# CONTRACT DOCUMENTS AND SPECIFICATIONS

for

# SAGAMORE BRIDGE REPAIRS City of Portsmouth Job #7144

Bid #32-10

**State of New Hampshire** 

John P. Bohenko, City Manager

Prepared by:

City of Portsmouth Engineering Division Public Works Department

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City of Portsmouth Portsmouth, New Hampshire Department of Public Works

# **Sagamore Bridge Repairs**

#### **INVITATION TO BID**

<u>Sealed</u> bid proposals, <u>plainly marked</u>, <u>Sagamore Bridge Repairs</u>, Bid Proposal #32-10 <u>on the outside of the mailing envelope as well as the sealed bid envelope</u>, addressed to the Finance/Purchasing Department, City Hall, 1 Junkins Avenue, Portsmouth, New Hampshire, 03801, will be accepted until **February 2, 2010 at 2:00pm**; at which time all bids will be publicly opened and read aloud. There will be a mandatory pre-bid meeting held at the Portsmouth DPW Building at 680 Peverly Hill Road at 10:00 AM on January 21<sup>st</sup>, 2010 with a mandatory site walk to follow.

This project consists of emergency repair work to Portsmouth's Sagamore Bridge located at the intersection of Sagamore Avenue and Sagamore Creek. Work may begin at any time on or after March 1<sup>st</sup>, 2010. All sections of the work shall be completed within 90 days of a notice to proceed. Liquidated damages shall be assessed at \$500.00 per day.

The Contractor will be required to keep the roadway passable (1 alternating one-way traffic) for the public with the exception of a 16-day window when the bridge will be allowed to be closed to all traffic.

The General Contractor for this project must be <u>Pre-qualified with NHDOT for Bridge Construction</u>.

Bidders must determine the quantities of work required and the conditions under which the work will be performed.

The City reserves the right, after bid opening and prior to award of the contract, to modify the amount of the work in the event that bids exceed budgeted amounts. The City of Portsmouth further reserves the right to reject any or all bids, to waive technical or legal deficiencies, to re-bid, and to accept any bid that it may deem to be in the best interest of the City. Also, the City reserves the right to approve or deny subcontractors for this project.

Each Bidder shall furnish a bid security in the amount of ten percent (10%) of the bid. The Bid Security may be in the form of a certified check or a bid bond executed by a surety company authorized to do business in the State of New Hampshire, made payable to the City of Portsmouth, N.H.

Questions may be directed to and specifications/plans may be obtained from the Finance/Purchasing Department on the third floor at the above address, or by calling the Purchasing Clerk at 603-610-7227. Specifications/plans may also be obtained from the City's website <a href="www.cityofportsmouth.com">www.cityofportsmouth.com</a>. Addenda to this bid document, if any, including written answers to questions, will be posted by close of business on January 29 on the City of Portsmouth website under the project heading. <a href="Continue below for the complete bid document.">Continue below for the complete bid document.</a>

### **INSTRUCTIONS TO BIDDERS**

#### BIDDING REQUIREMENTS AND CONDITIONS

#### 1. Special Notice to Bidders

Appended to these instructions is a complete set of bidding and general contract forms. These forms may be detached and executed for the submittal of bids. The plans, specifications, and other documents designated in the proposal form will be considered as part of the proposal, whether attached or not.

The bidders must submit a statement of bidder's qualifications, if requested, subsequent to bid opening but prior to award.

Addenda to this bid document, if any, including written answers to questions, will be posted by January 29, 2010, on the City of Portsmouth website at <a href="http://www.cityofportsmouth.com/finance/purchasing.htm">http://www.cityofportsmouth.com/finance/purchasing.htm</a> under the project heading. Addenda and updates will <a href="https://www.cityofportsmouth.com/finance/purchasing.htm">NOT</a> be sent directly to firms. Contractors submitting a bid should check the web site daily for addenda and updates after the release date. Firms will print out, sign and return addenda with the proposal. Failure to do so may result in disqualification.

### 2. <u>Interpretation of Quantities in Bid Schedules</u>

The quantities appearing in the bid schedule are approximate only and are prepared for the comparison of bids. Payment to the contractor will be made only for actual work performed and accepted in accordance with the contract. Any scheduled item of work to be done and materials to be furnished may be increased, decreased or omitted as hereinafter provided, and no claim for loss, anticipated profits or costs incurred in anticipation of work not ultimately performed will be allowed due to such increase or decrease.

### 3. Examination of Plans, Specifications and Site Work

The bidder is expected to examine carefully the site of the proposed work, the plans, standard specifications, supplemental specifications, special provisions and contract forms before submitting a proposal. The submission of a bid shall be considered conclusive evidence that the bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the contract. It will be conclusive evidence that the bidder has also investigated and is satisfied with the sources of supply for all materials.

Plans, surveys, measurements, dimensions, calculations, estimates and statements as to the condition under which the work is to be performed are believed to be correct, but the contractors must examine for themselves, as no allowance will be made for any errors or inaccuracies that maybe found therein.

### 4. Familiarity with Laws

The bidder is assumed to have made himself or herself familiar with all federal and state laws and all local by-laws, ordinances and regulations which in any manner affect those engaged or employed on the work or affect the materials or equipment used in the work or affect the conduct of the work, and the bidder, if awarded the contract, shall be obligated to perform the work in conformity with said laws, by-laws, ordinances and regulations notwithstanding its ignorance thereof. If the bidder shall discover any provision in the plans or specifications which is in conflict with any such law, by-law, ordinance or regulation the bidder shall forthwith report it to the engineer in writing.

### 5. <u>Preparation of Proposal</u>

- a) The bidder shall submit its proposal upon the forms furnished by the Owner. The bidder shall specify a lump sum price in figures, for each pay item for which a quantity is given and shall also show the products of the respective prices and quantities written in figures in the column provided for that purpose and the total amount of the proposal obtained by adding the amount of the several items. All words and figures shall be in ink or typed. If a unit price or a lump sum bid already entered by the bidder on the proposal form is to be altered it should be crossed out with ink, the new unit price or lump sum bid entered above or below it and initialed by the bidder, also with ink.
- b) The bidder's proposal must be signed with ink by the individual, by one or more general partners of a partnership, by one or more members or officers of each firm representing a joint venture; by one or more officers of a corporation, by one or more members (if member-managed) or managers (if manager-managed) of a limited liability company, or by an agent of the contractor legally qualified and acceptable to the owner. If the proposal is made by an individual, his or her name and post office address must be shown, by a partnership the name and post office address of each general and limited partner must be shown; as a joint venture, the name and post office address of each venturer must be shown; by a corporation, the name of the corporation and its business address must be shown, together with the name of the state in which it is incorporated, and the names, titles and business addresses of the president, secretary and treasurer.

### 6. <u>Nonconforming Proposals</u>

Proposals will be considered nonconforming and may be rejected in the Owner's sole discretion for any of the following reasons:

- If the proposal is on a form other than that furnished by the Owner, or if the form is altered or any portion thereof is detached;
- If there are unauthorized additions, conditional or altered bids, or irregularities of any kind which may tend to make the proposal or any portion thereof incomplete, indefinite or ambiguous as to its meaning;
- If the bidder adds any provisions reserving the right to accept or reject an award, or to enter into a contract pursuant to an award; or
- If the proposal does not contain a unit price for each pay item listed except in the case of authorized alter pay items.

### 7. <u>Proposal Guaranty</u>

No proposal will be considered unless accompanied by a bid bond, surety, or similar guaranty of the types and in an amount not less than the amount indicated in the Invitation to Bid. All sureties shall be made payable to the "City of Portsmouth". If a bid bond is used by the bidder it shall be:

- In a form satisfactory to the Owner;
- With a surety company licensed, authorized to do business in, and subject to the jurisdiction of the courts of the State of New Hampshire; and
- Conditioned upon the faithful performance by the principal of the agreements contained in the sub-bid or the general bid.

In the event any irregularities are contained in the proposal guaranty, the bidder will have four business days (not counting the day of opening) to correct any irregularities. The corrected guaranty must be received by 4:00 p.m. If irregularities are not corrected to the satisfaction of the Owner, the Owner, in its sole discretion, may rejected the bid.

### 8. <u>Delivery of Proposals</u>

When sent by mail, the sealed proposal shall be addressed to the Owner at the address and in the care of the official in whose office the bids are to be received. All proposals shall be filed prior to the time and at the place specified in the invitation for bids. Proposals received after the time for opening of the bids will be returned to the bidder, unopened.

#### 9. Withdrawal of Proposals

A bidder will be permitted to withdraw his or her proposal unopened after it has been submitted if the Owner receives a request for withdrawal in writing prior to the time specified for opening the proposals.

### 10. Public Opening of Proposals

Proposals will be opened and read publicly at the time and place indicated in the invitation for bids. Bidders, their authorized agents, and other interested parties are invited to be present.

### 11. <u>Disqualification of Bidders</u>

Any or all of the following reasons may be deemed by Owner in its sole discretion as being sufficient for the disqualification of a bidder and the rejection of his proposal:

- More than one proposal for the same work from an individual, firm, or corporation under the same or different name:
- Evidence of collusion among bidders;
- Failure to submit all required information requested in the bid specifications;
- If the Contractor is not listed with the New Hampshire Department of Transportation as a pre-qualified contractor under the classification of Bridge Construction;
- Lack of competency or of adequate machinery, plant or other equipment, as revealed by the statement of bidders qualification or otherwise;
- Uncompleted work which, in the judgment of the owner, might hinder or prevent the prompt completion of additional work if awarded;
- Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contracts;
- Default or unsatisfactory performance on previous contracts; or
- Such disqualification would be in the best interests of the Owner.

### 12. <u>Material Guaranty and Samples</u>

Before any contract is awarded, the bidder may be required to furnish a complete statement of the origin, composition and manufacture of any or all materials to be used in the construction of the work, and the Owner may, in its sole discretion, reject the bid based on the contents of the statement or as a result of the failure of the bidder to submit the statement.

### **AWARD AND EXECUTION OF CONTRACT**

### 1. <u>Consideration of Proposals</u>

After the proposals are opened and read, they will be compared on the basis of the total price for all sections of work and any such additional considerations as may be identified in the bid documents. The results of such comparisons will be immediately available to the public. In case of a discrepancy between the prices written in words and those written figures, the prices written in words shall govern. In case of a discrepancy between the total shown in the proposal and that obtained by adding the products of the quantities of items and unit bid prices, the latter shall govern.

### 2. <u>Award of Contract</u>

Within 30 calendar days after the opening of proposals, if a contract is to be awarded, the award will be made to the lowest responsible and qualified bidder whose proposal complies with all the requirements prescribed. The successful bidder will be notified, in writing, mailed to the address on his or her proposal, that his or her bid has been accepted and that the bidder has been awarded the contract.

#### 3. Reservation of Rights

The Owner reserves the right to reject any or all proposals, to waive technicalities or to advertise for new proposals, if, in the sole discretion of the Owner, the best interest of the City of Portsmouth will be promoted thereby.

The Owner reserves the right to cancel the award of any contract at any time before the execution of such contract by all parties without any liability of the Owner.

The City reserves the right, after bid opening and prior to award of the contract, to modify the amount of the work in the event that bids exceed budgeted amounts and/or necessary easements and agreements from one or more impacted property owners are not received.

The City reserves the right to make such inquiries regarding the firm's qualifications and reputation as it deems necessary to evaluate the firm. The firm may be requested to execute releases to obtain information from third parties. Failure to execute a release upon request may result in disqualification.

## 4. <u>Return of Proposal Guaranty</u>

All proposal guaranties, except those of the three lowest bidders, will be returned upon request following the opening and checking of the proposals. The proposal guaranties of the three lowest bidders will be returned within ten days following the award of the contract if requested.

### 5. <u>Contract Bonds</u>

At the time of the execution of the contract, the successful bidder shall furnish:

- A performance bond in the amount of 100 percent of the contract amount.
- Labor and materials payment bond in the sum equal to 100 percent of the contract amount.

At the time of project completion, the Contractor will be required to provide a maintenance bond for the guaranty period. It shall meet the following criteria:

• The bond shall be in an amount equal to 20 percent of the contract amount. Such bond shall guarantee the repair of all damage due to faulty materials or workmanship provided or done by the contractor. The guarantee shall remain in effect for a period of one year after the date of final acceptance of the job by the Owner.

Each bond shall be: (1) in a form satisfactory to the Owner; (2) with a surety company licensed and authorized to do business and with a resident agent designated for services of process in the State of New Hampshire; and (3) conditioned upon the faithful performance by the principal of the agreements contained in the original bid. All premiums for the contract bonds are to be paid by the contractor.

### 6. Execution and Approval of Contract

The successful bidder is required to present all contract bonds, to provide proof of insurance, and to execute the contract within 10 days following receipt of the City's notification of acceptance of the bid. No contract shall be considered as in effect until it has been fully executed by all parties.

### 7. Failure to Execute Contract

Failure to execute the contract and to provide acceptable bonds and proof of insurance within 10 days after notification of acceptance of bid shall be just cause for the cancellation of the award and the forfeiture of the proposal guarantee which shall become the property of the Owner, not as a penalty, but in liquidation of damages sustained. Award may then be made to the next lowest responsible bidder, or the City may exercise its reserved rights including the rejection of all bids or re-advertisement.

#### PROPOSAL FORM

# **Sagamore Bridge Repairs**

#### CITY OF PORTSMOUTH, N.H.

To the City of Portsmouth, New Hampshire, herein called the Owner.

