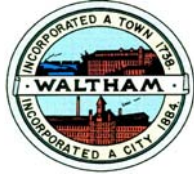


# City of Waltham, Massachusetts



**Invites,  
in accordance with  
the Massachusetts General Law Chapter 30b,  
Interested Parties  
To propose the best plan**

**For the:**

**Engineering DESIGN for the a) Immediate Stabilization Measures and b) a Full Replacement of the Rt. 60 Trapelo Road Culvert over Beaver Brook.**

Your response is due to the Purchasing Office no later than:

**1.00 PM Wednesday July 13, 2016**

**Site Inspection and Briefing: 1.00 PM Tuesday July 5, 2016**  
**(meet on location)**

**Last day for Written Questions: 10.00 AM Thursday July 7, 2016.**  
**(Via e-mail only to [jpedulla@city.waltham.ma.us](mailto:jpedulla@city.waltham.ma.us))**

**REQUEST FOR PROPOSAL (RFP)  
FOR DESIGNER SERVICES FOR THE**

**To Provide a) Immediate Temporary Stabilization DESIGN Measures and b) Full Culvert DESIGN Replacement Plans for the Rt. 60- Trapelo Rd. Culvert Over Beaver Brook.**

The intent of this project is to DESIGN a correction plan for the critical structural deficiencies discovered at the Rt. 60 – Trapelo Road Culvert over the Beaver Brook identified in “Structures Inspection Field Report” (Bridge Inspection Report, is attached at the end of this document) prepared by the Mass DOT. It is the intent of this project to have the designer engineer provide the City with a) an immediate Temporary Design Stabilization Measures that will allow the road to remain open to traffic and b) the DESIGN of a Full Culvert Replacement, permitted and bid for construction.

**I. GENERAL INFORMATION AND SUBMISSION REQUIREMENTS.**

- 1) Bid packages can be obtained from the City web Site at [www.city.waltham.ma.us/open-Bids](http://www.city.waltham.ma.us/open-Bids). **The original and Three (3) copies of the proposal are required.**
- 2) Award date. Award will be made within forty-five (45) days after the due date unless otherwise stated in the specifications or the time for award is extended by mutual consent of all parties. All Bids submitted shall be valid for a minimum period of forty-five (45) calendar days following the date established for acceptance.
- 3) Questions concerning this bid must be submitted in writing to: [Jpedulla@city.waltham.ma.us](mailto:Jpedulla@city.waltham.ma.us) **before 10:00 AM, July 7, 2016** only e-mailed/written questions will be answered. Written responses will be mailed via Addenda to all bidders on record as having registered in the City web site.
- 4) **A site inspection and pre bid briefing will be held: 11.00 AM Tuesday July 5, 2016 Meet on location.**
- 5) Bids may be modified, corrected or withdrawn only by written correspondence received by the Waltham Purchasing Department prior to the time and date set for the bid opening. Bid modifications must be submitted in a sealed envelope clearly labeled “Modification No. \_\_\_\_” and must reference the original bid.
- 6) After the bid opening, a bidder may not change any provision of the bid in a manner prejudicial to the interests of the City of Waltham or fair competition. Minor informalities will be waived or the bidder will be allowed to correct them. If a mistake and the intended bid are clearly evident on the face of the bid document, the mistake will be corrected to reflect the intended bid, and the bidder will be notified in writing; the bidder may not withdraw the bid. A bidder may withdraw a bid if a mistake is clearly evident on the face of the bid, but the intended correct bid is not similarly evident.
- 7) The City of Waltham reserves the right to reject any and all Bids and to waive any informality in Bids received whenever such rejection or waiver is in its best interest.
- 8) The City of Waltham will not be responsible for any expenses incurred in preparing and submitting Bids. All Bids shall become the property of the City of Waltham.
- 9) The bid, and any subsequent contract for the services, is hereby issued in accordance with applicable Massachusetts General Laws chapter 30B. The selected bidder shall be expected to comply with all applicable state and federal laws in performance of service.
- 10) Bids received prior to the date of opening will be securely kept, unopened. **THIS IS A TWO ENVELOPE SOLICITATION.** Place in one envelope all qualification documents and place in a separate sealed envelope the Price Page. Mark the envelope with “Price sheet, DESIGN Trapelo Rd. Culvert”. No responsibility shall be placed upon an officer or person of the City of Waltham for the premature opening of a bid not properly addressed and identified.
- 11) Any bids received after the advertised date and time for opening will be returned to the responder unopened.
- 12) Purchases by the City of Waltham are exempt from federal, state and municipal sales and/or excise taxes.
- 13) Unexpected closures. If, at the time of the scheduled bid opening, City Hall is closed due to uncontrolled events such as fire, snow, ice, wind or building evacuation, the bid opening will be postponed until 2:00 PM on

the next normal business day. Bids will be accepted until that date and time.

- 14) The City of Waltham is an Affirmative Action/Equal Opportunity Employer. The City encourages Bids from qualified MBE/DBE/WBE firms.
- 15) Responses to this bid must be prepared according to the guidelines set forth herein. Selection of the successful responder will be based upon an evaluation and analysis of the information and materials required under the bid. Responses that do not comply with the requested format of this solicitation may be disqualified.

## I. SCOPE OF SERVICES.

### a) DESIGN Work for Temporary Stabilization Measures,

The Designer Engineer will be responsible to provide the following engineering services for the Temporary Stabilization of the culvert:

- Conduct site visits to make observations and general measurements
- Review the May 24, 2016 Mass DOT Bridge Inspection Report and recommend Temporary Stabilization Measures for immediate implementation to keep the Trapelo Road open to Traffic.
- Review other plans the City and / or Town of Belmont may have relative to the Rt. 60 culvert over the Beaver Brook
- Plans and cross sections will comply with all Mass DOT requirements and environmental regulations
- Meet with City officials to present the plans to Mass DOT, DCR, Waltham's Conservation Commission, Town of Belmont and, if necessary, the Army Corps of Engineering
- Prepare bid documents, plans and specifications for the construction of the Temporary Stabilization Measures, including construction cost estimates.
- Provide bid phase services, review of bids and recommendation for award
- Provide construction oversight services during construction, providing daily report and weekly progress reports to the City, Mass DOT and the Town of Belmont. **THIS IS PRICED AS AN ALTERNATE SERVICE.**
- Designer Engineer services include obtaining all necessary permits for the Temporary Stabilization Measures to be constructed.

### b) Scope of Work for the Full Culvert Replacement

The Designer Engineer will be responsible to provide the following Engineering services, in addition to the services listed above in the temporary project, for the Full Culvert Replacement of the Rt. 60 - Trapelo Road Culvert over the Beaver Brook:

- Conduct topographical surveys, delineate wetlands, define existing utilities, conduct soil borings, and generate existing conditions plans with property & right of way information certified by a Registered Land Surveyor.
- Prepare plans and cross sections of the proposed Full Culvert Replacement, matching the existing hydraulic cross sectional area of the culvert opening.
- Prepare permit applications for the filing with the Conservation Commissions in Waltham and Belmont. (Notice of Intent), notify abutters, attend public hearings and site visits with the Commissions.
- Submit plans to Mass DOT for approval of the Full Culvert Replacement.
- Submit plans to obtain approval from DCR for work abutting the Beaver Brook Reservation and, if necessary, obtain review and approval by the Army Corps of Engineering.
- Prepare traffic management plans for submission the Waltham Traffic Commission, Mass DOT and the Town of Belmont. Modify plans as necessary to obtain approval from all parties.
- Prepare narrative of construction sequencing, describing the maintenance of traffic throughout the construction project and maintenance of the hydraulic capacity of the culvert
- Meet with City officials to present the Full Culvert Replacement Plan.
- Meet with Town of Belmont officials to present the Full Culvert Replacement Plan.
- Meet with Mass DOT officials to present the Full Culvert Replacement Plan.
- Provide a detailed erosion control and storm water management plan for all phases of construction to prevent downstream flooding due to washouts from severe weather events.

- The Designer Shall provide:
  - Detailed Inspection of the existing culvert
  - Right of way and property research
  - Hydraulic investigations and studies
  - Geotechnical investigations and engineering
  - Environmental studies
  - Traffic studies and engineering for preparation of a Traffic management plan
  - Civil engineering
  - Construction cost estimating
  - Coordination meeting with the City, Mass DOT and the Town of Belmont
  - Preparation of preliminary and final plans, specifications and estimates of the Full Culvert Replacement Project
  - Preparation of bid documents, plans and technical specifications, plans to be in AutoCAD 14 and specification in Microsoft Word 2013.
  - Provide engineering services, during the bid phase, review bids, answer technical questions for the preparation of addenda, checks references and makes award recommendation.
  - Provide construction phase services, construction oversight preparation of daily reports, weekly progress reports, respond to Engineers request for information, review all contactor submittals, review and recommend periodic payment requests and final payment requests. **THIS IS PRICED AS AN ALTERNATE SERVICE.**
  - Prepare an inspection and live load rating of the Full Culvert Replacement satisfactory to Mass DOT
  - Provide as-built plans of the completed project

Each prospective firm shall provide at least three (3) references for relevant engineering work, from client(s) whose projects were similar to that of this proposal. These references shall include specific names and telephone numbers for reference points of contact.

## II. PROPOSAL EVALUATION PROCEDURE

A subcommittee will evaluate qualifications on the basis of criteria contained herein. Submittals failing to comply with one or more of the minimum criteria stated below shall be disqualified from further consideration. **60%** of the award is based on **the technical qualifications** of the company; the remaining **40% is determined by the price**.

Submittals that comply with the minimum criteria will be further evaluated on the basis of the comparative criteria detailed below. Each proposal meeting the minimum criteria will be assigned a rating for each comparative criterion, as well as a composite rating. Selection of the three finalists will be based on meeting all minimum criteria, and the evaluation of qualifications with regard to the comparative criteria. The City will rank the three finalists.

### A. Minimum Evaluation Criteria

The Chief Procurement Officer shall reject Proposals which do not meet the following certain minimum requirements:

- 1) Submitting architectural firm must have a minimum of five (5) projects during the past five years involving similar MEP Design services in Massachusetts.
- 2) The Proposal must be from an individual or established business, corporation, partnership, sole proprietorship, joint stock company, joint venture, firm, or other entity engaged in the practice of providing such services as the principal business for which the entity was formed.
- 3) The firm must possess all necessary current licenses and registrations, as applicable, either within the firm or through independent consultants, to qualify under Massachusetts law to perform the stated services. All consultants carried by the Architect are to be licensed to provide professional services in the Commonwealth of Massachusetts.
- 4) All Proposers must provide a "Engineer Profile" that includes:
  - a. Full name, tax identification number, main office address and officers of the Engineer that would ultimately enter into a Contract with the City of Waltham.
  - b. History and background including when the Engineer was organized and if a corporation, where incorporated, and how many years engaged in providing the stated services. Provide a complete list of

officers and/or associates who will be directly involved with the stated project including name, title, address, telephone number, and e-mail address.

- 5) The Proposal shall be signed by an agent of the company who has authority to bind the company to a firm bid price.
- 6) All responses are to include a statement that the Proposal is in accordance with this Request for Proposal and that the proposer has read and understands all sections and provisions herein. Exceptions, if any, are to be clearly stated.

