

September 14, 2012

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATION
DEPARTMENT OF TRANSPORTATION
RHODE ISLAND CONTRACT NO.2012-CB-089
FEDERAL-AID PROJECT NO. FAP Nos: 405-421-631

Interim Shoring of Huntington Viaduct Bridge No. 504

CITY/TOWN OF Providence
COUNTY OF PROVIDENCE

NOTICE TO PROSPECTIVE BIDDERS

ADDENDUM NO. 2 Prospective bidders and all concerned are hereby notified of the following changes in the Plans, Specifications, Proposal and Distribution of Quantities for this contract. These changes shall be incorporated in the Plans, Specifications, Proposal and Distribution of Quantities, and shall become an integral part of the Contract Documents.

A. Drawings/Plans - Change/Addition

1. Sheet 7

Remove Sheet 7 in its entirety and replace it with revised Sheet 7 (R-1) attached to this Addendum No. 2.

"Painting of New Structural Steel" Note 1 has been revised.

"Shoring Notes" Notes 12a and 12b have been added.

"Shoring Notes" Note 17 has been revised.



RI Department of Transportation
Chief Engineer

REPAINTING OF EXISTING STRUCTURAL STEEL

- THE EXISTING STRUCTURAL STEEL SHALL BE REPAINTED IN TO THE LIMITS SHOWN ON THE PLANS IN ACCORDANCE WITH THE R.I. STANDARD SPECIFICATIONS, THE SPECIAL PROVISION FOR THE WORK BEING PERFORMED, AND THESE CONTRACT DRAWINGS. THE COLOR OF THE TOP COAT SHALL BE GREEN (SEMI-GLOSS) TO MATCH FEDERAL STANDARD 595 COLOR 24272.
- THE EXISTING STRUCTURAL STEEL TO BE REPAINTED SHALL INCLUDE, BUT NOT BE LIMITED TO, BEAMS, DIAPHRAGMS, CONNECTION PLATES, STIFFENERS, BEARING PLATES AND FASTENERS.
- ALL EXISTING STRUCTURAL STEEL DESIGNATED TO BE REPAINTED SHALL BE CLEANED TO SSPC-SP10 "NEAR-WHITE BLAST CLEANING".
- ANY COMPONENT NOT DESIGNATED TO BE REPAINTED SHALL BE ADEQUATELY PROTECTED FROM CLEANING OPERATIONS.
- ANY DAMAGE RESULTING FROM CONTRACTOR'S CLEANING OR REPAINTING OPERATIONS, SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE STATE.

PAINTING OF NEW STRUCTURAL STEEL

- THE NEW STRUCTURAL STEEL SHALL BE PAINTED TO THE LIMITS SPECIFIED IN THE R.I. STANDARD SPECIFICATIONS, OR TO THE LIMITS INDICATED ON THE PLANS EXCEPT FOR M270 GRADE 50W AND ASTM A847 STEEL.

SHORING NOTES

- DESIGN SPECIFICATIONS:**
 - * THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6th EDITION, INCLUDING ALL INTERIM REVISIONS TO DATE.
 - * THE LATEST STRUCTURAL WELDING CODES ANSI/AWS D1.1 AND ANSI/AASHTO/AWS D1.5
- DESIGN LOADS:**
VERTICAL LOADS (UNFACTORED, PER GIRDER REACTION):