The undersigned, as Bidder, herein referred to as singular and masculine declares as follows:

- 1. All interested in the Bid as Principals are named herein.
- 2. This bid is not made jointly, or in conjunction, cooperation or collusion with any other person, firm, corporation, or other legal entity;
  - 3. No officer, agent or employee of the Owner is directly or indirectly interested in this Bid.
- 4. The bidder has carefully examined the sites of the proposed work and fully informed and satisfied himself as to the existing conditions, the character and requirements of the proposed work, the difficulties attendant upon its execution and the accuracy of all estimated quantities stated in this Bid, and the bidder has carefully read and examined the Drawings, Agreement, Specifications and other Contract Documents referred to and knows and understands the terms and provisions thereof;
- 5. The bidder understands that the quantities of work calculated in the Bid or indicated on the Drawings or in the Specifications or other Contract Documents are approximate and are subject to increase or decrease or deletion as deemed necessary by Owner. Any such changes will not result in or be justification for any penalty or increase in contract prices; and agrees that, if the Bid is accepted the bidder will contract with the Owner, as provided in the Contract Documents, this Bid Form being part of said Contract Documents, and that the bidder will supply or perform all labor, services, plant, machinery, apparatus, appliances, tools, supplies and all other activities required by the Contract Documents in the manner and within the time therein set forth, and that the bidder will take in full payment therefore the following item prices, to wit:

PROPOSA ITEM #	L FORM EST. QTY.	UNITS	ITEM DESCIPTION & UNIT PRICE IN WORDS	UNIT PRICE IN FIGURES	ITEM TOTAL IN FIGURES
500.051	1	U	Access for Bridge Construction	\$	\$
500.052	2	Day	Access for Bridge Inspection	\$	\$
550.1011	18	Ea	Structural Steel Repair – Type 1: Supplementa		
				\$	\$
550.1012	4	Ea	Structural Steel Repair – Type 2: Cover Plate S		
				\$	\$
550.1013	2	Ea	Structural Steel Repair – Type 3: Beam Web R	- Leinforcement	
				\$	\$
550.1014	200	Lb	Structural Steel Repair – Type 4: Miscellaneou	- as Structural Steel Rep	airs
				\$	\$
618.6	200	Hrs	Uniformed Portsmouth Police	\$ <u>50.00</u>	\$10,000.00
692	1	U	Mobilization	\$	\$
1008.1	1	\$	Repairs or Replacements as needed	\$1,000.00	\$1,000.00

# To Bidder:

The City reserves the right, after bid opening and prior to award of the contract, to modify the amount of the work in the event that bids exceed budgeted amounts and/or easements and agreements from one or more impacted property owners are not received.

It is the intention of this contract that the items listed above describe completely and thoroughly the entirety of the work as shown on the plans and as described in the specifications. All other items required to accomplish the above items are considered to be subsidiary work, unless shown as a pay item.

TOTAL FOR PROJECT AND BA	SIS OF AWARD
In Figures \$	
In Words \$	
	ork, if any, performed in accordance with the terms and ne bidder will accept compensation as stipulated therein.
Date	
Company	By:
Business Address	Title:
City, State, Zip Code	Telephone:
· ·	pre-qualified with the State of New Hampshire for
All Bids are to be submitted on this form	ged Addenda Nothrough  a and in a sealed envelope, plainly marked on the outside the Project name as it appears at the top of the Proposal

### **BID SECURITY BOND**

(This format provided for convenience, actual Bid Bond is acceptable in fleu of, if compatible.)
KNOW ALL MEN BY THESE PRESENTS, that we the undersigned
, as Principal, and
, as Surety, are hereby
held and firmly bound unto
IN THE SUM OF
as liquidated damages for payment of which, well and truly to be made we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.
The condition of this obligation is such that whereas the Principal has submitted to the
A CERTAIN Bid attached hereto and hereby made a part hereof to enter into a contract in writing, hereinafte referred to as the "AGREEMENT" and or "CONTRACT", for

### NOW THEREFORE,

- (a) If said Bid shall be rejected or withdrawn as provided in the INFORMATION FOR BIDDERS attached hereto or, in the alternative,
- (b) If said Bid shall be accepted and the Principal shall duly execute and deliver the form of AGREEMENT attached hereto and shall furnish the specified bonds for the faithful performance of the AGREEMENT and/or CONTRACT and for the payment for labor and materials furnished for the performance of the AGREEMENT and or CONTRACT,

then this obligation shall be void, otherwise it shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder in no event shall exceed the amount of this obligation.

# BID SECURITY BOND (continued)

The Surety, for value received, hereby agrees that the obligation of said surety and its bond shall be in no way impaired or affected by any extensions of the time within such BID may be accepted, and said Surety does hereby waive notice of any such extension.

IN WITNESS WI	HEREOF, the pa	rties hereto h	ave duly e	xecuted
this bond on the _		day of		20
	(Name of Pri		L.S.	
(SEAL)				
ВУ				=
(N	ame of Surety)			
RY	7			

# STATEMENT OF BIDDER'S QUALIFICATIONS

# Supply with Bid

All questions must be answered and the data given must be clear and comprehensive. This statement must be notarized. Add separate sheets if necessary

1.	Name of Bidder
2.	Permanent Main Office Address
3.	Form of Entity
4.	When Organized
5.	Where Organized
6.	How many years have you been engaged in the contracting business under your present name; also state and dates of previous firm names, if any.
7.	Contracts on hand; (schedule these, showing gross amount of each contract and the approximate anticipated of completion).
8.	General character of work performed by your company.
9.	Have you ever failed to complete any work awarded to you?(no)(yes). If so, where and why?
10.	Have you ever defaulted on a contract?(no)(yes). If so, where and why?
11.	Have you ever failed to complete a project in the time allotment according to the Contract Documents?(no)(yes). If so, where and why?
12. the mo	List the most important contracts recently executed by your company, stating approximate cost for each, and onth and year completed.
13.	List your major equipment available for this contract.
14.	List your key personnel such as project superintendent and foremen available for this contract.

# **STATEMENT OF BIDDERS QUALIFICATIONS** (continued)

15. List any subcontractors whom you would expect to use for the following (unless this work is to be done by your own organization).

The City reserves the right to disallow any subcontractor.

16. With what banks do you do business?
<ul><li>a. Do you grant the Owner permission to contact this/these institutions?</li><li>(yes)(no).</li></ul>
b. Latest Financial Statements, certified audited if available, prepared by an independent certified public accountant, may be requested by Owner. If requested, such statements must be provided within five (5) business days or the bid proposal will be rejected. Certified Audited Statements are preferred. Internal statements may be attached only if independent statements were not prepared.
Dated at this day of, 20
Name of Bidder
BY
TITLE
State of
County of
being duly sworn, deposes and
says that the bidder isof(Name of Organization)
and answers to the foregoing questions and all statements contained therein are true and correct.
Sworn to before me thisday of, 20
Notary of Public
My Commission expires

# CONTRACT AGREEMENT

# **Sagamore Bridge Repairs**

THIS AGREEMENT made as of the xxxxxxxx day of xxxxxx in the year **2010**, by and between the City of Portsmouth, New Hampshire (hereinafter call the Owner) and xxxxxxxxx (hereinafter called the Contractor),

WITNESSETH; that the Owner and Contractor, in consideration of the mutual covenants hereinafter set forth, agree as follows:

**ARTICLE I-** Work - The Contractor shall perform all work as specified or indicated in the Contract Documents for the completion of the Project. The Contractor shall provide, at his expense, all labor, materials, equipment and incidentals as may be necessary for the expeditious and proper execution of the Project.

**ARTICLE II** - ENGINEER - The Director of Public Works, or his/her authorized representative will act as Engineer in connection with completion of the Project in accordance with the Contract Documents.

**ARTICLE III** - CONTRACT TIME - The work will commence in accordance with the Notice to Proceed. **All work shall be completed no later than May 28, 2010.** 

**ARTICLE IV** - CONTRACT PRICE - Owner shall pay Contractor for performance of the work in accordance with the Contract Documents as shown under item prices in the Bid Proposal.

**ARTICLE V** - PAYMENT - Partial payments will be made in accordance with the Contract Documents. Upon final acceptance of the work and settlement of all claims, Owner shall pay the Contractor the unpaid balance of the Contract Price, subject to additions and deductions provided for in the Contract Documents.

**ARTICLE VI** - LIQUIDATED DAMAGES - In event the Contractor fails to successfully execute the work within the specified contract time the Owner shall assess the Contractor liquidated damages in the amount of **five hundred dollars** (\$500) for each calendar day beyond the specified completion date for each section of work. Liquidated damages shall be deducted from the Contract Price prior to final payment of the Contractor.

# **CONTRACT AGREEMENT** (continued)

**ARTICLE VII** – CONTRACT DOCUMENTS – The Contract Documents which comprise the contract between Owner and Contractor are attached hereto and made a part hereof and consist of the following:

- 8.1 This Agreement
- 8.2 Contractor's Bid and Bonds
- 8.3 Notice of Award, Notice to Proceed
- 8.4 Instruction to Bidders
- 8.5 General Requirements, Control of Work, Temporary Facilities, Measurement and Payment, Standard Specifications
- 8.6 Insurance Requirements
- 8.7 Standard and Technical Specifications
- 8.8 Drawings
- 8.9 Special Provisions
- 8.10 Any modifications, including change orders, duly delivered after execution of this Agreement.

**ARTICLE VIII** – TERMINATION FOR DEFAULT – Should contractor at any time refuse, neglect, or otherwise fail to supply a sufficient number or amount of properly skilled workers, materials, or equipment, or fail in any respect to prosecute the work with promptness and diligence, or fail to perform any of its obligations set forth in the Contract, Owner may, at its election, terminate the employment of Contractor, giving notice to Contractor in writing of such election, and enter on the premises and take possession, for the purpose of completing the work included under this Agreement, of all the materials, tools and appliances belonging to Contractor, and to employ any other persons to finish the work and to provide the materials therefore at the expense of the Contractor.

**ARTICLE IX** – INDEMNIFICATION OF OWNER – Contractor will indemnify Owner against all suits, claims, judgments, awards, loss, cost or expense (including without limitation attorneys' fees) arising in any way out of the Contractor's negligent performance of its obligations under this Contract. Contractor will defend all such actions with counsel satisfactory to Owner at its own expense, including attorney's fees, and will satisfy any judgment rendered against Owner in such action.

**ARTICLE X** – PERMITS – The Contractor will secure at its own expense, all other permits and consents required by law as necessary to perform the work and will give all notices and pay all fees and otherwise comply with all applicable City, State, and Federal laws, ordinances, rules and regulations.

**ARTICLE XI** – INSURANCE – The Contractor shall secure and maintain, until acceptance of the work, insurance with limits not less than those specified in the Contract.

### **ARTICLE XII** – MISCELLANEOUS –

- A. Neither Owner nor Contractor shall, without the prior written consent of the other, assign, sublet or delegate, in whole or in part, any of its rights or obligations under any of the Contract Documents; and, specifically not assign any monies due, or to become due, without the prior written consent of Owner.
- B. Owner and Contractor each binds himself, his partners, successors, assigns and legal representatives, to the other party hereto in respect to all covenants, agreements and obligations contained in the Contract Documents.
- C. The Contract Documents constitute the entire Agreement between Owner and Contractor and may only be altered amended or repealed by a duly executed written instrument.
- D. The laws of the State of New Hampshire shall govern this Contract without reference to the conflict of law principles thereof.
- E. Venue for any dispute shall be the Rockingham County Superior Court unless the parties otherwise agree.

IN WITNESS WHEREOF, the parties hereunto executed this

AGREEMENT the day and year first above written.

	BIDDER:	
BY:		
TITLE:		
	CITY OF PORTSMOUTH, N.F	ł.
BY:	John P. Bohenko	
TITLE: Ci	y Manager	

# NOTICE OF INTENT TO AWARD

Date:	
TO:	
IN AS MUCH as you were the low responsible bidder for work entitled:	
Sagamore Bridge Repairs	
You are hereby notified that the City intends to award the aforesaid project to yo	u.
Immediately take the necessary steps to execute the Contract and to provide requiproof of insurance within ten (10) calendar days from the date of this Notice.	ired bonds and
The City reserves the right to revoke this Notice if you fail to take the necessary steps to execute	this Contract.
City of Portsmouth Portsmouth, New Hampshire	
Judie Belanger, Finance Director	

### **NOTICE TO PROCEED**

DA	TE:
----	-----

# **Sagamore Bridge Repairs**

TO:

YOU ARE HEREBY NOTIFIED TO COMMENCE WORK IN ACCORDANCE

WITH THE AGREEMENT DATED XXXXXXXXXXXXXXXX ON OR AFTER XXXXXXXXXXX AND ALL WORK SHALL BE COMPLETED BY May 28, 2010.

CITY OF PORTSMOUTH, N.H.