#### **B. Staffing Requirements**

1. The engineer must set forth the staffing to be utilized for this service, including the estimated percentage of time to be dedicated to this project.
2. Submitting firm must be prepared to contractually commit all individuals as submitted in their Proposal to this service. Any deviation from the proposed will constitute a breach of Contract to any agreement which may result from this Request for Qualifications.
3. The Proposal must include resumes, experience, and qualifications of any proposed consultants that would be utilized by the Proposer in the performance of this contract. Any deviation from the architect's listed consultants or their team will constitute a breach of Contract to any agreement which may result from this Request for Proposals. Any change in consultants listed in the Proposal must obtain approval from the City.
4. Should it become impossible for a contractually committed individual to complete his duties, for a reason such as termination of employment, any change in the Proposers staffing as outlined in the Proposal will be subject to the approval of the City of Waltham. The City of Waltham Project Administrator, or designee, shall notify the proposer within fifteen (15) business days of the acceptance or rejection of any such staff substitutions. Any substituted person must be of an experience level equal to or greater than the person being replaced unless approved by the City.

#### **C. Additional Narrative Information**

1. List the anticipated amount of support services and/or documents the Procurement Office would be required to provide to you.
3. Provide evidence that the firm has an established and implemented Affirmative Action Plan.

#### **D. Miscellaneous Requirements**

Public Relations: The City of Waltham and the Proposer shall cooperate in maintaining good public relations throughout the period of this project. Any announcements including, but not limited to, press releases, bill stuffers, flyers, web site information, and so forth, shall be submitted to the Project Manager, or designee, for review and approval before distribution to the public.

The Company, or a representative of the firm given the Contract may be required to meet privately or publicly with various representatives, committees, boards, or commissions of the City of Waltham or other public forums, to discuss this project, gather information, and address any concerns or to provide timely updates.

#### **F. Financial Scope of Services**

The Price Proposal must be submitted in a separately sealed envelope and no mention of the pricing portions of the Proposal shall be referenced in the technical, or non-price qualifications portion of the Proposal. Failure to meet this stipulation may be cause for the Proposal to be rejected.

### **III. COMPARATIVE EVALUATION CRITERIA**

The City reserves the right to award the contract to the responsive and responsible qualification submittal which best meets the City's needs, taking into account firm qualifications, submittal quality, evaluation criteria and price. The awarding authority's decision or judgment on these matters shall be final; the committee will use the comparative criterion for each separate rating area, and based upon these criteria, will assign an overall rating to each proposal. Each of the criteria may contain ratings of:

Unacceptable  
Not Advantageous  
Acceptable  
Advantageous  
Highly Advantageous

**The technical section of the RFP is worth 60%**

**An “Unacceptable” rating in any one of the criteria will eliminate the proposal from further consideration.**

Firms must meet the minimum requirements as specified in Section III A. Failure to meet the minimum evaluation criteria will result in immediate rejection of the qualification submittal and will not be subject to further review.

The following criteria will be used in the evaluation of the architectural firm regarding the Technical or Non-Price Proposal in order to be placed on the short list for an interview with the Selection Committee.

**Responding Firms are to address each of the following criteria in a clearly labeled section of their response and in the same order.**

- 1) The Firm Background, Relevant Experience and Capability to perform all of the aspects of the project, such as programming, building permitting, cost estimating and value engineering and flood mitigation design. Recent with projects comparable to the proposed project. Firm to describe relevant design in this type of project. (15 Points)**
  - a. Unacceptable:** Less than three (3) years of experience in providing Design services with documented examples of such services. Firm has no permitting or design background in providing this type of facility project. No projects of similar type have been successfully completed
  - b. Acceptable:** Three (3) to five (5) years of experience in providing Design services with documented examples of such services.
  - c. Advantageous:** More than five (5) years of experience in providing Design services with documented examples of such services. Firm has prior experience in permitting and design in providing this type of facility project that is current (within the past 5 years). One (1) to Three (3) projects of similar type have been successfully completed.
  - d. Highly Advantageous:** More than seven (7) years of experience in providing Design services in with documented examples of such services.
  - e. Highly Advantageous:** Firm has prior experience with permitting and design background in this type of facility project within that is current (within past 5 years). Additional similar work is underway currently within the firm. Three (3) or more projects of similar type have been successfully completed.
- 2) Current Firm Capacity and References (15 Points).** List significant current work and work completed in the last five (5) years, as well as projects in-house but not yet begun; quantify. Provide references with contact names and valid phone numbers of other clients whereby similar work has been performed.
  - a. Unacceptable:** No or limited current work listed. References are not provided.
  - b. Not Advantageous:** Firm capacity may be challenged by current work load when taking on this new assignment. References provided are not related to similar project type
  - c. Advantageous:** Firm capacity appears to be able to handle this assignment with the given work load. More than three (3) references are provided from similar project types
  - d. Highly Advantageous:** Firm capacity can easily handle this assignment with their given work load. Five or more references are provided for similar project types.
- 3) Project Discussion & Scope of Work, Project Understanding & Challenges, Project Approach (15 Points)**
  - a. Unacceptable** - Proposal did not adequately convey the Proposers understanding of the project and the firm’s approach to completing the project successfully.
  - b. Not Advantageous** - The response indicates the proposer may understand the Owner’s needs, but the plan provided is not clear enough to make a determination. The Proposers approach does not instill confidence in a plan to complete the project in a well thought out manner.
  - c. Advantageous** - The Scope of Services response provided indicates the proposer will meet the needs of

the Owner; and shows the Proposers demonstrated understanding of the project and their approach to the work required to complete a successful project.

- d. **Highly Advantageous** - The Scope of Services response clearly indicates the understanding and ability to successfully meet the needs of the Owner; shows the Proposers demonstrated understanding of the project; their ability to bring leadership to the project and that their approach to the project demonstrates a creative and thorough process

#### 4) Proposed Schedule (15 Points)

- a. **Unacceptable:** A proposed schedule was not offered.
- b. **Not Advantageous:** The proposed project schedule does not instill confidence by the Owner in the firm to complete the project in a well thought out manner.
- c. **Acceptable:** The proposed project schedule provided indicates the proposer understands the project, its scope and its timeframes for completing the work adequately.
- d. **Advantageous:** The proposed schedule provided indicates the proposer has more than adequately demonstrated their understanding of the project and the work required to complete a successful project and to meet the requirement of the Owner's review and approval cycles.
- e. **Highly Advantageous:** The proposed schedule provided indicates the proposer has demonstrated their complete understanding of the project and will monitor and keep the project on schedule. The firm understands the time required to complete a successful project and has clearly demonstrated their process which will meet the requirements of the Owner for timely reviews and approvals.

#### IV RULE FOR AWARD

The contract shall be awarded to the responsive and responsible proposer submitting the most advantageous proposal, taking into consideration the proposals relative merits and price. **The technical section of the RFP is worth 60% of the award, the Price is worth 40%.**

#### VII BASIS OF COMPENSATION

**There will be no reimbursable expenses allowed. This shall be a fixed price and not-to-exceed contract** Monthly invoices

**AGREEMENT BETWEEN  
THE CITY OF WALTHAM  
AND**

\_\_\_\_\_ (Company)

THIS DRAFT AGREEMENT made effective \_\_\_\_\_, 2016, by and between the **CITY WALTHAM, WALTHAM, MASSACHUSETTS**, a municipal corporation, acting by and through its Mayor at 610 Main, Waltham, Massachusetts 02452 (hereinafter called the "CITY"), and \_\_\_\_\_ whose principal office address and state of incorporation are as set forth (hereinafter called the "ENGINEER").

**RECITALS:**

WHEREAS, the CITY desires to retain the ENGINEER to provide certain services for the CITY, as described below, and the ENGINEER is willing to accept such engagement, all on the terms hereinafter set forth,

NOW, THEREFORE, in consideration of the mutual covenants hereinafter set forth, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

**ARTICLE 1 - ENGAGEMENT OF THE ENGINEER**

- 1.1 The CITY hereby engages the ENGINEER, and the ENGINEER hereby accepts the engagement to perform certain services for the CITY, as described in Article 2.
- 1.2 In the performance of any service under this Agreement, the ENGINEER acts at all times as an independent Engineer. There is no relationship of employment or agency between the CITY, on the one hand, and the ENGINEER, on the other, and the CITY shall not have or exercise any control or direction over the method by which the ENGINEER performs its work or functions aside from such control or directions which are consistent with the independent Engineer relationship contemplated in the Agreement.

**ARTICLE 2 - SERVICES OF THE ENGINEER**

- 2.1 The ENGINEER will perform the services described in the Scope of Services set forth in this document (the "Work").
- 2.2 The ENGINEER shall report, and be responsible, to the CITY and its designee (if any).
- 2.3 There shall be no amendment to the Scope of Services or Work provided for in this Agreement without the written approval of the CITY. The CITY shall be under no obligation to pay for any services performed by the ENGINEER which are not explicitly agreed to by the CITY in writing.
- 2.4 The ENGINEER represents and warrants to the CITY that the ENGINEER (including all of its personnel, whether employees, agents or independent Engineers) will be qualified and duly licensed (if necessary) to perform the services required by this Agreement and further agrees to perform its services in a professional manner, and in accordance with the reasonable standard of care implied by law and all applicable local, state or federal ordinances, laws, rules and regulations, all of which are incorporated herein by reference. The ENGINEER will obtain and pay for any and all permits, bonds and other items required for the proper and legal performance of the Work.
- 2.5 The ENGINEER represents and warrants to the CITY that it is not a party to any agreement contract or understanding which would in any way restricts or prohibits it from undertaking or performing its obligations hereunder in accordance with the terms and conditions of this Agreement.
- 2.6 All written materials and any other documents (whether in the form of "hard" copies, graphics, magnetic media or otherwise) which are received and produced by the ENGINEER pursuant to this Agreement shall be deemed to be "work for hire" and shall be and become the property of the CITY upon the receipt and production of such items by the ENGINEER. The CITY acknowledges that such materials are being prepared with respect to the specific project contemplated hereby and that any reuse of such materials by the CITY in connection with any other project shall be at the CITY's sole risk, unless otherwise agreed to by the ENGINEER in writing.
- 2.7 The ENGINEER shall be responsible for the professional and technical accuracy, and for the coordination, of all designs, drawings, specifications, estimates and other work or services furnished by ENGINEER or its consultants and sub Engineers. The ENGINEER shall perform its work under this Agreement in such a competent and professional manner that detail checking and reviewing by the CITY shall not be necessary. The



ENGINEER shall supervise and direct the Work, using its best skills and attention, which shall not be less than such state of skill and attention generally rendered by the design and engineering profession for projects similar to the subject project in scope, difficulty and location.

- 2.8 The ENGINEER shall not use any sub Engineers or sub-consultants (not identified herein) for any work required under this Agreement unless such use has been approved in advance in writing by the CITY.
- 2.9 Notwithstanding anything to the contrary in this Agreement, the ENGINEER shall not be relieved of its obligations under this Agreement by the CITY's performance, or failure to perform, any of the CITY's administrative duties under this Agreement, including, but not limited to, the CITY's review and/or approval of plans, estimates, programs, documents, materials, work and services furnished by ENGINEER.

