

January 10, 2014

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATION  
DEPARTMENT OF TRANSPORTATION  
RHODE ISLAND CONTRACT NO. 2014-CB-004

FEDERAL AID PROJECT NO. FAP Nos: BRO-0465(001)

Improvements to I-195  
Accelerated Bridge Construction (ABC) of  
**Bridge No. 465 Replacement**  
I-195 Ramp (DR-2) over Warren Avenue

CITY/TOWN OF East Providence, Rhode Island

COUNTY OF PROVIDENCE

**NOTICE TO PROSPECTIVE BIDDERS**

**ADDENDUM NO. 1:**

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. Clarification**

1. Pre-Bid Conference

A copy of the Pre-Bid Conference attendance sheet is attached to this Addendum No. 1.

2. Distribution of Quantities

Please be advised that all Distribution of Quantity sheets shall be "Page X of 33".

**B. General Provisions – Contract Specific**

1. INDEX

Delete page CS-1 in its entirety and replace it with page CS-1 (R1) attached to this Addendum No. 1. The Index has been revised.

2. LIST OF CONTRACT DRAWINGS

Delete pages CS-2 and CS-3 in their entirety and replace them with pages CS-2 (R1) and CS-3 (R1) attached to this Addendum No. 1. The List of Contract

**ADDENDUM NO. 1**

Drawings has been revised.

3. NOTICE TO CONTRACTORS

Delete page CS-7 in its entirety and replace it with page CS-7 (R1) attached to this Addendum No. 1. Add page CS-7A to this Addendum No. 1. The Notice to Contractors has been revised.

4. SUGGESTED SEQUENCE OF CONSTRUCTION

Delete page CS-9 in its entirety and replace it with page CS-9 (R1) attached to this Addendum No. 1. The Suggested Sequence of Construction has been revised.

5. LUMP SUM BID ITEMS

Delete page CS-10 in its entirety and replace it with page CS-10 (R1) attached to this Addendum No. 1. The Lump Sum Bid Items have been revised.

6. TRANSPORTATION MANAGEMENT PLAN

Delete page CS-10 in its entirety and replace it with page CS-10 (R1) attached to this Addendum No. 1. The Transportation Management Plan has been revised.

7. STEEL FABRICATION AND DELIVERY

Add page CS-10A to this Addendum No. 1. The Steel Fabrication and Delivery has been added.

8. REQUEST FOR INFORMATION (RFI)

Add pages CS-10B and CS-10C to this Addendum No. 1. The Request for Information (RFI) has been added.

9. APPENDIX C

Delete page 17 of 18 of the TMP in its entirety and replace it with page 17 of 18 (R1) attached to this Addendum No. 1. Delete Attachment A of the TMP in its entirety and replace it with Attachment A (R1) attached to this Addendum No. 1. Appendix C has been revised.

**C. General Provisions – Job Specific**

1. INDEX

Delete pages JS-1 and JS-2 in their entirety and replace it with pages JS-1 (R1) and JS-2 (R1) attached to this Addendum No. 1. Add page JS-7A to this attached

- Addendum No. 1. This specification has been revised.
2. CODE 12.108.1000 PROSECUTION AND PROGRESS  
Delete page JS-7 in its entirety and replace it with page JS-7 (R1) attached to this Addendum No. 1. Add page JS-7A to this attached Addendum No. 1. This specification has been revised.
  3. CODE 12.108.11 INCENTIVE AND DISINCENTIVE  
Add pages JS-7B and JS-7C to this attached Addendum No. 1. This specification has been revised.
  4. CODE 800.9910 WARREN AVENUE BRIDGE NO. 465 SUPERSTRUCTURE  
Delete page JS-55 in its entirety and replace it with page JS-55 (R1) attached to this Addendum No. 1. This specification has been revised.
  5. CODE 800.9920 WARREN AVENUE BRIDGE NO. 465 SUBSTRUCTURE  
Delete page JS-61 in its entirety and replace it with page JS-61 (R1) attached to this Addendum No. 1. This specification has been revised.
  6. CODE 804.9910 PRE- AND POST-CONSTRUCTION CONDITION SURVEY  
Add pages JS-72A and JS-72B to this attached Addendum No. 1. A new specification “804.9910 Pre- and Post-Construction Condition Survey” has been added.
  7. CODE 804.9920 INSTRUMENTATION AND MONITORING  
Add pages JS-72C through JS-72F to this attached Addendum No. 1. A new specification “804.9920 Instrumentation and Monitoring” has been added.
  8. CODE 809 PRECAST/PRESTRESSED STRUCTURE CONCRETE MASONRY  
Delete pages JS-79 and JS-83 in their entirety and replace them with pages JS-79 (R1) and JS-83 (R1) attached to this Addendum No. 1. This specification has been revised.
  9. CODE 810 REINFORCING STEEL  
Delete page JS-90 in its entirety and replace it with page JS-90 (R1) attached to this Addendum No. 1. This specification has been revised.
  10. CODE T12.9901 MOBILE CAMERA SURVEILLANCE SYSTEM  
Add pages JS-118A through JS-118F to this attached Addendum No. 1. A new specification “T12.9901 Mobile Camera Surveillance Monitoring” has been

added

**D. Plans**

1. VOLUME 1 SHEET 9 OF 41 – GENERAL PLAN SHEET 1 OF 2

Delete Sheet 9 in its entirety and replace it with Sheet 9 (R1) attached to this Addendum No. 1. This sheet has been revised.

2. VOLUME 1 SHEET 12 OF 41 – DRAINAGE AND UTILITY PLAN SHEET 1 OF 2

Delete Sheet 12 in its entirety and replace it with Sheet 12 (R1) attached to this Addendum No. 1. This sheet has been revised.

3. VOLUME 1 SHEET 20 OF 41 – GRADE PLAN (RAMP DR-2)

Delete Sheet 20 in its entirety and replace it with Sheet 20 (R1) attached to this Addendum No. 1. This sheet has been revised.

4. VOLUME 1 SHEET 21 OF 41 – LIGHTING PLAN SHEET 1 OF 2

Delete Sheet 21 in its entirety and replace it with Sheet 21 (R1) attached to this Addendum No. 1. This sheet has been revised.

5. VOLUME 1 SHEET 29 OF 41 – DETOUR SIGNING PLAN SHEET 1 OF 4

Delete Sheet 29 in its entirety and replace it with Sheet 29 (R1) attached to this Addendum No. 1. This sheet has been revised.

6. VOLUME 1 SHEET 31 OF 41 – DETOUR SIGNING PLAN SHEET 3 OF 4

Delete Sheet 31 in its entirety and replace it with Sheet 31 (R1) attached to this Addendum No. 1. This sheet has been revised.

7. VOLUME 1 SHEET 33 OF 41 – CONSTRUCTION SIGN SUMMARY

Delete Sheet 33 in its entirety and replace it with Sheet 33 (R1) attached to this Addendum No. 1. This sheet has been revised.

8. VOLUME 2 SHEET 4 OF 42 – GENERAL BRIDGE NOTES SHEET 2 OF 3

Delete Sheet 4 in its entirety and replace it with Sheet 4 (R1) attached to this Addendum No. 1. This sheet has been revised.

9. VOLUME 2 SHEET 5 OF 42 – GENERAL BRIDGE NOTES SHEET 3 OF 3

Delete Sheet 5 in its entirety and replace it with Sheet 5 (R1) attached to this Addendum No. 1. This sheet has been revised.

10. VOLUME 2 SHEET 6 OF 42 – GENERAL PLAN AND WESTERLY  
ELEVATION

Delete Sheet 6 in its entirety and replace it with Sheet 6 (R1) attached to this Addendum No. 1. This sheet has been revised.

11. VOLUME 2 SHEET 18 OF 42 – ABUTMENT SECTIONS AND DETAILS  
SHEET 2 OF 2

Delete Sheet 18 in its entirety and replace it with Sheet 18 (R1) attached to this Addendum No. 1. This sheet has been revised.

12. VOLUME 2 SHEET 26 OF 42 – NORTH ABUTMENT AND WINGWALL  
PAY LIMITS

Delete Sheet 26 in its entirety and replace it with Sheet 26 (R1) attached to this Addendum No. 1. This sheet has been revised.

13. VOLUME 2 SHEET 27 OF 42 – SOUTH ABUTMENT AND WINGWALL  
PAY LIMITS

Delete Sheet 27 in its entirety and replace it with Sheet 27 (R1) attached to this Addendum No. 1. This sheet has been revised.

14. VOLUME 2 SHEET 28 OF 42 – BRIDGE GRADING PLAN

Delete Sheet 28 in its entirety and replace it with Sheet 28 (R1) attached to this Addendum No. 1. This sheet has been revised.

**E. Distribution of Quantities**

1. Index

Delete Index pages 1 through 3 in their entirety and replace them with Index pages 1 (R1) through 3 (R1) attached to this Addendum No. 1. The index has been revised.

2. Pages 24 of 33

Delete page 24 in its entirety and replace it with page 24 (R1) attached to this Addendum No. 1. Item Code 927.9901 "Relocate Precast Median Barrier for Temporary Traffic Control" has been deleted.

3. Pages 29 of 33

Delete page 29 in its entirety and replace it with page 29 (R1) attached to this Addendum No. 1. Item Code T16.0300 "Ground Mounted Primary Directional Sign Post Steel Breakaway" has been deleted.

4. Pages 30 of 33

Delete page 30 in its entirety and replace it with page 30 (R1) attached to this Addendum No. 1. Item Code T16.0300 "Ground Mounted Primary Directional Sign Post Steel Breakaway" has been deleted.

5. Pages 32 of 33

Delete page 30 in its entirety and replace it with page 30 (R1) attached to this Addendum No. 1. Item Code 203.0400 "Structural Excavation Unclassified" has been added.

6. Pages 33 of 33

Add page 33 attached to this Addendum No. 1. Item Code 804.9910 "Pre- and Post-Construction Survey" has been added.

7. Pages 33 of 33

Add page 33 attached to this Addendum No. 1. Item Code 804.9920 "Instrumentation and Monitoring" has been added.

8. Pages 33 of 33

Add page 33 attached to this Addendum No. 1. Item Code T12.9901 "Mobile Camera Surveillance System" has been added.



For: Robert Rankhi  
RI Department of Transportation  
Chief Engineer

**"NON-MANDATORY" PRE-BID CONFERENCE SIGN IN SHEET**

BID NUMBER:	2014-CB-004
BID TITLE:	Replacement of Warren Avenue Bridge # 465
PRE-BID DATE AND TIME:	01/07/2014 @ 9:00 AM

Purchasing Representative:	
Pre-bid START TIME:	9:
Pre-bid END TIME:	

COMPANY NAME	COMPANY REPRESENTATIVE	ADDRESS	CONTACT E-MAIL	CONTACT PHONE NUMBER	CONTACT FAX NUMBER	PROPOSAL SUBMITTED (For Purchasing Use Only)
RIDOT	Rahmat Noorfarhan	2 Capital Hill	Rahmat.Noorfarhan@RIDOT.RI.gov	(401) 222-2053 x400		
RIDOT	Kenneth Butera	2 Capital Hill	Kenneth.Butera@dot.rigov	(401) 222-2053 x406		
D'Andrea	Lee Taylor	800 Jefferson Blvd Warrville, RI	LTaylor@D-AMBRA.COM	401-737-1300	401 732-4725	
Schauer	Denny Curcio	110 SUMMIT ST PROV	LEORRENTE@LNERUF.COM	6390207		
JOHN RACCIO	MIKE SARRASIN	20 CARE IND DRUM SMITHFIELD	msarrasin@johnracciocorp.com	919 5562	999-3316	
Tim Dervay	JHLynch	50 Lynch Place Cumberland	Sales@jhllynch.com	333 4300		
Jason LaForge	JHL	50 Lynch Place Cumberland RI		333-4300		
<del>NATHAN SHAPARD</del>	NATHAN SHAPARD	2 Central Hill	NATHAN.SHAPARD@DOT.RI.GOV	222-3260 x440		
RIDOT - Const	Anthony Pompei	2 Care Hill	anthony.pompei@dot.rigov	265-4500		
Manufact	Andrew Iovanni	24 Mount Auburn	aiovanni@manufact.com	401-333-2550	333-2550	
MAMAFOET	ARTHUR SCOTTON	"	ASCO@MAMAFOET.COM	"	"	
RIDOT TRAIL	Jeff Freuden	2 Capital Hill	jeff.freuden@dot.rigov	401 222 2624 ext 4212		
RIDOT Bridge	Dave Fish	"	david.fish@dot.rigov	x4022	401-222-1271	
RIDOT	Norman Marzano	"	norman.marzano@dot.rigov	x4312		
RIDOT	Steve Prosta	11	Steve.Prosta@AMESIT.COM	4207		
CARDI Corp	Anthony Mesin	Linden Ave Warwick, RI	AMESIT@CARDI.COM	401-739-5300 EXT. 120	401-732-0006	



State of Rhode Island  
 Division of Purchases  
 One Capitol Hill  
 Providence, RI 02908

**"NON-MANDATORY" PRE-BID CONFERENCE SIGN IN SHEET**

**BID NUMBER:** 2014-CB-004  
**BID TITLE:** Replacement of Warren Avenue Bridge # 465  
**PRE-BID DATE AND TIME:** 01/07/2014 @ 9:00 AM

**Purchasing Representative:**  
**Pre-bid START TIME:**  
**Pre-bid END TIME:**

COMPANY NAME	COMPANY REPRESENTATIVE	ADDRESS	CONTACT E-MAIL	CONTACT PHONE NUMBER	CONTACT FAX NUMBER	PROPOSAL SUBMITTED (For Purchasing Use Only)
LBG	John Fitzgerald	Promenade St Providence RI	jfitzgerald@louisberger.com	781 707 7485		
LBG	Courtney Dwyer	295 Promenade St Providence, RI	cdwyer@louisberger.com	781-707-7426		
LBG	Phinees Fowler	"	pfowler@louisberger.com	"		
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RIC No. 2014-CB-004

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## 1. BRIEF SCOPE OF WORK

RI Contract No., 2014-CB-004, RI Federal Aid Project No. BRO-0465(001) for the Replacement of Warren Avenue Bridge No. 465 project in the City of East Providence, County of Providence, will be completed under Accelerated Bridge Construction (ABC) Method. ABC will be accomplished by the use of, but not limited to, prefabricated modular units for both the superstructure as well as the substructures. ABC will include, but not limited to demolition of existing bridge, as well as completing the new replacement bridge. The ABC work in this contract shall include the complete replacement of Warren Avenue Bridge No. 465. The work includes the complete demolition of the entire existing bridge, including, but not limited to superstructure, abutments, wingwalls, approach walls, pier caps and columns to the limits shown on the contract drawings. The work for the bridge superstructure shall include the installation of two (2) prefabricated modular units. The prefabricated modular units are constructed using rolled steel beams W36x256 with 7 ½” composite concrete deck, including concrete barrier. The prefabricated modular units will be connected on site by the use of High Early Strength concrete for the closure pours. The work for the bridge substructure shall include, but not limited to, the installation of precast footings, stemwalls, wingwalls and backwalls for both north and south abutments.

The work shall also include, but not be limited to road construction which includes gravel borrow subbase course, bituminous pavement, sawcutting, curbing, sidewalk, pavement marking, drainage, clearing and grubbing, removal of pavement, excavation and embankment, erosion control, trimming and fine grading, dust control, landscaping; plantable soil and seed, traffic control; uniform traffic persons, flag persons, temporary construction signs, detours, temporary closures, maintenance and protection of traffic, signs, lighting, field office, mobilization, and all other incidentals, complete and accepted, as required by the Engineer.

## 2. LIST OF CONTRACT DRAWINGS

### Volume 1 of 2

### Highway Plans

#### Sheet No.

#### Description

1	Cover Sheet & Index
2	Standard Plan Symbols & Standard Legend
3	Standard Notes - 1
4	Standard Notes - 2
5	Job-Specific Plan Symbols, Legend & Notes
6	Key Plan
7-8	Typical Sections
9-10	General Plans
11	General Details
12-13	Drainage & Utility Plans
14-15	Location Plans
16	Location Plans - Traverse Sheet
17-18	Profile (Ramp DR-2)

19	Profile (Warren Avenue)
20	Grade Plan (Ramp DR-2)
21-22	Lighting Plans
23-24	Signing & Striping Plans
25	Traffic Sign Summary
26-27	Traffic Control Plans
28	Traffic Control Details
29-32	Detour Signing Plans
33	Construction Sign Summary
34-35	Temporary Signal Plans
36-41	Cross Sections (Ramp DR-2)

Volume 2 of 2

Bridge Plans

<u>Sheet No.</u>	<u>Description</u>
1	Cover Sheet & Index
2	Bridge Abbreviations & General Legend
3-5	General Bridge Notes
6	General Plan and Westerly Elevation
7	Typical Bridge & Approach Sections
8	Profiles
9-11	Demolition Details
12-13	ABC Sequence of Construction
14	Footing Layout Plan
15	North Abutment Plan and Elevation
16	South Abutment Plan and Elevation
17-18	Abutment Sections and Details
19	North Wingwall Plan and Elevations
20	South Wingwall Plan and Elevations
21	Wingwall Sections
22	Precast Substructure Details
23	Precast Tolerance Details
24	End Post Details for Safety Barrier
25	Roadway Joints
26	North Abutment and Wingwall Pay Limits
27	South Abutment and Wingwall Pay Limits
28	Bridge Grading Plan
29	Paved Slope and Details
30	Framing Plan
31	Steel Details
32	Diaphragm Details
33	Camber Table
34	Deck Plan
35	Deck and Barrier Reinforcement Details
36	Deck Grades
37	Bearing Details

5:00 AM the following Monday to at a minimum complete all the erection of the two modular units as well as forming of the closure pour.

