROVAL OF THE ENGINEER.

EARTHWORK AND BACKFILL:

NEW CONCRETE FOOTINGS SHALL BEAR ON UNDISTURBED NATIVE SUBGRADE AND SLABS SHALL BEAR ON A MINIMUM OF 18 INCHES OF COMPACTED SELECT FILL PLACED IN MAXIMUM 6" LIFTS (MIN. 95% COMPACTION AS PER ASTM D1557) ON ROLLER-COMPACTED, UNDISTURBED NATIVE SOIL. REMOVE ALL UNSUITABLE MATERIAL IF IT IS FOUND AT FOOTING SUBGRADE ELEVATION AND REPLACE WITH COMPACTED SELECT FILL, AS APPROVED BY THE ENGINEER.

PLACE A MINIMUM OF 24" OF SELECT FILL ADJACENT TO ALL NEW WALLS FOR FULL HEIGHT OF WALLS. ALL SELECT FILL SHALL BE PLACED AND COMPACTED IN MAXIMUM 6" LIFTS (MIN. 95% COMPACTION AS PER ASTM D1557).

"SELECT FILL" SHALL BE CLEAN, NON-FROST SUSCEPTIBLE MATERIAL MEETING THE FOLLOWING GRADATION:

SIEVE SIZE (INCHES)	PERCENT FINER BY WEIGHT
4	100
3	90-100
1/4	25-90
#40	0-30
#200	0-5

KEEP EXCAVATION DRY AND STABLE BY SUMPING AND PUMPING OF SEEPAGE WATER AS REQUIRED.

DO NOT PLACE BACKFILL AGAINST WALLS IN A MANNER THAT WILL CAUSE DIFFERENTIAL PRESSURE ON WALLS, UNTIL CONCRETE HAS OBTAINED COMPRESSIVE STRENGTH EQUAL TO 28-DAY COMPRESSIVE STRENGTH, AS CONFIRMED BY CYLINDER BREAK RESULTS AND AS APPROVED BY THE ENGINEER.

SOIL COMPACTION TESTING SHALL BE PERFORMED BY A QUALIFIED INDEPENDENT TESTING AGENCY (PAID FOR BY OWNER). TESTING FREQUENCY SHALL BE APPROVED BY THE ENGINEER.

REINFORCED CONCRETE:

COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS - 4000 PSI; AIR CONTENT 6%± 1%; W/C RATIO 0.45 MAXIMIM; SLUMP 4" MAXIMUM AFTER ALL WATER HAS BEEN ADDED. SUBMIT TEST RESULTS TO THE ENGINEER.

CONCRETE DESIGN SHALL BE AS PER ACI 318 BUILDING CODE. ALL CONCRETE SHALL BE DESIGNED, PLACED, AND CURED (MIN. 7 DAYS) AS PER ALL APPLICABLE SECTIONS OF THE ACI.

REINFORCEMENT: ASTM A615 GRADE 60 - ALL SPLICES CLASS B (U.N.O.).

REINFORCEMENT SHALL BE DETAILED, FABRICATED, AND PLACED AS PER ACI 315 DETAILING MANUAL.

PROVIDE 3/4" CHAMFER ON EXPOSED EDGES OF CONCRETE, U.N.O.

CONCRETE TESTING OF SLUMP, AIR CONTENT AND TEMPERATURE SHALL BE PERFORMED AS PER ACI REQUIREMENTS FOR ALL TRUCKLOADS BY A QUALIFIED INDEPENDENT TESTING AGENCY (PAID FOR BY OWNER). CAST ONE SET OF 4 COMPRESSION TEST CYLINDERS (ASTM C31) FOR THE FIRST TRUCK LOAD AND FOR EACH 50 CY THEREAFTER OF EACH TYPE OF CONCRETE PLACED IN ANY ONE DAY, AS DIRECTED BY THE ENGINEER. BREAK CYLINDERS (ASTM C39) AS FOLLOWS: 1 AT 7 DAYS; 2 AT 28 DAYS; 1 HELD IN RESERVE FOR FUTURE TESTING.