#### ARTICLE 3 - PERIOD OF SERVICES

- 3.1 Unless otherwise provided, the term of this Agreement shall commence on the date hereof and continue until the Work is completed to the CITY's reasonable satisfaction.
- 3.2 The ENGINEER shall proceed with the Work promptly after receiving Notice to Proceed and will diligently and faithfully prosecute the Work to completion in accordance with the provisions hereof. In any event, the Work shall be completed no later than: **for the Temporary Replacement DESIGN: Thirty (30 days from the date of Notice-to-Proceed (NTP) and an ADDITIONAL Ninety (90) days for the completion of the Full Culvert Replacement design.** The ENGINEER acknowledges that time is of the essence of this Agreement.
- 3.3 If the ENGINEER is delayed in the performance of any of its obligations under this Agreement by the occurrence of an unforeseen event beyond its control such as fire or other casualty, abnormal adverse weather conditions, acts of God (collectively, "Unavoidable Events") which materially and adversely affect its ability to perform the Work, then the time for the ENGINEER to perform the Work shall be extended for such time as the CITY shall reasonably determine is necessary to permit the ENGINEER to perform in light of the effects of the Unavoidable Event.
- If an Unavoidable Event occurs which, in the CITY's reasonable determination, makes the performance of the Agreement impossible without the expenditure of additional CITY funds, the CITY may, at its option, elect to terminate this Agreement upon thirty (30) days written notice.

#### ARTICLE 4 - PAYMENTS TO THE ENGINEER

- 4.1 The compensation due to the ENGINEER shall be paid in the amounts, and in the manner, set forth on in the Price Sheet based on a fixed, not-to-exceed price.
- 4.2 The ENGINEER will bill the CITY in two equal invoices at the completion of the work unless otherwise provided with one or more invoices broken down to show the quantity of work performed and the percentage of the entire project completed, categories and amount of reimbursable expenses (if any), and provide such supporting data as may be required by the CITY.
- 4.3 The CITY will pay the ENGINEER upon review and approval of such invoices by the CITY or its designee.
- 4.4 This engagement may be subject to budgetary restrictions which may limit the total amount of funds available for the Work. Accordingly, unless otherwise stated on Exhibit B, the CITY will not be obligated to pay any amount in excess of the maximum project amount without the express written approval of the CITY.
- 4.5 The ENGINEER and its sub-Engineers shall not be compensated for any services involved in preparing changes that are required for additional work that should have been anticipated by the ENGINEER in the preparation of the documents, as reasonably determined by the CITY.

#### ARTICLE 5 - TERMINATION

- 5.1 This Agreement may be terminated, with or without cause, by either the CITY upon written notice given by the City to the other party. For the purposes of this provision, "cause" shall include the failure of a party to fulfill its material duties hereunder in a timely and proper manner.
- 5.2 The CITY shall have the right to terminate this Agreement for its convenience and without cause upon ten (10) days written notice.
- 5.3 Following termination of this Agreement, the parties shall be relieved of all further obligations hereunder except:
- (a) unless the CITY terminates for cause under paragraph 5.1, in which event the CITY shall be under no

obligation to make any payments to ENGINEER except for those services satisfactorily provided, the CITY shall remain responsible for payments for the services satisfactorily performed and, unless this Agreement is for a lump-sum, expenses of ENGINEER reasonably accrued prior to the effective date of the notice of termination in compliance with this Agreement (less the value of any claims of the CITY), all as determined by the CITY in its sole discretion, but for no other amounts, including, without limitation, claims for lost profits on Work not performed; and

- (b) The ENGINEER shall remain liable for any damages, expenses or liabilities arising under this Agreement (including its indemnity obligations) with respect to WORK performed pursuant to the Agreement.

#### **ARTICLE 6 - INSURANCE AND INDEMNIFICATION**

6.1 The ENGINEER agrees to indemnify and save the CITY harmless from any and all manner of suits, claims, or demands arising out of any errors, omissions or negligence by ENGINEER (including all its employees, agents and independent Engineers) in performing the Work, or any breach of the terms of this Agreement by such ENGINEER and shall reimburse the CITY for any and all costs, damages and expenses, including reasonable attorney's fees, which the CITY pays or becomes obligated to pay, by reason of such activities, or breach. The provisions of this Section 6.1 shall be in addition to, and shall not be construed as a limitation on, any other legal rights of the CITY with respect to the ENGINEER, in connection with this Agreement, and shall survive termination or expiration of this Agreement.

6.2 Before commencing work the ENGINEER shall obtain and maintain at its expense and from insurance companies of a Best Rating of A or better, which are licensed to do business in the Commonwealth of Massachusetts, insurance as set forth below. If the ENGINEER is permitted to sub-contract a material portion of the Work, or is otherwise identifying a third party to perform services for the City, the ENGINEER shall assure that such sub-Engineer or other third party also has such insurance.

- (a) Workers' Compensation, covering the obligations of the ENGINEER in accordance with applicable Workers' Compensation or Benefits laws.
- (b) Commercial General Liability Insurance on an occurrence basis with a combined single limit of not less than \$1 million. Coverage is to include premises and operations, coverage for liability of subEngineers. The policy shall contain an endorsement stating that the aggregate limits will apply separately to the work being performed under this Agreement.
- (c) Automobile Liability Insurance of not less than \$1 million combined single limit covering owned, hired and non-hired vehicle use.
- (d) Errors and Omissions Insurance of not less than \$2 million per claim. The coverage shall be in force from the date of execution of the Agreement to the date when all design and construction work is completed and accepted by the CITY, unless, however, the policy is a "claims made policy," in which event the policy shall remain effective and in full force for a period of six (6) years after completion of all design and construction work relating to the engagement.
- (e) Such additional insurance as may be required to be carried by the ENGINEER by law.
- (f) Such additional insurance as the CITY may reasonably require, as set forth below.

ENGINEER shall maintain such insurance during the term of Agreement and give the CITY twenty (20) days written notice of any change or cancellation of coverage. Each insurer providing policies hereunder shall waive its rights to subrogate claims against the CITY. The CITY of Waltham is a named additional insured for General Liability with respect to each such policy and such endorsement shall be reflected on a Certificate of Insurance to be delivered to the CITY upon the execution of this Agreement and at such times thereafter as the CITY may reasonably request.

## ARTICLE 7 - GENERAL PROVISIONS

- 7.1 Upon the expiration or the termination of this Agreement for any reason, all data, drawings, specifications, reports, estimates, summaries and other work product which have been accumulated, developed or prepared by the ENGINEER (whether completed or in process) shall become the property of the CITY upon payment for such to the ENGINEER and the ENGINEER shall immediately deliver or otherwise make available all such material to the CITY.
- 7.2 Neither party may assign, transfer or otherwise dispose of this Agreement or any of its rights hereunder or otherwise delegate any of its duties hereunder without the prior written consent of the other party, and any such attempted assignment or other disposition without such consent shall be null and void and of no force and effect.
- 7.3 Except as otherwise expressly provided in this Agreement, any decision or action made by the CITY relating to this Agreement, its operation, amendment or termination, shall be made by the Board, Committee or Authority of the CITY specified in the initial paragraph of this Agreement, unless specifically authorized or delegated by a lawful vote of such body.
- 7.4 This Agreement, together with and any additional exhibits referred to therein, constitute the entire agreement of CITY and ENGINEER with respect to the matters set forth therein and may not be changed, amended, modified or terms waived except by a writing signed by CITY and ENGINEER. If there is any conflict among the terms set forth in the body of this Agreement or in any other document or law incorporated by reference herein, such conflict shall be resolved by giving precedence to the party's address above by certified mail, return receipt requested Terms or provisions contained in the following documents in accordance with the following hierarchy, with the topmost document of the highest priority:
- A. Applicable federal, state and local laws, rules and regulations.
  - B. Amendments to this Agreement, if any.
  - C. This Agreement.
  - D. Any other attachments to this Agreement.
- To the extent the conflict is not resolved by applying the above hierarchy, the conflict shall be resolved in a manner that results in the highest quantity and best quality of goods and services to the CITY.
- 7.5 This Agreement is governed by the law of The Commonwealth of Massachusetts and shall be construed in accordance therewith. The parties agree that exclusive jurisdiction for any action arising out of or relating to this Agreement shall lie with the state and federal courts having jurisdiction over the county and state in which the City is located and the parties hereby irrevocably waive, to the fullest extent permitted by law, any objection which they may now or hereafter have to the venue of any proceeding brought in such location and further irrevocably waive any claims that any such proceeding has been brought in an inconvenient forum.
- 7.6 Any notices required or allowed shall be to the person's address above by certified mail, return receipt requested.
- 7.7 Notwithstanding anything to the contrary in this Agreement, this Agreement is subject to the appropriation and availability of funds.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first written above.

**For the CITY OF WALTHAM,**

**MAYOR**

\_\_\_\_\_  
Jeannette A. McCarthy                      date

**PURCHASING AGENT**

\_\_\_\_\_  
Joseph Pedulla,                              date

**CITY SOLICITOR ( as to form only)**

\_\_\_\_\_  
John Cervone                                date

**AUDITOR**

\_\_\_\_\_  
Paul Centofanti                              date

Approved as to Funds Available

**ENGINEERING DEPARTMENT**

\_\_\_\_\_  
Stephen Casazza, City Engineer        date

**For the DESIGNER:**

\_\_\_\_\_  
Sign    title  
Company: \_\_\_\_\_  
Print Name: \_\_\_\_\_, Date: \_\_\_\_\_

## AGREEMENT, FINANCIAL SUMMARY

1. Lump Sum Method. Fixed, Not-To-Exceed
  - a. **Maximum Fixed Project Amount:** your base bid amount
  - b. **Payment Increments:** Monthly Invoices
  - c. **Reimbursable Expenses** (if any): [None.](#)
  - d. **Based on hourly rate:** NO

## CITY OF WALTHAM'S DESIGN PROCEDURES

Please respond to this solicitation by:

- ◆ **Completing the entire Compliance Section**
- ◆ **Complete the Price Sheet.** (Include **in a separate sealed envelope** with the project name and company) (40% OF THE AWARD VALUE)
- ◆ **Completing the Commonwealth of Massachusetts DSB Application Form.**  
<http://www.mass.gov/anf/docs/dcam/dlforms/dsb/13-2-5-dsb-application-form.pdf>
- ◆ **Including your company brochure and marketing materials (optional).**

***DESIGNER'S PERSONNEL ASSIGNED TO THE PROJECT***

(Provide Name, Title and Project Role for Each Individual Listed)

**DESIGNER'S TRUTH-IN-NEGOTIATIONS CERTIFICATE**

The Designer for design services for:

\_\_\_\_\_, hereby certifies and agrees to the following:

- a) The Designer certifies that the wage rates and other costs used to determine the Designer's project price are accurate, complete, and current at the time of contracting; and
- b) The Designer agrees that the original contract price and any additions to the contract may be adjusted within six years of completion of the contract to exclude any significant amounts if the City of Waltham determines that the fee was increased by such amounts due to inaccurate, incomplete, or noncurrent wage rates or other costs; and
- c) The Designer affirms that its firm and the entire principal are current with all Federal, State and Local **Taxes**; and
- d) The undersigned certifies under penalties of perjury that this bid or proposal has been made and submitted in good faith and **without collusion** or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity or group of individuals. The undersigned certifies that no representations made by any City officials, employees, entity, or group of individuals other than the Purchasing Agent of the City of Waltham was relied upon in the making of this bid; and
- e) The respondent certifies that neither the company nor its principals are suspended, **debarred**, proposed for debarment, declared ineligible, or voluntarily excluded from the award of contracts, procurement or non-procurement programs from the Commonwealth of Massachusetts, the US Federal Government and /or the City of Waltham. "Principals" means officers, directors, owners, partners and persons having primary interest, management or supervisory responsibilities with the business entity. Vendors shall provide immediate written notification to the Purchasing Agent of the City of Waltham at any time during the period of the contract of prior to the contract award if the vendor learns of any changed condition with regards to the debarment of the company or its officers. This certification is a material representation of fact upon which reliance will be placed when making the business award. If at any time it is determined that the vendor knowingly misrepresented this certification, in addition to other legal remedies available to the city of Waltham, the contract will be cancelled and the award revoked.