4. The Contractor shall furnish the Engineer with time-lapse high end imaging documenting all of the construction activities starting with Weekend Closure #1, Weekend Closures #2, and ending with the completion of Milestone #4.
5. The Contractor must provide all of the required detours in accordance with the TMP during the two weekend closures of Warren Avenue.
6. The contractor’s attention is directed to the following contract milestones;

<b>Milestone</b>
#1- Interim Completion Date #1 – Completion of Weekend Closure #1
#2 - Interim Completion Date #2 – Completion of Weekend Closure #2
#3 - Interim Completion Date #3 - Bridge Open to Traffic
#4 - Substantial Completion

- Milestone #3 is defined as the completed bridge structure and ramp, open to all traffic, less final striping. Temporary striping will be allowed until the roadway pavement has reached the required curing period of 14 days.
  - Milestone #4 is defined as Substantial Completion per specification 12.101.71 and including all of the Works of the Bridge, final striping as well as Warren Avenue.
7. Due to the nature of the ABC project delivery method, NO winter shutdown is allowed.
  8. The Contractor is reminded of the ABC nature of this contract and shall note specification “12.105.02 Plans and Shop Drawings”. The Contractor shall submit duplicate Shop Drawings (two copies per submittal) directly to the attention of the Consulting Engineer (The Louis Berger Group, Inc., 117 Kendrick Street, Suite #400, Needham, Mass 02494, Attn: Phineas Fowler, PE) simultaneously with each of his official submittals to the Department.
  9. The Contractor shall submit Requests for Information (RFI) through the RIDOT’s Project Management Portal (PMP).
  10. Strict adherence to the regulatory agencies’ permit requirements is mandatory.
  11. The Contractor shall coordinate through RIDOT to modify any permit that is included in this Contract. These modifications will be at the Contractor’s expense.
  12. The Contractor shall be responsible to obtain any permits required to perform the work of this Contract if these permits are not already included in this Contract
  13. The Contractor will not be permitted to close the existing bridge to traffic or start any demolition activities prior to the start of Weekend Closure #1 requirements. Contract drawings designated onsite construction laydown areas. If the contractor requires more storage/laydown areas or elects to use other areas these additional areas must be at the contractor’s own expense.

Prior to the start of weekend closure #1, all prefabricated elements must be stored on or in close proximity of the project site. The ABC phase during bridge closure will not allow for transportation related delays. All offsite storage locations shall be approved by the engineer.

lanes of traffic. Signs shall be trimmed when placed on median barriers to avoid encroaching on open travel lanes. This work shall be considered incidental and no extra payment shall be made.

24. All temporary signs shall be erected so that they are not obstructed by barrels or cones.

## 7. SUGGESTED SEQUENCE OF CONSTRUCTION

**The following is the suggested sequence of work of major items and is not inclusive of all work items or other sequence of work:**

- Install Support of Excavation (SOE) prior to demolition work.
- Setup temporary traffic controls as needed for Bridge 465 (Ramp DR-2) detour.
- Bridge 465 (Ramp DR-2) closure to traffic, after the onsite delivery of all the prefabricated modular units as well as the precast substructure elements.
- Setup temporary traffic controls as needed for Warren Avenue detour. Demolish the existing bridge superstructure and substructure during weekend closure of Warren Avenue roadway and sidewalks.
- Setup temporary traffic controls as needed on Warren Avenue and limit to one lane directional traffic on Warren Ave during off-peak hours as required.
- Begin work on the South Abutment.
- Place the reinforced crushed stone fill layers under substructure elements and install the precast footing elements, working from the abutment footing to the upper wingwall footings.
- Install the precast abutment wall stems, backwalls and wingwalls, working from the lower footing elevations to the upper footing elevations.
- Place crushed stone backfill behind abutments and wingwalls.
- Begin work on the North Abutment by repeating the south abutment suggested sequence.
- Install south and north abutments bearing assemblies.
- Setup temporary traffic controls as needed for Warren Avenue detour. Install modular superstructure units, including connecting diaphragms and form the closure pour between beams S2 and S3 during weekend closure of Warren Avenue roadway and sidewalks.
- Install the precast approach slab elements at the north and south abutments.
- Install the strip seal roadway joint at north abutment.
- Place the reinforcement for the superstructure and approach slab closure pours.
- Form and place the reinforcement for the safety barrier closure pours.
- Place concrete for the superstructure and approach slab closure pours.
- Place concrete for the safety barrier closure pours.
- Place approach roadway base material.
- Place the bridge waterproofing.
- Place wearing surface binding layer.
- Place overlay wearing surface, and provide temporary stripping.
- Saw cut pavement at the south abutment.
- Open Bridge 465 (Ramp Dr-2) to traffic.

## 8. LUMP SUM BID ITEMS

The Contractor shall note that numerous bridge items on this project are paid for on a lump sum basis or are included for payment under other lump sum item(s). In general these include but are not limited to:

- The construction of the new Bridge 465 superstructure in its entirety.
- The construction of the new Bridge 465 substructure in its entirety.
- The removal and disposal of the existing Bridge 465 superstructure in its entirety.
- The removal and disposal of the existing Bridge 465 substructure piers in their entirety.
- The structural excavation (removal and disposal) of the existing Bridge 465 substructure abutments and wingwalls in their entirety.

## 9. TRANSPORTATION MANAGEMENT PLAN

Included as an appendix (Appendix B) to these Contract Specific General Provisions is the Transportation Management Plan (TMP) for this project. The TMP lays out the set of coordinated transportation management strategies that will be used to manage the work zone safety and mobility impacts of this project. In the event of a discrepancy between information in the TMP and information elsewhere in the Contract Documents, the former shall govern.

*The Department's latest Training Guidelines for Personnel Responsible for Work Zone Safety & Mobility are available under the "Training" section at <http://www.dot.ri.gov/humanresources/index.asp>.*

## **10. STEEL FABRICATION AND DELIVERY**

The Contractor shall schedule the work such that all structural steel for the Bridge is fabricated, coated, delivered to the Department approved pre-assembly shop/site for prefabrication of the Superstructure Modular Units. This shall include girders, diaphragms, and other miscellaneous members. The steel shall be stockpiled at a location secured by the Contractor on land that is in the Contractor's control. The location shall be fenced. The Department will not provide a location. The Contractor may stockpile the steel on site however the Department will not consider any claims for costs or delays for stockpiling on site. The Department will not accept responsibility for the security of the steel if it is stockpiled on site.

The steel shall be stockpiled in such a manner so as not to damage or deform it, or mark the surface. The contractor shall provide all cribbing, trailers, loading, unloading, fencing, and security. The Contractor shall be liable for repairing all damage, including graffiti, to the satisfaction of the Engineer.

At the time of the execution of the Contract, the successful bidder must furnish the Department with a Contract Bond by the steel fabrication subcontractor for the structural steel and the work associated with meeting the requirements in the previous two paragraphs, in a sum equal to the value of the steel and the work. The bond shall meet all other requirements of section 103.05 of the Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction.

The cost for securing the location, fabricating, delivering, stockpiling, loading and unloading, and securing the steel shall be incidental to the contract. No additional payment shall be made for the requirements stated above.

## 11. REQUEST FOR INFORMATION (RFI)

An RFI is a document submitted by the Contractor requesting clarification of a portion of the Contract Documents or a field condition. All such requests shall include a detailed written statement indicating the specific Drawings or Specification to be clarified and the clarification requested. In addition, the Contractor shall:

- a. Identify Drawings by Drawing number and location on the sheet.
- b. Identify Specifications by Section number, page and paragraph.
- c. Provide description of the field condition requiring clarification.
- d. Clearly state the item to be clarified, provide background information as appropriate, and explain why a response is needed.
- e. Present Contractor's interpretation or understanding of the requirement.
- f. Include possible solutions by text and/or drawings.

Improper RFI's are defined as RFI's that are not complete, and will be returned unanswered.

Frivolous RFI's are defined as:

- a. RFI's that request information that is clearly shown on the Contract Documents.
- b. RFI's that do not comply with the definition of an RFI as indicated above.

Frivolous RFI's may be returned unanswered.

Delays caused by improper or frivolous RFI's are the sole responsibility of the Contractor who shall waive the Contractor's right to seek additional time or compensation.

### Submittals:

Submit RFI's on a form approved by the Department, numbered consecutively. Electronic Portable Document Format (pdf) RFI's are to be entered by the Contractor into the Department's web-based Project Management Protocol system (PMP). Ensure that the completed form and attachments (if any) are fully legible after download for photocopying or transmission by facsimile (fax) or email. Each page of attachments to RFI's shall bear the RFI number.

RFI's shall be originated by the Contractor. RFI's from subcontractors or material suppliers shall be submitted through, reviewed by, commented on, numbered & logged, and signed by Contractor prior to submittal to the Department.

The Contractor shall carefully study the Contract Documents to determine that the requested information is not available therein. RFI's which request information available in the Contract Documents will be deemed either "improper" or "frivolous."

Where RFI's are issued to request clarification of coordination issues, for example, pipe and duct routing, clearances, specific locations of work shown diagrammatically, and similar items, the Contractor shall fully lay out a suggested solution using drawings or sketches drawn to scale, and

submit with the RFI. RFI's which fail to include a suggested solution will be returned unanswered.

RFI's shall not be used for the following purposes:

- a. To request approval of submittals.
- b. To request approval of substitutions.
- c. To request different methods of performing work than those drawn and specified.
- d. To request changes which entail additional cost or credit.
- e. Routine written communications between the Department and the Contractor.
- f. Replies to Nonconformance Notices issued by the Department.
- g. To clarify subcontract bid questions.

RFI's do not automatically justify a cost increase in the work or a change in the project schedule. Answered RFI's shall not be construed as approval to perform extra work.

Responses from the Department will not change any requirement of the Contract Documents. If the Contractor believes that a response to a Request for information will cause a change to the requirements of the Contract Documents, the Contractor shall immediately give written notice to the Engineer stating that the Contractor considers the response requires a Change Order. Failure to give such written notice immediately shall waive the Contractor's right to seek additional time or compensation. The Contractor shall not proceed with the work until a Change Order has been issued.

Contractor shall allow up to 30 days review and response time for RFI's, however, the Department will endeavor to respond in a timely fashion to RFI's. If the Engineer determines that an RFI is inappropriate or should be submitted in another format, the RFI will be returned unanswered to the Contractor for re-submittal on the proper form and in the proper manner.

Department's Response to RFI's

A Request for Information Log will be maintained by the PMP system, and that system will assign a number for each RFI. If the Engineer determines that an RFI is improper or frivolous, the RFI will be returned to the Contractor unanswered; however, all RFI's will be numbered and entered in the Log.

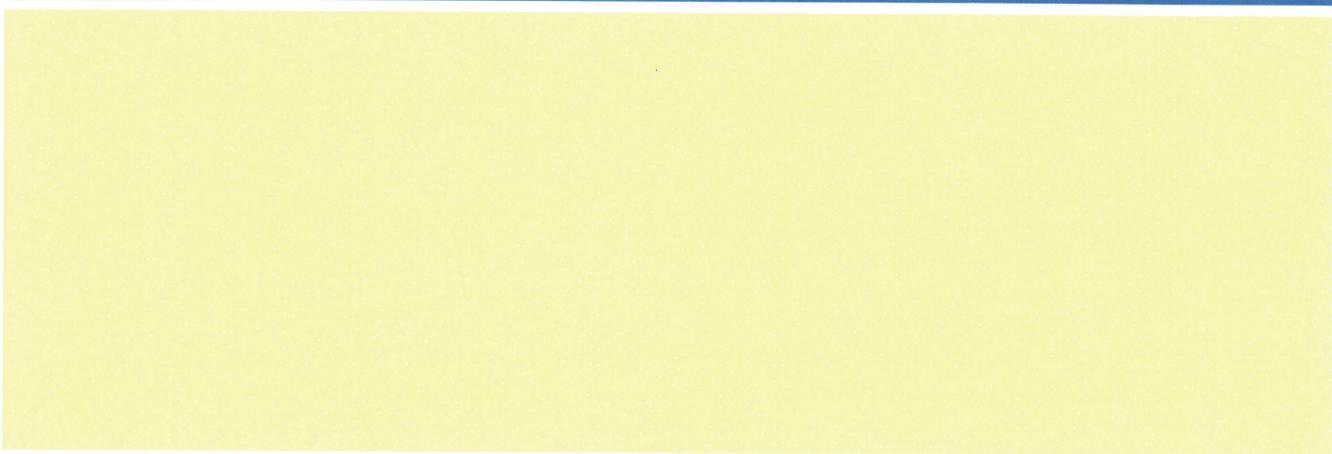
## CHANGES TO TMP & CONTINGENCY PLANS

If at any time (1) a significant deviation from any of the strategies included in the TMP (e.g., the use of an alternate construction sequence) is desired by one or more members of the project implementation team, (2) field observations and/or data suggest that impacts to road users are or will be unacceptable, or (3) one or more performance requirements established in the TMP are not being met in the field, the RIDOT TMP Implementation Manager shall report the situation to his/her supervisor or Division/Section/Unit manager. The supervisor / manager will coordinate with the State Traffic Engineer, the Traffic Management Chief, the TMP Development and/or Implementation Manager(s), the Chief Engineer, and/or other interested parties as appropriate and/or necessary to consider and determine whether revised and/or alternate strategies should be implemented in an effort to lessen the adverse safety and/or mobility impacts of the project. If the supervisor / manager deems that strategy changes should be implemented, the changes shall be documented in a revised version of the TMP and the Traffic Management Chief, the State Traffic Engineer, and the Chief Engineer must approve of the revised TMP prior to their implementation.

If a significant deviation from any of the strategies included in the TMP is requested by the Contractor, unless directed otherwise by the RIDOT the Contractor is responsible for preparing and submitting to the RIDOT TMP Implementation Manager appropriate documentation (e.g., design calculations, analysis reports, Temporary Traffic Control Plans, etc.) showing that the requested change(s) are (1) feasible and (2) expected to result in safety and mobility impacts that are no more adverse than the impacts resulting from the strategies already included in the latest approved TMP. The RIDOT will review and consider the submittal(s) as described in the preceding paragraph and will determine whether the changes should be implemented. If the requested changes are approved by the RIDOT, unless otherwise directed by the RIDOT the Contractor shall prepare and submit to the RIDOT TMP Implementation Manager a revised version of the latest approved TMP in both printed and electronic (Microsoft® Excel) format that documents all of the approved changes. Work to implement the changes shall not begin until the Traffic Management Chief, the State Traffic Engineer, and the Chief Engineer have approved of the revised TMP.

When unexpected events (e.g., crashes, inclement weather, unforeseen traffic demands, etc.) occur in a project work zone where one or more lanes are closed, the RIDOT TMP Implementation Manager or his/her responsible designee should (1) determine whether or not the lane closure(s) can/should be removed in order to improve traffic operations and/or minimize delays and (2) if deemed appropriate, take action to remove the lane closure(s).