EXTERIOR SLAB FINISH: TEXTURE WITH STIFF-BRISTLE BROOM DRAGGED TRANSVERSELY.

SLAB SEALER: EQUAL TO "STARSEAL PS CLEAR" BY VEXCON CHEMICALS, A SPECIAL WATER-WHITE SOLUTION OF ACTIVE SILICATES WITH PENETRATING AND WETTING AGENTS TO FORM A CHEMICAL AND WEAR RESISTANT, DUST FREE, WATER REPELLANT, HARDENED CONCRETE SURFACE. APPLICATION SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.

BONDING AGENT/ DOWEL GROUT: PROVIDE EPOXY BONDING AGENT TO BOND FRESH CONCRETE TO HARDENED CONCRETE AND FOR DOWELS DRILLED INTO EXISTING CONCRETE. PROVIDE BONDING AGENT AND DOWEL GROUTING ADHESIVE EQUAL TO SIKADUR 32 HI-MOD BY SIKA, MEETING ASTM C-881. APPLICATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

BOTTOM OF ALL FOUNDATIONS SHALL BE AT LEAST 4'-6" BELOW FINISHED GRADE.

STRUCTURAL STEEL, LANDING, AND GUARDRAILS:

ALL STRUCTURAL STEEL, BOLTS, AND HARDWARE SHALL BE HOT-DIP GALVANIZED IN COMPLIANCE WITH ASTM A 123, ASTM A 153, ASTM A386 AS APPLICABLE. PROVIDE MINIMUM 1.5 OZ./FT^2 ZINC COATING. GALVANIZE AFTER FABRICATION. PROVIDE HOT-DIP GALVANIZING WITH 0.05 TO 0.09 PERCENT NICKEL IN THE KETTLE.

APPLY GALVANIZING REPAIR PAINT TO ALL FIELD WELDS AND DAMAGED GALVANIZED AREAS. USE HIGH-ZINC-DUST-CONTENT PAINT FOR REGALVANIZING WELDS IN GALVANIZED STEEL, WITH DRY FILM CONTAINING NOT LESS THAN 94 PERCENT ZINC DUST BY WEIGHT, AND COMPLYING WITH DOD-P-21035 OR SSPC-PAINT 20.

ALL STRUCTURAL STEEL, GUARDRAILS, HANDRAILS AND GRATING SHALL HAVE A GALVANIZED FINISH. TOP COAT OF PAINT IS NOT REQUIRED.

ALL WIDE FLANGE STEEL SHAPES SHALL CONFORM TO ASTM A-992. ALL OTHER ROLLED SHAPES SHALL CONFORM TO ASTM A-36.

STRUCTURAL STEEL TUBULAR SHAPES SHALL CONFORM TO ASTM A-500 GRADE B.

STEEL PIPE SHALL CONFORM TO ASTM A53.

ALL CONNECTIONS SHALL USE 3/4" DIA ASTM A-325 GALVANIZED BOLTS, UNLESS NOTED OTHERWISE.

WELDING SHALL CONFORM TO AWS D1.1. MANUAL WELDING ELECTRODES SHALL CONFORM TO A233-E70 SERIES, GRADE SAW-2.

ANCHOR BOLTS SHALL COMPLY WITH ASTM A-307. ANCHOR BOLTS SHALL BE GALVANIZED.

STEEL GRATING:

GRATING SHALL BE STEEL DOVE TAIL DT SERIES BY OHIO GRATINGS, INC. OR APPROVED EQUAL. PROVIDE 7-DT-2 GRATING WITH 1 1/2" x 3/16" BARS.

BEARING BARS SHALL BE RECTANGULAR BAR ON 1 3/16" CENTERS MAXIMUM WITH DOVE TAIL SLOTS TO ACCEPT CROSS BARS.