Designer Firm: \_\_\_\_\_

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

Duly authorized

Print Name \_\_\_\_\_

Date: \_\_\_\_\_



**CERTIFICATE OF VOTE OF AUTHORIZATION**

Date:

I \_\_\_\_\_, Clerk of \_\_\_\_\_ hereby certify that at a meeting of the Board of Directors of said Corporation duly held on the \_\_\_\_\_ day of \_\_\_\_\_ at which time a quorum was present and voting throughout, the following vote was duly passed and is now in full force and effect:

VOTED: That \_\_\_\_\_ (*name*) is hereby authorized, directed and empowered for the name and on behalf of this Corporation to sign, seal with the corporate seal, execute, acknowledge and deliver all contracts and other obligations of this Corporation; the execution of any such contract to be valid and binding upon this Corporation for all purposes, and that this vote shall remain in full force and effect unless and until the same has been altered, amended or revoked by a subsequent vote of such directors and a certificate of such later vote attested by the Clerk of this Corporation.

I further certify that \_\_\_\_\_ is duly elected/appointed \_\_\_\_\_ of said corporation

SIGNED:

(Corporate Seal)

\_\_\_\_\_  
Clerk of the Corporation:

Print Name: \_\_\_\_\_

---

**COMMONWEALTH OF MASSACHUSETTS**

County of \_\_\_\_\_

Date:

Then personally appeared the above named and acknowledged the foregoing instrument to be their free act and deed before me, \_\_\_\_\_

Notary Public;

My Commission expires: \_\_\_\_\_

**CORPORATION IDENTIFICATION**

The bidder for the information of the Awarding Authority furnishes the following information.

**If a Corporation:**

Incorporated in what state \_\_\_\_\_

President \_\_\_\_\_

Treasurer \_\_\_\_\_

Secretary \_\_\_\_\_

Federal ID Number \_\_\_\_\_

**If a foreign (out of State) Corporation** – Are you registered to do business in Massachusetts?

Yes \_\_\_\_\_, No \_\_\_\_\_

If you are selected for this work you are required under M.G.L.ch. 30S, 39L to obtain from the Secretary of State, Foreign Corp. Section, State House, Boston, a certificate stating that you Corporation is registered, and furnish said certificate to the Awarding Authority prior to the award.

**If a Partnership:** (Name all partners)

Name of partner \_\_\_\_\_

Residence \_\_\_\_\_

Name of partner \_\_\_\_\_

Residence \_\_\_\_\_

**If an Individual:**

Name \_\_\_\_\_

Residence \_\_\_\_\_

**If an Individual doing business under a firm's name:**

Name of Firm \_\_\_\_\_

Name of Individual \_\_\_\_\_

Business Address \_\_\_\_\_

Residence \_\_\_\_\_

Date \_\_\_\_\_

Name of Bidder \_\_\_\_\_

By \_\_\_\_\_

Signature

\_\_\_\_\_

Title

Business Address \_\_\_\_\_ (POST OFFICE BOX NUMBER NOT ACCEPTABLE)

City \_\_\_\_\_ State \_\_\_\_\_ Telephone Number \_\_\_\_\_ Today's Date \_\_\_\_\_

**PROVIDE THREE (3) SERVICE APPROPRIATE REFERENCES**

1. Company Name:

Address:

Contact Name:

Phone #

Type of service/product provided to this Company:

Dollar value of service provided to this Company:

2. Company Name:

Address:

Contact Name:

Phone #

Type of service/product provided to this Company:

Dollar value of service provided to this Company:

3. Company Name:

Address:

Contact Name:

Phone #

Type of service/product provided to this Company:

Dollar value of service provided to this Company:

**NOTE**

**Failure to submit any of the required documents, in this or in other sections, with your bid response package will be cause for the disqualification of your company.**

**PRICE SHEET**

**(40% OF THE TOTAL AWARD VALUE)**

(Place in a separate sealed envelope marked with the title of the project and the name of your company). **My company offers the not too exceed, fixed,**

1) **BASE Price for:**

**a) DESIGN Work for Temporary Stabilization Measures,** \$: \_\_\_\_\_

**b) DESIGN Work for The Full Culvert Replacement,** \$: \_\_\_\_\_

2) **OPTIONAL:**

Add **Alternate 1:** Construction Administration During Temporary Stabilization  
\$: \_\_\_\_\_

Add **Alternate 2:** Construction Administration During Full Culvert Replacement  
\$: \_\_\_\_\_

My Company Acknowledges receipt of addenda #: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_.

---

Company: \_\_\_\_\_

Authorized Signature: \_\_\_\_\_

Print Name: \_\_\_\_\_

Phone: \_\_\_\_\_, Date: \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

STRUCTURES INSPECTION FIELD REPORT

ROUTINE & SPECIAL MEMBER INSPECTION

BR. DEPT. NO.

B-07-015-W-04-039

2-DIST 04 B.I.N. 7VB

CITY/TOWN BELMONT=WALTHAM	8-STRUCTURE NO. B07015-7VB-MUN-CUL	11-Kilo. POINT 000.000	41-STATUS A:OPEN	90-ROUTINE INSP. DATE MAY 24, 2016
07-FACILITY CARRIED ST 60 TRAPELO RD	MEMORIAL NAME/LOCAL NAME	27-YR BUILT 1850	106-YR REBUILT 1900	YR REHAB'D (NON 106) 0000
06-FEATURES INTERSECTED WATER BEAVER BROOK	26-FUNCTIONAL CLASS Urban Arterial	DIST. BRIDGE INSPECTION ENGINEER T. G. Weil		
43-STRUCTURE TYPE 801 : Masonry Slab	22-OWNER Town Agency	21-MAINTAINER Town Agency	TEAM LEADER J. Dileo	
107-DECK TYPE 1 : Concrete Cast-in-Place	WEATHER CLOUDY	TEMP (air) 16°C	TEAM MEMBERS A. MARLIN AM	

100DAM53		3		DEF
DECK				
1. Wearing surface	5	M-P		
2. Deck Condition	3	C-S-I		
3. Stay in place forms	7	-		
4. Curbs	4	S-P		
5. Median	N	-		
6. Sidewalks	6	M-P		
7. Parapets	N	-		
8. Railing	7	-		
9. Anti Missile Fence	N	-		
10. Drainage System	N	-		
11. Lighting Standards	N	-		
12. Utilities	N	-		
13. Deck Joints	N	-		
14.	N	-		
15.	N	-		
16.	N	-		

CURB REVEAL (In millimeters)	N 76	S 203
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APPROACHES		DEF
a. Appr. pavement condition	5	M-P
b. Appr. Roadway Settlement	6	-
c. Appr. Sidewalk Settlement	6	M-P
d.	N	-

OVERHEAD SIGNS (Attached to bridge)		(Y/N)	DEF
a. Condition of Welds	N	-	
b. Condition of Bolts	N	-	
c. Condition of Signs	N	-	

100DAM59		3		DEF
SUPERSTRUCTURE				
1. Beams	3	C-S-I		
2. Floorbeams	N	-		
3. Floor System Bracing	N	-		
4. Girders or Beams	N	-		
5. Trusses - General	N	-		
a. Upper Chords	N	-		
b. Lower Chords	N	-		
c. Web Members	N	-		
d. Lateral Bracing	N	-		
e. Sway Bracings	N	-		
f. Portals	N	-		
g. End Posts	N	-		
6. Pin & Hangers	N	-		
7. Conn Plt's, Gussets & Angles	N	-		
8. Cover Plates	N	-		
9. Bearing Devices	N	-		
10. Diaphragms/Cross Frames	N	-		
11. Rivets & Bolts	N	-		
12. Welds	N	-		
13. Member Alignment	N	-		
14. Paint/Coating	N	-		
15.	N	-		

Year Painted N

COLLISION DAMAGE: Please explain  
None X) Minor ( ) Moderate ( ) Severe ( )

LOAD DEFLECTION: Please explain  
None X) Minor ( ) Moderate ( ) Severe ( )

LOAD VIBRATION: Please explain  
None X) Minor ( ) Moderate ( ) Severe ( )

Any Fracture Critical Member: (Y/N) N

Any Cracks: (Y/N) N

100DAM60		2		DEF
SUBSTRUCTURE				
1. Abutments	Dive Cur	2		
a. Pedestals	N N			
b. Bridge Seats	N H			
c. Backwalls	N N			
d. Breastwalls	N 2			C-S-I
e. Wingwalls	N 5			M-P
f. Slope Paving/Rip-Rap	N N			
g. Pointing	N N			
h. Footings	N 5			M-P
i. Piles	N N			
j. Scour	N 4			S-A
k. Settlement	N N			
l.	N N			
m.	N N			
2. Piers or Bents		N		
a. Pedestals	N N			
b. Caps	N N			
c. Columns	N N			
d. Stems/Webs/Pierwalls	N N			
e. Pointing	N N			
f. Footing	N N			
g. Piles	N N			
h. Scour	N N			
i. Settlement	N N			
j.	N N			
k.	N N			
3. Pile Bents		N		
a. Pile Caps	N N			
b. Piles	N N			
c. Diagonal Bracing	N N			
d. Horizontal Bracing	N N			
e. Fasteners	N N			

UNDERMINING (Y/N) IF YES please explain N

COLLISION DAMAGE:  
None X) Minor ( ) Moderate ( ) Severe ( )

SCOUR: Please explain  
None X) Minor ( ) Moderate ( ) Severe ( )

I-60 (Dive Report): N I-60 (This Report): 2

93B-UW (DIVE) Insp 00/00/000

X=UNKNOWN N=NOT APPLICABLE H=HIDDEN/INACCESSIBLE R=REMOVED

CITY/TOWN BELMONT=WALTHAM	B.I.N. 7VB	BR. DEPT. NO. B-07-015=W-04-039	S-STRUCTURE NO. E07015-7VB-MUN-CUL	INSPECTION DATE MAY 24, 2016
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<b>ITEM 61</b>	<b>2</b>	<b>CHANNEL &amp; CHANNEL PROTECTION</b>
	Dive Cur DEF	
1.Channel Scour	N 2	S-A
2.Embankment Erosion	N 7	-
3.Debris	N 7	-
4.Vegetation	N N	-
5.Utilities	N N	-
6.Rip-Rap/Slope Protection	N N	-
7.Aggradation	N 7	-
8.Fender System	N N	-
STREAM FLOW VELOCITY: Tidal ( ) High ( ) Moderate ( ) Low (X) None ( )		
ITEM 61 (Dive Report):	N	ITEM 61 (This Report): <b>2</b>
93b-U/W INSP. DATE:	00/00/0000	