### Project Specific Contingencies



## TMP APPROVALS

*All approvals must be obtained prior to start of work.*

DEPUTY CHIEF ENGINEER		
Signature:		
	Frank Corrao III, P.E.	
Date:	1/8/14	
Revision #	Initials	Date

STATE TRAFFIC ENGINEER		
Signature:		
	Robert Rocchio, P.E.	
Date:	1/8/14	
Revision #	Initials	Date

CHIEF ENGINEER		
Signature:		
	Kazem Farhoumand, P.E.	
Date:	1/8/14	
Revision #	Initials	Date

## Attachment A - General Restrictions - Bridge 465 East Providence Replacement of Bridge No. 465 over Warren Avenue

Location	MINIMUM NUMBER OF LANES & SHOULDERS TO REMAIN OPEN TO TRAFFIC <sup>1,2</sup>											
	TIME OF DAY		DAY OF WEEK									Saturday
	From	To	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday			
Warren Avenue <sup>6</sup>	0:00:00	6:00:00	1L	1L	1L	1L	1L	1L	1L	1L	1L	
	6:00:00	9:00:00	1L	2L	2L	2L	2L	2L	2L	2L	1L	
	9:00:00	15:00:00	1L	1L	1L	1L	1L	1L	1L	1L	1L	
	15:00:00	19:00:00	1L	2L	2L	2L	2L	2L	2L	2L	1L	
	19:00:00	24:00:00	1L	1L	1L	1L	1L	1L	1L	1L	1L	
	0:00:00	5:00:00	CLOSED	CLOSED	ALL	ALL	ALL	ALL	ALL	ALL	CLOSED	
Warren Avenue Weekend Closure <sup>3</sup>	5:00:00	22:00:00	CLOSED	ALL	ALL	ALL	ALL	ALL	ALL	ALL	CLOSED	
	22:00:00	24:00:00	CLOSED	ALL	ALL	ALL	ALL	ALL	CLOSED	CLOSED		
	0:00:00	5:00:00	CLOSED	CLOSED	ALL	ALL	ALL	ALL	ALL	CLOSED		
I-195 Eastbound Off-Ramp (Exit 5) Weekend Closure <sup>4</sup>	5:00:00	22:00:00	CLOSED	ALL	ALL	ALL	ALL	ALL	ALL	ALL	CLOSED	
	22:00:00	24:00:00	CLOSED	ALL	ALL	ALL	ALL	ALL	ALL	CLOSED		
	0:00:00	0:00:00	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED		
I-195 Westbous On-Ramp (DR-2) <sup>5</sup> over Warren Avenue (Full closure of this ramp allowed in accordance with the CS Pages of the contract documents)	0:00:00	0:00:00	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	

**LEGEND:**

- 2L All travel lanes and shoulders shall remain open to traffic (One lane in each direction)
- 1L A minimum of one 11 ft wide travel lane shall remain open to traffic (Alternating Eastbound and Westbound travel)
- CLOSED Full closure of roadway/ramp allowed.
- ALL All travel lanes shall remain open to traffic

**NOTES:**

1. The set-up and break-down of temporary traffic control devices within a traveled way or shoulder shall be construed as a closure of that traveled way or shoulder.
2. The provisions noted herein shall not free the Contractor from his responsibility to conduct all work in such a manner that assures the least possible disruption to traffic.
3. Full closure of Warren Ave below Bridge No. 465 allowed for Weekend Closure #1 and Weekend Closure #2 ONLY, as defined in the CS Pages.  
Closure allowed from 10 PM Friday through 5 AM Monday.
4. Full closure of I-195 Eastbound Off-Ramp (Exit 5) allowed for Weekend Closure #1 and Weekend Closure #2 ONLY, as defined in the CS Pages.  
Closure allowed from 10 PM Friday through 5 AM Monday.
5. Closed during the demolition and reconstruction of Bridge No. 465.
6. Night time construction activities must comply with local noise ordinance.

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**SPECIFICATIONS - JOB SPECIFIC**  
RIC No. 2014-CB-004

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**CODE 12.108.1000**

**PROSECUTION AND PROGRESS**

In accordance with Section **12.108.08, Failure to Complete on Time, Para. A., Phased and Interim Completion** the following defines the Phase and Interim Completion Dates and Associated Incentive/Disincentive Payment.

Weekend Closure #1:

The following work shall be completed prior to commencing Weekend Closure #1:  
The complete delivery of all prefabricated SMU's and PCE's to the project site, including bearing assemblies and all construction material and equipment required for the construction of the new bridge.

**1. Interim Completion Date - Completion of Weekend Closure #1**

**Closure of Warren Avenue below Bridge 465:**

**55 Hours** after start of Weekend Closure #1 (which may start at 10PM on a Friday night).

All work shall be completed for ICD #1 as defined below.

ICD 1 is the completion of all superstructure and substructure demolition work of the existing bridge, and all of the subsurface preparation work required for installation of the PCEs for the abutment footings such that Warren Avenue is reopened to two lanes of traffic.

**Incentive/Disincentive:**

**\$400 per hour** for Closure of Warren Avenue below Bridge 465.

**2. Interim Completion Date - Completion of Weekend Closure #2**

**Closure of Warren Avenue below Bridge 465:**

**55 Hours** after start of Weekend Closure #2(which may start at 10PM on a Friday night).

All work shall be completed for ICD #2 as defined below.

ICD 2 is the completion of all the erection of the two modular units as well as forming of the closure pour, and Warren Avenue reopened to two lanes of traffic.

**Incentive/Disincentive:**

**\$400 per hour** for Closure of Warren Avenue below Bridge 465.

- 3. Interim Completion Date #3 – Bridge Open to all Traffic:**  
**30 Calendar Days** after start of Weekend Closure #1. (From beginning of 1<sup>st</sup> weekend closure of Warren Avenue)

Interim Completion Date #3 as defined as the completed bridge structure and ramp, open to all traffic, less final striping. Temporary striping will be allowed until the roadway pavement has reached the required curing period of 14days.

**Incentive/Disincentive:**

**\$12,000** per calendar day for Closure of I-195 Westbound On-Ramp (DR-2) over Warren Avenue (Bridge 465).

- 4. Substantial Completion: December 15, 2014**

Substantial Completion per specification 12.101.71 and including all of the Works of the Bridge, final striping as well for Warren Avenue.

**Liquidated Damages: \$ 1,500** per calendar day.

**CODE 12.108.11**

**INCENTIVE AND DISINCENTIVE**

**DESCRIPTION:**

The payment provisions set forth elsewhere in the Contract are supplemented by the terms of this Special Provision.

**INTERIM COMPLETION DATE:**

A monetary incentive or disincentive will be applied to the following interim completion durations according to the terms herein:

Interim Completion Date #1 (hereafter referred to as "ICD1"): 55 hours after the start of Weekend Closure #1 with work as defined in 108.1000 Prosecution and Progress.

Interim Completion Date #2 (hereafter referred to as "ICD2"): 55 hours after the start of Weekend Closure #2 with work as defined in 108.1000 Prosecution and Progress.

Interim Completion Date #3 (hereafter referred to as "ICD3"): 30 days after the start of Weekend Closure #1 with work as defined in 108.1000 Prosecution and Progress.

**INCENTIVE AND DISINCENTIVE ASSESSMENT:**

**ICD1 – Completion of Weekend Closure #1**

Incentive (positive assessment): For each hour that the defined work is completed prior to ICD1, an incentive equal to the sum of **\$400 per hour** will be added to any monies due the Contractor. This incentive will be calculated from ICD1 up to the actual completion time of the defined work.

Disincentive (negative assessment): Correspondingly, for each hour that the defined work remains incomplete after ICD1, a disincentive equal to the sum of **\$400 per hour** will be deducted from any monies due the Contractor. This disincentive will be calculated from ICD1 up to the actual completion time of the defined work.

**ICD 2 – Completion of Weekend Closure #2**

Incentive (positive assessment): For each hour that the defined work is completed prior to ICD2, an incentive equal to the sum of **\$400 per hour** will be added to any monies due the Contractor. This incentive will be calculated from ICD2 up to the actual completion time of the defined work.

Disincentive (negative assessment): Correspondingly, for each hour that the defined work remains incomplete after ICD2, a disincentive equal to the sum of **\$400 per hour** will be deducted from any monies due the Contractor. This disincentive will be calculated from ICD2 up to the actual completion time of the defined work.

**ICD3 - Bridge Open to all Traffic**

Incentive (positive assessment): For each calendar day that the defined work is completed prior to ICD3, an incentive equal to the sum of **\$12,000 per calendar day** will be added to any monies due the Contractor. This incentive will be calculated from ICD3 up to the actual completion date of the defined work.

Disincentive (negative assessment): Correspondingly, for each calendar day that the defined work remains incomplete after ICD3, a disincentive equal to the sum of **\$12,000 per calendar day** will be deducted from any monies due the Contractor. This disincentive will be calculated from ICD3 up to the actual completion date of the defined work.

In no case shall the incentive be greater than **\$20,000.00** for closure of Warren Avenue below Bridge 465. In no case shall the incentive be greater than **\$120,000.00** for closure of the I-195 On-Ramp (DR-2) over Warren Avenue). There will be no limit to the total disincentive for the contract.

11. Placing the cast-in-place end of deck closure pour at the backwalls including steel reinforcement assembly and any and all embedded or attached components.
12. Placing cast-in-place concrete safety barrier closure pours for superstructure as shown on the plans including steel reinforcing, electrical conduit, couplings, pull boxes, junction boxes, concrete surface rubbed regular, concrete surface treatment protective coating, block-out for bent sliding plate, block out for strip seal frame and any and all embedded or attached components as shown on the plans.
13. Placing cold applied liquid membrane waterproofing on the bridge deck, wearing surface and subpavement deck drain.
14. Furnishing and installing the roadway joints at the abutments, including the strip seal hardware and joints, and any and all embedded or attached components.

All of the above work shall be complete in place and accepted in accordance with the Contract Documents except that the Method of Measurement and Basis of Payment will be in accordance with these Special Provisions.

#### **MATERIALS:**

The materials used shall be in accordance with the applicable sections of the RI Standard Specifications, Special Provisions, and plans for each respective item included in the construction of the superstructure.

#### **Fabricator Qualification**

The fabrication and pre-assembly of the SMU's shall be the sole responsibility of the Contractor.

1. If the Contractor elects to fabricate and pre-assemble the SMU's, the Contractor shall provide the fabrication and pre-assembly shop/site for doing this work. The Contractor shall submit the location of the shop/site for review and approval to the Department prior to the commencement of work. Compensation for out of state inspection service shall be in accordance with RI Standard Specifications Section 809.
2. If the Contractor elects to subcontract the SMU's fabrication and pre-assembly to a precast concrete plant, it shall be to a precast concrete plant listed on the latest RIDOT approved plant list "Approved Asphalt, Ready Mix Concrete, and Precast Concrete Plants".

The following submittals are required in addition to those required by relevant RI Standard Specifications. The Contractor shall conform to all submittal requirements of the Contract (Special Provision 105.02), including submitting the information specified herein to the Engineer.

#### **Shop Drawings for Prefabricated Superstructure Modular Units.**

Shop Drawings for the components of the SMU's shall be as required by the applicable specifications of the various work items. Shop Drawings for the prefabricated SMU's shall be made by the Contractor for review and final approval by the Engineer prior to ordering materials and prior to the performance of work for the prefabricated SMU's.

**CODE 800.9920**

**WARREN AVENUE BRIDGE NO. 465 SUBSTRUCTURE**

**DESCRIPTION:**

The work under this item shall consist of constructing the substructure of the Warren Avenue Bridge No. 465 in its entirety. These Special Provisions shall supplement the relevant sections of the State of Rhode Island Standard Specifications for Road and Bridge Construction, Amended December 2010, including all applicable compilations of approved specifications (hereinafter referred to as the RI Standard Specifications), not replace them. All work shall be performed in accordance with the contract drawings, the RI Standard Specifications as modified by this Special Provision, and as directed by the Engineer. Where no specific requirement is directed for a component part of this item, the RI Standard Specifications shall apply, except for payment.

The work included for this item shall comprise all work pertaining to the construction of all substructure components consisting of fabricating, pre-assembly, furnishing, erecting, and installing all reinforced Precast Concrete Elements (PCE), including but not limited to, the precast abutment footings, precast abutment stems, precast wingwall footings, precast wingwall stems, precast footing steps, precast parapets, precast endposts, precast approach slabs, concrete closure pours, slope paving, paved waterway, shear keys, flowable concrete bedding, non-shrink grout, grouted splice couplers, concrete surface rubbed regular, concrete surface treatment (protective coating), weep drain, neoprene sheet seal, backer rod, protection board, leveling bolt assembly, granite identification tablets, rigid steel conduit in structure, couplings, flexible fittings, expansion fittings, pull boxes, junction boxes, block-out for bent sliding plate, miscellaneous metals, lifting anchors, temporary bracing, hardware, and any and all embedded or attached components including all necessary materials and equipment to complete the work as shown on the plans.

The temporary earth retaining system is included as part of this work. Refer to Section 805.9900 of these special provisions.

All of the above work shall be complete in place and accepted in accordance with the Contract Documents except that the Method of Measurement and Basis of Payment will be in accordance with these Special Provisions.

**MATERIALS:**

The materials used shall be in accordance with the applicable sections of the RI Standard Specifications, Special Provisions, and plans for each respective item included in the construction of the superstructure.

**Fabricator Qualification**

The fabrication and pre-assembly of the PCE's shall be the sole responsibility of the Contractor.

1. If the Contractor elects to fabricate and pre-assemble the PCE's, the Contractor shall provide the precast concrete fabrication shop/site for doing this work. The Contractor shall submit the location of the fabrication shop/site for review and approval to the

**CODE 804.9910**

**PRE- AND POST-CONSTRUCTION CONDITION SURVEY**

**DESCRIPTION:**

The work to be performed under this item shall consist of all labor, equipment, and materials associated with conducting condition surveys of all structures on the properties listed herein, in accordance with the RI Standard Specifications and these Special Provisions. Any damage sustained by the structures listed herein due to construction operations shall be repaired by the Contractor to the satisfaction of the Engineer at no additional cost to the State.

The structure condition surveys shall be conducted on all buildings and structures within 200 feet of the proposed Bridge 465 structure.

The following is a list of properties for which structure condition surveys shall be conducted:

1. City of East Providence – Assessors Plat 22 Lot 11
2. City of East Providence – Assessors Plat 22 Lot 12
3. City of East Providence – Assessors Plat 22 Lot 13
4. City of East Providence – Assessors Plat 22 Lot 14
5. City of East Providence – Assessors Plat 22 Lot 15
6. City of East Providence – Assessors Plat 22 Lot 16
7. City of East Providence – Assessors Plat 6 Lot 1
8. City of East Providence – Assessors Plat 6 Lot 4
9. City of East Providence – Assessors Plat 5 Lot 1
10. City of East Providence – Warren Avenue Ramp CR-3 Bridge No. 464

**EXECUTION:**

The surveys shall be conducted by an Engineer, licensed to practice in the State of Rhode Island, who possesses relevant experience. The registered Engineer retained by the Contractor shall have conducted a minimum of 2 similar studies within the last 5 years. The surveys shall be conducted prior to the start of any construction activities.

Documentation shall include photographs, video, sketches, and a written report of findings. Particular attention shall be paid to, but not necessarily limited to, the following:

1. Locations and sizes of cracks in interior and exterior walls, floors and ceilings; and missing mortar, plaster or other surface materials;
2. Damaged masonry or roofing including evidence of leakage or poor roof/gutter drainage, such as staining;
3. Damaged or out-of-square doorways and windows including tightness of fit and ease of operation;
4. Walls that are not plumb, floors or ceilings that are not level, and walls, floors or ceilings that are uneven and the extent to which they are not planar;
5. Condition of the foundation walls and basement floors, especially cracking, differential movements, and signs of dampness or wetness;

6. Condition and grading of the ground surface around the exterior of the structure including evidence of drainage towards walls, low spots that pond water, cracks and irregularities in asphalt, concrete, brick or stone pavements, sidewalks, and steps and;
7. Evidence of previous repairs to the structures.

For both the Pre- and Post—construction condition surveys, the Contractor shall submit an original report for each property and six (6) copies with all of the documentation to the Engineer for review. The Pre- construction survey reports shall be submitted at least twenty (20) days prior to the start of work. The Post—construction survey report shall be submitted within four (4) weeks of the completion of the work.

The Contractor shall keep on file, one copy of all results of the pre- and post—construction condition survey in a suitable location on site. The documents shall be kept available for viewing during normal working hours. No duplicates, other than as specified above, of any of the survey information will be allowed without the expressed written consent of the Engineer and the Property Owner. Should the Survey Engineer encounter difficulty or be refused entry to a property, he shall document said refusal in his report and inform the Contractor and Engineer of the incident. He shall gather only that information that is available from outside the structure or outside the property boundary.

**METHOD OF MEASUREMENT:**

Item 804.9910 "PRE- AND POST-CONSTRUCTION CONDITION SURVEY" will be measured for payment per "Each" survey performed in accordance with the Contract Documents and/or as directed by the Engineer. For the purposes of measurement, pre-construction and post-construction surveys for all structures on a given property will be considered together as one "survey performed".

**BASIS OF PAYMENT**

The accepted quantity of Item 804.9910 "PRE- AND POST—CONSTRUCTION CONDITION SURVEY" will be paid for at its respective contract unit price per "Each" as listed in the Proposal. The price so stated shall constitute full and complete compensation for all labor, materials, tools and equipment, and all other incidentals required to complete the work as described in these Special Provisions and elsewhere in the Contract Documents, complete in place and accepted by the Engineer.

**CODE 804.9920**

**INSTRUMENTATION AND MONITORING**

**DESCRIPTION**

- A. The Contractor shall retain an experienced engineer registered in the State of Rhode Island to develop a geotechnical instrumentation plan providing the proposed location of the monitoring points and seismographs required in this specification. The contractor shall provide an Geotechnical Instrumentation Plan Submittal which will provide shop drawings that indicate the instrumentation locations, sizes, material types, manufacturers' data and specifications, installation procedures, and other data. The Contractor shall also submit a list of all affected properties and structures for vibration and movement monitoring (Surface monitoring points and Movement Monitoring Points) as part of the project schedule development process Contractor's Submittal List. Vibration/settlement monitoring shall be performed at all structures within 200 feet of vibration-including construction activities. The Contractor submittals shall be acceptable to the Engineer prior to undertaking the work and shall be submitted a minimum of 30 days prior to the start of work.
- B. Prior to commencement of construction activities, the contractor shall install all seismographs and settlement monitoring points at locations approved by the Engineer. Baseline readings shall be recorded prior to the start of construction activities. An engineer or surveyor registered in the State of Rhode Island shall perform the monitoring of the settlement points.
- C. The following is a description and requirement for the number of monitoring points to be installed for the project. Monitoring points shall be installed a minimum of two weeks prior to the start of work and preconstruction baseline data shall be established for comparison with construction and post construction data.
1. Movement Monitoring Points (MMP):  
These points shall consist of fixed total station targets on exterior buildings, on existing bridge and ramp piers, abutments and walls at approximate 25-foot spacing. A minimum of two points shall be installed on all building and bridge structures within 200 feet of the construction. It should be noted that each existing bridge foundation unit (abutment, pier and wingwall) is considered a separate structure and shall require two monitoring points.
  2. Surface Monitoring Points (SMP):  
These points shall consist of a PK Nail or Drill Hole on surface of roads, slabs or sidewalks at approximate 50 foot spacing. A minimum of 3 points shall be installed within Warren Avenue, Potter Avenue and all on and off ramps for I-195 situated within 200 feet of the construction.

