BID #7448315 - DESIGN/BUILD Services for the Replacement of the Laurel Avenue Bridge #397, Coventry, RI

Prepared For:

Rhode Island Department of Transportation

Submitted By:

Aetna Bridge Company, Inc. (Lead Contractor)
Steere Engineering, Inc. (Lead Engineer)

Supported by GZA GeoEnvironmental, Inc. & Bryant Associates, Inc.

Due Date:

April 22, 2011 by 11:30 AM

State of Rhode Island and Providence Plantations Contract Offer

RIVIP GENERATED BIDDER CERTIFICATION COVER FORM

SECTION 1 - VENDOR INFORMATION

Bid/RFP Number:	7448315A4
Bid/RFP Title:	RFP - DESIGN/BUILD SVCS FOR REPLACEMENT OF THE LAUREL AVE BRIDGE #397 - AD
Opening Date & Time:	4/22/2011 11:30 AM
RIVIP Vendor ID #:	2907
Vendor Name:	Aetna Bridge Company
Address:	30 Lockbridge Street Pawtucket, RI 02860 USA
Telephone:	(401) 728-0400
Fax:	(401) 728-0189
E-Mail:	jbostock@aetnabridge.com
Contact Person:	Jeffrey A. Bostock
Title:	Vice President - Construction
R.I. Foreign Corp #:	

NOTICE TO VENDORS

Effective January 1, 2011 all public works project related bids or proposals exceeding one million ($1,000,000) dollars are required to include a "public copy". All agency contract solicitations, requests for proposals, invitations for bids, etc. shall state that any bid or proposal that exceeds one million ($1,000,000) dollars must include a copy to be available for public inspection upon the opening of the bids. Any bid or proposal in excess of one million ($1,000,000) dollars which does not include a copy for public inspection shall be deemed to be non-responsive. For further information, please see R. I. Gen. Laws §37-2-18 (P.L. 221) http://www.rilin.state.ri.us/PublicLaws/law10/law10221.htm and Purchasing Rules & amendment at http://www.purchasing.ri.gov/Notices2.aspx. See Question #11 below for further instructions regarding RIDOT Highway and Bridge Construction projects.

In addition, the Division of Purchases has promulgated proposed regulations pursuant to R.I. Gen. Laws § 37-2-18 that implements the "public copy" requirement. Public hearing on the proposed regulations was held on Friday, December 17, 2010. The proposed regulations became final on January 11, 2011. For further information please visit www.sos.ri.gov.

NOTE: AWARD OF CONTRACTS AND PURCHASE ORDERS SHALL BE SUBJECT, AT THE DISCRETION OF THE PURCHASING AGENT, TO THE OFFEROR COMPLETING AN ON-LINE RIVIP REGISTRATION at www.purchasing.ri.gov. It is THE RESPONSIBILITY OF THE VENDOR to make on-line corrections/updates using the Vendor maintenance program on the RI Division of Purchases Web Site.

SECTION 2 - REQUIREMENTS

ALL OFFERS ARE SUBJECT TO THE REQUIREMENTS, PROVISIONS AND PROCEDURES CONTAINED IN THIS THREE-PAGE CERTIFICATION FORM. Offerors are expected to READ, SIGN and COMPLY with all requirements. Failure to do so may be grounds for disqualification of the offer contained herein.

Section 2.1 - RULES FOR SUBMITTING OFFERS

2.1A. This CERTIFICATION FORM MUST BE ATTACHED IN ITS ENTIRETY TO THE FRONT OF THE OFFER and shall be considered an integral part of each offer made by a vendor to enter into a contract with the State of Rhode Island, Division of Purchases. As such, submittal of the entire Bidder Certification Cover Form, signed by a duly authorized representative of the offeror attesting that he/she (1) has read and agrees to comply with the requirements set forth herein and (2) to the accuracy of the information provided and the offer extended, is a mandatory part of any contract award.

To assure that offers are considered on time, each offer must be submitted with the specific Bid/RFP/LOI number (provided above), date and time of opening marked in the upper left hand corner of envelope. Each bid/offer must be submitted in separate sealed envelopes.

A complete, signed (in ink) offer package, must be delivered to the Division of Purchases (via any mail or messenger service) by the time and date specified for the opening of responses in a sealed envelope.

Bids must be submitted on the RI bid solicitation forms provided, indicating brand and part numbers of items offered, as appropriate. Bidders must submit detailed cuts and specs on items offered as equivalent to brands requested WITH THE OFFER. Bidders must be able to submit samples if requested.
Mail To: Division of Purchases, One Capitol Hill, Second Floor, Providence, RI 02908-5855.

Documents misdirected to other State locations or which are not present in the Division of Purchases at the time of opening for whatever cause will be deemed to be late and will not be considered. For the purposes of this requirement, the official time and date shall be that of the time clock in the Division of Purchases. Postmarks shall not be considered proof of timely submission.

2.1B. RIVIP SOLICITATIONS. To assure maximum access opportunities for users, public bid/RFP solicitations shall be posted on the RIVIP for a minimum of seven days and no amendments shall be made within the last five days before the date an offer is due. Except when access to the Web Site has been severely curtailed and it is determined by the State Purchasing Agent that special circumstances preclude extending a solicitation due date, requests to mail or fax hard copies of solicitations will not be honored. When the result of an Internet solicitation is unsuccessful, the State of Rhode Island will cancel the original solicitation and resolicit the original offer directly from vendors.

2.2. PRICING. Offers are irrevocable for sixty (60) days from the opening date (or such other extended period set forth in the solicitation) and may not be withdrawn, except with the express permission of the State Purchasing Agent. All pricing will be considered to be firm and fixed unless otherwise indicated. The State of Rhode Island is exempt from Federal excise taxes and State Sales and Use Taxes. Such taxes shall not be included in the bid price. PRICES QUOTED ARE FOB DESTINATION.

2.3. DELIVERY and PRODUCT QUALITY. All offers must define delivery dates for all items; if no delivery date is specified, it is assumed that immediate delivery from stock will be made. The contractor will be responsible for delivery of materials in first class condition. Rejected materials will be at vendor's expense.

2.4. PREVAILING WAGE, OSHA and APPRENTICESHIP.

2.4.1 Prevailing Wage and OSHA Safety Training Requirements. The provisions of the State labor laws and OSHA Safety Training, including but not limited to Rhode Island General Laws 37-13-1 et seq. and 28-20-1 et seq., shall apply for all public works contracts. Prevailing wage rates are posted in the information section of the RIVIP. The RI Department of Labor and Training should be contacted for regulatory requirements.

2.4.2 (a) Apprenticeship. Rhode Island General Laws §37-13-3.1 requires all general contractors and subcontractors who perform work on any public works contract awarded by the state valued at one million dollars ($1,000,000) or more shall employ apprentices required for the performance of the awarded contract. The number of apprentices shall comply with the apprentice to journeyman ratio for each trade approved by the apprenticeship council of the department of labor and training.

2.4.2(b) In addition to executing this certification, the general contractor shall be responsible for requiring that all subcontractors on the awarded project certify their compliance with R.I. Gen. Laws §37-13-3.1 prior to allowing the subcontractor to commence work on the awarded project. The general contractor shall be responsible for submitting the subcontractors compliance certification to the Division of Purchases after the contracts are finalized between the contractor and subcontractor.

2.5. PUBLIC RECORDS. Offerors are advised that all materials submitted to the State for consideration in response to this solicitation will be considered without exception to be Public Records pursuant to Title 38 Chapter 2 of the Rhode Island General Laws, and will be released for inspection immediately upon request once an award has been made. Offerors are encouraged to attend public bid/RFP openings to obtain information; however, bid/RFP response summaries may be reviewed after award(s) have been made by using the RIVIP at any time or appearing in person at the Division of Purchases Mondays through Fridays between 8:30 a.m. and 3:30 p.m. Telephone requests for results will not be honored. Written requests for results will only be honored if the information is not available on the RIVIP.

SECTION 3 - AWARD DETERMINATION

Award will be made to the responsive and responsible offeror quoting the lowest net price in accordance with specifications, for any individual item(s), for major groupings of items, or for all items listed, at the State's sole option.
3.1. BID SURETY. Where bid surety is required, bidder must furnish a bid bond or certified check for 5% of the bid total with the bid, or for such other amount as may be specified. Bids submitted without a required bid surety will not be considered.

3.2. SPECIFICATIONS. Unless specified "no substitute," product offerings equivalent in quality and performance will be considered (at the sole option of the State) on the condition that the offer is accompanied by detailed product specifications. Offers which fail to include alternate specifications may be deemed nonresponsive.

SECTION 4 – CONTRACT PROVISIONS

4.1. VENDOR AUTHORIZATION TO PROCEED.

4.1A. When a purchase order, change order, contract/agreement or contract/agreement amendment is issued by the RI Division of Purchases, no claim for payment for services rendered or goods delivered contrary to or in excess of the contract terms and scope shall be considered valid unless the vendor has obtained a written change order or contract amendment issued by the Division of Purchases PRIOR TO delivery.

4.1B. Any offer, whether in response to a solicitation for proposals or bids, or made without a solicitation, which is accepted in the form of an order OR Pricing Agreement made in writing by the Purchasing Agent, or a state official with purchasing authority delegated by the Purchasing Agent, shall be considered a binding contract.

4.2. REGULATIONS, GENERAL TERMS AND CONDITIONS GOVERNING STATE CONTRACTS. This solicitation and any contract or purchase order arising from it are issued in accordance with the specific requirements described herein, and the State's Purchasing Laws and Regulations and other applicable State Laws. The Regulations, General Terms and Conditions are incorporated into all state contracts. These regulations and basic information on How To Do Business with the State of Rhode Island are posted on the Rhode Island Vendor Information Program Website (www.purchasing.ri.gov).

4.2A. ARRA SUPPLEMENTAL TERMS AND CONDITIONS. Contracts and sub-awards funded in whole or in part by the American Recovery and Reinvestment Act of 2009. Pub.L.No. 111-5 and any amendments thereto, such contracts and sub-awards, shall be subject to the Supplemental Terms and Conditions For Contracts and Sub-awards Funded in Whole or in Part by the American Recovery and Reinvestment Act of 2009. Pub.L.No. 111-5 and any amendments thereto located on the Division of Purchases website at www.purchasing.ri.gov.

4.3. EQUAL EMPLOYMENT OPPORTUNITY. Compliance certificate and agreement procedures will apply to all awards for supplies or services valued at $10,000 and more. Minority Business Enterprise policies and procedures, including subcontracting opportunities as described in Title 37 Chapter 14.1, of the Rhode Island General Laws, also apply.

4.4. PERFORMANCE BONDS. Where indicated, successful bidder must furnish a 100% performance bond and labor and payment bond for contracts subject to Title 37 Chapters 12 and 13 of the Rhode Island General Laws. All bonds must be furnished by a surety company authorized to conduct business in the State of Rhode Island. Performance bonds must be submitted within 21 calendar days of the issuance of a tentative notice of award.

4.5. DEFAULT and NON-COMPLIANCE. Default and/or non-compliance with the RIVIP requirements and any other aspects of the award may result in withholding of payment(s), contract termination, debarment, suspension, or any other remedy necessary that is in the best interest of the state.

4.6. COMPLIANCE. Vendor must comply with all applicable federal, state and local laws, regulations and ordinances.

4.7. SPRINKLER IMPAIRMENT AND HOT WORK. The Contractor agrees to comply with the practices of the State's insurance carrier for sprinkler impairment and hot work. Prior to performing any work, the Contractor shall obtain the necessary information for compliance from the Risk Management Office at the Department of Administration or the agency for which work will be performed.

SECTION 5 – CERTIFICATIONS AND DISCLOSURES

ALL CONTRACT AWARDS ARE SUBJECT TO THE FOLLOWING DISCLOSURES & CERTIFICATIONS

Offerors must respond to every disclosure statement.

A person authorized to enter into contracts must sign the offer and attest to the accuracy of all statements.

Indicate Yes (Y) or No (N):

N 1. Has your firm (or any principal) been subject to any of the following findings by the Federal Government, the State of Rhode Island or any other jurisdiction? Suspension, Debarment, Indictment, Criminal Conviction. CIRCLE APPROPRIATE ITEM(S).

N 2. Has your firm (or any principal) been fined more than $5000 for a single violation by the Rhode Island Department of Environmental Management for violation of Rhode Island Wetlands law?

Y 3. I/we certify that I/we will immediately disclose, in writing, to the Chief Purchasing Officer any potential conflict of interest, which may occur during the course of the engagement authorized pursuant to this contract.

Y 4. I/we acknowledge that, in accordance with Chapter 37-2-54(c) of the Rhode Island General Laws "no purchase or contract shall be binding on the state or any agency thereof unless approved by the Department [of Administration] or made under general regulations which the Chief Purchasing Officer may prescribe", including change orders and other types of contracts and under State Purchasing Regulation 8.2.1.1.2, "any alleged oral agreement or arrangements made by a bidder or contractor with any agency or an employee of the Office of Purchases may be disregarded and shall not be binding on the state".

Y 5. I/we certify that the above vendor information is correct and complete.

Y 6. I/we certify that I/we or my/our firm possesses all licenses required by Federal and State laws and regulations as they pertain to the requirements of the solicitation and offer made herein and shall maintain such required license(s) during the entire course of the contract resulting from the offer contained herein and should my/our license lapse or be suspended, I/we shall immediately inform the Rhode Island State Purchasing Agent in writing of such circumstance.

Y 7. I/we certify that I/we will maintain required insurance during the entire course of the contract resulting from the offer contained herein and should my/our insurance lapse or be suspended, I/we shall immediately inform the Rhode Island State Purchasing Agent in writing of such circumstance.

Y 8. I/we certify that I/we understand that falsification of any information herein or failure to notify the Rhode Island State Purchasing Agent as certified herein may be grounds for suspension, debarment and/or prosecution for fraud.

Y 9. I/we acknowledge that the provisions and procedures set forth in this three-page form apply to any contract arising from this offer.

Y 10. I/we acknowledge that I/we understand the State's Purchasing Laws (37-2 of the General Laws of Rhode Island) and Purchasing Regulations and General Terms and Conditions available at the Rhode Island Division of Purchases Website (www.purchasing.ri.gov) apply as the governing conditions for any contract or purchase order I/we may receive from the State of Rhode Island, including the offer contained herein.

Y **11. NEW REQUIREMENT* - IMPORTANT!!! I/we hereby acknowledge that I/we understand that effective January 1, 2011 all public works related project bids or proposals exceeding One Million Dollars ($1,000,000), inclusive of all proposed alternates, must include a "public copy" as required by R.I. Gen. Laws § 37-2-18 and the "Rules, Regulations and General Conditions of Purchases". It is further understood that any bid or proposal in excess of One million Dollars ($1,000,000) which does not include a copy for public inspection shall be deemed to be non-responsive.**

RIDOT Highway and Bridge Public Works related projects utilizing Quest Lite program only – Effective immediately, submission to the Division of Purchases of a duplicate original of a vendor's Quest Lite compatible electronic copy on a readable compact disk shall satisfy the statutory "public copy" requirements. Quest Lite software is defined in the Division of Purchases "Rules, Regulations and General Conditions of Purchases" §12.102.05 (Preparation of Proposal), as adopted on December 15, 2010 and January 11, 2011.

For further information, please see R.I Gen. Laws § 37-2-18 and specific instructions at www.purchasing.ri.gov .

IF YOU HAVE ANSWERED "YES" TO QUESTIONS #1–2 OR IF YOU ARE UNABLE TO CERTIFY YES TO ITEMS #3–11 OF THE FOREGOING, PROVIDE DETAILS/EXPLANATION BELOW AND/OR IN AN ATTACHED STATEMENT. INCOMPLETE CERTIFICATION FORMS SHALL BE GROUNDS FOR DISQUALIFICATION OF OFFER.

Signature below commits vendor to the attached offer and certifies (1) that the offer has taken into account all solicitation amendments, (2) that the above statements and information are accurate and that vendor understands and has complied with the requirements set forth herein. When delivering offers in person to One Capitol Hill, vendors are advised to allow at least one hour additional time for clearance through security checkpoints.

Date 4/1/11

Vendor's Signature (Person authorized to enter into contracts; signature must be in ink.)

Jeffrey A. Bostock, Vice President - Construction

Print Name and Title of company official signing offer

Revised: 3/21/11

Steere Engineering Inc.

State of Rhode Island and Providence Plantations

STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

BE IT KNOWN THAT

STEERE ENGINEERING, INC.

having given satisfactory evidence that having the qualifications required by law is hereby authorized to practice

Professional Engineering

IN THE STATE OF RHODE ISLAND

as a Corporation

IN WITNESS WHEREOF, THE BOARD HAS ISSUED THIS CERTIFICATE OF AUTHORIZATION NO. 6027 *UNDER THE SEAL OF THE BOARD THIS* 6TH *DAY OF* OCTOBER, 2010

CHAIRMAN *SECRETARY*

GZA Environmental, Inc.

STATE OF RHODE ISLAND

RI Board of Registration for Professional Engineers
Expires
June 30, 2012

STATE BOARD OF REGISTRATION
FOR PROFESSIONAL ENGINEERS
BE IT KNOWN THAT

GZA GEOENVIRONMENTAL, INC.

having given satisfactory evidence that having the qualifications required by law is hereby authorized to practice

Professional Engineering

IN THE STATE OF RHODE ISLAND

as a Corporation

IN WITNESS WHEREOF, THE BOARD HAS ISSUED THIS CERTIFICATE OF REGISTRATION NO. 5234 UNDER THE SEAL OF THE BOARD THIS 13TH DAY OF OCTOBER 1993.

STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

CHAIRMAN

SECRETARY

Bryant Associates, Inc.

STATE OF RHODE ISLAND

Expires
June 30, 1996

STATE BOARD OF REGISTRATION
FOR PROFESSIONAL ENGINEERS
BE IT KNOWN THAT

BRYANT ASSOCIATES, INC.

having given satisfactory evidence that having the qualifications required by law is hereby authorized to practice

Professional Engineering

IN THE STATE OF RHODE ISLAND

as a Corporation

IN WITNESS WHEREOF, THE BOARD HAS ISSUED THIS CERTIFICATE OF REGISTRATION NO. 5142 UNDER THE SEAL OF THE BOARD THIS 7TH DAY OF October 1992

STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

CHAIRMAN *SECRETARY*

State of Rhode Island and Providence Plantations

STATE BOARD OF REGISTRATION
FOR PROFESSIONAL LAND SURVEYORS
BE IT KNOWN THAT

BRYANT ASSOCIATES, INC.

having given satisfactory evidence of meeting the qualifications required by law is hereby issued this Certificate of Authorization to practice

Professional Land Surveying

IN THE STATE OF RHODE ISLAND

as a CORPORATION

Person(s) listed in responsible charge: THOMAS D. DRURY, JR. PLS #1711 THOMAS R. CULLIGAN, JR. PLS #1953 GARY J. HAMILTON PLS #1887

IN WITNESS WHEREOF, THE BOARD HAS ISSUED THIS CERTIFICATE OF AUTHORIZATION NO LS-A55 UNDER THE SEAL OF THE BOARD THIS 11TH DAY OF OCTOBER, 2001 AND IS VALID FROM ~~JUNE 1, 2000~~ DECEMBER 12TH, 2000 TO ~~JUNE 30, 2000~~ MAY 18TH, 2001

STATE BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS

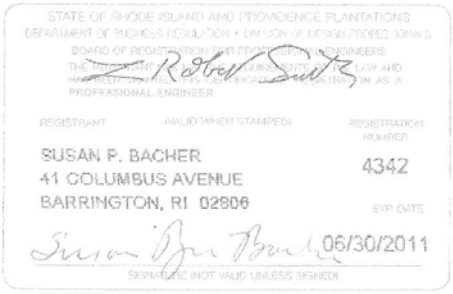
CHAIRMAN *SECRETARY*

Steere Engineering Inc.

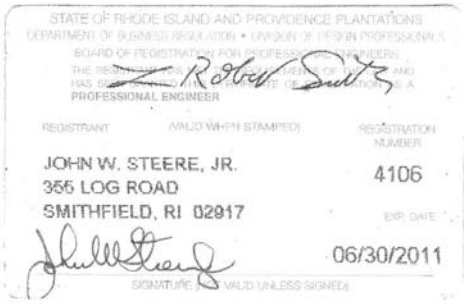
Patricia D. Steere, P.E.
Design Manager
Lead Design Engineer and Bridge Engineer

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
PROFESSIONAL ENGINEER
REGISTRANT (VALID WHEN STAMPED) REGISTRATION NUMBER
PATRICIA D. STEERE 5056
355 LOG ROAD
SMITHFIELD, RI 02917
EXP. DATE
06/30/2011
SIGNATURE (NOT VALID UNLESS SIGNED)

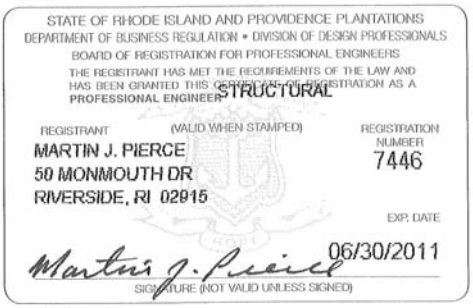
Susan Payne Bacher, P.E., LEED AP
Structural Engineer Bridge


STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
PROFESSIONAL ENGINEER
REGISTRANT (VALID WHEN STAMPED) REGISTRATION NUMBER
SUSAN P. BACHER 4342
41 COLUMBUS AVENUE
BARRINGTON, RI 02806
EXP. DATE
06/30/2011
SIGNATURE (NOT VALID UNLESS SIGNED)

John W. Steere, P.E.
Structural Engineer Bridge

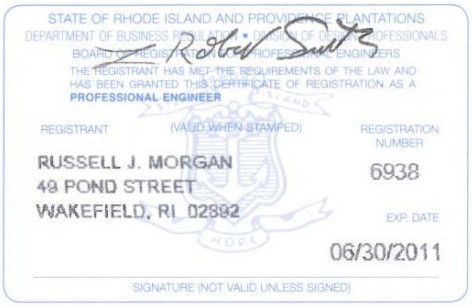

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
PROFESSIONAL ENGINEER
REGISTRANT (VALID WHEN STAMPED) REGISTRATION NUMBER
JOHN W. STEERE, JR. 4106
355 LOG ROAD
SMITHFIELD, RI 02917
EXP. DATE
06/30/2011
SIGNATURE (NOT VALID UNLESS SIGNED)

Martin Pierce, P.E.
Structural Engineer Bridge


STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF BUSINESS REGULATION • DIVISION OF DESIGN PROFESSIONALS
BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS
THE REGISTRANT HAS MET THE REQUIREMENTS OF THE LAW AND HAS BEEN GRANTED THIS CERTIFICATE OF REGISTRATION AS A
PROFESSIONAL ENGINEER STRUCTURAL
REGISTRANT (VALID WHEN STAMPED) REGISTRATION NUMBER
MARTIN J. PIERCE 7446
50 MONMOUTH DR
RIVERSIDE, RI 02915
EXP. DATE
06/30/2011
SIGNATURE (NOT VALID UNLESS SIGNED)

GZA Environmental, Inc.

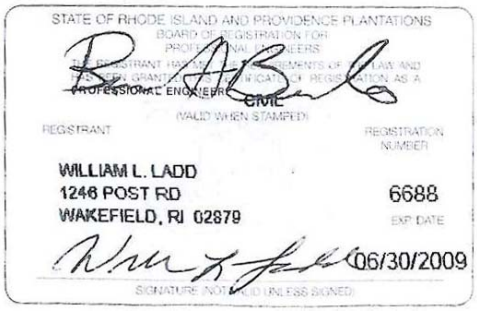
Russell J. Morgan, P.E.
Principal In Charge, Geotechnical


STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF BUSINESS REGULATION • DIVISION OF PROFESSIONALS
BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS
THE REGISTRANT HAS MET THE REQUIREMENTS OF THE LAW AND
HAS BEEN GRANTED THIS CERTIFICATE OF REGISTRATION AS A
PROFESSIONAL ENGINEER
REGISTRANT (VALID WHEN STAMPED) REGISTRATION NUMBER
RUSSELL J. MORGAN
49 POND STREET
WAKEFIELD, RI 02892
6938
EXP. DATE
06/30/2011
SIGNATURE (NOT VALID UNLESS SIGNED)

Michael Powers, P.E.
Geotechnical/ Environmental QA/QC

STATE OF RHODE ISLAND
STATE BOARD OF REGISTRATION
FOR PROFESSIONAL ENGINEERS
BE IT KNOWN THAT
MICHAEL A. POWERS
having given satisfactory evidence that he has the qualifications required
by law is hereby authorized to practice as a
Professional Engineer
IN THE STATE OF RHODE ISLAND
IN WITNESS WHEREOF, THE BOARD HAS ISSUED THIS CERTIFICATE OF REGISTRATION
NO. 6223 UNDER THE SEAL OF THE BOARD THIS 14TH DAY OF JULY 1993.
STATE BOARD OF REGISTRATION FOR
PROFESSIONAL ENGINEERS
CHAIRMAN SECRETARY

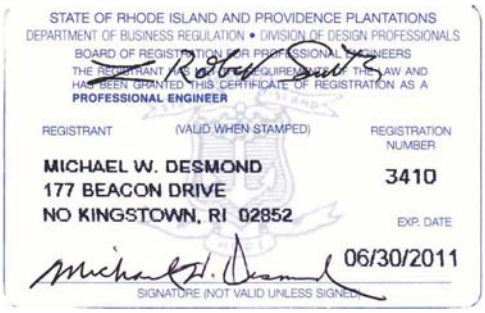
William L. Ladd, P.E. *
Senior Project Manager, Geotechnical


STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
BOARD OF REGISTRATION FOR
PROFESSIONAL ENGINEERS
PROFESSIONAL ENGINEER CIVIL
(VALID WHEN STAMPED)
REGISTRANT REGISTRATION NUMBER
WILLIAM L. LADD
1246 POST RD
WAKEFIELD, RI 02879
6688
EXP. DATE
06/30/2009
SIGNATURE (NOT VALID UNLESS SIGNED)

* RI PE registration renewed through 2011

Bryant Associates, Inc.

Michael W. Desmond, P.E.
QA/QC Manager Design
Highway & Traffic QA/QC


STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF BUSINESS REGULATION • DIVISION OF DESIGN PROFESSIONALS
BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS
THE REGISTRANT HAS MET THE REQUIREMENTS OF THE LAW AND HAS BEEN GRANTED THIS CERTIFICATE OF REGISTRATION AS A
PROFESSIONAL ENGINEER
REGISTRANT (VALID WHEN STAMPED)
MICHAEL W. DESMOND
177 BEACON DRIVE
NO KINGSTOWN, RI 02852
REGISTRATION NUMBER
3410
EXP. DATE
06/30/2011
SIGNATURE (NOT VALID UNLESS SIGNED)

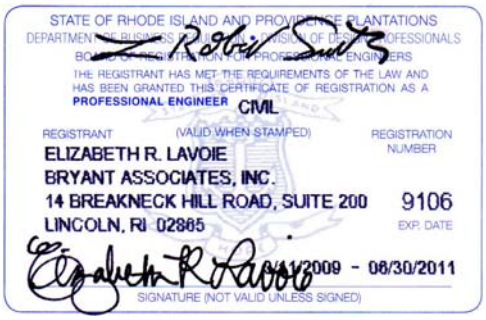
Todd E. Brayton, P.E.
Project Manager
Highway/Utilities/Traffic

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF BUSINESS REGULATION • DIVISION OF DESIGN PROFESSIONALS
BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS
THE REGISTRANT HAS MET THE REQUIREMENTS OF THE LAW AND HAS BEEN GRANTED THIS CERTIFICATE OF REGISTRATION AS A
PROFESSIONAL ENGINEER CIVIL
REGISTRANT (VALID WHEN STAMPED)
TODD E. BRAYTON
9 SPRAGUE STREET
CUMBERLAND, RI 02864
REGISTRATION NUMBER
9000
EXP. DATE
06/30/2011
SIGNATURE (NOT VALID UNLESS SIGNED)

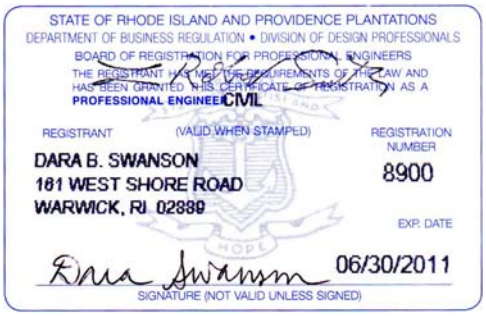
Michael E. LeBeau, PE, SE
Bridge QA/QC

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF BUSINESS REGULATION • DIVISION OF DESIGN PROFESSIONALS
BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS
THE REGISTRANT HAS MET THE REQUIREMENTS OF THE LAW AND HAS BEEN GRANTED THIS CERTIFICATE OF REGISTRATION AS A
PROFESSIONAL ENGINEER CIVIL
REGISTRANT (VALID WHEN STAMPED)
MICHAEL E. LEBEAU
77 HILLTOP AVE
PROVIDENCE, RI 02908
REGISTRATION NUMBER
6824
EXP. DATE
06/30/2011
SIGNATURE (NOT VALID UNLESS SIGNED)

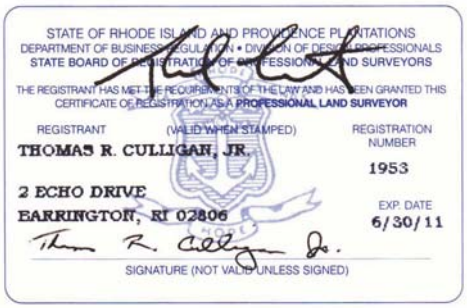
Elizabeth R. Lavoie, P.E.
Traffic Engineer


STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF BUSINESS REGULATION • DIVISION OF DESIGN PROFESSIONALS
BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS
THE REGISTRANT HAS MET THE REQUIREMENTS OF THE LAW AND HAS BEEN GRANTED THIS CERTIFICATE OF REGISTRATION AS A
PROFESSIONAL ENGINEER CIVIL
REGISTRANT (VALID WHEN STAMPED)
ELIZABETH R. LAVOIE
BRYANT ASSOCIATES, INC.
14 BREAKNECK HILL ROAD, SUITE 200
LINCOLN, RI 02865
REGISTRATION NUMBER
9106
EXP. DATE
2009 - 06/30/2011
SIGNATURE (NOT VALID UNLESS SIGNED)

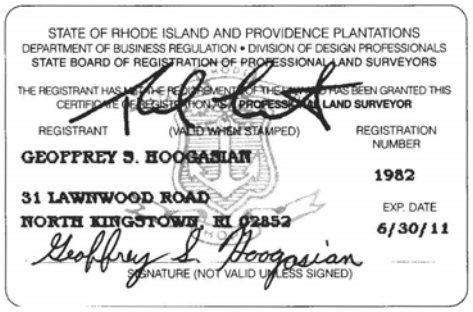
Dara Clough, P.E.
Senior Traffic Engineer


STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF BUSINESS REGULATION • DIVISION OF DESIGN PROFESSIONALS
BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS
THE REGISTRANT HAS MET THE REQUIREMENTS OF THE LAW AND HAS BEEN GRANTED THIS CERTIFICATE OF REGISTRATION AS A
PROFESSIONAL ENGINEER CIVIL
REGISTRANT (VALID WHEN STAMPED)
DARA B. SWANSON
181 WEST SHORE ROAD
WARWICK, RI 02889
REGISTRATION NUMBER
8900
EXP. DATE
06/30/2011
SIGNATURE (NOT VALID UNLESS SIGNED)

Thomas R. Culligan, Jr., PLS
Project Surveyor


STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF BUSINESS REGULATION • DIVISION OF DESIGN PROFESSIONALS
STATE BOARD OF REGISTRATION OF PROFESSIONAL LAND SURVEYORS
THE REGISTRANT HAS MET THE REQUIREMENTS OF THE LAW AND HAS BEEN GRANTED THIS CERTIFICATE OF REGISTRATION AS A PROFESSIONAL LAND SURVEYOR
REGISTRANT (VALID WHEN STAMPED)
THOMAS R. CULLIGAN, JR.
2 ECHO DRIVE
EARRINGTON, RI 02806
REGISTRATION NUMBER
1953
EXP. DATE
6/30/11
SIGNATURE (NOT VALID UNLESS SIGNED)

Geoffrey S. Hoogasian, PLS
Project Surveyor


STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF BUSINESS REGULATION • DIVISION OF DESIGN PROFESSIONALS
STATE BOARD OF REGISTRATION OF PROFESSIONAL LAND SURVEYORS
THE REGISTRANT HAS MET THE REQUIREMENTS OF THE LAW AND HAS BEEN GRANTED THIS CERTIFICATE OF REGISTRATION AS A PROFESSIONAL LAND SURVEYOR
REGISTRANT (VALID WHEN STAMPED)
GEOFFREY S. HOOGASIAN
31 LAWNWOOD ROAD
NORTH KINGSTOWN, RI 02852
REGISTRATION NUMBER
1982
EXP. DATE
6/30/11
SIGNATURE (NOT VALID UNLESS SIGNED)

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SECTION 4.1

Letter of Submittal

Aetna Bridge Company

Steere ENGINEERING INC
Bridge and Structural Engineers

BID #7448315:
Laurel Avenue Bridge #397

April 21, 2011

RI Department of Administration
Division of Purchases (2nd fl)
One Capitol Hill
Providence, RI 02908-5855

RE: BID #7448315 - DESIGN/BUILD Services for the Replacement of the Laurel Avenue Bridge #397, Coventry, RI

Dear Sir/Madam:

Aetna Bridge Company (Aetna) is pleased to submit our Team's proposal and bid for the Design/Build Services for the Replacement of the Laurel Avenue Bridge. ***Aetna*** has assembled a team which is well known to the Department and has a proven record of quality construction and design services. ***Aetna*** would welcome the opportunity to complete another successful project working for the Rhode Island Department of Transportation (RIDOT).

The Design/Build (D/B) Team will be led by ***Aetna*** as the Lead Contractor and ***Steere Engineering, Inc. (Steere)*** serving as the Lead Designer for this project. Mr. Jeffrey A. Bostock, Vice President-Construction at ***Aetna***, and Ms. Patricia D. Steere, P.E., President of ***Steere***, a DBE/WBE firm, will serve as the D/B team principal contacts, and will remain as such throughout the life of the project. The D/B team is also supported by several Consultants for this project. ***Bryant Associates, Inc. (Bryant)*** will provide the project's overall Design QA/QC services and be responsible for the design and construction surveys and the roadway and traffic engineering services. ***GZA GeoEnvironmental, Inc. (GZA)*** will provide the services required for the hydrologic/hydraulic, geotechnical and environmental aspects of the project. ***Dynamic Scheduling Solutions (DSS),*** a DBE/WBE firm, will provide scheduling services; ***ATC Associates, Inc. (ATC)*** will provide construction quality control services; and ***Risk & Safety Management Inc. (RSM)*** shall be responsible for construction safety. The Team is also supported by several DBE sub-consultants on the construction side, as represented within Section 4.3, DBE and OJT Requirements, and within the Price Proposal as part of the RIDOT DBE Utilization Plan.

Aetna is a corporation, and will provide the general contracting for this project. Hugo R. Mainelli, Sr. founded ***Aetna*** in 1945. Since that time, ***Aetna*** has successfully completed over 800 bridge projects. Today, ***Aetna*** is an acknowledged leader in bridge construction and rehabilitation, marine construction and demolition services. With our primary focus on Rhode Island and Southeastern Massachusetts area, the company provides quality comprehensive construction services throughout New England to various state highway departments, cities, and towns.

From the original construction of the Washington Bridge in Providence to the reconstruction of the Cranston Street Viaduct and the Joseph A. Russo Bridge in Cumberland/Lincoln, to ***Aetna's*** most current project on Union Avenue in Providence, ***Aetna*** has always maintained our reputation of integrity while producing high quality work. In the last 10 years, ***Aetna*** has completed over 30 bridge projects for RIDOT worth over $110 million. ***Aetna*** is still owned and managed today by the Mainelli family, with Hugo R. Mainelli, Jr. son of the founder, as President/CEO and Chip Mainelli, grandson of the founder, as Senior Vice President. Mr. Mainelli, Jr. and Mr. Mainelli have 50 years and 22 years of dedicated construction experience, respectively. The company's main office is located in Pawtucket, Rhode Island. The

Management Team located at the main office includes Mr. Jeffrey A. Bostock, Vice President-Construction; Mr. Daniel Kelley, Vice President- Estimating; Mr. Mark Mainelli, Vice President-Contract Administration; and Mr. Robert Barber, Vice President-Finance. The main office is supported by a staff of six full time employees. The field staff is comprised of five project managers, and approximately 50 to 100 union construction workers. All of ***Aetna's*** project managers are degreed civil engineers and have at least ten years of field experience. These qualities give ***Aetna*** the ability to technically collaborate with design engineers and consultants. ***Aetna's*** foremen and work crews are experienced and knowledgeable in all phases of bridge construction and repair. ***Aetna*** has a full complement of aerial, marine, demolition, concrete placement, and excavation equipment. Through the years, ***Aetna*** has maintained a great working relationship with local subcontractors, vendors, and owners by being fair, professional, and responsive.

As Lead Designer, ***Steere*** will be providing the bridge engineering services for this project and will also fulfill the design DBE requirements. ***Steere*** is a corporation and the only certified DBE, Mission 360° Partner, bridge and structural engineering firm headquartered in Rhode Island. ***Steere*** has a broad range of bridge design experience which includes the first network arch bridge built in the United States, steel trapezoidal box girders and I-girders, as well as cast-in-place and precast concrete bridges. Owner Patricia D. Steere, P.E. was the lead bridge design engineer for the Iway project, the largest project in the history of the Rhode Island Department of Transportation. The ***Steere*** Team also brings a wide range of experience in the construction support services that will be needed on this project. ***Steere's*** structural analysis and design includes many sophisticated analyses of various structure types, including linear and non-linear finite element analysis and seismic analysis. ***Steere*** has four bridge/structural engineers who will provide the engineering for this bridge. Ms. Steere will be supported by Mr. John Steere, P.E. and Ms. Susan Bacher, P.E., who each have over 33 years of experience in bridge and structural engineering design, and Mr. Martin Pierce, P.E. (start date May 2, 2011), who has over 15 years experience including work with Ms. Steere on many RIDOT projects.

Bryant will be providing design for the traffic engineering, roadway engineering, and survey services for this project, as well as overall quality control services for the design of the bridge and associated roadway improvements. Founded in 1976, ***Bryant*** is a minority-owned professional consulting highway and traffic engineering firm that provides structural and civil engineering; water resources; construction management; and surveying services to public and private clients throughout New England and the mid Atlantic region. ***Bryant*** is a corporation and is headquartered in Boston with offices in Lincoln, RI; Landover, MD; and Louisville, KY. ***Bryant's*** Team includes registered engineers and land surveyors complemented by a flexible and creative technical staff.

GZA will be providing geotechnical and environmental engineering services for the project, including foundation analysis and design, hydrologic and hydraulic evaluation, and environmental permitting. ***GZA*** is a multidisciplinary consulting firm offering services in the fields of geotechnical, civil, and environmental engineering, hazardous waste assessment and remediation, as well as related construction design-related services. Founded in 1964, ***GZA*** is a corporation, and has grown into a full-service company providing its clients with a wide range of geotechnical engineering, dam engineering, water resources, environmental consulting, and remediation services. ***GZA*** employs over 560 engineers, scientists, and technical support staff in more than 18 offices in the U.S. Over 50 of these highly qualified technical staff are located in the Providence, RI office. In 2010, ***GZA*** was ranked No. 125 in the Engineering News Record list of the Top 500 Design Firms.

DSS, a corporation, will be providing the CPM scheduling services for this project. Over the past 5 years, ***DSS*** has performed scheduling services on over 100 projects totaling $800 million. The primary focus of

DSS is working for contractors on RIDOT projects. ***DSS*** has provided scheduling services on 40 RIDOT projects and is well versed in the specifications and requirements of Section 12.108.3.

ATC is a national corporation specializing in quality control, inspection, and testing of construction materials and processes. ***ATC*** was founded in 1982 and has 1,600 employees nation-wide. The local branch is located in Avon, MA. ***ATC*** provides systematic testing and inspection services to assure materials utilized during construction meet project specifications and sustainability goals. ***ATC*** has the QA/QC expertise to meet the needs of the project. ***ATC*** has routinely provided testing and inspection services during construction of bridges, highways, foundations, railroads, dams, towers, low and high-rise buildings, airports, auto plants, distribution centers, industrial plants, stadiums, healthcare facilities, schools, water supply and sewage treatment facilities, dock and waterway facilities, power plants and many other construction projects. ***ATC*** works with architects, engineers, owners, general contractors and participants throughout each phase of the project – from feasibility/planning, design development, construction and fabrication and post-construction operations. ***ATC's*** services have saved significant money by preventing change orders during construction and reducing future maintenance and repair cost.

Incorporated in 1992, ***RSM*** is a Rhode Island corporation, which has been providing safety support services and safety inspections for construction companies for over a decade. The services that ***RSM*** provides to ensure compliance with local and federal safety regulations include Certified OSHA and MSHA trainers, site inspections, safety manual review and update, safety program review, job specific hazard analysis, and assistance during and follow-up to OSHA inspections. All inspectors for ***RSM*** are OSHA certified and are qualified to teach within the areas of their expertise.

Aetna shall be responsible for guaranteeing the delivery of the project on time and on budget in accordance with the contract provisions. ***Aetna*** will undertake the financial responsibility and bonding for the project. ***Aetna*** confirms and certifies that the information enclosed in this Proposal remains true and accurate. ***Aetna*** also acknowledges receipt of the complete RFP and all six (6) addenda.

The ***Aetna*** Team trusts that this proposal expresses the Team's expertise and abilities to provide the needed services for this contract. The D/B Team principal contacts are committed that, if selected, this assignment will receive the needed resources and support to deliver this project on time and on budget. Should the Department representatives have any questions, please feel free to contact either of the D/B Team representatives listed below. The ***Aetna*** Team looks forward to the Department's favorable consideration.

Sincerely,

Aetna Bridge Company, Inc.

Jeffrey A. Bostock – Vice President Construction
Aetna Bridge Company, Inc.
30 Lockbridge Street
Pawtucket, RI 02860
Phone: (401) 728-0400
Fax: (401) 728-0189
Email: jbostock@aetnabridge.com

Steere Engineering, Inc.