<b>ITEM 36 TRAFFIC SAFETY</b>			
A. Bridge Railing	0	7	-
B. Transitions	0	6	M-P
C. Approach Guardrail	0	6	M-P
D. Approach Guardrail Ends	0	7	-
<b>WEIGHT POSTING</b> <span style="float: right;">Not Applicable <input checked="" type="checkbox"/></span>			
	H	3	3S2
Actual Posting	N	N	N
Recommended Posting	N	N	N
Waived Date:	00/00/0000		EJDMY Date: 00/00/0000
Signs In Place (Y=Yes, N=No, NR=Not Required)	At bridge	Other Advance	
Legibility/Visibility	E W	E W	
<b>CLEARANCE POSTING</b>			
	N	S	
Actual Field Measurement	ft in	ft in	meter
Posted Clearance	0	0	
Signs In Place (Y=Yes, N=No, NR=Not Required)	At bridge	Advance	
Legibility/Visibility	N S	N S	

<b>ACCESSIBILITY (Y/N/P)</b>		
	Needs	Used
Lift Bucket	N	N
Ladder	N	N
Boat	N	N
Waders	Y	Y
Inspector 50	N	N
Rigging	N	N
Staging	N	N
Traffic Control	N	N
RR Flagger	N	N
Police	N	N
Other:	N	N
<b>TOTAL HOURS</b>		26
<b>PLANS (Y/N):</b> N		
<b>(V.C.R.) (Y/N):</b> N		
<b>TAPE#:</b>		
<i>List of field tests performed:</i>		

<b>RATING</b>	Rating Report (Y/N): <input type="checkbox"/> N	<b>(To be filled out by DBIE)</b>
Date: 00/00/0000	Request for Rating or Rerating (Y/N): <input type="checkbox"/> N	<b>IF YES please give priority:</b>
Inspection data at time of existing rating	REASON: <u>Tw</u>	HIGH ( ) MEDIUM ( ) LOW ( )
158: - 159: - 160: - Date: 00/00/0000		

CONDITION RATING GUIDE			(For Items 58, 59, 60 and 61)
CODE	CONDITION	DEFECTS	
N	NOT APPLICABLE		
G 9	EXCELLENT	Excellent condition.	
G 8	VERY GOOD	No problem noted.	
G 7	GOOD	Some minor problems.	
F 6	SATISFACTORY	Structural elements show some minor deterioration.	
F 5	FAIR	All primary structural elements are sound but may have minor section loss, cracking, spalling or scour.	
P 4	POOR	Advance section loss, deterioration, spalling or scour.	
P 3	SERIOUS	Loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present.	
C 2	CRITICAL	Advance deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored it may be necessary to close the bridge until corrective action is taken.	
C 1	"IMMINENT" FAILURE	Major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stability. Bridge is closed to traffic but corrective action may put it back in light service.	
0	FAILED	Out of service - beyond corrective action.	

DEFICIENCY REPORTING GUIDE	
<b>DEFICIENCY</b>	A defect in a structure that requires corrective action.
<b>CATEGORIES OF DEFICIENCIES:</b>	
M= Minor Deficiency	- Deficiencies which are minor in nature, generally do not impact the structural integrity of the bridge and could easily be repaired. Examples include but are not limited to: Spalled concrete, Minor pot holes, Minor corrosion of steel, Minor scouring, Clogged drainage, etc.
S= Severe/Major Deficiency	- Deficiencies which are more extensive in nature and need more planning and effort to repair. Examples include but are not limited to: Moderate to major deterioration in concrete, Exposed and corroded rebar, Considerable settlement, Considerable scouring or undermining, Moderate to extensive corrosion to structural steel with measurable loss of section, etc.
C-S= Critical Structural Deficiency	- A deficiency in a structural element of a bridge that poses an extreme unsafe condition due to the failure or imminent failure of the element which will affect the structural integrity of the bridge.
C-H= Critical Hazard Deficiency	- A deficiency in a component or element of a bridge that poses an extreme hazard or unsafe condition to the public, but does not impair the structural integrity of the bridge. Examples include but are not limited to: Loose concrete hanging down over traffic or pedestrians, A hole in a sidewalk that may cause injuries to pedestrians, Missing section of bridge railing, etc.
<b>URGENCY OF REPAIR:</b>	
I = Immediate-	[Inspector(s) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive further instruction from him/her].
A = ASAP-	[Action/Repair should be initiated by District Maintenance Engineer or the Responsible Party (if not a State owned bridge) upon receipt of the Inspection Report].
P = Prioritize-	[Shall be prioritized by District Maintenance Engineer or the Responsible Party (if not a State owned bridge) and repairs made when funds and/or manpower is available].

STRUCTURES INSPECTION FIELD REPORT

ROUTINE & SPECIAL MEMBER INSPECTION

BR. DEPT. NO.

B-07-015=W-04-039

2-DIST  
04

B.I.N.  
7VB

CITY/TOWN: BELMONT=WALTHAM  
 8-STRUCTURE NO.: B07015-7VB-MUN-CUL  
 11-Kilo. POINT: 000.000  
 90-ROUTINE INSP. DATE: May 24, 2016  
 93\*-SPEC. MEMB. INSP. DATE: May 24, 2016

07-FACILITY CARRIED: ST 60 TRAPELO RD  
 MEMORIAL NAME/LOCAL NAME: [Blank]  
 27-YR BUILT: 1850  
 106-YR REBUILT: 1900  
 \*YR REHAB'D (NON 106): 0000

06-FEATURES INTERSECTED: WATER BEAVER BROOK  
 26-FUNCTIONAL CLASS: Urban Arterial  
 DIST. BRIDGE INSPECTION ENGINEER: T. G. Weil

13-STRUCTURE TYPE: 801 : Masonry Slab  
 22-OWNER: Town Agency  
 21-MAINTAINER: Town Agency  
 TEAM LEADER: J. Dideo

107-DECK TYPE: 1 : Concrete Cast-in-Place  
 WEATHER: CLOUDY  
 TEMP (air): 16°C  
 TEAM MEMBERS: A. MARLIN, AM

WEIGHT POSTING: Not Applicable  X

Actual Posting: H N, 3 N, 3S2 N, Single N  
 Recommended Posting: H N, 3 N, 3S2 N, Single N

Waived Date: 00/00/0000 EJDWT Date: 00/00/0000

Signs In Place (Y=Yes, N=No, NR=Not Required):  
 At bridge: E, W  
 Advance: E, W

Legibility/Visibility: [Blank]

PLANS (Y/N): N  
 (V.C.R.) (Y/N): N  
 TAPE#: [Blank]

RATING

Rating Report (Y/N): N Date: [Blank]

Request for Rating or Rerating (Y/N): N

If YES please give priority: HIGH ( ) MEDIUM ( ) LOW ( )

REASON: TW

Inspection data at time of existing rating  
 I 58: - I 59: - I 60: - I 62: - Date: 00/00/0000

SPECIAL MEMBER(S):

	MEMBER	CRACK (Y/N):	WELD'S CONDITION (0-9)	LOCATION OF CORROSION, SECTION LOSS (%), CRACKS, COLLISION DAMAGE, STRESS CONCENTRATION, ETC.	CONDITION		INV. RATING OF MEMBER FROM RATING ANALYSIS			Deficiencies
					PREVIOUS (0-9)	PRESENT (0-9)	H-20	3	3S2	
A	Item 58.2 - Deck Condition	N		See remarks in comments section.	7	3				C-S-I
B	Item 59.1 - Beams	N		See remarks in comments section.	5	3				C-S-I
C	Item 60.1.d - Breastwalls	N		See remarks in comments section.	2	2				C-S-I
D										
E										

List of field tests performed:

	I-58	I-59	I-60	I-62
(Overall Previous)	7	5	2	-
(Overall Current)	3	3	2	-

**DEFICIENCY** - A defect in a structure that requires corrective action.

**CATEGORIES OF DEFICIENCIES:**

M= Minor Deficiency - Deficiencies which are minor in nature, generally do not impact the structural integrity of the bridge and could easily be repaired. Examples include but are not limited to: Spalled concrete, Minor pot holes, Minor corrosion of steel, Minor scouring, Clogged drainage, etc.

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C-S= Critical Structural Deficiency - A deficiency in a structural element of a bridge that poses an extreme unsafe condition due to the failure or imminent failure of the element which will affect the structural integrity of the bridge.

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**URGENCY OF REPAIR:**

I = Immediate - (Inspectors) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive further instruction from his/her.

A = ASAP - (Action/Repair should be initiated by District Maintenance Engineer or the Responsible Party (if not a State owned bridge) upon receipt of the Inspection Report).

P = Prioritize - (Shall be prioritized by District Maintenance Engineer or the Responsible Party (if not a State owned bridge) and repairs made when funds and/or manpower is available).

X=UNKNOWN    N=NOT APPLICABLE    H=HIDDEN/INACCESSIBLE    R=REMOVED

CITY/TOWN BELMONT=WALTHAM	B.I.N. 7VB	BR. DEPT. NO. B-07-015=W-04-039	S-STRUCTURE NO. B07015-7VB-WUN-CUL	INSPECTION DATE MAY 24, 2016
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### REMARKS

#### BRIDGE ORIENTATION

For this report, the approaches are west and east and the elevations are south and north. Beaver Brook flows from north to south.

#### GENERAL REMARKS

The superstructure is composed of a combination of the following four elements: 16 Granite slabs which are numbered from south to north, 8 steel I beams, 1 reinforced concrete section measuring 5-1/2' wide, and a concrete culvert extension at the north end (see sketch 1 and 2 for locations).

There was an Initial Routine and Special Member Report performed on August 27, 2002. In this report, it was documented that granite slab number 7 had a 3/4" wide crack, 4' from the east breastwall. This crack has increased in width to a maximum of 2" wide. This crack is beneath the eastbound roadway. There are also several full width small (hairline) cracks near mid-span located on slab number 3, 4, 5, 6, and 8. Slab 12 has 2 partial width cracks that run approximately half way across the slab near mid-span.

Repairs have been made to the east breastwall, repairing the undermined slabs 13 and 14. However, slab number 14 has a loss of bearing area at the west breastwall and for this reason the rating for the substructure will remain a "2" until repairs are made.

#### ITEM 58 - DECK

##### Item 58.1 - Wearing surface

There are numerous transverse, longitudinal and map cracks throughout the bituminous wearing surface (see photos 1 and 2).

##### Item 58.2 - Deck Condition

See Item 59.1 Beams for a detailed description.

Since we do not have bridge plans that show a concrete slab over the beams, we will consider that the beams act as the deck for this report.

##### Item 58.4 - Curbs

The north granite curb has settled several inches and has a 3" reveal. The south granite curb has an 8" reveal (see photos 1 and 2).

##### Item 58.6 - Sidewalks

The south sidewalk has slight heaving at the east end.