EXTERIOR STRINGERS-	
DEAD LOAD:	62K
LIVE LOAD w/ IMPACT:	57K
INTERIOR STRINGERS-	
DEAD LOAD:	56K
LIVE LOAD w/ IMPACT:	81K
- ALL HIGH STRENGTH BOLTS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M164 (ASTM DESIGNATION A325). HIGH STRENGTH THREADED ROD SHALL CONFORM TO THE REQUIREMENTS OF ASTM F1554 GRADE 36.
- ALL CONCRETE ANCHORS SHALL BE ADHESIVE TYPE ANCHORS WITH EMBEDMENT DEPTH AND DIAMETER AS DESIGNATED ON THE PLANS.
- WELDING ELECTRODES SHALL BE E70XX.
- THE CONTRACTOR SHALL FIELD VERIFY DIMENSIONS, ELEVATIONS, AND COLUMN HEIGHTS PRIOR TO FABRICATION OF SHORING SYSTEMS.
- PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL VERIFY UTILITY LOCATIONS WITH "DIG-SAFE" AND APPROPRIATE STATE AND MUNICIPAL AGENCIES.
- COLUMNS SHALL BE ERECTED PLUMB IN BOTH DIRECTIONS. THE CENTER OF THE SHORING COLUMN SHALL COINCIDE WITH THE CENTERLINE OF THE GIRDER TO BE SHORED WITH A MAXIMUM TOLERANCE OF 1 INCH.
- ANY DAMAGE WHICH MAY OCCUR TO THE BRIDGE STRUCTURE AS A RESULT OF ANY DIFFERENTIAL DISPLACEMENT DURING SHORING SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE STATE.
- THE CONTRACTOR MAY AT HIS OPTION, SUBSTITUTE STEEL SECTIONS OF EQUAL OR GREATER SECTION PROPERTIES THAN THOSE SHOWN WITH THE ENGINEER'S APPROVAL. NO ADDITIONAL PAYMENT SHALL BE MADE IF LARGER SIZES ARE SUBSTITUTED.
- ALL STRUCTURAL STEEL PLATES AND SHAPES SHALL CONFORM TO AASHTO M270, GRADE 50W AND ALL HOLLOW STRUCTURAL SECTIONS SHALL CONFORM TO ASTM A847.
- ALL FABRICATION OF OF STEEL COMPONENTS FOR THIS PROJECT SHALL BE IN ACCORDANCE WITH THE LATEST STRUCTURAL WELDING CODES ANSI/AWS D1.1 AND ANSI/AASHTO/AWS D1.5.

12a. THE SHOPS FABRICATING THE STRUCTURAL STEEL FOR STEEL BEAM REPAIRS TO BRIDGE NO. 504 MUST BE CERTIFIED FOR "SIMPLE STEEL BRIDGES (SBR)" IN ACCORDANCE WITH THE AISC QUALITY CERTIFICATION PROGRAM OR EQUIVALENT.

THE SHOPS SHALL ALSO BE CERTIFIED UNDER THE AISC "SOPHISTICATED PAINT ENDORSEMENT (SPE)" QUALITY PROGRAM OR THE SSPC-QP3 PAINT CERTIFICATION PROGRAM.

THE FABRICATOR MUST SUBMIT PROOF OF CURRENT CERTIFICATION AS SPECIFIED.

12b. THE STEEL ERECTOR/CONTRACTOR FOR THIS PROJECT SHALL BE CERTIFIED FOR "CERTIFIED STEEL ERECTOR (CSE)" IN ACCORDANCE WITH THE AISC QUALITY CERTIFICATION PROGRAM. THE ERECTOR/CONTRACTOR OF THE STRUCTURAL STEEL SHALL BE REQUIRED TO SUBMIT PROOF OF CURRENT CERTIFICATION AS SPECIFIED.

- FOR OTHER APPLICABLE STEEL NOTES REFER TO "STRUCTURAL STEEL NOTES" ON "BRIDGE GENERAL NOTES SHEET 1" SHEET.
- ALL TIMBER SHALL BE GRADED AS PER THE LATEST EDITION OF THE AFPA NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION.
- ALL TIMBER SHALL BE PRESSURE TREATED AS PER AASHTO M133 WITH CCA CONFORMING TO AWPA STANDARD P5 TO A MINIMUM NET RETENTION OF 0.60 lb/cf IN ACCORDANCE WITH AWPA STANDARD C14.
- ALL TIMBER CRIBBING DIMENSIONS SPECIFIED ON THESE PLANS ARE "NOMINAL" DIMENSIONS. THE NET "DRESSED" SIZE SHALL NOT BE MORE THAN A 1/2" LESS THAN THE SPECIFIED "NOMINAL" DIMENSION.