Patricia D. Steere, P.E. – President
Steere Engineering Inc.
640 George Washington Highway, Suite 103
Lincoln, RI 02865
Phone: (401) 258-9391
Fax: (401) 728-0189
Email: patricia.steere@gmail.com

SECTION 4.2

Qualifications/Technical Proposal

Aetna Bridge Company

Steere ENGINEERING INC
Bridge and Structural Engineers

BID #7448315:
Laurel Avenue Bridge #397

Key Personnel

Our key personnel have tackled some of the most challenging projects in the state and have experience in the important aspects for the success of this job, including deep foundations near sensitive structures, historic masonry reconstruction, river flow through work zones, hydraulic analysis and design of spillways, and scour countermeasures. The D/B Team also has experience working together on various projects in the past. The following summary provides a brief overview of each of the key personnel.

Design-Build Project Manager – Jeffrey A. Bostock, Aetna

Mr. Jeffrey A. Bostock of ***Aetna*** will be the Design Build Project Manager. He has been working for ***Aetna*** on RIDOT projects for the last 15 years. As an employee of ***Aetna,*** he has been involved in over 20 successful RIDOT and other state bridge projects totaling over $75 million dollars. Through the years, Mr. Bostock has developed productive professional relationships with RIDOT personnel and their consultants and has partnered with RIDOT to complete some of Rhode Island's most challenging projects. His past experience gives him a good familiarity with RIDOT's expectations, standards, and procedures.

Design Manager – Patricia D. Steere, P.E., Steere

With over 27 years of experience in bridge and structural engineering, Ms. Patricia D. Steere, P.E. of ***Steere*** will serve as the Design Manager. Her past experience leading the bridge design on the Iway project gives her the capability to coordinate and oversee the design disciplines and QA/QC program on this project, as well as to coordinate with ***Aetna*** on the construction phase, and with RIDOT through all phases. Ms. Steere's past experience also gives her the necessary familiarity with RIDOT standards and procedures and a proven track record of tackling demanding design and construction issues with a fast-paced schedule.

Construction Manager – Kevin Zona, Aetna

Mr. Kevin Zona will be the Construction Manager for the project. He has been working for ***Aetna*** on RIDOT projects for the last 15 years and has completed 12 projects worth over $38 million dollars. Most notably, he was the Project Manager for the Berkley/Martin Bridge Project for which ***Aetna*** received the Transportation Pioneering Award from RIDOT for excellence in construction. Recently, to his credit, he completed the Wanskuck/Hawkins Bridge project which finished more than 3 months ahead of schedule. Over his years working with RIDOT, Mr. Zona has gained significant experience in high quality historic stone masonry construction; on a project where river flow was maintained through the work zone; on projects which required deep foundations in structurally sensitive areas; and on projects which required construction of scour counter-measures and related site work. Furthermore, Mr. Zona has developed an excellent professional relationship with RIDOT's staff and consultants. His past experience gives him a good familiarity with RIDOT's expectations, standards, and procedures.

Geotechnical Engineer – William L. Ladd, P.E., GZA

Mr. William L. Ladd, P.E. of ***GZA*** will be the lead Geotechnical Engineer for the project. Mr. Ladd has over 24 years experience in geotechnical engineering, including numerous projects involving geotechnical investigations, recommendations, and design for both bridge and dam projects. Relevant project experience includes the use of drilled minipiles for foundation support on vibration sensitive projects, cofferdam design for control of water and earth support, design of both permanent and temporary earth retaining structures, and design of dam spillway structures. Additionally, Mr. Ladd has extensive experience in the quality control aspect of geotechnical construction, including inspection of pile installations, monitoring the placement and compaction of structural fills, geotechnical instrumentation and vibration monitoring, and performing pre- and post-construction surveys.

Quality Control Manager (Construction) – Kevin Martin, P.E., ATC
Mr. Kevin Martin, P.E. is Director of Testing for ***ATC*** in Avon, MA. He leads a group of more than 30 inspectors and technicians qualified and certified to test and inspect soils, concrete, hot mix asphalt and structural steel. ***ATC's*** full service laboratory in Avon is AASHTO accredited for soils, concrete and hot mix asphalt testing. Mr. Martin has over 20 years' experience in this field. ***ATC*** has been working on RIDOT projects for over 14 years. Current RIDOT projects include the Route 95 Bridge over the Seekonk River in Pawtucket, the Sakonnet River Bridge in Portsmouth/Tiverton and the Union Avenue Bridge.

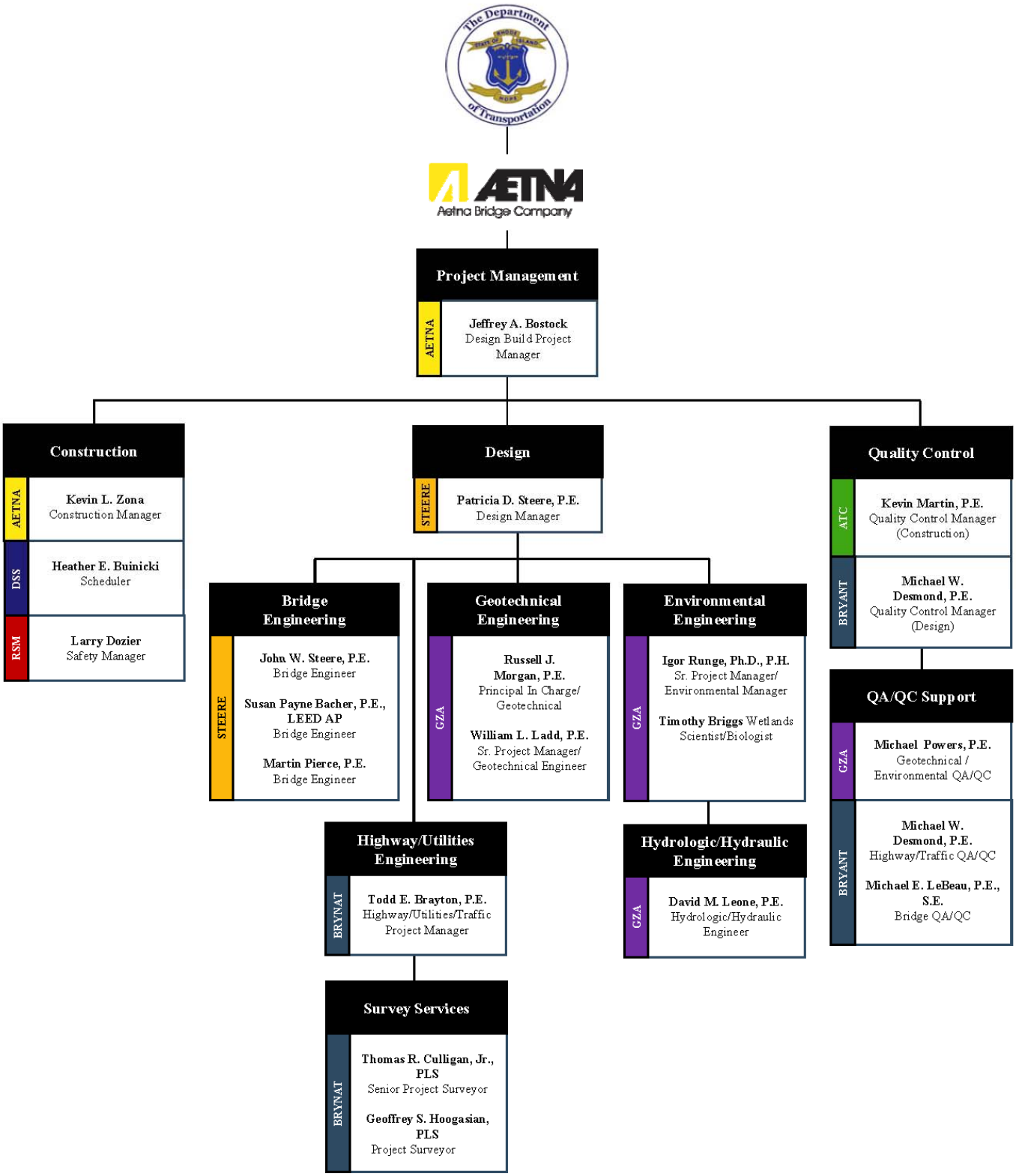
Quality Control Manager (Design) – Michael W. Desmond, P.E., Bryant
Overseeing the overall design quality assurance will be Mr. Michael W. Desmond, P.E. of ***Bryant***. Mr. Desmond has over forty years of design experience and is familiar with RIDOT design standards and procedures. He is been responsible for all of ***Bryant's*** transportation projects since joining the firm in 1999. Mr. Desmond is a traffic and transportation specialist, recognized by all municipalities and court systems in Rhode Island and Massachusetts. He regularly testifies in public meetings for proposed developments, as well as providing peer reviews for municipalities. Following graduation from Notre Dame University, Mr. Desmond's postgraduate education included graduation from the Bureau of Highway Traffic at Yale University. Education and experience makes Mr. Desmond an ideal candidate to provide quality assurance for the design services for this contract.

Safety Manager – Larry Dozier, RSM
To meet the safety requirements of the Contract, ***Aetna*** will employ the services of Mr. Larry Dozier who is an employee of ***RSM***. Incorporated in 1992, ***RSM*** uses hands-on techniques for guiding small companies through the intricacies of safety regulations. Mr. Dozier has been developing safety plans for ***Aetna*** projects for nine years and has completed his Work Zone Traffic Control training for maintenance and protection of traffic through and adjacent to construction areas.

Scheduler – Heather Buinicki, DSS
Ms. Heather Buinicki of ***DSS***, will be the scheduler for the project. Ms. Buinicki has over 10 years experience providing scheduling for RIDOT projects, including 3 years as an employee of Plexus Corporation. Ms. Buinicki has participated in over 50 RIDOT projects and has performed scheduling services on several design/build projects. Ms. Buinicki is well regarded and has established a good working relationship with RIDOT. MS. Buinicki is President of ***DSS***, a project management firm based in Rhode Island providing CPM scheduling services for contractors throughout New England.

Environmental Manager – Igor Runge, Ph.D., P.H. & Timothy Briggs, GZA
GZA's environmental management team will consist of two individuals, Igor Runge, Ph.D., P.H. and Mr. Timothy Briggs, who, collectively, have nearly 35 years of experience at ***GZA*** managing projects requiring in-depth knowledge of the various local, state, and federal environmental regulations, laws, commitments, requirements, permits, approvals, and wetlands issues. The team will be headed up by Dr. Runge, one of only two-registered Professional Hydrologists in Rhode Island, with support provided by Mr. Briggs, a Wetland Professional in accordance with the RI Department of Environmental Management's (RIDEM) Freshwater Wetlands Rules and Regulations. This team's engineering and scientific experience includes a thorough understanding of watershed hydrology, river and dam hydraulics, natural ecosystems, wetland delineation, and sediment and erosion control best management practices and features. Both are well versed in the recently promulgated *Rhode Island Stormwater Design and Installation Standards Manual* (December 2010) that will govern certain design aspects of this project. These individuals have the necessary education and experience to satisfy the requirements of certain regulatory permits requiring monitoring be conducted by qualified professionals. This includes the expertise necessary to meet the requirements of the RIDOT Natural Resources unit, which will include coordinating inspections and required reporting.

Organizational Chart



Organizational Chart Narrative

The lead Contractor, ***Aetna***, and Designer, ***Steere,*** have worked together closely over the past months on a large number of bridge construction jobs. This relationship is the continuation of a relationship begun in the mid-1990's when Ms. Patricia Steere, P.E. was with Maguire Group. ***Aetna*** and ***Steere*** worked together on numerous projects over the years with Maguire as the design engineering firm and ***Aetna*** as the contractor as well as on many projects where Maguire provided engineering support services as a sub consultant to ***Aetna***. ***Aetna*** and ***ATC*** have worked together in the past, most recently on the RIDOT Union Avenue project. ***Aetna*** and ***GZA*** have worked several times in the past on bridge projects, namely Union Avenue, and the County Street Bridge in Attleboro for MassDOT. ***GZA*** and ***Bryant*** also have longstanding relationships working with Ms. Steere on the Iway project when she was at Maguire.

D/B Team Functional Relationships

Mr. Jeffrey Bostock of ***Aetna***, is in overall charge of the management of all phases of the project with the following individuals reporting to him.

Ms. Patricia Steere, P.E. of ***Steere*** will report to Mr. Bostock for the design of the project and the quality management for the design. Ms. Steere will oversee the bridge engineering performed by ***Steere***. Mr. William Ladd, P.E. and Igor Runge, Ph.D., P.H. from ***GZA*** will report to Ms. Steere for geotechnical and environmental design and permitting and Mr. Todd Brayton, P.E. from ***Bryant*** will report to Ms. Steere for highway and traffic design and utility coordination. Mr. Michael Desmond, P.E. from ***Bryant*** will coordinate the efforts of the individual quality assurance engineers for each discipline reporting to Ms. Steere for this effort.

Mr. Kevin Zona of ***Aetna*** will report to Mr. Bostock as the Construction Manager. Mr. Zona will be in charge of all construction operations and will be on site for this job. Mr. Zona will be responsible for coordinating the testing of materials and the quality of the workmanship of the individual trades.

Mr. Kevin Martin, P.E. of ***ATC*** will report to Mr. Bostock for construction quality assurance. Mr. Martin will work with Mr. Zona to establish the Quality Control program, and will monitor the program to ensure compliance with it. Quality assurance reports will go directly to Mr. Bostock.

Ms. Heather Buinicki of ***DSS*** will report to Mr. Bostock for project scheduling. Ms. Buinicki will work with Ms. Steere for design scheduling and monitoring and with Mr. Zona for construction scheduling and monitoring.

Mr. Larry Dozier of ***RSM*** will report to Mr. Bostock as Safety Manager. Mr. Dozier will establish and enforce the project safety plan in conjunction with Mr. Zona.

Functional Relationships With Outside Agencies

Mr. Bostock is the key point of contact with the RIDOT for all project issues. Design issues will also be coordinated with Ms. Steere as the Design Manager.

For RIDEM and RIDOT Cultural Resources issues, Dr. Runge will be the main contact and will report to Ms. Steere.

Contact and coordination with utilities and the Town of Coventry during design will be through Mr. Brayton who will report to Ms. Steere. Day to day coordination during construction will be Mr. Zona's responsibility.

Coordination with the adjacent mill owners will be through Mr. Bostock for the duration of the project.

Relevant Work Experience

Aetna team members each have a vast amount of bridge design and construction experience in the State of Rhode Island as well as experience working together. From the Iway to the Ashton Viaduct, the team members have the necessary experience to provide a quality, on-time project for the State. The following section lists projects completed over the last ten years which demonstrate each member's experience with the following Experience Criteria:

1. Construction of deep bridge foundations and structures in close proximity to structurally sensitive walls, dams and/or spillways.
2. Successful completion of high quality, historic stone masonry construction/restoration of comparable scale and style.
3. Management of river flows through work zones.
4. Hydraulic analysis and design of spillways and spillway walls of comparable scale.
5. Design and construction of scour counter-measures, and related site work.

Berkley/Martin Bridges, RI Contract 2003-CB-032, Lincoln/Cumberland, RI

D/B Team Member:	***Completion:***	***Experience Criteria:***
Aetna Bridge Company	2007	2. ✓
Owner/Client:	***Construction Cost:***	3. ✓
RIDOT	$6,824,682	

The two bridges which carry Martin Street over the Blackstone River and the Blackstone Canal date back to 1900. Through a contract with ***Aetna***, the bridges were replaced and the bikeway was reconfigured. The new bikeway now travels below the bridges and provides a much safer environment for cyclists and pedestrians.

The Blackstone River and its valley have been designated by the Federal Government as a National Heritage Corridor. The two old bridges within the Heritage Corridor were considered valuable visual elements. It originally was a two-span structure supported by two pairs of timber bow string trusses. One pair of trusses was washed away by flooding in the Blackstone River. That span was replaced by a conventional deck-type stringer structure. Due to the presence of the deck-type structure in one span and the old timber trusses in the other, it was decided to design two pairs of new timber trusses to look like the originals and place them astride the new steel fascia girders. In keeping with the original rustic appearance of the bridge abutments and surrounding area, the long river wall adjacent to the bridge and the bike path ramps were constructed with granite stone masonry with FC Construction Corporation as the masonry subcontractor. This work was reviewed and accepted by RIDOT's Cultural Resources Unit.

Managing the strong river flow through the work zone was a key aspect of this project. Steel sheeting cofferdams were installed to divert the water around the area required for the construction of the bridge piers and abutments. After the sheeting was installed, a tremie concrete placement was poured to seal the bottom of the cofferdam and the river water was pumped out. The new pier or abutment could then be constructed in the dry.

Warren Bridge Project, RI Contract 2005-CB-057, Warren, RI

D/B Team Member:	***Completion:***	***Experience Criteria:***
Aetna Bridge Company	2009	1. ✓
Owner/Client:	***Construction Cost:***	2. ✓
RIDOT	$12,474,747	3. ✓
		5. ✓

In 2005, ***Aetna*** was contracted by RIDOT to build a new permanent bridge structure over the Palmer River in Warren, RI. The original bridge was one of the first bridges constructed by Rhode Island's public works entity. The Historic Preservation and Heritage Commission wanted the new bridge to resemble the original. Therefore, the reconstruction incorporated elements that emulate the original span's aesthetics. For example, granite stone masonry was used to build the bases of the piers and abutment stems in an effort to mimic the original construction. Per contract, this work was reviewed and accepted by RIDOT's Cultural Resources Unit. Additionally, the railing included a pedestrian rail with intermittent decorative concrete pylons between rail sections supporting ornamental lights. FC Construction Corporation was the stone mason.

The new bridge would replace the temporary bridge which was also built by ***Aetna*** in 1998. The new bridge is a four-span, 260 foot long, pre-stressed concrete structure that resembles an arch bridge from most perspectives. The box girders that are only visible from beneath the bridge support the roadway. Precast concrete arch fascias that look like the original concrete arch design hide the girders. The four span design provides for lower water velocity of the tidal river around the structure. This reduced the impact of erosion on bridge abutments and made it easier for navigation around the bridge. Additional rip rap scour protection was installed around the piers and in front of the abutments to prolong the life of the bridge. The areas adjacent to the bridge were also protected from scour by planting sea grass and installing coconut fiber logs.

A major challenge on this project was maintaining the exceptionally strong tidal river flow through the work zone. Steel sheeting cofferdams were installed to divert the water around the area required for the construction of the bridge piers and abutments. After the sheeting was installed, a tremie concrete placement was poured to seal the bottom of the cofferdam and the river water was pumped out. The new pier or abutment could then be constructed in the dry. Another challenge included driving of foundation piles in close proximity to exiting residential and commercial buildings. Pre and post condition surveys were performed to document the impact of the pile driving operation. Careful monitoring of the adjacent structures was required.

This project did encounter some significant subsurface changed conditions which required a major redesign. The bedrock elevation was much higher than expected causing most of the substructure to be redesigned. This complication could have delayed the project several years. However, through a joint effort between ***Aetna*** and RIDOT, the project was completed only one year late.

Cranston Street Viaduct Project, RI Contract 2001-CB-009, Cranston, RI		
D/B Team Member: Aetna Bridge Company ***Owner/Client:*** RIDOT	***Completion:*** 2003 ***Construction Cost:*** $23,374,444	***Experience Criteria:*** 1. ✓

Aetna was contracted by RIDOT to reconstruct the Cranston Street Viaduct in Cranston, RI. The Cranston Street Viaduct is a three span bridge approximately 500 feet long, carrying four lanes of traffic on Route 10 over Amtrak. The scope of the work included: demolition of the existing bridge in two phases (in order to maintain traffic flow), installation of twenty-two 3' diameter drilled shafts at the abutments and four 9' diameter drilled shafts at the piers, concrete pier and abutment construction, setting and post tensioning precast concrete bulb-T girders, and placing the concrete decks with a self propelled finishing machine.

An extensive retaining wall system was also installed along the Amtrak railroad line and other Amtrak facilities. A major portion of this construction included driven deep foundation piles adjacent to the sensitive active railroad. Special provisions had to be made for all work performed in proximity to Amtrak's facilities such as: careful survey and monitoring of the railway, specialized equipment to minimize ground disturbance, Amtrak training for all personnel, and installation of extensive shielding and protective barriers. Some ancillary work that was also performed included: complete replacement of a secondary bridge, temporary shoring of several neighboring bridges, paving, overhead sign installation, utility work, permanent Amtrak protective barrier installation, and traffic control to facilitate the work.

Rawson Road Bridges RI Contract 2004-CB-034, Cumberland, RI		
D/B Team Member: Aetna Bridge Company ***Owner/Client:*** RIDOT	***Completion:*** 2006 ***Construction Cost:*** $1,465,977	***Experience Criteria:*** 1. ✓ 2. ✓ 3. ✓

In 2003, ***Aetna*** was contracted by RIDOT to reconstruct the Rawson Rd Bridges in Cumberland, RI. The bridges passed over the Abbott Run River and the Abbott Run Canal. The work zone was immediately downstream of the river dam. The work included the removal and salvaging of the existing historic truss superstructures, rebuilding on the historically significant stone masonry abutments, constructing a 27' wide by 62' long steel superstructure, installing a transverse timber deck, and constructing new concrete abutment stems and wingwalls.

The bridges were considered historic by the Rhode Island Historic Preservation and Heritage Commission and, therefore, special requirements were needed by the contractor for portions of the work performed. The wet stone masonry work required for the reconstructed abutment stems required that existing stone masonry be carefully removed, stockpiled, and then reset to resemble the original bridge construction. This work was reviewed and accepted by RIDOT's Historic Preservation Specialist. The stone masonry work was performed by FC Construction Corporation.

Drilled micro piles were installed to support the new wingwall foundations. The drilled micro piles were used to minimize disturbance to the adjacent dam, portions of the historically significant abutment which were to remain, and nearby residential structures. In order to construct the new concrete wingwalls, the river flows had to be properly managed. To do this a sand bag dike was constructed and the water behind the dike was pumped out. The water was pumped into a dewatering basin so that any sediment could be settled out and then the water was pumped back into the river.

I-195 Relocation Contract 7, Providence, RI

D/B Team Member:	***Completion:***	***Experience Criteria:***
Steere Engineering	2007	1. ✓
Owner/Client:	***Construction Cost:***	3. ✓
RIDOT	$84,000,000	5. ✓

Contract 7 was the largest of the Iway project contracts and included the design and construction of the Providence River Bridge. The bridge is a seven span bridge featuring the first network arch designed and built in the U.S. The foundations included twenty-one 8-foot diameter drilled shafts which were designed to be installed in proximity to a 110 year-old, 4-foot diameter brick sewer siphon carrying all the sewage from the East Side of Providence to the Fields Point Sewage treatment plant. The brick sewer siphon was in the top organic silt layer under the river bottom. Any damage to the siphon would have caused an environmental nightmare for the upper Narragansett Bay. The drilled shafts at the northern most point on pier 3 were also installed within 2-feet of the 1960's era Fox Point Hurricane Barrier.

Many steps were taken during the design phase to ensure that the siphon and hurricane barrier would be protected. These included the use of full depth permanent casing for the drilled shafts, instrumentation and monitoring of key structures, the use of method shafts, and a sequence of construction from farthest to nearest to the critical structures. The care taken during design to protect the nearby structures contributed to the successful completion of the drilled shafts with no damage to the brick siphon or hurricane barrier.

During the design of the Providence River Bridge it was determined that the use of cofferdams in the river to build the piers could not be allowed. The installation of the sheeting and deflections of the sheeting when the cofferdams were dewatered and excavated could potentially damage the 100 year-old sewer siphon just south of the piers and abutments. The solution to the problem of building piers in the river without using cofferdams included the design of raised piers on drilled shafts. This was an innovative solution to the problems and expense of the use of cofferdams in the Providence River. Precast concrete panels were designed to fit over the drilled shafts at the water line and to extend from a few feet below mean low water to about eight feet above mean high water. The panels were assembled on a temporary frame, sealed and dewatered. The reinforcing cage was placed inside and concrete was poured to form the base of the pier. The complete elimination of a cofferdam for work in the water helped ensure sensitive structures nearby would not be disturbed and allowed almost full use of the river by the boating public.

The project also replaced part of the Fox Point Hurricane Barrier system and required that some structures be designed for hurricane waves and to be resistant to the scour expected from a hurricane surge. Scour protection was provided by several means depending on the location. These designs included driven sheeting, and scour protection slabs on the bay side of the structures requiring protection. In addition, riprap was designed for scour to protect piers in the river and riverwalls.

I-195 Relocation Contract 3, Providence, RI

D/B Team Member:	***Completion:***	***Experience Criteria:***
Steere Engineering	2005	2. ✓
Owner/Client:	***Construction Cost:***	
RIDOT	$4,000,000	

This project involved the design of new walls and walkways along the Providence River as well as the restoration and rebuilding of a historic granite block wall along the river with a total length of about 150 feet. Most of the wall was in good condition, but the upper portion had vegetation growing out of it causing damage in spots which needed to be fixed. ***Steere*** worked with the project architect and Barry Simpson of RIDOT during design to come up with the appropriate repair methods and specifications to respectfully restore the historic wall to its original condition. The specifications developed by the design team required the granite blocks to be numbered and photographed as they were removed from the wall so that the wall could be rebuilt with the stones in the exact position as the original wall.

Ashton Bridge, Blackstone River Bikeway Segments 6, Lincoln, and Cumberland, RI

D/B Team Member:	***Completion:***	***Experience Criteria:***
GZA GeoEnvironmental	2002	2. ✓
Owner/Client:	***Construction Cost:***	5. ✓
RIDOT	$1,156,000	

GZA provided geotechnical engineering services for the design of the Ashton Bridge, which carries the Blackstone River Bikeway over the Blackstone River. The new bridge, located just downstream of the historic concrete arch Ashton Viaduct, is constructed using a pre-engineered steel truss structure. The bridge is founded on rehabilitated stone abutments of a bridge that was washed out during severe flooding in the 1950's. The remnants of the stone abutments consisted of granite block structures in generally poor condition.

GZA's services included development and implementation of a subsurface exploration program. The explorations included test borings at each abutment, as well as in the middle of the river for a potential center pier. Since little information was known about the foundations of the existing abutments, the investigations also included cores advanced through the stone work, as well as test pits to determine the backwall configuration. The soil conditions were found to be deposits of sands and gravels over glacial till and bedrock. Thin layers of organic river sediments were below the fill behind the abutments, but not below the foundation.

A stability analysis of the new structure on the existing abutments was performed, and indicated that global stability did not meet current bridge engineering standards. Permanent steel sheet piling was driven at the toe of the abutments to improve the global stability, as well as to provide additional scour protection. Additionally, the backwall of the existing stone abutments was supplemented with reinforced concrete structure to improve the factor of safety for overturning stability.

Stillwater Reservoir Dam, Smithfield, RI

D/B Team Member:	***Completion:***	***Experience Criteria:***
GZA GeoEnvironmental	N/A in final design	4. ✓
Owner/Client:	***Construction Cost:***	
RIDEM	N/A in final design	

Stillwater Reservoir Dam is a 20-foot-high, 660-foot long earthen and concrete structure that was reportedly constructed in 1910. The condition of the dam has worsened since 1910, requiring safety improvements. ***GZA*** was the prime consultant for the repair project, providing RIDEM with an array of engineering services, including visual inspection, wetland delineation, topographic surveying, seepage and stability analyses, hydrologic and hydraulic analyses, geotechnical investigation, design of embankment repairs, spillway capacity improvements, preliminary and final design plans, bid oversight, and construction supervision.

Among the technical challenges involved with the project was the refinement of existing hydrologic analyses related to the so-called "Spillway Design Flood (SDF)." Previous analyses by another consultant resulted in a series of recommendations for expensive spillway repairs with installation of spillway gates. ***GZA*** re-evaluated the hydrologic analysis for RIDEM by performing an Inflow Design Flood analysis, in accordance with Federal Emergency Management Agency guidelines. As a result of the updated analyses, a lesser magnitude SDF was found to be appropriate for the Stillwater Reservoir Dam, and new spillway repair options were developed.

GZA has also designed embankment repairs for the structure to address concerns regarding excessively steep slopes and freeboard issues, toe-drains to control seepage through the earthen embankment, and concrete repairs to the gatehouse foundation and upstream face of the dam. Final design plans are currently being prepared for the construction of repair alternatives, which will enable the dam to conform to current dam safety standards.

Round Top Bridge, No. 378, Burrillville, RI

D/B Team Member:	***Completion:***	***Experience Criteria:***
Bryant Associates	2010	3. ✓
Owner/Client:	***Construction Cost:***	5. ✓
RIDOT	$1,500,000	

Bridges across Burrillville were in disrepair and were either structurally deficient or functionally obsolete. The bridges were posted and emergency vehicles were unable to respond across town without violating the load restriction signs. The Town of Burrillville, RI was in a difficult position. To accelerate the repair of this bridge, the Town agreed to finance the design of a new bridge, providing RIDOT the committed the funds to construct the bridge.

The Town solicited professional services in 2006 and selected ***Bryant*** to perform the design of the replacement structure. The Town was in negotiations with RIDOT until the spring of 2007. On May 7, 2007, ***Bryant*** received a Notice to Proceed from the Town to proceed with the design of the replacement structure. The design project duration was two years, and was completed on May 31, 2009. The construction was scheduled for FY 2008 and FY 2009. Initially, ***Bryant*** provided geotechnical engineering, hydrologic/hydraulic engineering and scour analyses.

Following these studies, ***Bryant*** completed a bridge type study and subsequently entered the design stage. The contract documents were prepared and the project authorized for advertising by FHWA on November 9, 2009.

The replacement bridge is a butted box beam superstructure supported on pile supported precast abutments. The bridge type was selected to provide for accelerated construction techniques thereby minimizing the duration of street closure to two months. The road was closed for 41 days. The replacement bridge was dedicated on November 8, 2010.

<u>DESIGN CONCEPT</u> (Please refer to pages 33 -35 for plans)

1. **Provide Project layout, indicating (a) typical sections, roadway and bridge; (b) profiles that deviate from those shown on the existing plans.**

The replacement bridge deck cross-section will consist of two 16-foot travel lanes (two 12-foot lanes and two 4-foot shoulders), two 4-foot sidewalks and two 1-foot wide parapet walls. The bridge's 12-foot lanes will remain constant with the roadway's existing 12-foot lanes. The bridge's 4-foot shoulders will transition to two 2-foot roadway offsets over a distance of 75 feet. The bridge's 4-foot sidewalks will transition to the roadway's 4-foot sidewalks. The travel way's centerline will be delineated with double yellow lines while the shoulder to offset transitions will be delineated with solid white lines. The existing curbing will be replaced with granite curb and sidewalks reconstructed along both sides of the roadway from Route 117 to the bicycle path's new curbing. The minimum roadway pavement will consist of 12 inches of gravel borrow subbase course, 6 inches of bituminous base course and two 1-1/2 inches layers of bituminous surface course. This pavement makeup may be modified during the design should the projected truck traffic over the design life of the project indicate a need for modification. The horizontal alignment will remain constant, while the vertical alignment at the bridge will increase 6-1/2 inches. The elevation increase will be accommodated by a combination of vertical alignment adjustments, intersecting street re-profiling, grade transitioning and drainage location and casting adjustments (see accompanying profile plan). The existing drainage areas and flow patterns will remain the same as pre-construction conditions.

2. **Provide a description and structural concept for the bridge structure(s) proposed. Include 11x17copies of an elevation view, transverse section, foundation, and abutment configurations. Outline conceptual solutions for any complex problems that are identified.**

The new bridge will be a one span steel beam bridge with a composite concrete deck. The span length will be 88 feet which will enable the beams to be delivered in one piece and eliminate splicing. This length was also chosen to allow room for the spillway walls to be built in front of the abutments. The overall width of the bridge will be 42.15' with a curb to curb width of 32.15'. The bridge superstructure will consist of five W36x262 steel beams designed in accordance with AASHTO LRFD Bridge Design Specifications. The beams will be metalized and painted. The composite deck will have a minimum thickness of 7 ½" with a waterproofing membrane and an asphalt wearing surface. Due to the number of future utilities anticipated on the bridge, stay-in-place forms will be utilized for the construction. Two four-foot-wide sidewalks and two one-foot-thick parapets will be provided to replicate the previous bridge cross section. This cross section will provide adequate stiffness to keep the live load deflections below the specified limit of L/1100.

The bridge abutments will be semi-integral with the superstructure to provide better longevity and lower maintenance cost for the bridge. Based on meetings with utilities, and based on the previously crossing utility, a gas main sleeve will be required, but no electrical, telephone or cable sleeves will be necessary. Future utilities include water and sewer, for which sleeves for future installation will be provided if approved as a betterment by RIDOT. If the number of sleeves through the backwall becomes prohibitive, a stub abutment could be used instead. The sleeves for future utilities will be continued and capped at the end of the sleeper slab behind the approach slab to eliminate disturbance to these structures when the utilities are installed after the bridge is in service. Sketches of both abutment alternatives are included in the plans. The abutments will be supported on mini piles behind the spillway walls which will be a separate structure.

Construction of the bridge adjacent to the overhead utilities will be a challenge during construction. National Grid has agreed to shut down their line over the river during steel erection, sheeting, and mini-pile installation. In addition, the electric lines feeding the mills may need to be shut down on off hours for some of the work. This work will be scheduled with the utility and mill owners.

3. **Provide a description of the Respondents approach to integrate the new spillway walls with the stone facades and the reconstructed splash pad.**

The spillway walls will be constructed in alignment with the existing walls upstream and will be separate from the bridge. This is probably the most challenging structure from a construction viewpoint for three reasons:

- Dewatering will be required to control both river flows and groundwater seepage;
- It is adjacent to the existing dam and must tie into the existing walls at the transition from the dam to the bridge abutment;
- It must use the old stones in a historically accurate way to replicate the original walls.

As the proposed semi-integral abutment will not have any capacity to support lateral earth loads, the spillway wall must be designed for this purpose. The proposed approach is to construct the spillway walls within a sheet pile cofferdam for control of water and which will allow the work to begin in the late winter/early spring when river flows will be significant. A concrete footing will be constructed within the cofferdam to support the new concrete wall. The back wall of the sheet pile cofferdam will be extended the full height of the wall, and will be provided with an anchor system of steel tierods extending to a sheet pile deadman wall approximately thirty feet behind the abutment, as the wall is backfilled. This permanent sheet pile wall will support the lateral earth pressures behind the spillway walls. The new concrete spillway wall will be constructed within the cofferdam as a permanent facing using this sheeting as a one-sided form. The stone façade will be constructed in front of the reinforced concrete wall after a 2' portion of the splash pad slab has been constructed within the limits of the cofferdam. The stones will be attached to the concrete wall using channels cast into the concrete and inserts doweled into the stones. The splash pad will be integrally connected to the spillway walls with reinforcing dowels. The steel sheet piles on the river side of the cofferdam will be cut off below the splash pad and left in place.

The transition from the cast in place concrete wall with anchored permanent sheeting on the upstream side of the bridge will require the installation of drilled in place H-Pile or minipile shoring to support the dam-side of the excavation during the repairs to the existing stone masonry walls and the tie-in to the new stone façade. This shoring will be required to support the full height of the excavation as the stone wall repairs will need to provide stability of the wall for final earth pressure conditions. Dewatering by the use of deep wells and or well points will also be required to intercept groundwater and control seepage through the adjacent dam embankment.

4. **Identify what additional geotechnical investigation Respondent expects or intends to undertake to supplement or verify the geotechnical information included in the RFP CD. If Respondent intends to exceed the RIDOT requirements, then explain the basis and benefits/value for doing so.** ***GZA*** has reviewed the geotechnical report and boring logs included in the RFP, and finds this information to be generally adequate for foundation design. However, additional information will be desirable for the design of the earth support and dewatering systems for the proposed excavations. A supplemental subsurface investigation program will be developed during the design phase in order to identify the composition of the dam embankment located immediately upstream of the bridge, with particular emphasis on groundwater levels and embankment permeability for seepage and stability analysis, and the presence of potential obstructions for shoring systems that may be required for construction of the new bridge substructures and the repairs to the existing stone masonry walls. We anticipate performing additional borings on each side of the river, with groundwater observation wells/piezometers installed in these borings to measure vertical gradients. Additional boings and/or probes will be performed to investigate the composition and configuration of the dam and existing spillway walls. The borings will be observed, logged and located by a representative of ***GZA*** in conformance with the requirements of the RFP Project Technical Requirements. Laboratory gradation analyses will be performed on selected soil samples to aid in the estimation of the permeability of the dam embankment material.

   An interpretation of subsurface conditions and estimates of the engineering soil design parameters (unit weights, friction angles, lateral pressure, bearing capacity, etc.) for the bridge substructure design will be developed based on an evaluation of the subsurface exploration data. A Final Geotechnical Data Report (FGDR) and a Final Geotechnical Interpretive Report (FGIR) will be prepared summarizing site observations, field explorations, laboratory testing, and results of geotechnical analyses. The FGIR will also present geotechnical recommendations for the design of the foundation systems for the proposed structures.

5. **Describe Respondent's approach to managing river flow through the Project area throughout construction.**

The managing of the river flow through the project area will be one of the more challenging aspects of the project. The Anthony Mill dam is a "run of the river" dam, with little or no storage in the upstream impoundment, therefore storm flows will need to be passed through the site as they occur. Our preliminary evaluation of the watershed hydrology indicates that a peak river discharge for the 10-year storm will be over 1,400 cfs, and that the 200-year design flood is 4,400 cfs. A review of the nearby USGS gauging station data indicates that the river flows vary greatly seasonally, with flows up to 1,000 cfs or greater occurring regularly in the winter and spring, and significantly lower flows, often less than 100 cfs, occurring in the summer and early fall.

It is planned to install steel sheet pile cofferdams at each abutment at the beginning of the project to allow the demolition of the existing abutments and construction of the new river walls and stub abutments to begin in the later winter or early spring when significant river flows may be expected. This work includes the construction of the spillway wall footing, the spillway wall, and a small segment of the splash pad. The back wall of this cofferdam will be left in place, as described previously, to form the lateral support for the spillway wall. These cofferdams will be limited to the abutment areas and are anticipated to only minimally impact the flow of the river.

The construction of the new splash pad in the river bed will be performed in the late summer (July through September) when the river flows are historically lowest and manageable. Our approach is to divide the river as it goes over the dam so that half the work area will remain in the dry to facilitate the work. This will be accomplished by driving sheeting into the river bottom below the dam and parallel to the flow up to the edge of the remaining splash pad a few feet below the downstream side of the dam. "Super sack" sand bags (1 cy) will be used over the face of the stepped granite block dam. The river flow will be diverted to one side of the river on the upstream side of the dam using super sack sand bags and/or proprietary cofferdam measures such as Port-A-Dam. The dam inspection photos show the ground elevation to be only a few feet below the crest of the dam in the immediate upstream area, forming a shallow plateau. A channel runs through the plateau to the 48 inch drawdown pipe. Super sacks will be placed on top of this plateau area to cordon off half the dam at a time. The super sacks may be supplemented using Port-A-Dams or other measures depending on calculated flow capacities and depths.

Once one half of the splash pad has been constructed, the upstream diversion cofferdam will be moved to divert the flow over the newly constructed splash pad, and the remaining half of the splash pad will be constructed. During a period of low flow, sand bags will be placed on the new splash pad and the sheeting will be cut off and a closure slab will be poured.

The ownership of the dam is currently in question, with reports that the owner is in receivership and that the Anthony Mill owner may end up with the property. ***Aetna*** has been in contact with the mill owner and has received tentative permission to use the 48" drawdown pipe in the Anthony Mill Pond Spillway to divert the flow. This will, of course, be dependent on the final ownership of the dam returning to the Anthony Mill owner and the assumption that the gate can be made operational. Additional pipe length will be added to the 48" drawdown pipe discharge to divert the flow past the work zone. The pipe cross sectional area is anticipated to be adequate to handle the average flow over the dam during the low flow months. The use of the 48-inch drawdown pipe, if possible, will greatly facilitate the construction of the splash pad.

6. **Describe Respondent's understanding of what utilities are believed to be in conflict with design features and will need to be relocated. Identify and list all known utilities and describe Respondent's coordination and relocation plan.**

At the outset of the proposal initiative, contact was established with the aerial utilities paralleling the Laurel Avenue Bridge Replacement site, crossing the Pawtuxet River. Upon inspection of the site it was apparent that the vertical clearances of these utilities would pose an existing site condition requiring immediate attention. National Grid, Verizon and Cox Communications were contacted to determine what facilities existed on the site and whether service could be interrupted or whether the utility could be relocated.

During the initial contact period, it was determined that National Grid maintained 3 primary electric service cables and one neutral cable; that Verizon maintained one 900 pair cable and two fiber optic

cables, one 4 count fiber and one 48 count fiber; and that Cox Communications maintained one coaxial cable and one 16 count fiber optic cable.

National Grid indicated that the primary electric service could be interrupted providing the Contractor presents a schedule to National Grid outlining the frequency, time and duration of the service interruption. This is possible because the electric grid is back fed. The service interruption is possible between pole numbers 3, 4 and 4 ½, because pole numbers 3 and 4 ½ have switches which de-energize the primary electric cables. A force account would be required for each event to de-energize and reenergize the cables. In addition to the primary cables crossing the Pawtuxet River, pole number three has three primary cables which are perpendicular to Laurel Avenue and connect to the transformer pad servicing the mill complex at the northeast limits of the project site. These cables must be maintained in service to keep the mill operable. During the discussions, National Grid indicated that these cables were 12.760 KV lines and that per the ASME B30.5, Required Clearances for Nominal Voltages in Operation Near High-Voltage Lines, clearances of 10 feet are required for equipment in operation and 4 feet for equipment in transit. It is possible that these cables may be interrupted with owner approval when the mills are not operating (weekends, nights, and holidays). Cox Communications facilities are not back fed and, therefore the facilities could not be taken out of service. Verizon facilities are not back fed and their service cannot be interrupted.

Discussions concerning the feasibility of relocating these facilities were undertaken with each utility company. As a result, a meeting of the utilities was called and an open dialogue occurred between the Utilities, the Contractor and the Design Team. A primary concern was the location proposed for the southwest bridge foundation and pole number 4. It was noted that prior discussions with RIDOT representatives had considered the minor relocation of pole number 4, which would result in gaining 15 feet of clearance between the abutment and the excavation limits. Although this would be a costly addition to the bid for National Grid to move the pole, it would be a far greater cost for Cox Communications and Verizon to relocate to accommodate this minor change in pole location. Cox Communications and Verizon require costly and time consuming splicing of cable to relocate. Further consideration was given to sheeting around the pole so as to keep it out of the excavation and provide support to maintain the pole vertical during the excavation. At the conclusion of the meeting it was generally agreed that the time and cost to facilitate relocations was not warranted and the Contractor would set the crane at a location that would permit the construction of the bridge with National Grid de-energizing the primary electric during certain operations. Force accounts for the costs of the work have been provided by National Grid Electric and are included in the bid price for utilities.