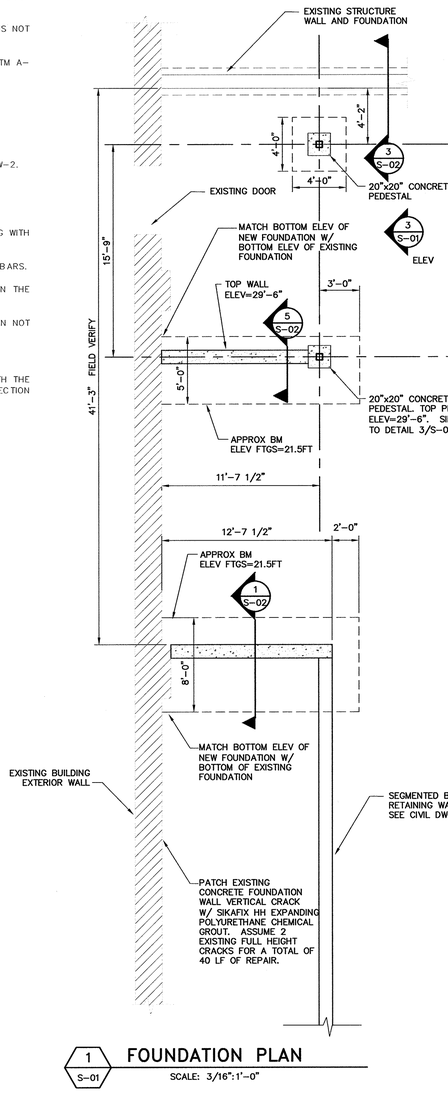
CROSS BARS SHALL BE RECTANGULAR BARS, SLOTTED AND LOCKED IN DOVE TAIL FASHION AT RIGHT ANGLES, AND IN THE SAME PLANE AS THE TOP SURFACE OF THE BEARING BARS. SPACE CROSS BARS AT 4" o/c

LOADING- GRATING TO CARRY A PEDETRIAN LOADING EQUAL TO 100 PSF OVER A 6'-0" CLEAR SPAN WITH A DEFLECTION NOT TO EXCEED ¼".

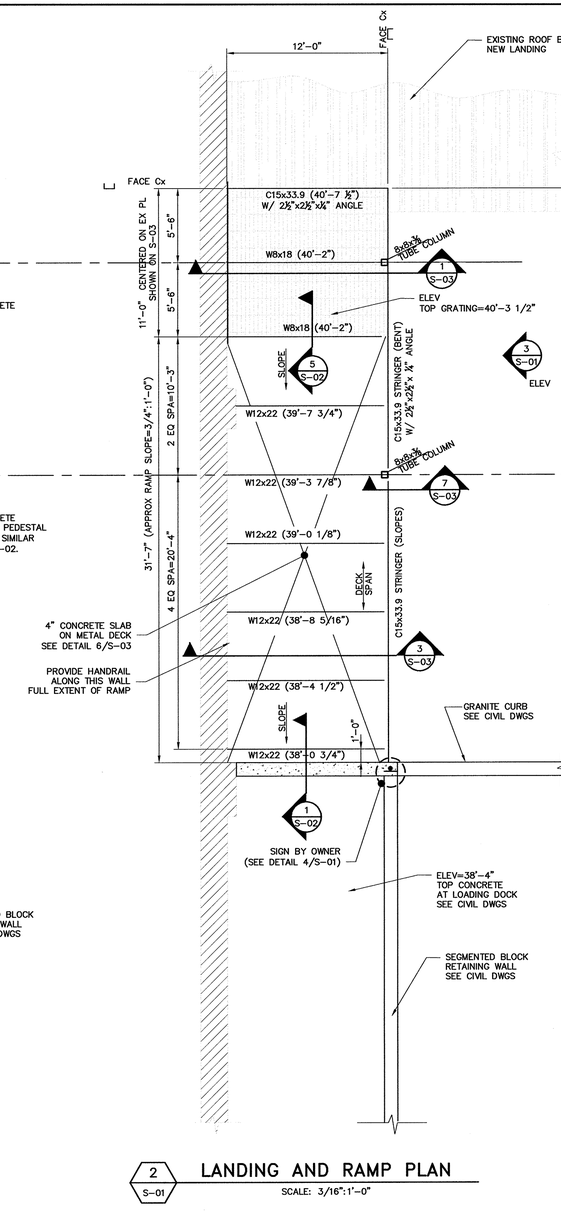
FINISH SHALL BE GALVANIZED.

