



**Solicitation Information
10 Sept 02**

LOI # B01457

Title: On-Call Shop Inspection and Testing Services for Structural Steel Materials

SUBMISSION DEADLINE: 8 Oct 02 @ 1:40 PM

Questions concerning this solicitation may be e-mailed to the Division of Purchases at questions@purchasing.state.ri.us no later than 24 Sept 02 at 12:00 Noon (Eastern Daylight Time) Please reference the LOI # on all correspondence . Questions received, if any, will be posted on the Internet as an addendum to this solicitation. It is the responsibility of all interested parties to download this information.

CERTIFICATIONS REQUIRED: Yes See Scope of Work for Requirements

SURETY REQUIRED: No

BOND REQUIRED: No

**Jerome D. Moynihan, C.P.M., CPPO
Administrator of Purchasing Systems**

Vendors must register on-line at the State Purchasing Website at www.purchasing.state.ri.us.

NOTE TO VENDORS:

Offers received without the entire completed three-page RIVP Generated Bidder Certification Form attached may result in disqualification.

THIS PAGE IS NOT A BIDDER CERTIFICATION FORM

On-Call Shop Inspection and Testing Services for Structural Steel Materials

The Rhode Island Department of Administration / Division of Purchases, on behalf of the Rhode Island Department of Transportation (RIDOT), seeks to establish a five-year Price Agreement with qualified sources for the **On-Call Shop Inspection and Testing Services for Structural Steel Materials** for anticipated RIDOT construction projects. The work to be done is detailed in the Scope of Work to follow and shall conform to the relevant requirements of the Rhode Island Standard Specifications for Road and Bridge Construction, which are current at the time of project advertising, the construction contract Special Provisions that are specific to the structure materials that are to be inspected, and the Specifications for Inspection of Structural Material.

Responses to this solicitation must be in accordance with guidelines as outlined in this request and the State's General Conditions of Purchase which can be accessed online through *the Rhode Island Vendor Information Program (RIVIP)* at:

<http://www.purchasing.state.ri.us>

All respondents are advised to review all sections of this request thoroughly and to follow the instructions carefully. Failure to make a complete submission as described elsewhere herein may result in rejection of the proposal.

Note: This solicitation is a Letter of Interest, not an Invitation for Bid. There will be no public opening of responses received by the Division of Purchases pursuant to this solicitation other than to name those firms who have responded. Per the instructions to follow offerors must provide the following to be considered responsive to this solicitation:

1. a fully-completed, signed **RIVIP Certification Cover Sheet**, and
2. a complete **LETTER OF INTEREST** inclusive of all requested administrative, technical and proposed price information.

GENERAL INSTRUCTIONS AND NOTIFICATIONS TO RESPONDENTS:

- All respondents **MUST REGISTER** online at the State Division of Purchases' website @ **<http://www.purchasing.state.ri.us>**. This website is the Rhode Island Vendor Information Program (RIVIP).
- A fully completed signed *RIVIP Bidder Certification Cover Sheet* – **All three pages MUST** accompany the response submitted. Failure to make a complete submission inclusive of this three-page document may result in disqualification.
- Should there be a need for assistance in registering and/or downloading any document, call (401) 222-2142, ext. 134 for RIVIP HELP DESK technical assistance. Office Hours: 8:30 AM – 4:00 PM.
- All costs associated with developing or submitting documents in response to this Request and/or in providing oral or written clarification of its content shall be borne by the respondent. The State assumes no responsibility for these costs.

- It is intended that a Price Agreement will be established pursuant to this solicitation. Award(s) will be made to prime respondent(s) who by virtue of participating in this solicitation assume full responsibility for all aspects of the services to be provided under the Scope of Work. Joint venture and cooperative proposals will not be considered. Subcontractors, however, will be considered provided any proposed subcontractor(s) are clearly identified along with a full disclosure as to the type of work to be performed within the Scope of Work.
- Submissions in response to this solicitation are considered to be irrevocable for a period of not less than sixty (60) days following the established due date and may not be withdrawn without the express written permission of the State Purchasing Agent.
- Responses misdirected to other State locations or which otherwise are not received by the Division of Purchases by the established due date for any cause will be determined to be late and will not be considered. The office clock, for the purpose of registering the arrival of a document, is in the reception area of the Department of Administration (DOA), Division of Purchases, One Capitol Hill, Providence, Rhode Island.
- Respondents are advised that all materials submitted to the State for consideration will be considered to be public records as defined in Title 38 Chapter 2 of Rhode Island General Laws, without exception, and will be released for inspection immediately upon request once an award is made.
- In accordance with Title 7, Chapter 1.1-99 of the Rhode Island General Laws, Foreign corporations (a corporation established other than in Rhode Island) shall have the right to transact business in the State.
- Successful respondent(s) must comply with all federal, state and local licensing/certification requirements to perform requested services.
- Successful respondent(s) must comply with all necessary insurance protections up to industry standard; -see Scope of Work.
- Although not required, Disadvantaged Business Enterprise (DBE) participation in this solicitation is encouraged. Questions concerning the current listing of Rhode Island State certified DBE firms should be directed to:

**Charles Newton, Director,
 Minority Business Enterprise Commission,
 One West Exchange Street, 5th Floor,
 Providence, Rhode Island 02903
 Phone: 401-222-6253**

CONTRACT TERMS AND CONDITIONS:

The Price Agreement that will be established as a result of this solicitation will be for five years. The State intends to establish a qualified vendor list with multiple technical inspection and testing service providers.