#### APPROACHES

##### Approaches a - Appr. pavement condition

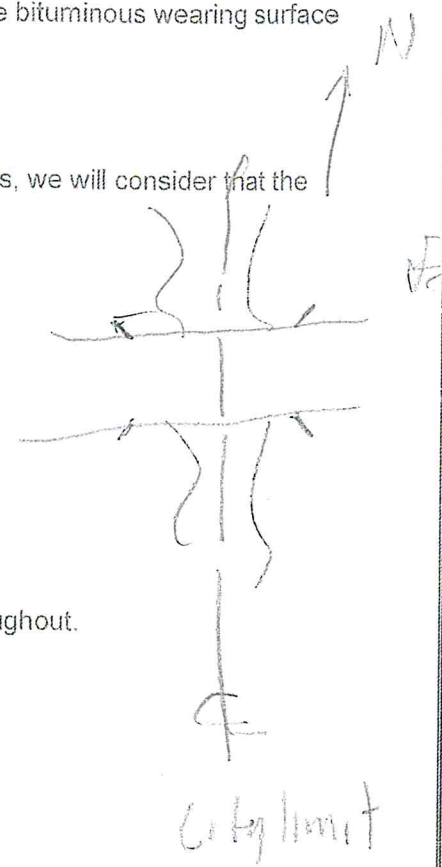
Both approaches have heavy transverse, longitudinal, and map cracks throughout.

##### Approaches b - Appr. Roadway Settlement

There is minor settlement along the curbs (see photos 1 and 2).

##### Approaches c - Appr. Sidewalk Settlement

There is slight heaving at the southeast approach sidewalk.





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### REMARKS

#### ITEM 59 - SUPERSTRUCTURE

##### Item 59.1 - Beams

There is a small section of reinforced concrete which acts as part of the superstructure below the westbound roadway. This section is mostly hidden by the corrugated metal stay in place form below it.

The seventh granite slab from the south end of the bridge has a split through it (see photos 3 and 4). The split ranges from 3/4" up to 2" wide which is larger than the reported 3/4" wide split in the 2002 inspection report. The split is located 4' from the east breastwall and is below the eastbound roadway. Because it is evident that the split has grown, the rating of the 59.1 is now serious.

Note: The average width from breastwall to breastwall was 6' 10".

Also, slab number 3, 4, 5, 6 and 8 all have full width hairline cracking at or near mid-span. (see sketch 1 and photos 5 through 9).

Slab number 12 has 2 partial width transverse cracks near midspan. (see sketch 1 and photo 10).

There are 8 steel I Beams below the eastbound roadway. Several of these beams exhibit severe rust, lamination and some section losses on the bottom flanges (see photos 11 and 12).

There are wooden planks between the beams so the condition of the webs is unknown.

#### ITEM 60 - SUBSTRUCTURE

##### Item 60.1 - Abutments

##### Item 60.1.d - Breastwalls \*

There is a large wash out at the top of the west breastwall below beam 14 measuring 40" L x 30" H x 50" D. This washout has caused the bearing area of beam 14 to be non existant (see photos 13, 14, and 15). Because beam 14 is essentially being only supported at the east end, the rating for the breastwalls will remain a 2.

West breastwall-Void below the reinforced concrete slab measuring: 20" W x 15" H x 24" D (see photo 16).

West breastwall-Void at the top measuring: 15" W x 21" H x 30" D (see photo 17 and 18).

West breastwall-Void below beam 5-Void measuring: 27" W x 17" H x 14" D (see photo 19).

West breastwall, south end-Large void measuring: 2.5' x 8" H x 20" D (see photo 20).

East breastwall-Large void at the bottom starting 18' 7" from the south end measuring: 2.5' W x 3' D x 4' H (see photo 21).

The east breastwall washout has been repaired since the last inspection below beams 13 and 14 (see photo 22).

##### Item 60.1.e - Wingwalls

The southeast wingwall has several displaced blocks (see photo 23 and 24).

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### REMARKS

#### Item 60.1.h - Footings

See Item 60.1.J Scour.

There is minor abrasion throughout the areas of the footings that are visible. There is only a minimal amount of footings visible.

#### Item 60.1.i - Scour

At the north end of the channel, the water is too deep to wade.

The scour around the footing for the concrete culvert extension is unknown.

Using a long pole, it was evident that the northeast wingwall footing is partially undermined and the west breastwall north end is also partially undermined.

#### TRAFFIC SAFETY

#### Item 36a - Bridge Railing

There is a masonry stone wall at the south end of structure.

There is Type "SS" Highway guardrail at the north end of the structure that acts as the bridge railing.

#### Item 36b - Transitions

The northeast and northwest transitions both have type "SS" highway guardrail in place.

The northeast and northwest transitions both have minor scrapes and dents.

The southeast transition is a continuation of the masonry stone wall.

The southwest transition does not exist.

#### Item 36c - Approach Guardrail

The northeast and northwest approach guardrail both have type "SS" highway guardrail in place.

The northeast and northwest approach guardrails both have minor scrapes and dents.

The southeast approach guardrail is a continuation of the masonry stone wall.

The southwest approach guardrail does not exist.

#### Item 36d - Approach Guardrail Ends

The northeast terminal is a boxing glove end.

The northwest terminal is continuous type "SS" Highway guardrail.

The southeast terminal is a continuation of the masonry stone wall.

The southwest terminal does not exist.

#### Sketch / Photo Log

Sketch 1 : Super structure composition (Granite beams numbered south to north).

Sketch 2 : Approximate Curb Line Locations

Photo 1 : Typical wearing surface photo showing heavy cracking throughout.

Photo 2 : Typical wearing surface photo showing heavy cracking throughout.

Photo 3 : Slab 7-Full width transverse crack ranging from 3/4" to 2" wide.

Photo 4 : Slab 7-Full width crack ranging from 3/4" to 2".

Photo 5 : Slab 3-Hairline diagonal crack at mid-span.

Photo 6 : Slab 4-Hairline diagonal crack at midspan.

Photo 7 : Slab 5-Longitudinal hairline crack at the east end measuring 2' long.

Photo 8 : Slab 6-Hairline transverse crack near mid-span

Photo 9 : Slab 8-Full width partial transverse crack near mid-span.

Photo 10 : Slab 12-2 partial width hairline transverse cracks near midspan.

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**REMARKS**

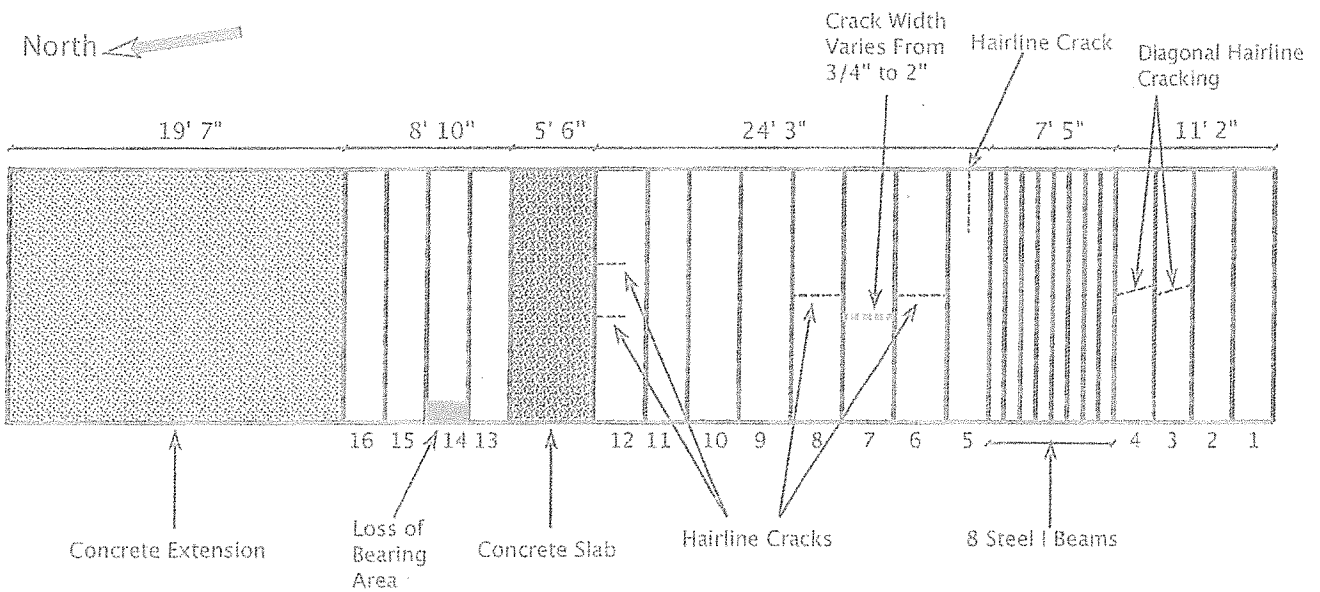
Sketch / Photo Log (Cont'd)

- Photo 11 : Typical condition of the bottom flanges of the steel I-Beams showing severe rust, lamination, and some section loss/ Wooden planks between beams.
- Photo 12 : Typical condition of steel I-Beams showing severe rust on the bottom flanges of several beams with lamination. Note: webs are hidden due to wooden planks between.
- Photo 13 : Slab 14-Complete loss of bearing area at the west breastwall.
- Photo 14 : Slab 14-Complete loss of bearing area at the west breastwall.
- Photo 15 : Slab 14-Complete loss of bearing area at the west breastwall.
- Photo 16 : West breastwall-Void below the reinforced concrete slab measuring: 20" W x 15" H x 24" D.
- Photo 17 : West breastwall-Void at the top measuring: 15" W x 21" H x 30" D.
- Photo 18 : West breastwall-Void at the top measuring: 15" W x 21" H x 30" D.
- Photo 19 : West breastwall, below beam 5-Void measuring: 27" W x 17" H x 14" D.
- Photo 20 : West breastwall, south end-Large void measuring: 2.5' x 8" H x 20" D.
- Photo 21 : East breastwall-Large void at the bottom starting 18' 7" from the south end measuring: 2.5' W x 3' D x 4' H.
- Photo 22 : East breastwall-Repaired area.
- Photo 23 : Southwest wingwall-Several displaced stones.
- Photo 24 : Southwest wingwall-Several displaced stones.