BY: Steven F. Parkinson, PE

TITLE: Public Works Director

# ACCEPTANCE OF NOTICE

RECEIPT OF THE ABOVE NOTICE TO PROCEED IS HEREBY ACKNOWLEDGED BY

This the \_\_\_\_\_day of \_\_\_\_\_20\_\_

By:\_\_\_\_\_

# **CHANGE ORDER**

Change Order Number	Date of Is	ssuance
Owner: CITY OF PORTSMOUTH, N.	Н	
Contractor:		
You are directed to make the following	changes in the Contract Documents:	
Description:		
Purpose of Change Order		
Attachments:		
CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIME	E
Original Contract Price: \$	Original Completion Date:	
Contract Price prior to this Change Order: \$	Contract date prior to this Change Order:	
Net Increase or Decrease of this Change Order:	Net Increase or Decrease of this Change Order:	
Contract Price with all approved Change Orders:	Contract Due date with all approved Change Orders:	
RECOMMENDED:	APPROVED:	APPROVED
by by	by	by
PW Director City Finance	e City Manager	Contractor

# PERFORMANCE BOND

(This format provided for convenience, actual Performance	
Bond is acceptable in lieu, if compatible)	
Bond Number	
KNOW ALL MEN BY THESE PRESENTS	
that	as Principal, hereinafter called Contractor,
and (Surety Compan	y) a corporation organized and existing under the laws
of the State of and authorized to	
hereinafter called Surety, are held and firmly bound unto the C	
Owner, in the amount of Dollars (\$_	
and Surety bind themselves, their heirs, executors, administrate	ors, successors and assigns, jointly and severally,
firmly by these presents. WHEREAS, Contractor has by writte	en agreement dated entered
into a contract with Owner forin acc	cordance with drawings and specifications prepared by
the Public Works Department, 680 Peverly Hill Road, Portsmo	
a part hereof, and is hereinafter referred to as the Contract.	
NOW, THEREFORE, THE CONDITION OF THIS OBLIGAT faithfully do and perform the things agreed by him to be done at Contract and such alterations as may be made in said Contract save harmless the said Owner in accordance with the Contract defect which may develop within one year from the time of contract defect.	and performed, according to the terms of said during progress work, and shall further indemnify and and shall remedy without cost to the Owner any
The Surety hereby waives notice of any alteration in work or eagents or representatives.	xtension of time made by the Owner or any of its
Whenever Contractor shall be, and declared by Owner to be, in performed Owner's obligations thereunder, the Surety may pro	
(1) Complete the Contract in accordance with its terms and cor	nditions, or

### **PERFORMANCE BOND** (continued)

(2) Obtain a bid or bids for submission to the Owner for completing the Contract in accordance with its terms and conditions, and upon determination by Owner and Surety of the lowest responsible bidder, arrange for a contract between such bidder and Owner and make available as work progresses (even though there should be a default or a succession of defaults under the contract of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the contract price", as used in this paragraph, shall mean the total amount payable by the Owner to Contractor under the Contract and any amendments thereto, less the amount paid by Owner to Contractor.

Any suit under this bond must be instituted before the expiration of (2) years from the date on which final payment under the contract falls due.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the Owner named herein or the heirs, executors, administrators or successors of Owner.

Signed and sealed	l this day of	
A.D., 20		
In the presence of		
	BY:	
(Witness)	(Principal) (Seal)	
	(Surety Company)	
	BY:	
(Witness)	(Title) (Seal)	

### Note:

If the Principal (Contractor) is a partnership, the Bond should be signed by each of the partners.

If the Principal (Contractor) is a corporation, the Bond should be signed in its correct corporate name by its duly authorized Officer or Officers.

If this bond is signed on behalf of the Surety by an attorney-in-fact, there should be attached to it a duly certified copy of his Power of Attorney showing his authority to sign such Bonds.

There should be executed an appropriate number of counterparts of the bond corresponding to the number of counterparts of the Agreement.

sum or sums as may be

### **LABOR AND MATERIAL PAYMENT BOND**

(This format provided for convenience, actual Labor and Material Bond is acceptable in lieu, if compatible) Bond Number KNOW ALL MEN BY THESE PRESENTS: as Principal, hereinafter called Contractor, and \_\_\_\_\_\_(Surety Company) a corporation organized and existing under the laws of the State of and authorized to do business in the State of New Hampshire hereinafter called Surety, are held and firmly bound unto the City of Portsmouth, N.H. Obligee, hereinafter called Owner, for the use and benefit of claimants as herein below defined, in the amount of \_\_\_\_\_\_ Dollars (\$\_\_\_\_\_), for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these WHEREAS, Principal has by written agreement dated \_\_\_\_\_\_ entered into a \_\_\_\_\_ in accordance with drawings and contract with Owner for specifications prepared by the Public Works Department, 680 Peverly Hill Road, Portsmouth, N.H. 03801, which contract is by reference made a part hereof, and is hereinafter referred to as the Contract. NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that the Principal shall promptly make payment to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract and for the hire of all equipment, tools, and all other things contracted for or used in connection therewith, then this obligation shall be void, otherwise it shall remain in full force and effect, subject however, to the following conditions: (1) A claimant is defined as one having a direct contract with the Principal or, with a subcontractor of the Principal for labor, material, equipment, or other things used or reasonably required for use in the performance of the Contract. "Labor and material" shall include but not be limited to that part of water, gas, power, light, heat, oil and gasoline, telephone service or rental of equipment applicable to the Contract. (2) The above named Principal and Surety hereby jointly and severally agree with the Owner that every

claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such a claimant, may sue on this bond for the use of such claimant, prosecute the suit by final judgment for such

### **LABOR AND MATERIAL PAYMENT BOND** (continued)

justly due claimant, and have execution thereon. The Owner shall not be liable for the payment of any such suit or any costs or expenses of any such suit, and principal and surety shall jointly and severally indemnify, defend and hold the Owner harmless for any such suit, costs or expenses.

- (3) No suit or action shall be commenced hereunder by any claimant:
- (a) Unless Claimant, other than one having a direct contract with the Principal, shall have given notice to all the following:

The Principal, the Owner and the Surety above named, within six (6) calendar months after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, Owner, and Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the State of New Hampshire save that such service need not be made by a public officer.

- (b) After the expiration of one (1) year following the date on which Principal ceased all work on said contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof, such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.
- (c) Other than in a State court of competent jurisdiction in and for the county or other political subdivision of the State in which the project, or any part thereof, is situated, or in the United States District Court for the district in which the project, or any part thereof, is situated, and not elsewhere. (4) The amount of this bond may be reduced by and to the extent of any payment of payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed on record against said improvement, whether or not claim for the amount of such lien by presented under and against this bond.

Signed and sealed this	day of	, 20	In the presence of:
	BY:		
(Witness)	(Principal) (Seal)		
_			
	Surety Company)		
	BY:		
(Witness)		(Title) (Seal)	

# **LABOR AND MATERIAL PAYMENT BOND** (continued)

### Note:

If the Principal (Contractor) is a partnership, the Bond should be signed by each of the partners.

If the Principal (Contractor) is a corporation, the Bond should be signed in its correct corporate name by its duly authorized Officer or Officers.

If this bond is signed on behalf of the Surety by an attorney-in-fact, there should be attached to it a duly certified copy of his Power of Attorney showing his authority to sign such Bonds.

There should be executed an appropriate number of counterparts of the bond corresponding to the number of counterparts of the Agreement.

# **MAINTENANCE BOND**

A maintenance bond will be required at the completion of the project. It shall be in the amount of **Twenty Percent** (20%) of the contract price with a corporate surety approved by the Owner. Such bond shall be provided at the time of Contract completion, shall guarantee the repair of all damage due to faulty materials or workmanship provided or done by the Contractor and shall be in a form acceptable to the Owner. This guarantee shall remain in effect for a period of one year after the date of final acceptance of the job by the Owner.

# **CONTRACTOR'S AFFIDAVIT**

STATE OF:	
COUNTY OF:	
Before me, the undersigned, a(Notary Public, Justice of the Peace	<del>(</del> )
in and for said County and State personally appeared,(Individual, Partner, or duly authorized representations)	
who, being duly sworn, according to law deposes and say	ys that the cost of labor, material, and
equipment and outstanding claims and indebtedness of w	hatever nature arising out of the
performance of the Contract between	
CITY OF PORTSMOUTH, NEW HAMPSHIRE	
and	
(Contractor)	
of	<u> </u>
Dated:	
has been paid in full for Construction of: <b>Sagamore Bridge</b>	Repairs
	(Individual, Partner, or duly authorized representative of Corporate Contractor)
Sworn to and subscribed before me thisday	
of20	

# **CONTRACTOR'S RELEASE**

	, County of	and State of
	does h	nereby acknowledge
that	((	Contractor)
has on this day had, and receiv	ved from the CITY OF PORTSMOUTH	NEW HAMPSHIRE, final and completed
payment for the Construction of	of:	
Sagamore Bridge Re	epairs	
NOW THEREFORE, the said		_
do/does by these presents Portsmouth, New Hampsl arising from or in connect all, and all manners of act	tion with the said Contract dated tion and actions, cause and causes	•
claims and demand, what New Hampshire, its succe its successors and assigns administrators) (it, its suc reason of any matter, cause these presents.	eements, promises, variances, dan soever in law of equity, or otherwessors and assigns, which (I, my has) ever had, now have or which (I, eccessors and assigns) hereafter car	n shall or may have, for, upon or by
claims and demand, what New Hampshire, its succesits successors and assigns administrators) (it, its sucreason of any matter, cause	eements, promises, variances, dan soever in law of equity, or otherwessors and assigns, which (I, my has) ever had, now have or which (I, eccessors and assigns) hereafter car	hages, judgments, extents, executions, vise, against the City of Portsmouth, heirs, executors, or administrators) (it, my heirs, executors, or a shall or may have, for, upon or by
claims and demand, what New Hampshire, its succe its successors and assigns administrators) (it, its suc reason of any matter, caus these presents.	eements, promises, variances, dan soever in law of equity, or otherwessors and assigns, which (I, my has) ever had, now have or which (I, eccessors and assigns) hereafter carse, or thing whatsoever; from the Contractor:	nages, judgments, extents, executions, vise, against the City of Portsmouth, neirs, executors, or administrators) (it, my heirs, executors, or

### **GENERAL REQUIREMENTS**

### SCOPE OF WORK

### 1. INTENT OF CONTRACT

The intent of the Contract is to provide for the construction and completion in every detail of the work described. The Contractor shall furnish all labor, materials, equipment, tools, transportation and supplies required to complete the work in accordance with the terms of the Contract. The Contractor shall be required to conform to the intent of the plans and specifications. No extra claims shall be allowed for portions of the work not specifically addressed in the plans and specifications but required to produce a whole and complete project, such work will be considered subsidiary to the bid items.

### 2. INCIDENTAL WORK

Incidental work items for which separate payment is not measured includes, but is not limited to, the following items:

- a. Clean up
- b. Plugging existing sewers and manholes
- c. Signs
- d. Mobilization/Demobilization (unless otherwise paid for)
- e. Restoration of property
- f. Cooperation with other contractors, abutters and utilities.
- g. Utility crossings, (unless otherwise paid for)
- h. Minor items such as replacement of fences, guardrails, rock wall, etc.
- i. Steel and/or wood sheeting as required.
- j. Accessories and fasteners or components required to make items paid for under unit prices or lump sum items complete and functional.

### 3. ALTERATION OF PLANS OR OF CHARACTER OF WORK

The Owner reserves the right, without notice to Surety, to make such alterations of the plans or of the character of the work as may be necessary or desirable to complete fully and acceptably the proposed construction; provided that such alterations do not increase or decrease the contract cost. Within these cost limits, the alterations authorized in writing by the Owner shall not impair or affect any provisions of the Contract or bond and such increases or decreases of the quantities as a result from these alterations or deletions of certain items, shall not be the basis of claim for loss or for anticipated profits by the contractor. The contractor shall perform the work as altered at the contract unit price or prices.

### 4. EXTRA WORK ITEMS

Extra work shall be performed by the Contractor in accordance with the specifications and as directed, and will be paid for at a price as provided in the Contract documents or if such pay items are not applicable than at a price negotiated between the contractor and the Owner or at the unit bid price. If the Owner determines that extra work is to be performed, a change order will be issued.

### 5. CHANGE ORDERS

The Owner reserves the right to issue a formal change order for any increase, decrease, deletion, or addition of work or any increase in contract time or price. The contractor shall be required to sign the change order and it shall be considered as part of the Contract documents.

### 6. FINAL CLEANING UP

Before acceptance of the work, the contractor shall remove from the site all machinery, equipment, surplus materials, rubbish, temporary buildings, barricades and signs. All parts of the work shall be left in a neat and presentable condition. On all areas used or occupied by the contractor, regardless of the contract limits, the bidder shall clean-up all sites and storage grounds.

The items prescribed herein will not be paid for separately, but shall be paid for as part of the total contract price.

### 7. ERRORS AND INCONSISTENCY IN CONTRACT DOCUMENTS

Any provisions in any of the Contract Documents that may be in conflict with the paragraphs in these General Requirements shall be subject to the following order of precedence for interpretation.

- 1. Standard Specifications for Road & Bridge Construction will govern General Requirements.
- 2. Technical Specifications will govern Standard Specifications.
- 3. Plans will govern Technical Specifications, and General Requirements.

#### CONTROL OF WORK

### 1. AUTHORITY OF ENGINEER

- (a) All work shall be done under supervision of the Engineer and to his/her satisfaction. The Engineer will decide all questions which may arise as to the quality and acceptability of materials furnished and work performed and as to the rate of progress of the work; all questions that may arise as to the interpretation of the plans and specifications; and all questions as to the acceptable fulfillment of the Contract by the Contractor.
- (b) The Engineer will have the authority to suspend the work wholly or in part for such periods as he may deem necessary due to the failure of the Contractor to correct conditions unsafe for workers or the general public; for failure to carry out provisions of the Contract; for failure to carry out orders; for conditions considered unsuitable for the prosecution of the work, including unfit weather; or for any other condition or reason deemed to be in the public interest. The Contractor shall not be entitled any additional payments arising out of any such suspensions.
- (c) The Owner reserves the right to demand a certificate of compliance for a material or product used on the project. When the certificate of compliance is determined to be unacceptable to the Engineer the Contractor may be required to provide engineering and testing services to guarantee that the material or product is suitable for use in the project, at its expense (see Sample of Certificate of Compliance).

