

**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 STRUCTURAL ENGINEER PRIOR TO PROCEEDING WITH THE AFFECTED PORTION OF THE WORK.
- STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH JOB SPECIFICATIONS.
- ALL DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.
- THE REPAIRS TO THIS STRUCTURE HAVE BEEN DESIGNED TO RE-ESTABLISH THE STRUCTURAL INTEGRITY OF THE STRUCTURE AFTER THE REPAIRS ARE COMPLETE. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE PROCEDURES AND SEQUENCE TO INSURE THE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING THE RESTORATION. 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 ENGINEER.
- 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 ONE DIGITAL COPY. THE DIGITAL COPY WILL BE REVIEWED AND A DIGITAL COPY BE RETURNED.
- ALL APPLICABLE FEDERAL, STATE, AND MUNICIPAL REGULATIONS SHALL BE FOLLOWED, INCLUDING THE FEDERAL DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ACT.

**DESIGN:**

- BUILDING CODE: IBC 2009  
IEBC 2009
- VEHICLE BARRIER DESIGN LOADS: 6,000 LBS CONCENTRATED LOAD
- PEDESTRIAN GUARDRAIL DESIGN LOADS: 50 PLF OR 200 LB CONCENTRATED LOAD
- THE EXISTING MASONRY FACADE SYSTEM IS TO BE REMOVED AND REPLACED WITH A STEEL BUMPER AND CABLE GUARDRAIL SYSTEM. GRAVITY AND LATERAL FORCES IMPARTED ONTO THE EXISTING STRUCTURE HAVE BEEN DETERMINED NOT TO INCREASE WITH THE WORK THAT IS SCHEDULED TO BE PERFORMED. THE LOAD-CARRYING CAPACITY OF THE STRUCTURE WILL NOT BE DECREASED WITH THE WORK THAT IS SCHEDULED TO BE PERFORMED.
- EXISTING BUILDING HAS BEEN EVALUATED USING THE "PRESCRIPTIVE METHOD" PER CHAPTER 3 OF IEBC.

**STRUCTURAL STEEL NOTES**

- STRUCTURAL STEEL FABRICATION, ERECTION, AND CONNECTION DESIGN SHALL 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 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)
- 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)
- PROVIDE ALL MISCELLANEOUS ANGLES, PLATES, ANCHOR BLOTS ETC., SHOWN ON THE DRAWINGS FOR SUPPORT OF BLOCKING, PARAPETS, FINISHES, ETC. COORDINATE WITH MISCELLANEOUS METAL FABRICATOR TO ENSURE COMPLETE COVERAGE OF ALL ITEMS.
- ALL FASTENERS AND BOLTS SHALL BE HOT-DIPPED GALVANIZED.
- ALL STEEL SHALL BE HOT-DIPPED GALVANIZED PER ASTM A123 UNLESS OTHERWISE NOTED.

**FABRICATION**

- SHOP ASSEMBLY: PRE-ASSEMBLE ITEMS IN THE SHOP TO GREATEST EXTENT POSSIBLE. DISASSEMBLE UNITS ONLY AS NECESSARY FOR SHIPPING AND HANDLING LIMITATIONS. USE CONNECTIONS THAT MAINTAIN STRUCTURAL VALUE OF JOINED PIECES. CLEARLY MARK UNITS FOR REASSEMBLY AND COORDINATED INSTALLATION.
- CUT, DRILL, AND PUNCH METALS CLEANLY AND ACCURATELY. REMOVE BURRS AND EASE EDGES TO A RADIUS OF APPROXIMATELY 1/32 INCH, UNLESS OTHERWISE INDICATED. REMOVE SHARP OR ROUGH AREAS ON EXPOSED SURFACES.
- FORM BENT-METAL CORNERS TO SMALLEST RADIUS POSSIBLE WITHOUT CAUSING GRAIN SEPARATION OR OTHERWISE IMPAIRING WORK.
- FORM EXPOSED WORK TRUE TO LINE AND LEVEL WITH ACCURATE ANGLES AND SURFACES AND STRAIGHT EDGES.
- WELD CORNERS AND SEAMS CONTINUOUSLY TO COMPLY WITH THE FOLLOWING:
  - USE MATERIALS AND METHODS THAT MINIMIZE DISTORTION AND DEVELOP STRENGTH AND CORROSION RESISTANCE OF BASE METALS.
  - OBTAIN FUSION WITHOUT UNDERCUT OR OVERLAP.
  - REMOVE WELDING FLUX IMMEDIATELY.
  - AT EXPOSED CONNECTIONS, FINISH EXPOSED WELDS AND SURFACES SMOOTH AND BLENDED SO NO ROUGHNESS SHOWS AFTER FINISHING AND CONTOUR OF WELDED SURFACE MATCHES THAT OF ADJACENT SURFACE.
- PROVIDE FOR ANCHORAGE OF TYPE INDICATED; COORDINATE WITH SUPPORTING STRUCTURE. SPACE ANCHORING DEVICES TO SECURE METAL FABRICATIONS RIGIDLY IN PLACE AND TO SUPPORT INDICATED LOADS.
- ALL STEEL ELEMENTS ARE TO BE HOT-DIPPED GALVANIZED INCLUDING PLATES, ANGLES AND TUBING UNLESS OTHERWISE NOTED.