Since the initial meeting with the utility companies, National Grid indicated that more space for crane operations could be provided at the north side of the bridge site. To accomplish this, an additional pole number 2.5 will be added between pole numbers 2 and 3. The primary cables would be transferred from pole number 3 to the new pole 2.5, which is closer to pole 2. The cables will then cross Laurel Avenue, at a skewed angle, from pole 2.5 to the transformer pad to maintain power to the mill.

Kent County Water, National Grid Gas, Coventry Fire Alarm, and Coventry Public Works were contacted to discuss their facilities and the need to address their concerns. Kent County Water currently has a 12 inch water main in the river west of the spillway and there are no provisions to

replace it at this time. As requested by Kent County Water and if approved by RIDOT as a betterment, sixteen and twenty inch sleeves for Kent County Water will be provided through the bridge back walls. Eight inch sleeves will be provided through the bridge back walls for the 4 inch steel gas main relay. The gas main relay will be performed under this construction contract by an approved National Grid Gas contractor and the force account for the cost of this work has been provided by National Grid Gas and is included in the bid price for utilities.

Coventry Fire Alarm was contacted and they indicated that their fire alarm system consists of high frequency building mounted radios and that they no longer use hard wired systems for fire alarms in Coventry.

Coventry Public Works was contacted. The use of sleeves for sanitary sewers would be a betterment requiring approval from RIDOT. If pumps are not used, the profile of the sewer would fall below the bottom of the beams. The Town has indicated that it would like to use a gravity line for this sewer, so sleeves may not be feasible for the sewers.

The design of the Laurel Avenue drainage improvements will incorporate the most recent requirements outlined in the Rhode Island Stormwater Design and Installation Standards Manual. This manual calls for the optimum treatment of stormwater by employing Best Management Practices BMP's. On the north side of the bridge, very little change to the drainage system is anticipated. Impacts to this drainage watershed will include profile modification and bridge width increases. However, drainage system amenities for this area are downstream of the site. On the south side of the bridge, adjustments to the profile of the roads will result in drainage system adjustments and the need for a stormwater treatment device is anticipated in this design. The magnitude of these adjustments and the degree of treatment will be determined during the final design. The relocation of the existing outfall to a location easterly of the southeasterly abutment is anticipated to accommodate the treatment device and minimize impact to the new abutment.

7. **Describe Respondent's plan to coordinate with other agencies and the public, and to meet historical agency requirements.**

The Design Team will facilitate communication with the necessary agencies, town officials, and utilities in order for the project to be completed in an orderly and expeditious manner. Coordination with RIDOT will be accomplished through meetings, required submittals, and 'over the shoulder' reviews. The primary point of contact for this project will be Mr. Jeffrey Bostock, the Design/Build Project Manager. Ms. Patricia Steere, P.E., Design Manager, will be the point of contact for design issues. RIDEM coordination will be through Dr. Igor Runge, Ph.D., P.H..

The Team has already made contact with key people from the Town and utilities to begin the coordination process. As discussed in the previous section, the D/B Team has had a meeting with National Grid, Verizon, and Cox to discuss the aerial lines. The arrangement with the underground utilities will mainly involve National Grid Gas. The D/B Team will coordinate with the subcontractor approved by the gas company to install the gas line across the bridge. The design of the hangers and steel attachments will be coordinated between ***Steere*** and the utility. The D/B Team has been in discussions with the Town, as well, to accommodate their future water and sewer needs and will continue this discussion into the design phase. Mr. Todd Brayton, P.E. will continue to coordinate during design and Mr. Kevin Zona will coordinate during construction.

Although no public meeting is required for this project, residents, adjacent mill and business owners, and bike path users all have an interest in the construction of the bridge. Mr. Bostock has begun coordination with the Anthony Mill owner. The owner has agreed to an arrangement for lay down areas and also to setting a schedule for electrical outages to his mill on off hours if needed for construction adjacent to the transfer station feeding the mill. It is not anticipated that access to the Concordia Mill

site will be affected, but coordination with that owner will be undertaken as necessary by Mr. Bostock.

The accommodation of bike path traffic is of concern to the D/B Team. This may be best accomplished by providing clear signage and fencing to safely keep cyclists and pedestrians out of the work zone. Any other necessary public outreach will be coordinated with RIDOT.

The D/B Team has subcontracted with FC Construction (FC) for the historic stone masonry work. FC has worked with historic walls in the past and is familiar with the methods of performing this work in accordance with the requirements of the Rhode Island Historic Preservation Officer. Once the south abutment stones have been sorted and salvaged, FC will work with Dr. Runge and Ms. Steere to develop a plan and procedures for the reconstruction of the spillway wall fascias and repair of the upstream granite block walls. The north abutment reconstruction and granite wall repairs will include the numbering and photo documentation of the stones as the wall is deconstructed. The stones will be used in the same positions in the new walls. The methods for reconstruction of the south abutment will depend on the salvage of the existing stones and will be developed when that is known. The reconstruction methods and plans will be submitted to RIDOT's Cultural Resources Unit by Dr. Runge for review and approval.

8. Describe Respondent's plan to identify, coordinate and address all applicable Federal and State environmental laws and regulations.

Based on the details articulated in the RFP, various regulatory permits will need to be secured prior to commencement of construction activities. This will necessitate identification of required permits, coordination with the regulatory agencies, and completion of required permit application forms. Continuous communication with all applicable parties will be the focus of our approach.

National Environmental Policy Act (NEPA): A Categorical Exclusion (CE) was approved by RIDOT on December 20, 2010 for this project. Therefore preparation of a formal environmental assessment will not be required. The Team will adhere to applicable environmental commitments noted in the CE during the design and construction process. These will include compliance with the requirements of the Rhode Island Historic Preservation and Heritage Commission (RIHPHC), securing of a RIDEM Freshwater Wetlands Permit, and approval from the RIDEM Dams program. Should site conditions require changes in the scope or footprint of the project, the Team will coordinate with RIDOT to determine if a re-evaluation of the CE by RIDOT will be necessary and will proceed accordingly.

RIDEM Permits: Based on the anticipated scope of the project, and the results of due diligence investigations conducted by RIDOT, the Team will prepare permit and/or approval application documents for the following:

- Freshwater Wetlands Permit from RIDEM;
- Authorization from the US Army Corps of Engineers under the RI Programmatic General Permit;
- RI Dams Program approval;
- RIDEM Water Quality Certification; and
- A General Permit for Stormwater Discharges Associated with Construction Activities under the Rhode Island Pollutant Discharge Elimination System (RIPDES) program.

As part of the RIPDES General permit, a Storm Water Pollution Prevention Plan (SWPPP) will be prepared in accordance with the sample plan attached to the RFP. We will coordinate with the

regulatory agencies to ensure all appropriate requirements are completed. As noted in the RFP, RIDOT will be the owner and permittee and will review and approve all necessary permit applications, and will directly submit applications to appropriate regulatory agencies. We will prepare any required additional information and ensure that all required permits are properly secured.

During the design and construction phases of this project, we will utilize the recently released (December 2010) Rhode Island Stormwater Design and Installation Standards Manual (Stormwater Manual). We will incorporate Low Impact Design (LID) design and construction practices to reduce detrimental impacts to the surrounding environment. At a minimum, we believe that the Stormwater Manual will require some type of water quality mitigation be employed in the damaged roadway storm drains that will be reconstructed as a part of this project.

As part of the permitting process, we will prepare and submit to RIDOT as soon as practicable prior to 30% design: a completed Appendix A checklist (competed as much as possible at this design stage) from the Stormwater Manual and a preliminary design strategy for environmental permitting listing anticipated permit submissions based on our design concept for environmental permitting. It is anticipated that this preliminary submission will assist in streamlining the environmental permitting process for this project and will allow for early coordination with the RIDOT Natural Resources Unit (NRU), including a preliminary meeting with RIDEM's permitting staff. We will meet with the RIDOT NRU as necessary to ensure that the environmental permitting process moves ahead expeditiously.

Since this project spans the South Branch of the Pawtuxet River, some of the construction phases will include in-stream activities. We will prepare our permit application submittals to address the proposed in-stream activities required for our design. This will include developing a regulatory agency acceptable approach of dewatering certain sections of the riverbed during the various phases of construction.

While it is unknown at this time the extent of post construction monitoring that will be required, we believe that some type of short term monitoring of water quality will be required by RIDEM. For this reason, our price proposal includes three months of basic water quality monitoring using field meters and visual observations.

Soil Management: The Phase I Environmental Site Assessment (ESA) for the project site referenced in the RFP concludes that two soil samples collected from the site at depths from 0 to 3 feet below grade were compliant with the Remediation Regulations for residential, commercial, and Industrial exposure. However, since headspace volatile organic compound (VOC) concentrations showed some inconsistencies between the two sampling teams, we believe management, handling, and final deposition of soil at the project site will be regulated by RIDEM's office of Waste Management. We propose additional field screening for VOCs to be conducted periodically during site excavation. At this time we assume that all soil disturbed during the project will be suitable, from a contamination perspective, for reuse on the project site. Should contamination be discovered during excavation activities that renders the soil or groundwater as a Characteristic Hazardous Waste, we will manage the soil/groundwater accordingly and be compensated for this out-of-scope activity accordingly by RIDOT. Prior to commencement of excavation activities, we will prepare a Soil Management Plan in accordance with RIDEM guidelines that will discuss soils management practices, soils stockpile maintenance, soil reuse practices, excess soil disposal practices, basic health and safety procedures (in the form of a Health and Safety Plan), and provisions to address unexpected soil contamination.

Groundwater: The two environmental test borings discussed in the Phase I ESA referenced in the RFP were reportedly analyzed for TPH and VOCs. Based on the analytical results, the Phase I ESA concluded that groundwater samples were compliant with the RIDEM Remediation Regulations Method 1 GA groundwater objectives. Based on the available data, we believe that dewatering activities will not require permitting under the RIPDES General Remediation Permit. However, we will coordinate our assumptions with RIDEM staff and proceed accordingly. Additional water quality testing of groundwater and river water, if required will be conducted in conformance with RIDEM protocols. For the purpose of our price proposal, we assume that any dewatering activities will require fractionation only (to remove suspended solids) with no chemical treatment.

Historic Properties: As noted in the RFP, one historic property has been identified within the area of potential effect. The Anthony Village Historic District, which includes two downstream mill complexes, the dam, raceways, and associated masonry. RIDOT has secured a "no adverse effect" determination for the project that is based on reconstruction using stone from the original abutments and/or supplemental stone that matches the original at the south abutment, if necessary. Our design will follow this procedure.

Stone wall construction will be conducted in coordination with the Rhode Island State Historic Preservation Officer (RI SHPO) through the RIDOT Cultural Resources Unit. Unanticipated discoveries of historic or archaeological resources or human remains shall prompt cessation of work and notification of the RIDOT Project Manager/Engineer immediately for direction.

Environmental Monitoring: The Team will monitor on a daily basis compliance with all applicable state and federal environmental laws, regulations, and permits. Should deficiencies be noted, immediate action will be taken to bring items back into compliance. Monitoring to support the SWPPP will also be conducted. Environmental monitoring during construction activities will be conducted on a periodic basis. An environmental compliance report will be prepared and provided to the RIDOT Project Manager on a weekly basis. This Report will include a list of items observed to be in non-compliance, deviations from approved work, and actions taken or recommendations appropriate actions, to bring back into compliance.

PROPOSED PLAN FOR DESIGNING THE PROJECT

The initial concepts for the design of each component have been established by the Design Team based on RIDOT and AASHTO technical and quality requirements with input from the Construction Team based on constructability and budget. The D/B Team met weekly prior to the issue of the RFP to discuss concepts and possibilities for this bridge to coordinate and advance these initial concepts to achieve a quality, cost-effective, constructable design.

The main line of communication between the design personnel and construction personnel is between Mr. Jeffrey Bostock, the Design/Build Project Manager, and Ms. Patricia Steere, P.E., the Design Manager . Coordination will continue to be accomplished through meetings both onsite and offsite on a biweekly schedule. All key issues and coordination will be done through Mr. Bostock and Ms. Steere between construction and design. For some bigger issues such as utility coordination and permitting, designees will be assigned by these managers to coordinate that issue independently and report back to the managers.

Document control will be key to keeping everyone in the loop and making sure the project personnel move forward in the design and construction process as a team. Project files will be established and reports of meetings, telecoms, and key emails will be routed to a pre-established routing list before filing. In addition, a document control procedure will be established to assure that the latest versions of the design plans, specs, shop drawings, etc. are being used by the entire D/B Team.

The design has been integrated into the preliminary schedule based on the logical construction schedule taking into account the lead time required for shop drawing submittals and reviews and fabrication of the items. Due to the lead time required for the fabrication and delivery of the structural steel, the design of the steel has been incorporated early in the schedule. The 30 % and P&S submittals of the steel superstructure will be made prior to the main 30% and P&S submittals enabling the shop drawings for steel to be started prior to the final P&S approval. Design reviews at the submittal stages listed in the Project Technical requirements have been worked into the schedule to allow adequate time for review and comment.

Based on the information available to date, the permitting is anticipated to be straightforward. RIDEM coordination will be the responsibility of Dr. Igor Runge, Ph.D., P.H.

One key area for design coordination is the spillway wall design and construction. Coordination of various design disciplines (geotechnical, structural, hydraulic, permitting, historic) and contractors (sheeting, concrete, historic stone mason, dewatering) and agencies (RIDOT, RIDEM, RIDOT Cultural Resources Unit) will necessitate careful coordination by the D/B Team. This coordination will be accomplished through the biweekly meetings where all necessary parties are brought together to efficiently resolve the various issues. Mr. William L. Ladd, P.E. and Ms. Steere will be responsible for the coordination effort for this part of the project.

QUALITY CONTROL AND QUALITY ASSURANCE

1. **A description of how the quality control function will be organized, including the name(s) of quality control manager(s).**
   Quality is key on a fast-moving design/build project and will be vital to the success of the Laurel Avenue Bridge project.

   Construction QA/QC: From the standpoint of ***Aetna***, quality assurance is the organization's activities that provide the accepting agency with the product that meets or exceeds the performance needs of the project. The goal for ***Aetna*** is to build the structural facilities on this project that have a serviceability that meets the anticipated performance level for a period that exceeds the expected design life of the structure. ***ATC*** is a construction materials inspection and testing organization with over 30 years of experience in the transportation industry. Mr. Kevin Martin, P.E. (***ATC***), Quality Control Manager (Construction), will work with ***Aetna*** to identify the specific contract requirements set forth by RIDOT for the materials established within the quality assurance specification. Based on the quality criteria for construction materials identified in the contract documents, Mr. Kevin Zona (***Aetna***), Construction Manager, and Mr. Martin will develop a Quality Control Plan (QC Plan) that will serve as the blueprint for providing acceptable construction materials on a continuous basis. The QC Plan will establish minimum process controls to provide a uniform product, incorporate sampling and testing procedures that can verify the quality level of the product during construction, and identify evaluation methods to determine any necessary actions required to maintain an acceptable quality level. ***Aetna*** and ***ATC*** will partner with RIDOT to develop a plan that establishes a framework for producing the right product the first time. Mr. Martin's Team will include inspectors certified and qualified in soils sampling, soils compaction testing, concrete sampling and testing, concrete curing, steel fabrication and welding, metalizing and painting inspection, driven piles, and deep foundations. These technicians will report

directly to Mr. Martin who in turn, will report to Mr. Jeffrey Bostock (***Aetna***), Design Build Project Manager.

Design QA/QC: Each design firm on the Team has their own quality control procedures which will govern their in-house design. A project quality control procedure will be used to specifically address the procedures to be used for this project to assure compliance with RIDOT and AASHTO requirements, completeness, common sense and economical solutions, coordination between all disciplines, and constructability. Project quality assurance procedures will also be in place to make sure the quality control procedures are followed for every aspect of the job.

Our Design Quality Assurance (QA) Team will consist of senior level engineers who are not part of the project and who will perform independent peer reviews. The individuals who will make up the Team are listed in the organization chart. Overseeing the design quality assurance will be Michael W. Desmond, P.E. (***Bryant***), Quality Control Manager (Design). Mr. Desmond has many years of experience in the Rhode Island transportation field and knows the standards and procedures required for the job. Mr. Desmond will report directly to Patricia Steere, P.E. (***Steere)***, Design Manager. The other members of the QA Team are: Michael E. LeBeau, P.E., S.E. (***Bryant***), Bridge QA; Michael Powers, P.E. (***GZA***), Geotechnical/Environmental QA; and Michael W. Desmond, P.E. (***Bryant***), who will also serve as Highway/Traffic QA.

2. **A description of how the quality control program will operate, including how it will interface with the Respondent's organization and RIDOT.**

Construction QA/QC: Depending on the time constraints of the project schedule, the QC Plan will be developed and submitted prior to or at an initial pre-construction conference for review by RIDOT. The QC Plan will establish a quality control system that will ensure conformance of the quality assurance materials identified in the contract. The plan will list the sources of material for the project. Necessary laboratory facilities will be identified for on-site sampling and testing activities as well as production facilities. The QC Plan will list the managers, inspectors, and technicians participating in the quality control activities for the project, and delineate the roles and responsibilities for the personnel involved. Similarly, the QC Plan will list the contractor personnel participating in the production of quality assurance materials and their respective roles and responsibilities. The QC Plan will identify equipment that will be utilized in the production and placement of materials. The plan will also list the inspection and testing specifications established by RIDOT that will be used to determine the quality of the materials used on the project. As necessary, mix designs will be submitted for approval and added to the QC Plan. ***Aetna*** and ***ATC*** will work with RIDOT to incorporate necessary changes and incorporate items of concern. Resolving issues prior to the beginning of construction activities provides for a fundamental understanding of the roles of all the parties and can reduce problems as production commences.

Aetna/ATC is committed to maintaining active and timely communications with RIDOT. As the data indicating a particular item indicates a reduced quality level, test results will be presented to the RIDOT representative as soon as possible. The RIDOT representative will receive verbal communication indicating initial activities taken to identify possible causes of the reduced quality level. If the reduced quality level persists, ***Aetna/ATC*** will meet to develop an action plan to address the issue. The action plan will be presented to the RIDOT representative for comment. Increases in personnel and testing will be taken on by ***Aetna/ATC*** in order to monitor the production process until the item is back in control.

Design QA/QC: A project specific Design Quality Control/Quality Assurance procedure will be developed by the Design Team and Mr. Desmond for use by the Design and QA Teams. This

procedure will include the establishment of the project design criteria, the schedule of formal reviews by the QA Team along with review guidelines and criteria, calculation format and checking procedures, drawing review guidelines and procedures, organizational and interface review procedures, and document control procedures. The scheduled reviews will be incorporated into the design schedule so there is sufficient time prior to submittals to perform the work.

Once these procedures are established, the design and QA Team will meet to review them and implement them. At each of the scheduled reviews, Mr. Desmond, the Quality Control Manager (Design), will submit a QA report to Ms. Steere, the Design Manager, and to RIDOT to accompany the submittal to ensure the procedures have been met and followed. Review comments generated by the QA Team will be documented and addressed by the Design Team as part of the QA report. Similarly, review comments generated by RIDOT and FHWA will be documented and formally addressed by the Design Team. If problems with design quality are found, Mr. Desmond will report the issues immediately to Ms. Steere for corrective action.

3. **A detailed summary of Respondent's proposed Design and Construction Quality Management Plans.**

Construction Quality Management Plan Summary

Soils: With the extensive experience as a contractor for transportation facilities in New England, ***Aetna*** utilizes best practices to provide soil and aggregate materials on all of its projects. Conventional sampling and testing procedures are used to determine the appropriate functional classification of all soil materials found within project limits. Processed aggregates are manufactured with consistent process controls to make a uniformly acceptable product. All soil and aggregate products are stored, loaded, delivered, and placed using methods designed to maintain the quality and consistency of the products throughout the placement of these materials. Based on the Department's established quality criteria for soil and aggregate materials, ***Aetna*** and ***ATC*** will prepare a QC plan that identifies critical points for sampling and testing that identifies the initial quality level of these materials. Minimum sampling criteria will be established to provide both RIDOT and ***Aetna*** the confidence that an acceptable quality level is maintained during the placement of the soils and aggregates on the project. Compaction criteria will be determined prior to placement of any materials. Equipment and procedures appropriate to the grading and compaction requirements will be used to achieve acceptable quality levels the first time. Once the process for providing an acceptable product is established, continuous inspection, sampling and testing, as defined in the QC Plan, will be performed to maintain that quality level.

Concrete: All constituent materials used in the manufacture of Portland Cement Concrete (PCC) will meet the AASHTO and Rhode Island Department of Transportation specification requirements for aggregate, cement, admixtures, and water necessary to provide quality PCC products for the project. Best practices for aggregate handling and stockpile management will be used to provide uniform sand and stone products in the production of concrete. The QC Plan developed for this project will define minimum sampling and testing guidelines to identify and maintain consistent aggregate products throughout the production of all concrete materials utilized on the project. Batching and mixing procedures developed for the specific concrete produced will be used to maintain consistent concrete

products meeting the requirements set forth in the contract. The QC Plan will identify sampling and testing needs to determine the initial quality level of the concrete produced on a daily basis. Ongoing inspection, sampling and testing will be performed, as defined in the QC Plan, to identify variability in the product. Evaluation of inspection and testing by ***ATC***'s qualified personnel will assist production personnel in controlling the production process and maintain an acceptable quality level.

Other fabrication and construction: There are several additional job specific tasks for which ***ATC*** has certified technicians; specifically, driven pile inspection and deep foundation support. Furthermore, ***ATC*** has certified welding and structural steel erection inspectors to inspect the structural steel at the plant and on site in conjunction with the fabricator's QC department.

Steps to ensure quality: ***Aetna/ATC*** will utilize control charts to track the ongoing quality level of material properties essential to the quality level of the project. When an item being addressed by QC is showing a decrease in quality, the respective work will be halted. QC and Construction will evaluate the issue to determine courses of action that will bring the item back into a higher quality level. The project manager will direct QC to increase the frequency of non-random testing to help determine the source of the developing problem. Construction will review its basic best practices for the process to determine what can be adjusted to achieve consistent quality. Both Construction and QC will verify that equipment is in proper working condition.

An example of a common problem during a construction project is a reduced ability to achieve consistently acceptable in-place soil density. As the in-place density is reduced compared to the existing Proctor value, a number of possible problems and solutions are available to be addressed. The Field QC technician will report the reduced in-place density to the QC Manager and RIDOT representative, identifying that there is an issue to be addressed. The technician will verify that test equipment is in proper working condition. The earthwork foreman will verify that grading and compaction equipment are appropriate for the work and in good working condition. Increased sampling of the soil/aggregate will be performed to determine if there is a change in material properties. If existing soil/aggregate moistures indicate the material is relatively too far from optimum, the earthwork foreman will use best practices to increase or decrease the material moisture, as necessary, to increase the efficiency of compaction effort. RIDOT will be notified of the results of corrective actions as they are taken, along with test results of the activities.

Design Quality Management Plan Summary

Design Input/ Design Criteria: The project design criteria will be formalized to assure that all components are designed to the appropriate codes and version of the codes. As discussed previously, pre-design meetings have been held and will continue to be held as the project progresses to discuss constructability, cost effectiveness, life expectancy, future maintenance, utility requirements, control of water, environmental issues, etc.

Design output: At pre-determined milestones, formal review of the plans, specifications, and calculations will be conducted by the QA Team for conformance to the codes identified in the Design Criteria as well as for constructability, cost, longevity, and minimization of required maintenance in the future. The plans will also be reviewed to assure conformance with RIDOT's Design Policy Memo 450.02 Plans Content Requirements.

Design Verification: A set of calculations will be submitted that can be used in the future by a technically qualified person without recourse to the originator. All calculations will have formal write-ups that include the purpose, approach, body of calculations, and conclusion at a minimum. Number by number checks of the calculations will be performed or an alternate calculation will be undertaken. In

addition, the drawings will be reviewed by both the calculation originator and the checker to make sure the design matching the calculations is shown correctly on the plans. Computer calculations will be verified using simple hand calculations and both computer and hand calculations will be checked for reasonableness of the results.

Organizational and Technical Interfaces: Close coordination and continuous interface is critical to ensuring a quality project. To that end, special reviews will be performed of the interface areas, including:

- Interdisciplinary (bridge-highway, bridge-geotechnical, etc.)
- Between Plans and Specifications
- Between the Design/Build Team and RIDOT
- Between the design and the permit requirements
- Between the design and the geotechnical report

Document Control: As mentioned previously, document controls will be used to ensure the use of the latest versions of the design documents. Procedures will also be established for the shared CAD files and base maps to be used by the Team, assuring that everyone is using the same files with the same information.

PROPOSED APPROACH TO CONSTRUCT THE PROJECT

The D/B Team's approach to construction of the bridge, spillway walls, splash pad and associated work for the more complicated sequencing will be as follows:

The south abutment stones will be sorted, and the granite for reuse will be salvaged and stockpiled. The areas at the abutments will be benched down to elevation 86 +/- approximately five feet above the splash pad elevation, to allow equipment access. The sheeting location lines will be pre-trenched to remove boulders and obstructions. The existing sections of the splash pad which interfere with the proposed sheeting will be removed with a hoe ram. The river side sheeting temporary cofferdam sheeting and sheeting in the center of the river for diversion of river flow will be installed. The permanent sheeting will be installed using a template. Some of the sheeting and shoring to be used to retain the excavation on the dam side of the abutment and for the granite wall construction upstream of the bridge will be installed. This work will require shutdown of the electric wires running over the river. The sheets installed directly under the utility wires will be short sheets that will be spliced. The super sacks upstream of the sheeting will be installed and the dewatering wells or well points will be installed.

Sheeting for a cofferdam will be installed in the river in front of the existing north abutment prior to demolition. During demolition, the abutment stone wall will be deconstructed in accordance with the pre-approved plan and the stones will be catalogued and stockpiled. The permanent sheeting for the abutment will be installed after demolition in a manner similar as for the south abutment.

The new river wall footings for both sides of the river will be constructed inside the cofferdams at each abutment. The permanent sheeting will be backfilled to the height of the tiebacks. The mini piles will be installed followed by the wales and tiebacks. The tiebacks will have double corrosion protection and will be anchored to a sheet pile or cast in place concrete deadman approximately 30 feet behind the abutment. The area will be backfilled a few feet to the height of the abutment concrete pile cap. The abutment cap will be reinforced, formed and poured. Drainage and utility work in the vicinity of the abutments will be done at this time.

While the abutment is being built, the spillway walls can be constructed starting with the reinforced concrete and adding the stones later. The repairs to the existing granite walls can start in conjunction with

the stone fascia work for the new spillway walls. Similarly, the splash pad that ties into the spillway concrete wall can be built simultaneously with the bridge work once the river flow is controlled during the period of seasonally low flows.

After the concrete abutment cap is cured, the bearings and steel will be placed and the superstructure will be built. Utilities under the approach slab and on the superstructure will be installed at this time. The end pours around the steel beams will be cast; the sleeper slabs, approach slabs, and endposts built; and the approach roadway work will be done.

Describe Respondent's proposed approach to construct the Project, including but not limited to:

1. **A listing of those categories of work that Respondent anticipates will be performed by its own direct labor force (Respondent shall perform at least forty percent (40%) of the construction work) and those that will be performed by other team members, including subcontractors.**
   The construction components of the Laurel Avenue Bridge which will be performed by ***Aetna*** include: structural steel erection, concrete forming and pouring, rebar placement, earthwork, shear stud welding, bearing installation, railing installation, traffic control, temporary fencing, temporary signing, surface dewatering, installation of super sacks and/or port-a-dams, temporary electrical work and lighting.

   Work to be performed by subcontractors will include: historic stone masonry construction, deep well or well point dewatering, mini-pile installation, sheeting installation, asphalt work, electrical work, monitoring of sensitive structures, seismograph setup and monitoring.

2. **Coordination with federal, state and local agencies, local emergency response providers, local maintenance workers (including snow and ice removal workers), utility owners, and local municipal and county governments. Identify the person(s) who will have lead responsibility for agency coordination.**
   During construction, Mr. Jeffrey Bostock will work with Mr. Kevin Zona to coordinate with the various agencies including RIDOT and RIDEM. Since the bridge is currently closed and no other road closures are proposed, there will be little interference with Coventry emergency agencies or maintenance workers, but should something arise which requires their input or coordination, Mr. Bostock will contact the Town.

   Utility coordination will be Mr. Zona's responsibility. This coordination has begun and must be continue throughout the project to keep it on schedule. National Grid must agree to a schedule for electrical shutdowns so that the necessary sheeting, mini-pile, and steel erection work can be done. Early establishment of this schedule is necessary in order to make sure the overall contract schedule will work. Also, their crews must be notified in advance that their services are needed to shut off the electrical lines over the river. The National Grid Gas Company and their approved contractor must also be coordinated with to make sure their work will fit into the schedule.

3. **The proposed maintenance of traffic and traffic control concept for the adjacent mill buildings and the bike path.**
   The existing detour plan will be reviewed early on in the design process and the current plan in place will be augmented to insure conformity with current MUTCD criteria and ease of use. In addition, provisions will be incorporated into the plan to facilitate traffic at the immediate construction site locations, one on each side of the bridge. Typical site access (temporary) improvements will be provided to reduce dust generated from trucks entering and leaving the site. Signage will advise vehicle operators to use alternate routes to avoid these locations. During times of heavy equipment movement (crane setting, steel member and concrete batch arrivals etc.) provisions will be made for the staged movements during off peak hours to minimize impacts to the local motoring public. The

alternate route signage will be in place soon after the traffic evaluations but before the construction, to familiarize the motoring public with these route alternatives.

The bikepath traffic will be in proximity to the construction site. In order to provide for the safety of the cyclists and pedestrians, the D/B Team is proposing a temporary construction fence to prevent users of the path from encroaching on the work site. In addition, a flagger will direct bikepath traffic during delivery of materials and equipment.

4. **The location for temporary facilities, construction entrances, haul routes, staging and storage areas, stockpile areas, cranes, erosion/sediment control, and construction fencing.**
   Aetna has an arrangement with the Anthony Mill owner for a laydown area on his property. This will be used for laydown areas for storage of materials and equipment necessary for the job as well as the jobsite office space. On the other side of the river, the temporary easement will be used for additional laydown.

   It is not anticipated that access to either mill will be obstructed for any significant length of time. When temporary closures are needed, Mr. Zona will coordinate with the respective mill owners. Times of significant construction traffic such as concrete pours, and material delivery will also be coordinated with the mill owners.

   The crane for the steel erection will be set up on the north abutment side of the bridge. The crane supplier has visited the site with Mr. Zona to review the site and determine the optimum crane location. The overhead wires supplying power to Anthony Mill and Concordia Mill pose a potential problem for the crane on each side of the river. The main electric lines over the bridge will be shut off as needed, requiring approximately six outages between February and July of 2012. The mill electrical feeds, however, will not be able to shut down during working hours. The north abutment has a more level area and arrangements with the Anthony Mill owner have been coordinated for the electrical outages. Smaller equipment for sheeting and mini pile installation will be used on both sides of the bridge. The equipment used for the installation of the sheeting and mini piles will also require electrical outages, but will not interfere with the mill electrical feeds.

   Steel delivery will be along Rte. 3 and/or Rte. 117/33 to the north abutment of the job site. Other deliveries will follow the same route to the north abutment or Rte. 3 and/or Rte. 117/33 and onto Pilgrim Avenue to the south abutment.

   Erosion and sediment control will be used at open slopes and will consist of silt fence and temporary riprap.

   Since this is an urban area, fencing will be needed to keep the public out of work areas. Fencing will be used around the perimeter of the work area.

PROJECT CONTROLS

1. **Work Breakdown Structure**
   The schedule will be used as a platform for the interface of design, permitting and construction segments of the project. The schedule will be organized utilizing the WBS Structure standard for RIDOT projects. This will include the addition to a design section of the schedule organized by 30% Design and P&S Design (example provided below).

Activity ID	Activity Description
LA	Laurel Avenue Bridge Design/Build
LA .10	MILESTONES
LA .12	DESIGN
LA .12.02	General
LA .12.10	30% Design
LA .12.10.02	30% Steel Superstructure Package
LA .12.10.04	30% Substructure Package
LA .12.10.06	30% Concrete Superstructure Package
LA .12.10.08	30% Highway Design
LA .12.20	P&S Design
LA .12.20.02	P&S Steel Superstructure Package
LA .12.20.04	P&S Substructure Package
LA .12.20.06	P&S Final Package Submission
LA .12.20.08	P&S Highway Design
LA .14	PERMITTING
LA .25	CHANGE MANAGEMENT
LA .30	SUBMITTALS
LA .40	UTILITIES
LA .50	CONSTRUCTION START UP
LA .55	TRAFFIC MANAGEMENT
LA .60	CONSTRUCTION
LA .60.10	General
LA .60.30	Substructure Reconstruction
LA .60.30.05	North Abutment
LA .60.30.10	South Abutment
LA .60.30.20	Splash Pad
LA .60.40	Superstructure Reconstruction
LA .60.50	Roadway Reconstruction
LA .70	CLOSE OUT

2. Proposal Schedule

The schedule and schedule narrative are included within this section following the design concepts. Several elements will be incorporated into the project schedule process to ensure the completion dates set forth in the contract are attained. These include:

Establishment of a schedule update program with systematic schedule update periods: At a minimum of a bi-weekly basis, activities within the project schedule will be progressed and a schedule update will be generated and posted on the project FTP site accompanied by a schedule narrative. As part of the update process, the scheduler will meet/conference call with Team members on the status of their scope of the project prior to the submission of the update. The update program will include meeting with the Construction Manager on a bi-weekly basis to further detail/refine the construction activities as the design process progresses to ensure the project schedule is reflective of the planned sequence of construction.

Coding of the project schedule by responsibility and associated schedule sorts: In conjunction with the schedule update process, the schedule will be filtered to produce a condensed schedule by responsibility. This will allow Team members to view a condensed schedule of just their scope in addition to the overall project schedule.

The establishment of interim milestones for design activities: Meeting the established design package submission dates is essential to a timely project completion. Design submission dates will be represented as interim milestone activities to highlight their importance. The total float value for these

activities in addition to the variance in the expected finish date from one update to the next will serve as a gauge in meeting the contractual completion milestones.

Incorporation of the design WBS tracking system into the project schedule via activity coding: A coding structure will be created to align the schedule activities with the Design WBS (i.e. 2.03 – Traffic Design and Analysis) for tracking/updating purposes. This will allow the Team members to cross reference the WBS design tracking sheet with the schedule activities, which will establish a priority level for each drawing/deliverable (shown as the schedule activity's total float). This will allow the schedule to serve a dual purpose as both a planning tool and a submittal tracking register.

Utilization of the resource loading of the project schedule per Schedule A requirements: This project is designated as a Schedule Level A which will require the tracking of budgeted and actual manhours for the project per specifications. The Team plans on utilizing the information generated for quantifying the actuals against the estimate to track progress and to track the budget during the design development and construction phases of the project.

Incorporation of a priority level for all RIDOT submissions via activity coding: A coding structure will be established to convey to the Department the preference of ordering of review packages by the D/B Team, based on priority level. This priority level will be included in the schedule activities by an activity code. This coding will be reviewed with the Department during the schedule development/bi-weekly progress meetings.

Inclusion of a change management/project issues section of the schedule: A project issue section will be incorporated into the schedule in which critical items/issues are evaluated along with their scenarios for resolution and work arounds.

3. Respondent's understanding of the biggest risks and challenges to attaining the contractual completion dates and what can be done to mitigate such risks and challenges.

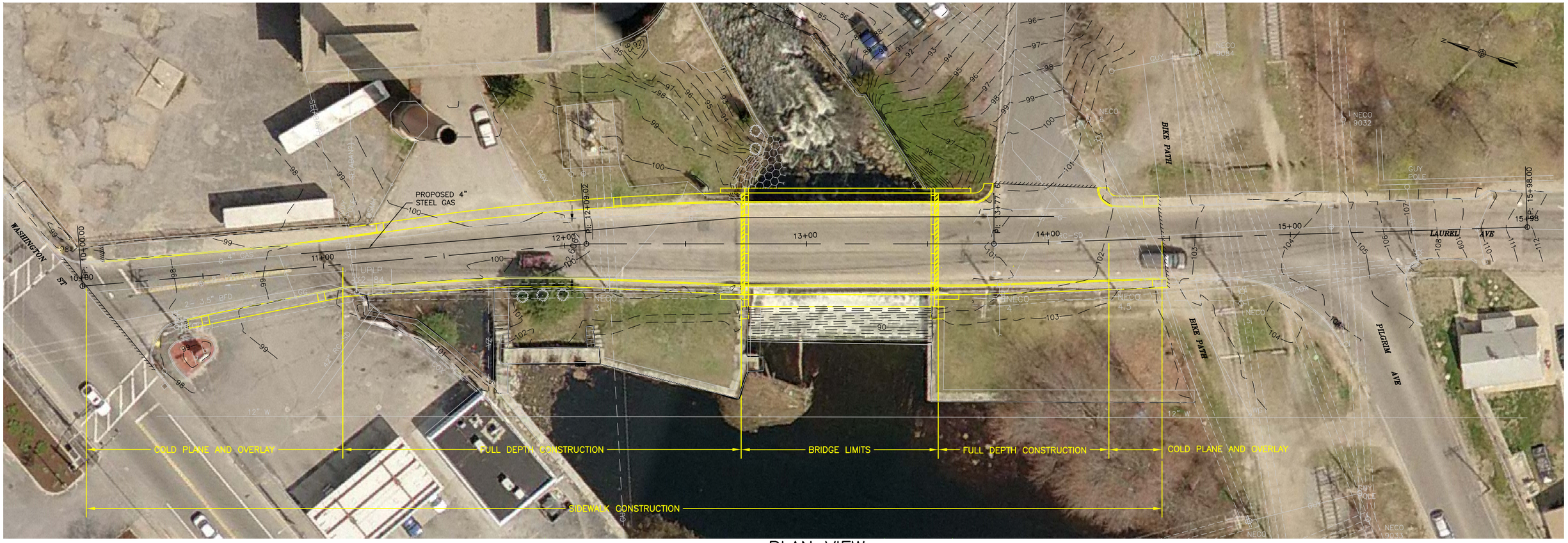
A significant challenge to timely completion of the project is the control of water. Most of our D/B Team meetings have focused on the control of water. Our strategy to reduce the risk is to use a combination of methods including cofferdams, the 48" drawdown pipe, and sheeting/super sacks/port-a-dams. There will also be a dewatering system to remove seepage water and groundwater.

The existing spillway under the roadway and going to the Anthony Mill building is currently blocked. Early in the design, the D/B Team will investigate the feasibility of rebuilding the gates and the culvert under the roadway to divert the water. The Team feels that such an investment will have a cost effective benefit in reducing the risks of controlling the water.

Another challenge is coordination with National Grid Electric and National Grid Gas companies. Scheduling of the electrical outages required in order to use the heavy equipment necessary for the work is sensitive to the electrical demands during the outage period. These arrangements are being made, but a small change in schedule for an outage may not be able to be accommodated by National Grid. We will need to be diligent and track the windows of opportunity as part of the scheduling process. Coordination with National Grid Electric will be on going and will be key to this process.

The density of the subgrade and presence of boulders in the area presents another risk for driving the sheeting. The D/B Team has discussed the contingency plan if the sheeting cannot be driven to the required depths or if vibrations caused by installing the sheeting are above pre-established thresholds, potentially affecting the dam or nearby structures. Occasional sheets which are obstructed by boulders will be left high and adjacent sheets will be able to carry the load. If none of the cofferdam sheeting can be installed to the design depth, the cofferdam will be braced. If the permanent sheeting cannot be installed to design depth, an MSE wall will be built behind the sheeting to carry the lateral loads.