### 2. PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPES

- (a) The Contractor shall use every precaution to prevent injury or damage to wires, poles, or other property of public utilities; trees, shrubbery, crops, and fences along and adjacent to the right-of-way, all underground structures such as pipes and conduits, within or outside of the right-of-way; and the Contractor shall protect and carefully preserve all property marks until an authorized agent has witnessed or otherwise referenced their location.
- (b) The Contractor shall be responsible for all damage or injury to property of any character, during the prosecution of the work, resulting from any act, omission, neglect, or misconduct in his manner or method of executing the work, or at any time due to defective work or materials, and said responsibility will not be released until the project shall have been completed and accepted.
- (c) When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or as a result of the failure to perform work by the Contractor, the Contractor shall restore, at its own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing rebuilding, or otherwise restoring as may be directed, or the Contractor shall make good such damage or injury in an acceptable manner.
- (d) The Contractor shall paint with tree paint all scars made on fruit or ornamental trees by equipment, construction operations, or the removal of limbs larger than one inch in diameter. Damaged trees must be replaced if so determined by the City Arborist, in his or her sole discretion.
- (e) If the Contractor fails to repair, rebuild or otherwise restore such property as may be deemed necessary, the Owner, after 48 hours notice, may proceed to do so, and the cost thereof may be deducted from any money due or which may become due the Contractor under the contract.
- (f) It is the intent of the Parties that the Contractor preserve, to as great an extent as possible, the natural features of the site.

### **CONTROL OF WORK** (continued)

### 3. MAINTENANCE DURING CONSTRUCTION

The Contractor shall maintain the work during construction and until the project is accepted. This maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and workers to ensure that the structure is kept in satisfactory conditions at all times.

### **4. SAFETY PRECAUTIONS**

Upon commencement of work, the Contractor shall be responsible for initiating, maintaining and supervising all safety precautions necessary to ensure the safety of employees on the site, other persons who may be affected thereby, including the public, and other property at the site or adjacent thereto.

### 5. PERMITS

It will be the responsibility of the Contractor to obtain all permits required for the operation of equipment in, or on, all city streets and public ways.

The City is in the process of applying for a *Permit By Notification* from NHDES wetlands bureau allowing work within 100' of the highest observable tide line. As of this date, the City has not received final approval for the work. Upon the City's receipt of the approved permit, the Contractor will be furnished with a copy of the permit and the Contractor will be required to abide by all conditions of that permit.

#### 6. BARRICADES, WARNING SIGNS AND TRAFFIC OFFICERS

- (a) The Contractor shall provide, erect and maintain all necessary barricades, suitable and sufficient lights, danger signals, signs and other traffic control devices, and shall take all necessary precautions for the protection of the work and safety of the public. Roadway closed to traffic shall be protected by effective barricades. Obstructions shall be illuminated during hours of darkness. Suitable warning signs shall be provided to control and direct traffic in a proper manner, as approved by the engineer.
- (b) The Contractor will be held responsible for all damage to the work from traffic, pedestrians, animals or any other cause due to lack of adequate controlling devices.
- (c) The Contractor shall provide such police officers as the Engineer deems necessary for the direction and control of traffic within the site of project.

The work prescribed herein will not be paid for separately but will be paid for as part of the Contract Price unless specifically appearing as a bid item.

### **TEMPORARY FACILITIES**

### 1. STORAGE FACILITIES

- (a) The Contractor shall not store materials or equipment in a public right-of-way beyond the needs of one working day. Equipment and materials shall be stored in an approved location.
- (b) The Contractor shall protect all stored materials from damage by weather or accident and shall insure adequate drainage at and about the storage location.
- (c) Prior to final acceptance of the work all temporary storage facilities and surplus stored materials shall be removed from the site.

### 2. SANITARY FACILITIES

- (a) The Contractor shall provide for toilet facilities for the use of the workers employed on the work.
- (b) Temporary toilet facilities may be installed provided that the installation and maintenance conform with all State and local laws, codes, regulations and ordinances governing such work. They shall be properly lit and ventilated, and shall be kept clean at all times.
  - (c) Prior to final acceptance of the work all temporary toilet facilities shall be removed from the site.

#### 3. TEMPORARY WATER

The Contractor shall make all arrangements with the local water department for obtaining water connections to provide the water necessary for construction operations and shall pay all costs.

### 4. TEMPORARY ELECTRICITY

The Contractor shall make all arrangements with the Public Service Company for obtaining electrical connections to provide the electrical power necessary for construction operations and security lighting and shall pay all electrical connection and power costs.

The Contractor shall be responsible with obtaining an electrical permit from the City Electrical Inspector.

### **INSURANCE REQUIREMENTS**

Insurance shall be in such form as will protect the Contractor from all claims and liabilities for damages for bodily injury, including accidental death, and for property damage, which may arise from operations under this contract whether such operation by himself or by anyone directly or indirectly employed by him.

### Types and Amounts

A) Commercial General Liability; Occurrence Form, to include Contractual Liability (see Indemnification Clause), explosion, collapse and underground coverages.

Each Occurrence Bodily injury or Property Damage: \$1,000,000 General Aggregate: \$2,000,000 Products/Completed Operations Aggregate: \$2,000,000

Or

Comprehensive General Liability Form; to include premises/operations, independent contractors, products/completed operations, personal injury, contractual liability (see indemnification clause), collapse and underground coverages, medical payment coverages (broad form comprehensive GL endorsement).

Combined Single Limit of liability

for bodily injury and property damage: \$1,000,000

B) Comprehensive Automobile and Truck Liability covering all motor vehicles including owned, hired, borrowed and non-owned vehicles:

Combined Single Limit for Bodily Injury or Property Damage: \$1,000,000

D. Commercial Umbrella Liability Form

Each Occurrence: \$2,000,000 Aggregate: \$3,000,000

Additionally, the Contractor shall purchase and maintain the following types of insurance:

- A) Workers Comprehensive Insurance coverage for all people employed by the Contractor to perform work on this project. This insurance shall at a minimum meet the requirements of the most current laws of the State of New Hampshire.
- B) Owners Protective Liability Coverage for the benefit of the City of Portsmouth:

Each Occurrence: \$2,000,000 Aggregate: \$3,000,000

### **ADDITIONAL INSURED**

All liability policies (including any excess policies used to meet coverage requirements) shall include the City of Portsmouth, New Hampshire as named Additional Insureds.

- 1) The contractor's insurance shall be primary in the event of a loss.
- City of Portsmouth shall be listed as a Certificate Holder. The City shall be identified as follows:

City of Portsmouth Attn: Legal Department 1 Junkins Avenue Portsmouth, NH 03801

### **MEASUREMENT AND PAYMENT**

### 1. MEASUREMENT OF QUANTITIES

- (a) All work completed under the contract will be measured according to the United States standard measure.
- (b) The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice. Unless otherwise stated all quantities measured for payment shall be computed or adjusted for "in place" conditions.
- (c) Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures having an area of 9 square feet or less. Unless otherwise specified, transverse measurements for area computations will be the dimensions shown on the plans or ordered in writing.
- (d) Structures will be measured according to lines shown on the plans or as ordered unless otherwise provided for elsewhere in the specifications.
- (e) In computing volumes of excavation, embankment, and borrow, the average end area method will be used. Where it is impracticable to measure by the cross-section method, acceptable methods involving three-dimensional measurement may be used. When measurement of borrow in vehicles is permitted, the quantity will be determined as 80 percent of the loose volume.
- (f) In computing volumes of concrete, stone and masonry, the prismoidal method will be used. The term "ton" will mean the short ton consisting of 2,000 pounds avoirdupois.
- (g) Except as specified below, all materials that are measured or proportioned by weight shall be weighed on scales which the Contractor has had sealed by the State or by a repairman registered by the Commissioner of Agriculture. All weighing shall be performed in a manner prescribed under the Rules and Regulations of the Bureau of Weights and Measures of the New Hampshire Department of Agriculture.
- (h) Weighing of materials on scales located outside New Hampshire will be permitted for materials produced or stored outside the state, when requested by the Contractor and approved. Out-of-state weighing in order to be approved, must be performed by a licensed public weigh master or a person of equal authority in the state concerned on scales accepted in the concerned state.
- (i) Each truck used to haul material being paid for by weight shall bear a plainly legible identification mark, and if required, shall be weighed empty daily at such times as directed.
- (j) When material is weighed, the individual weight slips, which shall be furnished by the Contractor, for trucks, trailers, or distributors, shall show the following information: the date; the project; the material or commodity; the dealer or vendor; the Contractor or Subcontractor; the location of the scales; the vehicle registration number or other approved legible identification mark; the tare and net weights, with gross weights when applicable; and the weigher's signature or his signed initials.

- (k) The right is reserved to weight any truck, trailer, or distributor, at locations designated, before and after making deliveries to the project.
  - (1) Bituminous materials will be measured by the gallon or ton.
- (m) When material is specified to be measured by the cubic yard but measurement by weight is approved, such material may be weighed and the weight converted to cubic yards for payment purposes. Necessary conversion factors will be determined by the Owner.
- (n) The term "lump sum" when used as an item of payment will mean complete payment for the work described in the item.
- (o) When a complete structure or structural unit (in effect, "lump sum" work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories, so as to provide the item complete and functional. Except as may be otherwise provided, partial payments for lump sum items will be made approximately in proportion to the amount of the work completed on those items.
  - (p) Material wasted without authority will not be included in the final estimate.

#### 2. SCOPE OF PAYMENT

- (a) The Contractor shall receive and accept compensation provided for in the contract as full payment for furnishing all materials and for performing all work under the contract in a complete and acceptable manner and for all risk, loss, damage or expense of whatever character arising out of the nature of the work or the prosecution thereof.
- (b) The Contractor shall be liable to the Owner for failure to repair, correct, renew or replace, at his own expense, all damage due or attributable to defects or imperfections in the construction which defects or imperfections may be discovered before or at the time of the final inspection and acceptance of the work.
- (c) No monies, payable under the contract or any part thereof, except the first estimate, shall become due or payable if the Owner so elects, until the Contractor shall satisfy the Owner that the Contractor has fully settled or paid all labor performed or furnished for all equipment hired, including trucks, for all materials used, and for fuels, lubricants, power tools, hardware and supplies purchased by the Contractor and used in carrying out said contract and for labor and parts furnished upon the order of said Contractor for the repair of equipment used in carrying out said contract; and the Owner, if he so elects, may pay any and all such bills, in whole or in part, and deduct the amount of amounts so paid from any partial or final estimate, excepting the first estimate.

#### 3. COMPENSATION FOR ALTERED QUANTITIES

- (a) Except as provided for under the particular contract item, when the accepted quantities of work vary from the quantities in the bid schedule the Contractor shall accept as payment in full, so far as contract items are concerned, at the original contract unit prices for the accepted quantities of work done. No allowance will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor resulting either directly from such alterations or indirectly from unbalanced allocation among the contract items of overhead expense on the part of the Bidder and subsequent loss of expected reimbursements therefore or from any other cause.
- (b) Extra work performed will be paid for at the contract bid prices or at the price negotiated between the Owner and the Contractor if the item was not bid upon. If no agreement can be negotiated, the Contractor will accept as payment for extra work, cost plus 15% (overhead and profit). Costs shall be substantiated by invoices and certified payroll.

#### 4. PARTIAL PAYMENTS

Partial payments will be made on a monthly basis during the contract period.

#### **5. FINAL ACCEPTANCE**

Upon due notice from the Contractor of presumptive completion of the entire project, the Engineer will make an inspection. If all construction provided for and contemplated by the contract is found complete to his satisfaction, this inspection shall constitute the final inspection and the Engineer will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of the final inspection.

If, however, the inspection discloses any work in whole or in part, as being unsatisfactory, the Engineer will give the Contractor the necessary instructions for correction of such work, and the Contractor shall immediately comply with and execute such instructions. Upon correction of the work, another inspection will be made which shall constitute the final inspection provided the work has been satisfactorily completed. In such event, the Engineer will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of final inspection.

#### 6. ACCEPTANCE AND FINAL PAYMENT

- (a) When the project has been accepted and upon submission by the Contractor of all required reports, completed forms and certifications, the Owner will review the final estimate of the quantities of the various classes of work performed. The Contractor may be required to certify that all bills for labor and material used under this contract have been paid.
- (b) The Contractor shall file with the Owner any claim that the Contractor may have regarding the final estimate at the same time the Contractor submits the final estimate. Failure to do so shall be a waiver of all such claims and shall be considered as acceptance of the final estimate. Contractor shall provide the required Maintenance Bond. After approval of the final estimate by the Owner, the Contractor will be paid the entire sum found to be due after deducting all previous payments and all amounts to be retained or deducted under the provisions of the contract.
  - (c) All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

#### 7. GENERAL GUARANTY AND WARRANTY OF TITLE

- (a) Neither the final certification of payment nor any provision in the contract nor partial or entire use of the improvements embraced in this Contract by the Owner or the public shall constitute an acceptance of work not done in accordance with the Contract or relieve the Contractor of liability in respect to any express or implied warranties or responsibility for faulty materials or workmanship. The Contractor shall promptly remedy any defects in the work and pay for any damage to other work resulting therefrom which shall appear within a period of twelve (12) months from the date of final acceptance of the work. The Owner will give notice of defective materials and work with reasonable promptness.
- (b) No material, supplies or equipment to be installed or furnished under this Contract shall be purchased subject to any chattel mortgage or under a conditional sale, lease purchase or other agreement by which an interest therein or in any part thereof is retained by the Seller or supplier. The Contractor shall warrant good title to all materials, supplies and equipment installed or incorporated in the work and upon completion of all work, shall deliver the same together with all improvements and appurtenances constructed or placed thereon by him to the Owner free from any claims, liens or charges. Neither the Contractor nor any person, firm or corporation furnishing any material or labor for any work covered by this Contract shall have the right to a lien upon any improvements or appurtenances thereon.