The qualified vendor(s) selected as a result of this solicitation will provide personnel to conduct inspection and testing services as described in the Scope of Work on an as-needed on-call basis. The respondent will be required to furnish technically qualified personnel in a timely manner who will perform inspection(s) at either the fabrication shop or at the material manufacturer's place of operation, to be established by the respective RIDOT construction

contractors on current and anticipated RIDOT construction projects. **Hours and assignments will be determined by RIDOT.** RIDOT anticipates the need for shop inspection and testing services for structural materials may be required for more than one RIDOT project at the same time and at more than one inspection location. RIDOT reserves the right to refuse to accept the services of any individual staff member under the Price Agreement. In addition, RIDOT reserves the right to request the services for any individual staff member as deemed appropriate.

Successful respondents' prices for **fully inclusive hourly rates** to compensate for the productive hours actually worked for the various proposed classes of inspection and testing services personnel and **per diem rates** for communications not otherwise covered by overhead, and any other miscellaneous expenses will form the basis for the Price Agreement. Additional reimbursement will be provided for necessary pre-authorized travel expenses incurred in the course of providing services requested by RIDOT under terms and conditions described in the Scope of Work. **THERE WILL BE NO OTHER FORM OF COMPENSATION PROVIDED.**

No commitment to a specific level of spending is made by this request. Services will be authorized using individual requests against the Price Agreement and will be subject to the State's General Conditions of Purchase which is available from the RIVIP website, and any other specific conditions set forth in the Price Agreement.

It is anticipated that payment for services rendered will be monthly for periods when the Price Agreement is in active use. Invoices are to be fully itemized for hourly inspection charges, -i.e., productive hours only, by individual inspector assignment, applicable per diem expenses and reimbursement requests for authorized, documented travel expenses. Invoices are to be submitted to the responsible RIDOT unit for review, acceptance and processing for payment.

INSTRUCTIONS:

Upon review of the Scope of Work one "**Original**" and **five (5) copies** of a completed **LETTER OF INTEREST** inclusive of all requested information must be submitted to the Division of Purchases by the deadline specified per the detailed instructions to follow.

To be considered responsive at a minimum the Letter of Interest must include the following administrative, technical and price information for RIDOT review and subsequent selection recommendation(s):

BACKGROUND AND PREVIOUS EXPERIENCE:

- **Letter of Transmittal:** A Letter of Transmittal must accompany each response signed by an owner, officer, or other authorized agent of the firm.
- **Proof of Professional Certifications:** See attached Scope of Work for A.W.S., ASNT, and NACE approved certifications required.
- **Company Introduction:** Qualified Respondents must provide evidence of a minimum five years expertise relative to the services requested. Respondents are also required to include a complete description and other relevant information documenting organizational structure and business background.
- **Relevant Experience:** Respondents are to include a comprehensive listing of similar current and past projects and/or clients served providing services related to this Scope

of Work. References must be provided which include *at a minimum*: description of each project/services, client name, complete address, timeframe, contact person(s) including telephone number.

- **Proof of Insurance:** Respondents are to provide official certification from their insurance source(s) of current levels of insurance protection which must be up to industry standard. See attached Scope of Work for minimum insurance requirements.

ORGANIZATION AND STAFFING:

- **Staff Qualifications:** Respondents are to include an overview of personnel with a minimum of five years of experience each presently on staff including resumes, curricula vitae or statements of prior experience and/or qualifications of key personnel to be available to RIDOT. Respondent must demonstrate proof of a **minimum of five (5) qualified inspection staff members available for this project.**

Full disclosure of the proposed team to be available to RIDOT requires:

1. a **listing** of key personnel currently on staff,
2. **resumes** of proposed key personnel to be available to RIDOT,
3. **copies of the required certifications** held by proposed inspection staff as stated in the attached Scope of Work.

- **Subcontractor(s):** If used, the Respondent must disclose a company introduction for the subcontractor firm(s)' this must include the subcontractors organizational structure, business background and the type of work they will perform in response to this solicitation. Proof of professional certifications, relevant experience, and proof of insurance must also be provided. Each respondent must show proof of a minimum of five (5) qualified inspection staff members available for this project.

Full disclosure of the proposed team to be assigned this project requires:

1. a **listing** of key personnel currently on staff,
2. **resumes** of proposed key personnel to be available to RIDOT,
3. **copies of the required certifications** held by proposed inspection staff as stated in the attached Scope of Work.