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI			1	3

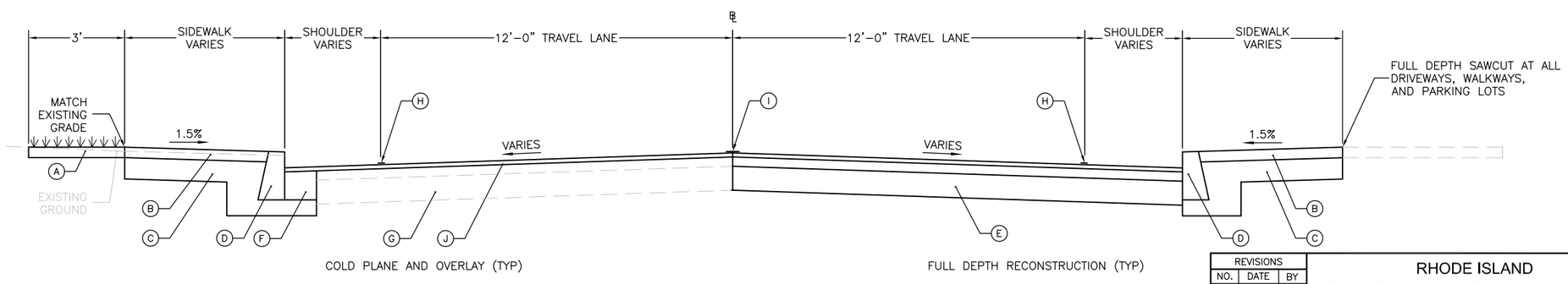


PLAN VIEW

SCALE: 1:40

LEGEND

- (A) LOAM BORROW 4–INCHES DEEP AND RESIDENTIAL SEEDING TYPE 2
- (B) REMOVE AND DISPOSE SIDEWALK
- (C) 8–INCHES GRAVEL BORROW SUBBASE COURSE
- (D) GRANITE CURB
- (E) FULL DEPTH CONSTRUCTION (SEE PLAN VIEW FOR LIMITS)
  2–1–1/2" BITUMINOUS TYPE I–1 SURFACE COURSE
  6" BITUMINOUS BASE COURSE
  12" GRAVEL BORROW SUBBASE
- (F) CLASS A PORTLAND CEMENT CONCRETE
- (G) EXISTING PAVEMENT STRUCTURE
- (H) 6–INCH SINGLE WHITE EPOXY RESIN PAVEMENT MARKING
- (I) 4–INCH DOUBLE YELLOW EPOXY RESIN PAVEMENT MARKINGS
- (J) COLD PLANE (SEE PLAN VIEW FOR LIMITS)
  2–1–1/2" BITUMINOUS TYPE I–1 SURFACE COURSE



TYPICAL ROADWAY SECTION

NOT TO SCALE

REVISIONS		
NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE REPLACEMENT
LAUREL AVE BRIDGE NO. 397
FROM WASHINGTON STREET TO PILGRIM STREET
COVENTRY RHODE ISLAND

PLAN VIEW
NO. 1

CHECKED BY _____ DATE _____ SCALE VARIES

GZA | BRYANT ASSOCIATES Engineers Surveyors Construction Managers | Steere ENGINEERING INC Bridge and Structural Engineers | AETNA Aetna Bridge Company

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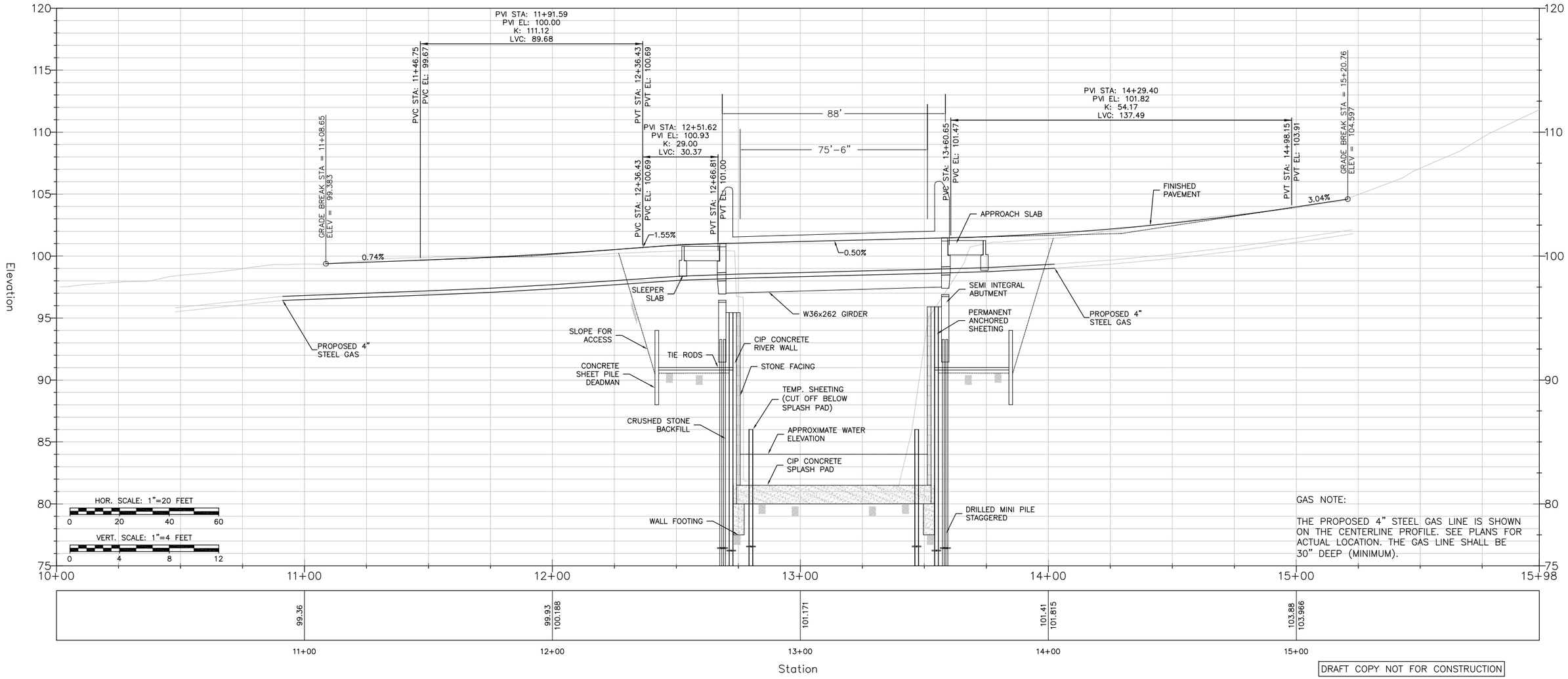
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI			2	3

LAUREL AVENUE BRIDGE CENTERLINE PROFILE



GAS NOTE:

THE PROPOSED 4" STEEL GAS LINE IS SHOWN ON THE CENTERLINE PROFILE. SEE PLANS FOR ACTUAL LOCATION. THE GAS LINE SHALL BE 30" DEEP (MINIMUM).

DRAFT COPY NOT FOR CONSTRUCTION

REVISIONS		
NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE REPLACEMENT
LAUREL AVE BRIDGE NO. 397
FROM WASHINGTON STREET TO PILGRIM STREET
COVENTRY RHODE ISLAND

PROFILE
NO. 1

CHECKED BY _____ DATE 4/15/11 SCALE H: 1"=20' V: 1"=4'

GZA | BRYANT ASSOCIATES Engineers Surveyors Construction Managers | Steere ENGINEERING INC. Bridge and Structural Engineers | AETNA Aetna Bridge Company

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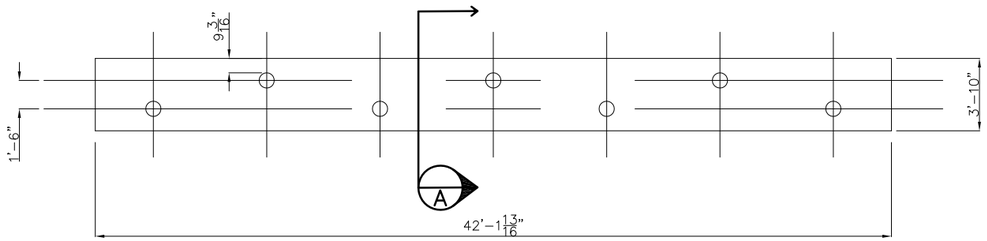
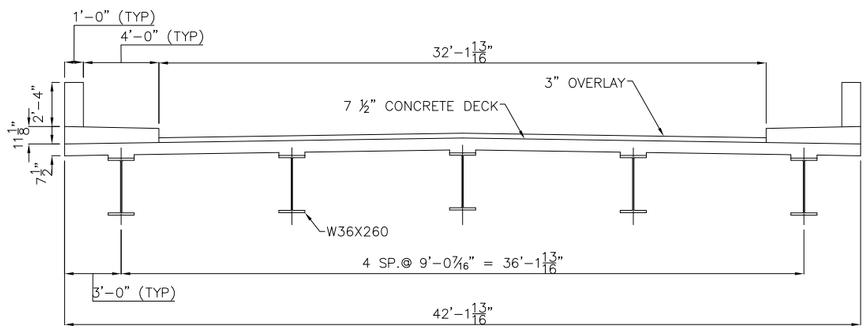
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI			3	3

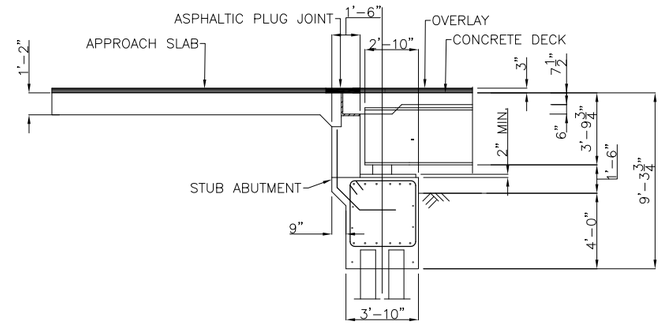


ABUTMENT PLAN



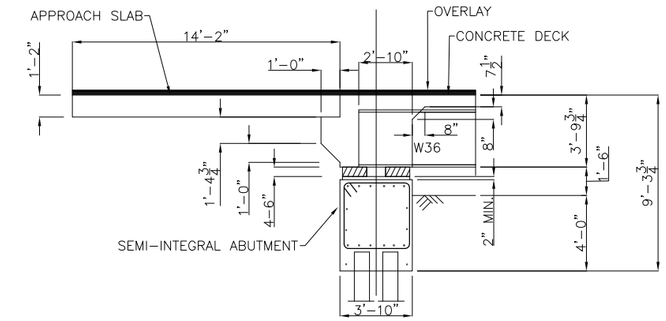
BRIDGE SECTION

SCALE: 1"=4'



STUB ABUTMENT ALTERNATE

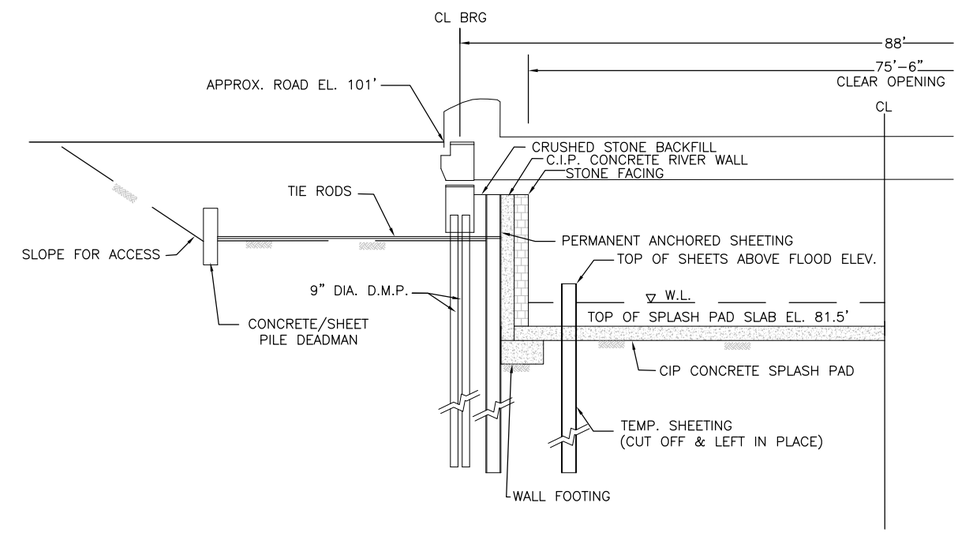
SCALE: 1"=4'



SEMI INTEGRAL ABUTMENT ALTERNATE

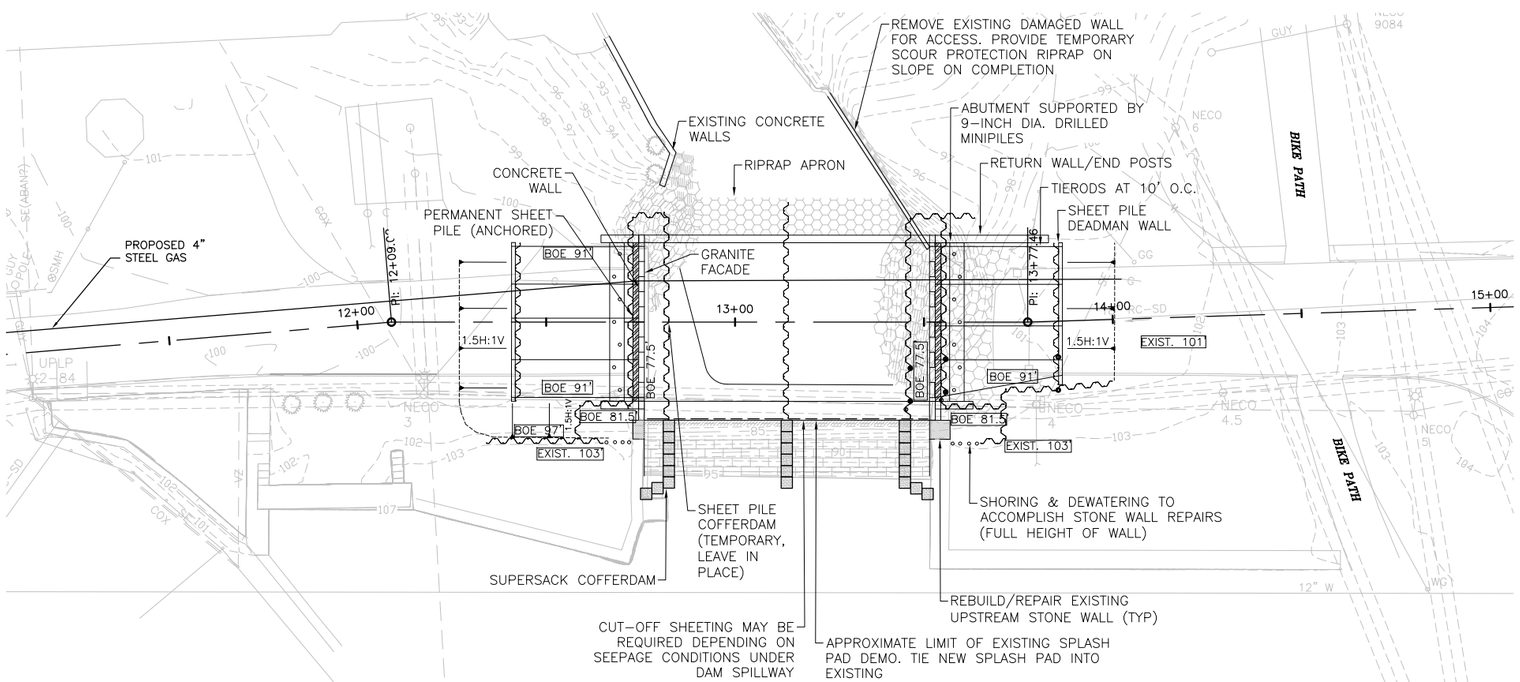
SCALE: 1"=4'

SECTION A



CONCEPTUAL SECTION AT ABUTMENT

SCALE: 1"=8'



CONCEPTUAL LAYOUT PLAN

SCALE: 1"=20'

REVISIONS		
NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE REPLACEMENT
LAUREL AVE BRIDGE NO. 397
FROM WASHINGTON STREET TO PILGRIM STREET
COVENTRY RHODE ISLAND

DETAIL SHEET
NO. 1

CHECKED BY _____ DATE 4/18/11 SCALE VARIES

GZA | BRYANT ASSOCIATES Engineers Surveyors Construction Managers | Steere ENGINEERING INC. Bridge and Structural Engineers | AETNA Aetna Bridge Company

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PROJECT CONTROLS (Continued)

Schedule Narrative

The schedule for the Laurel Avenue Bridge Rehabilitation Design/Build Project follows this narrative. This schedule has been developed by the D/B Team with the consideration of the project constraints and completion dates outlined in the RFP.

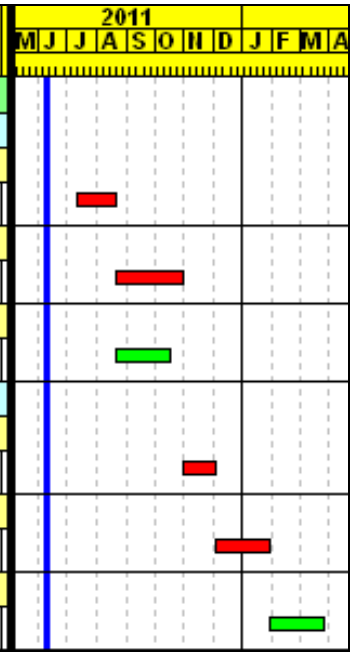
Proposed Design Sequence

Upon receipt of the Notice of Tentative Award, the Design/Build Team will begin support services for the design process. This includes the confirmation of the final utility crossing information and confirmation of the average daily truck traffic counts in support of the 30% superstructure design. Initial operations include performing the boring program and generating the preliminary interpretive geotechnical report and hydraulic report in support of the 30% substructure design.

The sequence of the structural design will run from the development of the 30% steel superstructure package to the development of the 30% substructure design package ongoing with the design of the 30% concrete superstructure design package. Upon submission of the 30% substructure design package and the 30% concrete superstructure design package, Steere Engineering will generate the P&S submission for the steel superstructure package.

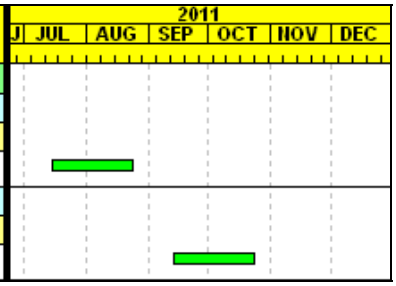
Upon completion of the P&S submission of the steel superstructure package, Steere Engineering will complete the P&S design of the substructure package followed by the P&S design of the concrete superstructure/final package submission. This sequence is outlined in the snapshot below.

Activity ID	Activity Description	Cal ID	Orig Dur	Early Start	Early Finish	Total Float
LA .12 DESIGN						
LA .12.10 30% Design						
+ LA .12.10.02 30% Steel Superstructure Package						
		2	42	11JUL11	21AUG11	1
+ LA .12.10.04 30% Substructure Package						
		2	70	22AUG11	30OCT11	1
+ LA .12.10.06 30% Concrete Superstructure Package						
		2	56	22AUG11	16OCT11	15
LA .12.20 P&S Design						
+ LA .12.20.02 P&S Steel Superstructure Package						
		2	35	31OCT11	04DEC11	1
+ LA .12.20.04 P&S Substructure Package						
		2	56	05DEC11	29JAN12	1
+ LA .12.20.06 P&S Final Package Submission						
		2	56	30JAN12	25MAR12	61



The development of the 30% highway design is planned from July 2011 through August 2011. This work is scheduled to begin after the confirmation of the average daily truck counts. After the RIDOT review of the 30% highway design, the design team will begin development of the P&S submission of the highway design submission. The P&S highway design submission is planned from September 2011 through October 2011. This sequence is outlined in the snapshot below.

Activity ID	Activity Description	Cal ID	Orig Dur	Early Start	Early Finish	Total Float
LA .12 DESIGN						
LA .12.10 30% Design						
+ LA .12.10.08	30% Highway Design					
		2	40	15JUL11	23AUG11	23
LA .12.20 P&S Design						
+ LA .12.20.08	P&S Highway Design					
		2	40	14SEP11	23OCT11	99



The sequencing of the development of design packages is based on the interdependencies established by the D/B Team between the design and construction phases of the project. Considerations include:

- The development of the highway plans (P&S submission) and substructure plans (30% submission) by October 2011 to allow for a 90 calendar day permitting period to ensure all required permitting is obtained in advance of the February 2012 start of construction
- The completion of the P&S steel superstructure design by December 2011 to allow for 60 calendar days of structural steel shop drawing development/approval and 140 calendar days of structural steel procurement to ensure the steel is fabricated prior to the July 2012 scheduled erection date
- The completion of the P&S substructure design by February 2012 to meet the February 2012 scheduled start of construction operations

Proposed Construction Sequence

Aetna Bridge will mobilize in February 2012 to begin construction operations. In advance of this start date, DIGSAFE will be contacted and construction survey will be performed. Initial construction operations include clearing and grubbing and the installation of erosion controls as well as performing the preconstruction survey.

Reconstruction of the North Abutment is scheduled from February 2012 through July 2012. Aetna Bridge will install a sheet pile cofferdam for control of water at the North Abutment followed by demolition of the existing abutment and partial demolition of the existing splash pad. The installation of the cofferdam will allow for reconstruction of the spillway walls and abutments during late Winter/early Spring, when the river flows will be at the highest anticipated levels of the year.

The area will be excavated with care taken to document and remove historical stones. Additional sheeting will then be installed to facilitate the reconstruction of the spillway wall and stone façade. The spillway wall will then be reconstructed within the cofferdam followed by the reconstruction of the stone façade. Construction of the spillway wall and stone façade is scheduled from April 2012 through May 2012. Aetna will then construct the spillway wall cap and return walls and backfill the area for the installation of the minipiles and construction of the integral abutment cap. Installation of the minipiles and construction of the integral abutment cap is scheduled from June 2012 through early July 2012.

Reconstruction of the South Abutment will follow the same sequence as outlined for the North Abutment. Construction of the South Abutment is scheduled from February 2012 through July 2012 with crews moving from the North Abutment to the South Abutment for operations such as demolition, construction of the spillway wall, construction of the stone façade and installation of minipiles. The South Abutment is scheduled to be completed two weeks after the construction of the North Abutment.

Reconstruction of the splash pad is planned from July 2012 through September 2012, when the river flows are historically lowest and manageable. This work will be performed in two phases, diverting water for each phase of construction. This will be accomplished by driving sheeting into the river bottom below the dam and parallel to the flow up to the edge of the remaining splash pad a few feet below the downstream side of the dam. "Super sack" sand bags (1 cy) will be used over the face of the stepped granite block dam. The river flow will be diverted to one side of the river on the upstream side of the dam using super sack sand bags and/or proprietary cofferdam measures such as Port-A-Dam. The construction of the splash pad will be coordinated with the construction of the bridge superstructure. Crews will be working at both locations, possibly on different shifts, to facilitate the construction of both the splash pad and the bridge deck.

Aetna Bridge will set the structural steel in late July 2012. This will be followed by the installation of the gas line across the bridge and the construction of the bridge deck. The bridge deck will be placed by September 25, 2012. Aetna Bridge will then place the bridge sidewalks followed by the waterproofing and paving of the bridge deck. The paving of the bridge deck is scheduled for the beginning of November 2012 and will be followed by the final paving at the approaches and the installation of the expansion joints. This will allow for the installation of epoxy striping by mid-November 2012.

The construction of the bridge parapets and endposts are scheduled in mid-November 2012 after the paving of the bridge deck. This proposed sequence has been developed taking into consideration the temperature restrictions for both asphalt and concrete. This sequence will allow for the tenting and heating of the parapets and endposts, if required. The bridge is scheduled to be completed and opened to traffic on November 28, 2012, 3 calendar days ahead of the December 1, 2012 Interim Milestone Date outlined in the RFP.

Construction operations planned for the Spring of 2013 include demobilization, site clean up, and loaming and seeding. This work is scheduled to be completed on April 26, 2013, 35 calendar days ahead of the May 31, 2013 Substantial Completion Date outlined in the RFP.

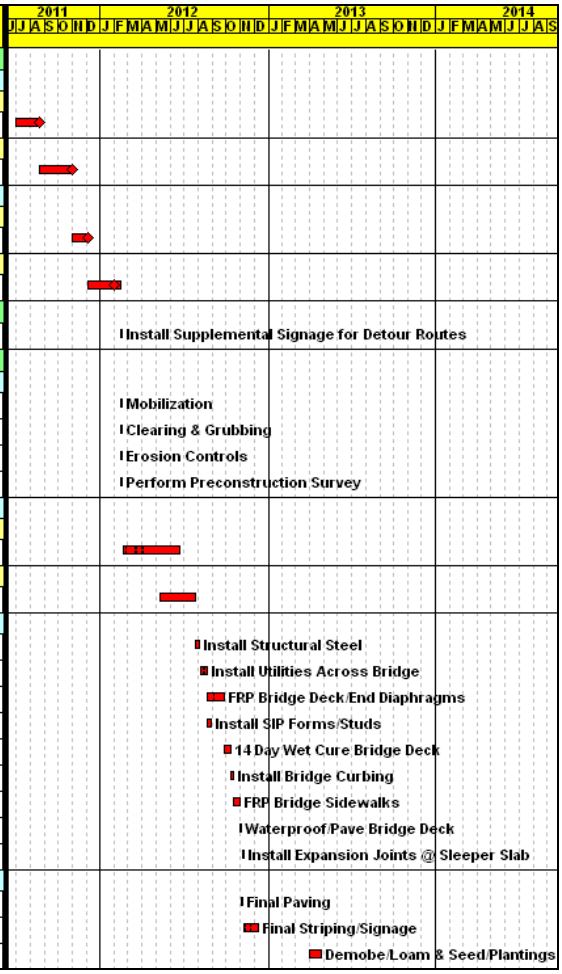
CRITICAL PATH:

The critical path of the project runs from the Notice of Tentative Award to the development of the 30% Steel Superstructure Design Package to the development of the 30% Substructure Design Package to the P&S Steel Superstructure Design Package to the P&S Substructure Design Package to the mobilization for construction operations (temporary construction signs, erosion controls, clearing and grubbing, preconstruction survey).

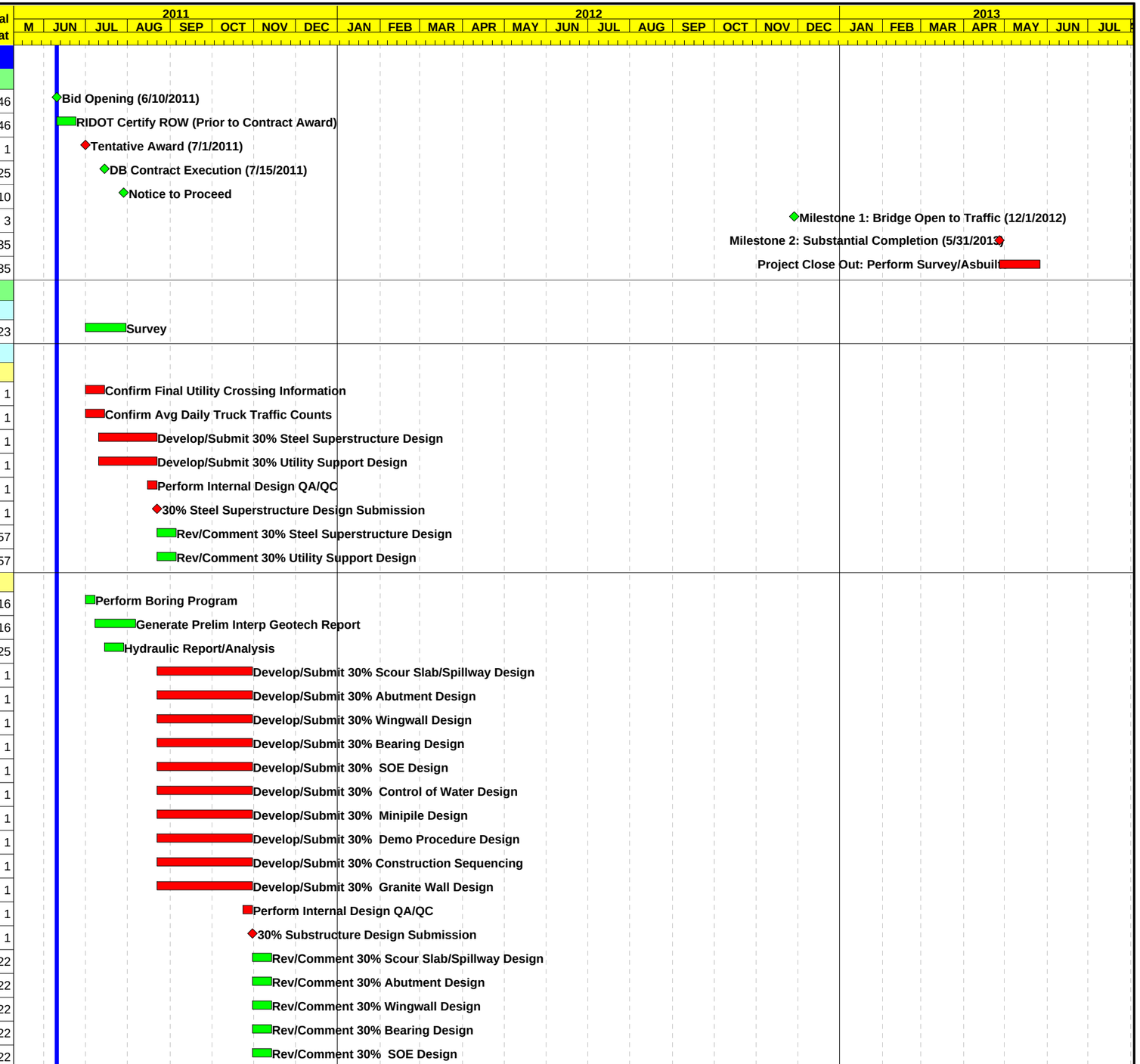
The critical path then runs from through the construction of the substructure (construction of the spillway walls and stone façade to the installation of mini piles and construction of the abutment cap, with operations moving from the North Abutment to the South Abutment) to the setting of the structural steel and placement of the bridge deck. The critical path then runs through the construction of the bridge sidewalks to the paving of the bridge deck to the paving of the surface course at the approaches to the installation of the expansion joints to the final striping and signing. This work is followed by the installation of loaming and seeding/plantings planned for the Spring of 2013 Construction Season.

SNAPSHOT OF THE CRITICAL PATH OF THE PROJECT:

Activity ID	Activity Description	Cal ID	Orig Dur	Early Start	Early Finish	Total Float
LA .12 DESIGN						
LA .12.10 30% Design						
+ LA .12.10.02 30% Steel Superstructure Package						
		2	52	01JUL11	21AUG11	1
+ LA .12.10.04 30% Substructure Package						
		2	70	22AUG11	30OCT11	1
LA .12.20 P&S Design						
+ LA .12.20.02 P&S Steel Superstructure Package						
		2	35	31OCT11	04DEC11	1
+ LA .12.20.04 P&S Substructure Package						
		2	70	05DEC11	12FEB12	1
LA .55 TRAFFIC MANAGEMENT						
682	Install Supplemental Signage for Detour Routes	5	5	13FEB12	17FEB12	1
LA .60 CONSTRUCTION						
LA .60.10 General						
600	Mobilization	5	5	13FEB12	17FEB12	1
601	Clearing & Grubbing	5	5	13FEB12	17FEB12	1
602	Erosion Controls	5	5	13FEB12	17FEB12	1
633	Perform Preconstruction Survey	5	5	13FEB12	17FEB12	1
LA .60.30 Substructure Reconstruction						
+ LA .60.30.05 North Abutment						
		1	49	20FEB12	22JUN12	2
+ LA .60.30.10 South Abutment						
		1	53	11MAY12	26JUL12	2
LA .60.40 Superstructure Reconstruction						
617	Install Structural Steel	1	6	27JUL12	03AUG12	2
620	Install Utilities Across Bridge	1	10	06AUG12	20AUG12	2
616	FRP Bridge Deck/End Diaphragms	1	25	21AUG12	25SEP12	2
632	Install SIP Forms/Studs	1	7	21AUG12	29AUG12	2
628	14 Day Wet Cure Bridge Deck	2	14	26SEP12	09OCT12	2
618	Install Bridge Curbing	1	4	10OCT12	15OCT12	2
619	FRP Bridge Sidewalks	1	10	16OCT12	29OCT12	2
631	Waterproof/Pave Bridge Deck	1	3	30OCT12	01NOV12	2
679	Install Expansion Joints @ Sleeper Slab	1	2	07NOV12	08NOV12	13
LA .60.50 Roadway Reconstruction						
625	Final Paving	1	3	02NOV12	06NOV12	13
626	Final Striping/Signage	1	20	09NOV12	10DEC12	17
683	Demobe/Loam & Seed/Plantings	A	20	01APR13	26APR13	24



Activity ID	Activity Description	Cal ID	Orig Dur	Early Start	Early Finish	Total Float
LA	**Laurel Avenue Bridge Design/Build**					
LA .10	**MILESTONES**					
100	Bid Opening (6/10/2011)	2	0	10JUN11		46
105	RIDOT Certify ROW (Prior to Contract Award)	2	14	10JUN11	23JUN11	46
101	Tentative Award (7/1/2011)	2	0	01JUL11*		1
106	DB Contract Execution (7/15/2011)	2	0	15JUL11*		25
102	Notice to Proceed	2	0	29JUL11*		110
103	Milestone 1: Bridge Open to Traffic (12/1/2012)	2	0		28NOV12	3
104	Milestone 2: Substantial Completion (5/31/2013)	2	0		26APR13	35
107	Project Close Out: Perform Survey/Asbuilts	2	30	27APR13	26MAY13	35
LA .12	**DESIGN**					
LA .12.02	**General**					
202	Survey	2	30	01JUL11	30JUL11	23
LA .12.10	**30% Design**					
LA .12.10.02	30% Steel Superstructure Package					
240	Confirm Final Utility Crossing Information	2	14	01JUL11	14JUL11	1
241	Confirm Avg Daily Truck Traffic Counts	2	14	01JUL11	14JUL11	1
242	Develop/Submit 30% Steel Superstructure Design	2	42	11JUL11	21AUG11	1
248	Develop/Submit 30% Utility Support Design	2	42	11JUL11	21AUG11	1
289	Perform Internal Design QA/QC	2	7	15AUG11	21AUG11	1
252	30% Steel Superstructure Design Submission	2	0		21AUG11	1
243	Rev/Comment 30% Steel Superstructure Design	2	14	22AUG11	04SEP11	57
249	Rev/Comment 30% Utility Support Design	2	14	22AUG11	04SEP11	57
LA .12.10.04	30% Substructure Package					
244	Perform Boring Program	2	7	01JUL11	07JUL11	16
245	Generate Prelim Interp Geotech Report	2	30	08JUL11	06AUG11	16
258	Hydraulic Report/Analysis	2	14	15JUL11	28JUL11	25
246	Develop/Submit 30% Scour Slab/Spillway Design	2	70	22AUG11	30OCT11	1
247	Develop/Submit 30% Abutment Design	2	70	22AUG11	30OCT11	1
250	Develop/Submit 30% Wingwall Design	2	70	22AUG11	30OCT11	1
251	Develop/Submit 30% Bearing Design	2	70	22AUG11	30OCT11	1
301	Develop/Submit 30% SOE Design	2	70	22AUG11	30OCT11	1
306	Develop/Submit 30% Control of Water Design	2	70	22AUG11	30OCT11	1
311	Develop/Submit 30% Minipile Design	2	70	22AUG11	30OCT11	1
316	Develop/Submit 30% Demo Procedure Design	2	70	22AUG11	30OCT11	1
321	Develop/Submit 30% Construction Sequencing	2	70	22AUG11	30OCT11	1
326	Develop/Submit 30% Granite Wall Design	2	70	22AUG11	30OCT11	1
292	Perform Internal Design QA/QC	2	7	24OCT11	30OCT11	1
257	30% Substructure Design Submission	2	0		30OCT11	1
253	Rev/Comment 30% Scour Slab/Spillway Design	2	14	31OCT11	13NOV11	22
254	Rev/Comment 30% Abutment Design	2	14	31OCT11	13NOV11	22
255	Rev/Comment 30% Wingwall Design	2	14	31OCT11	13NOV11	22
256	Rev/Comment 30% Bearing Design	2	14	31OCT11	13NOV11	22
331	Rev/Comment 30% SOE Design	2	14	31OCT11	13NOV11	22



Start Date	01JAN08
Finish Date	26MAY13
Data Date	10JUN11
Run Date	20APR11 14:14

Early Bar
Progress Bar
Critical Activity

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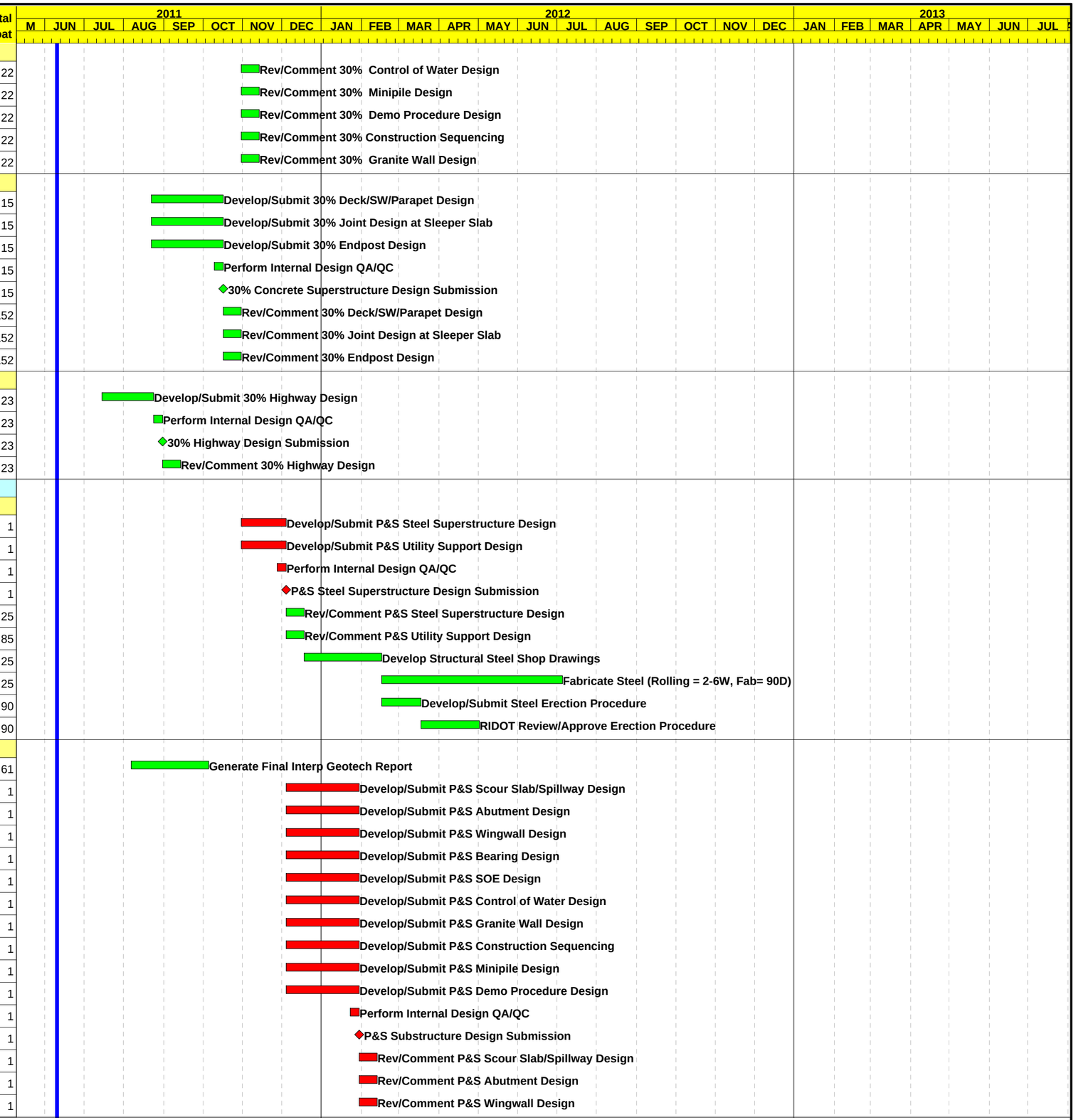
PR00

Laurel Avenue Bridge
Design/Build
PROPOSAL SCHEDULE
Steere Engineering/Aetna Bridge Company

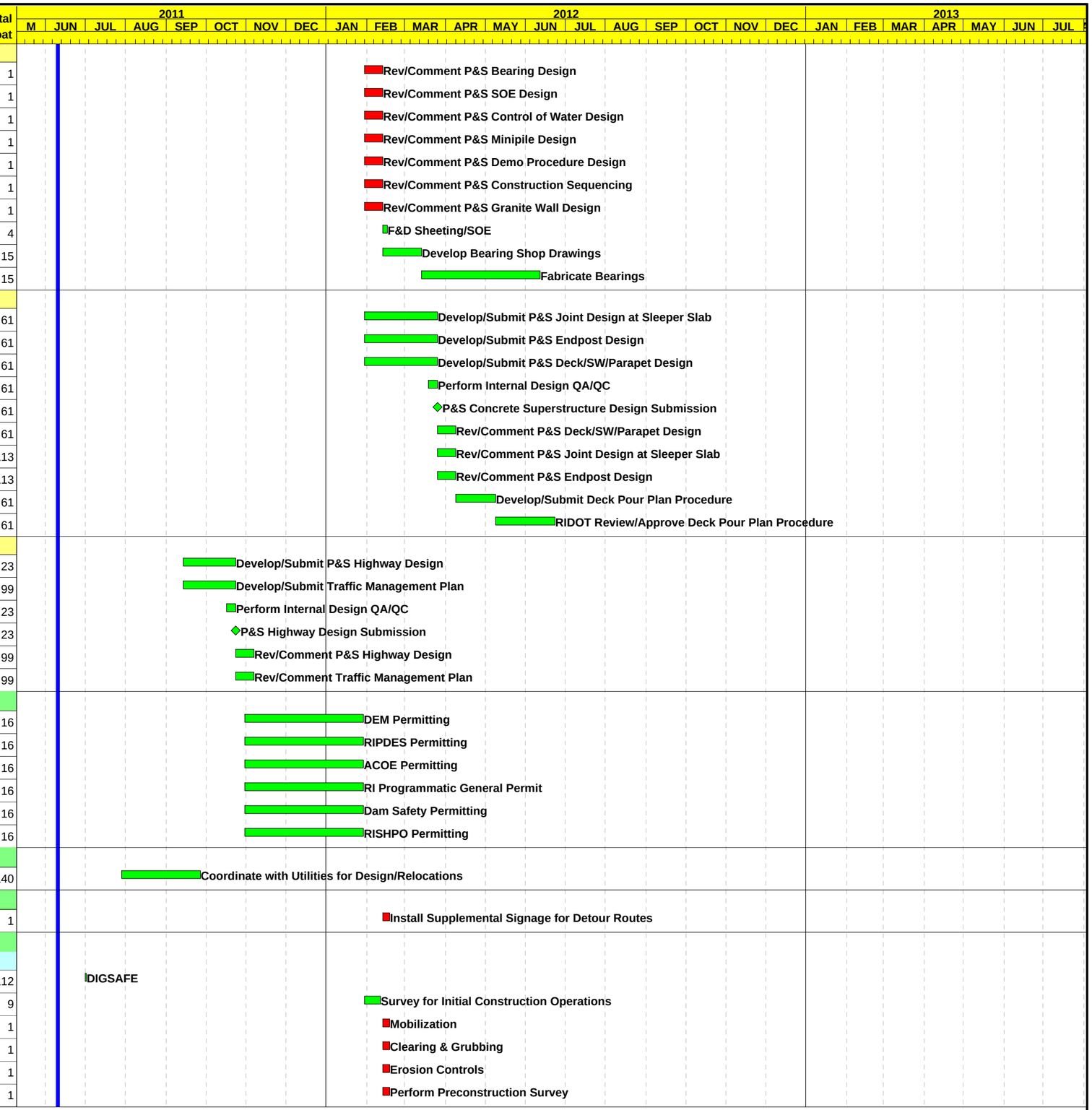
Layout: Baseline Layout
Filter: All Activities