Nothing contained in this paragraph, however, shall defeat or impair the right of persons furnishing materials or labor to recover under any bond given by the Contractor for their protection or any rights under any law permitting such persons to look to funds due the Contractor in the hands of the Owner. The provisions of this paragraph shall be inserted in all subcontractors and material contracts and notice of its provisions shall be given to all persons furnishing materials for the work when no formal contract is entered into for such materials.

#### 8. NO WAIVER OF LEGAL RIGHTS

- (a) Upon completion of the work, the Owner will expeditiously make final inspection and notify the Contractor of acceptance. Such final acceptance, however, shall not preclude or stop the Owner from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the Owner be precluded or be stopped from recovering from the Contractor or his Surety, or both, such overpayment as it may sustain by failure on the part of the Contractor to fulfill his obligations under the contract. A waiver on the part of the Owner of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.
- (b) The Contractor, without prejudice to the Contract shall be liable to the terms of the Contract, shall be liable to the Owner for latent defects, fraud or such gross mistakes as may amount to fraud, and as regards the Owner's right under any warranty or guaranty.

#### 9. TERMINATION OF CONTRACTOR'S RESPONSIBILITY

Whenever the improvement provided for by the Contract shall have been completely performed on the part of the Contractor and all parts of the work have been released from further obligations except as set forth in his bond and as provided in Section 8 above.

#### STANDARD SPECIFICATIONS

The Standard Specifications for Road and Bridge Construction of the State of New Hampshire Department of Transportation and any Addenda shall apply but without regard to Section 100 "General Conditions" of those Standard Specifications

#### **SHOP DRAWINGS**

Shop Drawings for this project shall be submitted under the following conditions:

- 1. The Contractor shall submit working and detail drawings, well in advance of the work, to the Engineer for review.
- 2. The Contractor's drawings shall consist of shop detail, erection and other working plans showing dimensions, sizes and quality of material, details and other information necessary for the complete fabrication and erection of the pertinent work.
- 3. The Contractor shall submit three (3) sets of drawings to the Engineer.
- 4. Prior to the approval of the drawings, any work done or materials ordered for the work involved shall be at the Contractor's risk.
- 5. One (1) set of the drawings will be returned to the Contractor approved or marked with corrections to be made. After approval has been given, the Contractor shall supply the Engineer with two sets of the revised detail working drawings.
- 6. The Engineer's approval of the Contractor's working drawings will not relieve the Contractor from responsibility for errors in dimensions or for incorrect fabrication processes, or from responsibility to complete the contract work.

#### **TECHNICAL SPECIFICATIONS**

#### **INDEX**

- 1. Prosecution of Work
- 2. Section 500 Accesses for Bridge Construction
  Amendment to Section 500 Structural Steel Item 500.051
  Amendment to Section 500 Structural Steel Item 500.052
- 3. Section 550 Structural Steel
  Amendment to Section 550 Structural Steel Item 550.1
  Structural Steel Repair Type 1 Item 550.1011
  Structural Steel Repair Type 2 Item 550.1012
  Structural Steel Repair Type 3 Item 550.1013
  Structural Steel Repair Type 4 Item 550.1014
- 4. 4. Section 1008 Repairs and Replacement as Needed

#### PROSECUTION OF WORK

#### **DESCRIPTION**

This project consists of performing limited structural steel repairs to the existing NH Route 1A bridge over Sagamore Creek in the City of Portsmouth NH as shown on the plans or as ordered. These repairs include the installation of supplementary floor beams, repairs to the existing supports posts at the expansion joint plate at the north end of the bridge, beam web reinforcements to existing floor beams, and any additional miscellaneous repairs as ordered.

#### PRE BID MEETING

The City of Portsmouth will hold a mandatory pre-bid meeting on January 21, 2010 at 10:00 AM. The Meeting will be at the Department of Public Works offices @ 680 Peverly Hill Road, Portsmouth NH, with a mandatory site walk to follow.

#### **CONCURRENT WORK**

There will be no concurrent work by others on the bridge.

#### **EXISTING BRIDGE PLANS**

Prospective bidders may review the available existing bridge plans at the City of Portsmouth Department of Public Works, located at 680 Peverly Road, Portsmouth, NH, by appointment. The existing site conditions may vary from the existing plans therefore the Bidders shall visit the site to review the existing conditions and shall include all work required for completion of the contract scope accordingly in the base bid.

An aerial photo of the existing bridge (looking North towards Portsmouth), has been included as an attachment to this specification for the contractor's reference (see Figure-1)

#### **UTILITIES**

There are utility installations in the area of the bridge including aerial utilities in close proximity and a water line supported beneath the bridge belonging to, but not necessarily limited to, the following:

PUBLIC SERVICE OF NEW HAMPSHIRE

Contact: Sonny Lemire

Phone: 436-7708 #5641

**FAIRPOINT** 

Contact: Joe Considine Phone: 427-2000

**COMCAST** 

Contact: Construction Services Support Center

Phone: (800) 266-2278

CITY OF PORTSMOUTH, MUNICIPAL WATER/SEWER

Contact: Mike Jenkins Phone: 766-1438

#### Aerial:

Existing aerial utilities are in close proximity to the bridge on the east side. The Contractor shall coordinate his work with the respective utility companies to install cable guarding if necessary (subsidiary) and to plan the work to prevent damage with no interruption of service.

#### **Underground:**

There are underground utilities in close proximity to the site, however, excavation is not anticipated as part of this project. In the circumstance that the Contractor considers any limited excavation for any purpose, the Contractor shall, as specified by New Hampshire State Law, RSA 374:51 and 374:55, call **DIG SAFE** (1-888-344-7233) at least <u>72 hours prior</u> to any excavation. The Contractor shall comply with any notification and other requirements of City and State excavation permits.

In the event the Contractor damages any underground utility, it shall be the Contractor's responsibility for any and all necessary repairs to that utility. The Contractor shall bear all costs incurred to make necessary repairs including emergency or temporary repairs, patch pavement, traffic control, labor, materials, and all other items necessary to repair the damaged utility in accordance with the requirements of the utility owner. If any electrical or telephone wire is damaged or broken, the Contractor shall be responsible for the costs to replace the entire line from the nearest junction box, or as required by the utility.

The Contractor shall cooperate with the various utility companies, public agencies and the municipality, and provide access through the site as required for their work or to observe work in connection with this project that affects their respective properties.

The Contractor should note that an existing city water line shown on the bridge plans is approximate and based in part on record information. The underground location beyond the bridge limits is not shown on the plans. Excavation is not anticipated for this project therefore the Contractor must request prior approval from the Engineer prior to any excavation or other construction operations that may affect any underground utilities. The Contractor shall notify the Engineer immediately upon finding undocumented underground utilities or conditions varying significantly from those shown on the plans.

#### **Temporary Lighting:**

The Contractor is responsible for providing adequate lighting for its construction activities during any work outside of daylight hours. City ordinances limit work times from 7:00 a.m. to 6:00 p.m. unless prior approval from the Owner is received.

#### **RIGHT OF WAY**

There are NO changes to the right-of-way anticipated as part of this project. All work shall be performed within the existing NHDOT Right of Way. The Contractor shall be responsible for locating the limits of the existing Right of Way as necessary for the planning and performance of his work. The Contractor shall be responsible for obtaining any easements or right of entry to private properties as needed to facilitate the work plan.

#### **EXCAVATION, DREDGING, OR FILLING STATE WATERS**

There will be no excavation, dredging, or filling of state waters associated with this project.

The City of Portsmouth will obtain the necessary NH Wetlands Permit if necessary to accomplish the work indicated on the plans. (NOTE: No work is anticipated in Sagamore Creek within jurisdictional wetlands as part of this contract).

The Contractor is responsible for obtaining any additional NHDES Wetlands Bureau or US Army Corps of Engineers Permit(s) (including notice to mariners), or modifications to the existing permit(s) necessary for the Contractor's method of construction. Prior to submission to these agencies, the Bureau of Construction and the Bureau of Environment must review any additional impacts. (The permits obtained by the Owner are for only the work shown on the Plans.)

The Contractor shall plan and perform the work in such a manner that deleterious materials and debris shall not fall into the water below the bridge.

#### EPA STORMWATER DISCHARGE

There is no anticipated excavation or surface disturbance planned for this project, however, the Contractor shall comply with any requirements for stormwater discharge related to the Contractor's construction methods and temporary staging areas. The Contractor's attention is directed to the Special Attention concerning the Contractor's obligation relative to the National Pollution Discharge Elimination System (NPDES) permit as administered by the Environmental Protection Agency. This project is subject to Notice of Intent, Notice of Termination, and other project record by the Contractor as required in the Construction General Permit (CGP).

#### **USE OF GROUNDS AND STREET OCCUPANCY**

All work shall take place within the public Right of Way. Any area outside the limits of the site and temporary construction easements, which the Contractor may require for storage of equipment and materials, or for other purposes necessary in the performance of the Work, shall be secured by the Contractor at its own expense. Materials shall not be stored or stacked within any active roadway clear zones, or in a manner that obstructs adequate sight lines.

#### **DISPOSAL OF SURPLUS MATERIAL AND DEBRIS**

Contractor shall legally and safely dispose of surplus and excess materials not required for use on the project as well as all debris and removed existing structural steel, without additional compensation.

#### UNIFORMED OFFICERS WITH VEHICLES AND FLAGGERS

If required for the performance of work within the public traveled way, Uniformed Portsmouth Officers shall be requested by the Contractor with at least 24 hours prior notice.

At a minimum, two uniformed officers with or without vehicle (as directed by the Owner) will be required to be present on site during all alternating one-way traffic operations. It is not anticipated that uniformed officers will be required during the temporary bridge closure period. The uniformed officers will fulfill the role of traffic control flaggers for the alternating one-way traffic pattern.

It is anticipated that the Contractor will accomplish the bridge repairs field installation work within a maximum two-week (16 calendar day; Saturday through 2<sup>nd</sup> following Sunday) bridge closure period or less. The Contractor shall include extended work hours as needed to complete the work identified in the base bid. Uniformed Officers will not be required during the bridge closure period. The Contractor shall provide incidental flaggers during the bridge closure period to facilitate his work plan if required which shall be subsidiary to the overall project.

The access for bridge inspection work will be accomplished prior to the bridge closure period with alternating one-way traffic maintained during the work hours. The Contractor will provide Uniformed Officers for the alternating one-way traffic during the bridge access for inspection work.

The Contractor shall coordinate his request for police officers through the City of Portsmouth Police Department. For scheduling considerations, the Contractor shall plan at least one week in advance, and determine any traffic control needs for the next week at the weekly construction meeting.

#### **WORK HOURS**

Normal work hours are 7:00 AM to 6:00 PM, Monday to Friday.

The contractor may perform parts of the work during extended days, weekends, and night shift hours subject to approval by the Owner. If the Contractor plans to perform work at night noise control measures shall be implemented after 7 pm. The Contractor shall request approval from the Owner's Representative at least one week in advance of any scheduled extended day hours (outside of 7:00 am to 4:30 pm), night, weekend, and holiday work.

#### **SALVAGE OF MATERIALS**

There are no salvaged materials anticipated for this project.

#### **SCHEDULE OF WORK**

The Contractor shall coordinate with the Engineer and perform the access for bridge inspection work within 2 weeks from receipt of Notice to Proceed from the Owner. The Contractor shall not commence structural steel procurement until the results of the inspection work have determined the extents of the supplementary floor beam replacements and other repairs.

The Contractor shall complete the field work for the bridge repairs work within a maximum of two weeks (16 calendar day; Saturday through 2nd following Sunday) bridge closure period or less. The Contractor shall include all extended work hours as need in the base bid.

Prior to beginning any work, the Contractor shall submit a proposed work plan and schedule for documentation consistent with 108.03. Furthermore, conduct a weekly meeting with the Engineer and the Owner's Representative, starting one week after Notice to Proceed, to discuss the project status and upcoming work, traffic control, and any other issues that may be deemed pertinent. The overall schedule shall be updated as needed, and presented at this meeting.

#### **COMPLETION DATE**

The completion date for this project shall be 90 calendar days from Notice to Proceed.

#### TRAFFIC CONTROL PLAN

Except for items of work specifically noted in the contract documents to be provided by the Owner, the Contractor shall be responsible for providing an appropriate supplementary traffic control plan (if required for his work plan) and all related traffic control measures for any work within the public right of way to maintain adequate vehicular and pedestrian access in an alternating one-way traffic pattern utilizing uniformed officers as required during working hours. The Contractor shall coordinate traffic control requirements in advance with the City of Portsmouth, and shall hold a meeting with the City of Portsmouth Department of Public Works, Police, and Fire Departments to review the Traffic Control Plan provided by the contractor. The

Contractor's preparation of the Traffic Control Plan and all prior and subsequent coordination is considered subsidiary to the overall project.

The following standards and specifications are considered to be part of the Traffic Control Plan:

- Section 618 and 619 of the NHDOT Standard Specifications for Road and Bridge Construction, Supplemental Specifications as amended, and Special Provision Specifications.
- NHDOT Work Zone Traffic Control Standard Plans, latest revision.
- The most current Manual on Uniform Traffic Control Devices, (MUTCD), including all current updates, and official interpretations.
- State of New Hampshire's Flagger Handbook.

All signs, channelizing devices and arrow boards as required by the Manual on Uniform Traffic Control Devices, including part six, as amended, and the above Standards Sheets shall be in place prior to moving any equipment onto the pavement.

The Contractor shall provide trained personnel to be responsible for the maintenance of supplementary traffic control.