WORK PLAN:

- **Approach:** Respondents are to provide a detailed technical synopsis of their proposed services based on the Scope of Work requested by the RIDOT including any technical issues that will or may be confronted.
- **DBE Participation:** If utilized the disclosure of DBE firm(s) proposed is to be documented in response to this solicitation. Include copy of Rhode Island State DBE Certification(s).

PRICING: Fully Inclusive as Described Below in this Required Format

<u>Applicable Inspection Certification(s)</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
⋮					
<u>Hourly Rates:</u>					
as Applicable:					
1. <u>Title or Class</u>					
Straight Time	_____	\$ _____	\$ _____	\$ _____	\$ _____
Overtime (> 8 hrs/per day, weekends holidays)		\$ _____	\$ _____	\$ _____	\$ _____
2. <u>Title or Class</u>					
Straight Time	_____	\$ _____	\$ _____	\$ _____	\$ _____
Overtime (> 8 hrs/per day, weekends holidays)		\$ _____	\$ _____	\$ _____	\$ _____
CONTINUE LIST AS APPLICABLE.					
X. <u>Title or Class</u>					
Straight Time	_____	\$ _____	\$ _____	\$ _____	\$ _____
Overtime (> 8 hrs/per day, weekends holidays)		\$ _____	\$ _____	\$ _____	\$ _____
<u>Per Diem Rate:</u>					
	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____

- Hourly Rates:** For each job title or job class of personnel applicable to the respondent's team of inspectors available to RIDOT, provide detailed profile of their certifications and itemized hourly rates for inspection and testing services in the above format. Rates are requested for straight time and overtime; overtime hours are productive eligible hours worked consecutively beyond a base eight-hour shift excluding lunch. These hourly rates are to be **fully inclusive** of all direct charges including wages and fringe benefits, and any and all indirect charges including administrative expenses with the exception of the per diem allowance priced separately. Prices are requested to be fully-disclosed for each of the five years in the required format above. If one price is offered, that price will remain firm and fixed for the maximum five-year contract term.
- Per Diem:** Prices are here requested expressed as per diem to be applied to productive days only of inspection/testing hours specifically to cover any necessary telephone, facsimile, copying and other communications expenses not otherwise included in overhead as well as any other miscellaneous expenses.

DOCUMENT FORMAT:

- Proposal Format:** Completed Letters of Interest must be submitted bound or contained in one single document. The contents must be organized in the exact order in which the Letter of Interest requirements are presented in these instructions with page numbers in consecutive order. The proposal should contain a Table of Contents that cross-references each Letter of Interest requirement with a specific page in the Proposal.

- **Supplemental Information:** Respondents are encouraged to submit any other information deemed useful to provide RIDOT with sufficient relevant information to evaluate the firm's qualifications and technical approach to the project.

PRE-PROPOSAL QUESTIONS:

Questions concerning this solicitation may be e-mailed to the Division of Purchases at questions@purchasing.state.ri.us no later than 24 Sept 02 @ 12:00 Noon (EDT). Please reference the LOI # on all correspondence . Questions received, if any, will be posted on the Internet as an addendum to this solicitation. It is the responsibility of all interested parties to download this information. For computer technical assistance, call the Help Desk at 401 222-2142, ext 134.

SUBMISSION REQUIREMENTS:

“Original” plus five (5) copies of the complete **Letter of Interest** is to be either mailed or hand-delivered in a sealed envelope marked:

LOI #B01457 Letters of Interest for Shop Inspection and Testing Services for Structural Materials no later than 8 Oct 02 @ 1:40 PM to:

BY COURIER:	BY MAIL:
RI Department of Administration Division of Purchases (2 nd fl) One Capitol Hill Providence, RI 02908-5855	RI Department of Administration Division of Purchases P.O. Box 6528 Providence, RI 02940-6528

NOTE: Proposals received after the above-referenced due date and time will not be considered. Proposals misdirected to other State locations or which are otherwise not presented in the Division of Purchases by the scheduled due date and time will be determined to be late and will not be considered. Proposals faxed to the Division of Purchases will not be considered. The official time clock, for th

EVALUATION AND SELECTION:

Letters of Interest will be evaluated through a Technical Review Committee comprised of members of the RIDOT Division responsible for the services under consideration. The Letters of Interest will be evaluated and ranked using the three criteria listed below. It is anticipated there will be multiple awards; all responsible offers receiving a score of 70 or greater will be included in the Price Agreement. Prices must be fully disclosed in the required format. The resulting Price Agreement will reflect accepted prices; RIDOT utilization of any given firm will be dependent upon expertise and price.