Date	Revision	Checked	Approved

Activity ID	Activity Description	Cal ID	Orig Dur	Early Start	Early Finish	Total Float
LA .12.10.04 30% Substructure Package						
336	Rev/Comment 30% Control of Water Design	2	14	31OCT11	13NOV11	22
341	Rev/Comment 30% Minipile Design	2	14	31OCT11	13NOV11	22
346	Rev/Comment 30% Demo Procedure Design	2	14	31OCT11	13NOV11	22
351	Rev/Comment 30% Construction Sequencing	2	14	31OCT11	13NOV11	22
356	Rev/Comment 30% Granite Wall Design	2	14	31OCT11	13NOV11	22
LA .12.10.06 30% Concrete Superstructure Package						
259	Develop/Submit 30% Deck/SW/Parapet Design	2	56	22AUG11	16OCT11	15
260	Develop/Submit 30% Joint Design at Sleeper Slab	2	56	22AUG11	16OCT11	15
261	Develop/Submit 30% Endpost Design	2	56	22AUG11	16OCT11	15
290	Perform Internal Design QA/QC	2	7	10OCT11	16OCT11	15
262	30% Concrete Superstructure Design Submission	2	0		16OCT11	15
263	Rev/Comment 30% Deck/SW/Parapet Design	2	14	17OCT11	30OCT11	152
264	Rev/Comment 30% Joint Design at Sleeper Slab	2	14	17OCT11	30OCT11	152
265	Rev/Comment 30% Endpost Design	2	14	17OCT11	30OCT11	152
LA .12.10.08 30% Highway Design						
298	Develop/Submit 30% Highway Design	2	40	15JUL11	23AUG11	23
299	Perform Internal Design QA/QC	2	7	24AUG11	30AUG11	23
302	30% Highway Design Submission	2	0		30AUG11	23
303	Rev/Comment 30% Highway Design	2	14	31AUG11	13SEP11	23
LA .12.20 P&S Design						
LA .12.20.02 P&S Steel Superstructure Package						
266	Develop/Submit P&S Steel Superstructure Design	2	35	31OCT11	04DEC11	1
267	Develop/Submit P&S Utility Support Design	2	35	31OCT11	04DEC11	1
291	Perform Internal Design QA/QC	2	7	28NOV11	04DEC11	1
268	P&S Steel Superstructure Design Submission	2	0		04DEC11	1
269	Rev/Comment P&S Steel Superstructure Design	2	14	05DEC11	18DEC11	25
270	Rev/Comment P&S Utility Support Design	2	14	05DEC11	18DEC11	85
281	Develop Structural Steel Shop Drawings	2	60	19DEC11	16FEB12	25
271	Fabricate Steel (Rolling = 2-6W, Fab= 90D)	2	140	17FEB12	05JUL12	25
297	Develop/Submit Steel Erection Procedure	2	30	17FEB12	17MAR12	90
304	RIDOT Review/Approve Erection Procedure	2	45	18MAR12	01MAY12	90
LA .12.20.04 P&S Substructure Package						
288	Generate Final Interp Geotech Report	2	60	07AUG11	05OCT11	61
272	Develop/Submit P&S Scour Slab/Spillway Design	2	56	05DEC11	29JAN12	1
273	Develop/Submit P&S Abutment Design	2	56	05DEC11	29JAN12	1
274	Develop/Submit P&S Wingwall Design	2	56	05DEC11	29JAN12	1
275	Develop/Submit P&S Bearing Design	2	56	05DEC11	29JAN12	1
421	Develop/Submit P&S SOE Design	2	56	05DEC11	29JAN12	1
422	Develop/Submit P&S Control of Water Design	2	56	05DEC11	29JAN12	1
423	Develop/Submit P&S Granite Wall Design	2	56	05DEC11	29JAN12	1
424	Develop/Submit P&S Construction Sequencing	2	56	05DEC11	29JAN12	1
425	Develop/Submit P&S Minipile Design	2	56	05DEC11	29JAN12	1
426	Develop/Submit P&S Demo Procedure Design	2	56	05DEC11	29JAN12	1
293	Perform Internal Design QA/QC	2	7	23JAN12	29JAN12	1
276	P&S Substructure Design Submission	2	0		29JAN12	1
277	Rev/Comment P&S Scour Slab/Spillway Design	2	14	30JAN12	12FEB12	1
278	Rev/Comment P&S Abutment Design	2	14	30JAN12	12FEB12	1
279	Rev/Comment P&S Wingwall Design	2	14	30JAN12	12FEB12	1

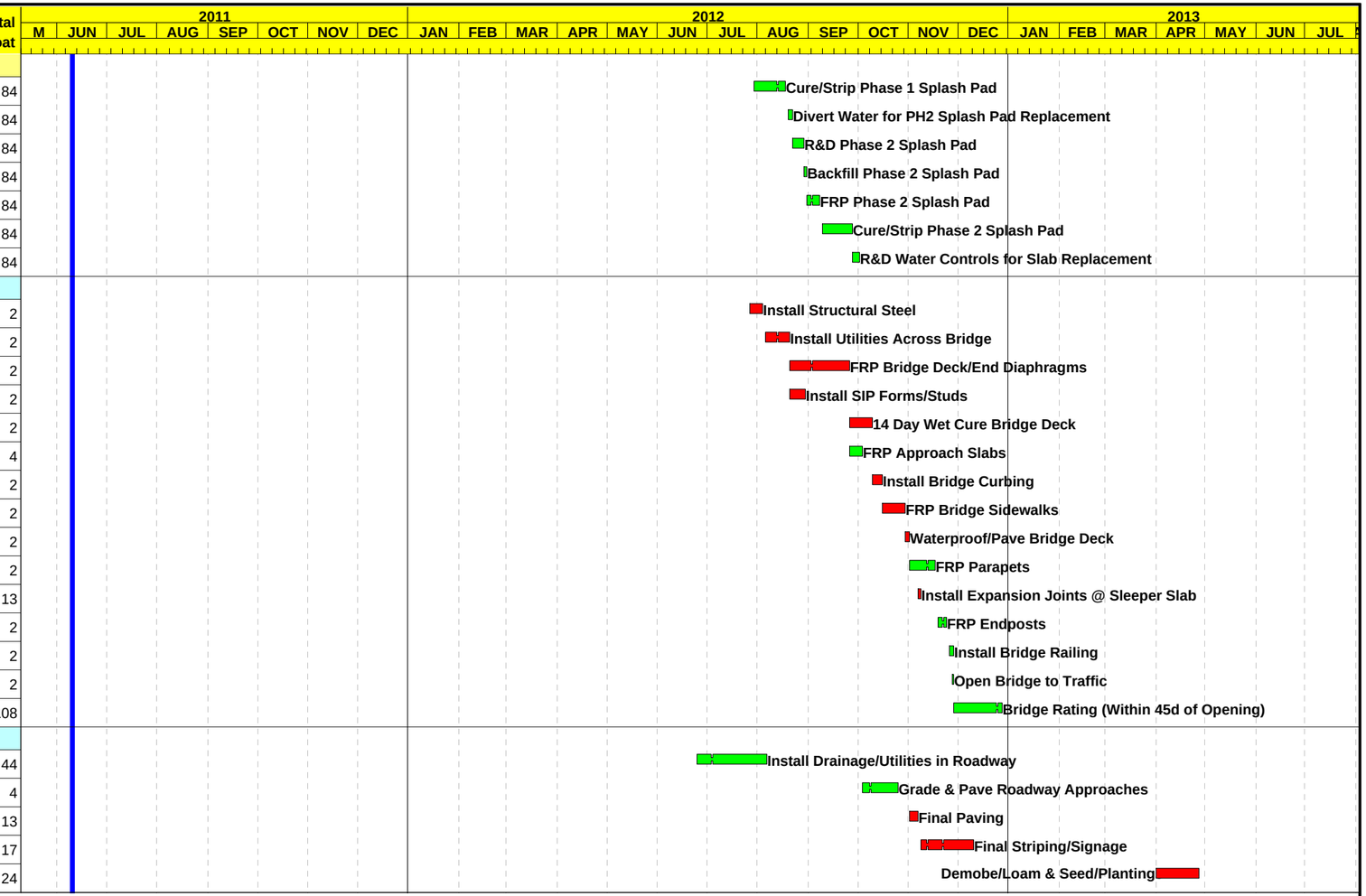


Activity ID	Activity Description	Cal ID	Orig Dur	Early Start	Early Finish	Total Float
LA .12.20.04 P&S Substructure Package						
280	Rev/Comment P&S Bearing Design	2	14	30JAN12	12FEB12	1
427	Rev/Comment P&S SOE Design	2	14	30JAN12	12FEB12	1
428	Rev/Comment P&S Control of Water Design	2	14	30JAN12	12FEB12	1
429	Rev/Comment P&S Minipile Design	2	14	30JAN12	12FEB12	1
430	Rev/Comment P&S Demo Procedure Design	2	14	30JAN12	12FEB12	1
431	Rev/Comment P&S Construction Sequencing	2	14	30JAN12	12FEB12	1
432	Rev/Comment P&S Granite Wall Design	2	14	30JAN12	12FEB12	1
434	F&D Sheeting/SOE	2	4	13FEB12	16FEB12	4
295	Develop Bearing Shop Drawings	2	30	13FEB12	13MAR12	15
296	Fabricate Bearings	2	90	14MAR12	11JUN12	15
LA .12.20.06 P&S Final Package Submission						
282	Develop/Submit P&S Joint Design at Sleeper Slab	2	56	30JAN12	25MAR12	61
283	Develop/Submit P&S Endpost Design	2	56	30JAN12	25MAR12	61
300	Develop/Submit P&S Deck/SW/Parapet Design	2	56	30JAN12	25MAR12	61
294	Perform Internal Design QA/QC	2	7	19MAR12	25MAR12	61
284	P&S Concrete Superstructure Design Submission	2	0		25MAR12	61
285	Rev/Comment P&S Deck/SW/Parapet Design	2	14	26MAR12	08APR12	61
286	Rev/Comment P&S Joint Design at Sleeper Slab	2	14	26MAR12	08APR12	113
287	Rev/Comment P&S Endpost Design	2	14	26MAR12	08APR12	113
313	Develop/Submit Deck Pour Plan Procedure	2	30	09APR12	08MAY12	61
314	RIDOT Review/Approve Deck Pour Plan Procedure	2	45	09MAY12	22JUN12	61
LA .12.20.08 P&S Highway Design						
305	Develop/Submit P&S Highway Design	2	40	14SEP11	23OCT11	23
309	Develop/Submit Traffic Management Plan	2	40	14SEP11	23OCT11	99
312	Perform Internal Design QA/QC	2	7	17OCT11	23OCT11	23
307	P&S Highway Design Submission	2	0		23OCT11	23
308	Rev/Comment P&S Highway Design	2	14	24OCT11	06NOV11	99
310	Rev/Comment Traffic Management Plan	2	14	24OCT11	06NOV11	99
LA .14 PERMITTING						
220	DEM Permitting	2	90	31OCT11	28JAN12	16
221	RIPDES Permitting	2	90	31OCT11	28JAN12	16
222	ACOE Permitting	2	90	31OCT11	28JAN12	16
223	RI Programmatic General Permit	2	90	31OCT11	28JAN12	16
224	Dam Safety Permitting	2	90	31OCT11	28JAN12	16
225	RISHPO Permitting	2	90	31OCT11	28JAN12	16
LA .40 UTILITIES						
204	Coordinate with Utilities for Design/Relocations	2	60	29JUL11	26SEP11	140
LA .55 TRAFFIC MANAGEMENT						
682	Install Supplemental Signage for Detour Routes	5	5	13FEB12	17FEB12	1
LA .60 CONSTRUCTION						
LA .60.10 General						
680	DIGSAFE	1	1	01JUL11	01JUL11	112
681	Survey for Initial Construction Operations	5	10	30JAN12	10FEB12	9
600	Mobilization	5	5	13FEB12	17FEB12	1
601	Clearing & Grubbing	5	5	13FEB12	17FEB12	1
602	Erosion Controls	5	5	13FEB12	17FEB12	1
633	Perform Preconstruction Survey	5	5	13FEB12	17FEB12	1



Activity ID	Activity Description	Cal ID	Orig Dur	Early Start	Early Finish	Total Float
LA .60.30 Substructure Reconstruction						
LA .60.30.05 North Abutment						
604	Install Sheeting	5	5	20FEB12	24FEB12	1
605	Demo Abutment	5	3	27FEB12	29FEB12	1
607	Partial Demo of Splash Pad	5	1	01MAR12	01MAR12	1
608	Excavate/Sort Stones	5	3	02MAR12	06MAR12	1
609	Pre-Trench	5	1	07MAR12	07MAR12	1
610	Install Back Sheets/Dead Man Sheets	5	5	08MAR12	14MAR12	1
611	Install Corner Sheets	5	2	15MAR12	16MAR12	1
612	Install SOE Upstream (Protect Utilities)	5	10	19MAR12	30MAR12	1
634	Replace Spillway Wall Footing @ NA	5	6	02APR12	09APR12	1
635	Rebuild Spillway Wall	5	8	10APR12	19APR12	1
636	Cure/Strip Spillway Wall	2	5	20APR12	24APR12	2
637	Reconstruct Stone Facade	5	12	25APR12	10MAY12	2
638	Backfill/Install Tie Rods	5	3	11MAY12	15MAY12	2
639	FRP Spillway Wall Cap	5	4	16MAY12	21MAY12	2
640	FRP Return Walls	5	6	22MAY12	30MAY12	2
641	Cure/Strip Return Walls	2	5	31MAY12	04JUN12	2
642	Complete Backfill for Integral Abutment	5	2	05JUN12	06JUN12	2
643	Drill Minipile: Test Pile	5	4	07JUN12	12JUN12	2
644	Drill Minipile: Production Pile	5	8	13JUN12	22JUN12	2
645	FRP Abutment Cap	5	7	25JUN12	03JUL12	2
646	Cure Abutment Cap	2	7	04JUL12	10JUL12	5
LA .60.30.10 South Abutment						
647	Install Sheeting	5	5	27FEB12	02MAR12	12
649	Partial Demo of Splash Pad	5	1	05MAR12	05MAR12	12
650	Excavate/Sort Stones	5	3	06MAR12	08MAR12	12
651	Pre-Trench	5	1	09MAR12	09MAR12	12
652	Install Back Sheets/Dead Man Sheets	5	5	19MAR12	23MAR12	7
653	Install Corner Sheets	5	2	26MAR12	27MAR12	7
654	Install SOE Upstream (Protect Utilities)	5	10	02APR12	13APR12	4
655	Replace Spillway Wall Footing @ SA	5	6	16APR12	23APR12	4
656	Rebuild Spillway Wall	5	8	25APR12	04MAY12	3
657	Cure/Strip Spillway Wall	2	5	05MAY12	09MAY12	5
658	Reconstruct Stone Facade	5	12	11MAY12	29MAY12	2
659	Backfill/Install Tie Rods	5	3	30MAY12	01JUN12	2
660	FRP Spillway Wall Cap	5	4	04JUN12	07JUN12	2
661	FRP Return Walls	5	6	08JUN12	15JUN12	2
662	Cure/Strip Return Walls	2	5	16JUN12	20JUN12	4
663	Complete Backfill for Integral Abutment	5	2	21JUN12	22JUN12	2
664	Drill Minipile: Test Pile	5	4	25JUN12	28JUN12	2
665	Drill Minipile: Production Pile	5	8	29JUN12	11JUL12	2
666	FRP Abutment Cap	5	6	12JUL12	19JUL12	2
667	Cure Abutment Cap	2	7	20JUL12	26JUL12	4
LA .60.30.20 Splash Pad						
668	Divert Water for Splash Pad Replacement	1	2	10JUL12*	11JUL12	84
669	R&D Phase 1 Splash Pad	1	5	12JUL12	18JUL12	84
670	Backfill Phase 1 Splash Pad	1	2	19JUL12	20JUL12	84
671	FRP Phase 1 Splash Pad	1	5	23JUL12	27JUL12	84

Activity ID	Activity Description	Cal ID	Orig Dur	Early Start	Early Finish	Total Float
LA .60.30.20 Splash Pad						
672	Cure/Strip Phase 1 Splash Pad	1	14	30JUL12	17AUG12	84
674	Divert Water for PH2 Splash Pad Replacement	1	2	20AUG12	21AUG12	84
675	R&D Phase 2 Splash Pad	1	5	22AUG12	28AUG12	84
676	Backfill Phase 2 Splash Pad	1	2	29AUG12	30AUG12	84
677	FRP Phase 2 Splash Pad	1	5	31AUG12	07SEP12	84
678	Cure/Strip Phase 2 Splash Pad	1	14	10SEP12	27SEP12	84
673	R&D Water Controls for Slab Replacement	1	2	28SEP12	01OCT12	84
LA .60.40 Superstructure Reconstruction						
617	Install Structural Steel	1	6	27JUL12	03AUG12	2
620	Install Utilities Across Bridge	1	10	06AUG12	20AUG12	2
616	FRP Bridge Deck/End Diaphragms	1	25	21AUG12	25SEP12	2
632	Install SIP Forms/Studs	1	7	21AUG12	29AUG12	2
628	14 Day Wet Cure Bridge Deck	2	14	26SEP12	09OCT12	2
629	FRP Approach Slabs	1	6	26SEP12	03OCT12	4
618	Install Bridge Curbing	1	4	10OCT12	15OCT12	2
619	FRP Bridge Sidewalks	1	10	16OCT12	29OCT12	2
631	Waterproof/Pave Bridge Deck	1	3	30OCT12	01NOV12	2
621	FRP Parapets	1	10	02NOV12	16NOV12	2
679	Install Expansion Joints @ Sleeper Slab	1	2	07NOV12	08NOV12	13
622	FRP Endposts	1	4	19NOV12	23NOV12	2
630	Install Bridge Railing	1	3	26NOV12	28NOV12	2
627	Open Bridge to Traffic	1	1	28NOV12	28NOV12	2
648	Bridge Rating (Within 45d of Opening)	5	20	29NOV12	27DEC12	108
LA .60.50 Roadway Reconstruction						
623	Install Drainage/Utilities in Roadway	1	30	25JUN12	06AUG12	44
624	Grade & Pave Roadway Approaches	1	15	04OCT12	25OCT12	4
625	Final Paving	1	3	02NOV12	06NOV12	13
626	Final Striping/Signage	1	20	09NOV12	10DEC12	17
683	Demobe/Loam & Seed/Plantings	A	20	01APR13	26APR13	24



SECTION 4.3

DBE and OJT Requirements

Aetna Bridge Company

Steere ENGINEERING INC
Bridge and Structural Engineers

BID #7448315:
Laurel Avenue Bridge #397

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
LETTER OF INTENT TO PERFORM AS A SUBCONTRACTOR

CONTRACT/PROPOSAL NAME:
BID #7448315 - DESIGN/BUILD Services for the Replacement of the Laurel Avenue Bridge #397, Coventry, RI

NAME OF BIDDER/RESPONDENT:
Aetna Bridge Company

The undersigned intends to perform work in connection with the above contract upon the execution and subsequent award of the contract by RIDOT:

Name of DBE Subcontractor STEERE ENGINEERING INC.
Address 640 GEORGE WASHINGTON HIGHWAY, SUITE 103
City LINCOLN State RI Zip 02865

Please check if RI certification letter attached:

Disadvantaged Business Enterprise (DBE) ✓

The DBE status of the above named subcontractor is certified by the Rhode Island Department of Administration. The above named subcontractor is prepared to perform the described work listed on the DBE Utilization Plan, in connection with the above contract upon execution of such and subsequent award of the contract by RIDOT. The above named subcontractor is prepared to perform the described work for the Price identified on the DBE Utilization Plan. (See Price Proposal).

The above named bidder and subcontractor mutually accepts the commitment total estimated for the Unit Prices and Quantities. This commitment total is based on estimated quantities only and most likely will vary up or down as the project is completed. Final compensation and DBE credit will be based on actual quantities of work performed and accepted during the pursuance of work. The listed amount represents the entire dollar amount quoted based on these estimated quantities. No conversations, verbal agreements, and/or other forms of non-written representations shall serve to add, delete, or modify the terms as stated. This document shall not serve in any manner as an actual subcontract between the two parties. A separate subcontractor agreement will describe in detail the contractual obligations of the bidder and the DBE subcontractor.

Affirmation

The above named DBE subcontractor affirms that it will perform the portion(s) of the contract for the estimated dollar value as stated in the DBE Utililzation Plan (see Price Proposal).

STEERE ENGINEERING INC. — Aetna Bridge Company

Name of DBE Subcontractor — **Name of Bidder**

Patricia D. Steere, P.E., President 4/21/11 — A. [illegible] VP Construction 4/21/11

Signature / Title — **Date** — **Signature / Title** — **Date**

RECEIVED
APR - 7 2011
30 Lockbridge St.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
LETTER OF INTENT TO PERFORM AS A SUBCONTRACTOR

CONTRACT/PROPOSAL NAME:
BID #7448315 - DESIGN/BUILD Services for the Replacement of the Laurel Avenue Bridge #397, Coventry, RI

NAME OF BIDDER/RESPONDENT:
Aetna Bridge Company

The undersigned intends to perform work in connection with the above contract upon the execution and subsequent award of the contract by RIDOT:

Name of DBE Subcontractor COSCO, Inc.
Address 707 Park East Drive
City Woonsocket State RI Zip 02895

Please check if RI certification letter attached:

Disadvantaged Business Enterprise (DBE) X

The DBE status of the above named subcontractor is certified by the Rhode Island Department of Administration. The above named subcontractor is prepared to perform the described work listed on the DBE Utilization Plan, in connection with the above contract upon execution of such and subsequent award of the contract by RIDOT. The above named subcontractor is prepared to perform the described work for the Price identified on the DBE Utilization Plan. (See Price Proposal).

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Affirmation

The above named DBE subcontractor affirms that it will perform the portion(s) of the contract for the estimated dollar value as stated in the DBE Utililzation Plan (see Price Proposal).

COSCO, Inc.	Aetna Bridge Company
Name of DBE Subcontractor	**Name of Bidder**
Sandra L. Brooke - Manager 4/5/11	4/18/11
Signature / Title **Date**	**Signature / Title** **Date**

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
LETTER OF INTENT TO PERFORM AS A SUBCONTRACTOR

CONTRACT/PROPOSAL NAME:
BID #7448315 - DESIGN/BUILD Services for the Replacement of the Laurel Avenue Bridge #397, Coventry, RI

NAME OF BIDDER/RESPONDENT:
Aetna Bridge Company

The undersigned intends to perform work in connection with the above contract upon the execution and subsequent award of the contract by RIDOT:

Name of DBE Subcontractor F.C. CONSTRUCTION CORP.
Address 133 STATE ROAD P.O. BOX 1630
City WESTPORT State MA Zip 02790

Please check if RI certification letter attached:

Disadvantaged Business Enterprise (DBE) ✓

The DBE status of the above named subcontractor is certified by the Rhode Island Department of Administration. The above named subcontractor is prepared to perform the described work listed on the DBE Utilization Plan, in connection with the above contract upon execution of such and subsequent award of the contract by RIDOT. The above named subcontractor is prepared to perform the described work for the Price identified on the DBE Utilization Plan. (See Price Proposal).

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Affirmation

The above named DBE subcontractor affirms that it will perform the portion(s) of the contract for the estimated dollar value as stated in the DBE Utilization Plan (see Price Proposal).

F.C. CONSTRUCTION CORP.
Name of DBE Subcontractor

Aetna Bridge Company
Name of Bidder

Kathleen O'Brien - GM 4-5-11
Signature / Title **Date**

VP-CONSTRUCTION 4/13/11
Signature / Title **Date**

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
LETTER OF INTENT TO PERFORM AS A SUBCONTRACTOR

CONTRACT/PROPOSAL NAME:
BID #7448315 - DESIGN/BUILD Services for the Replacement of the Laurel Avenue Bridge #397, Coventry, RI

NAME OF BIDDER/RESPONDENT:
Aetna Bridge Company

The undersigned intends to perform work in connection with the above contract upon the execution and subsequent award of the contract by RIDOT:

Name of DBE Subcontractor H-O-N LANDSCAPING, INC
Address P.O. Box 70220
City N. Dartmouth State MA Zip 02747

Please check if RI certification letter attached:

Disadvantaged Business Enterprise (DBE) ✓

The DBE status of the above named subcontractor is certified by the Rhode Island Department of Administration. The above named subcontractor is prepared to perform the described work listed on the DBE Utilization Plan, in connection with the above contract upon execution of such and subsequent award of the contract by RIDOT. The above named subcontractor is prepared to perform the described work for the Price identified on the DBE Utilization Plan. (See Price Proposal).

The above named bidder and subcontractor mutually accepts the commitment total estimated for the Unit Prices and Quantities. This commitment total is based on estimated quantities only and most likely will vary up or down as the project is completed. Final compensation and DBE credit will be based on actual quantities of work performed and accepted during the pursuance of work. The listed amount represents the entire dollar amount quoted based on these estimated quantities. No conversations, verbal agreements, and/or other forms of non-written representations shall serve to add, delete, or modify the terms as stated. This document shall not serve in any manner as an actual subcontract between the two parties. A separate subcontractor agreement will describe in detail the contractual obligations of the bidder and the DBE subcontractor.

Affirmation

The above named DBE subcontractor affirms that it will perform the portion(s) of the contract for the estimated dollar value as stated in the DBE Utililzation Plan (see Price Proposal).

H-O-N LANDSCAPING, INC — Aetna Bridge Company

Name of DBE Subcontractor — **Name of Bidder**

, President — 4/13/11

Signature / Title 4/5/11 **Date** — **Signature / Title** **Date**

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
LETTER OF INTENT TO PERFORM AS A SUBCONTRACTOR

CONTRACT/PROPOSAL NAME:
BID #7448315 - DESIGN/BUILD Services for the Replacement of the Laurel Avenue Bridge #397, Coventry, RI

NAME OF BIDDER/RESPONDENT:
Aetna Bridge Company

The undersigned intends to perform work in connection with the above contract upon the execution and subsequent award of the contract by RIDOT:

Name of DBE Subcontractor T & T Steel Erectors, Inc
Address 21 Taunton Ave
City Mattapan State MA Zip 02126

Please check if RI certification letter attached:

Disadvantaged Business Enterprise (DBE) X

The DBE status of the above named subcontractor is certified by the Rhode Island Department of Administration. The above named subcontractor is prepared to perform the described work listed on the DBE Utilization Plan, in connection with the above contract upon execution of such and subsequent award of the contract by RIDOT. The above named subcontractor is prepared to perform the described work for the Price identified on the DBE Utilization Plan. (See Price Proposal).

The above named bidder and subcontractor mutually accepts the commitment total estimated for the Unit Prices and Quantities. This commitment total is based on estimated quantities only and most likely will vary up or down as the project is completed. Final compensation and DBE credit will be based on actual quantities of work performed and accepted during the pursuance of work. The listed amount represents the entire dollar amount quoted based on these estimated quantities. No conversations, verbal agreements, and/or other forms of non-written representations shall serve to add, delete, or modify the terms as stated. This document shall not serve in any manner as an actual subcontract between the two parties. A separate subcontractor agreement will describe in detail the contractual obligations of the bidder and the DBE subcontractor.

Affirmation

The above named DBE subcontractor affirms that it will perform the portion(s) of the contract for the estimated dollar value as stated in the DBE Utililzation Plan (see Price Proposal).

T & T STEEL
Name of DBE Subcontractor

Aetna Bridge Company
Name of Bidder

Signature / Title **Date**

Signature / Title VP-CONSTRUCTION **Date** 4/13/11

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
LETTER OF INTENT TO PERFORM AS A SUBCONTRACTOR

CONTRACT/PROPOSAL NAME: **NAME OF BIDDER/RESPONDENT:**

The undersigned intends to perform work in connection with the above contract upon the execution and subsequent award of the contract by RIDOT:

Name of DBE Subcontractor Dynamic Scheduling Solutions
Address 31 Smith Avenue, Unit 1
City Greenville State RI Zip 02828

Please check if RI certification letter attached:

Disadvantaged Business Enterprise (DBE) ✓

The DBE status of the above named subcontractor is certified by the Rhode Island Department of Administration. The above named subcontractor is prepared to perform the described work listed on the DBE Utilization Plan, in connection with the above contract upon execution of such and subsequent award of the contract by RIDOT. The above named subcontractor is prepared to perform the described work for the Price identified on the DBE Utilization Plan. (See Price Proposal).

The above named bidder and subcontractor mutually accepts the commitment total estimated for the Unit Prices and Quantities. This commitment total is based on estimated quantities only and most likely will vary up or down as the project is completed. Final compensation and DBE credit will be based on actual quantities of work performed and accepted during the pursuance of work. The listed amount represents the entire dollar amount quoted based on these estimated quantities. No conversations, verbal agreements, and/or other forms of non-written representations shall serve to add, delete, or modify the terms as stated. This document shall not serve in any manner as an actual subcontract between the two parties. A separate subcontractor agreement will describe in detail the contractual obligations of the bidder and the DBE subcontractor.

Affirmation

The above named DBE subcontractor affirms that it will perform the portion(s) of the contract for the estimated dollar value as stated in the DBE Utililzation Plan (see Price Proposal).

Dynamic Scheduling Solutions — **Name of DBE Subcontractor**

Aetna Bridge Co. — **Name of Bidder**

4/18/11 — **Signature / Title** **Date**
Heather Buinicki, President

V.P. Construction — **Signature / Title** **Date** 4/18/11

RIDOT
ON-THE-JOB TRAINING
ACKNOWLEDGEMENT AND STATEMENT OF INTENT

4/18/11
Date

To: RIDOT OJT Coordinator
Office of Business and Community Resources
Rhode Island Department of Transportation
2 Capitol Hill Rm109
Providence, RI 02903

Project Name and Number: BID #7448315 - DESIGN/BUILD Services for the Replacement of the Laurel Avenue Bridge #397, Coventry, RI

Aetna Bridge Company **(Respondent) will review the OJT requirements (Training Specification) in the contract for the above noted project. Based on these requirements, the availability of applicants within a reasonable area of recruitment, and in an effort to meet the minority and female participation goals outlined in the OJT Specification, our company will select a qualified trainee(s) and conduct training under the classification(s) identified below in accordance with the RIDOT OJT Program.**

*** Selected firm must submit a copy of training plan (training classification) to be used during post qualification.**

The undersigned has personally reviewed the content of each selected training classification in relation to the project scope and assures that all portions of training can be completed if initiated by the "no later than" (NLT) date indicated below.

1 Selected Training Classification	2 Number of Trainees in Classification	3 Projected Start Date	4 NLT Start Date in Order to Complete training hours
1. Union Laborer	1	July 2011	August 2011
2.			
3.			
4.			
5.			

IMPORTANT: Written justification is required to substantiate the selection of training classifications where company representation is below the minority and female participation goals specified in the contract. Compare columns (i) and (j) of the table on page 2 of 2 with 41 CFR 60-4.2, Affirmative Action Requirements.

Please provide information regarding your company's current workforce demographics in the trades listed below:

(a) Trade Classification	(b) Total Employees	(c) Female	(d) Hispanic	(e) American Indian or Alaskan Native	(f) Black	(g) Asian or Pacific Islander	(h) Total of columns (d) through (g)	(i) Minority Percentage (h) / (b)	(j) Female Percentage (c) / (b)
Constr. Supervisors	6								
Constr. Foreperson	20								
Carpenters	15	1			1		1	.06	.06
Equipment Mechanics	2					1	1	.50	
Equipment Operators	2								
Grade Foreman Asst.	N/A								
Ironworker	5								
Laborers	22	3			1		1	.045	.136
Truck Drivers	N/A								

The authorized representative below certifies that the information proved herein is accurate and is made in good faith:

Mark H. Mainelli
Company EEO Officer

Signature Date: 4/18/11

Approval ☐ Disapproval ☐

Date: _____

RIDOT OJT Coordinator

SECTION 4.4

Required Forms

Aetna Bridge Company

Steere ENGINEERING INC
Bridge and Structural Engineers

BID #7448315:
Laurel Avenue Bridge #397

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS PRIMARY COVERED TRANSACTIONS

In accordance with the code of Federal Regulations, Part 49 CFR Section 29. 510, the prospective primary participant Jeffrey A. Bostock (name of Authorized Agent), Vice President - Construction (Title), being duly sworn (or under penalty of perjury under the laws of the United States), certifies to the best of his/her knowledge and belief, that its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statues or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1) (b) of this certification;

d. Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

Where the prospective primary participant is unable to certify any of the statements in this certification, such prospective participant shall list exceptions below.

Exceptions will not necessarily result in denial of award, but, will be considered in determining contractor responsibility. For any exception noted, indicate below to whom it applies, the initiating agency, and the dates of the action. Providing false information may result in criminal prosecution or administrative sanctions. If an exception is noted the contractor must contact the Department to discuss the exception prior to award of the contract.

Aetna Bridge Company

30 Lockbridge St.

Pawtucket, RI 02860

Signature of Authorized Agent

4/1/11

Date

DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

1. Type of Federal Action:
   [a] a. contract
   b. grant
   c. cooperative agreement
   d. loan
   e. loan guarantee
   f. loan insurance

2. Status of Federal Action:
   [a] a. bid/offer/application
   b. initial award
   c. post-award

3. Report Type:
   [a] a. initial filing
   b. material change

   For Material Change Only:
   year _____ quarter _____
   date of last report _____

4. Name and Address of Reporting Entity:
   [X] Prime [ ] Subawardee
   Tier _____, if known:
   Aetna Bridge Company
   30 Lockbridge St., Pawtuckt, RI 02860
   Congressional District, if known:

5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime:
   Congressional District, if known:

6. Federal Department/Agency:
   FHWA

7. Federal Program Name/Description
   CFDA Number, if applicable: _____

8. Federal Action Number, if known:

9. Award Amount, if known:
   $

10. a. Name and Address of Lobbying Entity (if individual, last name, first name, MI):
    N/A
    (attach Continuation Sheet(s) SF-LLL-A, if necessary)

    b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI): N/A

11. Amount of Payment (check all that apply:
    $ N/A [ ] actual [ ] planned

12. Form of Payment (check all that apply):
    [ ] a. cash N/A
    [ ] b. in-kind; specify: nature _____
    value _____

13. Type of Payment (check all that apply):
    [ ] a. retainer
    [ ] b. one-time fee
    [ ] c. commission
    [ ] d. contingent fee
    [ ] e. deferred
    [ ] f. other; specify: N/A

14. Brief Description of Services Performed or to be Performed and Date(s) of Service, including officer(s), employee(s), or Member(s) contacted, for Payment Indicated in Item 11:

    N/A - No Lobbying Activities have been engaged by Aetna Bridge Company.

    (attach Continuation Sheet(s) SF-LLL-A if necessary)

15. Continuation Sheet(s) SF-LLL-A attached: [ ] Yes [ ] No

16. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

    Signature: [signature]
    Print Name: Jeffrey A. Bostock
    Title: Vice President - Construction
    Telephone No.: (401) 728-0400 Date: 4/1/11

Federal Use Only:

Authorized for Local Reproduction
Standard Form - LLL-A

RIDOT 12/27/07

CONFLICTS DISCLOSURE STATEMENT

RE: BID #7448315 - DESIGN/BUILD Services for the Replacement of the Laurel Avenue Bridge #397, Coventry, RI

I, Jeffrey A. Bostock **hereby certify as follows:**

I am employed as a Vice President- Construction **of** Aetna Bridge Company
[TITLE] **[COMPANY]**
and to the best of my knowledge:

PLEASE CHECK THE APPROPRIATE BOX:

☒ **I have no family or personal relations currently employed either on a full-time or part-time basis at the Rhode Island Department of Transportation.**

☐ **I do have family or personal relations currently employed at the Rhode Island Department of Transportation. Please list their name(s), title(s), and RIDOT Division(s) (if known):**

NAME	TITLE	RIDOT DIVISION

If necessary, please add any additional names as attachments hereto.

FOR ILLUSTRATIVE PURPOSES, FAMILY RELATIONS SHALL INCLUDE, WHETHER BY BLOOD, ADOPTION OR MARRIAGE, ANY OF THE FOLLOWING RELATIONSHIPS:

Father, Mother, Son, Daughter, Brother, Sister, Grandfather, Grandmother, Grandson, Granddaughter, Father-In-Law, Mother-In-Law, Brother-In-Law, Sister-In-Law, Son-In-Law, Daughter-In-Law, Stepfather, Stepmother, Stepson, Stepdaughter, Stepbrother, Stepsister, Half-Brother Or Half-Sister, Niece, Nephew, And Cousin

- *If you are unsure whether a relationship, association, or connection you have may need to be disclosed, please consult with RIDOT's Legal Office at (401) 222-6510.*

4/1/11

SIGNATURE **DATE**

By signing this form you: (1) certify that the information contained in this form is complete and accurate to the best of your knowledge; and (2) acknowledge your continuing obligation to complete and submit a new Disclosure form when there is any change in your family or personal relations during the course of this Contract.

This document is used for internal RIDOT purposes only in order to address and avoid any potential conflicts at the inception of the contract process and to avoid any impropriety or the appearance of impropriety during the contract process. Any disclosures made hereto will not prejudice prospective vendors from selection.

Revised: 4/12/2002

ANTI-COLLUSION CERTIFICATE FOR CONTRACT AND FORCE ACCOUNT
[Unsworn Declaration]

Title 23, United States Code, Section 112(c), requires, as a condition precedent to approval by the Director of Public Roads of the contract for this work, that there be filed an unsworn declaration executed by, on behalf of, the person, firm, association, or corporation submitting the bid certifying that such person, firm, association, or corporation has not either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action, in restraint of free competitive bidding in connection with the submitted bid. This unsworn statement shall be in the form of a declaration executed under penalty of perjury under the laws of the United States.

To the: STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF TRANSPORTATION, DIVISION OF PUBLIC WORKS

State of RI

County of Providence

I, Jeffrey A. Bostock, Vice President - Construction, under penalty under the laws of the United States, do depose and say:

On behalf of Aetna Bridge Company, of Pawtucket, RI that said Contractor has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with Rhode Island Contract Number , Federal-Aid Project Number , County of , Town-City , Road-Bridge .

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS PRIMARY COVERED TRANSACTIONS

In accordance with the code of Federal Regulations, Part 49 CFR Section 29. 510, the prospective primary participant PATRICIA D. STEERE (name of Authorized Agent), PRESIDENT (Title), being duly sworn (or under penalty of perjury under the laws of the United States), certifies to the best of his/her knowledge and belief, that its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statues or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1) (b) of this certification;

d. Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

Where the prospective primary participant is unable to certify any of the statements in this certification, such prospective participant shall list exceptions below.

Exceptions will not necessarily result in denial of award, but, will be considered in determining contractor responsibility. For any exception noted, indicate below to whom it applies, the initiating agency, and the dates of the action. Providing false information may result in criminal prosecution or administrative sanctions. If an exception is noted the contractor must contact the Department to discuss the exception prior to award of the contract.

Patricia D. Steere

Signature of Authorized Agent

3/31/11

Date

DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

1. Type of Federal Action:
   - [a] a. contract
   - b. grant
   - c. cooperative agreement
   - d. loan
   - e. loan guarantee
   - f. loan insurance

2. Status of Federal Action:
   - [a] a. bid/offer/application
   - b. initial award
   - c. post-award

3. Report Type:
   - [a] a. initial filing
   - b. material change

   For Material Change Only:
   year _____ quarter _____
   date of last report _____

4. Name and Address of Reporting Entity:
   - [ ] Prime
   - [✓] Subawardee
   - Tier _____, if known:

   STEERE ENGINEERING INC.
   1640 GEO. WASHINGTON HWY, SUITE 103
   LINCOLN, RI 02865
   Congressional District, if known:

5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime:
   AETNA BRIDGE CO.
   30 LOCKBRIDGE ST.
   PAWTUCKET, RI
   Congressional District, if known:

6. Federal Department/Agency: FHWA

7. Federal Program Name/Description BID# 7448315
   DESIGN/BUILD SERVICES FOR THE REPLACEMENT OF THE LAUREL AVENUE BRIDGE
   CFDA Number, if applicable:

8. Federal Action Number, if known: —

9. Award Amount, if known:
   $ —

10. a. Name and Address of Lobbying Entity (if individual, last name, first name, MI):
    N/A
    (attach Continuation Sheet(s) SF-LLL-A, if necessary)

    b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI):
    N/A

11. Amount of Payment (check all that apply:
    $ N/A
    - [ ] actual
    - [ ] planned

12. Form of Payment (check all that apply):
    - [ ] a. cash
    - [ ] b. in-kind; specify: nature none
      value _____

13. Type of Payment (check all that apply):
    - [ ] a. retainer
    - [ ] b. one-time fee
    - [ ] c. commission
    - [ ] d. contingent fee
    - [ ] e. deferred
    - [ ] f. other; specify: none

14. Brief Description of Services Performed or to be Performed and Date(s) of Service, including officer(s), employee(s), or Member(s) contacted, for Payment Indicated in Item 11:

    N/A

    (attach Continuation Sheet(s) SF-LLL-A if necessary)

15. Continuation Sheet(s) SF-LLL-A attached: [ ] Yes [X] No

16. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

    Signature: Patricia D. Steere
    Print Name: PATRICIA D. STEERE
    Title: PRESIDENT
    Telephone No.: 401-258-9391 Date: 4/14/11

Federal Use Only:

Authorized for Local Reproduction
Standard Form - LLL-A

CONFLICTS DISCLOSURE STATEMENT

RE: BID #7448315 - DESIGN/BUILD Services for the Replacement of the Laurel Avenue Bridge #397, Coventry, RI

I, PATRICIA D. STEERE **hereby certify as follows:**

I am employed as a PRESIDENT **of** STEERE ENGINEERING, INC.
[TITLE] **[COMPANY]**
and to the best of my knowledge:

PLEASE CHECK THE APPROPRIATE BOX:

☑ **I have no family or personal relations currently employed either on a full-time or part-time basis at the Rhode Island Department of Transportation.**

☐ **I do have family or personal relations currently employed at the Rhode Island Department of Transportation. Please list their name(s), title(s), and RIDOT Division(s) (if known):**

NAME	TITLE	RIDOT DIVISION

If necessary, please add any additional names as attachments hereto.

FOR ILLUSTRATIVE PURPOSES, FAMILY RELATIONS SHALL INCLUDE, WHETHER BY BLOOD, ADOPTION OR MARRIAGE, ANY OF THE FOLLOWING RELATIONSHIPS:

Father, Mother, Son, Daughter, Brother, Sister, Grandfather, Grandmother, Grandson, Granddaughter, Father-In-Law, Mother-In-Law, Brother-In-Law, Sister-In-Law, Son-In-Law, Daughter-In-Law, Stepfather, Stepmother, Stepson, Stepdaughter, Stepbrother, Stepsister, Half-Brother Or Half-Sister, Niece, Nephew, And Cousin

- *If you are unsure whether a relationship, association, or connection you have may need to be disclosed, please consult with RIDOT's Legal Office at (401) 222-6510.*

Patricia D. Steere 3/31/11
SIGNATURE **DATE**

By signing this form you: (1) certify that the information contained in this form is complete and accurate to the best of your knowledge; and (2) acknowledge your continuing obligation to complete and submit a new Disclosure form when there is any change in your family or personal relations during the course of this Contract.