GRATING SHALL BE FABRICATED IN ACCORDANCE WITH NAAM METAL BAR GRATING MANUAL AND SHALL CONFORM TO WITH THE SPACING REQUIRMENTS OF ADA WHEN INSTALLED WITH THE ELONGATED OPENING PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.

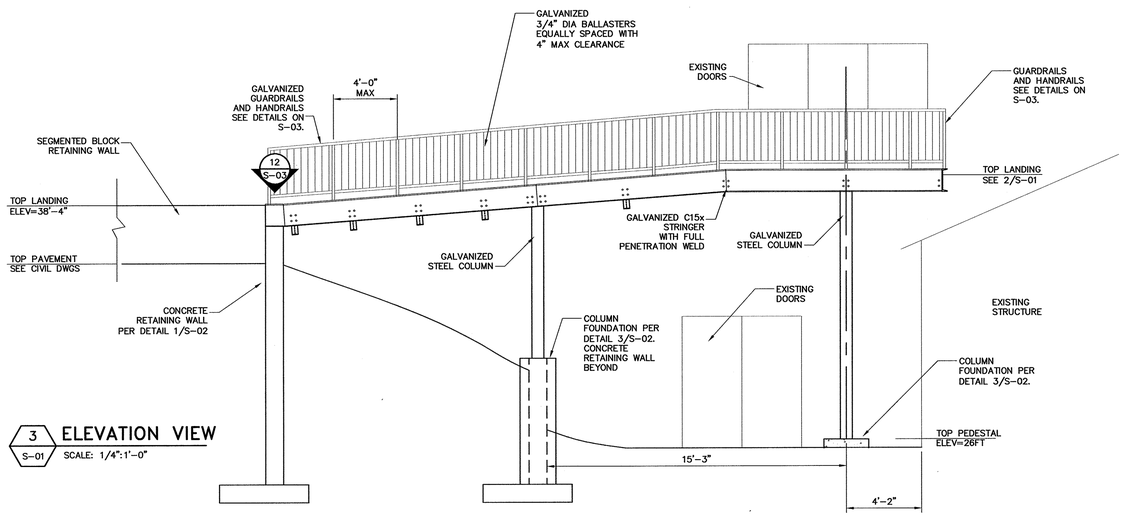
CONTRACTOR TO REMOVE EXISTING FIRE ESCAPE, LANDING, STAIRS, AND SMALL CONCRETE RETAINING WALL.



1 S-01 FOUNDATION PLAN
SCALE: 3/16":1'-0"



2 S-01 LANDING AND RAMP PLAN
SCALE: 3/16":1'-0"



3 S-01 ELEVATION VIEW
SCALE: 1/4":1'-0"

NO FORKLIFTS BEYOND THIS POINT

4 S-01 SIGN BY OWNER
SCALE: N.T.S.

WOODARD & CURRAN
41 Hutchins Drive | Portland, Maine 04102
800.426.4262 | www.woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

STATE OF MAINE SCOTT M. HAWK 11286 REGISTERED PROFESSIONAL ENGINEER
2-20-09

REV	DESCRIPTION	DATE
	REISSUED FOR BID	02/20/09

DESIGNED BY: SMH
DRAWN BY: SMH
CHECKED BY: JPS
203848\98-S01.dwg

PROPOSED FIRE ESCAPE AND CONCRETE RETAINING WALLS

CITY OF PORTLAND
PORTLAND, MAINE

PORTLAND EXPO
DRAINAGE IMPROVEMENTS

JOB NO.: 203848.98
DATE: AUGUST 2007
SCALE: SEE PLAN
SHEET: 3 OF 5

S-01