**VIBRATION MONITORING**

- A. During construction operations, four (4) seismographs shall be positioned and continuously operating. These seismographs shall continuously monitor vibrations at structures within 200 feet of construction activity. Seismographs shall be used to establish the maximum energy which can be used without surpassing acceptable vibration levels at nearby facilities. The Contractor shall submit a comprehensive list of all affected properties and structures for vibration monitoring. Any damage sustained by the structures due to construction operations shall be repaired by the Contractor to the satisfaction of the Engineer at no additional cost to the State.
- B. The contractor shall notify the Engineer at least 72 hours prior to starting a new vibration-producing construction activity.
- C. The vibration monitoring shall be performed under the direction of a Rhode Island Registered Professional Engineer.
- D. The Contractor shall record data for vibrations to ensure that construction vibrations are maintained below the values provided on the project plans.

#### **MONITORING POINTS**

- A. The Contractor shall collect data at all settlement monitoring points on a weekly basis. A surveyor or engineer registered in the State of Rhode Island shall conduct the monitoring.
- B. The Description of work in this Special Provision provides a general requirement for the structures for which monitoring shall be conducted. Additional settlement monitoring locations may be added to this list as directed by the Engineer.
- C. Surface Monitoring Points (SMP's) shall be installed at locations as described in the Special Provision or as directed by the Engineer to monitor vertical and horizontal deformation. SMP's will typically be installed into horizontal surfaces (e.g., ground surface, sidewalks, granite curbstones).
- D. Movement Monitoring Points (MMP's) shall be installed on structures as described in this Special Provision or as directed by the Engineer to monitor deformation of new and existing structures. MMP's shall typically be installed into vertical surfaces of buildings and structures. Installation of points shall utilize means and methods that avoid or minimize damage to building materials in general, and in particular, to historic materials. It will be the responsibility of the Contractor to arrange permission for installation of the MMP's.
- E. The SMP's, and MMP's shall be located such that daily construction activities will not inhibit the Contractor from obtaining readings at any time during the construction.

#### **DATA REDUCTION, PROCESSING AND ANALYZING**

- A. When the Engineer judges from the data that a change has occurred which is likely to require remedial or precautionary measures, the Engineer will notify the Contractor. The Contractor shall verify the change and shall initiate response action(s).
- B. Data will be evaluated by the Engineer, at his sole discretion, to determine whether the response to construction activities is reasonable. Interpretation will include making correlations between instrumentation data and the specific construction activities.
- C. Table 2 indicates Response Values for selected instruments. The actions associated with these Response Values are defined below. Plans for such actions are referred to herein as “Plans of Action,” and the actual actions to be implemented are referred to herein as “Response Actions.” Response Values are subject to adjustment by the Engineer as indicated by prevailing conditions or circumstances.

INSTRUMENTATION TYPE/LOCATION	INSTRUMENT RESPONSE VALUES	
	THRESHOLD	LIMITING
Monitoring Points on Existing Bridge Piers and Abutments	Deformation in Any Direction - 0.10"	Deformation in Any Direction - 0.25"
Monitoring Points on Existing or New Retaining Walls	Deformation in Any Direction - 0.25"	Deformation in Any Direction - 0.5"
Monitoring Points on Residential Building	Vertical Deformation - 0.25"	Vertical Deformation - 0.5" (1/500 Angular Distortion)
Monitoring Points on Commercial Buildings	Vertical Deformation - 0.25"	Vertical Deformation - 0.5" (1/500 Angular Distortion)
Seismographs	See Vibration Control and Monitoring Notes on General Bridge Notes Sheet 3 of 3	

- D. If a Threshold Value is reached the Contractor shall:
  - 1. Meet with the Engineer within 24 hours of the Threshold Value being reached to discuss the need for Response Action(s). If notified by the engineer during the above meeting that a Response Action is needed, within 24 hours submit a detailed specific Plan of Action.
  - 2. If notified by the Engineer, implement Response Action(s) within 24 hours of submitting a detailed specific Plan of Action, so that the Limited Value is not exceeded.
- E. If a Limiting Value is reached the Contractor shall:
  - 1. Meet with the Engineer within 24 hours of Limiting Value being reached to discuss the need for additional Response Action(s). If notified by the Engineer, implement additional Response Action(s) within 24 hours of submitting a detailed specific Plan of Action, so that the Limiting Value is no longer exceeded.

2. The Contractor shall take all necessary steps so that the Limiting Value is not exceeded. The Contractor may be directed to suspend activities in the affected area with the exception of those actions necessary to avoid exceeding the Limiting Value.

#### **DISPOSAL OF INSTRUMENTS**

Upon completion of the Work, as directed by the Engineer, the Contractor shall remove and dispose of those portions of instruments constituting an obstruction, including but not limited to SMP's, and MMP's. New pavement patches shall be constructed, in paved areas, of the same material and to the same thickness as existing adjacent pavement. Disturbed or damaged surfaces shall be restored to the condition existing before installation of the instrument.

**METHOD OF MEASUREMENT:** This item of work will not be measurement for payment.

**BASIS OF PAYMENT:** Item Code 804.9920 "INSTRUMENTATION AND MONITORING", will be paid for at the respective contract "Lump Sum" price as listed in the Proposal. The price so stated shall constitute full and complete compensation for all labor, tools, materials and equipment, and all other incidentals required to complete the work as described in these Special Provisions and elsewhere in the Contract Documents, complete in place and accepted by the Engineer.

(5) Backup systems as required.

The Engineer shall be allowed forty five calendar days to review a set of shop drawings. A set of shop drawings shall be considered to be all drawings received by the Engineer from the Contractor for a particular contract on any calendar day. If the shop drawings are detained for examination for a period longer than that stated above, such detention will be taken into account when considering application by the Contractor for an extension of time for the completion of the Contract.

**809.02.2 Concrete.** The Contractor shall be responsible for designing a concrete mix to produce the strength and other characteristics specified on the Plans in accordance with the applicable requirements of **SECTIONS 601, M.02; PORTLAND CEMENT CONCRETE.**

**809.02.3 Steel.** Except as noted herein, reinforcing steel shall conform to the requirements of SECTION 810 of these Specifications and as shown in the plans. All reinforcing steel used in the fabrication of precast/prestressed concrete structural elements shall be tested before being placed in any of the products.

**a. Other Requirements.** Steel components shall also conform to the following additional requirements.

1. **Chairs or other devices** necessary to ensure the proper placement of steel items shall be galvanized, or plastic coated and must be capable of supporting the loads without deformations, all as approved by the Engineer.
2. **Prestressing steel** shall meet the requirements of Subsection M.05.03 of these Specifications.
3. **Bearing plates**, if required, shall meet the applicable requirements of SECTION M.05; METALS, of these Specifications.
4. **Any additional strands or reinforcing steel**, wire mesh etc., shall be subject to approval of the Engineer and be provided at no additional cost to the State.

### **809.03 CONSTRUCTION METHODS.**

**809.03.1 Equipment Checks and Calibration.** A calibration certificate indicating the load calibration of each gauge and hydraulic jack combination used for tensioning shall be provided. The gauge shall have clearly marked divisions of 2 percent of the final tensioning force that are easily readable at the initial and final tensioning force. The calibration of each combination gauge and hydraulic jack shall be made every 6 months. Any repair to the rams, such as

subject to approval by the Engineer. All strands that show a relaxation loss of prestress in excess of 3 percent shall be retensioned to the designed final jacking force.

When stressing grouped strands simultaneously, each tendon must first be brought to initial tensioning load. The final tensioning load shall be applied to the group using a procedure approved by the Engineer.

During tensioning of any one strand, the process shall be so conducted that the applied load and the elongation of the strand may be measured at all times.

Any prestressed strand which has been tensioned for over 48 hours without the placement of concrete must be checked for elongation or loss of stress before placing of concrete. If losses occur the strands shall be detensioned and then retensioned in accordance with the design loading requirements.

**809.03.6 Handling and Placing Concrete.** No concrete shall be placed without the Engineer's approval. Concrete shall be handled and placed in accordance with the applicable requirements of **SECTIONS 601 and 808; PORTLAND CEMENT CONCRETE and CAST-IN-PLACE STRUCTURE CONCRETE MASONRY, respectively.**

Suitable means shall be used for conveying and placing concrete without segregation. The concrete mixture shall not be dropped from a height greater than one foot above the top of the forms. Special care shall be taken to deposit the concrete in its final position in each part of the form.

The fresh concrete shall be consolidated in place by internal vibration and, if necessary, also by external vibration. The vibrators shall be of a type and design approved by the Engineer and the size of the vibrating head will be governed by the spacing of the prestressing and reinforcement. Vibrators shall be used only to consolidate the concrete after it has been properly placed and shall not be used for moving concrete along the forms.

The Contractor is responsible for the proper vibration and consolidation of concrete. Only properly trained personnel shall be used in the placing and finishing operations.

**809.03.7 Finishing.** After all the concrete has been placed and thoroughly compacted as required under Subsection; 809.03.6, above, the tops of units shall be magnesium float finished, unless specified otherwise. To assure production of well-formed concrete elements with an overall pleasing appearance, all surfaces of concrete shall be true and even, free from rough, open or honeycombed areas, depressions, air pockets or projections. All exposed surfaces shall be finished by bagging or as otherwise indicated. In addition, special care and effort shall be taken when finishing all fascia portions of concrete elements.

**809.03.8 Curing.** Curing shall conform to section 601 and as modified herein.

**a. Curing by Moist Method Without Supplemental Heat**

3. Erico Lenton Interlok  
ERICO United States  
34600 Solon Road  
Solon, OH 44139

- C. Use the same coating system as used for the reinforcing steel.
- D. Use grouted splice couplers that provide 150 percent of the specified yield strength of the connected bar.
- E. Use grout supplied by the manufacturer of the coupler and that matches the certified test report for the coupler.

**810.03 CONSTRUCTION METHODS:** [Add to end of section]

**810.03.3 Grouted Splice Couplers**

- A. Use personnel familiar with installation and grouting splice couplers and have completed at least two successful projects in the last two years. Train new personnel within three months of installation by a manufacturer's technical representative as an acceptable substitution for the experience.
- B. Remove and clean all debris from the joints before grout application.
- C. Keep bonding surfaces free from laitance, dirt, dust, paint, grease, oil, or any contaminants other than water.
- D. Check the lengths of rebar anchor dowels to make sure they meet the minimum coupler embedment specified in the manufacturer's manual.
- E. Saturate Surface Dry (SSD) all joint surfaces before connecting the elements.
- F. Monitor shim thickness between the precast elements to ensure that the reinforcing extensions are within the manufacturers recommended tolerance.
- G. Maintain a minimum grout and sleeve temperature of 50 degrees F. Monitor the temperature of the covered grouted slice couplers until the temporary bracing is removed.
- H. Monitor the grout mixing, water to grout ratio, mixing time, and shelf life of the grout for conformance with the manufacturer's written instructions.
- I. Mix structural grout and coupler grout just before use according to the manufacturer's instructions.
- J. Follow the manufacturer's recommendations for coupler installation and grouting
- K. Monitor the grouting operation to verify that all sleeves have been filled.
- L. Verify that all sleeves are protected from any vibration, shock, or other excessive movement until temporary bracing is removed.
- M. Conform to the following when installing couplers above a horizontal joint:
  - 1. Determine the thickness of shims to provide the specified elevation within tolerance.
  - 2. Follow non-shrink grout manufacturer's recommendations for mixing, joint surface preparation, and application.

**CODE T12.9901**

**MOBILE CAMERA SURVEILLANCE SYSTEM**

**DESCRIPTION:** This work shall consist of furnishing and installing a mobile camera surveillance system to view and record the project construction. The system shall include two (2) self-powered, rugged, wind-resistant trailers with pressure-sealed cameras for traffic management and work zone monitoring. The dome cameras shall mount to a 42 foot telescoping mast to provide a strategic overview of site.

- A. The outdoor camera system shall consist of two (2) separate weather resistant cameras, constructed of black powdered coated aluminum housing integrated on mobile solar powered trailer platform. One trailer shall be located at the eastern side of the project and the other at the western side of the project (looking at the bridge).
- B. The cameras shall have the ability to take digital still images every 5 minutes as well as provide live video.
- C. The camera shall upload both images and video over a wireless cellular modem.
- D. The content shall be sent to a secure, password protected website with an interface and online software features provided by the vendor as a managed service.
- E. The system shall operate on 12 VDC.

**MATERIALS:** This work shall consist of furnishing, installing, and testing a mobile camera surveillance system that meets the following requirements:

**EQUIPMENT:**

- A. The dome camera shall consist of a thermoplastic dome and acrylic bubble with pan, tilt, and zoom motion with 360° rotation, live streaming video and lens assembly consisting of a charge coupled device (CCD) camera with a remotely controlled focal lens with the following features:
  - 1. Image sensor 1/4-inch
  - 2. Scanning system 2:1 interlaced output
  - 3. Effective pixels NTSC: 768 x 494, PAL: 752 x 582
  - 4. Horizontal resolution NTSC: 540 TVL, PAL: 540 TVL
  - 5. Lens f/1.4 (focal length, 3.4~119 mm; 35X optical zoom,12X digital zoom)
  - 6. Programmable zoom speeds 3.2, 4.6, or 6.6 seconds
  - 7. Horizontal angle of view 55.8° at 3.4 mm wide zoom, 1.7° at 119mm telephoto zoom
  - 8. Focus Automatic with manual override

- |                                    |  |
|------------------------------------|--|
| 9. Sensitivity at 35 IRE           | NTSC/EIA: 0.55 lux at 1/60 sec (color), 0.063 lux at 1/4 sec (color), 0.00018 lux at 1/2 sec (B-W) PAL/CCIR: 0.55 lux at 1/4 sec (color), 0.063 lux at 1/3 sec (color), 0.00018 lux at 1/1.5 sec (B-W) |
| 10. Synchronization system         | Internal/AC line lock phase adjustable using remote control, V-sync  |
| 11. White balance                  | Automatic with manual override   |
| 12. Shutter speed                  | NTSC: 1/2-1/30,000, PAL: 1/1.5-1/30,000  |
| 13. Iris control                   | Automatic with manual override   |
| 14. Gain control                   | Automatic with manual override   |
| 15. Video output                   | 1 Vp-p, 75 ohms  |
| 16. Video signal-to-noise          | 50 dB  |
| 17. Wide dynamic range             | 128X   |
| 18. Electronic image stabilizer    | Integrated   |
| 19. Image enhancement              | Integrated   |
| 20. Pan movement                   | 360° continuous pan rotation   |
| 21. Vertical tilt                  | Unobstructed +2° to -92°   |
| 22. Manual pan speed               | 0.1° to 80°/sec manual operation, 150/sec turbo  |
| 23. Manual tilt speed              | 0.1° to 40°/sec manual operation   |
| 24. Preset speed                   | Pan: 400°/sec, Tilt: 200°/sec  |
| 25. Heater and blower              | Thermostatically controlled  |
| 26. Dome pressure                  | 12 PSI   |
| 27. Surge and lightning protection | Built-in surge and limited lightning protection  |

B. The video webcaster shall consist of a single channel video encoder compatible with the vendor's systems consisting of:

1. Multi-user level password protection for restricted camera access.
2. Events triggered by motion detection, external inputs or schedule.
3. Alarm notification: E-mail, TCP, and HTTP.
4. Compatible with most versions of Internet Explorer, Firefox and Safari.
5. Video compression: Motion JPEG, MPEG.
6. Maximum resolution: 768 x 576.
7. Frames per second: 30
8. IP addressing: Dynamic or Static.
9. Communication: DSL, Cable Modem, T-1, Wireless ISP, EV-DO Rev-A or LAN Available.

C. Solar powered trailer platform:

1. Operational temperature range: -4°F to 158°F (-20°C to 70°C)
2. Traveling dimensions: 15' L x 7' W x 7' H
3. Region of operation: Contiguous United States.
4. Autonomy: 4 days battery backup.

5. Full size spare tire.
6. Guy Wires to stabilize an extended mast and steady the camera shot.

D. Battery:

1. Battery type: 6Volt DC Deep Cycle Batteries.
2. Low voltage battery disconnect.

E. Solar Array:

1. Photovoltaic module type – Single crystal (monocrystalline) silicon.
2. Solar panels on positional mounts.
3. Photovoltaic module junction boxes shall be equipped with watertight strain relief at all cable entry points.
4. Charge controller with remote monitoring.