This document is used for internal RIDOT purposes only in order to address and avoid any potential conflicts at the inception of the contract process and to avoid any impropriety or the appearance of impropriety during the contract process. Any disclosures made hereto will not prejudice prospective vendors from selection.

Revised: 4/12/2002

ANTI-COLLUSION CERTIFICATE FOR CONTRACT AND FORCE ACCOUNT
[Unsworn Declaration]

Title 23, United States Code, Section 112(c), requires, as a condition precedent to approval by the Director of Public Roads of the contract for this work, that there be filed an unsworn declaration executed by, on behalf of, the person, firm, association, or corporation submitting the bid certifying that such person, firm, association, or corporation has not either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action, in restraint of free competitive bidding in connection with the submitted bid. This unsworn statement shall be in the form of a declaration executed under penalty of perjury under the laws of the United States.

To the: **STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS**
DEPARTMENT OF TRANSPORTATION, DIVISION OF PUBLIC WORKS

State of RI

County of Providence

I, Patricia D. Steere, P.E., President, under penalty under the laws of the United States, do depose and say:

On behalf of Steere Engineering, Inc., of Lincoln, RI that said Contractor has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with Rhode Island Contract Number , Federal-Aid Project Number , County of , Town-City , Road-Bridge .

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS PRIMARY COVERED TRANSACTIONS

In accordance with the code of Federal Regulations, Part 49 CFR Section 29. 510, the prospective primary participant Russell J. Morgan (name of Authorized Agent), Principal (Title), being duly sworn (or under penalty of perjury under the laws of the United States), certifies to the best of his/her knowledge and belief, that its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statues or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1) (b) of this certification;

d. Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

Where the prospective primary participant is unable to certify any of the statements in this certification, such prospective participant shall list exceptions below.

Exceptions will not necessarily result in denial of award, but, will be considered in determining contractor responsibility. For any exception noted, indicate below to whom it applies, the initiating agency, and the dates of the action. Providing false information may result in criminal prosecution or administrative sanctions. If an exception is noted the contractor must contact the Department to discuss the exception prior to award of the contract.

_____

_____

_____

Signature of Authorized Agent

4/11/2011
Date

DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

1. Type of Federal Action:
   - [a] a. contract
   - b. grant
   - c. cooperative agreement
   - d. loan
   - e. loan guarantee
   - f. loan insurance

2. Status of Federal Action:
   - [a] a. bid/offer/application
   - b. initial award
   - c. post-award

3. Report Type:
   - [a] a. initial filing
   - b. material change

   For Material Change Only:
   year _____ quarter _____
   date of last report _____

4. Name and Address of Reporting Entity:
   - [ ] Prime [X] Subawardee
   - Tier _____, if known:

   GZA GeoEnvironmental, Inc.
   530 Broadway
   Providence, RI 02909
   Congressional District, if known:

5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime:

   Aetna Bridge
   30 Lockbridge Street
   Pawtucket, Rhode Island 02860
   Congressional District, if known:

6. Federal Department/Agency:

7. Federal Program Name/Description
   Design/Build Services for Replacement of Laurel Ave Bridge No. 397
   RI Bid Number: 7448315
   CFDA Number, if applicable: _____

8. Federal Action Number, if known:

9. Award Amount, if known:
   $ N/A

10. a. Name and Address of Lobbying Entity (if individual, last name, first name, MI):
    N/A
    (attach Continuation Sheet(s) SF-LLL-A, if necessary)

    b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI):
    N/A

11. Amount of Payment (check all that apply):
    $ N/A [ ] actual [ ] planned

12. Form of Payment (check all that apply):
    - [ ] a. cash
    - [ ] b. in-kind; specify: nature none
    - value _____

13. Type of Payment (check all that apply):
    - [ ] a. retainer
    - [ ] b. one-time fee
    - [ ] c. commission
    - [ ] d. contingent fee
    - [ ] e. deferred
    - [ ] f. other; specify: none

14. Brief Description of Services Performed or to be Performed and Date(s) of Service, including officer(s), employee(s), or Member(s) contacted, for Payment Indicated in Item 11:

    N/A

    (attach Continuation Sheet(s) SF-LLL-A if necessary)

15. Continuation Sheet(s) SF-LLL-A attached: [ ] Yes [X] No

16. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

    Signature: Russell M
    Print Name: Russell J. Morgan
    Title: Principal
    Telephone No.: 401-421-4140 Date: 4-4-2011

Federal Use Only:

Authorized for Local Reproduction
Standard Form - LLL-A

RIDOT 12/27/07

CONFLICTS DISCLOSURE STATEMENT

RE: BID #7448315 - DESIGN/BUILD Services for the Replacement of the Laurel Avenue Bridge #397, Coventry, RI

I, Russell J. Morgan **hereby certify as follows:**

I am employed as a Principal **of** GZA GeoEnvironmental, Inc.
[TITLE] **[COMPANY]**
and to the best of my knowledge:

PLEASE CHECK THE APPROPRIATE BOX:

☒ **I have no family or personal relations currently employed either on a full-time or part-time basis at the Rhode Island Department of Transportation.**

☐ **I do have family or personal relations currently employed at the Rhode Island Department of Transportation. Please list their name(s), title(s), and RIDOT Division(s) (if known):**

NAME	TITLE	RIDOT DIVISION

If necessary, please add any additional names as attachments hereto.

FOR ILLUSTRATIVE PURPOSES, FAMILY RELATIONS SHALL INCLUDE, WHETHER BY BLOOD, ADOPTION OR MARRIAGE, ANY OF THE FOLLOWING RELATIONSHIPS:

Father, Mother, Son, Daughter, Brother, Sister, Grandfather, Grandmother, Grandson, Granddaughter, Father-In-Law, Mother-In-Law, Brother-In-Law, Sister-In-Law, Son-In-Law, Daughter-In-Law, Stepfather, Stepmother, Stepson, Stepdaughter, Stepbrother, Stepsister, Half-Brother Or Half-Sister, Niece, Nephew, And Cousin

- *If you are unsure whether a relationship, association, or connection you have may need to be disclosed, please consult with RIDOT's Legal Office at (401) 222-6510.*

Russell J. Morgan 4/21/2011
SIGNATURE **DATE**

By signing this form you: (1) certify that the information contained in this form is complete and accurate to the best of your knowledge; and (2) acknowledge your continuing obligation to complete and submit a new Disclosure form when there is any change in your family or personal relations during the course of this Contract.

This document is used for internal RIDOT purposes only in order to address and avoid any potential conflicts at the inception of the contract process and to avoid any impropriety or the appearance of impropriety during the contract process. Any disclosures made hereto will not prejudice prospective vendors from selection.

Revised: 4/12/2002

ANTI-COLLUSION CERTIFICATE FOR CONTRACT AND FORCE ACCOUNT
[Unsworn Declaration]

Title 23, United States Code, Section 112(c), requires, as a condition precedent to approval by the Director of Public Roads of the contract for this work, that there be filed an unsworn declaration executed by, on behalf of, the person, firm, association, or corporation submitting the bid certifying that such person, firm, association, or corporation has not either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action, in restraint of free competitive bidding in connection with the submitted bid. This unsworn statement shall be in the form of a declaration executed under penalty of perjury under the laws of the United States.

To the: **STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS**
DEPARTMENT OF TRANSPORTATION, DIVISION OF PUBLIC WORKS

State of RI

County of Providence

I, Russell J. Morgan, _____, under penalty under the laws of the United States, do depose and say:

On behalf of GZA GeoEnvironmental, Inc., of Providence, RI that said Contractor has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with Rhode Island Contract Number , Federal-Aid Project Number , County of , Town-City , Road-Bridge .

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS PRIMARY COVERED TRANSACTIONS

In accordance with the code of Federal Regulations, Part 49 CFR Section 29. 510, the prospective primary participant **George F. Monaghan, Jr.** (name of Authorized Agent), **Sr. Vice Presisdent** (Title), being duly sworn (or under penalty of perjury under the laws of the United States), certifies to the best of his/her knowledge and belief, that its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statues or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1) (b) of this certification;

d. Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

Where the prospective primary participant is unable to certify any of the statements in this certification, such prospective participant shall list exceptions below.

Exceptions will not necessarily result in denial of award, but, will be considered in determining contractor responsibility. For any exception noted, indicate below to whom it applies, the initiating agency, and the dates of the action. Providing false information may result in criminal prosecution or administrative sanctions. If an exception is noted the contractor must contact the Department to discuss the exception prior to award of the contract.

_____

_____

_____

Signature of Authorized Agent

4/22/2011

Date

Approved by
0348-0046

DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

1. Type of Federal Action:
   [a] a. contract
   b. grant
   c. cooperative agreement
   d. loan
   e. loan guarantee
   f. loan insurance

2. Status of Federal Action:
   [a] a. bid/offer/application
   b. initial award
   c. post-award

3. Report Type:
   [a] a. initial filing
   b. material change

   For Material Change Only:
   year _____ quarter _____
   date of last report _____

4. Name and Address of Reporting Entity:
   ☐ Prime ☑ Subawardee
   Tier _____, if known:
   Congressional District, if known:

5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime:
   Aetna Bridge Co.
   30 Lockbridge Street
   Pawtucket, RI 02860
   Congressional District, if known:

6. Federal Department/Agency:
   Federal Highway Administration

7. Federal Program Name/Description
   CFDA Number, if applicable: _____

8. Federal Action Number, if known:

9. Award Amount, if known:
   $

10. a. Name and Address of Lobbying Entity (if individual, last name, first name, MI):
    (attach Continuation Sheet(s) SF-LLL-A, if necessary)

    b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI):

11. Amount of Payment (check all that apply:
    $_____ ☐ actual ☐ planned

12. Form of Payment (check all that apply):
    ☐ a. cash
    ☐ b. in-kind; specify: nature _____
    value _____

13. Type of Payment (check all that apply):
    ☐ a. retainer
    ☐ b. one-time fee
    ☐ c. commission
    ☐ d. contingent fee
    ☐ e. deferred
    ☐ f. other; specify: _____

14. Brief Description of Services Performed or to be Performed and Date(s) of Service, including officer(s), employee(s), or Member(s) contacted, for Payment Indicated in Item 11:

    NONE

    (attach Continuation Sheet(s) SF-LLL-A if necessary)

15. Continuation Sheet(s) SF-LLL-A attached: ☐ Yes ☐ No

16. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

    Signature: [signature]
    Print Name: George F. Monaghan, Jr.
    Title: Sr. Vice President
    Telephone No.: 401-722-7660 Date: 4/22/2011

Federal Use Only:

Authorized for Local Reproduction

CONFLICTS DISCLOSURE STATEMENT

RE: BID #7448315 DESIGN/BUILD Services for the Replacement of the Laurel Avenue Bridge No. 397, Coventry, Rhode Island

I, George F. Monaghan, Jr. **hereby certify as follows:**

I am employed as a Sr. Vice President **of** Bryant Associates, Inc.
[TITLE] **[COMPANY]**
and to the best of my knowledge:

PLEASE CHECK THE APPROPRIATE BOX:

☑ **I have no family or personal relations currently employed either on a full-time or part-time basis at the Rhode Island Department of Transportation.**

☐ **I do have family or personal relations currently employed at the Rhode Island Department of Transportation. Please list their name(s), title(s), and RIDOT Division(s) (if known):**

NAME	TITLE	RIDOT DIVISION

If necessary, please add any additional names as attachments hereto.

FOR ILLUSTRATIVE PURPOSES, FAMILY RELATIONS SHALL INCLUDE, WHETHER BY BLOOD, ADOPTION OR MARRIAGE, ANY OF THE FOLLOWING RELATIONSHIPS:

Father, Mother, Son, Daughter, Brother, Sister, Grandfather, Grandmother, Grandson, Granddaughter, Father-In-Law, Mother-In-Law, Brother-In-Law, Sister-In-Law, Son-In-Law, Daughter-In-Law, Stepfather, Stepmother, Stepson, Stepdaughter, Stepbrother, Stepsister, Half-Brother Or Half-Sister, Niece, Nephew, And Cousin

- *If you are unsure whether a relationship, association, or connection you have may need to be disclosed, please consult with RIDOT's Legal Office at (401) 222-6510.*

4/22/2011

SIGNATURE **DATE**

By signing this form you: (1) certify that the information contained in this form is complete and accurate to the best of your knowledge; and (2) acknowledge your continuing obligation to complete and submit a new Disclosure form when there is any change in your family or personal relations during the course of this Contract.

This document is used for internal RIDOT purposes only in order to address and avoid any potential conflicts at the inception of the contract process and to avoid any impropriety or the appearance of impropriety during the contract process. Any disclosures made hereto will not prejudice prospective vendors from selection.

Revised: 4/12/2002

ANTI-COLLUSION CERTIFICATE FOR CONTRACT AND FORCE ACCOUNT
[Unsworn Declaration]

Title 23, United States Code, Section 112(c), requires, as a condition precedent to approval by the Director of Public Roads of the contract for this work, that there be filed an unsworn declaration executed by, on behalf of, the person, firm, association, or corporation submitting the bid certifying that such person, firm, association, or corporation has not either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action, in restraint of free competitive bidding in connection with the submitted bid. This unsworn statement shall be in the form of a declaration executed under penalty of perjury under the laws of the United States.

To the: **STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS**
DEPARTMENT OF TRANSPORTATION, DIVISION OF PUBLIC WORKS

State of **RI**

County of **Providence**

I, **George F. Monaghan, Jr.**, **Senior Vice President**, under penalty under the laws of the United States, do depose and say:

On behalf of **Bryant Associates, Inc.**, of **Lincoln, RI** that said Contractor has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with Rhode Island Contract Number , Federal-Aid Project Number , County of , Town-City , Road-Bridge .

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS PRIMARY COVERED TRANSACTIONS

In accordance with the code of Federal Regulations, Part 49 CFR Section 29. 510, the prospective primary participant Heather Bruinicki (name of Authorized Agent), President of Dynamic Scheduling Solutions (Title), being duly sworn (or under penalty of perjury under the laws of the United States), certifies to the best of his/her knowledge and belief, that its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statues or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1) (b) of this certification;

d. Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

Where the prospective primary participant is unable to certify any of the statements in this certification, such prospective participant shall list exceptions below.

Exceptions will not necessarily result in denial of award, but, will be considered in determining contractor responsibility. For any exception noted, indicate below to whom it applies, the initiating agency, and the dates of the action. Providing false information may result in criminal prosecution or administrative sanctions. If an exception is noted the contractor must contact the Department to discuss the exception prior to award of the contract.

None

Signature of Authorized Agent

Heather Bruinicki

4/18/11

Date

Approved by
OMB 0348-0046

DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

1. Type of Federal Action:
   - [a] a. contract
   - b. grant
   - c. cooperative agreement
   - d. loan
   - e. loan guarantee
   - f. loan insurance

   NONE

2. Status of Federal Action:
   - [a] a. bid/offer/application
   - b. initial award
   - c. post-award

   NONE

3. Report Type:
   - [a] a. initial filing
   - b. material change

   NONE

   For Material Change Only:
   year _____ quarter _____
   date of last report _____

4. Name and Address of Reporting Entity:
   - ☐ Prime
   - ☒ Subawardee
   - Tier _____, if known:

   NONE

   Congressional District, if known:

5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime:

   NONE

   Aetna Bridge Company
   30 Lockbridge St.
   Pawtucket, RI 02860

   Congressional District, if known:

6. Federal Department/Agency:

   FHWA

   NONE

7. Federal Program Name/Description

   CFDA Number, if applicable: NONE

8. Federal Action Number, if known: NONE

9. Award Amount, if known: NONE
   $

10. a. Name and Address of Lobbying Entity (if individual, last name, first name, MI):

    NONE

    (attach Continuation Sheet(s) SF-LLL-A, if necessary)

    b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI):

    NONE

11. Amount of Payment (check all that apply:
    $ NONE ☐ actual ☐ planned

12. Form of Payment (check all that apply):
    - ☐ a. cash
    - ☐ b. in-kind; specify: nature _____ value _____

    NONE

13. Type of Payment (check all that apply):
    - ☐ a. retainer
    - ☐ b. one-time fee
    - ☐ c. commission
    - ☐ d. contingent fee
    - ☐ e. deferred
    - ☐ f. other; specify: _____

    NONE

14. Brief Description of Services Performed or to be Performed and Date(s) of Service, including officer(s), employee(s), or Member(s) contacted, for Payment Indicated in Item 11:

    NONE

    (attach Continuation Sheet(s) SF-LLL-A if necessary)

15. Continuation Sheet(s) SF-LLL-A attached: ☐ Yes ☒ No

16. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Signature: HBell

Print Name: Heather Buinicki

Title: President, Dynamic Scheduling Solutions

Telephone No.: (401) 744-9420 Date: 4/18/11

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Standard Form - LLL-A

RIDOT 12/27/07

CONFLICTS DISCLOSURE STATEMENT

RE: Design/Build of Laurel Avenue

I, Heather Burnicki **hereby certify as follows:**

I am employed as a President **of** Dynamic Scheduling Solutions
[TITLE] **[COMPANY]**
and to the best of my knowledge:

PLEASE CHECK THE APPROPRIATE BOX:

☒ **I have no family or personal relations currently employed either on a full-time or part-time basis at the Rhode Island Department of Transportation.**

☐ **I do have family or personal relations currently employed at the Rhode Island Department of Transportation. Please list their name(s), title(s), and RIDOT Division(s) (if known):**

NAME	TITLE	RIDOT DIVISION
N/A		

If necessary, please add any additional names as attachments hereto.

FOR ILLUSTRATIVE PURPOSES, FAMILY RELATIONS SHALL INCLUDE, WHETHER BY BLOOD, ADOPTION OR MARRIAGE, ANY OF THE FOLLOWING RELATIONSHIPS:

Father, Mother, Son, Daughter, Brother, Sister, Grandfather, Grandmother, Grandson, Granddaughter, Father-In-Law, Mother-In-Law, Brother-In-Law, Sister-In-Law, Son-In-Law, Daughter-In-Law, Stepfather, Stepmother, Stepson, Stepdaughter, Stepbrother, Stepsister, Half-Brother Or Half-Sister, Niece, Nephew, And Cousin

- *If you are unsure whether a relationship, association, or connection you have may need to be disclosed, please consult with RIDOT's Legal Office at (401) 222-6510.*

HBell 4/18/11
SIGNATURE **DATE**

By signing this form you: (1) certify that the information contained in this form is complete and accurate to the best of your knowledge; and (2) acknowledge your continuing obligation to complete and submit a new Disclosure form when there is any change in your family or personal relations during the course of this Contract.

This document is used for internal RIDOT purposes only in order to address and avoid any potential conflicts at the inception of the contract process and to avoid any impropriety or the appearance of impropriety during the contract process. Any disclosures made hereto will not prejudice prospective vendors from selection.

Revised: 4/12/2002

ANTI-COLLUSION CERTIFICATE FOR CONTRACT AND FORCE ACCOUNT
[Unsworn Declaration]

Title 23, United States Code, Section 112(c), requires, as a condition precedent to approval by the Director of Public Roads of the contract for this work, that there be filed an unsworn declaration executed by, on behalf of, the person, firm, association, or corporation submitting the bid certifying that such person, firm, association, or corporation has not either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action, in restraint of free competitive bidding in connection with the submitted bid. This unsworn statement shall be in the form of a declaration executed under penalty of perjury under the laws of the United States.

To the: **STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS**
DEPARTMENT OF TRANSPORTATION, DIVISION OF PUBLIC WORKS

State of RI

County of Providence

I, Heather Buinicki, President, under penalty under the laws of the United States, do depose and say:

On behalf of Dynamic Scheduling Solutions of Greenville, RI that said Contractor has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with Rhode Island Contract Number , Federal-Aid Project Number , County of , Town-City , Road-Bridge .

HBell 4/18/11

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS PRIMARY COVERED TRANSACTIONS

In accordance with the code of Federal Regulations, Part 49 CFR Section 29. 510, the prospective primary participant Andrew N. Thomson (name of Authorized Agent), President (Title), being duly sworn (or under penalty of perjury under the laws of the United States), certifies to the best of his/her knowledge and belief, that its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statues or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1) (b) of this certification;

d. Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

Where the prospective primary participant is unable to certify any of the statements in this certification, such prospective participant shall list exceptions below.

Exceptions will not necessarily result in denial of award, but, will be considered in determining contractor responsibility. For any exception noted, indicate below to whom it applies, the initiating agency, and the dates of the action. Providing false information may result in criminal prosecution or administrative sanctions. If an exception is noted the contractor must contact the Department to discuss the exception prior to award of the contract.

Risk & Safety Management Company

2447 Division Road

East Greenwich, RI 02818-1216

AN Thomson

Signature of Authorized Agent

4-12-11

Date

DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

1. Type of Federal Action:
   - [A] a. contract
   - b. grant
   - c. cooperative agreement
   - d. loan
   - e. loan guarantee
   - f. loan insurance

2. Status of Federal Action:
   - [A] a. bid/offer/application
   - b. initial award
   - c. post-award

3. Report Type:
   - [A] a. initial filing
   - b. material change

   For Material Change Only:
   year _____ quarter _____
   date of last report _____

4. Name and Address of Reporting Entity:
   - [ ] Prime [X] Subawardee
   - Tier _____, if known:

   Risk & Safety Management Company
   2447 Division Road, E. Greenwich, RI 02818-1216

   Congressional District, if known:

5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime:

   Aetna Bridge Company
   30 Lockbridge St.
   Pawtucket, RI 02860

   Congressional District, if known:

6. Federal Department/Agency:

   FHWA

7. Federal Program Name/Description

   CFDA Number, if applicable: _____

8. Federal Action Number, if known:

9. Award Amount, if known:
   $

10. a. Name and Address of Lobbying Entity (if individual, last name, first name, MI):

    N/A

    (attach Continuation Sheet(s) SF-LLL-A, if necessary)

    b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI):

    N/A

11. Amount of Payment (check all that apply:

    $ N/A [ ] actual [ ] planned

12. Form of Payment (check all that apply):
    - [ ] a. cash N/A
    - [ ] b. in-kind; specify: nature _____
      value _____

13. Type of Payment (check all that apply):
    - [ ] a. retainer N/A
    - [ ] b. one-time fee
    - [ ] c. commission
    - [ ] d. contingent fee
    - [ ] e. deferred
    - [ ] f. other; specify: N/A

14. Brief Description of Services Performed or to be Performed and Date(s) of Service, including officer(s), employee(s), or Member(s) contacted, for Payment Indicated in Item 11:

    N/A - No lobbying activities have been engaged by Risk & safety Management Company

    (attach Continuation Sheet(s) SF-LLL-A if necessary)

15. Continuation Sheet(s) SF-LLL-A attached: [ ] Yes [X] No

16. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

    Signature: A N Thomson

    Print Name: Andrew N. Thomson

    Title: President

    Telephone No.: 401-884-0430 Date: 4-12-11

Federal Use Only:

Authorized for Local Reproduction
Standard Form - LLL-A

CONFLICTS DISCLOSURE STATEMENT

RE: BID #7448315 - DESIGN/BUILD Services for the Replacement of the Laurel Avenue Bridge #397, Coventry, RI

I, Andrew N. Thomson **hereby certify as follows:**

I am employed as a President **of** Risk & Safety Management Co.
[TITLE] **[COMPANY]**
and to the best of my knowledge:

PLEASE CHECK THE APPROPRIATE BOX:

☒ **I have no family or personal relations currently employed either on a full-time or part-time basis at the Rhode Island Department of Transportation.**

☐ **I do have family or personal relations currently employed at the Rhode Island Department of Transportation. Please list their name(s), title(s), and RIDOT Division(s) (if known):**

NAME	TITLE	RIDOT DIVISION

If necessary, please add any additional names as attachments hereto.

FOR ILLUSTRATIVE PURPOSES, FAMILY RELATIONS SHALL INCLUDE, WHETHER BY BLOOD, ADOPTION OR MARRIAGE, ANY OF THE FOLLOWING RELATIONSHIPS:

Father, Mother, Son, Daughter, Brother, Sister, Grandfather, Grandmother, Grandson, Granddaughter, Father-In-Law, Mother-In-Law, Brother-In-Law, Sister-In-Law, Son-In-Law, Daughter-In-Law, Stepfather, Stepmother, Stepson, Stepdaughter, Stepbrother, Stepsister, Half-Brother Or Half-Sister, Niece, Nephew, And Cousin

- *If you are unsure whether a relationship, association, or connection you have may need to be disclosed, please consult with RIDOT's Legal Office at (401) 222-6510.*

AN Thomson — 4-12-11
SIGNATURE **DATE**

By signing this form you: (1) certify that the information contained in this form is complete and accurate to the best of your knowledge; and (2) acknowledge your continuing obligation to complete and submit a new Disclosure form when there is any change in your family or personal relations during the course of this Contract.

This document is used for internal RIDOT purposes only in order to address and avoid any potential conflicts at the inception of the contract process and to avoid any impropriety or the appearance of impropriety during the contract process. Any disclosures made hereto will not prejudice prospective vendors from selection.

Revised: 4/12/2002

ANTI-COLLUSION CERTIFICATE FOR CONTRACT AND FORCE ACCOUNT
[Unsworn Declaration]

Title 23, United States Code, Section 112(c), requires, as a condition precedent to approval by the Director of Public Roads of the contract for this work, that there be filed an unsworn declaration executed by, on behalf of, the person, firm, association, or corporation submitting the bid certifying that such person, firm, association, or corporation has not either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action, in restraint of free competitive bidding in connection with the submitted bid. This unsworn statement shall be in the form of a declaration executed under penalty of perjury under the laws of the United States.

To the: **STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS**
DEPARTMENT OF TRANSPORTATION, DIVISION OF PUBLIC WORKS

State of RI

County of Kent

I, Andrew N. Thomson, President, under penalty under the laws of the United States, do depose and say:

On behalf of Risk & Safety Management Co. E. Greenwich, RI, that said Contractor has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with Rhode Island Contract Number , Federal-Aid Project Number , County of , Town-City , Road-Bridge .

Approved by
OMB 0346

DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

1. Type of Federal Action:
   - [a] a. contract
   - [ ] b. grant
   - [ ] c. cooperative agreement
   - [ ] d. loan
   - [ ] e. loan guarantee
   - [ ] f. loan insurance

2. Status of Federal Action:
   - [a] a. bid/offer/application
   - [ ] b. initial award
   - [ ] c. post-award

3. Report Type:
   - [a] a. initial filing
   - [ ] b. material change

   For Material Change Only:
   year _____ quarter _____
   date of last report _____

4. Name and Address of Reporting Entity:
   - [ ] Prime
   - [X] Subawardee
   - Tier _____, if known:

   ATC Associates, Inc.
   40 Strafello Dr. Unit G/Avon, MA 02322
   Congressional District, if known:

5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime:

   Aetna Bridge Company
   30 Lockbridge St.
   Pawtucket, RI 02860

   Congressional District, if known:

6. Federal Department/Agency:

   FHWA

7. Federal Program Name/Description

   CFDA Number, if applicable: _____

8. Federal Action Number, if known:

9. Award Amount, if known:
   $

10. a. Name and Address of Lobbying Entity
    (if individual, last name, first name, MI):

    N/A

    (attach Continuation Sheet(s) SF-LLL-A, if necessary)

    b. Individuals Performing Services (including address if different from No. 10a)
    (last name, first name, MI):

    N/A

11. Amount of Payment (check all that apply:

    $ N/A
    - [ ] actual
    - [ ] planned

12. Form of Payment (check all that apply):
    - [ ] a. cash
    - [ ] b. in-kind; specify: nature _____
      value _____

    N/A

13. Type of Payment (check all that apply):
    - [ ] a. retainer
    - [ ] b. one-time fee
    - [ ] c. commission
    - [ ] d. contingent fee
    - [ ] e. deferred
    - [ ] f. other; specify: _____

    N/A

14. Brief Description of Services Performed or to be Performed and Date(s) of Service, including officer(s), employee(s), or Member(s) contacted, for Payment Indicated in Item 11:

    N/A-No lobbying activities have been engaged by ATC Associates, Inc.

    (attach Continuation Sheet(s) SF-LLL-A if necessary)

15. Continuation Sheet(s) SF-LLL-A attached: [ ] Yes [X] No

16. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

    Signature: Kevin Caine
    Print Name: Kevin Caine
    Title: Laboratory Manager
    Telephone No.: (508) 588-0886 Date: 4/7/11

Federal Use Only:

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Standard Form - LLL-A

RIDOT 12/27/07

CONFLICTS DISCLOSURE STATEMENT

RE: BID #7448315 - DESIGN/BUILD Services for the Replacement of the Laurel Avenue Bridge #397, Coventry, RI

I, Kevin Caine **hereby certify as follows:**

I am employed as a Laboratory Manager **of** ATC Associates, Inc.
[TITLE] **[COMPANY]**
and to the best of my knowledge:

PLEASE CHECK THE APPROPRIATE BOX:

☒ **I have no family or personal relations currently employed either on a full-time or part-time basis at the Rhode Island Department of Transportation.**

☐ **I do have family or personal relations currently employed at the Rhode Island Department of Transportation. Please list their name(s), title(s), and RIDOT Division(s) (if known):**

NAME	TITLE	RIDOT DIVISION

If necessary, please add any additional names as attachments hereto.

FOR ILLUSTRATIVE PURPOSES, FAMILY RELATIONS SHALL INCLUDE, WHETHER BY BLOOD, ADOPTION OR MARRIAGE, ANY OF THE FOLLOWING RELATIONSHIPS:

Father, Mother, Son, Daughter, Brother, Sister, Grandfather, Grandmother, Grandson, Granddaughter, Father-In-Law, Mother-In-Law, Brother-In-Law, Sister-In-Law, Son-In-Law, Daughter-In-Law, Stepfather, Stepmother, Stepson, Stepdaughter, Stepbrother, Stepsister, Half-Brother Or Half-Sister, Niece, Nephew, And Cousin

- *If you are unsure whether a relationship, association, or connection you have may need to be disclosed, please consult with RIDOT's Legal Office at (401) 222-6510.*

Kevin Caine 04/07/11
SIGNATURE **DATE**

By signing this form you: (1) certify that the information contained in this form is complete and accurate to the best of your knowledge; and (2) acknowledge your continuing obligation to complete and submit a new Disclosure form when there is any change in your family or personal relations during the course of this Contract.

This document is used for internal RIDOT purposes only in order to address and avoid any potential conflicts at the inception of the contract process and to avoid any impropriety or the appearance of impropriety during the contract process. Any disclosures made hereto will not prejudice prospective vendors from selection.

Revised: 4/12/2002

ANTI-COLLUSION CERTIFICATE FOR CONTRACT AND FORCE ACCOUNT
[Unsworn Declaration]

Title 23, United States Code, Section 112(c), requires, as a condition precedent to approval by the Director of Public Roads of the contract for this work, that there be filed an unsworn declaration executed by, on behalf of, the person, firm, association, or corporation submitting the bid certifying that such person, firm, association, or corporation has not either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action, in restraint of free competitive bidding in connection with the submitted bid. This unsworn statement shall be in the form of a declaration executed under penalty of perjury under the laws of the United States.

To the: **STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS**
DEPARTMENT OF TRANSPORTATION, DIVISION OF PUBLIC WORKS

State of MA

County of Norfolk

I, Kevin Caine, Laboratory Manager, under penalty under the laws of the United States, do depose and say:

On behalf of ATC Associates Inc., of Avon, MA that said Contractor has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with Rhode Island Contract Number , Federal-Aid Project Number , County of , Town-City , Road-Bridge .

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS PRIMARY COVERED TRANSACTIONS

In accordance with the code of Federal Regulations, Part 49 CFR Section 29. 510, the prospective primary participant Kevin Caine (name of Authorized Agent), Laboratory Manager (Title), being duly sworn (or under penalty of perjury under the laws of the United States), certifies to the best of his/her knowledge and belief, that its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statues or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1) (b) of this certification;

d. Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

Where the prospective primary participant is unable to certify any of the statements in this certification, such prospective participant shall list exceptions below.

Exceptions will not necessarily result in denial of award, but, will be considered in determining contractor responsibility. For any exception noted, indicate below to whom it applies, the initiating agency, and the dates of the action. Providing false information may result in criminal prosecution or administrative sanctions. If an exception is noted the contractor must contact the Department to discuss the exception prior to award of the contract.

ATC Associates, Inc.

40 Strafello Drive, Unit G

Avon, MA 02322

Kevin Caine

Signature of Authorized Agent

April 7, 2011

Date

APPENDIX

Aetna Bridge Company

Steere ENGINEERING INC
Bridge and Structural Engineers

BID #7448315:
Laurel Avenue Bridge #397

Design Build Project Manager – Jeffrey A. Bostock

Education: University of New Hampshire, 1995, BS Civil Engineering

Experience: 2007 to present – Aetna Bridge Company; Vice President-Construction
Managed day to day operations and administration of all construction activities. Duties include: supervision of project managers, contract management, written and verbal communications concerning the mediation of outstanding issues, construction scheme development, negotiation and administration of subcontracts and purchase orders, management of company resources, enforcement of company safety regulations and development of safety program, cost monitoring, estimating, and business development. Notable projects completed during tenure:

- MassDOT Contract 55284 – Mansfield Rt 106/MBTA, $4.3M
- RIDOT Contract 2005-CB-057-Warren Bridge, $12.4M
- RIDOT Contract 2005-CB-043 – Main Rd Bridge, $8.2M
- RIDOT Contract 2007-CB-076 – Wanskuck/Hawkins, $3M
- RIDOT Contract 2007-CB-031 – Jamestown Bridge, $1.9M
- RIDOT Contract 2008-CB-074 – Sakonnet River Bridge Repairs, $2.5M
- RIDOT Contract 2008-CB-005 – Providence River Shoring, $2.2M
- MassDOT Contract 57633 – Berkley Bridge over Tauton River, $2.4M

2000 to 2007 – Aetna Bridge Company; Project Manager
Complete jobsite responsibilities including: construction/erection schemes, coordination of subcontractors, jobsite safety, scheduling, cost and progress reporting, cost projections, quality control, supervision of craftsmen, development of progress payments, technical written and oral communication with owner/engineer, maintain technical liaison between crafts, owners, and engineers. Notable projects include:

- RITBA Contract 05-12 – Newport Bridge – Security & Electrical Upgrades $6M
- RITBA Contract 05-6 – Mt Hope Bridge – Bridge Maintenance $2.6M
- RIDOT Contract 2005-CH-047 – RT 295 2B Bridge Safety Imprv. $11.7M
- RITBA Contract 03-2 & 03-4 – Newport Bridge Repairs $1.6M
- RIDOT Contract 2002-CH-031 – RT 295 1B Bridge Safety Imprv. $6.4M
- RITBA Contract 01-6 – Mt Hope Bridge – Substructure Repairs $4.7M
- RIDOT Contract 9937 – Roger Williams RR Bridge Replacement $2.3M

1996 to 2000 – Aetna Bridge Company; Engineer / Superintendent

- RIDOT Contract 9880 – J. Russo Memorial Bridge- $14M
- RIDOT Contract 9706 - Rt. 95 Safety Improvements - $13M
- RIDOT Contract 9603 – Rehabilitation of Washington Bridge - $13M

Training/Licensing/Certification/Memberships:

- OSHA 10 Crane Safety Training 1.1, Arial Lift & Forklift Safety Training
- RI Construction Industries – Specification Committee
- ATSSA Work Zone Safety Training - Supervisor
- American Institute of Steel Construction – Advanced Certified Steel Erector

Patricia D. Steere, PE

Design Manager
Lead Design Engineer and Bridge Engineer

EDUCATION

BS/1979/Civil Engineering
University of Delaware

MS/1981/Civil Engineering
University of Delaware

PROFESSIONAL ENGINEERING REGISTRATIONS

MA 37724, RI 5056, CT 13662, FL 70410

BOARDS

University of Rhode Island Civil Engineering Advisory Board

Smithfield Sewer Authority

Architects and Engineers Emergency Response Task Force

PROFESSIONAL ASSOCIATIONS

RI Urban Search and Rescue Structural Specialist

Member WTS & ASCE

PROFESSIONAL AWARDS

Providence Engineering Society 2008Freeman Award

PROFESSIONAL SUMMARY

Ms. Steere has over twenty-seven years of experience in structural engineering. Her design experience includes the design of a network arch bridge, as well as simple and continuous span bridges, including steel girders and prestressed concrete box beams, and bridge rehabilitation. She has also designed drilled shafts, pile and spread footing foundations as well as retaining walls and timber boardwalks. Her building design experience includes power plants, waste water pump stations, and composting facilities. Her finite element modeling experience includes both static and dynamic analyses of bridges and buildings. Ms. Steere's responsibilities have included the management of the Bridge Department and associated supervision of a staff of engineers, construction inspectors, and drafting technicians.

REPRESENTATIVE PROJECTS: BRIDGES

I-195 Relocation, "Iway", Providence, RI

Managing Engineer in charge of the design of all bridges on this 600 million dollar project from 2002 until 2010. Project included 15 new bridges and 61 new walls including a network arch, steel trapezoidal box girders, concrete box beams, MSE and cast-in-place retaining walls. The project included 15 separate construction contracts.

As Bridge Project Manager, Ms. Steere provided technical oversight, management of in-house staff of fifteen engineers, coordination with RIDOT and highway staff, and coordination with bridge and geotechnical sub-consultants.

The in-house bridge design included eight bridges. The Providence River Bridge featured the first Network arch bridge in the United States. Four ramp bridges were curved steel trapezoidal box girders with a combined length of over four thousand feet. The in-house design also included the India Point Park Pedestrian bridge, with cast-in-place rigid frame concrete construction and elaborate plantings on the bridge.

I-195 Providence River Bridge, Providence, RI
Static Analysis and Design

Engineer in charge of the design and analysis of the 7-span 1200' bridge including a 400' network arch span.

Developed a three dimensional GTStrudl model to model the network arch section of the bridge. Non-linear elements were used to model the cables and plate elements were used for

the deck. The deck was modeled in order to determine the live load tensions that would be imposed on the deck; however the tie was designed to carry the entire tension load. Influence surfaces were developed in order to determine the maximum live loads for each member. Also developed the seismic model which included all spans of the bridge.

Also responsible for implementing an instrumentation program for the Providence River Bridge. Strain gages on the arch, tie, knuckles and floorbeams of the bridge. The gage readings were uploaded to a web site where the engineers could download the readings. Strain readings were compared to the bridge model and the model was adjusted by changing the deck stiffness in order to match the strain gauge results.

I-95 Service Roads (3R and 4R), Providence, RI
Managing Engineer in charge of the inspection of and design of three bridges over I-95. The design involved the complete replacement of one bridge and replacement of the piers and update of seismic analysis for two bridges. The bridges are being replaced as part of the emergency replacement of Pawtucket Bridge 550 and had an accelerated design schedule.

Lexington Bridge Route 2A (Marrett Road) over Route 128, Lexington, MA
Performed quality review and design of steel trapezoidal box girders and bearings for this two span bridge. Project also included drilled shaft design, concrete pier and abutment design.

Braga Bridge, Fall River, MA
Working for the Contractor, performed formwork design and pour procedure submittal for MassDOT for the extensive repairs to the pier 18 cap. The cap is eight feet wide, 27 feet high and 90 feet long with a curved bottom surface requiring heavy formwork and careful pour timing to carry the weight of wet concrete.

Wilbur Road Bridge No. 415, Lincoln Rhode Island
Managing Engineer in charge of the superstructure replacement design of bridge over Rt 146. This structure is a 2 span steel girder bridge which carries Wilbur Road over Route 146. The bridge consists of 8 girders in cross section and has a total width of 42 feet. Span 1 has a length of 79’-5” while the span 2 length is 34’-3”. This contract consisted of replacing the steel superstructure, concrete deck and bearings.

I-95 Bridge Widening, Darien, CT
Engineer in charge of final design drawings and specifications for the widening of the interstate highway bridge. Performed quality review and editing of the contract drawings and specifications prior to advertising.

Coventry Greenway, Coventry, RI
Managing Engineer in charge of the construction phase for the conversion of historic railroad bridges into bike path bridges. Project included inspection, timber deck and railing design, specifications, and concrete and steel repair details.

I-195 Relocation, Old Harbor, Providence, RI
Engineer in charge of the design of structures along the Providence River, including retaining walls, both cast-in-place cantilever and concrete faced tied back sheeting walls; and timber boardwalks and piles with concrete abutment seats for a multi-use path. Responsible for design, estimates, specifications and supervision of contract drawings through final design.

Roger Williams Avenue Bridge, Providence, RI
Responsible for demolition plan and temporary bracing for girders for a contractor to perform work in compliance with Amtrak requirements for demolition over railroad tracks.

Massachusetts Highway Department - Bridge 'Footprint' Program
Staff Engineer for the rehab of a small, historic, concrete T-beam bridge. Responsibilities included analysis, design, preparation of specifications, and supervision of contract drawing preparation.

Massachusetts Highway Department - Bridge 'Footprint' Program
Staff Engineer for the type study for the rehab of a two span steel bridge. Responsibilities included seismic analysis, preliminary design, preparation of type study report, and preparation of preliminary estimates.

Massachusetts Highway Department - Bridge 'Footprint' Program
Staff Engineer for the rating of a seven span steel bridge with unusual steel cross girders. Responsibilities included rating analysis and preparation of rating report.

Massachusetts Turnpike Authority - Bridge Rehab Program Staff Engineer for the rehab program for three of the ten bridges including deck replacement and seismic analysis and retrofitting. Responsibilities included analysis and design, shop drawing review, and supervision of plan preparation.

Meshanticut Interchange, Warwick, RI
Staff Engineer for various aspects of the rehab of five bridges including design of replacement piers and a jacking scheme for bearing replacement.

Metrication of the RI Bridge Design Manual and Standard Details
Staff Engineer for the conversion of the current manual and details to metric units. Included research into construction trade practices and methods of conversion.

Ashton Viaduct, Lincoln/Cumberland, RI
Staff Engineer for the seismic analysis of the east approach span and design of the baluster support beam for this historic concrete arch bridge.

Six Corners Underpass, East Providence, RI
Staff Engineer responsible for design, AutoCAD drawing preparation, field inspection, specifications, and estimate.

Lang Drive Bridge, N. Kingstown, RI
Staff Engineer for design review of prestressed concrete slab bridge.

REPRESENTATIVE PROJECTS: BUILDINGS

Naval Undersea Warfare Center, Department of Defense, Newport, RI – Time history analysis

Developed three dimensional model of the Test Facility Building on a pier using GTStrudl and performed a time history analysis to determine the effects of the dynamic loading on the building from a proposed roof-mounted shake table used to test periscopes. New bracing was added to the model to reduce dynamic forces and displacements caused by the dynamic loading. Bracing was designed to resist the loading.