17. TIMBER CRIBBING SHALL BE SOUTHERN PINE, GRADE No. 2.

BASE DESIGN VALUES AS FOLLOWS:
 $F_b = 850 \text{ psi}$ $F_v = 100 \text{ psi}^*$ $F_{c\perp} = 375 \text{ psi}$ $E = 1,200,000 \text{ psi}$.
 *WHEN SHEAR STRESS FACTORS ARE APPLIED, USE $F_v = 90 \text{ psi}$.

THE FOLLOWING ADJUSTMENT FACTORS APPLY:

WET SERVICE FACTOR: C_m F_b F_v $F_{c\perp}$ E
 1.0 1.0 1.0 1.0 1.0

SHEAR STRESS FACTOR: $C_H = 1.0$
 LOAD DURATION FACTOR: $C_D = 1.0$

- TIMBER CRIBBING OF ANOTHER SPECIES OR GRADE, HAVING STRENGTH PROPERTIES EQUAL TO OR GREATER THAN SPECIFIED ABOVE, SHALL BE PERMITTED UPON APPROVAL BY THE ENGINEER. NO ADDITIONAL PAYMENT SHALL BE MADE IF ANOTHER SPECIES OR GRADE ARE UTILIZED.
- THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PREVENT CONTAMINATION OF BALLAST DURING ALL CONSTRUCTION ACTIVITIES ASSOCIATED WITH INSTALLATION AND/OR REMOVAL OF TEMPORARY SHORING WITHIN THE RAILROAD RIGHT OF WAY. ANY DAMAGE SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF AMTRAK, AT NO ADDITIONAL COST TO THE STATE.

GENERAL NOTES REGARDING TEMPORARY CONSTRUCTION CONDITIONS:

- DESIGN WIND PRESSURES FOR CONSTRUCTION:
 MINIMUM WIND PRESSURES TO BE USED BY THE CONTRACTOR FOR DESIGN DURING THE CONSTRUCTION CONTRACT (WITH THE EXCEPTION OF SIGNS) SHALL BE FROM THE FOLLOWING TABLE:

HEIGHT ABOVE GROUND	WIND PRESSURE (PSF)
UP TO 17'	23
OVER 17' AND UP TO 33'	27
OVER 33' AND UP TO 50'	30
OVER 50' AND UP TO 75'	34
OVER 75' AND UP TO 100'	37

TABLE NOTES:

- APPLICATION OF THE TABULAR PRESSURE:
 - BRIDGE COMPONENTS DURING CONSTRUCTION, PRIOR TO THE INSTALLATION OF THE PERMANENT BRACING SYSTEMS, NOT INCLUDING CRANE LIFTING.
 - FALSE WORK, SHORING, AND SCAFFOLDING AS DEFINED IN FHWA "GUIDE DESIGN SPECIFICATION FOR BRIDGE TEMPORARY WORKS", EXCLUDING 3-DIMENSIONAL LATTICED OR TRUSSED FRAMES OR TOWERS;
 - TEMPORARY SHIELDING.
- WHERE APPLICABLE HIGHER AMTRAK WIND REQUIREMENTS SHALL SUPERSEDE THESE REQUIREMENTS.
- FOR STRUCTURES SITUATED ABOVE LIVE INTERSTATE TRAFFIC, THE TABULAR VALUES SHALL BE INCREASED BY 5 PSF.

WIND PRESSURES FOR ALL OTHER STRUCTURES SHALL BE CALCULATED BASED ON ASCE "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION", SEI/ASCE 37-02 (ALL REFERENCES TO THE ASCE 7 IN THE SEI/ASCE 37-02 PUBLICATION, SHALL BE THE LATEST REVISION OF ASCE 7). THE EXPOSURE CATEGORY SHALL BE "B".