F. Communication:

1. Wireless GPS modem EV-DO Rev. A full duplex transceiver with dual-band support for both 800 MHz cellular and 1.9 GHz PCS bands.
2. Forward link up to 3.1 Mbps; Reverse link 1.8 Mbps and real time GPS reporting

## **INTERFACE AND ONLINE SOFTWARE**

A. Remote Access: The Contractor's system vendor shall provide an internet based interface and online software as a managed service to allow the viewing of all high definition digital still images captured and stored and live video from any location with internet access via a secure password protected website.

1. Maintain images on the system vendor's website for reference available at all times during the life of the project and for not less than 60 days after date of final completion.

B. Online Interface Features:

1. Software delivered by vendor as a managed service.
2. Displays project name.
3. Capable of viewing actual live video.
4. Picture in picture to control and view live video while viewing additional data.
5. Pan, tilt and zoom control of camera system.
6. Calendar based navigation system for selecting specific images.
7. Multifunction image browsing.
8. Pan, tilt and zoom capability within a high definition image.
9. A multi-view screen to view all of the cameras on a project at the same time.
10. Graphical mark-up tools for detailing and creating overlays on images.

11. Graphical weather applet displaying ten points of local weather data and 48-hour forecast.
12. Remote solar monitoring screen displaying the DC amperage output of the solar panels.
13. Remote battery monitoring screen displaying battery voltage, temperature and status.
14. Remote cellular monitoring screen displaying connectivity, network traffic and modem temperature.
15. Remote wireless radio monitoring screen displaying connectivity, network traffic and Google Map features including wireless radio locations.
16. Share image tools: save, print, email and post to message board or mobile devices.
17. Automated progress reports in Power Point, Open Office and PDF formats.
18. Map, aerial and satellite view by Google.
19. Time lapse feature shall include – Instant time lapse play back by day, week, month or year.
20. Machine to machine self-healing technology that automates maintenance of camera up to 288 times daily.
21. Account security features shall include – Four levels of password protection, IP address block/ permission and SSL protection of the user login password.

All equipment and software including but not limited to the portable trailer, solar panels, batteries, camera, communications systems, video webcaster, software and online interface shall be provided by the same vendor as a complete unit.

**CONSTRUCTION METHODS:** The Contractor in coordination with the Engineer shall determine the mounting location for each mobile traffic camera trailer. The trailers shall be installed outside of the roadway clear zone or behind protective barrier or guardrail. If the trailers cannot be located outside the clear zone or behind protective devices, the contractor shall provide temporary protective devices in accordance with the latest edition of the AASHTO Roadside Design Guide. The Contractor may be requested to move the trailers up to two times during the construction period by RIDOT. If the trailer needs to be relocated due to Contractor construction activities, it shall not count towards a requested relocation.

One trailer shall be positioned to view the south end of the project and the other trailer to view the north end of the project. Possible locations may include the top of the Providence Place Parking Garage or the top of the Hilton Hotel Parking Garage. However, the Contractor shall be responsible for all negotiations, fees and agreements with private land owners.

The trailers shall be installed at the agreed locations and made operational and tested 7 days prior to the start of construction. The contractor shall utilize vendor support as needed and perform initial installation and set-up procedures per the vendor's instructions.

#### **INSTALLATION:**

##### **A. General:**

1. Install camera system in accordance with manufacturer's printed instructions, State and Municipality codes and requirements and approved submittals.
  2. Install units plumb and level and at proper angle to provide maximum field of view of on-site operations.
  3. Securely and rigidly anchor products in place.
  4. Connect cameras to power.
- B. Position camera so that field of view of approximately 58° horizontal and 44° vertical covers intended area of site.
1. Locate the trailer so that the solar panels have an unobstructed view of the Southern sky.
  2. Locate the trailer so the camera will provide uncompromised visual coverage.
  3. Locate the trailer so that position of sun or man-made light sources will not come into direct contact with field of view of camera at any time during construction.

**MAINTENANCE:**

The Contractor shall clean and maintain the units and equipment for the life of the project for 24 hour operation per the vendor's recommended schedule. The camera domes shall each be cleaned up to ten times per year at the Engineer's request. The Contractor shall create a maintenance spreadsheet detailing the recommended maintenance for each site and keep a maintenance log documenting the maintenance performed for submittal to the Engineer every six (6) months.

The Contractor shall be responsible for all aspects of maintaining a fully operational mobile camera surveillance system from 7 days prior to beginning construction to 30 days after written notification of final acceptance.

**PROJECT COMPLETION:**

Within 30 days after final project completion, the Contractor shall demonstrate to the Engineer that each camera and trailer unit is fully operational and the two mobile camera surveillance system trailers shall be delivered to the RIDOT at the following location with all original literature, instruction, operation, and maintenance manuals:

RIDOT Maintenance Headquarters  
360 Lincoln Avenue  
Warwick RI 02888-3030  
Telephone - 401 222-2378

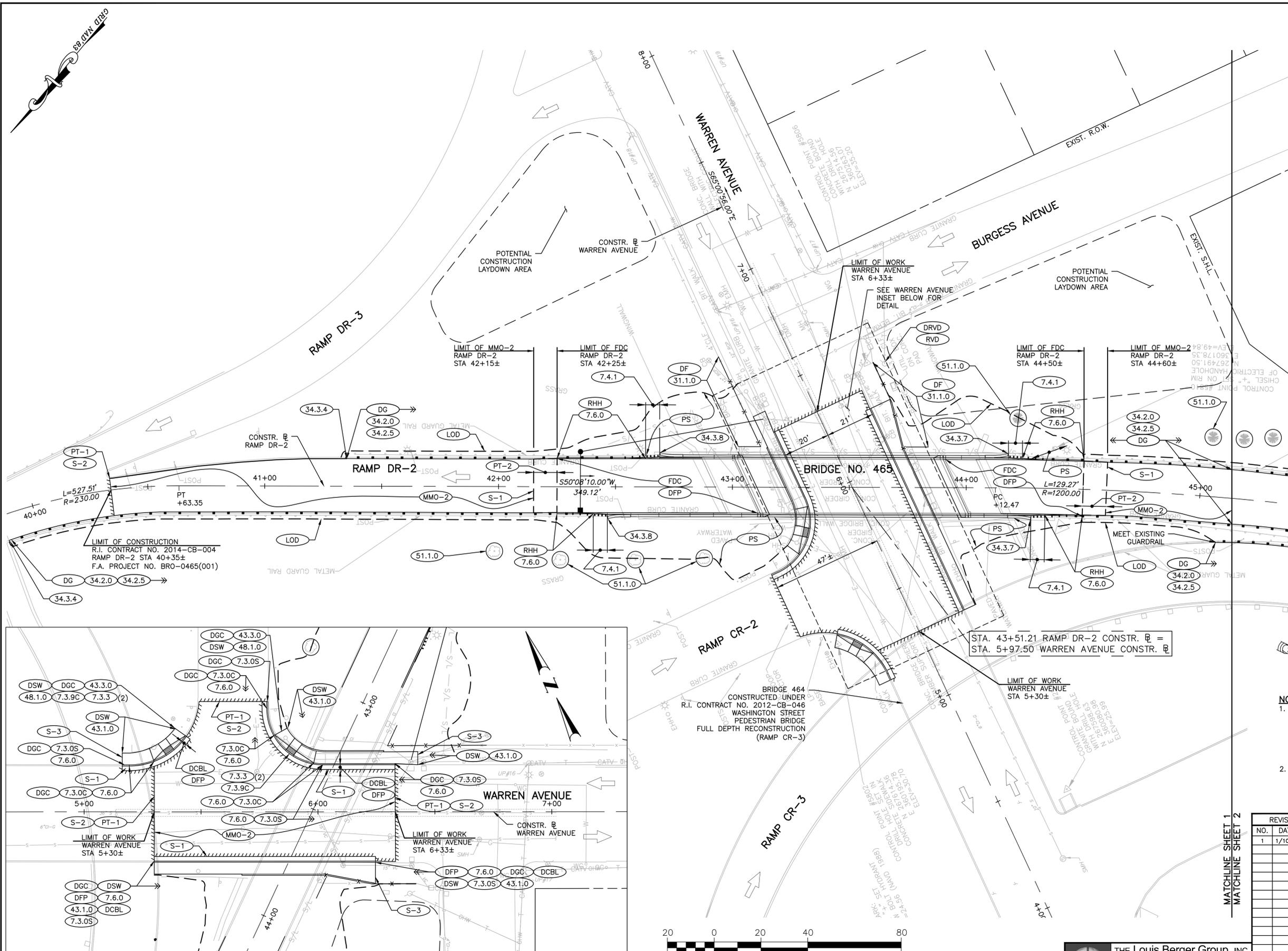
The Contractor shall contact the RIDOT Maintenance Headquarters a minimum of 7 calendar days in advance to arrange a specific date and time for delivery of the trailers.

**SHOP DRAWINGS:**

The Contractor shall develop and submit shop drawings in accordance with **Subsection 12.105.02: Plans and Shop Drawings** of the Rhode Island Standard Department of Administration Procurement Regulations.

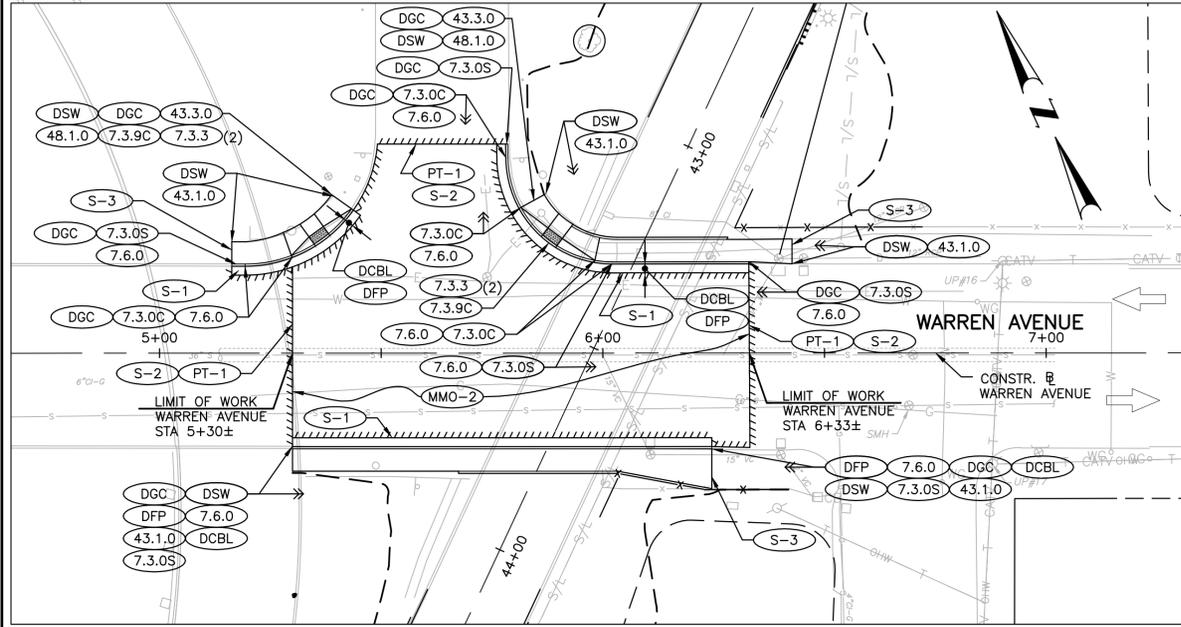
**METHOD OF MEASUREMENT:** “MOBILE CAMERA SURVEILLANCE SYSTEM” shall be measured for payment by the unit “Lump Sum” for the system installed and accepted by the Engineer.

**BASIS OF PAYMENT:** “MOBILE CAMERA SURVEILLANCE SYSTEM” shall be paid at the contractor unit bid price “Lump Sum”, which price shall include full compensation for all materials, equipment, tools, labor, maintenance, testing, software, and work incidental thereto complete in place and accepted by Engineer.



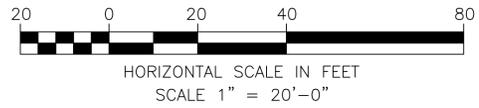
ENTIRE SHEET REPLACED BY  
 ADDENDUM NO. 1

- NOTES:**
- EXISTING UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE. THE WATER AND SEWER WAS TAKEN FROM "WARREN AVENUE RAMPS (N & S) FOUNDATION & UTILITY PLAN" BY CHARLES A. MAGUIRE & ASSOCIATES ENGINEERS DATED AUGUST 8, 1958. THE GAS AND ELECTRIC WAS TAKEN FROM PLANS PROVIDED BY NATIONAL GRID.
  - SEE SHEET 20 - GRADE PLAN (RAMP DR-2) FOR EXISTING AND PROPOSED CONTOURS.



ADDENDUM NO. 1

INSET  
 WARREN AVENUE



**THE Louis Berger Group, Inc.**  
 295 PROMENADE STREET  
 PROVIDENCE, RI 02908  
 TEL 401 521 5980  
 WWW.LOUIBERGER.COM

REVISIONS		
NO.	DATE	BY
1	1/10/14	LBG

RHODE ISLAND  
 DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO I-195  
 ABC BRIDGE NO. 465 REPLACEMENT  
 RAMP (DR-2) OVER WARREN AVENUE  
 EAST PROVIDENCE, RHODE ISLAND

GENERAL PLAN  
 SHEET 1 OF 2

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE 1"=20'











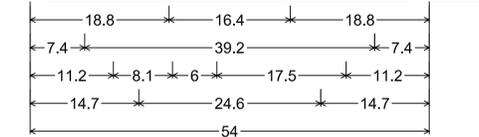
CONSTRUCTION SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS			NUMBER OF SIGN REQUIRED	COLOR			AREA IN SQUARE FEET
	WIDTH INCHES	HEIGHT INCHES		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE MKR		BACK-GROUND	LEGEND	BORDER	
G20-2	36	18	END ROAD WORK	SEE M.U.T.C.D. 2009 STANDARDS			4	SEE M.U.T.C.D. 2009 STANDARDS			4.50 ea =18.00
G20-2	48	24	END ROAD WORK				2				8.00 ea =16.00
M1-1	24	24	195				9				4.00 ea =36.00
M3-4	24	12	WEST				9				2.00 ea =18.00
M4-1	24	12	ALTERNATE				1				2.00 ea =2.00
M4-8a	24	12	END DETOUR				6				2.00 ea =12.00
M4-9b(L)	30	24	DETOUR				2				5.00 ea =10.00
M4-9b(R)	30	24	DETOUR				3				5.00 ea =15.00
M4-9(L)	30	24	DETOUR				7				5.00 ea =35.00
M4-9(R)	30	24	DETOUR				8				5.00 ea =40.00
M4-9(V)	30	24	DETOUR				18				5.00 ea =90.00
R9-9	24	12	SIDEWALK CLOSED				4				2.00 ea =8.00
R9-11(R)	24	18	SIDEWALK CLOSED AHEAD CROSS HERE				1				3.00 ea =3.00
R9-11(L)	24	18	SIDEWALK CLOSED AHEAD CROSS HERE				1				3.00 ea =3.00
R11-2	48	30	ROAD CLOSED				3				10.00ea =30.00
R11-4	60	30	ROAD CLOSED TO THRU TRAFFIC				2				12.50ea =25.00
RI STD 27.1.1	48	72	WORK ZONE TRAFFIC FINES DOUBLED	SEE RIDOT STANDARDS			4	SEE RIDOT STANDARDS			24.00ea =96.00

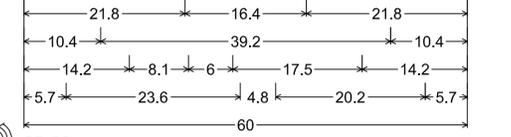
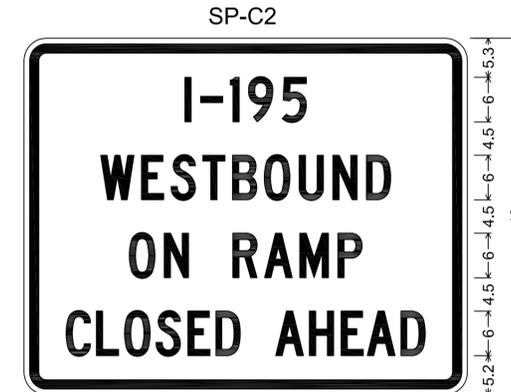
CONSTRUCTION SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS			NUMBER OF SIGN REQUIRED	COLOR			AREA IN SQUARE FEET
	WIDTH INCHES	HEIGHT INCHES		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE MKR		BACK-GROUND	LEGEND	BORDER	
W5-4	48	48	RAMP ARROWS	SEE M.U.T.C.D. 2009 STANDARDS			2	SEE M.U.T.C.D. 2009 STANDARDS			16.00ea =32.00
W11-2	30	30	PEDESTRIAN				4				6.25 ea =25.00
W13-1P (25)	30	30	25 M.P.H.				2				6.25 ea =12.50
W16-7pL	24	12	ARROW				4				2.00 ea =8.00
W20-1 (AHEAD)	36	36	ROAD WORK AHEAD				6				9.00 ea =54.00
W20-1 (AHEAD)	48	48	ROAD WORK AHEAD				2				16.00ea =32.00
W20-2A	36	36	DETOUR AHEAD				2				9.00 ea =18.00
W20-4	36	36	ONE LANE ROAD AHEAD				2				9.00 ea =18.00
W20-7a	36	36	PEDESTRIAN				2				9.00 ea =18.00
W24-1(L)	36	36	LEFT TURN				1				9.00 ea =9.00
W24-1(R)	36	36	RIGHT TURN				1				9.00 ea =9.00
SP-C1	54	48					1	WHITE	BLACK	BLACK	18.00ea =18.00
SP-C2	60	48					3	WHITE	BLACK	BLACK	20.00ea =60.00
SP-C3	24	12					6	ORANGE	BLACK	BLACK	2.00 ea =12.00
SP-C4	30	24					12	ORANGE	BLACK	BLACK	5.00 ea =60.00
SP-C5	60	24					1	ORANGE	BLACK	BLACK	10.00ea =10.00