New Production Reactor, U.S. Department of Energy Performed a three dimensional finite element analysis of proposed reactor building. ANSYS was used to model the structure using plate elements. Loads included equipment and live loading, pressure, temperature, wind, seismic, and piping.

Comanche Peak Nuclear Power Station, TX
Performed non-linear analysis of the primary shield wall using ANSYS 3-D brick elements. The wall was cracked and non-linear 'gap' elements were used to model the cracks.

Comanche Peak Nuclear Power Station, TX
Performed finite element analysis of composite steel/concrete roof using ANSYS plate and beam elements.

Millstone III Nuclear Power Station, Waterford, CT Performed as-built finite element analysis of containment liner plate with missing anchor studs. Plate elements were used to model the liner. Non-linear gap elements were used to model the concrete. High temperature and pressure were applied to simulate an accident condition.

North Anna III Nuclear Power Station, VA
Performed seismic analysis of containment structure and internal structure using Strudl and various in-house programs.

Compost Facility, Kingston, Ontario, Canada
Staff Engineer for the design of timber and concrete composting building and preparation of AutoCAD drawings.

Compost Facility, West Palm Beach, FL
Staff Engineer for the design of concrete footings for pre-engineered building

Construction Manager - Kevin L. Zona

Education: Clarkson University, 1992, BS Civil Engineering, BS Engineering and Management

Experience:

1996-Present: Aetna Bridge Company, Project Manager;
Bridge construction, rehabilitation and repair; marine construction. Duties include project scheduling, cost and progress reporting, supervision of craftsmen and acting as liaison between the project staff, engineers, and owners of the project. Proactive involvement in project scheduling, safety compliance, and quality assurance programs. Extensive experience with RIDOT projects requiring management of river flow through work zone, high quality historic stone masonry construction, deep foundations in structurally sensitive areas, and construction of scour counter-measures.
Notable projects:

- RIDOT Contract 9602 – Rt 114 Temporary Bridges, $6.2M (A,C)
- RIDOT Contract 9901 – Washington Bridge Drilled Shaft, $1M
- RIDOT Contract 9929 – Improved Ramp Access to Mall, $4M (C)
- RIDOT Contract 2000-CV-039 – Sakonnet River Bridge, $4.5M
- RIDOT Contract 2001-CB-045 – Washington Bridge, $2.8M (A)
- RIDOT Contract 2002-CB-097-Washington Bridge Drilled Shaft, $5.7M (C)
- RIDOT Contract 2003-CB-063 – Berkley/Martin Bridges, $6.8M (A,B,D)
- RIDOT Contract 2004-CB-034 – Rawson Rd. Bridges, $1.4M (A,B)
- RIDOT Contract 2007-CB-030–Wanskuck/Hawkins Bridges $3M
- MassDOT Contract 54406 – Bridge Recon. I-195 over 140, $7.7M
- MassDOT Contract 57633–Berkley Bridge - Tauton River, $2.5M (A,D)

Key:
(A) Project required management of river flow through work zone
(B) Project required high quality historic stone masonry construction
(C) Project required deep foundations in structurally sensitive areas
(D) Project required construction of scour counter-measures and related site work

1995-1996: J.H. Lynch, Project Superintendent; drainage at new T.F. Green Airport, new road construction, roadway resurfacing.

1993-1995: Granger-Lynch Construction Corp; Superintendent on projects ranging from new bridge construction, highway resurfacing

Training/Licensing/Certification:

- OSHA 10
- American Institute of Steel Construction – Advanced Certified Steel Erector
- Ariel Lift & Forklift Safety Training

William L. Ladd, P.E.
Sr. Project Manager/ Geotechnical Engineer

RESUME

Education

B.S., 1987, Civil and Environmental Engineering, University of Rhode Island

Professional Registrations

Professional Engineer, Rhode Island #6688

Areas of Specialization

Geotechnical Engineering
Civil Engineering
Foundation Engineering
Construction Monitoring

Summary of Experience

Mr. Ladd's experience includes a variety of soil, foundation and waterfront engineering projects. He has acted as field engineer or project engineer for projects involving geotechnical site investigations, testing and instrumentation, construction monitoring, and structural design. Relevant experience includes:

Relevant Project Experience

Project Manager, Improved Access from Interstate 95, Providence, Rhode Island. Coordinated and managed a fast-track geotechnical site investigation program for new highway ramps at the Civic Center Interchange. Provided design recommendations and construction observation for the installation of 3-foot to 6-foot diameter drilled shafts for support of the new structures. Analysis of the shafts included rock and soil bearing values and lateral loading using the COM624 computer program. The project also included the use of mechanically stabilized earth (MSE) retaining walls, for which a global stability analysis was performed.

Project Manager, Ashton Bridge, Blackstone River Bikeway Segments 6, Lincoln, and Cumberland, Rhode Island. GZA's services included development and implementation of a subsurface exploration program. The explorations included test borings at each abutment, as well as in the middle of the river for a potential center pier. Since little information was known about the foundations of the existing abutments, the investigations also included cores advanced through the stone work, as well as test pits to determine the backwall configuration. The soil conditions were found to be deposits of sands and gravels over glacial till and bedrock. Thin layers of organic river sediments were below the fill behind the abutments, but not below the foundation. A stability analysis of the new structure on the existing abutments was performed, and indicated that global stability did not meet current bridge engineering standards. Permanent steel sheet piling was driven at the toe of the abutments to improve the global stability, as well as to provide additional scour protection. Additionally, the backwall of the existing stone abutments was supplemented with reinforced concrete structure to improve the factor of safety for overturning stability.

Project Manager, Washington Bridge 200, Providence/East Providence, RI: GZA was retained to provide geotechnical consulting services for the rehabilitation of the bridge, including seismic retro-fitting. Services included a diving inspection of the substructures, review of existing subsurface data, recommendations for soil design properties, analysis of pile capacities, and geotechnical input data for structural modeling. GZA also designed the repairs/replacement of the center channel timber fender system.

GZA performed a limited exploration program including land and water based test borings and cone penetration testing to supplement existing data. Laboratory in-situ testing was also performed. At one pier location, a three-hole seismic array was installed for measurement of cross-hole soil shear wave velocities. The study included an evaluation by a geophysical subconsultant of the regional seismic activity, development of source and attenuation models, and a frequency vs. magnitude model for the Narragansett basin Seismic Zone.

A design earthquake response spectra and simulated accelerograms were developed for both the 500 and 2500 year events. One-dimensional free-field soil response analyses were performed to provide acceleration response spectra for use by the structural engineers. A more detailed liquefaction analysis was also performed.

Project Manager, I-195 Contract 7, Providence, RI: The project included a new bridge over the Providence River and an elevated highway embankment to the east of the river. The elevated embankment is supported by retaining walls includes bridge crossings over existing and relocated city streets. The new structures include elements to replace the existing hurricane barrier dike and flood gates on the east shore of the river. GZA provided geotechnical subconsultant services for the east approach retaining walls, bridge crossings over South Main and Water Streets, and for the elevated highway viaduct at the east approach to the bridge. Challenging soil conditions included deep deposits of compressible organic soils under a portion of the alignment.

Project Manager, California Jim's Pond Dam Replacement, South Kingstown, Rhode Island. California Jim's Pond is an approximately 14-acre man-made reservoir located in Peace Dale, Rhode Island which failed on February 18, 1998 after heavy rains. GZA GeoEnvironmental, Inc was retained by the Town of South Kingstown to design a new spillway structure, obtain RIDEM permits, and to provide construction oversight services. The dam improvements included a new concrete drop spillway located at the location of the former drop inlet and dam breach. The 40-foot wide spillway was sized to accommodate the 100-year flood, and is spanned by a timber bridge. An 18-inch sluice gate and low-level outlet pipe was incorporated into the design. Improvements to the earthen embankment included flattening the side slopes to 3H:1V, the placement of a low permeability silt layer on the upstream slope, riprap erosion protection, and a new concrete walkway.

Project Manager, Stillwater Reservoir Dam Improvements, Smithfield, Rhode Island. GZA undertook a variety of engineering services related to the design of improvements to the Stillwater Reservoir Dam for the Rhode Island Department of Environmental Management, Division of Planning and Development (RIDEM). Stillwater Reservoir Dam is a 20-foot –high, 660-foot long earthen and concrete structure that was reportedly constructed in 1910. The main dam also has earthen dikes on each side, ranging up to ten feet in height and 590 feet in length. GZA was the prime consultant for the repair project, providing RIDEM with an array of engineering services, including visual inspection, wetland delineation, topographic survey, geotechnical investigation, hydrologic and hydraulic analyses, design of embankment repairs, spillway capacity improvements, preliminary and final design plans, bid oversight, and construction contract management. The final design provided a 100-foot wide concrete spillway with hydraulics that closely matched the existing spillway up to the 100-year flood, along with a 400-foot long emergency spillway protected with articulated concrete blocks (ACBs) to pass the total 500-year SDF. GZA has also designed embankment repairs for the structure to address concerns regarding excessively steep slopes and to improve access for maintenance and ADA recreational use, to improve freeboard, and to provide erosion protection. Concrete repairs were designed to protect the upstream face of the dam and the existing gatehouse structure, and to provide fishing stations with handicapped access. Other site improvements included upgrading a maintenance access road and paving of an existing parking lot.

Consultant/Reviewer, Veteran's Memorial Bridge Design-Build Project, Portland / South Portland, Maine. GZA serves as geotechnical engineer on the Reed & Reed / T.Y. Lin International design-build team for the Veteran's Memorial Bridge, currently under construction. GZA interpreted available subsurface information, developed interpretive subsurface profiles and completed engineering analyses to support design of the new bridge foundations and approach roadways. The principal geotechnical challenges on the project were caused by the extensive deposits of compressible, moderate-strength marine clay. Deep foundations were developed to provide sufficient axial and lateral resistance in the moderate strength deposits. Several alternatives were considered for mitigating settlement of the new approach embankments where they were to be constructed on the marine clay, including wick drains and surcharging, lightweight fill, sheet pile retaining walls, and pile supported embankments. Instrumentation was included to monitor the preload embankment for settlement, horizontal movement, and pore pressure dissipation. In addition to preparing geotechnical aspects of plans, specifications and reports in accordance with AASHTO LRFD and Maine BDG Standards, GZA participated in developing the Design Quality Management Plan (DQMP) and the Construction Quality Management Plan (CQMP). During the construction phase, GZA is providing review, instrumentation and consultation for the wick-drain surcharge embankment, pile driving services

including construction consultation, Wave Equation analysis and Dynamic (PDA) Pile Testing with Signal Matching (CAPWAP) Analysis in support of the CQMP.

Project Manager, Albion Bridge, Blackstone River Bikeway Segment 7, Cumberland, Rhode Island. GZA performed subsurface investigations for the evaluation of the existing structure, and developed a geotechnical report presenting our conclusions and recommendations. The investigations included borings and probes at the abutments, as well as at the piers in the river. Test pits were also excavated at the abutments to determine the existing backwall configuration. The soil conditions were found to consist of deposits of sand over bedrock at relatively shallow depths. A seismic evaluation for liquefaction susceptibility of the foundation soils was also performed. As part of this study, GZA also performed a diving inspection of the existing foundations in the river.

Project Manager, Relocated Route 403 Bridge 1005, North Kingstown, Rhode Island. Prepared a geotechnical report presenting foundation recommendations for the construction of a new, three-span bridge utilizing integral abutments supported on H-piles, and center piers on shallow foundations. The proximity of the piers to existing railroad track required the design of a soldier pile and lagging earth support system, with rock-socketed piles and internal bracing.

Project Engineer, Barrington and Palmer River Bridges, Barrington, Rhode Island. GZA was retained by the Contractor to design four cofferdams for the new bridge abutments. Due to shallow bedrock conditions and the necessity for the cofferdams to support the bridge abutments as shallow foundations, circular steel cells were used. The design also included cantilevered walls and raker anchored bulkheads.

Project Engineer, J.T. Carr Bridge, New Haven, Connecticut. Performed engineering and structural design calculations for three separate steel sheet pile cofferdams. The internally braced cofferdams were constructed around the existing abutments and center pivot pier to allow for the demolition and reconstruction of the bridge foundations.

Project Engineer, White Rock Bridge, Westerly, Rhode Island/Pawcatuck, Connecticut. Evaluated subsurface conditions and prepared geotechnical report providing foundation design recommendations for the replacement of a historic steel truss bridge spanning the Pawcatuck River.

Project Engineer, Route 138 Improvements, Jamestown, Rhode Island. Coordinated geotechnical investigation field program and served as Staff Engineer to prepare geotechnical report for the designer of the new cross island freeway. The project included roadway cuts in soil and rock, 15 to 30 feet high embankment retaining walls, and a bridge overpass.

Project Engineer, Bridge 487, Richmond, Rhode Island. Developed and implemented subsurface exploration program to determine if existing stone masonry abutments should be repaired or replaced.

Project Engineer, Bridge 52, Hopkinton/Westerly, Rhode Island. Coordinated field investigations at existing 3-span bridge with stone masonry abutments and piers, and prepared geotechnical report to be used to evaluate whether existing substructure should be replaced or repaired.

Project Engineer, Route 95 Median Rehabilitations, Providence, Rhode Island. Supervised subsurface explorations and performed drainage structure inspections to be used to develop geotechnical design criteria for reconstructing a 1.4 mile section of the highway median.

KEVIN MARTIN, P.E.
Quality Control Manager (Construction)

EDUCATION

- M.S.C.E., Geotechnical Engineering, University of Massachusetts at Lowell, 1995
- B.S.C.E. Civil Engineer, New England College, Henniker, NH, 1989

PROFESSIONAL REGISTRATION

- Professional Engineer, Massachusetts #38206
- Professional Engineer, New Hampshire #8634
- Professional Engineer, Maine #8738
- Professional Engineer, Vermont #018-0007358
- Professional Engineer, Connecticut #19926
- Professional Engineer, Rhode Island #6819

PROFESSIONAL SUMMARY

Mr. Martin is responsible for geotechnical investigations and associated engineering evaluations. Geotechnical engineering evaluations include bearing capacity, foundation settlements, seismic site review, retaining structures, slope stability, groundwater management, earth support systems, pavement designs and earthwork construction. Responsible for site investigations, laboratory testing programs, engineering reports, technical specifications and project management associated with geotechnical projects. Prior to joining ATC, he conducted geotechnical investigations for Geotechnical Services and Jaworski Geotech.

PROFESSIONAL EXPERIENCE

Geotechnical Investigations

- **Filene's Stores, North Dartmouth, Brockton, Saugus, Marlborough, Hyannis, Leominster, Kingston, Hanover, MA** Completed geotechnical studies and construction related services for Filene's building expansions and new stores throughout New England. Some of the sites are underlain by unsuitable fill and buried organic soils which required pile foundations for support. Most of the projects are located at existing malls with various underground utilities and questionable soils. Geotechnical recommendations for foundation design and site development were provided for each project per the Geotechnical Specifications.
- **Communications Towers, Various Sites throughout New England**
  ATC has completed over 100 geotechnical studies for various communication towers throughout the region. The towers generally include monopole, free-standing lattice or guy-supported structures varying in height from 80 to 250 ft. Test borings and a Geotechnical Report are provided for foundation design which generally involves a large mat footing or drilled shaft to encounter the large overturning moments. Occasionally, deep piles and rock anchors are necessary depending upon the subgrade conditions. ATC also completes resistivity testing and environmental review for these projects.

- **Bristol-Plymouth Regional Technical High School Building Expansion, Taunton, MA** Completed a geotechnical study for a building expansion to the existing high school. The site was underlain by questionable fill, buried organic soils and a shallow groundwater table. Over-excavation and

replacement would have been difficult due to the depth of the unsuitable materials, the shallow groundwater and the loose density of the fill and organics which readily collapse upon exposure. As such, the addition was supported upon concrete filled steel pipe piles driven to end-bearing resistance with design capacities of 40-50 tons. ATC monitored the pile driving activities per the design, the Wave Equation Analysis (WEAP) and the Building Code.

- **Massachusetts Highway Bridge, Route 1A over the MBTA and B&M Railroad, Revere, MA / Massachusetts Highway Dept. Geotech Division Boston, MA** Completed a geotechnical study for a three span replacement bridge which conveys four lanes of traffic in a dense urban setting. The project was complicated by site constraints, two serviceable rail lines, and a bridge skew of greater than 50º. The substructure included the reuse of the existing cantilevered concrete abutments and new column piers supported upon 10-inch nominal diameter cast in-place piles.

- **Rowe Earth Dam, Amherst, NH** The stability of this 20 ft. high, privately owned, earth embankment dam was in question per the NH Department of Environmental Resources. A geotechnical study was completed and remedial repairs were undertaken to improve the stability and hydraulic capacity of the dam. A widened spillway was constructed and the upstream and downstream slopes were flattened.

TRAINING AND CERTIFICATIONS

- 40-Hour Hazardous Waste Site Health and Safety Training
- Massachusetts Class "A" Concrete Field Technician
- Troxler Nuclear Density Gauge
- BSCES, Geo-Institute, Deep Foundation Analysis, Design & Const., 2003
- BSCES, Developing New Foundation Alternatives: Helical Piles & Geopiers, 2003
- BSCES, Soil-Structure Interaction & Interaction with Geotechnical & Structural Engineers, 2002
- BSCES, Blasting in Urban Environments and Near Critical Structures, 2002
- Foundation Courses, Inc., Geotechnical &Structural Design and Construction Monitoring of Deep Foundations, 2001
- ADSC Anchored Geo-Support Seminar, 2000
- BSCES, Design and Construction of Integral Abutment Bridges, 1999
- ASCE GeoCongress Convention, 1998
- Northeastern University, Fundamentals of Seismic Design, 1997
- BSCES, Dam Safety Seminar, 1996
- ASCE, Professional Malpractice Seminar, 1996
- ASFE, Loss Prevention Seminar, 1994
- Boston Earth Retention Seminar, 1993
- ACI Concrete Proportioning Seminar, 1992

PROFESSIONAL ACTIVITIES

- International Who's Who of Entrepreneurs
- American Society of Civil Engineers
- Boston Society of Civil Engineers
- New Hampshire Society for Civil Engineers
- Who's Who of Scientists and Engineers

Professional Profile

Mr. Desmond has decades of experience in the areas of traffic and highway engineering including project management and design of new roadway construction, highway rehabilitation and renovation, bridge approach roadways, and major urban intersections. His expertise in the area of traffic engineering includes the preparation of numerous traffic studies for transportation improvement projects, as well as traffic impact analyses for proposed commercial and industrial developments. These studies and analyses include the design of mitigating measures such as traffic signal installation, roadway widening, intersection improvements, striping, and signing to eliminate or minimize adverse traffic impacts. Mr. Desmond's experience also includes a full range of highway engineering services, including highway safety improvements; pavement upgrading; development of maintenance and protection of traffic plans; vertical and horizontal alignment; drainage analysis and design; development of final plans and contract documents; ROW plans, plats, descriptions, and coordination of environmental permits.

Project Experience

RIDOT Round Top Bridge, No. 378, Burrillville, RI
Transportation Manager for a bridge replacement project that included geotechnical, hydrologic/hydraulic, civil and traffic engineering services. Bryant performed a bridge type study, and final design for the replacement of an existing bridge and approach roadways. The bridge is a butted box beam superstructure supported on pile supported precast abutments. The bridge type was selected to provide for accelerated construction techniques thereby minimizing the duration of street closure to two months. The road was closed for 41 days. The replacement bridge was dedicated on November 8, 2010.

County Street Bridge, Water Street Bridge, Tiffany Street Bridge and the Lakeville Bridges, Attleboro & Taunton, MA
Manager for highway approaches, ROW and traffic control design projects for the Massachusetts Highway Department review and approval.

RIDOT 1R Highway Improvements, Statewide, RI
Project Manager for the study and design of 1R improvements to eight arterial (including one limited access) roadways located in various municipalities throughout the state. Work included resurfacing, roadside improvements (curb and sidewalk), drainage, permitting, signing, striping, as well as a bridge evaluation. The approximate cost of the projects is $16 million.

RIDOT 1R Highway Improvements Project – Pawtucket Avenue, East Providence, RI
Traffic Project Manager responsible for the design of five traffic signals including a coordinated signal system.

RIDOT 1R Highway Improvements Project – Smithfield Avenue/Great Road, Lincoln, RI
Traffic Project Manager responsible for the design of two ornamental traffic signals in sensitive historic districts.

RIDOT 1R Safety Improvements Project – Route 146, North Smithfield, RI
Traffic Project Manager responsible for the preparation of Design Study Report and condition survey of the roadway, including pavement, drainage structures, and guardrail.

Michael W. Desmond, PE
Quality Control Manager (Design)

Years Experience
43

Qualification Highlights
Comprehensive and Extensive Traffic Experience in New England

Education/Training
BS, Civil Engineering,
University of Notre Dame, 1967

Post Graduate Studies:

- Yale University Bureau of Highway Traffic
- Northwestern University, Traffic Institute, Bicycle Planning and Facilities Workshop
- Institute of Transportation Engineers, Urban Arterial Traffic Improvements

Licenses/Registrations
Professional Engineer:
Connecticut # PEN.0011363
Massachusetts # 32081
Rhode Island # 3410
Vermont # 5765
Maryland # 39592

Affiliations
American Society of Civil Engineers

Chi Epsilon Honor Fraternity

Institute of Transportation Engineers

National Society of Professional Engineers

Planning Commission, North Kingstown, RI, Former Chairman

Providence Engineering Society

RIDOT 1R Safety Improvements Project – School Street, Lincoln, RI
Traffic Project Manager responsible for the preparation of Design Study Report and field review of the roadway, including assessment of the pavement structure, sidewalk, and drainage structures.

RIDOT 1R Safety Improvements Project - Smith Street, Providence and North Providence, RI
Traffic Project Manager responsible for the preparation of Design Study Report and performing field review of the roadway, including analysis of Americans with Disabilities Act compliance, as well as condition survey of the pavement, curbing, sidewalks, traffic signals, and lighting appurtenances.

RIDOT High Hazard Interchanges – C2, Providence and East Providence, RI
Traffic Project Manager who oversaw the preparation of Conceptual Design Report, including analysis of accident history, safety deficiencies, and performance of benefit-cost analysis for proposed improvements. Responsible for design of traffic signal and road improvement plans, as well as preparation of contract documents, including an estimate for the project.

RIDOT Highway Improvements to Newport Avenue, Newman Avenue, and Pawtucket Avenue, East Providence and Pawtucket, RI
Highway and traffic improvements to Newport Avenue (U.S. Route 1A), Newman Avenue (R.I. Route 152), and Pawtucket Avenue (R.I. Route 114). As part of the project, operations at six signalized intersections were analyzed. New traffic signals were designed and installed, including a complex coordinated system of four signals on two separate roadways and a mid-block pedestrian signal. In addition, Bryant provided study and design services for the drainage improvements to Newman Avenue and to the Newport Avenue/Ferris Avenue drainage system.

Rhode Island Department of Transportation - Routes 146, 104, 216
Manager for the Resurfacing, Restoration and Rehabilitation (RRR) of these three major routes in Rhode Island and an RRR program involving 14 other roadways totaling 100 miles.

Rhode Island Department of Transportation - Routes 95, 195, 295
Project Engineer for Interstate Safety Improvements for these three major routes in Rhode Island.

Wakefield Cutoff, South Kingstown, RI
Manager for highway interchange, bridge structures, drainage, and 2 miles of roadway construction.

Ludlow Traffic Improvements, Ludlow, MA
Traffic Project Manager for design services for traffic improvements to the intersection of East Street at Chapin Street in Ludlow, MA such as adding turning lanes to the intersection, pedestrian improvements, and upgrading traffic signal control equipment to improve signal timing phasing.

Moulton Square Reconstruction, Lowell, MA
Chief Traffic Engineer for a project addressing pedestrian safety and amenities, landscape architecture and traffic calming. Bryant performed base survey, evaluation of traffic flows and volumes and conceptual design of alternatives to improve the intersection and conceptual plans for the improvements, as well as final design, construction documents, a cost estimate needed to implement the selected improvements, and services during the construction phase of the project.

Michael W. Desmond, PE
Continued

Witness Jurisdictions

Rhode Island
Bristol
Burrillville
Coventry
Cranston
Cumberland
East Greenwich
East Providence
Gloucester
Hopkinton
Jamestown
Johnston
Lincoln
Middletown
Narragansett
Newport
North Kingstown
North Smithfield
Pawtucket
Portsmouth
Providence
Richmond
Smithfield
South Kingstown
Tiverton
Warwick
West Greenwich
West Warwick
Woonsocket

Superior Court of Rhode Island

Connecticut
Plainfield

Massachusetts
Attleboro
Bellingham
Fairhaven
Pembroke
Saugus
South Hadley
Templeton
Wareham
Westport
Woburn

Barnstable Superior Court

Massachusetts Land Court

Larry Dozier - Safety Manager
122 Overhill Road, East Greenwich, RI 02818 email larry.dozier@verizon.net
401-885-0559

EXPERIENCE:

Office Manager/Field Inspector Risk and Safety Management E. Greenwich, RI 2002 to present

Responsible for preparing inspection reports, research, safety manuals for clients, scheduling and interoffice communications. Additionally, responsible for on-site field safety inspections, preparing job hazard analysis in compliance with OSHA standards and ACE EM-385-1-1. Provide training on various subjects including confined space, fall protection, excavation, and forklift operation and license preparation. Outreach trainer for OSHA-10 and OSHA-30 in Construction. Full-time position.

Office Assistant Risk and Safety Management E. Greenwich, RI 2000 to 2002

Responsible for tabulating field inspection findings, and preparing safety manuals. Also assisted with on-site inspections. Part-time position.

ASSOCIATIONS:

Member of Rhode Island Association of General Contractors (RIAGC) Safety Committee 2003

EDUCATION:

OSHA 502 Trainer Update – Construction 2010
Presented by OTIEC, New England, completed March 24, 2010

Work Zone Traffic Control, NCSH-461 2008
Presented by Keene State CEES, New England, completed March 7, 2008

OSHA 500 Trainer Course – Construction 2006
Presented by OTIEC, New England, completed June 23, 2006

Train-the-Trainer Course – Forklift Safety Training 2003
Presented at Beacon Insurance, completed May 29, 2003

OSHA 30 – Thirty-hour Construction Safety Training 2002
Presented at Dimeo Construction, completed June 13, 2002

OSHA 10 – Ten-hour Construction Safety Training 2002
Presented at Air & Energy Corporation, completed March 7, 2002

University of Rhode Island 1977 to 1980

Worked toward B.S. in Computer Science.

REFERENCES:

Available upon request.

HEATHER E. BUINICKI
Scheduler
31 Smith Avenue, Unit 1, Greenville, RI
p.(401) 744-9420
f.(888) 314-7349

EXPERIENCE

Dynamic Scheduling Solutions, Inc., Greenville, RI
President (June 2005 to Present)

- Consultant providing CPM scheduling services to various construction firms on projects including hotel, pharmaceutical, heavy highway, municipal projects
- Facilitate job meetings and work coordination/progress between trades for power generation projects
- Develop and manage project schedules tracking design/City approval/buy out/construction for educational projects
- Develop and manage schedule for high purity construction projects and perform walk downs for quantity surveying of percent complete based on P&ID drawings
- Claims analysis preparation
- Performed scheduling services for RIDOT Projects totaling over $125M
- Performed scheduling services for non-RIDOT Projects totaling over $622M

The Procaccianti Group, Cranston RI
Scheduler & Consultant (June 2005 to March 2006)

- Established scheduling program for the company
- Developed and maintained project schedules for hotel renovation projects totaling $114M tracking due diligence, project scope development, design development, buyout, construction progress and change management

Plexus Corporation, Cranston, RI
Scheduler (Dec 2001 to June 2004)

- Worked as a consultant for RIDOT and for heavy highway contractors and commercial developers
- Developed Contract Time Determination Schedules for RIDOT projects used to outline project parameters and restrictions and to establish project completion milestones
- Reviewed RIDOT pre-bid contract documents and plans for constructability and accuracy
- Cost loaded and resource loaded schedules producing cash flow schedules
- Prepared materials/attended bi-weekly meetings and maintained schedules for projects tracking submittals, RFI's, change orders, and construction progress on RIDOT projects totaling $96M
- Developed procedures manual for reviewing/evaluating/developing schedules used by Plexus employees

Eastland Partners, Natick, MA
Construction Administrator (Jan 2001 to Sep 2001)

- Developed and maintained schedules for two residential developments, each with over 20 active homes for projects totaling $50M
- Managed documentation and standardized procedures, developed construction manual and Subcontractor Inspection Reports
- Researched, evaluated, and recommended computer software program for the company that incorporated tracking, estimating, scheduling, and accounting capabilities
- Generated work orders for subcontractors and maintained balance due on contract

Habitat for Humanity, Long Beach, CA
Construction Coordinator (Aug 1998 to Aug 2000)

- Worked with the Construction Superintendent to design and obtain approved construction plans and permits for building projects
- Established the Site Selection Committee which solicited donations and evaluated potential properties considering zoning, historical restrictions, UST, soil testing, title
- Developed the project budget and tracked construction costs for all building projects

TECH SKILLS Primavera P6, Primavera Project Planner, Primavera Expedition, Suretrak, Timberline, Microsoft Project, Microsoft Office, Microsoft Visio

EDUCATION *University of Massachusetts, Amherst*, Graduated in May 1998 with a Bachelor of Science, Economics

Igor Runge, Ph.D., P.H.
Sr. Project Manager/ Environmental Manager

RESUME

Education

B.S., 1979, Meteorology, State University of New York, College at Oneonta
M.S., 1980, Meteorology, University of Oklahoma
Ph.D., 1989, Civil and Environmental Engineering, University of Rhode Island

Professional Registrations

1994, Certified Professional Hydrologist, American Institute of Hydrology, #1051

Areas of Specialization

Regulatory Permitting
Watershed Hydrology
Water Quality Issues
CSO / Storm Water Modeling
Wet Weather Sampling Programs
Non Point Source Pollution

Summary of Experience

As a Senior Project Manager at GZA, Dr. Runge is responsible for many environmental engineering and water resources projects performed by the company. This includes oversight and design direction for projects involving site development and drainage, nonpoint source pollution mitigation, surface water and groundwater utilization, watershed planning and management activities, storm water runoff characterization and mitigation, and construction dewatering design. Dr. Runge is keenly knowledgeable in all aspects of regulatory compliance permitting including NPDES permits, water quality certifications, remediation permitting, Army Corps of Engineers dredging and waterways permitting, wetland permitting, storm water pollution prevention plans, spill prevention and control plans, and many others.

Dr. Runge has extensive experience in education and research, having served as a faculty member in the Civil Engineering Departments at the University of Rhode Island and the University of North Carolina where he was a recipient of the Young Investigator Award from the National Academy of Sciences for his work in nonpoint source pollution, and most recently as the Dean of the School of Engineering, Computing, and Construction Management at Roger Williams University in Bristol, RI where he secured ABET accreditation for all engineering programs. Dr. Runge has provided expert witness services to law firms in the areas of permitting compliance and surface and groundwater pollution.

SELECTED TECHNICAL EXPERIENCE

Project Manager, Electrical Transmission Line Regulatory Permitting, Johnston, Rhode Island. As part of a new landfill gas to energy project, GZA conducted all due diligence investigations and secured regulatory permits for twin 115kV electrical transmission lines, which cross an extensive wetland area that will connect a proposed 42 MW power plant to existing overhead transmission lines. Dr. Runge worked in concert with National Grid (NG) personnel to ensure all NG protocols were satisfied. The permitting process included specific requirements from various state and federal programs, including the Rhode Island Pollutant Discharge Elimination System (RIPDES), US Army Corps of Engineers Section 404 of the Clean Water Act, Rhode Island Freshwater Wetlands, Rhode Island Historic Preservation and Heritage Commission, and the Federal Wild and Scenic Rivers Act.

Project Manager, Nitrogen, Phosphorous, and Coliform Contamination. Several facilities operated by a large state agency in Massachusetts were implicated as contaminating residential wells with coliform bacteria and accelerating eutrophication of a nearby lake by a reportedly leaking sewer line. GZA was retained to prepare two white papers addressing the potential of well contamination by coliform bacteria and accelerated eutrophication caused by nitrogen and phosphorous enrichment from sewage. Dr. Runge successfully defended the Client by providing defendable expert testimony that the contamination was caused by other sources, and not the sewer line.

Project Manager, Construction Dewatering Permits, Warwick Intermodal Transportation Facility, Warwick, Rhode Island. GZA designed a groundwater treatment system and secured discharge permits for a construction dewatering project. Prior to securing a RIPDES discharge permit, GZA was able to demonstrate that several existing groundwater contaminants were associated with adjacent parcels and would not require costly treatment options.

Project Manager, Seawall Replacement, North Kingstown, Rhode Island. This project involved the replacement of a deteriorated cast-in-place concrete seawall with a 300-foot rip-rap revetment. GZA designed he wall to withstand an unusually harsh and exposed shoreline and provided construction oversite. A challenging component of this project was securing an Assent from the RI Coastal Resources Management Council.

Brushy Brook Master Plan Evaluation, Hopkinton, Rhode Island. GZA was retained by the Town of Hopkinton to evaluate a proposed major land development project in terms of potential environmental impacts and long-term safe carrying capacity of the 360 acre parcel. Our analyses included the development's compliance with the RI Freshwater Wetlands Act, the new RI Stormwater Design and Installation Standards (released December 2010), RI onsite wastewater treatment regulations, and the U.S. Clean Water Act. The project included several roadway stream crossings that required evaluation of cross sections with respect to stream impacts and a traffic study.

Project Manager, Coastal Slope Stabilization, Portsmouth, Rhode Island. GZA has been retained to evaluate persistent coast line erosion along portions of this historic property and develop alternative designs of stabilization measures. Permitting issues raised by the RI Coastal Resources Management Council have necessitated consideration of soft engineering measures such as coir fascines (bio logs) and native grasses.

Project Manager, Seawall Rehabilitation, Portsmouth, Rhode Island. GZA provided engineering designs and prepared all regulatory permitting documents for this seaside property along Type 1 (Conservation Area) waters. The existing, deteriorated seawall required extensive rebuilding and incorporated upland erosion controls to reduce future storms from eroding soils behind the wall.

Project Manager, Regulatory Permitting for Seaboats Inc., Fall River, Massachusetts. Seaboats Inc., owns a shipyard on the Taunton River in Fall River where large marine vessels are constructed, launched, and maintained. The facility includes two vessel berthing areas with crumbling stone walls and deteriorated timber piles. GZA was retained to prepare all required regulatory permitting to rebuild the docks. Dr. Runge coordinated a fast track permitting approach that included coordination with MADEP, National Park Service, US Army Corps of Engineers, Fall River Conservation Commission, and the City of Fall River. Extensive search in the MADEP archives in Boston revealed supporting documentation dated back to 1860. All permits were successfully secured.

Project Manager, Design of Floodwalls and Other Mitigation Practices for the Pocasset River. The Pocasset River Watershed encompasses 21 square miles in central Rhode Island and is prone to frequent and considerable flooding during rain events. GZA was engaged by the NRCS to evaluate flooding mitigation practices and provide designs of the most feasible alternatives. Work products included evaluation and upgrading of a TR-20 and HEC-RAS computer model to simulate discharges and water elevations, evaluation of structural alternatives using the model, and preparation of engineering designs of selected stormwater mitigation practices.

Project Manager, Stone Harbour Condominium Project, Bristol, Rhode Island. The completed project involved of the redevelopment of a former manufactured gas plant (MGP) and former textile manufacturing facility for residential use. Site investigation and remediation were subject to the RIDEM's Remediation Regulations and Brownfields Program. Approved remedy involved a mix of engineered and institutional controls including the installation of a low permeability slurry cut-off wall and a combination of permeability/impermeable caps. An integral part of this waterfront condominium complex was the design and permitting of a 45-slip marina in waters with contaminated sediments. Dr. Runge developed and executed a unique permitting approach, which included mathematical hydrodynamic modeling and secured all permits.

Project Manager, Potable Water Supply Source Development and Permitting, Eastman Gelatine Corporation, Peabody, Massachusetts. Dr. Runge coordinated efforts that secured all required permits for development of a new potable water source for a municipal water supply. These included compliance with the MEPA process, withdrawal permits from MADEP, and design and piloting of new water treatment technologies.

Project Manager, Thames Street Former MGP Newport, Rhode Island. The ongoing project is an environmental investigation and remediation of a former MGP located on Newport Harbor. Challenges included limited off-season access, the site's developed residential setting and the number of Responsible Parties. Dr. Runge secured the necessary environmental permits for the project to commence.

Project Manager, Dewatering Permitting and Treatment, Capital Center Project, Providence, Rhode Island. Dr. Runge was responsible for design and RIPDES permitting of a groundwater treatment system to remove metals and volatile organic compounds from a perimeter dewatering system discharging 400 gallons per minute. This large capacity dewatering system was a last-minute choice made by the developer and required an intensive effort by GZA to secure appropriate RIDEM permits in a very short period.

Project Manager, Tidewater Former MGP, Pawtucket, Rhode Island. This ongoing project involves an environmental investigation of the former Tidewater MGP and the Pawtucket No. 1 Power Station. The project is subject to the requirements of RIDEM's Remediation Regulations and the CRMC Management Plan.

Project Manager, Kiefer Park Drainage Design, Quonset, Rhode Island. This project provided a commercial developer with site drainage plans for a waterfront parcel in accordance with local (North Kingstown) and State regulations. Project tasks included stormwater detention system design, SWPPP development, and the securing of necessary RIDEM and CRMC water quality permits.

Project Manager, RIPDES Permitting Process for the RI Central Landfill. As Rhode Island's largest site for disposal of solid wastes, the Central Landfill in Johnston is required to adhere to all RIPDES requirements for discharges to waters of the State. Dr. Runge has led this effort for many years by coordinating and preparing all related RIPDES construction, industrial, and storm water permitting documents, storm water pollution prevention plans, ancillary studies investigating watershed runoff characteristics in terms of water quantity and quality, water quality mitigation alternatives, off-site pollutant migration assessments, and many others.

EXPERT WITNESS TESTIMONY

Potential of storm water runoff in the creation of hydroplaning conditions on asphalt surfaces.

Contamination of private drinking water wells by coliform bacteria.

Susceptibility of an urban lake to anthropogenic nutrient enrichment and possible acceleration of eutrophication.

Property damage caused by storm water runoff from a site development project.

Evaluation of industrial facility compliance to NPDES regulations.

Timothy L. Briggs, M.S.
Wetlands Scientist/Biologist

RESUME

Education

B.S., 1983, Fisheries Biology, University of Massachusetts at Amherst

M.S., 1989, Botany, University of Massachusetts at Amherst

Areas of Specialization

Ecological Risk Assessments

Wetlands Resource Evaluations, Construction/Restoration

Regulatory Compliance Evaluations

Water Quality Impact Assessments

Summary of Experience

Mr. Briggs has extensive technical experience in ecological risk assessment of chemical releases to the environment. He is also an expert in environmental regulations governing land development and commercial/industrial land use, with particular focus on evaluating potential impacts to wetland and upland habitats, and water resources. Mr. Briggs has over seven years of experience in site evaluations and environmental permitting with projects including wetland permitting for residential and commercial developments, environmental risk assessment associated with oil and hazardous material releases, NPDES stormwater permits, sewer connection and wastewater treatment permits, and preparation of multifaceted Environmental Impact Reports for large commercial developments. His technical expertise includes ecological risk assessment; wetland science, resource delineations and regulation; wetland resource construction/restoration; water quality impact assessment; community ecology and wildlife habitat impact assessment. Before joining GZA he was employed at Sanford Ecological Services, and was involved in a number of research projects in marine coastal and subtidal community ecology, and nutrient dynamics. Relevant project experience includes:

Relevant Project Experience

WETLAND SERVICES

Mr. Briggs has served as a Project Manager and Wetland Scientist for dozens of development projects and hazardous waste sites in Massachusetts, Rhode Island, New York and New Hampshire. Tasks normally range from resource determinations and delineations, evaluation of wetland hydrologic, water quality and wildlife habitat functions, wetland impact and mitigation design, and submission of applications for local, state and federal permits. Representative project experience includes:

Wetland Scientist/Ecologist, Barre Landfill, Barre, Massachusetts. Performed wetland resource determinations and delineations for a ±30-acre expansion of an existing, privately owned and operated sanitary landfill. Also performed a wetland impact and mitigation assessment, and an assessment of potential impacts to a state-list species of special concern known to inhabit wetlands near the project site. These evaluations were included in the Environmental Impact Report required under the Massachusetts Environmental Policy Act (MEPA). The wetland resource impact and mitigation assessment focused on potential impacts due to proposed alterations of groundwater hydrology within the watershed to site wetlands, and concluded that the post-construction storm water and groundwater control system would compensate for any potential alterations of wetland hydrology. As part of the MEPA review of this proposed landfill expansion, and at the request of the Barre Conservation Commission, the Executive Office of Environmental Affairs required that potential impacts to wood turtle (*Clemmys insculpta*) habitat be evaluated.

This was required because wood turtles are a Massachusetts state-listed species of special concern and were known to live a short distance from the proposed landfill expansion area. Based on this evaluation, it was concluded that although wood turtles may potentially utilize wetlands adjacent to the landfill expansion, the project would not impact wetlands or any other critical habitat areas for the local population of wood turtles.

Wetland Scientist/Project Ecologist, Carroll Products Facility, Wood River Junction, Richmond, Rhode Island. Delineated wetlands on site and obtained permits under the State of Rhode Island Freshwater Wetlands Act to perform exploratory work within wetlands as part of an ongoing RCRA Facilities Investigation of contaminant releases. Performed sediment sampling within site wetlands and the adjacent Pawcatuck River. Participated in obtaining a wetland permit from the U.S. Army Corps of Engineers to excavate waste water sludge and underlying soils from approximately 2-acre wetland area at the site. Ongoing work at this site includes completion of a Public Health and Environmental Risk Evaluation (PHERE) for the site base on a work plan approved by U.S. Environmental Protection Agency and overseeing and monitoring construction of a 2-acre wetland restoration area.

Wetland Scientist, Former GTE Facility, Salem, Massachusetts. Developed a restoration plan and conducted wetland permitting for ±2.75 acres of salt marsh that had been filled historically with solid waste refuse from the on-site industrial operation. The restoration was required by the Massachusetts Department of Environmental Protection (DEP), Division of Solid Waste Management and the Executive Office of Environmental Affairs as part of the landfill closure permit. The restoration plan also includes revegetation of the landfill. Ongoing work for this project includes overseeing establishment of salt marsh restoration grading and wetland substrate, and overseeing establishment and monitoring of salt marsh grasses.