- **Capability and Qualifications of the Firm** **50 Points**
 - as evidenced by firm's relevant minimum of five years experience in providing on-call shop inspection and testing services for structural steel materials
 - as evidenced by firm's apparent ability to supply qualified staff for a range of different assignments simultaneously
- **Qualifications of Available Staff** **25 Points**
 - as evidenced by resumes/certifications of staff members each with a minimum of five years experience each offered to provide inspection and testing services for structural steel materials

- **Firm Workload** **25 points**
 - as evidenced by firm's apparent ability to supply sufficient qualified staff upon short notice for a range of assignments possibly simultaneously.

Total :100 points

Min. Acceptable: 70 Points

- The Technical Review Committee reserves the right to schedule interviews with qualified respondents if it is deemed in the best interest of the selection process. The results of such interviews will be factored into the final evaluation and ranking of respondents. Other submissions, certifications, or affirmations may also be required if deemed necessary.
- Final selection recommendations from this Committee's evaluation will be submitted to Purchases in order to establish the Price Agreement.
- At any point during the review process, any proposal found to be substantially non-responsive will be dropped from further consideration.

Notwithstanding the above, the State reserves the right to accept or reject any or all options, bids, proposals, to award on the basis of cost alone, and to act in its best interest.

The State reserves the right to make an award or multiple awards or to reject any or all offers based on what it considers to be in its best interest.

Detailed Scope of Work Follows.

SCOPE OF WORK

Shop Inspection and Testing Services for Structural Materials

1. GENERAL

The work to be performed shall conform to the relevant requirements of the Rhode Island Standard Specifications for Road and Bridge Construction which are current at the time of project advertising, the construction contract special provisions that are specific to the structural materials that are to be inspected (to be provided by the State), and the Specifications for inspection of Structural Material.

The work under this Price Agreement shall include or be based on the following:

- A. Provide qualified technical services for the shop inspection of the fabrication of structural steel consisting of welded plate girders, rolled beams with welded cover plates, diaphragms, stiffeners, connection and splice plates, expansion and bearing devices and protective coatings where applicable.
- B. Provide qualified operators and equipment necessary to perform ultrasonic testing of shop butt welds. Ultrasonic tests of shop butt welds are to be performed at the same locations as radiographic tests performed by the fabricator. A report of the ultrasonic test results shall be furnished to the Engineer.
- C. Furnish qualified non-destructive testing and inspection services for the evaluation of required radiographs of shop butt welds performed by the fabricator. A report evaluating the radiographic films of the shop butt welds shall be furnished to the Engineer.
- D. Furnish qualified non-destructive testing and inspection services for the witnessing of fabricator's interpretations of magnetic particle testing of shop fillet welds. Reports of magnetic particle test results shall be furnished to the Engineer.
- E. Provide qualified inspection and testing services on shop-applied coatings. Reports of coatings inspection and testing shall be furnished to the Engineer.

SPECIAL NOTES TO THE INSPECTION CONTRACTOR

1.) General:

Part of the work outlined in this contract is intended to include inspection services for the shop inspection of the fabrication of structural steel and the testing of shop welds. The Rhode Island Department of Transportation assumes no responsibility for delays in fabrication caused by construction scheduling.

2.) Quality Control:

Quality Control (QC) and Quality Assurance (QA) are the responsibility of the Fabricator. Independent acceptance testing and inspection will be provided by the Inspection Agency and as directed by RIDOT. Should the Inspection Agency have any knowledge of frequent QC/QA deficiencies by the fabricator on a current or previous fabrication contract, it must be brought to the RIDOT Engineer's attention in writing.

Independent testing and inspection is not intended to supplement or replace any inspection that is the responsibility of the Fabricator, but rather to verify that the Fabricator's QC-QA programs produce acceptable results. The Inspection Agency should schedule their work to effectively determine by random inspections and measurements, the ability of the Fabricator's inspection and required tests to insure that all materials and workmanship meet the requirements of the Construction Contract Documents. Acceptance of structural steel at the shop is based upon observations of the Fabricator's QC & QA inspection and tests, plus random testing inspections of materials and workmanship by the Inspection Agency. Defects in materials or workmanship, even when discovered subsequent to acceptance by the Inspection Agency are the responsibility of the Fabricator.

2. DOCUMENTS

The most current or applicable issue of the following documents, as required for individual projects, shall be included in the Inspector's file at the fabrication shop:

- A. Rhode Island Standard Specifications for Road and Bridge Construction
- B. Bridge Welding Code ANSI/AASHTO/AWS D1.5
- C. Contract Special Provisions and Supplemental Specifications
- D. Contract Plans
- E. Approved Shop Drawings
- F. Approved Welding Procedures

Note: Items C through F are for specific construction contracts to be let by the State.