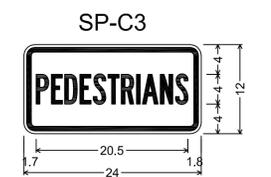
SEE DETAILS THIS SHEET



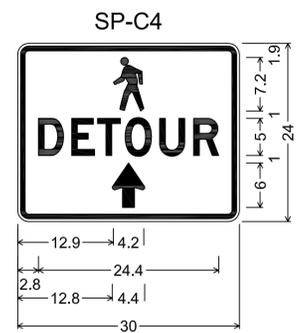
SP-C1:  
 3.0" Radius, 1.3" Border, 0.8" Indent, Black on White;  
 [I-195] C; [WESTBOUND] C; [ON RAMP] C;  
 [CLOSED] C;



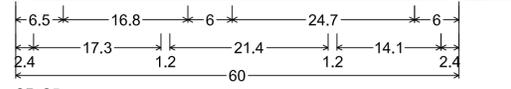
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 [I-195] C; [WESTBOUND] C; [ON RAMP] C;  
 [CLOSED AHEAD] C 80) spacing;



SP-C3:  
 1.5" Radius, 0.6" Border, 0.4" Indent, Black on Orange;  
 [PEDESTRIANS] B 50) spacing;



SP-C4:  
 1.5" Radius, 0.6" Border, 0.4" Indent, Black on Orange;  
 [DETOUR] D 2K;



SP-C5  
 1.9" Radius, 0.8" Border, 0.5" Indent, Black on White;  
 [ROAD CLOSED] C 101 spacing; [LOCAL TRAFFIC ONLY] C 20 spacing;

REVISIONS			NO.	DATE	BY
NO.	DATE	BY			
1	1/10/14	LBG			

RHODE ISLAND  
 DEPARTMENT OF TRANSPORTATION

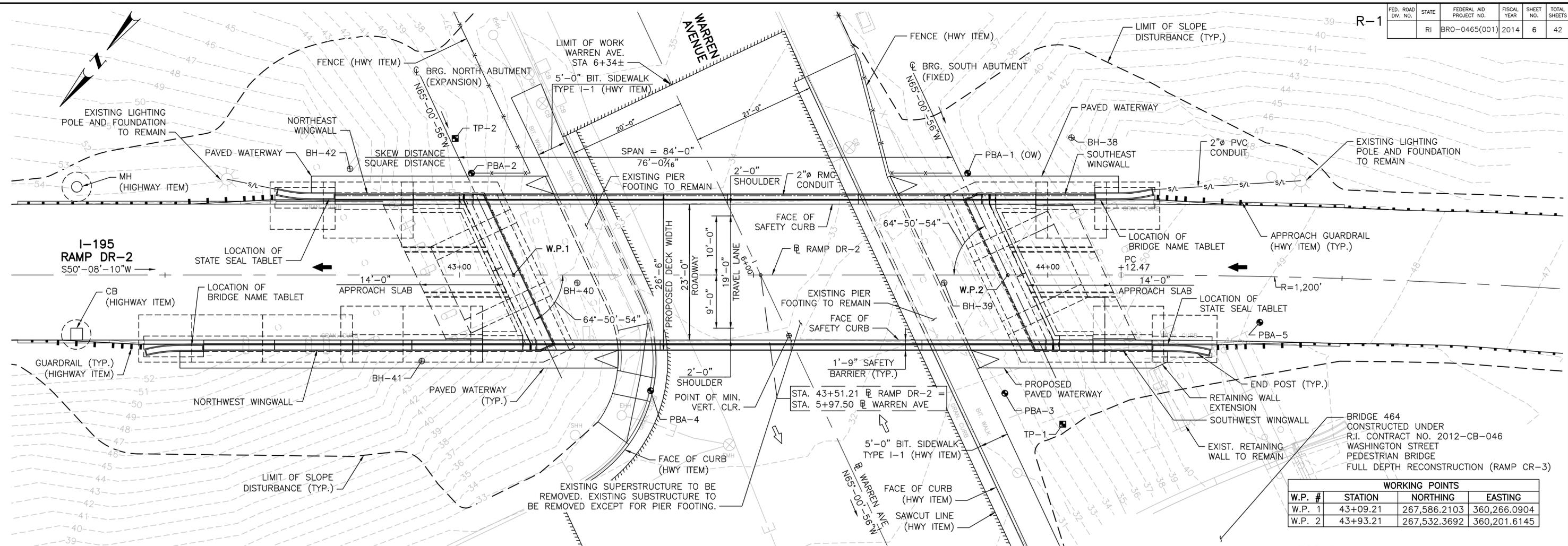
IMPROVEMENTS TO I-195  
 ABC BRIDGE NO. 465 REPLACEMENT  
 RAMP (DR-2) OVER WARREN AVENUE  
 EAST PROVIDENCE, RHODE ISLAND

CONSTRUCTION SIGN SUMMARY

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SCALE \_\_\_\_\_



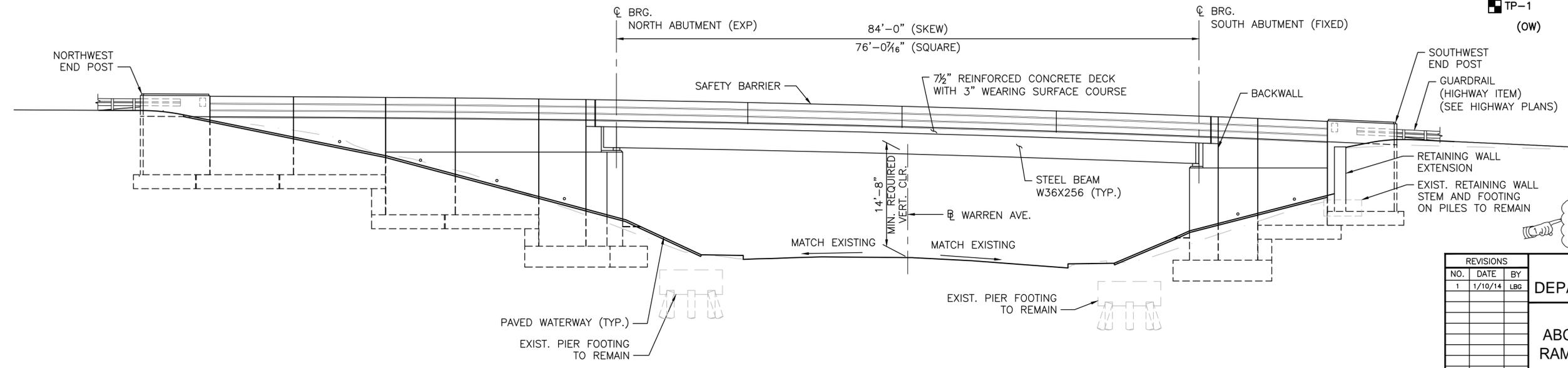




**GENERAL PLAN**  
SCALE: 1/8"=1'-0"

WORKING POINTS			
W.P. #	STATION	NORTHING	EASTING
W.P. 1	43+09.21	267,586.2103	360,266.0904
W.P. 2	43+93.21	267,532.3692	360,201.6145

- LEGEND:**
- PBA-1 BORINGS (2012)
  - ⊕ BH-40 BORINGS (1958)
  - TP-1 TEST PIT (2012)
  - (OW) OBSERVATION WELL



**WESTERLY ELEVATION**  
SCALE: 1/8"=1'-0"

ENTIRE SHEET REPLACED BY  
ADDENDUM NO. 1

ADDENDUM NO. 1

**THE Louis Berger Group, Inc.**  
295 PROMENADE STREET  
PROVIDENCE, RI 02908  
TEL 401 521 5980  
WWW.LOUISSBERGER.COM

REVISIONS		
NO.	DATE	BY
1	1/10/14	LBG

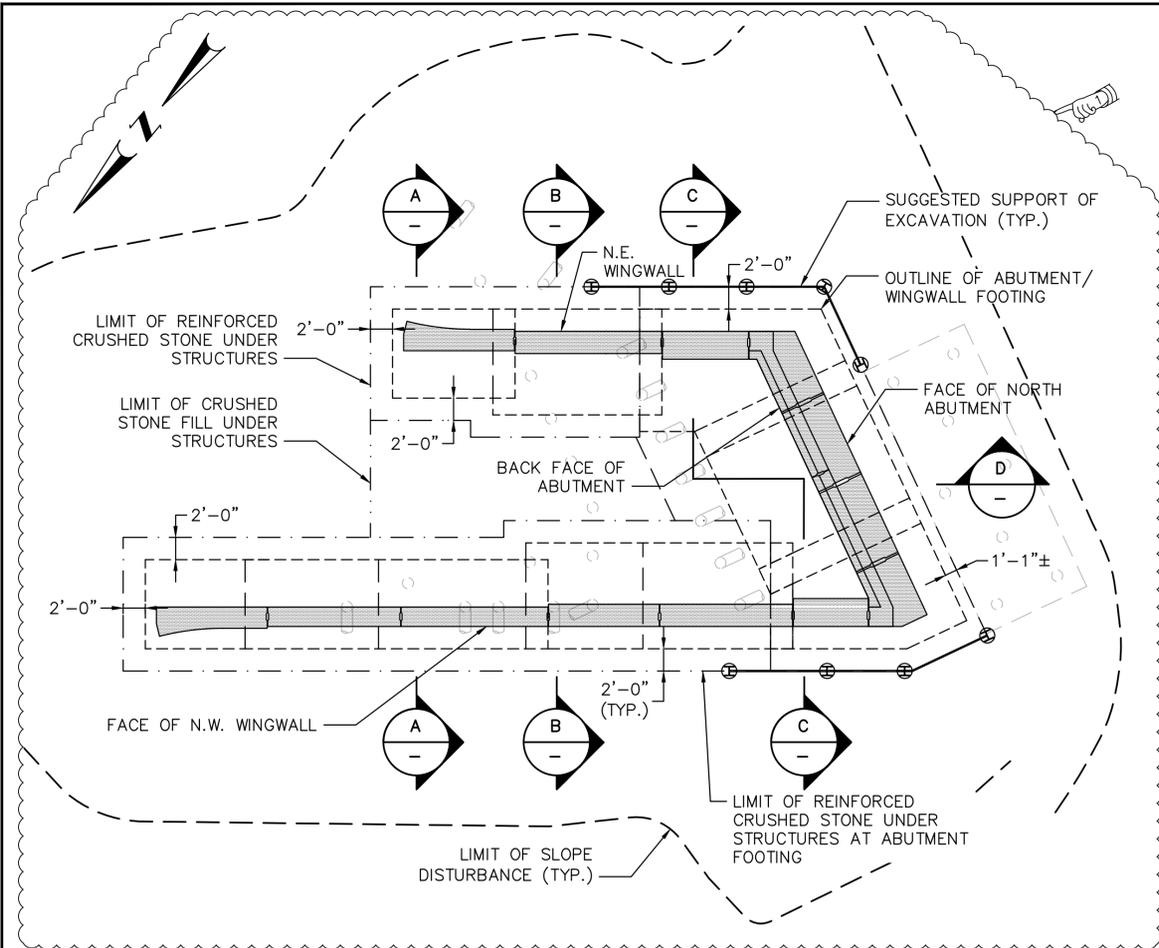
RHODE ISLAND  
DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO I-195  
ABC BRIDGE NO. 465 REPLACEMENT  
RAMP (DR-2) OVER WARREN AVENUE  
EAST PROVIDENCE, RHODE ISLAND

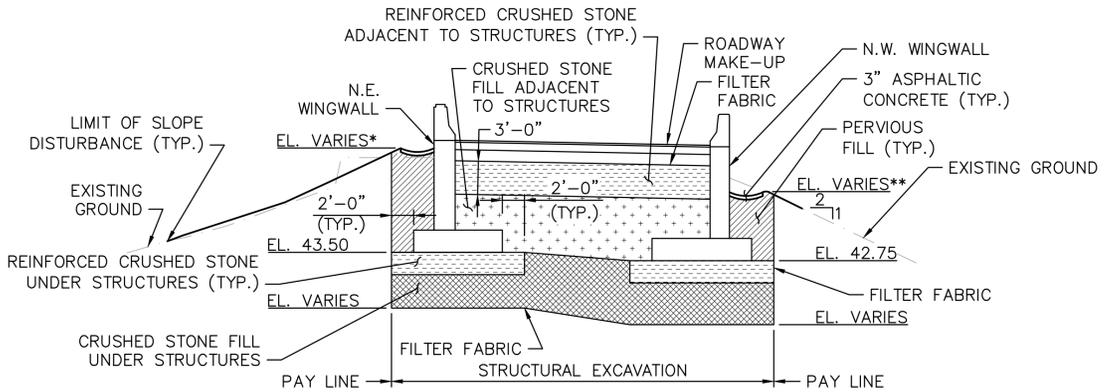
**GENERAL PLAN AND  
WESTERLY ELEVATION**

CHECKED BY PNF DATE 10/22/13 SCALE AS NOTED

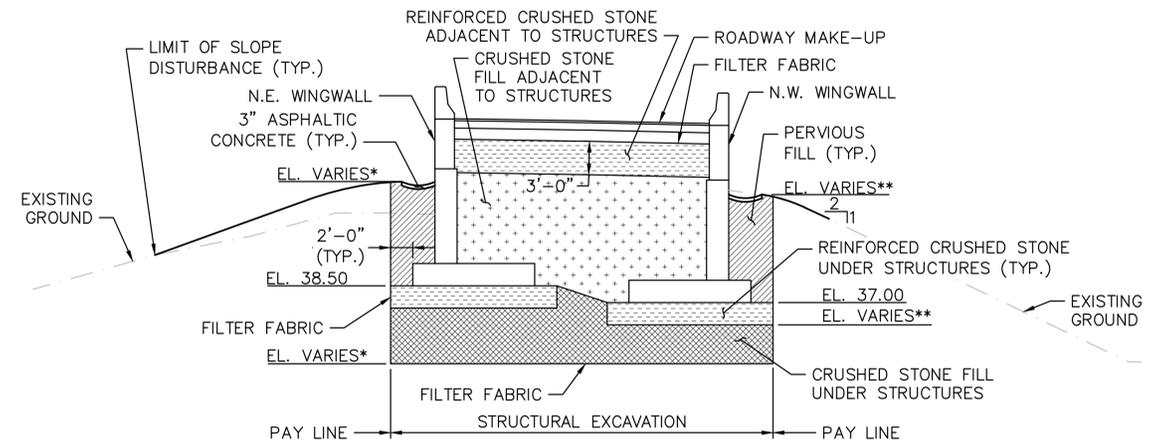




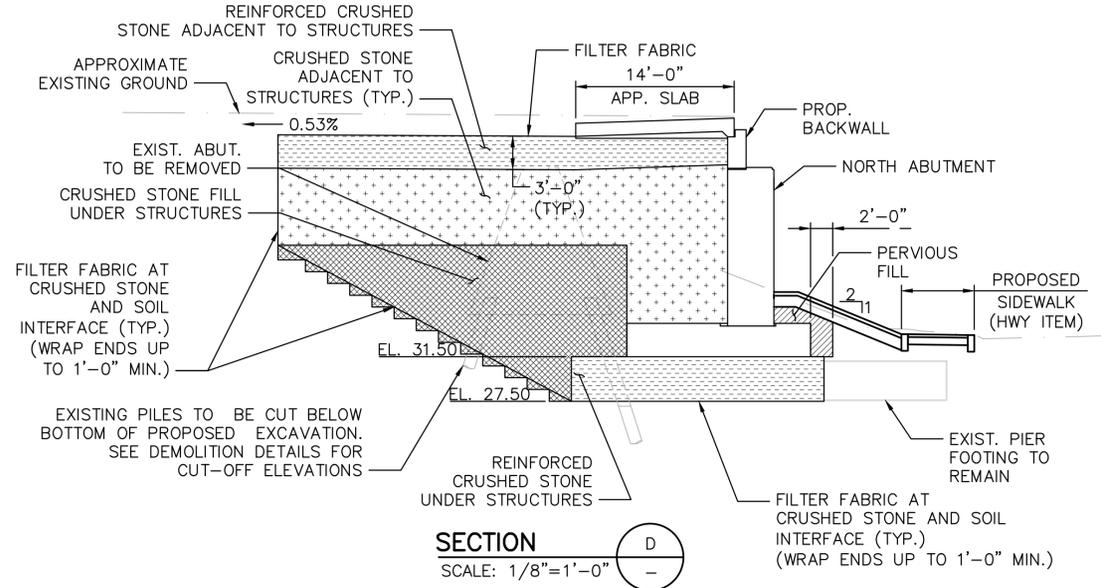
**NORTH ABUTMENT PLAN**  
 SCALE: 1/8"=1'-0"