All materials specified in or as needed to facilitate the traffic control plan and Maintenance of Traffic shall be required to be certified for reflectivity. Damaged devices shall be replaced as directed by the Engineer without additional compensation.

#### MAINTENANCE OF TRAFFIC

All work shall be prosecuted so that normal two-way vehicular and pedestrian access is maintained within the public right of way outside of the bridge closure limits at all times, and access to private residences and businesses shall be maintained at all times.

Except for those items specifically identified in the plans and specifications to be provided by the Owner, the Contractor shall provide, erect, and maintain any additional necessary barricades, suitable and sufficient lights, danger signals, signs and other traffic control devices and shall take all necessary precautions for the protection of the work and safety of the public, as well as providing safe and passable traffic accommodations for public travel. Effective barricades shall protect roadway areas closed to traffic. Obstructions shall be illuminated during hours of darkness. Suitable warning signs shall be provided to control and direct traffic in a proper manner.

The Contractor shall coordinate with the Engineer well in advance of setting up traffic control, work zones, or lay down areas. The contractor shall be responsible for providing and erecting any appropriate no parking signage and barricades in accordance with the approved Traffic Control Plan.

Closure of the bridge to all traffic will be permitted for the designated 16 calendar day period. If the work cannot be accomplished within this time period, the Contractor shall be responsible for maintaining an alternating one-way traffic pattern as necessary until the work is completed. The Contractor will be responsible for furnishing and maintaining all appropriate signage, and other associated traffic control (which may include Uniformed Portsmouth Police) during alternating one-way traffic periods.

If all work is not completed within the bridge closure period, then single lane closures during normal work hours of construction operations utilizing alternating one-way traffic will be permitted. Parallel parking within single lane closures will not be permitted, and it is the Contractor's responsibility to ensure there is no parking during these closures. Single lane closures are limited to providing a single lane for alternating each direction of travel, utilizing traffic control personnel (Uniformed Portsmouth Officers). The length of lane closure shall be as approved by the Engineer. Maintain one 11-foot wide travel lane minimum during the lane closure operation, and maintain a minimum of two 11-foot lanes minimum, supporting two-way traffic at all other times.

The Contractor's attention is directed to the latest revision of the NHDOT Work Zone Traffic Control Standard Plans (available on-line at <a href="www.NH.gov/dot">www.NH.gov/dot</a>) and MUTCD Part 6 – Temporary Traffic Control standards for lane shift and alternating one-way traffic details, especially with regard to signing and delineation required for shifting a lane or closing a lane of traffic. If an alternating one-way traffic lane extends through an intersection the on-site uniformed officer shall be posted at the intersection location. If more than one intersection is within the alternating one-way traffic pattern then a second Uniformed Officer shall be provided.

If the Bidder's work plan proposes to perform the work in such a manner that would require alternating one-way traffic during normal work hours beyond the designated bridge closure period, then the additional costs for the required uniformed officers will be subsidiary to Item 692 Mobilization.

All work required to provide Maintenance of Traffic, including flaggers, shall be in accordance with Sections 618 and of the NHDOT Standard Specifications for Road and Bridge Construction, and Special Provisions. All work to provide Maintenance of Traffic shall be subsidiary and shall not be measured.

#### VARIATION FROM THE TRAFFIC CONTROL PLAN

Changes to the approved Traffic Control Plan must be submitted to the Engineer and accepted by the Engineer in writing in advance of implementing the changes.

# <u>CITY OF PORTSMOUTH - FIRE AND POLICE DEPARTMENT TELEPHONE NUMBERS:</u>

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City of Portsmouth Fire Department : (603) – 427- 1515 Coordination Contact: Steve Achilles City of Portsmouth Police Department : (603) – 427 - 1500 Coordination Contact: Steve DuBois

#### **END OF SECTION**

#### **SPECIAL PROVISION**

#### **SECTION 500 -- ACCESS FOR BRIDGE CONSTRUCTION**

#### **Description**

- 1.1 Work under Item 500.051 Access For Bridge Construction shall consist of the design, construction, maintenance and removal of all temporary access means as needed by the Contractor for bridge construction. This work shall include storage and staging areas, temporary structures and/or work platforms, mobile under-bridge access platforms, and any other means and methods necessary for bridge construction not specifically included in other work or pay items. The limits of the available work areas shall be the existing Right of Way limits as indicated in the Specifications.
- 1.2 Work under Item 500.052 Access For Bridge Inspection shall include under-bridge access as needed for close-up inspection of the existing floor beams by the Engineer (and Contractor) at the onset of the project to verify supplementary floor beam quantity and locations, beam web reinforcements quantity and locations, and miscellaneous repairs as described in the plans and specifications. The Contractor shall provide adequate access for the Engineer to reach the floor beams for hands-on localized inspection by means of a mobile (articulating) under-bridge access platform with supplementary measures such as secured ladders or other means (subject to conformance with OSHA regulations). The Contractor shall prepare a work safety plan and provide safety measures and support personnel accordingly. The Contractor shall remove loose rust / scale and debris as required from the bottom flange areas of the existing floor beams (with hand tools) as directed/needed to facilitate the Engineer's estimation of remaining beam web and flange steel thickness near each end of the floor beam and at the center of the beam span as directed by the Engineer. The under-bridge inspection access shall include all incidental work, including an access work-safety plan, appropriate support personnel, and alternating on-way traffic control devices. The Owner will provide uniformed officers to support the alternating one-way traffic pattern for the Access for Bridge inspection.
- 1.3 The Contractor shall provide access necessary for bridge construction without placing any structures or staging within the jurisdictional wetlands of Sagamore Creek as indicated in the Prosecution of Work. If any work is proposed to be performed from a barge or other vessel the Contractor shall be responsible for obtaining all approvals and permits from regulatory agencies.
- 1.4 The removal of existing material, such as deteriorated steel members and debris necessary to complete the bridge construction shall be accomplished in a manner that prevents any removed material, debris or construction material from falling into Sagamore Creek. The Contractor's temporary structures and work platforms must provide a system that insures all material can be collected and removed from the site.

1.5 The Contractor shall submit a work plan description with the Bid submittal indicating the proposed methods for rigging and installing the floor beams including crane placement and any work to be performed from a barge or other vessel. The contractor shall obtain all permits, and permit modifications, required for any work performed from a barge or vessel.

#### **Materials**

2.1 All materials to be used in the construction of the temporary structures and work platforms shall be subject to inspection and approval prior to their incorporation into the work and shall conform to the NHDOT Standard Specifications for Road and Bridge Construction where applicable.

#### **Construction Requirements**

- 3.1 The existing bridge has been posted for a load limit of 6 Tons based on the condition of some of the existing floor beams. The Contractor shall verify the condition of floor beams that will be loaded by the construction operations and determine that the construction loads are less than current beam capacities. The Contractor shall not place equipment or materials on the existing bridge in a manner that could overload the existing bridge components (deck, floor beams, girders, etc) and shall consider the deteriorated condition of structural elements as needed. If the Contractor's work plan involves placement of equipment on the bridge, such as a small crane or other equipment to facilitate installation of supplementary floor beams, the contractor shall plan his work in advance accordingly and shall provide layout drawings of proposed equipment and loading distribution methods with structural calculations prepared under the supervision of a Registered Professional Engineer licensed in the State of New Hampshire and shall bear the Engineer's seal to the Owner for documentation.
- 3.2 Temporary structures and work platforms shall meet the minimum strength requirements to carry all construction equipment and materials at stress levels not to exceed 33% greater than the stresses allowed in the current AASHTO "Standard Specifications for Highway Bridges" as amended.
- 3.3 Detailed plans and calculations (as applicable) showing sizes, arrangements, connections, bracing, and quality of materials to be used in temporary structures and work platforms shall be submitted to the Engineer for documentation. The plans and calculations shall be designed by a Registered Professional Engineer licensed in the State of New Hampshire and bear the Engineer's seal.
- 3.4 The height of the temporary structures and work platforms shall be kept to a minimum such that the reduction in the clearance between the structure or platform and the waterline is minimized.
- 3.5 Temporary structures and work platforms shall be of sufficient geometric and structural capacity to handle all anticipated loads necessary for bridge construction.

- 3.6 Clearing, cutting, or trimming of any trees or vegetation shall not be permitted unless specifically requested in writing with a localized work plan subject to approval by the Owner, all regulatory agencies, and the Engineer. The Contractor will be responsible for any necessary permit applications, revisions, and fees. Stumps and existing topsoil shall not be removed except as directed by the Engineer.
- 3.7 When the temporary, storage and staging areas, temporary structures and work platforms are no longer required, they shall be completely removed and the area cleaned up, graded, landscaped and restored to the satisfaction of the Engineer to a condition equal to or better than that originally found or as shown on the plans.

#### **Method of Measurement**

- 4.1 Item 500.051 Access For Bridge Construction will be measured as a Unit. A Unit will consist of the design, construction, maintenance and removal of all temporary access for bridge construction.
- 4.1 Item 500.052 Access For Bridge Inspection will be measured per Day. A measured Day will consist of an 8-hour working day, including ½-hour of setup time, 7 hours of inspection access under the bridge for the Engineer, (exclusive of ½-hour lunch break), and ½-hour of demobilization time. Extended access time for any Access for Bridge Inspection Day, due to the Contractor's work preparations, measurements, or other operations by the Contractor shall not be measured or included and shall be subsidiary to the overall project.

#### **Basis of Payment**

- 5.1 Access for Bridge Construction will be paid for at the contract unit price complete in place.
- 6.1 The accepted quantity of Access for Bridge Inspection will be paid for at the contract unit price per Day.

Pay item and unit:

500.051	Access for Bridge Construction	Unit
500.052	Access for Bridge Inspection	Day

#### End of Section

#### **SPECIAL PROVISION**

#### AMENDMENT TO SECTION 550 - STRUCTURAL STEEL

#### Add / Amend to Description

- 1.2 This work shall consist of removing parts of existing steel components and furnishing, fabricating and installing new structural steel shapes, plates and fasteners necessary to install the reinforcements and repairs to the existing bridge components for the existing NH Route 1A bridge over Sagamore Creek, as shown on the plans or as directed by the Engineer. This work shall also include, but is not limited to, the cutting, drilling, grinding, removal and disposal of existing steel, required modifications of existing steel, and shop priming of all new structural steel.
- 1.3 The work for repairing the structural steel is classified herein as the following four (4) repair types:
  - **1.3.1** <u>Structural Steel Repair Type 1: Supplementary Floor Beam.</u> This work consists of providing all materials, tools, equipment, labor, and incidental work to furnish and install a supplementary floor beam alongside an existing deteriorated floor beam as identified by the Engineer.
    - **1.3.1.1** This repair includes, but is not limited to; the removal of sections of the existing debris shielding over the top flange of the main girders, preparations for and mounting of a steel sole plate to the existing girder including cleaning debris and lose scaling paint, specialized rigging and any bracing/guides or counterweights (contractor designed) needed for the placement of the supplementary floor beam which is to be inserted from the side of the bridge, lifting and shimming the floor beam to be in contact with the existing steel grid deck above, anchoring the floor beam, clamping/shimming (if required) and welding of the existing steel grid deck bearing bars to the floor beam, and modification and reinstallation of the existing debris shielding.
  - **1.3.2** <u>Structural Steel Repair Type 2: Cover Plate Support.</u> This work consists of providing all materials, tools, equipment, labor, and incidentals to furnish and install supplementary support post below the expansion joint plate at the North end of the bridge.
  - **1.3.3** <u>Structural Steel Repair Type 3: Beam Web Reinforcement.</u> This work consists of providing all materials, tools, equipment, labor, and incidentals to furnish and install bolted-on structural steel channels on both sides of the web of an existing W21 floor beam.
  - 1.3.4 Structural Steel Repair Type 4: Miscellaneous Structural Steel Repairs. This

work consists of providing structural steel repairs as directed by the engineer or the Owner's Representative and shall include, but is not limited to, the following: shop or field fabrication, delivery, rigging, work access, bolts and welding.

- **1.4** All existing debris in the work areas on the bridge between the existing floor beams where supplementary beams are being installed, and any other area of the Contractor's structural steel work, shall be removed and disposed of by the Contractor, which may include dirt, scaling paint, scaling rust or other debris. Disposal of debris and/or removed deteriorated existing steel may contain lead paint and shall be evaluated, handled, and disposed of properly by the Contractor in accordance with all applicable regulations.
- **1.5** Unless otherwise modified in these Special Provisions or the plans, all work, materials, submittals, and certifications shall conform to the requirements of the NHDOT Standard Specifications Section 550.

#### Add / Amend to Materials

- **Structural Steel**. Structural steel shall conform to 550 and modified as indicated below, or as otherwise specified on the plans:
- 2.2.1.2 Structural steel for supplementary floor beams shall conform to ASTM A709, Grade 36 or ASTM A709, Grade 50 to suit availability for accelerated steel procurement. No price increase will be awarded for either grade of steel utilized. All supplementary floor beams shall be of the same steel grade.

#### Add / Amend to Shop Fabrication Drawings

3.3.11 The details of the existing structural steel and proposed repairs shown on the plans are based on the original 1940 construction contract drawings and 1984 bridge rehabilitation drawings. Prior to fabrication the Contractor shall take field dimensions to verify all dimensions necessary to prepare detailed shop drawings for approval by the Engineer. The Contractor's field measurements shall include the vertical profile of the existing steel grid deck along the proposed supplementary floor beam centerline to facilitate matching the proposed floor beam mill-tolerance camber with the shape of the existing steel grid deck as much as possible.