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SKETCHES

B-07-015 = W-04-039 MUN-BRI



Beams Labeled 1-16 Are Granite Slabs

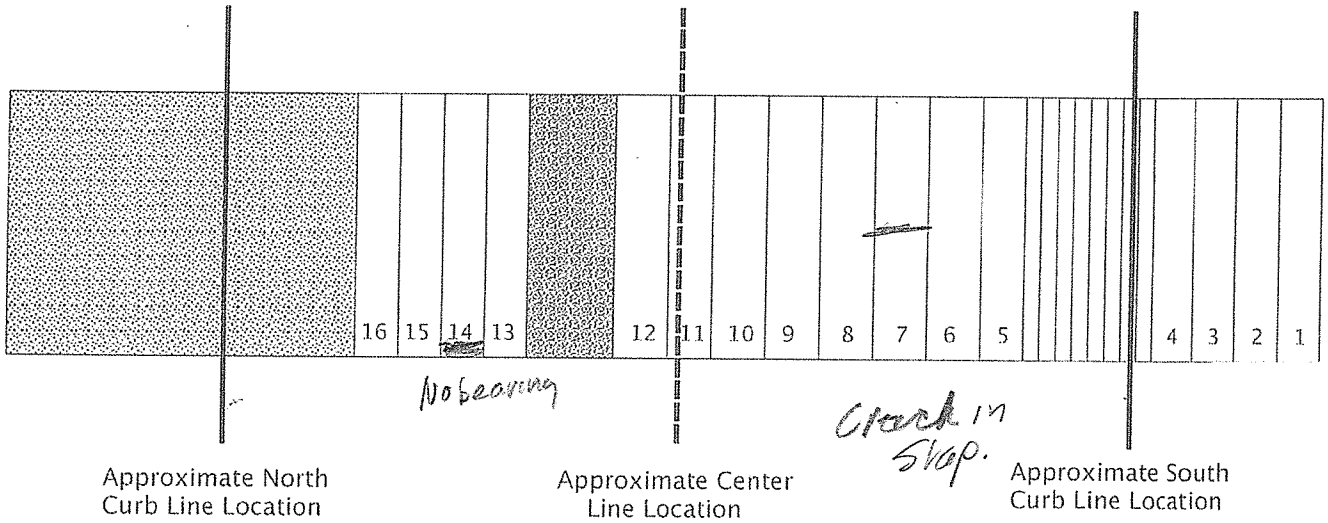
Sketch 1: Super structure composition (Granite beams numbered south to north).

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SKETCHES

B-07-015 = W-04-039 MUN-BRI  
Approximate Curb Line Locations

North ←



Sketch 2: Approximate Curb Line Locations

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**PHOTOS**

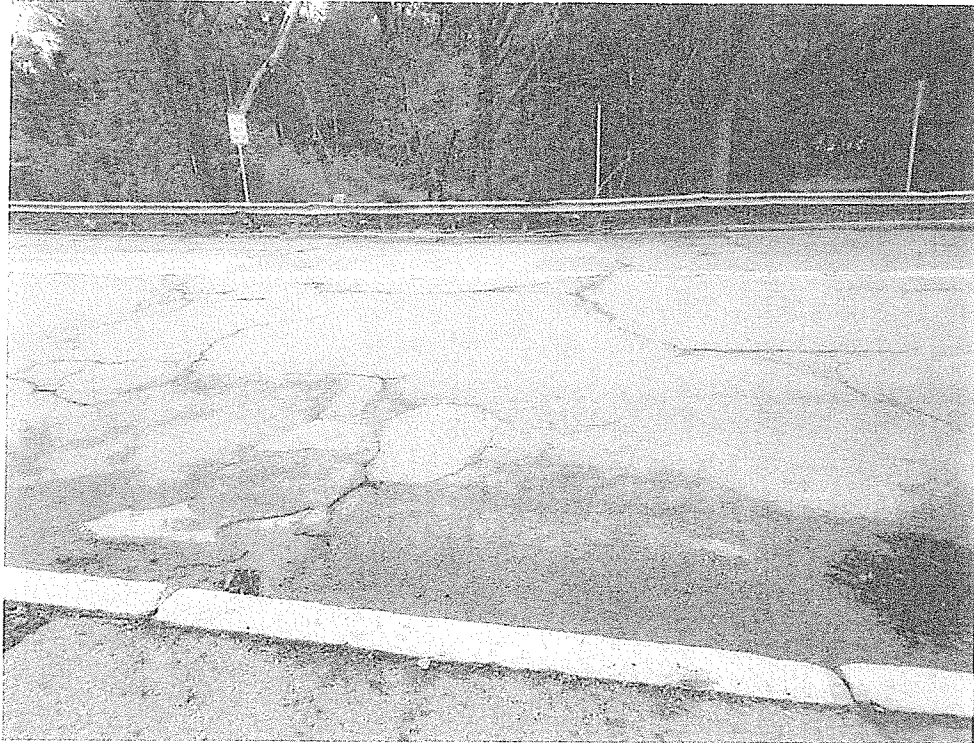


Photo 1: Typical wearing surface photo showing heavy cracking throughout.



Photo 2: Typical wearing surface photo showing heavy cracking throughout.

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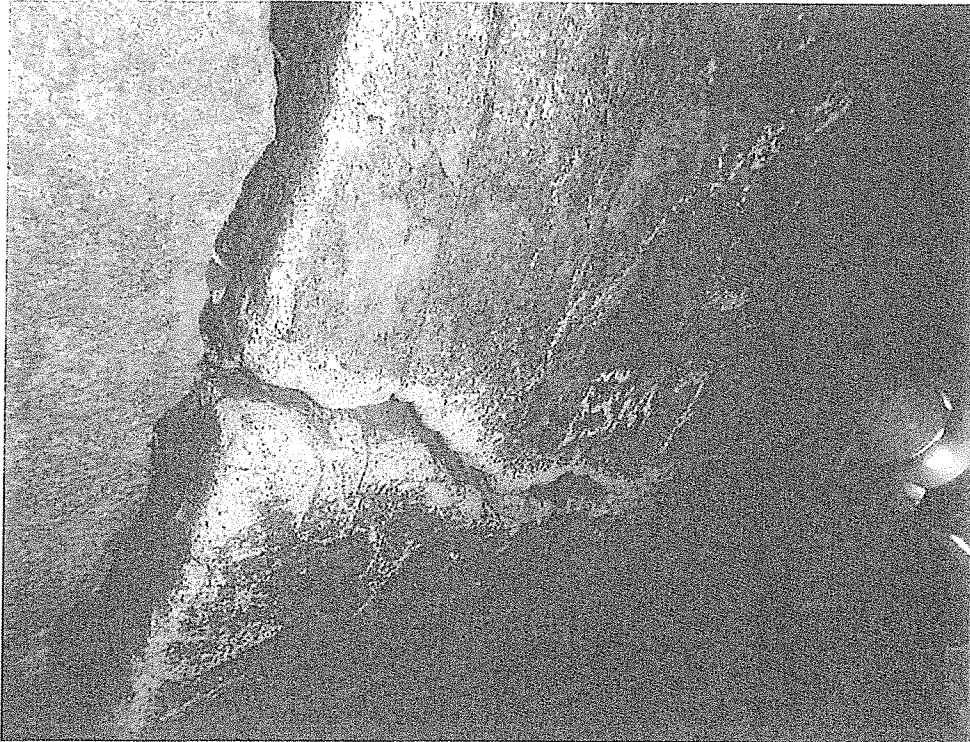
**PHOTOS**

Photo 3: Slab 7-Full width transverse crack ranging from 3/4" to 2" wide.



Photo 4: Slab 7-Full width crack ranging from 3/4" to 2".

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**PHOTOS**



Photo 5: Slab 3-Hairline diagonal crack at mid-span.

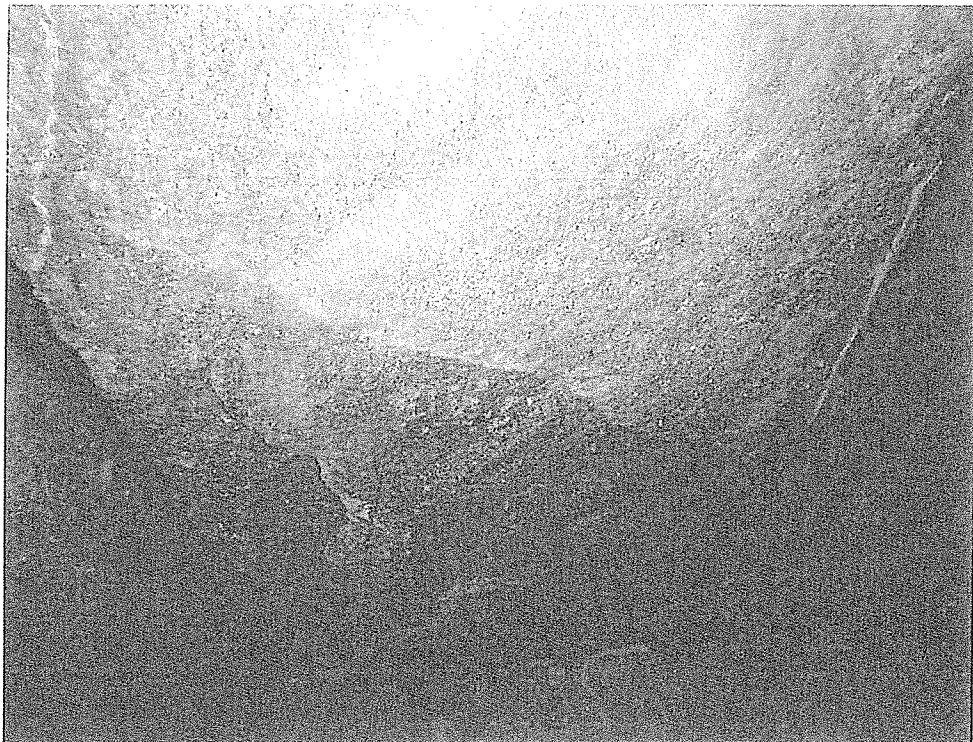


Photo 6: Slab 4-Hairline diagonal crack at midspan.



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**PHOTOS**

Photo 7: Slab 5-Longitudinal hairline crack at the east end measuring 2' long.

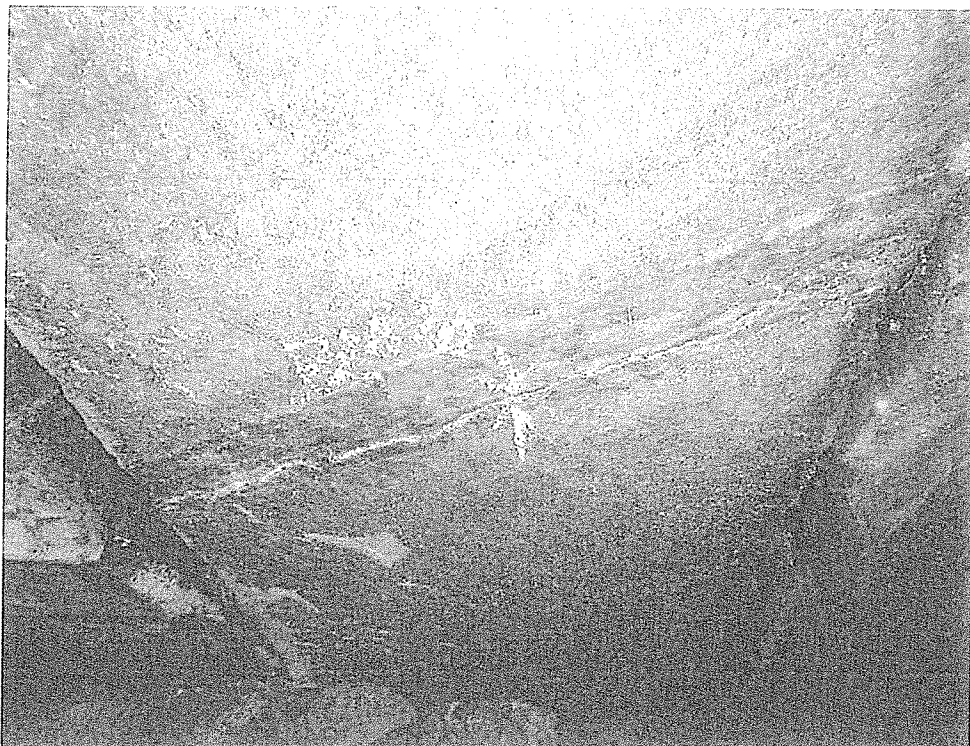


Photo 8: Slab 6-Hairline transverse crack near mid-span

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**PHOTOS**

Photo 9: Slab 8-Full width partial transverse crack near mid-span.