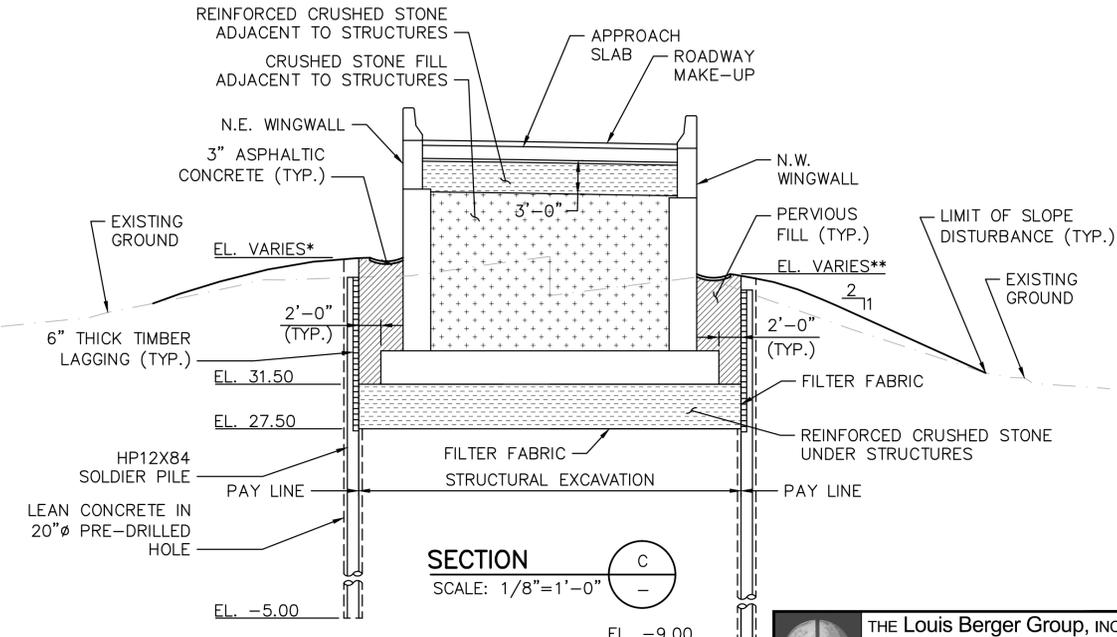
**SECTION A**  
 SCALE: 1/8"=1'-0"



**SECTION B**  
 SCALE: 1/8"=1'-0"



**SECTION D**  
 SCALE: 1/8"=1'-0"



**SECTION C**  
 SCALE: 1/8"=1'-0"

**NOTES:**  
 \* SEE NE WINGWALL ELEVATION, SHEET 19.  
 \*\* SEE NW WINGWALL ELEVATION, SHEET 19.

ADDENDUM NO. 1

THE Louis Berger Group, Inc.  
 295 PROMENADE STREET  
 PROVIDENCE, RI 02908  
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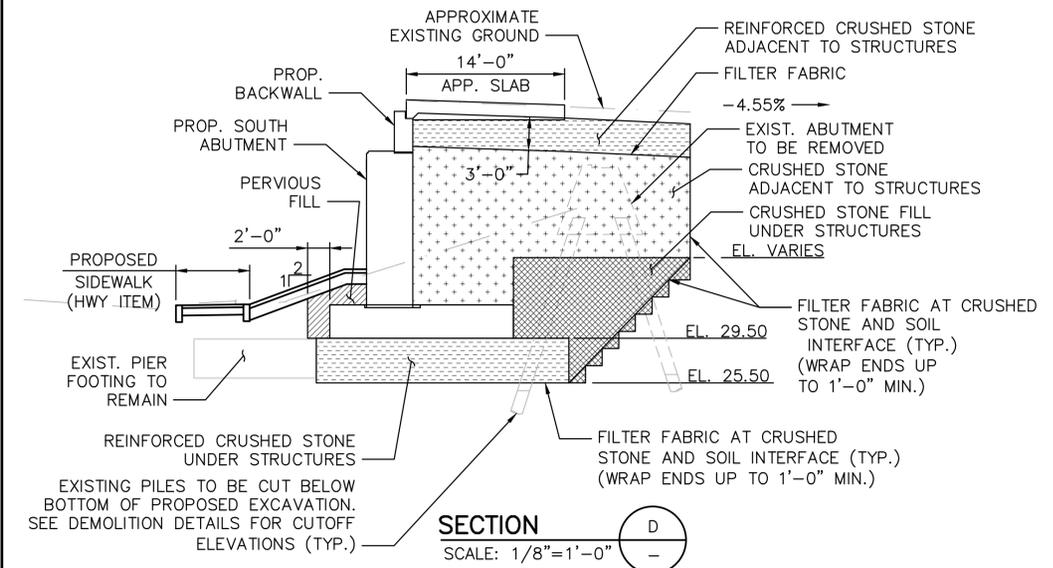
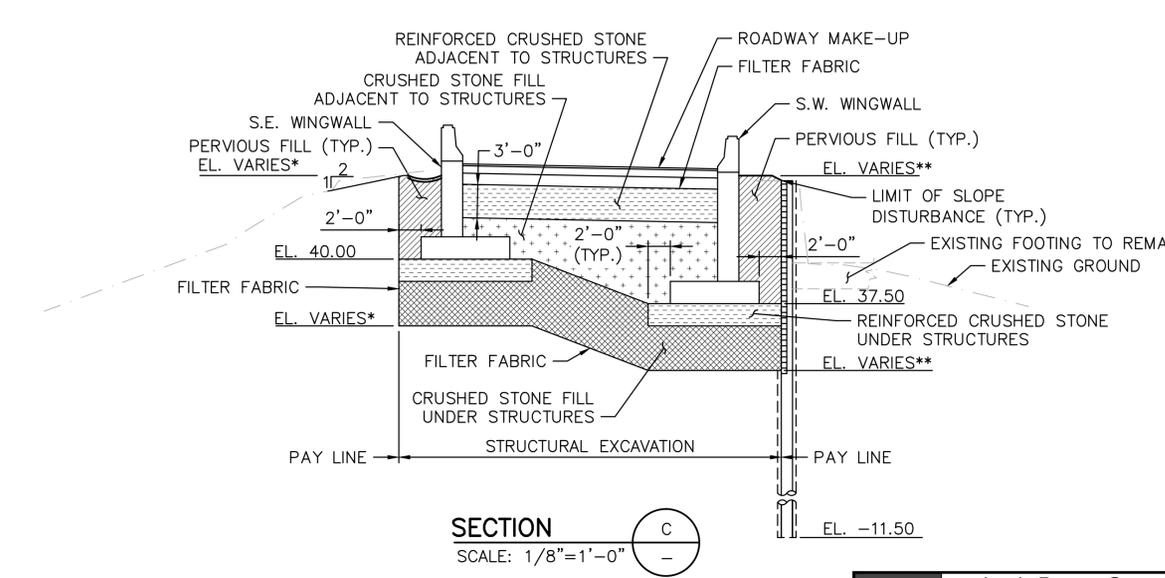
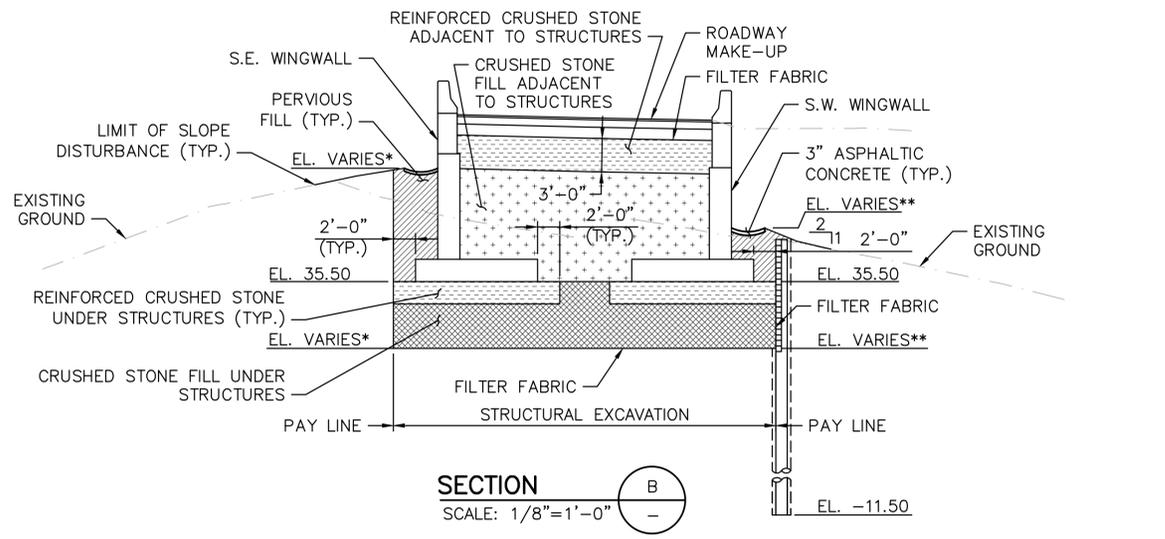
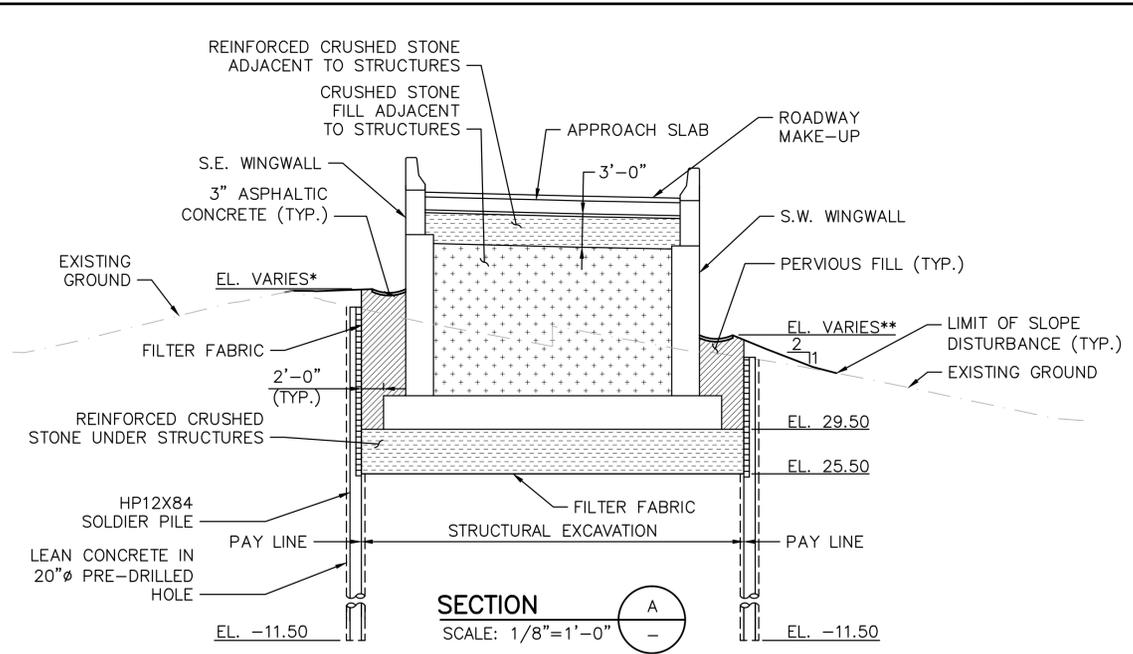
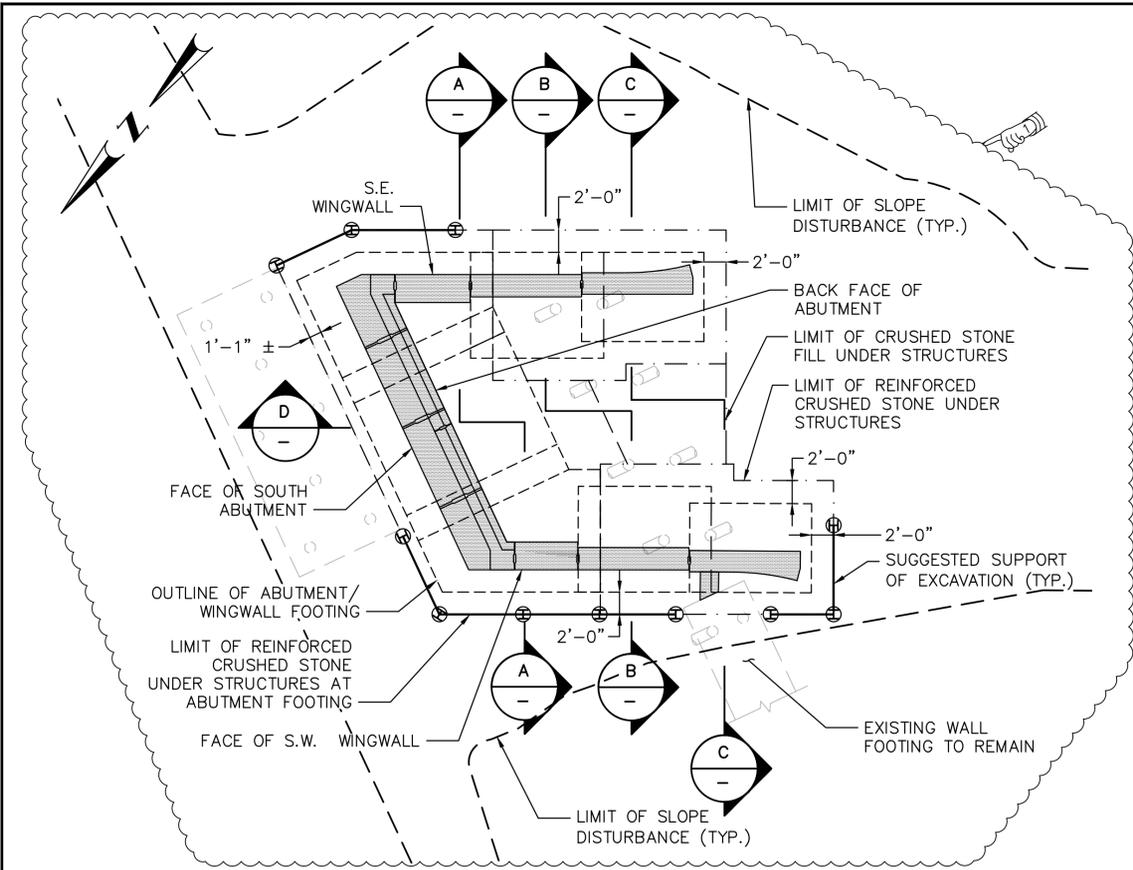
REVISIONS		
NO.	DATE	BY
1	1/10/14	LBG

RHODE ISLAND  
 DEPARTMENT OF TRANSPORTATION

IMPROVEMENTS TO I-195  
 ABC BRIDGE NO. 465 REPLACEMENT  
 RAMP (DR-2) OVER WARREN AVENUE  
 EAST PROVIDENCE, RHODE ISLAND

**NORTH ABUTMENT AND  
 WINGWALL PAY LIMITS**

CHECKED BY PNF DATE 10/22/13 SCALE AS NOTED



**NOTES:**  
\* SEE SE WINGWALL ELEVATION, SHEET 20.  
\*\* SEE SW WINGWALL ELEVATION, SHEET 20.

ADDENDUM NO. 1

**THE Louis Berger Group, INC.**  
295 PROMENADE STREET  
PROVIDENCE, RI 02908  
TEL 401 521 5980  
WWW.LOUIBERGER.COM

REVISIONS		
NO.	DATE	BY
1	1/10/14	LBG

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**IMPROVEMENTS TO I-195 ABC BRIDGE NO. 465 REPLACEMENT RAMP (DR-2) OVER WARREN AVENUE EAST PROVIDENCE, RHODE ISLAND**

**SOUTH ABUTMENT AND WINGWALL PAY LIMITS**

CHECKED BY PNF DATE 10/22/13 SCALE AS NOTED



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Project Name - Replacement of Warren Ave Ramp Br. No. 465