**PREPARATION OF EXISTING STEEL:**

- OLD COATINGS SHOULD BE TESTED FOR LIFTING. IF LIFTING OCCURS, REMOVE THE LIFTED COATING.
- REMOVE ALL CRACKED AND PEELING PAINT.
- PREP ALL EXPOSED STEEL TO SSPC-SP3 POWER TOOL CLEAN.
- PRIOR TO COATING ALL SURFACES MUST BE DRY, CLEAN, FREE OF OIL, GREASE, FORM RELEASE AGENTS, CURING COMPOUNDS, LAITANCE, OTHER FOREIGN MATTER AND BE STRUCTURALLY SOUND.
- COMPLY WITH ALL MANUFACTURERS RECOMMENDATIONS FOR SURFACE PREPARATION.

**PAINTING NEW & EXISTING STEEL:**

- MAINTAIN ENVIRONMENTAL CONDITIONS (TEMP, HUMIDITY, AND VENTILATION) WITHIN THE LIMITS RECOMMENDED BY THE MANUFACTURER FOR OPTIMUM RESULTS. DO NOT APPLY COATINGS UNDER ENVIRONMENTAL CONDITIONS OUTSIDE MANUFACTURER'S ABSOLUTE LIMITS.
- FIELD PAINT ALL FIELD WELDED CONNECTIONS AND PUNCHED HOLES. PROVIDE THREE COAT SYSTEM ON ALL FIELD PAINTING.
- OLD COATINGS SHOULD BE TESTED FOR LIFTING. IF LIFTING OCCURS, REMOVE THE LIFTED COATING. REMOVE ALL CRACKED AND PEELING PAINT.
- PREP ALL EXPOSED STEEL TO SSPC-SP3 POWER TOOL CLEAN. CLEAN STEEL REMOVE ALL RUST AND CORROSION. NOTIFY ENGINEER OF SEVERE SECTION LOSS OF ELEMENTS.
- PRIOR TO COATING ALL SURFACES MUST BE DRY, CLEAN, FREE OF OIL, GREASE, FORM RELEASE AGENTS, CURING COMPOUNDS, LAITANCE, OTHER FOREIGN MATTER AND BE STRUCTURALLY SOUND.
- COMPLY WITH ALL MANUFACTURERS RECOMMENDATIONS.
- PRIMER, INTERMEDIATE AND TOP COAT ARE TO BE DIFFERENT COLORS SO OWNER REPRESENTATIVE CAN CONFIRM THAT EACH COAT HAS BEEN APPLIED.
- MANUFACTURER: SHERWIN WILLIAMS OR PPG PITTSBURGH PAINTS. REFERENCE SPECIFICATIONS FOR APPROVED PRODUCTS.
- STEEL BEAMS, COLUMNS, AND MISC ITEMS.
  - 1ST COAT: EPOXY PRIMER
  - 2ND COAT: EPOXY INTERMEDIATE COAT
  - 3RD COAT: POLYURETHANE TOP COAT

**GUARDRAIL CABLE NOTES**

- ALL WORK SHALL CONFORM TO THE POST TENSIONING INSTITUTES (PTI) GUIDE SPECIFICATION "SPECIFICATION FOR SEVEN-WIRE PRESTRESSING STEEL STRAND FOR BARRIER CABLE APPLICATIONS."
  - ALL STRAND SHALL BE 1/2" GRADE 250 (MINIMUM) AND GALVANIZED PER ASTM A 475 CLASS A.
  - ALL WEDGE TYPE ANCHORS SHALL BE CAPABLE OF DEVELOPING 95% OF THE MINIMUM ULTIMATE BREAKING STRENGTH OF THE BARRIER CABLE.
  - BARRIER CABLE INSTALLATION SHALL BE PERFORMED BY PTI CERTIFIED INSTALLERS.
  - INSTALLATION:
    - THE SYSTEM SHALL BE A MINIMUM OF 42 INCHES IN HEIGHT AND BE CONSTRUCTED SUCH THAT A 4" SPHERE SHALL NOT PASS THROUGH ANY OPENING.
    - PROPERLY CALIBRATED STRESSING EQUIPMENT SHALL BE SUPPLIED FOR THE PARTICULAR APPLICATION AND BARRIER CABLE SYSTEM THAT IS NECESSARY TO PERFORM THE WORK.
    - AT INTERMEDIATE COLUMNS, PROVIDE A HOLE WHICH IS A MINIMUM OF 1/8" LARGER THAN THE BARRIER STRAND DIAMETER USED (INCLUDING COATING).
    - ALL ANCHORAGES SHALL BE BACKSTRESSED. THE CABLE SHALL BE STRESSED TO 80% OF MINIMUM ULTIMATE TENSILE STRENGTH (MUTS). ANY DAMAGE TO CABLE COATINGS DUE TO THIS PROCESS SHALL BE REPAIRED WITH 2 COATS OF ZRC COLD GALVANIZING.
    - BARRIER CABLE TAILS SHALL BE REMOVED TO WITHIN 1" OF END OF ANCHORS USING A METAL CUT-OFF SAW OR A HYDRAULIC SHEAR. ALL ENDS SHALL BE COATED WITH 2 COATS OF ZRC COLD GALVANIZING.
    - JACK CABLES AS REQUIRED TO BACKSTRESS AND SEAT ANCHORS.
    - PRETENSION CABLES TO A MINIMUM OF 3,000 LBS.

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GATEWAY PARKING GARAGE  
PORTLAND, MAINE  
FACADE REPAIRS PHASE 2  
GENERAL NOTES

Designed	JMM	Scale	AS NOTED
Drawn	RJB	Date	12/21/16
Checked	JMM	Becker Job Number	3917

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