Photo 10: Slab 12-2 partial width hairline transverse cracks near midspan.

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## PHOTOS



Photo 11: Typical condition of the bottom flanges of the steel I-Beams showing severe rust, lamination, and some section loss/ Wooden planks between beams.



Photo 12: Typical condition of steel I-Beams showing severe rust on the bottom flanges of several beams with lamination. Note: webs are hidden due to wooden planks between.

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**PHOTOS**

Photo 13: Slab 14-Complete loss of bearing area at the west breastwall.

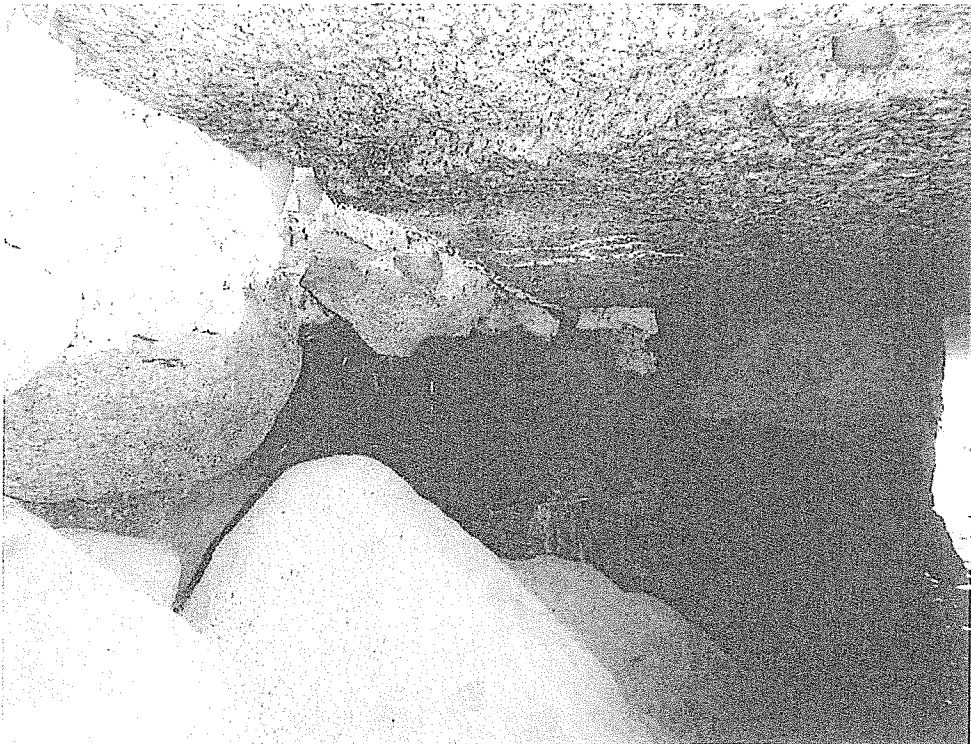


Photo 14: Slab 14-Complete loss of bearing area at the west breastwall.

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**PHOTOS**

Photo 15: Slab 14-Complete loss of bearing area at the west breastwall.



Photo 16: West breastwall-Void below the reinforced concrete slab measuring:  
20" W x 15" H x 24" D.

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**PHOTOS**

Photo 17: West breastwall-Void at the top measuring: 15" W x 21" H x 30" D.



Photo 18: West breastwall-Void at the top measuring: 15" W x 21" H x 30" D.

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**PHOTOS**



Photo 19: West breastwall, below beam 5-Void measuring: 27" W x 17" H x 14" D.

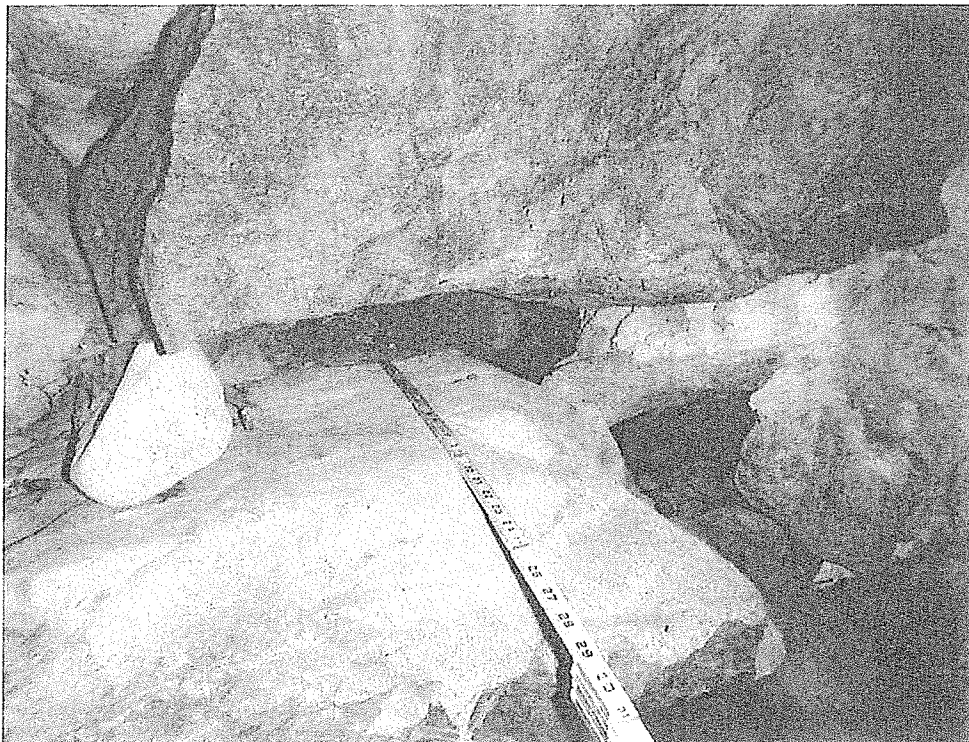


Photo 20: West breastwall, south end-Large void measuring: 2.5' x 8" H x 20" D.

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**PHOTOS**

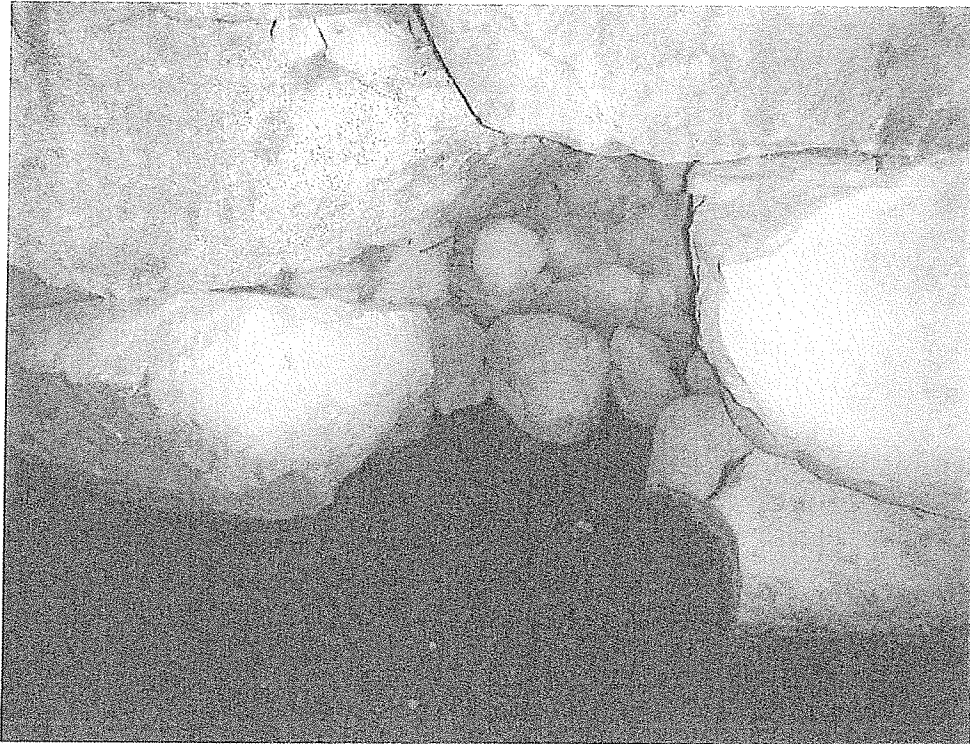


Photo 21: East breastwall-Large void at the bottom starting 18' 7" from the south end measuring: 2.5' W x 3' D x 4' H.

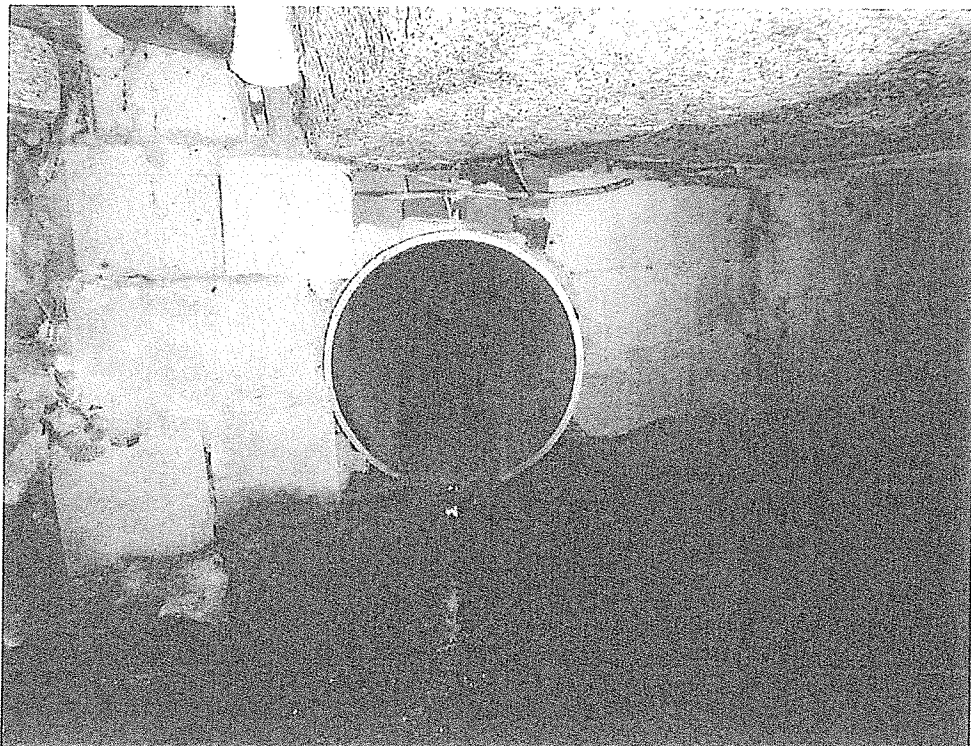


Photo 22: East breastwall-Repaired area.



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**PHOTOS**



Photo 23: Southwest wingwall-Several displaced stones.



Photo 24: Southwest wingwall-Several displaced stones.