- ERECTION OF BRIDGE COMPONENTS:
 FOR THE ERECTION OF STRUCTURES, THE FOLLOWING SHALL APPLY:
 - THE CONTRACTOR SHALL SUBMIT AN ERECTION PLAN THAT PROVIDES COMPLETE DETAILS OF THE PROCESS INCLUDING, BUT NOT LIMITED TO, TEMPORARY SUPPORTS, SCHEDULING AND OPERATION SEQUENCING, CRANE PLACEMENT, AND ASSUMED LOADS AND CALCULATED STRESSES DURING VARYING STAGES OF LIFTING. THIS APPLIES TO STRUCTURES OF ANY KIND. THE CAPACITY OF THE CRANE AND ALL LIFTING AND CONNECTING DEVICES SHALL BE ADEQUATE FOR 125 PERCENT OF THE TOTAL PICK LOAD INCLUDING SPREADERS AND OTHER MATERIALS. THIS FACTOR OF SAFETY SHALL BE IN ADDITION TO ALL MANUFACTURERS' PUBLISHED FACTORS OF SAFETY.
 - A REGISTERED PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF RHODE ISLAND, WILL BE REQUIRED TO STAMP THE CONTRACTOR'S ERECTION PLAN.
 - THE CONTRACTOR'S PROFESSIONAL ENGINEER WILL BE REQUIRED TO INSPECT AND PROVIDE WRITTEN APPROVAL OF EACH PHASE OF A GIRDER INSTALLATION, PRIOR TO ALLOWING VEHICLES OR PEDESTRIANS ON OR BELOW THE STRUCTURE. THE PROFESSIONAL ENGINEER MUST ALSO STAMP ALL CHANGES TO THE CONTRACTOR'S ERECTION PLAN. ADDITIONALLY, ALL PROPOSED CHANGES MUST BE SUBMITTED TO RIDOT FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.
 - A MANDATORY PRE-ERECTION CONFERENCE WILL BE HELD AT LEAST TWO WEEKS PRIOR TO THE START OF THE GIRDER INSTALLATION TO DISCUSS THE PLAN AND PROCEDURES, WORK SCHEDULES, CONTINGENCY PLANS, SAFETY REQUIREMENTS AND TRAFFIC CONTROL. THE CONTRACTOR'S PROFESSIONAL ENGINEER AND ERECTION SUBCONTRACTOR WILL BE REQUIRED TO ATTEND THIS MEETING, AS WILL THE RIDOT RESIDENT ENGINEER, THE DESIGN PROJECT ENGINEER AND THE DESIGN CONSULTANT. BASED UPON DISCUSSIONS AT THIS MEETING AND A REVIEW OF THE CONTRACTOR'S ERECTION PLAN, RIDOT MAY ORDER THE CONTRACTOR TO MODIFY AND RESUBMIT THE ERECTION PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL.
 - THE CONTRACTOR WILL BE REQUIRED TO PERFORM DAILY INSPECTIONS OF THE ERECTED GIRDERS UNTIL THE BRIDGE DECK IS COMPLETELY POURED.
 - THE COST OF PREPARING AND STAMPING THE ERECTION PLAN, COMPUTATIONS, AND REPORTS, RESPONDING TO RIDOT'S COMMENTS AND MAKING THE NECESSARY REVISIONS, AND ATTENDANCE AT MEETINGS SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE SUPERSTRUCTURE PAY ITEM, BE IT CONCRETE, STEEL OR TIMBER.



REVISIONS			NO.	DATE	BY	RHODE ISLAND DEPARTMENT OF TRANSPORTATION
NO.	DATE	BY				
1	9/14/12	KK				IMPROVEMENTS TO U.S. ROUTE 6 / ROUTE 10 INTERCHANGE INTERIM SHORING AND STEEL REPAIRS HUNTINGTON AVENUE VIADUCT BRIDGE No. 504 PROVIDENCE, RHODE ISLAND
						BRIDGE GENERAL NOTES SHEET 2
CHECKED BY _____ DATE _____ SCALE NONE						