3. TRAVEL EXPENSES

Travel expenses will be paid only for expenses incurred in conjunction with the performance of RIDOT-authorized requirements. Expenses incurred solely for the convenience of the Inspector and/or Contractor will not be allowed. Travel expenses will be limited to travel between an Inspector's normal place of departure and the fabrication shop (or material manufacturer) including return trip, which expenses shall be agreed to previously by the Engineer per Inspector, at \$.365 per mile. In those instances where long distance travel is warranted the only the following types of economical travel arrangements will be acceptable:

Air Travel: *Coach*
Hotel Accommodations: *Government Rates*
Car Rental: *Economy*
Travel Per Diem: *Max. \$24.*

** In all cases, the least expensive means of transportation and that, which is in the best interest of the State's economy, should be used.*

Once approval is given, travel expenses will be paid as follows:

- a) *Travel by public service transportation*: Copies of tickets, receipts, etc. shall be submitted.
- b) *Travel by private automobile*: Paid at a rate set by the State, currently \$. 365 cents per mile, to include all charges except tolls. Receipts for toll payments shall be included with the Inspector's weekly reports and will be paid separately. Reimbursement of expenses will be allowed for the actual miles for travel over the shortest and most convenient routes.
- c) *Travel by company owned vehicle*: Reimbursement for travel using a company vehicle shall be paid to the Inspection/Testing Provider at the same rate as stated in (b) above. The Inspector shall include in his weekly reports a written statement certifying that he has been assigned a company owned or leased vehicle.

When a fabricating shop is fabricating material for more than one project for which inspection is required:

- a) The time charged on each project shall be the actual time worked on each project vouchered to the nearest hour.
- b) Travel shall be calculated proportionally on the basis of time charged to each project, and the sum of such fees shall not exceed the charges representing the actual travel.

Transportation costs are reimbursable as follows:

- a) *Air transportation* requires pre-approval from RIDOT, the cost of which is reimbursable at the lowest rates.
- b) *Vehicle rental and parking fees* are reimbursable when air transportation is pre-approved and when requested for Department personnel to visit a fabrication shop.

Vouchers shall contain descriptions of the work and a breakdown of the productive hours actually worked, travel, and other transportation costs. Receipts of all transactions should be presented to the Department with the Contractor's invoice.

SPECIFICATION FOR SHOP INSPECTION OF STRUCTURAL STEEL AND TESTING OF WELDS

A. **Definitions:** Whenever the following nouns are used in this Bid Proposal Requisition, or in the Specifications for the services to be performed, they shall be interpreted to intend and mean the following:

1. **Inspection Agency:** The Company awarded the contract for the services to be performed as outlined in this Invitation for Bids.
2. **Inspector:** Any individual assigned by the Inspection Agency to perform inspection work under this contract and who has been previously approved by the State to perform such work.
3. **Engineer:** The Chief Engineer of the Department of Transportation of the State of Rhode Island, or his duly authorized agents or representatives, each acting within the scope of his duties.
4. **Fabricator:** Any individual, firm or corporation acting directly or through duly authorized agents or representatives who becomes the party of the second part of the Prime Construction Contract.
5. **Standard Specifications:** The Rhode Island Standard Specifications for Road and Bridge Construction Edition of 1997 with all Corrections and Addenda, available thru the Department of Transportation web site @ www.dot.state.ri.us/.

B. **Information Provided by the State:**

The following:

1. Structural Steel Plans and Approved Shop Drawings.
2. Pertinent Specific Special Provisions.
3. Two copies of Shop Inspection Contract.

C. **Coordination of Plans, Standard Specifications and Special Provisions:**

Figured dimensions shall govern over scaled dimensions: Special Provisions shall govern over Plans and Standard Specifications: Plans shall govern over Standard Specifications.

D. **Information Provided by the Inspection Agency:**

1. A written memorandum containing the name and a brief history of education and pertinent experience of each Inspector to be assigned to provide inspection for the subject project.
2. Fabrication inspection shall be performed by a Certified Weld Inspector (CWI), except for non-destructive testing (UT/RT) and/or coatings inspection, the requirements for which

are discussed below. The Certified Weld Inspector must be certified through A.W.S. testing procedures. For ultrasonic testing and radiograph witnessing and film

interpretation, the Inspector must be minimum Level II certified by ASNT. For coating inspection, the Inspector assigned to this project must be certified through the National Association of Corrosion Engineers (NACE) as having successfully completed a minimum of Session I coating inspection training. If more than one Inspector is assigned to the project, they shall work under the supervision of the Certified Weld Inspector. The Inspector shall provide the Engineer with copies of all pertinent up-to-date Inspector Certification Documents. In order to handle multiple assignments, the firm must show proof of a minimum of five (5) qualified inspection staff members.

3. Copies of all forms for testing and inspection reports of the types the Inspector proposes to use on the project.
4. A listing of all governing policies and codes, which the Inspector shall be required to have at his disposal. The Engineer may request a meeting to be held at the Bridge Section Office, Room 100 State Office Building, Providence, Rhode Island, in order to discuss the requirements of the Contract before the Contract is awarded.