The Contractor shall provide under-bridge inspection access for the Engineer and the Contractor's superintendent as required to verify the quantity and locations of the structural steel repairs to be installed. This verification shall take place as early in

the project as possible and prior to the Contactor's field measurements for shop drawing preparation. Under-bridge inspection access and the required related traffic control for alternating one-way traffic during that time shall be subsidiary to Item 550.05 Access For Bridge Construction.

The locations, types, details and dimensions of the repairs shown on the plans are based on the results of prior bridge inspections and represent the anticipated nature of the work known at that time. If during the execution of the work, the Contractor discovers severe deterioration that indicates an unsafe condition and is not identified on the drawings or locations where the encountered condition may warrant a different repair type than what is indicated on the drawings, the contractor shall notify the Engineer immediately. The Engineer must approve any changes to repair types and the addition of any repairs prior to commencing with the repair work.

#### Add / Amend to Field Painting

**3.17.10** Field painting of existing or new structural steel will not be required.

#### Add / Amend to Method of Measurement

- **4.2** 550.1011 Structural Steel Repair Type 1: Supplementary Floor Beam shall be measured as Each supplementary floor beam installed and all other work necessary to complete the work in accordance with the plans shall be subsidiary.
- **4.3** 550.1012 Structural Steel Repair Type 2: Cover Plate Support shall be measured as Each support plate installed and all other work necessary to complete the work in accordance with the plans shall be subsidiary.
- **4.4** 550.1013 Structural Steel Repair Type 3: Beam Web Reinforcement shall be measured as Each reinforced beam installed and all other work necessary to complete the work in accordance with the plans shall be subsidiary.
- **4.5** 550.1014 Structural Steel Repair Type 4: Miscellaneous Structural Steel Repairs shall be measured per pound based on the installed length and size of the structural steel elements and their calculated weight.

#### Add / Amend to Basis of Payment

**5.1** The accepted quantity for each item will be paid for at the respective Contract unit price.

- **5.1.1** The cost of under-bridge inspection access, including but not limited to: advance coordination with the Engineer and Police Department, access equipment, traffic control devices, mobilization, safety measures, and all incidental costs, as required for the Engineer to verify existing conditions for repairs quantities and locations shall be subsidiary to Item 550.052 Access for Bridge Inspection.
- 5.1.2 The Contractor's costs for taking field measurements, including but not limited to: advance coordination with the Engineer and Police Department, access equipment, traffic control devices, mobilization, safety measures, and all incidental costs, for dimension verifications and other items necessary for shop drawings, structural steel fabrication, work and construction access planning, and the proper completion of the work in accordance with the Contract shall be subsidiary to the overall project.

#### Pay items and units

550.1011	Structural Steel Repair – Type 1: Supplementary Floor Beam	Each
550.1012	Structural Steel Repair – Type 2: Cover Plate Support	Each
550.1013	Structural Steel Repair – Type 3: Beam Web Reinforcement	Each
550.1014	Structural Steel Repair – Type 4: Miscellaneous Structural Steel Repairs	Pound

#### **END OF SECTION**

#### **SPECIAL PROVISION**

#### SECTION 1008 – ALTERATIONS & ADDITIONS AS NEEDED

#### **ADD**

#### Item 1008.1 – Repairs and Replacement as Needed

#### **Description**

**1.1** Item 1008.1 shall consist of all work required to furnish and install repairs and replacement as needed for bridge components as directed by the Engineer.

#### **Materials**

**2.1** The materials for construction shall be in accordance with the NHDOT Standard Specifications, and all other applicable Standard Specifications and Special Provision Specifications, or as directed by the Engineer.

#### **Construction Requirements**

3.1 The Construction Requirements for the work shall be in accordance with the NHDOT Standard Specifications, and all other applicable Standard Specifications and Special Provision Specifications, or as directed by the Engineer.

#### **Method of Measurement**

4.1 Work authorized under this section will be measured as provided in 109.01; however when such work falls within the standard or special provision specifications of another contract item, the work will be measured according to the method of measurement for that contract item, including Item 550.1014 Structural Steel Repair – Type 4: Miscellaneous Structural Steel Repairs (pound).

#### **Basis of Payment**

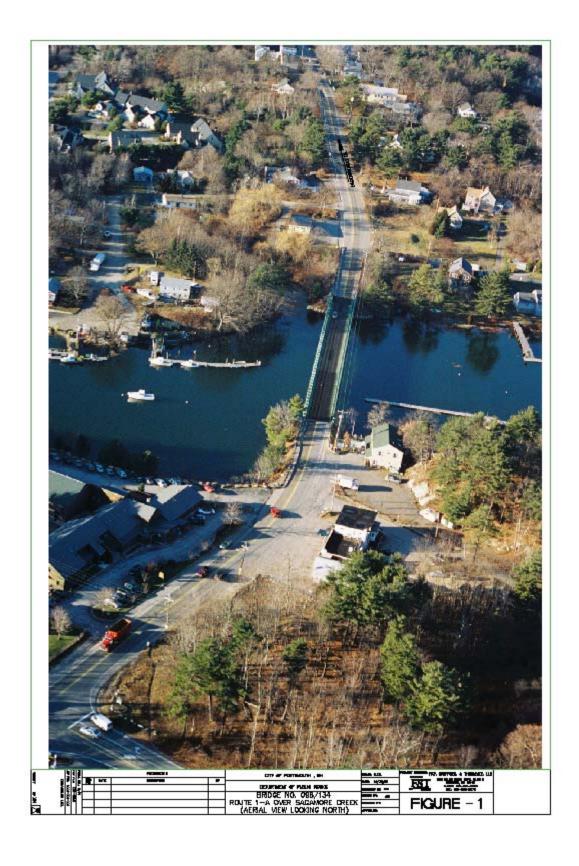
- **5.1** Payment for work authorized under this section will be made according to Section 109.04.
- 5.2 The dollar limit set in the proposal will not limit the Engineer in the value of work performed under this item.
- Payment of the allowance amount set in the proposal will not be on a lump sum basis. Only the amount determined for the value of the work ordered will be paid.
- 5.4 The Bidder's attention is called to the dollar amount inserted in the proposal under these items, which dollar amount is the allowance the Owner has set up for the special work. This figure must not be altered by the Bidder on the proposal, and must be included to obtain the grand total of the bid for the Contract.

#### Payment items and units:

ITEM 1008.1 – Repairs and Replacements as needed Allowance Dollar

The allowance for Item 1008.1 on this project has been set at: \$1000.00

End of Section



# CITY OF PORTSMOUTH PUBLIC WORKS DEPARTMENT

# SAGAMORE BRIDGE REPAIRS

(NH ROUTE 1A / SAGAMORE CREEK) BRIDGE NO. 198/034

# PORTSMOUTH, NEW HAMPSHIRE

STATE PROJECT NUMBER: 14493A

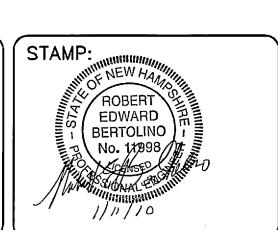
CITY OF PORTSMOUTH JOB NUMBER NUMBER: 7144

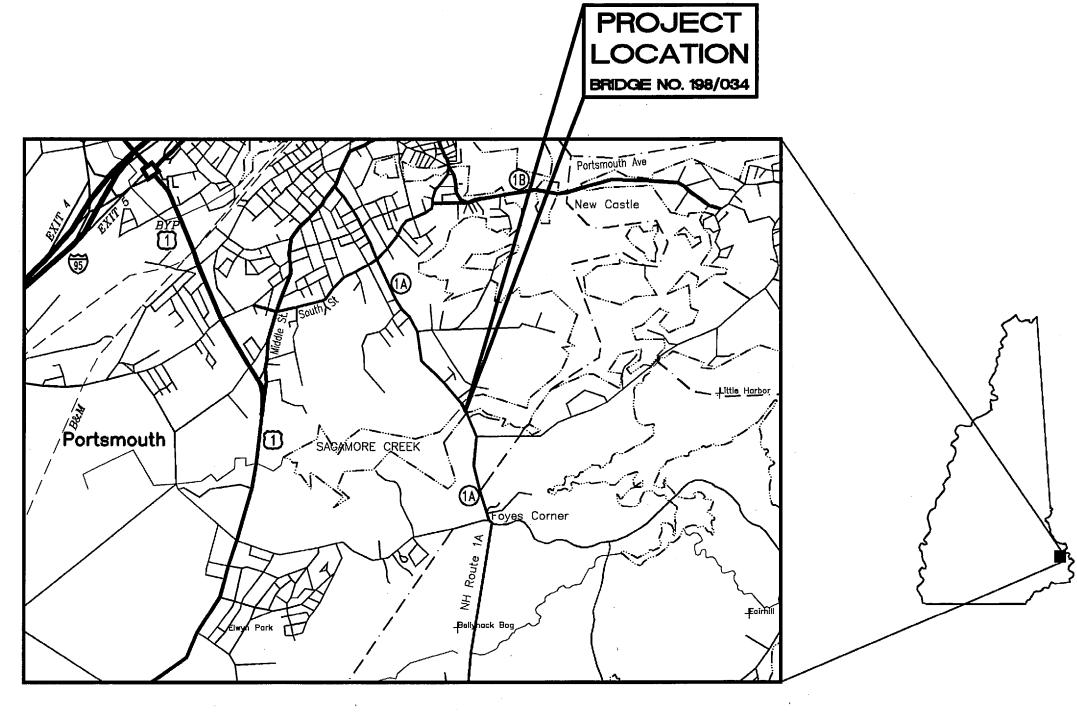
Prepared for:

CITY OF PORTSMOUTH PUBLIC WORKS DEPARTMENT **ENGINEERING DIVISION** 680 PEVERLY HILL ROAD PORTSMOUTH, NEW HAMPSHIRE 03801

PLANS PREPARED BY:

FAY, SPOFFORD & THORNDIKE, LLC ENGINEERS · PLANNERS · SCIENTISTS · LANDSCAPE ARCHITECTS





LOCATION PLAN

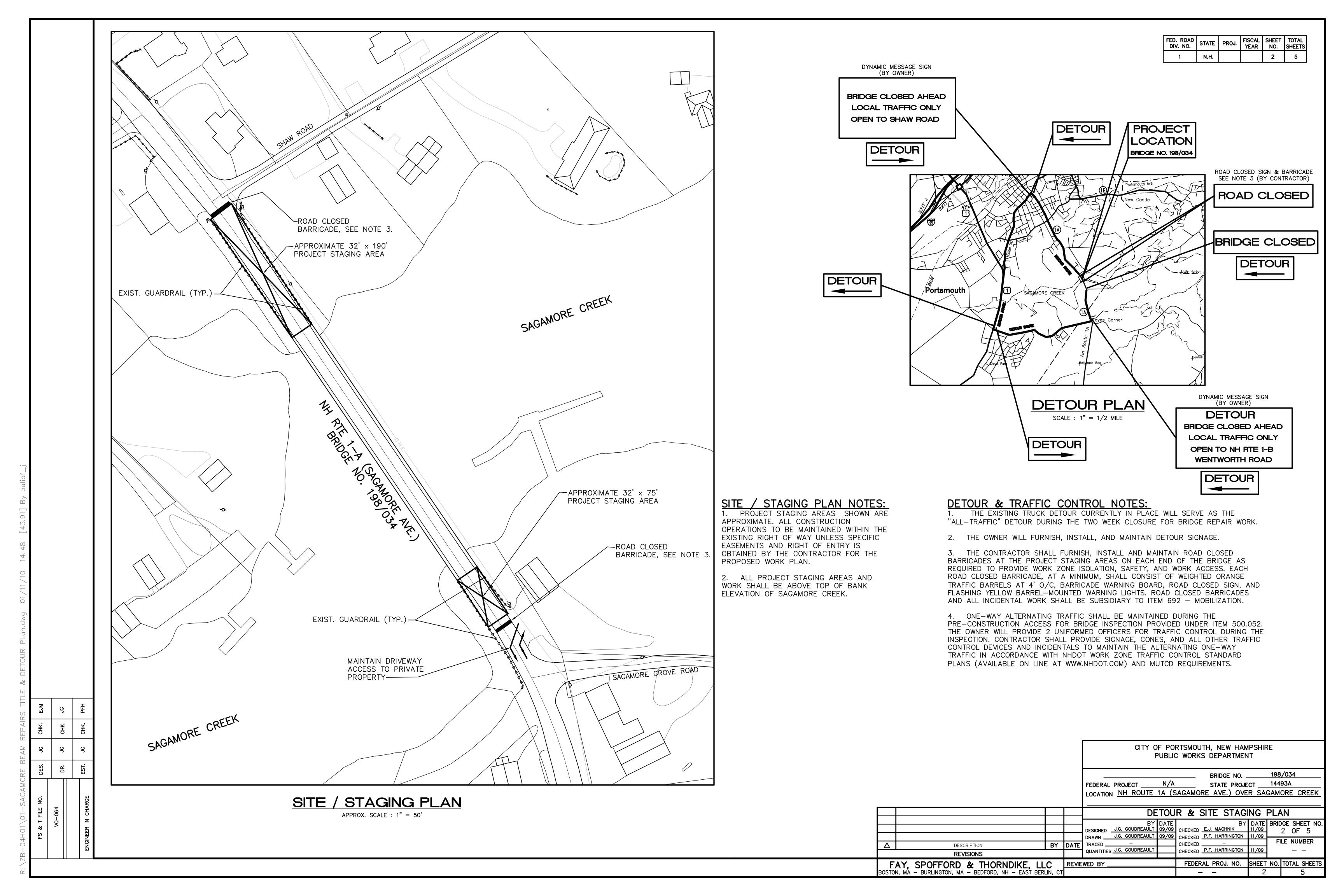
SCALE: 1'' = 1/2 MILE

CIT		OUTH, NEW HAMPSH RKS DEPARTMENT	IIRE
		BRIDGE NO.	198/
O IECT	N/A	STATE DROJECT	1449

LOCATION NH ROUTE 1A (SAGAMORE AVE.) OVER SAGAMORE CREEK TITLE SHEET & LOCUS PLAN

DESCRIPTION **REVISIONS** FAY, SPOFFORD & THORNDIKE, LLC BOSTON, MA - BURLINGTON, MA - BEDFORD, NH - EAST BERLIN, REVIEWED BY FEDERAL PROJ. NO. SHEET NO. TOTAL SHEETS

1401\01-SAGAMORE BEAM REPAIRS TITLE & DE	ORE B	EAM F	REPAIF	TIT SY	J.	 ≫	ليا
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## SCOPE OF WORK

THE WORK UNDER THIS CONTRACT CONSISTS OF FURNISHING ALL NECESSARY MATERIALS, LABOR, TOOLS AND EQUIPMENT REQUIRED FOR STRUCTURAL STEEL REPAIRS AND REINFORCEMENT AS DETAILED AND AS DIRECTED BY THE ENGINEER.