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ItemCode	Description	Page
201.0401	REMOVE AND DISPOSE GRANITE CURB	1
201.0403	REMOVE AND DISPOSE SIDEWALKS	1
201.0409	REMOVE AND DISPOSE FLEXIBLE PAVEMENT	1
201.0414	REMOVE AND DISPOSE PIPE - ALL SIZES	2
201.0415	REMOVE AND DISPOSE GUARDRAIL AND POST ALL TYPES	2
201.0419	REMOVE AND DISPOSE FENCE	2
201.0604	REMOVE AND DISPOSE GROUND MOUNTED SIGN POSTS	2
201.0610	REMOVE AND DISPOSE DIRECTIONAL, WARNING, REGULATORY, SERVICE, AND STREET SIGNS	3
201.0617	REMOVE AND DISPOSE CONDUIT - ALL SIZES	3
201.9901	REMOVE & DISPOSE COBBLESTONES	4
202.0100	EARTH EXCAVATION	4
202.0600	LOAM EXCAVATION	4
202.0700	COMMON BORROW	5
202.0800	GRAVEL BORROW	5
203.0100	STRUCTURAL EXCAVATION EARTH	5
203.0700	PERVIOUS FILL	6
203.9901	CRUSHED STONE FILL UNDER STRUCTURES	6
203.9902	CRUSHED STONE ADJACENT TO STRUCTURES	6
203.9903	REINFORCED CRUSHED STONE UNDER STRUCTURES	6
203.9904	REINFORCED CRUSHED STONE ADJACENT TO STRUCTURES	7
203.9905	STRUCTURAL EXCAVATION MASONRY	7
204.0100	TRIMMING AND FINE GRADING	7
206.9901	COMPOST FILTER SOCK	8
206.9902	CATCH BASIN INLET PROTECTION	9
212.2000	CLEANING AND MAINTENANCE OF EROSION CONTROLS	9
213.0100	PLACEMENT OF MILLINGS BENEATH GUARDRAIL	9
302.0100	GRAVEL BORROW SUBBASE COURSE	9
401.9901	CLASS 19	10
401.9903	MODIFIED CLASS 12.5	11
403.0300	ASPHALT EMULSION TACK COAT	12
601.0300	CLASS A PORTLAND CEMENT CONCRETE	12
701.0412	REINFORCED CONCRETE PIPE M 170 CLASS III 12 INCH	12
702.0513	FRAME AND GRATE STANDARD 6.3.1	13
702.0521	FRAME AND COVER STANDARD 6.2.0	13
702.0605	PRECAST CATCH BASIN 4' DIAMETER STANDARD 4.4.0	13
702.0630	PRECAST MANHOLE 4' DIAMETER STANDARD 4.2.0	13
707.0950	ADJUST TELEPHONE MANHOLE TO GRADE	13
707.0955	ADJUST ELECTRICAL MANHOLE TO GRADE	13
707.1900	ADJUST FRAME & COVER TO GRADE	14
707.2000	ADJUST FRAME AND GRATE TO GRADE	14
708.9041	CLEANING CATCH BASINS ALL TYPES AND SIZES	14
713.8269	ADJUST WATER GATE BOXES TO GRADE	15
713.8300	ADJUST GAS GATE BOXES TO GRADE	15
800.9910	WARREN AVENUE BRIDGE NO. 465 - SUPERSTRUCTURE	15
800.9920	WARREN AVENUE BRIDGE NO. 465 - SUBSTRUCTURE	15
803.9901	REMOVE AND DISPOSE EXISTING CONCRETE SUPERSTRUCTURE	15
803.9902	REMOVE AND DISPOSE EXISTING CONCRETE SUBSTRUCTURE - PIERS	15
901.0101	GUARDRAIL STEEL BEAM SINGLE FACE EARTH AND ASPHALT	16
901.0190	GUARDRAIL STEEL BEAM ANCHORAGE APPROACH SECTION STANDARDS 34.3.1 AND 34.3.3	16
901.0191	GUARDRAIL STEEL BEAM ANCHORAGE TRAILING END SECTION STANDARD 34.3.4	16
901.0194	GUARDRAIL CONNECTION TO BARRIER - APPROACH END SECTION - STD. 34.3.7	17

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ItemCode	Description	Page
901.0195	GUARDRAIL CONNECTION TO BARRIER - TRAILING END SECTION - STD. 34.3.8	17
901.9901	GUARDRAIL END TREATMENT - ENERGY ABSORBING TERMINAL	17
903.0204	CHAIN LINK FENCE 4' STANDARD 31.1.0	17
905.0110	PORTLAND CEMENT SIDEWALK MONOLITHIC STANDARD 43.1.0	17
906.0102	SLOPE FACED GRANITE TRANSITION CURB STANDARD 7.4.1	18
906.0110	GRANITE CURB, QUARRY SPLIT STRAIGHT, STANDARD 7.3.0	18
906.0111	GRANITE CURB, QUARRY SPLIT CIRCULAR, STANDARD 7.3.0	18
906.0120	GRANITE WHEELCHAIR RAMP CURB STANDARDS 7.3.3, 43.3.0 AND 43.3.1	19
906.0131	GRANITE RAMP STONE CIRCULAR STANDARD 7.3.9	19
906.0700	REMOVE, HANDLE, HAUL TRIM RESET CURB EDGING, STRAIGHT, CIRCULAR ALL TYPES	19
907.0100	WATER FOR DUST CONTROL	20
914.5010	FLAGPERSONS	20
914.5020	FLAGPERSONS - OVERTIME	20
916.0600	SHOCK ABSORBING BARRIER MODULES	20
916.0650	REMOVE, RELOCATE AND RESET SHOCK ABSORBING BARRIER MODULES	20
922.0100	TEMPORARY CONSTRUCTION SIGNS STANDARD 29.1.0 AND 27.1.1	21
923.0105	DRUM BARRICADE STANDARD 26.2.0	22
923.0125	PLASTIC PIPE TYPE III BARRICADE STANDARD 26.3.1	22
923.0200	FLUORESCENT TRAFFIC CONES STANDARD 26.1.0	22
924.0113	ADVANCE WARNING ARROW PANEL	22
925.0112	PORTABLE CHANGEABLE MESSAGE SIGN	23
926.0130	PRECAST MEDIAN BARRIER FOR TEMPORARY TRAFFIC CONTROL STANDARD 40.5.0	23
<b>927.9901</b>	<b>** ITEM DELETED **</b>	<b>24</b>
928.0800	TRUCK MOUNTED ATTENUATOR WITH TRUCK MOUNTED FLASHING ARROW BOARD	24
929.0110	FIELD OFFICE	24
932.0100	CUTTING AND MATCHING ASPHALT	24
932.0200	FULL-DEPTH SAWCUT OF BITUMINOUS PAVEMENT	25
932.0230	FULL DEPTH SAWCUT OF PORTLAND CEMENT CONCRETE SIDEWALK/DRIVEWAY	25
935.0400	REMOVING BITUMINOUS PAVEMENT BY MICRO MILLING	25
936.0110	MOBILIZATION	26
937.0200	MAINTENANCE AND MOVEMENT TRAFFIC PROTECTION	26
942.9901	DETECTABLE WARNING SYSTEMS STANDARD 48.1.0	26
943.0200	TRAINEE MAN-HOURS	26
L01.0104	PLANTABLE SOIL 4 INCHES DEEP	26
L02.0101	GENERAL HIGHWAY SEEDING (TYPE 1)	27
L11.0102	TREE PLANT PROTECTION DEVICE STANDARD 51.1.0	27
T06.4030	3 IN. RIGID STEEL CONDUIT IN STRUCTURE	28
T06.5130	3 INCH SCHEDULE 40 POLYVINYL CHLORIDE PLASTIC CONDUIT - UNDERGROUND	28
T06.9901	RADAR VEHICLE DETECTOR	28
T06.9902	REMOVE AND DISPOSE RADAR VEHICLE DETECTOR	28
T11.9999	TEMPORARY TRAFFIC SIGNAL SYSTEMS CONSTRUCTION AND MAINTENANCE	28
T15.0100	DIRECTIONAL REGULATORY AND WARNING SIGNS	29
T15.2000	PARKING SIGNS	29
<b>T16.0300</b>	<b>** ITEM DELETED **</b>	<b>29</b>
T20.0004	4 INCH WHITE FAST - DRYING WATERBORNE PAVEMENT MARKING PAINT	30
T20.0006	6 INCH WHITE FAST - DRYING WATERBORNE PAVEMENT MARKING PAINT	30

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<b>ItemCode</b>	<b>Description</b>	<b>Page</b>
T20.0012	12 INCH WHITE FAST - DRYING WATERBORNE PAVEMENT MARKING PAINT	30
T20.0104	4 INCH YELLOW FAST - DRYING WATERBORNE PAVEMENT MARKING PAINT	31
T20.0106	6 INCH YELLOW FAST - DRYING WATERBORNE PAVEMENT MARKING PAINT	31
T20.1000	REMOVE EXISTING PAVEMENT MARKINGS	31
T20.2006	6 INCH EPOXY RESIN PAVEMENT MARKINGS WHITE	31
T20.2012	12 INCH EPOXY RESIN PAVEMENT MARKINGS WHITE	32
T20.2014	4 INCH EPOXY RESIN PAVEMENT MARKINGS YELLOW	32
T20.2016	6 INCH EPOXY RESIN PAVEMENT MARKINGS YELLOW	32
<b>203.0400</b>	<b>STRUCTURAL EXCAVATION UNCLASSIFIED</b>	<b>32</b>
<b>804.9910</b>	<b>PRE- AND POST-CONSTRUCTION CONDITION SURVEY</b>	<b>33</b>
<b>804.9920</b>	<b>INSTRUMENTATION AND MONITORING</b>	<b>33</b>
<b>T12.9901</b>	<b>MOBILE CAMERA SURVEILLANCE SYSTEM</b>	<b>33</b>

**Distribution of Quantities**

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<u>Item No.</u>	<u>Item Code</u>	<u>Description</u>	<u>UM</u>	<u>Qty.</u>	<u>Pay Code</u>	<u>Seq. No.</u>
073	926.0130	Cont.				
		NORTH CONSTRUCTION		110.00	0011	01
		SOUTH CONSTRUCTION		140.00	0011	01
<b>Item 926.0130 Total:</b>				<b>360.00</b>		
074	927.9901	RELOCATE PRECAST MEDIAN BARRIER	LF			
		FOR TEMPORARY TRAFFIC CONTROL				
		PROJECT WIDE				
		1 RELOCATION			0011	01
<b>Item 927.9901 Total:</b>				<b>**DELETED**</b>		
075	928.0800	TRUCK MOUNTED ATTENUATOR WITH	PDAY			
		TRUCK MOUNTED FLASHING ARROW BOARD				
		PROJECT WIDE				
		CONTINGENCY		5.00	0011	01
		PARTIAL RAMP CLOSURE		5.00	0011	01
<b>Item 928.0800 Total:</b>				<b>10.00</b>		
076	929.0110	FIELD OFFICE	PMO			
		PROJECT WIDE				
		FIELD OFFICE		12.00	0011	01
<b>Item 929.0110 Total:</b>				<b>12.00</b>		
077	932.0100	CUTTING AND MATCHING ASPHALT	LF			
		RAMP DR-2 (S-2)				
		40+35 LT/RT		16.00	0011	01
		49+81 TO 49+91, LT/RT		24.70	0011	01
		ROUNDING				
		PROJECT WIDE		4.60	0011	01
		WARREN AVENUE (S-2)				
		5+30 LT/RT		38.50	0011	01
		5+49 TO 5+76, LT		27.00	0011	01
		6+33 LT/RT		39.20	0011	01
<b>Item 932.0100 Total:</b>				<b>150.00</b>		

**Distribution of Quantities**

Project Name - Replacement of Warren Ave Ramp Br. No. 465

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FAP Nos: BRO-0465(001)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
S092	T11.9999	Cont. CONSTRUCTION AND MAINTENANCE				
		PROJECT WIDE				
		LUMP SUM		1.00	0011	01
				<b>Item T11.9999 Total:</b>		<b>1.00</b>
S093	T15.0100	DIRECTIONAL REGULATORY AND WARNING SIGNS	SF			
		PROJECT WIDE				
		CONTINGENCY		20.00	0011	01
		M1-1		5.00	0011	01
		M1-5		5.00	0011	01
		M3-4		2.00	0011	01
		M4-5		2.00	0011	01
		M6-3		2.19	0011	01
		R3-3		4.00	0011	01
		R4-7		5.00	0011	01
		SP-1		5.00	0011	01
		W4-1(R)		9.00	0011	01
				<b>Item T15.0100 Total:</b>		<b>59.19</b>
S094	T15.2000	PARKING SIGNS	SF			
		R7-1(R)				
		12" X 18"		1.50	0011	01
		ROUNDING				
		PROJECT WIDE		0.50	0011	01
				<b>Item T15.2000 Total:</b>		<b>2.00</b>
S095	T16.0300	GROUND MOUNTED PRIMARY DIRECTIONAL SIGN POST-STEEL BREAKAWAY	EACH			
		RAMP DR-2				
		40+42 LT			0011	01
		40+85 LT			0011	01
		49+70 LT			0011	01

**Distribution of Quantities**

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
S095	T16.0300 Cont.	49+71 RT			0011	01
		WARREN AVENUE				
		5+58 RT			0011	01
		6+37 RT			0011	01
<b>Item T16.0300 Total:</b>					<b>**DELETED**</b>	
096	T20.0004	<b>4 INCH WHITE FAST - DRYING</b>	<b>LF</b>			
		<b>WATERBORNE PAVEMENT MARKING PAINT</b>				
		CONTINGENCY				
		PROJECTWIDE		100.00	0011	01
		NORTH AND SOUTH ABUTMENT				
		CONSTRUCITON				
		TRAFFIC CONTROL PLAN (SHEET		400.00	0011	01
		2 OF 2)				
<b>Item T20.0004 Total:</b>				<b>500.00</b>		
097	T20.0006	<b>6 INCH WHITE FAST - DRYING</b>	<b>LF</b>			
		<b>WATERBORNE PAVEMENT MARKING PAINT</b>				
		RAMP DR-2				
		40+35 TO 49+81, LT		945.00	0011	01
		CONTINGENCY		100.00	0011	01
		ROUNDING				
		PROJECT WIDE		5.00	0011	01
<b>Item T20.0006 Total:</b>				<b>1,050.00</b>		
098	T20.0012	<b>12 INCH WHITE FAST - DRYING</b>	<b>LF</b>			
		<b>WATERBORNE PAVEMENT MARKING PAINT</b>				
		ROUNDING				
		PROJECT WIDE		23.00	0011	01
		WARREN AVENUE				
		CROSS WALK		147.00	0011	01
		STOP LINE		30.00	0011	01
<b>Item T20.0012 Total:</b>				<b>200.00</b>		

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<u>Item No.</u>	<u>Item Code</u>	<u>Description</u>	<u>UM</u>	<u>Qty.</u>	<u>Pay Code</u>	<u>Seq. No.</u>
S102	T20.2006 Cont.	ROUNDING				
		PROJECT WIDE		5.00	0011	01
<b>Item T20.2006 Total:</b>				<b>1,050.00</b>		
S103	T20.2012	12 INCH EPOXY RESIN PAVEMENT	LF			
		MARKINGS WHITE				
		WARREN AVENUE				
		CONTINGENCY		60.00	0011	01
		CROSS WALK		75.00	0011	01
		STOP LINE		30.00	0011	01
<b>Item T20.2012 Total:</b>				<b>165.00</b>		
S104	T20.2014	4 INCH EPOXY RESIN PAVEMENT	LF			
		MARKINGS YELLOW				
		ROUNDING				
		PROJECT WIDE		4.00	0011	01
		WARREN AVENUE				
		5+90 TO 6+33, LT/RT		86.00	0011	01
		CONTINGENCY		50.00	0011	01
<b>Item T20.2014 Total:</b>				<b>140.00</b>		
S105	T20.2016	6 INCH EPOXY RESIN PAVEMENT	LF			
		MARKINGS YELLOW				
		RAMP DR-2				
		40+34 TO 49+91, RT		960.00	0011	01
		CONTINGENCY		100.00	0011	01
		ROUNDING				
		PROJECT WIDE		40.00	0011	01
<b>Item T20.2016 Total:</b>				<b>1,100.00</b>		
106	203.0400	STRUCTURAL EXCAVATION UNCLASSIFIED	CY			
		5% OF ITEM 203.0100				
		NORTH AND SOUTH ABUTMENT		70.00	0011	01

**Distribution of Quantities**

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<u>Item No.</u>	<u>Item Code</u>	<u>Description</u>	<u>UM</u>	<u>Qty.</u>	<u>Pay Code</u>	<u>Seq. No.</u>
106	203.0400	Cont.				
				<b>Item 203.0400 Total:</b>	<b>70.00</b>	
107	804.9910	<b>PRE- AND POST-CONSTRUCTION</b>	<b>EACH</b>			
		<b>CONDITION SURVEY</b>				
		CITY OF EAST PROVIDENCE				
		ASSESSORS PLAT 22 LOT 11		1.00	0011	01
		ASSESSORS PLAT 22 LOT 12		1.00	0011	01
		ASSESSORS PLAT 22 LOT 13		1.00	0011	01
		ASSESSORS PLAT 22 LOT 14		1.00	0011	01
		ASSESSORS PLAT 22 LOT 15		1.00	0011	01
		ASSESSORS PLAT 22 LOT 16		1.00	0011	01
		ASSESSORS PLAT 5 LOT 1		1.00	0011	01
		ASSESSORS PLAT 6 LOT 1		1.00	0011	01
		ASSESSORS PLAT 6 LOT 4		1.00	0011	01
		WARREN AVENUE RAMP CR-3		1.00	0011	01
		BRIDGE NO. 464				
				<b>Item 804.9910 Total:</b>	<b>10.00</b>	
108	804.9920	<b>INSTRUMENTATION AND MONITORING</b>	<b>LS</b>			
		PROJECT WIDE				
		LUMP SUM		1.00	0011	01
				<b>Item 804.9920 Total:</b>	<b>1.00</b>	
109	T12.9901	<b>MOBILE CAMERA SURVEILLANCE SYSTEM</b>	<b>LS</b>			
		PROJECT WIDE				
		LUMP SUM		1.00	0011	01
				<b>Item T12.9901 Total:</b>	<b>1.00</b>	