E. Competency of the Inspector: It shall be the responsibility of the Inspection agency to provide sufficient personnel and equipment to satisfactorily perform the work. If additional Inspectors, not previously qualified as in D (1 and 2) above, shall be assigned to the project later, their names and experience records must be approved by the Engineer in advance. The Engineer shall be considered the sole judge of the adequacy of personnel and equipment; and the competency of the Inspector or Inspectors; and shall have the right to reject or dismiss any personnel of the inspection agency that are not performing the services satisfactorily. The inspecting agency or its duly authorized representative shall not provide inspection services on the same project for the Contractor or Fabricator who is doing the work for the State.

All services specified in this Inspection Contract shall be performed by the successful respondent(s) unless a subcontractor is approved, in writing, by the Engineer.

F. Inspector's Authority: The Inspector shall have the authority to reject any material or work, which does not meet the requirements of the Specific Special Provisions, Plans, or Rhode Island Standard Specifications or other governing requirements. In case of dispute, the Fabricator may appeal to the Engineer whose decision shall be final.

G. Availability of the Inspector: In general, the Inspector shall be available to perform the necessary tasks and inspection whenever requested by the Fabricator or the State as necessary.

H. General Conditions:

1. **Laws to be Observed:** The Fabricator, at all times, shall observe and comply with all Federal and State Laws and local by-laws, ordinances and regulations in any manner affecting the conduct of the work, and all such orders and decrees as exist at present and

hose which may be enacted, by bodies or tribunals having any jurisdiction or authority over the work, and shall indemnify and save harmless by the State and all of its officers, agents and servants against any claim or liability arising from, or based on, the violation of any such law, by-law, ordinance, regulation, order or decree, whether by himself or his employees.

2. The successful bidder must furnish Insurance Certificates providing Workmen's Compensation, Public Liability and Property Damage Insurance covering personnel while engaged in this work, along with applicable Professional Liability Insurance and Valuable Papers Insurance. The minimum for the Professional Liability Insurance shall be \$1,000,000, while the minimum for the Valuable Papers Insurance shall be \$150,000. In both cases the State of Rhode Island shall be named as additional insured.
3. The State reserves the right to increase or decrease the quantities shown or delete entirely any items that may not be required. No adjustment will be made for anticipated profits.

I. Required Activities for Structural Steel Inspection, Item 1

1. Preliminary: The Inspector shall:

- (a) Review the mill test reports on metals and forward three copies of the reports, as well as a copy of certifications that the chemical and physical properties appearing on each report, individually identified, meet the requirements or the Specifications and those shown on the Plans.

The inspection agency shall secure the above reports from the Fabricator in sufficient time so that the State also will have the opportunity to examine these documents before the material is incorporated into the work.

- (b) Verify that the steel used is the same as the steel described on the mill test reports by checking the heat number and also the specification identification marking and color-coding required by the AASHTO Specification.
- (c) Conduct a surface inspection of steel with attention to the following points:
 - (1) That the section, length and cross-section geometry are within the specified Tolerances.
 - (2) Inspect for defects such as pipes, cracks, lamination, buckles, kinks and underfills. Overfills may be accepted if appearance of the member of plate is not objectionable.
 - (3) Excessive or reverse mill camber.

2. **Cutting and Straightening of Material:** The Inspector shall:

1. Check for cuts for neatness and trueness.
2. Insure that flame cutting is not substituted for punching or drilling.
3. Where flame cutting is allowed, see that the requirements for pre-heating and roughness are observed. The Inspector shall inspect flame cut edges for the possible presence of laminations and cracks.
4. Be present where material is straightened or cambered by the application of heat. Procedures for heat straightening or cambering shall have prior approval of the Engineer.
5. Measure copes and blocks of beams used in framed connections to insure adequate clearance.
6. The inspector shall inspect important templates for squareness and accuracy.

3. **Splices, Joints and Connections:** The Inspector shall:

- (a) Gage the diameter of bored pin holes, and check the walls for smoothness. Place pin in the hole to check the fit of the pin.
- (b) Check alignment and accuracy of punched and reamed holes for bolted work. Check reamed holes for cylindrical shape. See that shavings are cleaned from between two assembled surfaces in a bolted joint.
- (c) Check milled compression joints for closeness of fit.
- (d) Check beveled cuts.
- (e) Ascertain that the fit of members joined in a tens on splice is close, in accordance with the applicable specification.

5. **Shop Assemblies:** Where members which are to be field spliced are given a shop lay down assembly, the Inspector shall carefully check the fit and positioning of such shop assemblies. In addition to seeing that such assemblies have been correctly made and are properly punched and reamed, the Inspector shall:

- (a) Measure and record the cambers and variation from plan cambers of all beams, girders, and trusses at same points where camber is designated on the plans.
- (b) Check match marks and erection marks placed on members by the shop.

6. The Inspector shall carefully check completed work for general finish and workmanship as follows:

- (a) Compare the finished members with the plans for correct sections, dimensions, connection locations, detailing and workmanship.
- (b) Check finished members for kinks, bends, twists, and proper cross-section geometry.
- (c) Where stringers or girders are to be erected in line, the length center-to-center of end connections or splices shall be carefully checked to prevent the members from overrunning in length.
- (d) Measure and record the overall lengths and lengths center-to-center of bearings of all primary members. The overall lengths of secondary members shall be checked.
- (e) Camber and variations from plan camber shall be measured and recorded for all primary members where not covered previously under 5. (a).
- (f) Check that final sandblasting has been performed as required.