THE WORK INCLUDES, BUT IS NOT LIMITED TO, PERFORMING THE FOLLOWING:

- A. PROVIDE FOR UNDER-BRIDGE INSPECTION ACCESS FOR THE ENIGINEER PRIOR TO PROCUREMENT OF STRUCTURAL STEEL. THE PURPOSE OF THE INSPECTION IS TO VERIFY/IDENTIFY THE REPAIR LOCATION AND QUANTITIES.
- B. FURNISH AND INSTALL SUPPLEMENTARY FLOOR BEAMS AS BRIDGE SUPERSTRUCTURE REINFORCEMENT ADJACENT TO SELECTED DETERIORATED EXISTING FLOORBEAMS AS DIRECTED BY THE ENGINEER.
- C. FURNISH AND INSTALL EXPANSION JOINT COVER PLATE SUPPORT REPAIRS AS DIRECTED BY THE ENGINEER SUBSEQUENT TO CLOSE-UP INSPECTION.
- D. FURNISH AND INSTALL BEAM WEB REINFORCEMENT ON EXISTING W21 FLOOR BEAMS AS DIRECTED BY THE ENGINEER.

PAYMENT WILL BE MADE ONLY FOR ACTUAL WORK PERFORMED AND ACCEPTED. A CHANGE IN REPAIR QUANTITY SHALL NOT CONSTITUTE BASIS FOR CHANGE IN UNIT PRICE.

### GENERAL NOTES

1. SPECIFICATIONS:

**DESIGN:** 

AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17th EDITION, 2002 WITH INTERIMS.

MATERIAL AND CONSTRUCTION:

AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17th EDITION, 2002 WITH INTERIMS. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. BY THE STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION, 2006.

- 2. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM AVAILABLE EXISTING PLANS AND LIMITED FIELD INVESTIGATIONS AND THEY ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS OF THE EXISTING STRUCTURE AND SHALL BE PREPARED TO MAKE ANY ADJUSTMENTS REQUIRED TO PROPERLY COMPLETE THE WORK PRIOR TO FABRICATION, COMMENCEMENT OF CONSTRUCTION AND/OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK.
- 3. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO INSURE THAT DEBRIS DOES NOT FALL INTO THE WATERWAY BELOW THE EXISTING STRUCTURE. ALL COSTS SHALL BE PAID UNDER ITEM 500.05, ACCESS FOR BRIDGE CONSTRUCTION. SEE SPECIAL PROVISION.
- 4. NO SCAFFOLDING SHALL BE ERECTED OR OPERATIONS CONDUCTED IN THE WATERWAY, UNLESS APPROVED BY THE CONTRACT ADMINISTRATOR.
- 5. NO CLEARING IS ALLOWED ALONG THE BANKS OF THE WATERWAY.
- 6. DURING REMOVAL AND REPAIR OPERATIONS. EXTREME CARE SHALL BE TAKEN NOT TO DAMAGE EXISTING STRUCTURAL STEEL AND REINFORCING STEEL THAT IS TO REMAIN IN PLACE. ANY DAMAGE SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER AND REPAIRED AS DIRECTED, AT THE CONTRACTOR'S EXPENSE.
- 7. THE CONTRACTOR SHALL MEET OSHA REQUIREMENTS FOR WORKER PROTECTION FOR WORKING WITH MEMBERS WITH LEAD BASED PAINT.
- 8. THE EXISTING BRIDGE HAS BEEN POSTED FOR A LOAD LIMIT OF 6 TONS BASED ON THE CONDITION OF SOME OF THE EXISTING FLOOR BEAMS. THE CONTRACTOR SHALL VERIFY THE CONDITION OF FLOOR BEAMS THAT WILL BE LOADED BY THE CONSTRUCTION OPERATIONS AND DETERMINE THAT THE PROPOSED CONSTRUCTION LOADING DOES NOT EXCEED THE BEAM CAPACITIES.
- 9. THE CONTRACTOR SHALL NOT PLACE EQUIPMENT OR MATERIALS ON THE EXISTING BRIDGE IN A MANNER THAT COULD OVERLOAD THE EXISTING BRIDGE COMPONENTS (DECK, FLOOR BEAMS, GIRDERS, ETC) AND SHALL CONSIDER THE DETERIORATED CONDITION OF STRUCTURAL ELEMENTS AS NEEDED. IF THE CONTRACTOR'S WORK PLAN INVOLVES PLACEMENT OF EQUIPMENT ON THE BRIDGE, SUCH AS A SMALL CRANE OR OTHER EQUIPMENT TO FACILITATE COMPLETION OF THE WORK. THE CONTRACTOR SHALL PLAN HIS WORK IN ADVANCE AND SHALL PROVIDE LAYOUT DRAWINGS OF PROPOSED EQUIPMENT AND LOAD DISTRIBUTION METHODS WITH STRUCTURAL CALCULATIONS PREPARED UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE. THE PLAN AND CALCULATIONS SHALL BE SUBMITTED FOR REVIEW AND SHALL BE STAMPED BY THE CONTRACTOR'S PROFESSIONAL ENGINEER.

## STRUCTURE NOTES

- 1. ALL NEW STRUCTURAL STEEL SHALL BE AASHTO M 160 / ASTM A 709 GRADE 36 (OR GRADE 50 ). NEW STEEL SHALL BE SHOP PRIMED. SHOP PAINTING AND FIELD TOUCH-UP PAINTING OF NEW STEEL IS NOT REQUIRED. FIELD PAINTING OF EXISTING STRUCTURAL STEEL IS NOT REQUIRED.
- 2. ALL BOLTED CONNECTIONS SHALL BE MADE WITH MINIMUM  $\frac{7}{8}$ " DIAMETER HIGH STRENGTH BOLTS IN 15/16" DIAMETER HOLES UNLESS NOTED OTHERWISE. ALL BOLTS, NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS FOR AASHTO M164 (ASTM A325) TYPE 1. ALL BOLTS AND HARDWARE SHALL BE GALVANIZED.
- 3. THE CONTRACTOR SHALL INSTALL TEMPORARY BRACING, SHORING OR SUPPORTS AS NECESSARY TO MAINTAIN THE STRUCTURAL INTEGRITY DURING CONSTRUCTION. ALL COSTS INCLUDED IN ITEM 692 MOBILIZATION.
- 4. ANY FIELD WELDING OF ATTACHMENTS TO ANY PORTION OF THE EXISTING STRUCTURE FOR CONSTRUCTION PURPOSES WILL NOT BE PERMITTED, UNLESS APPROVED BY THE ENGINEER.
- 5. EXISTING STEEL AT PROPOSED CONNECTION LOCATIONS SHALL BE CLEANED OF DIRT, DEBRIS, AND LOOSE OR SCALING PAINT.
- 6. RIVETS SHALL NOT BE REMOVED FOR ANY PURPOSE UNLESS APPROVED BY THE ENGINEER.
- 7. THE ENGINEER WILL INSPECT THE EXISTING FLOOR BEAMS AT THE ONSET OF THE PROJECT TO DETERMINE THE REPAIR QUANTITIES AND LOCATIONS.
- 8. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS REQUIRED FOR FABRICATION OF STRUCTURAL STEEL AND INSTALLATION WORK. REFER TO SPECIAL PROVISION SPECIFICATION SECTION 500.5 - ACCESS FOR BRIDGE CONSTRUCTION FOR ADDITIONAL INFORMATION.

FED. ROAD DIV. NO.	STATE	PROJ.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	N.H.			3	5

SUMMARY OF QUANTITIES  TEM NO. DESCRIPTION QUANTITY UNIT									
DESCRIPTION	QUANTITY	UNIT							
ACCESS FOR BRIDGE CONSTRUCTION	1	UNIT							
ACCESS FOR BRIDGE INSPECTION	2	DAY							
STRUCTURAL STEEL REPAIR - TYPE 1: SUPPLEMENTARY FLOOR BEAM	18	EA							
STRUCTURAL STEEL REPAIR - TYPE 2: COVER PLATE SUPPORT	4	EA							
STRUCTURAL STEEL REPAIR - TYPE 3: BEAM WEB REINFORCEMENT	2	EA							
STRUCTURAL STEEL REPAIR - TYPE 4: MISC. STRUCTURAL STEEL REPAIRS	200	LB							
MOBILIZATION	1	UNIT							
REPAIRS AND REPLACEMENT AS NEEDED	1	\$							
	ACCESS FOR BRIDGE CONSTRUCTION  ACCESS FOR BRIDGE INSPECTION  STRUCTURAL STEEL REPAIR - TYPE 1: SUPPLEMENTARY FLOOR BEAM  STRUCTURAL STEEL REPAIR - TYPE 2: COVER PLATE SUPPORT  STRUCTURAL STEEL REPAIR - TYPE 3: BEAM WEB REINFORCEMENT  STRUCTURAL STEEL REPAIR - TYPE 4: MISC. STRUCTURAL STEEL REPAIRS  MOBILIZATION	DESCRIPTION  ACCESS FOR BRIDGE CONSTRUCTION  ACCESS FOR BRIDGE INSPECTION  STRUCTURAL STEEL REPAIR — TYPE 1: SUPPLEMENTARY FLOOR BEAM  STRUCTURAL STEEL REPAIR — TYPE 2: COVER PLATE SUPPORT  STRUCTURAL STEEL REPAIR — TYPE 3: BEAM WEB REINFORCEMENT  STRUCTURAL STEEL REPAIR — TYPE 4: MISC. STRUCTURAL STEEL REPAIRS  MOBILIZATION  DESCRIPTION  1  ACCESS FOR BRIDGE CONSTRUCTION  1  1  ACCESS FOR BRIDGE CONSTRUCTION  2  2  STRUCTURAL STEEL REPAIR — TYPE 2: COVER PLATE SUPPORT  4  STRUCTURAL STEEL REPAIR — TYPE 3: BEAM WEB REINFORCEMENT  2  STRUCTURAL STEEL REPAIR — TYPE 4: MISC. STRUCTURAL STEEL REPAIRS  1  1							

# **ABBREVIATIONS**

ABUT ALT & APPROX @ BRG	ABUTMENT ALTERNATE AND APPROXIMATE AT BEARING	JT LF LONGIT MAX MIN MISC	JOINT LINEAR FEET LONGITUDINAL MAXIMUM MINIMUM MISCELLANEOUS
BTWN	BETWEEN	NS OC	NEAR SIDE
€ CL	CENTERLINE CLEAR	OC OD	ON CENTER OUTSIDE DIAMETER
CONC	CONCRETE	PROP	PROPOSED
CONST	CONSTRUCTION	R	RADIUS
Ø	DIAMETER	RR	RAILROAD
EA	EACH	REF	REFERENCE, CONTR. VERIF
EF	EACH FACE	REINF	REINFORCED, REINFORCING
EL	ELEVATION	SECT	SECTION
EXP	EXPANSION	SST	STAINLESS STEEL
EXIST	EXISTING	SP	SPACES
FS	FAR SIDE	SYM	SYMMETRICAL
FG	FINISHED GRADE	TEMP	TEMPORARY
GALV	GALVANIZED	TYP	TYPICAL
HS	HIGH STRENGTH	VAR	VARIABLE
		WP	WORKING POINT

# INDEX TO DRAWINGS

SHEET NO.	<u>TITLE</u>
1	TITLE SHEET & LOCUS PLAN
2	DETOUR & SITE STAGING PLAN
3	GENERAL NOTES, INDEX AND SUMMARY OF QUANTITIES
4	FRAMING PLAN AND SECTIONS
5	STEEL REPAIR DETAILS

3

	CITY OF PORTSMOUTH, NEW HAMPSHIRE PUBLIC WORKS DEPARTMENT
SHEET SCALE: AS NOTED	BRIDGE NO198/034  FEDERAL PROJECTN/A STATE PROJECT14493A  LOCATION NH ROUTE 1A (SAGAMORE AVE.) OVER SAGAMORE CREEK
	GENERAL NOTES, INDEX AND SUMMARY OF QUANTITIES

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	SHEET SCALE: AS NOTED												
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				DRAWN	J.G.	GOUDREAULT	09/09	CHECKED	P.F. HARRINGTON	11/09			
Δ	DESCRIPTION	BY	DATE	TRACED		_		CHECKED				E NU	JMBER
	REVISIONS			QUANTITIES	J.G.	GOUDREAULT		CHECKED	P.F. HARRINGTON	11/09	i	_	_
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BOSTON, MA - BURLINGTON, MA - BEDFORD, NH - EAST BERLIN. CT