7. **Welding:** Welding and structural steel shall conform to the latest revision of the Rhode Island Standard Specifications and the Specific Special Provisions' terms, and the Contract Plans. The Inspector shall:

- (a) In advance of any welding operations, ascertain that all welding operators used to fabricate the structural steel are certified as specified in the applicable articles of the Rhode Island Standard Specifications.
- (b) In advance of welding operations, identify the welding procedure specification the fabricator plans to use at each joint carrying calculated stress, ascertain that these specifications have been approved by the State, and forward separate certification to that effect to the State.
- (c) Inspect actual welding regularly to insure that the qualified welding procedure is being followed, in accordance with the procedure specification.
- (d) Determine that the proper electrodes are being used. Storage conditions and care of electrodes shall be noted, with special attention to low hydrogen electrodes.
- (e) Check the geometry of welded joints before welding. The Inspector shall:
 1. Ascertain that the dimensions and form of edge preparation are as required.
 2. Check flame cut edges for cracks, laminations and other forms of defects.
 3. Check alignment of members to be spliced. See that provision is made to permit one member of the joint to move.
- (f) Check for correct pre-heat, interpass and post-heat temperatures.

- (g) See that the specified grade of weldable steel is used.
- (h) See that all unsound metal is removed from the root of butt groove welds by proper methods as provided for in the applicable Welding Code.
- (i) Perform visual inspection of completed weld and the base metal for cracks, notches, undercutting and other defects.
- (j) Check finished weld for correct profile and cross-section.
- (k) Check material certification of electrode and flux used.
- (l) Witness testing of any special joint procedure qualifications.
- (m) At the conclusion of the welding, the Inspector shall certify in letter form that the qualified welding procedures have been followed.
- (n) Ascertain that the required non-destructive testing of the welds is set up and performed as required.

8. Painting (If Applicable): The Inspector shall:

- (a) Observe that areas that are not to be painted are so marked.
- (b) Inspect the steel to see that it is thoroughly cleaned and surface prepared in accordance with the governing specifications before painting.
 - 1) The Inspector shall see that all welds are neutralized in accordance with the applicable articles of the latest AASHTO Specifications.
- (c) Insure that proper atmospheric conditions are prevailing for painting, including the temperature of the materials.
- (d) See that paint is applied in accordance with specifications including measurement of wet or dry film thickness as applicable and that members are dry before shipping.
- (e) Check thinning of paint to determine that an approved thinner is used and that the 5% allowance is not exceeded, especially in spray application, unless the Inspector approved it as being necessary.
- (f) Obtain a sample of paint from a batch that is being used to shop coat the structural steel and perform tests on the sample to insure that the paint conforms to the Specifications. Forward three copies of the results of these tests with certification that sample tests conform to specifications along with a portion of the sample; as well as three copies of the manufacturer's certificate of compliance to the Engineer.

9. **Miscellaneous:** The Inspector shall:

- (a) Check castings for blow holes and other defects.
- (b) Check size, location and fit of stiffeners.
- (c) See that all primary members are provided with identification marks so that the Field Engineer can relate the members in the field to the shipping and inspection reports. The shipping marks shall be verified.

In accordance with FHWA recommendations, “Where the steel stamping method is used, impressions shall be placed on the thicker tension-joint member in transition joints. The maximum allowable depth of the impression shall be 0.010 inch and the tool shall conform with the following requirements. Impressions shall be avoided near edges of tensile-stressed plate members.”

<u>Character Size</u>	<u>Minimum Character Face Radius</u>
(Inches)	(Inches)
1/8	0.007
3/16	0.008
1/4	0.010

- (d) Mark each primary member to signify that it has been inspected and accepted. The identifying mark shall include the name or initials of the inspecting agency. Identification marks shall be applied in accordance with FHWA recommendations, as listed in (c) above.
- (e) Report to the Engineer all defects or problems encountered, as well as all corrective measures taken.
- (f) Notify the Engineer of any errors or inaccuracies noticed in the shop drawings.
- (g) Check to see that the centerlines of anchor bolt holes are clearly scribed on ends and side faces of masonry plates.
- (h) Members weighing in excess of three tons shall have the weights marked thereon.

10. The inclusion of the detailed duties listed in this section shall not relieve the Inspector from performing other duties, which are necessary to insure that the steel is fabricated in accordance with the requirements of the Contract.

J. **Inspection Reports for Structural Steel Inspection, Item 1:**

- 1. The Inspection Agency shall submit in triplicate to the State, on a weekly basis, daily reports of inspection activities performed under this contract. These reports shall

besubmitted to the Design Section, numbered chronologically, and shall include the following:

- (a) Rhode Island Contract Number and structure identification.
- (b) The site and fabricator, date and hours spent, performing these inspection services.
- (c) A summary of inspection services performed including:
 - 1. Statements in enough detail to assure the Engineer that the State's requirements for the construction contract are being fulfilled.
 - 2. Identity of members possessing faulty workmanship and repairs performed.
 - 3. Identity of members satisfactorily completed, including submission of required check-off list. *
 - 4. A complete list of recorded cambers in tabulated form shall be submitted to the Engineer upon completion of cambering operations.

* The first major member deemed satisfactorily completed by the inspection agency shall conform to the accompanying check-off list. By placing a checkmark opposite each service that has been performed, the Inspector indicates that these services have been satisfactorily completed on this member and may apply to all subsequent members classified as satisfactorily completed. However, any major members, differing from the first may require an additional check-off list if additional services have been performed on it.

- 2. An estimate of the total amount of Structural Steel fabricated and ready for shipment shall be submitted on a weekly basis.

K. Inspection Requirements for Non-Destructive Testing of Welds - Items 2 and 3

All testing shall conform to the applicable articles of Section 809 of the latest revision for Rhode Island Standard Specifications for Road and Bridge Construction and A.W.S. Specification D1.5.

All testing reports identified as in J.1. of this contract, shall be forwarded to the State.

Item 2. Ultrasonic Testing of Butt Welds

The Inspector shall perform ultrasonic testing of shop butt welds, as required, in the same locations as radiographs are to be taken.

The Inspector shall interpret the readings and accept or reject the tested area. He shall define to the Fabricator the defects to be corrected and report on all tested areas.

These reports shall be promptly forwarded to the Engineer.

Item 3. Radiographic Testing of Butt Welds

After the Fabricator has taken and reviewed the required radiographs of shop welds, the Inspector shall accept or reject the area radiographed and define to the Fabricator the defects to be corrected. This would, in general, be done within the same working day.

The Inspector shall report on the radiographs, evaluating each. Each view in the report must be referenced to the completed member and its location on it. The rejected views shall be clearly indicated.

These reports shall be promptly forwarded to the State, as well as one set of the radiographs, when released by the Fabricator.

Item 4. Magnetic Particle Testing of Fillet Welds

The Inspector shall direct the location of and observe Magnetic Particle Tests of fillet welds. The equipment and operator will be furnished by the Fabricator. The Inspector shall record the locations of the tested areas and report any observed defects.

SAMPLE FORMS TO BE USED
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

Project: _____

Subject: _____

Inspector: _____ **Date:** _____

Check-off List

Member Mark: _____ **Bridge No.:** _____ **R.I. Contract No.:** _____

Location: _____ **S.O. No.:** _____ **Date:** _____

<u>No.</u>	<u>Shop Activity</u>	<u>Completed</u>	<u>Remarks</u>
1	Review Specifications, Plans & Provisions		
2	Verify Welder Qualifications		
3	Verify Electrode, Flux & Wire Certifications and Storage Conditions		
4	Check Fabricator's Qualifications and Testing Agency Personnel Credentials		
5	Verify Testing Agency's Compliance With Specifications		
6	Obtain the Mill Order and Fill Test Reports		
7	Check and Certify All Materials		
8	Verify steel Heat Numbers		
9	Inspect for Defects, Proper Dimensions and Mill tolerances		
10	Check for Proper Storage		
11	Material From Stock, Properly Documented		
12	Inspect Flame Cutting Operations (Cutting, Edge Condition, Roughness, Etc.)		
13	Inspect Joint Preparation Operations (Procedure, Pre-Heat/Post-Heat, Discontinuities Edge Defects, Etc.)		
14	Inspect Assembly Operations (Fit-up, Pre-Heat, Weld Sequences and Procedures		

<u>No.</u>	<u>Shop Activity</u>	<u>Completed</u>	<u>Remarks</u>
15	Inspect Welding Operations (Procedures, Electrodes, Pre-Heat, Discontinuities, Edge Defects, Grinding, Weld Contours, Etc.)		
16	Observe and/or Perform Required Non-Destructive Testing (Visual, Dye Penetrant, Mag Particle, Radiograph, Ultrasonic, Etc.)		
17	Record All Testing and Observation Results		
18	Check Preparation and Precision of Field Joints (Fit-Up, Holes, Splice Plates, Etc.)		
19	Check Finished Member for Workmanship		
20	Check Full Lay Down Assembly		
21	Check and Record Camber at Points Shown on Plans		
22	Record Distances C. to C. of Bearings		
23	Check Surface Preparation for Painting (M.11 Scale, Neutralize Welds, Cleaned Soiled Areas, Etc.)		
24	Check Blast Cleaning Where Appropriate or Where Required		
25	Inspect Painting Operations (Color, Specs., Thickness, Samples, Workmanship, etc.)		
26	Check Storage		
27	Check Shipping		

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2	Verify Welder Qualifications		
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