Project Manager/Wetland Scientist, Hazelwood Meadows Subdivision, Norwood, Massachusetts. Secured a non-wetland determination from the Norwood Conservation Commission for a large portion of a ±9-acre subdivision adjacent to the Fowl Meadow wetland area in Norwood, Massachusetts. The area in question was an upland area that had been historically altered by stockpiling of large volumes of wetland muck upon which wetland plants had become established, and by shunting of stormwater runoff to the area. After several weeks of consideration, the commission was persuaded that strict interpretation of the "vegetation only" method for determining wetland boundaries promulgated in the Massachusetts Wetlands Protection Regulations at that time was inappropriate for this area, and that Federal methods for determining wetland status of problem areas was more appropriate.

Project Manager/Wetland Scientist, Canton Commerce Center, Canton, Massachusetts. Directed construction of five major wetland and stream crossings with emphasis on erosion and sedimentation control, and construction/restoration of approximately 1.25 acres of freshwater wetlands including marshes and wooded swamps, to ensure compliance with state and federal permit conditions.

Professional Development

40-Hour OSHA per 29 CFR 1910.120, November 1991
8-Hour OSHA Annual Refresher, October 1994

Publications

Davis, A. N., and T. L. Briggs, 1986. Dispersion pattern of aerial shoots of the common marsh reed Phragmites australis (Poaceas). Rhodora, Vol. 88, No. 855, 325-30.

John W. Steere, PE

Bridge Engineer

EDUCATION
BS/1972/Civil Engineering
University of Rhode Island

PROFESSIONAL ENGINEERING REGISTRATIONS
RI 4106

BOARDS
Architects and Engineers Emergency Response Task Force

PROFESSIONAL ASSOCIATIONS
RI Urban Search and Rescue Structural Specialist

SERVICE AND AWARDS
Vietnam Veteran
Purple Heart Recipient

PROFESSIONAL SUMMARY

Mr. Steere has over thirty-five years of experience in structural engineering.

Mr. Steere has been responsible for the analysis and design of a wide variety of structures and structural elements including reinforced concrete buildings, foundations and retaining walls, structural steel buildings and equipment supports for vibrating equipment, CMU buildings, composite roof decks and innovative designs using bar trusses for roofs and slab supports. He has also designed pile and spread footing foundations as well as retaining walls. His finite element modeling experience includes both static and dynamic analyses of buildings and equipment supports.

REPRESENTATIVE PROJECTS

Callahan School, Burrillville, RI
Responsible for the analysis and design of a new gymnasium, a new addition to accommodate a handicapped accessible entrance, offices and classrooms, as well as modifications to the old gymnasium for future use as a media center. In addition coordinated the drafting effort and interfaced with the architect.

T.F. Green Airport, Warwick, RI
Responsible for the design of the new maintenance facility at the airport. The project consisted of a pre-engineered building supported on piles, a fueling building, a sand storage building and a system of retaining walls.

T.F. Green Airport, Warwick, RI
Responsible for the design of the 1200 foot long elevated pedestrian walkway. The project includes fourteen spans supported on reinforced concrete columns.

Holliston Sand Company, North Smithfield, RI
Responsible for the design of a new sand storage structure consisting of four eight-foot diameter steel tanks supported by a structural steel system such that the tanks could be used to top-load trucks. The structure also was required to support sand sifting equipment above the tanks so that each tank could store and dispense different grades of sand.

The entire structure is over 90 feet tall and a key component of the design involved the design for the dynamic loading imposed by the sifting equipment.

Holliston Sand Company, North Smithfield, RI
Responsible for the design of a new wash plant structure to replace the original system. The new structural steel system supports an elevated vibrating piece of equipment weighing about 20,000 pounds on a steel plate diaphragm to provide lateral rigidity and frequency control.

Holliston Sand Company, North Smithfield, RI
Engineer in charge of the design of the foundations for the expansion of the packaging building, the new office building and two maintenance bays.

Warwick Waste Water Treatment Facility, Warwick, RI
Performed analysis and design of various reinforced concrete buildings and tanks for the facility upgrade.

Greenville Utilities, Greenville, NC
Responsible for the civil and structural effort in the design and construction of a peak shaving LNG facility consisting of two 55,000 gallon LNG tanks, a reinforced concrete impoundment structure, the foundation of the control building and the vapor containment fence.

Providence Gas Company, Providence, RI
Responsible for the civil and structural effort in the design and construction of a new CNG facility at the Allens Avenue facility.

Providence Gas Company, Providence, RI
Responsible for the civil and structural effort in the design and construction of a new LNG facility at the Newport Naval Base in Newport, RI.

Providence Gas Company, Providence, RI
Responsible for the civil and structural effort in the design and construction of a new vaporizer at the Exeter, RI LNG facility.

Comanche Peak Nuclear Power Station, TX
Performed non-linear analysis of the primary shield wall using ANSYS 3-D brick elements. The wall was cracked and non-linear ‘gap’ elements were used to model the cracks.

Comanche Peak Nuclear Power Station, TX
Performed finite element analysis of composite steel/concrete roof using ANSYS plate and beam elements.

Millstone III Nuclear Power Station, Waterford, CT
Performed analysis and design of an elevated reinforced concrete slab system for the loading imposed by the dropping of a 250,000 pound nuclear fuel shipping cask.

North Anna III Nuclear Power Station, VA
Responsible for the analysis and design of the reinforced concrete containment internal structure which supports the nuclear reactor and other large pieces of equipment.

Beaver Valley 2 Nuclear Power Station, PA
Performed the analysis and reinforced concrete design of the containment internals structure and coordinated the drafting of the construction drawings.

Various Nuclear Power Facilities
Performed research to determine design procedures for tornado loading including the combined effects of wind, pressure drop and tornado generated missile impact.

Susan Payne Bacher, PE,
LEED AP
Bridge Engineer

EDUCATION
BS/1976/Civil Engineering
Rensselaer Polytechnic Institute

MEng/1977/Structural Engineering
Rensselaer Polytechnic Institute

PROFESSIONAL ENGINEERING REGISTRATIONS
MA 49080, RI 4342, CT 19217, FL 70561

BOARDS
ACE Mentor Program of Rhode Island

PROFESSIONAL ASSOCIATIONS
Member ASCE

PROFESSIONAL SUMMARY
Ms. Bacher has over thirty years of experience in structural engineering. She has been responsible for the structural design of a variety of facilities, from conceptual design phases through analysis and detailed design development. Her project experience includes both new construction and restoration/rehabilitation projects. She has provided structural design services for building projects including offices, schools and public safety facilities, parking garages, industrial/commercial projects, resource recovery and other energy related projects, materials recycling facilities, water/wastewater facilities and transportation projects.

REPRESENTATIVE PROJECTS: BRIDGES

I-195 Relocation, "Iway", Providence, RI
Staff engineer involved with the design of various portions of the structural design work for this 600 million dollar project. The overall project included 15 new bridges and 61 new walls including a network arch, steel trapezoidal box girders, concrete box beams, MSE and cast-in-place retaining walls. The project included 15 separate construction contracts. Ms. Bacher's work on the project included the design of seismic bearing restraints and QAQC review of various elements throughout the project.

Wilbur Road Bridge No. 415, Lincoln Rhode Island
Staff engineer involved with the superstructure replacement design of bridge over Rt 146. This structure is a 2 span steel girder bridge which carries Wilbur Road over Route 146. The bridge consists of 8 girders in cross section and has a total width of 42 feet. Span 1 has a length of 79'-5" while the span 2 length is 34'-3". This contract consisted of replacing the steel superstructure, concrete deck and bearings.

Pleasantville Toll Plaza Elevated Walkway, Atlantic City Expressway, Pleasantville, NJ
Lead structural engineer for the design of this enclosed walkway structure spanning several lanes of interstate highway. Included the design of tower structures at each end of the walkway acting as supporting abutments for the pre-engineered pedestrian walkway and housing access stairs and elevators. Foundations for the bridge and towers are pile supported. Concrete walls and the roof of the tower are unusually angled for architectural expression.

Providence Place Pedestrian Bridge, Providence, RI
Lead structural engineer for this highly visible "gateway" connecting the Providence Convention Center with the Providence Place Mall. The bridge is formed by steel arched trusses spanning between concrete abutments over a busy roadway. The bridge cantilevers at both ends to meet the adjacent buildings with expansion joints.

Interstate Route 291 Bissell Bridge, So. Windsor, CT
Staff Engineer for this fast-tracked structural design of a 2400 feet long temporary bridge crossing the Connecticut River. Structural design of the anchored sheet piling abutments of the bridge.

REPRESENTATIVE PROJECTS: BUILDINGS AND OTHER

Oak Bluffs Ferry Terminal Dock Reconstruction, Oak Bluffs, MA
Structural engineer for this project consisting of repair and reconstruction to piers used for access to ferries. Piers are supported by timber and steel pipe piles, designed for vehicular loads, pedestrian loads and wave impact. Inlcudes a 300 ft long pedestrian walkway with heavy timber truss superstructure and pavilions adjoing a new terminal building. The terminal building is constructed on an existing concrete seawall foundation. Redesign of existing concrete seawall/foundation walls was required when they were severely damaged during construction. The project was cited with a Silver excellence award by ACEC/MA.

Filtration System Improvements, Philip J. Holton Water Purification Plant, Scituate, RI
Lead sructural engineer for major renovations and expansion of this existing water purification facility to improve operations and performance of the plant. Project cost is $39.5 M. Structural work included a new, greatly enlarged precast concrete superstructure over the existing filter tanks and supported on the existing concrete tank walls. Special challenges included working with an existing structural system constructed over several decades beginning in the 1920's as well as the need to phase construction work so that the facility can remain continuously operational during construction.
Susan was the lead Structural Engineer for the project.

Otis AFB, Fire/Crash Rescue Facility, Otis AFB, Bourne, MA
Lead structural engineer for this design/build approach for a new $13 M facility to provide public safety services to Otis AFB, Camp Edwards and the surrounding communities. The steel framed building has a complex gabled roof system with clear stories, and large overhead door openings. Lateral framing, provided by a system of shear walls, vertical bracing and moment frames was designed for local wind loads of 120 mph.

Siemens Water Technology
Structural engineering services to aid Siemens in designing structural support elements for new product development and for compliance with local building codes for specific installations in various locations throughout the United States. Particular challenges include assuring that products will be structurally adequate in regions with high seismic activity. Work has required creative approaches to unique structural framing and connection conditions to assure that they will be structurally appropriate while allowing for stream-lined and efficient product production.

Portland International Marine Terminal, Portland Maine
Lead structural engineer for a structural study of this existing international passenger ferry terminal on Casco Bay. Serious deterioration of timber piles and decking, including displacement of the piles during adjacent construction, threatened the structural integrity of this steel framed building supported on a system of timber and concrete decks and

piles. Work included evaluation, long-term repair recommendations and the design of emergency stabilization to permit its safe continuing operation as passenger ferry terminal while long-term plans for the site were developed.

Research & Development Labs – Buildings P-014 & P-011, Naval Undersea Warfare Center, Newport, RI
Lead structural engineer for this two-phase project consisting of two adjacent four-story buildings to house research laboratories and office space, including two-story space with three bridge cranes. Buildings are steel-framed with brick cladding. Lateral framing is provided by concentric steel bracing.Both buildings required structural design for progressive collapse avoidance and for compliance with Force Protection/Anti-terrorism measures.

Parking Garage Assessment, Lowell Regional Transit Authority, Lowell, MA
Structural engineer providing structural assessment and repair recommendations for this existing four-story parking garage constructed partly of structural steel, post-tensioned concrete slabs and partly of precast concrete columns, beams and double tees. Significant deterioration of concrete surfaces and water leakage were ongoing problems. The assessment included extensive field testing of materials, recommendations of materials and repair techniques compatible with maintenance practices and the garage's continued high exposure to deicing salts and phasing recommendations to permit minimum downtime for this heavily used commuter parking garage.

Gateway Park Parking Garage, Worcester, MA
Lead structural engineer for this five-story, 215,000 SF precast concrete framed parking garage. The spread footing foundation system was complicated by tight property lines, the adjacency of a railroad and by the need to bridge a large existing underground sewer conduit to support major gravity columns.

Bradley International Airport Parking Garage, Windsor Locks, CT
Lead structural engineer for this 3,500 car, 4 level structure configured to accommodate both short- and long-term customers. This precast structure was constructed in two phases to minimize disruption to existing on-grade parking. Pedestrian access to the garage is via two elevated pedestrian walkways with exposed tubular steel truss framing supported by concrete pedestals. The walkways provide an important architectural focus for the airport.

New Britain Courthouse Garage, New Britain, CT
Lead structural engineer for this multi-story, precast concrete parking garage. The garage is founded on drilled shaft piles. Connection to the adjacent judicial complex is provided by a steel truss framed overhead walkway.

Central Artery (I-93)/ Tunnel (I-90), Boston, MA: Modifications to the USPS Annex Garage
Lead structural engineer for extensive modifications of an existing reinforced concrete underground garage adjoining the USPS South Postal Annex to accommodate the construction of a new highway tunnel under the original garage. Modifications were made to the superstructure and to the pile-supported foundation to accommodate a new entry ramp and to allow the demolition of about half of the total of the structure. Particularly challenging was the need to maintain uninterrupted use of the garage by the USPS and unrestricted use of the garage roof, which provides ground-level access to several loading docks.

Lee County Waste-to-Energy, Unit No. 3 Boiler, Lee County, Florida
Lead structural engineer for the balance-of-plant work, including support framing and platforms for this 636 ton per day steam generator built as an extension to the existing facility. The work also included evaluation and reinforcement of existing structural steel

framing. The arrangement of framing and lateral bracing systems were complex because of existing adjacent boilers and construction phasing requirements.

Public Service of New Hampshire, Merrimack Unit No. 1 SCR Addition, Bow, NH
Lead structural engineer for the design of a new SCR support superstructure and foundations. Locations of major structural framing elements and foundations were limited by the extremely confined site and by existing equipment. A framing system supported on mini-piles was developed to provide a strong foundation that could be installed in limited space and low headroom areas. Lateral bracing for wind and seismic loads were incorporated into the existing adjacent structures.

P-133 Central Receiving Facility, Navy Submarine Base, Pearl Harbor, HI
Participated as lead structural engineer in a Navy Functional Design Concept Development Study for a new 60,000 square foot receiving and handling building. The structure is to be founded on a site with poor soil and many existing piles of unknown condition and capacity. The FACD study is an intensive, time limited evaluation that includes meetings with the many facility users and applying the principles of value engineering, with the goal of developing a conceptual design that will be economical and will optimize user requirements. The Navy rated structural work “outstanding”.

USCG Buzzard's Bay Light Station
Inspection and recommendations for the rehabilitation of an offshore navigational platform. Identified short-term and long-term repair items. The steel framed platform, about 80 feet above the water surface, had suffered damage during recent hurricanes and general deterioration because of its harsh salt-water environment. Recommendations were made for repairs that would make the platform safe for use by personnel and allow access to the platform by boat and also extend the life of the structure overall. Plans were developed for restoring the landing platform, stair access and fender system.

Waterplace Building, Providence, RI
Staff engineer for the design of this multi-level concrete structure with complex geometry housing restaurant, visitor's center, auditorium and roofed by pedestrian walkways. A focal point of Waterplace Park and part of the river relocation project in downtown Providence.

Martin Pierce, PE

Bridge Engineer

EDUCATION

BS/1996/Structural Engineering
University of Massachusetts, Dartmouth
MS/2003/Structural Engineering
University of Rhode Island

PROFESSIONAL ENGINEERING REGISTRATIONS

RI 7446, FL 70243

PROFESSIONAL ASSOCIATIONS

Member American Concrete Institute

TRAINING

OSHA-10 Hour Construction Safety & Health

OSHA-Permit Required Confined Space Entry

AMTRAK – Track Safety Training for Contractors

Certificate of Training
FHWA & NHI -LRFD
Highway Bridge Substructures & Earth Retaining Structures

PROFESSIONAL SUMMARY

As a principal bridge engineer with over 15 years' experience Mr. Pierce's responsibilities include the structural analysis and design of all affiliated substructure and superstructure components for both seismic and non-seismic conditions. Additionally, his responsibilities include the oversight of specifications, estimates and contract plan development. His other responsibilities involve performing structural field inspections and load ratings for both vehicular and railroad bridges.

REPRESENTATIVE PROJECTS: BRIDGES

I-195 Relocation, Providence, RI: Contracts 6, 6A, 9, 10 & 11
Assisted in the design, plan development and preparation of contract documents. Responsibilities included designing various elements relating to multiple span pre-stressed box beams, curved steel girder box beams, curved steel plate girders, substructure abutments, multiple column pier bents, hammerhead pier caps and columns, shallow and deep foundations, along with cantilever and mse retaining walls. Design forces and deformations obtained from the creation and analysis of multiple finite element models.

I-95 Service Roads, Bridges 547 & 548, Pawtucket, RI: Design and plan development for the structural rehabilitation of the existing bridges. The improvements included incorporating seismic isolation bearings in the design of the three intermediate pier replacements for each structure.

Jamestown Verrazzano Bridge, Route 138 – Kingston, Rhode Island: Field inspection of the twenty-nine span trestle approach and portions of the main span segmental box girder spanning Narragansett Bay. Also prepared plans and reports documenting existing conditions.

Van Zandt Avenue Bridge, Newport, RI: Field inspection of a three span monolithic concrete tee beam bridge spanning the Old Colony Railroad Line. Preparation of contract plans and bid documents for the proposed rehabilitation.

Pontiac Bridge, Route 5 – Warwick, Rhode Island: Field inspection of a two-span steel stringer bridge spanning the Pawtuxet River. Responsibilities included preparation of plans and reports documenting existing conditions along with development of plans and details for the proposed rehabilitation.

Route 95 Bridge Rehabilitation Bridges 586, 588, 589, 591 & 592– West Greenwich-Exeter, Rhode Island: Engineer in charge of field inspection. Responsibilities included; preparation of plans and reports documenting existing conditions, seismic analysis, fatigue analysis and deck replacement design.

Massachusetts Bay Transportation Authority – Swanton Street Bridge No. W-40-009 – Winchester MA. Performed Load Rating analysis for built up riveted steel plate through girder bridge in accordance with AREMA specifications.

Massachusetts Bay Transportation Authority – Central Street Bridge No. A-09-009 – Andover MA. Performed Load Rating analysis for built up riveted steel plate through girder bridge in accordance with AREMA specifications.

Moffett Mill Rehabilitation, Lincoln, RI: Responsibilities included the design and plan development of an elevated timber walkway and railing in conjunction with a new two-span timber pedestrian bridge, as part of a nature trail located adjacent to the historic Moffett Mill and Chase Farm Park. The design utilized helical piles to support the elevated timber walkway to minimize the disturbance to the surrounding wetland areas.

Bellville Pond Dam Reconstruction & Pedestrian Bridge Replacement, N. Kingstown, RI: Performed the design and plan development of a new timber pedestrian bridge as part of a dam reconstruction project located along the Ryan Park nature trail around Bellville Pond. The structure consisted of new timber stringers, deck and railing supported on existing concrete abutments. The project also included the replacement of the existing spillway with a new cast-in-place structure adjacent to an existing fish ladder.

REPRESENTATIVE PROJECTS- Buildings and Miscellaneous

Dexter Corporation – Windsor Locks, Connecticut: Engineer in charge of structural steel framing design and detailing for a 32,000-square foot, three-story pile supported industrial building.

Genzyme Manufacturing Facility – Allston, Massachusetts: Engineer in charge of the design of structural modifications to an existing multi-level building for new biological reaction tanks located on the second and third floor mezzanine.

Quonset Point Davisville, Pier No. 1, North Kingstown RI: Construction supervision for the repairs to timber piles supporting carrier Pier No.1 in Narragansett Bay. Repair details included wrapping existing piles with neoprene jackets filled with cast-in-place concrete and driving new timber piles to shore up the existing pier.

Quonset Point Davisville, Pier No. 2, North Kingstown RI: Design, plan development and construction supervision for steel cofferdam repairs to carrier Pier No. 2. Repair details involved pouring a reinforced tremie concrete girdle against the cofferdams below Narragansett Bay.

Wickford Boat Ramp, Wickford, RI: Design and plan development of a pile supported floating dock and timber ramp located in Wickford Cove at Wilson Park.

Advanced Wastewater Treatment Facility –Douglas, Massachusetts: Design and plan development of a 1.25 Million Gallon Sequence Batch Reactor. Responsible for the design and plan development of a 3,500 square foot concrete masonry Process Building and reinforced concrete Vortex Grit Chamber.

Wastewater Treatment Facility Upgrades –Warwick, Rhode Island: Assisted with design and plan development for a new 400,000-gallon reinforced concrete chlorine contact tank along with structural modifications to an existing 250,000-gallon concrete chlorine contact tank. Participated in the design and detailing of two new aeration tanks totaling 3 million gallons capacity.

REPRESENTATIVE PROJECTS- Contractor Design Services
Aetna Bridge Company,- I-95 Robin Hollow Road Bridge, West Greenwich RI: Responsibilities included the design, detailing and plan development for the following items;
Excavation support to facilitate phased construction
Protective shielding for superstructure demolition
Overhang support brackets and connections to fascia girders
Lateral connection details for bridge mounted traffic barriers

Aetna Bridge Company,- Main Road Bridge, Tiverton, RI: Responsibilities included the design, detailing and plan development for the following items;
Protective shielding for superstructure demolition
Overhang support brackets and connections to fascia girders

Aetna Bridge Company, - County Street Bridge, Attleboro MA:
Responsibilities included the verification of the design and details for the following items;
134' long pile supported temporary utility support structure
30' x110' long personal protection barrier to satisfy safety requirements for working adjacent to open rails
Erection procedures, crane types and sizes

Russell J. Morgan, P.E.
Principal In Charge/ Geotechnical

RESUME

Education

B.S., 1982, Civil and Ocean Engineering, University of Rhode Island
M.S., 1984, Civil Engineering, University of Rhode Island

Professional Registrations

Registered Professional Engineer, Connecticut
Registered Professional Engineer, Rhode Island
Registered Professional Engineer, Massachusetts

Areas of Specialization

Geotechnical Engineering
Marine Engineering/Diving
Landfill Engineering

Summary of Experience

Mr. Morgan's area of expertise includes geotechnical, marine/waterfront, and Dam engineering. Geotechnical related areas of experience includes soil and foundation engineering with emphasis on the evaluation and/or design of deep and shallow foundations, site structures, temporary and permanent earth support systems, ground modification, construction blasting, rock and earth slope stability analysis, groundwater control systems, grouting techniques, and underpinning. Mr. Morgan's extensive waterfront experience includes inspection, rehabilitation, analysis, design, and construction monitoring of marine structures. He has specialized in structural and geotechnical engineering as applied to the marine environment with design experience related to pile-supported structures, relieving platforms, bulkheads, retaining walls, cofferdams, and ship berthing and mooring systems. Mr. Morgan was co-author of the geotechnical section of the 1990 waterfront design reference text, entitled "Design of Marine Facilities for the Berthing, Mooring, and Repair of Vessels."

RELEVANT PROJECTS

Structural Engineer, 2006 Hurricane Katrina Disaster Relief Deployment, Waveland & Bay St. Louis Ms. Mr. Morgan deployed as a structural specialist with the Rhode Island Urban Search and Rescue Task Force 1 Team to coastal Mississippi to perform search and recovery tasks. Task Force 1 is part of the Rhode Island Emergency Management Agency and was developed to respond to State disasters as well as FEMA managed disaster emergency response scenarios. The Task Force performed structure assessment and search operations as well as victim recovery operations over a two week period. During the deployment Mr. Morgan assessed damage to coastal structures and observed structural failures due to moving flood waters.

Project Reviewer, Stillwater Reservoir Dam Improvements, Smithfield, Rhode Island. GZA undertook a variety of engineering services related to the design of improvements to the Stillwater Reservoir Dam for the Rhode Island Department of Environmental Management, Division of Planning and Development (RIDEM). Stillwater Reservoir Dam is a 20-foot –high, 660-foot long earthen and concrete structure that was reportedly constructed in 1910. The main dam also has earthen dikes on each side, ranging up to ten feet in height and 590 feet in length. GZA was the prime consultant for the repair project, providing RIDEM with an array of engineering services, including visual inspection, wetland delineation, topographic survey, geotechnical investigation, hydrologic and hydraulic analyses, design of embankment repairs, spillway capacity improvements, preliminary and final design plans, bid oversight, and construction contract management. Among the technical challenges involved with the project was the refinement of existing hydrologic analyses related to the so-called "Spillway Design Flood (SDF)". GZA re-evaluated the hydrologic analysis for RIDEM with Federal Emergency Management Agency guidelines.

As a result of the updated analyses, a lesser magnitude SDF was found to be appropriate, and new spillway repair options were developed. The final design provided a 100-foot wide concrete spillway with hydraulics that closely matched the existing spillway up to the 100-year flood, along with a

400-foot long emergency spillway protected with articulated concrete blocks (ACBs) to pass the total 500-year SDF. GZA has also designed embankment repairs for the structure to address concerns regarding excessively steep slopes and to improve access for maintenance and ADA recreational use, to improve freeboard, and to provide erosion protection. Concrete repairs were designed to protect the upstream face of the dam and the existing gatehouse structure, and to provide fishing stations with handicapped access. Other site improvements included upgrading a maintenance access road and paving of an existing parking lot.

Principal-In-Charge, California Jim's Pond Dam Replacement, South Kingstown, Rhode Island. California Jim's Pond is an approximately 14-acre man-made reservoir located in Peace Dale, Rhode Island which failed on February 18, 1998 after heavy rains. GZA GeoEnvironmental, Inc was retained by the Town of South Kingstown to design a new spillway structure, obtain RIDEM permits, and to provide construction oversight services. The dam improvements included a new concrete drop spillway located at the location of the former drop inlet and dam breach. The 40-foot wide spillway was sized to accommodate the 100-year flood, and is spanned by a timber bridge. An 18-inch sluice gate and low-level outlet pipe was incorporated into the design. Improvements to the earthen embankment included flattening the side slopes to 3H:1V, the placement of a low permeability silt layer on the upstream slope, riprap erosion protection, and a new concrete walkway.

Principal-In-Charge, Town of South Kingstown Dams, South Kingstown, Rhode Island. As part of South Kingstown's effort to assess the safety of town-owned dams, GZA performed inspections and evaluations of four separate dams, located on Factory Pond, Asa Pond, Indian Run Reservoir, and SK Junior High Pond in South Kingstown, Rhode Island. The project included visual inspections of the of the dams and appurtenant structures, with measurements and observations made necessary to develop an understanding of the dams' geometry, methods, and materials of construction, and other information relative to the overall stability of the dams. GZA also performed hydrologic and hydraulic analyses of the dams in order to evaluate spillway capacities. The analyses involved an investigation into the hydrologic characteristics of the respective watersheds including soil types and land use, as well as the delineation of watershed boundaries. The required design storm was routed through each reservoir using HEC-1. The capacity of the existing spillways and overtopping potential of the dams during the design floods were evaluated. Based upon these analyses, the general condition and stability of the dams were assessed, with remedial actions recommended if required. GZA also evaluated maintenance and operational issues. A report was prepared for each dam, presenting the results of the dam inspection, general dam conditions, and recommendations for repairs, maintenance, and dam operation.

Rhode Island Department of Transportation - Bridge Rehabilitation Program. Completed Geotechnical investigation for the following bridges:

Roger Williams Bridge - Providence
Stoney La. Bridge - North Kingstown
Tarkiln Road Bridge - Burrillville
Barbs Hill Road Bridge - Coventry
Main Street Bridge - West Warwick
Greenwood R.R. Bridge - Cranston
Cahoone Road Bridge - Coventry

The work included completion of a subsurface investigation program, engineering analysis, and development of a geotechnical engineering report.

Project Manager, Albion Bridge, Blackstone River Bikeway Segment 7, Cumberland, Rhode Island. GZA performed subsurface investigations for the evaluation of the existing structure, and developed a geotechnical report presenting our conclusions and recommendations. The investigations included borings and probes at the abutments, as well as at the piers in the river. Test pits were also excavated at the abutments to determine the existing backwall configuration. The soil conditions were found to consist of deposits of sand over bedrock at relatively shallow depths. A seismic evaluation for liquefaction susceptibility of the foundation soils was also performed. As part of this study, GZA also performed a diving inspection of the existing foundations in the river.

Project Manager, Route 138 Upgrade, North Kingston and Jamestown, Rhode Island. Completed a geotechnical study for two separate portions of the Route 138 upgrade project. For the North Kingstown portion the

geotechnical study addressed issues relative a 30-foot rock cut, geotechnical design criteria for abutments, and subsurface conditions for a wetlands replacement area. For the Jamestown portion the geotechnical study addressed geotechnical design and construction issues relative to a deep wet well, bridge abutments, elevated roadway structure and groundwater control. Both studies included an extensive subsurface exploration program, report development, and design document development.

Project Manager, Replacement of Barrington and Warren River Bridges, Barrington and Warren, Rhode Island. Mr. Morgan completed a significant geotechnical evaluation and foundation design for two replacement bridges carrying state highway Route 114. The exploration phase of the project included borings and soundings using peizo-electric cone penetrometers. The proposed pile foundation was modeled for lateral capacity using the COM 624 computer program. The model was later field calibrated by full scale lateral load testing during the design phase. Mr. Morgan also provided/managed full-time construction monitoring during pile installation.

Principal-in-Charge, Veteran's Memorial Bridge Design-Build Project, Portland / South Portland, Maine. Mr. Morgan served as Principal-in-Charge and a Quality Control Officer for the Reed & Reed / T.Y. Lin International design-build team for the Veteran's Memorial Bridge, currently under construction. GZA interpreted available subsurface information, developed interpretive subsurface profiles and completed engineering analyses to support design of the new bridge foundations and approach roadways. The principal geotechnical challenges on the project were caused by the extensive deposits of compressible, moderate-strength marine clay. Deep foundations were developed to provide sufficient axial and lateral resistance in the moderate strength deposits. A wick drain and surcharging scheme was implemented that relied on anchored sheet pile retaining walls to temporarily support the surcharge fill. The Portland approach embankments were designed in accordance with a successful Alternative Technical Concept ATC that called for a more westerly alignment and a tie in to the Fore River Parkway. The benefits of the ATC resulted in a superior technical score and a clear best value to the Maine DOT. In addition to preparing geotechnical aspects of plans, specifications and reports in accordance with AASHTO LRFD and Maine BDG Standards, GZA participated in developing the Design Quality Management Plan (DQMP) and the Construction Quality Management Plan (CQMP). During the construction phase, GZA is providing review, instrumentation and consultation for the wick-drain surcharge embankment, pile driving services including construction consultation, Wave Equation analysis and Dynamic (PDA) Pile Testing with Signal Matching (CAPWAP) Analysis in support of the CQMP.

Principal-in-Charge, Caribou Connector Design Build Project, Caribou, Maine. Mr. Morgan currently serves as Principal-in-Charge for this design build effort. The contract was successfully won by Contractors Lane Construction and Sargent Corp. and Lead Designer Tylin International. The projects consist of several bridges and connecting roadways. GZA is providing geotechnical engineering and construction phase services for the project.

PUBLICATIONS:

Gaythwaite, J.W. and R.J. Morgan, geotechnical chapter of "Design of Marine Facilities for the Berthing, Mooring, and Repair of Vessels."

Carchedi, D.R., Nacci, V.A., Pekin, O., Morgan, R.J., "An Experimental Study of Drag Anchors and Implications for OTEC", Offshore Technology Conference, 1984

Morgan, R.J., Johnsen, L.F., Grynkewicz, F.M., "Permanent Excavation Support and Underpinning in Sands: A Case History", Grouting, Soil Improvement, and Geosynthetics, ASCE Specialty Conference, 1992.

Morgan, R.J., Carchedi, D.R., "Geotechnical Considerations in Port Design", PORTS Conference, 1989.

Carchedi, D.R., Morgan, R.J., "Port Conversion to Residential and Retail Use", PORTS Conference, 1989.

David M. Leone, P.E.
Hydrologic/Hydraulic Engineer

RESUME

Education

B.S., 1996, Civil Engineering, Worcester Polytechnic Institute

M.S., 1998, Civil Engineering, University of Massachusetts, Lowell

Professional Registrations

2004, Professional Engineer, MA, #45877

Areas of Specialization

Dam Inspections
Surface Water Hydrology
Hydraulic Engineering
Computer Modeling
Groundwater Hydrology
Water Resources Management
Geographic Information Systems (GIS)

Summary of Experience

Mr. Leone is a hydrologist and hydraulic engineer in GZA's GeoCivil Group who specializes in surface water hydrology, open-channel hydraulics, stream restoration, and groundwater hydrology. His expertise includes computer modeling of rainfall/runoff processes, hydraulic structures, and mapping using geographic information systems (GIS). Mr. Leone is well-versed in several hydrologic computer applications including HEC-1, HEC-6, HEC-RAS, and DAMBRK, and has also developed site-specific computer models for both watershed and reservoir-specific water balance simulation. He has performed spillway adequacy analyses and dam break simulations for dozens of dam and reservoir systems, including the largest dams of the City of New York water supply system. Mr. Leone also has specific expertise in the area of dam Emergency Action Planning (EAP), having developed EAPs for the City of New York, Commonwealth of Massachusetts, and many other municipalities and private dam owners. Relevant project experience includes:

Relevant Project Experience

Project Engineer, California Jim's Pond Dam Replacement, South Kingstown, Rhode Island. California Jim's Pond is an approximately 14-acre man-made reservoir located in Peace Dale, Rhode Island which failed on February 18, 1998 after heavy rains. GZA GeoEnvironmental, Inc was retained by the Town of South Kingstown to design a new spillway structure, obtain RIDEM permits, and to provide construction oversight services. The dam improvements included a new concrete drop spillway located at the location of the former drop inlet and dam breach. The 40-foot wide spillway was sized to accommodate the 100-year flood, and is spanned by a timber bridge. An 18-inch sluice gate and low-level outlet pipe was incorporated into the design. Improvements to the earthen embankment included flattening the side slopes to 3H:1V, the placement of a low permeability silt layer on the upstream slope, riprap erosion protection, and a new concrete walkway.

Project Engineer, Stillwater Reservoir Dam Improvements, Smithfield, Rhode Island. GZA undertook a variety of engineering services related to the design of improvements to the Stillwater Reservoir Dam for the Rhode Island Department of Environmental Management, Division of Planning and Development (RIDEM). Stillwater Reservoir Dam is a 20-foot –high, 660-foot long earthen and concrete structure that was reportedly constructed in 1910. The main dam also has earthen dikes on each side, ranging up to ten feet in height and 590 feet in length. GZA was the prime consultant for the repair project, providing RIDEM with an array of engineering services, including visual inspection, wetland delineation, topographic survey, geotechnical investigation, hydrologic and hydraulic analyses, design of embankment repairs, spillway capacity improvements, preliminary and final design plans, bid oversight, and construction contract management. Among the technical challenges involved with the project was the refinement of existing hydrologic analyses related to the so-called "Spillway Design Flood (SDF)". GZA re-evaluated the hydrologic analysis for RIDEM with Federal Emergency Management Agency guidelines. As a result of the updated analyses, a lesser magnitude SDF was found to be appropriate, and new spillway repair options were developed.

The final design provided a 100-foot wide concrete spillway with hydraulics that closely matched the existing spillway up to the 100-year flood, along with a 400-foot long emergency spillway protected with articulated concrete blocks (ACBs) to pass the total 500-year SDF. GZA has also designed embankment repairs for the structure to address concerns regarding excessively steep slopes and to improve access for maintenance and ADA recreational use, to improve freeboard, and to provide erosion protection. Concrete repairs were designed to protect the upstream face of the dam and the existing gatehouse structure, and to provide fishing stations with handicapped access. Other site improvements included upgrading a maintenance access road and paving of an existing parking lot.

Project Manager, Massachusetts Department of Conservation and Recreation 2007 Follow-up and Phase I Inspections of Various Dams, Massachusetts. Mr. Leone served as project manager for GZA's assignment to perform visual dam safety inspections of 13 dams throughout the Commonwealth. The visual inspections ranged from Phase I dam inspections to follow-up visits to dams which had been classified as "poor" or "unsafe" by the DCR.

Project Engineer, Inspection of Massachusetts Water Resources Authority Dams Throughout Massachusetts. In 2006, GZA was contracted by the Massachusetts Water Resources Authority (MWRA) to conduct Phase I – level dam safety inspections and preliminary facilities assessment planning for numerous dams and related impoundments within the Commonwealth. Mr. Leone was part of GZA's inspection team for most of the 19 dams included in the project, and served as lead author for the dam inspection reports.

Project Engineer, Hydrologic and Hydraulic Evaluation and Inundation Mapping of Massachusetts Water Resources Authority Dams Throughout Massachusetts. As a follow-up to our Phase I Dam Inspection services to MWRA, Mr. Leone served as the lead hydrologic and hydraulic engineer for GZA's spillway adequacy analyses and dam breach evaluation services for about a dozen dams in the MWRA system. The work involved the development of rainfall-runoff to assess the ability of the spillway to safely pass the regulatory design flood and the preparation of dam breach computer models to develop dam breach inundation maps for inclusion into existing Emergency Action Plans.

Project Engineer, Massachusetts Department of Conservation and Recreation Phase I Inspections of State-Owned Dams, Massachusetts. As part of GZA's inspection team, Mr. Leone performed and stamped dam safety evaluations for over 20 dams throughout the state of Massachusetts. These Phase I dam inspections were in some cases the first visual dam inspections for these structures since the 1970s. The inspections resulted in the development of a Phase I report which included an evaluation of the structure and recommendations for future studies, maintenance, and remedial measures.

Project Engineer, Massachusetts Department of Conservation and Recreation Emergency Dam Inspections of High Hazard Dams, Massachusetts. GZA responded to the Commonwealth's call for the emergency inspection of dozens of public and privately owned dams in the aftermath of the flooding which struck the region in the Fall of 2005. As part of GZA's dam engineering team, Mr. Leone performed dam safety inspections for several dams throughout the state of Massachusetts. The work was performed on extremely short notice and on an expedited schedule.

Project Engineer, Massachusetts Department of Environmental Management Dam Inspections, Massachusetts. As part of GZA's inspection team, Mr. Leone performed dam safety evaluations for over 30 dams throughout the state of Massachusetts. Activities included identifying surficial inadequacies and potential sources of reduced hydraulic capacity in spillways and outlets through visual inspection and preliminary hydraulic and hydrologic analyses in order to determine the adequacy of a spillway to safely pass flood flows. Mr. Leone was the primary author of more than 20 dam inspection/evaluation reports.

Project Engineer, Metropolitan District Commission Dam Inspections, Massachusetts. As part of MDC's dam safety program, GZA performed dam safety inspections for 86 dams throughout Massachusetts. Mr. Leone was part of GZA's inspection team which conducted visual inspections of the dams and spillways and documented conditions with photographs, site sketches, and a comprehensive report.

Project Manager, Aquarion Water Company Dam Inspections, Connecticut, Massachusetts, and New York. GZA has conducted dam inspections for Aquarion Water Company on an annual basis since 1995. Mr. Leone has served as Project Manager for over 30 Aquarion dam inspections in 2004, 2005, and 2006. The work includes field visits to conduct visual observation of the dams and appurtenant structures, assembly of inspection checklists and photographs, and development of a summary report and associated recommendations for repair or further evaluation.

Project Manager, Providence Water Dam Inspections and Emergency Action Planning. Mr. Leone serves as project manager for the inspection, peer review of existing information, and hydrologic/hydraulic and structural analyses for the investigation of the major water supply dams for the Greater Providence area. The project involves a Phase I level dam inspection and review of the recently completed repairs to Gainer Memorial Dam, the largest dam in Rhode Island, and four of its tributary dams. In addition, GZA is carrying out spillway adequacy analyses, structural stability review and updates, and dam break simulations and inundation mapping. As part of the project, GZA has updated the decades-old Emergency Action Plan for the system. GZA performed the inspection and hydrologic / hydraulic and structural analyses, and assembled reports for the dams on an expedited, 2-month schedule to meet the needs of Providence Water.

Project Manager, Rhode Island Department of Environmental Management Dam Hazard Classification, Rhode Island. Mr. Leone has project management, lead technical and GIS mapping duties for this dam hazard potential classification project. The project involves updating the dam hazards in the RIDEM database for 68 public and private dams throughout the state. GZA is performing so-called "simplified" dam break analyses for each of the dams, as well as site reconnaissance and mapping estimated inundation areas and downstream lifeline resources in ArcView (GIS).

Project Manager, Falls Pond and Hoadley Pond Dam Repair, Connecticut. GZA has undertaken dam repair engineering services on behalf of Aquarion Water Company for 2 dams: Falls Pond Dam in Redding and Hoadley Pond Dam in Seymour, Connecticut. Both dams are concrete and stone masonry gravity structures which are in poor structural condition. Mr. Leone is the project manager for the repair design, which include hydrologic and hydraulic analyses, stability analyses, structural and civil engineering design, and permitting coordination. Additionally, the repair of Falls Pond Dam includes local stakeholder outreach and coordination as a result of its location in a historically significant District. In response, GZA has prepared a context-sensitive repair design which has met the approval of local and state historic officials. The projects are currently under construction as of the Summer of 2007.

Project Manager, Town of Millbury, Massachusetts Dam Inspections. In 2005, the Town of Millbury contracted GZA to undertake visual dam inspections and preliminary hydrologic and hydraulic analyses of four Town-owned dams. Mr. Leone serves as project manager for the project and has taken part in the visual dam inspection and hydrologic analysis of the dams.

Professional Development

Member, Association of State Dam Safety Officials
Member, American Water Resources Association
40-Hour OSHA 29 CFR 1910.120, October 1988
FLDWAV Workshop: "Unsteady Flow Simulation Using NWS FLDWAV Model," National Weather Service Training Center (NWSTC), Kansas City, November, 1999.

Publications

Baril, P.H., and Leone, D.M., 2000. Use Of Electronic Methods For Inundation Mapping At NYCDEP Catskill And Delaware System Dams. Association of State Dam Safety Officials Annual Conference, September, 2000.

Cox, C.W.., and Leone, D.M., 2002. Water Allocation Planning and Use. Conference on Watershed Conservation 2002: Water Supply, Aquatic Ecosystems, and Planning, September, 2002.

Leone, D.M., Baril, P.H., and Cox, C.W.., 2003. Simplified Water Budget Modeling. Annual Conference of the American Water Resources Association, 2003.

Leone, D.M., Flood, K.M., and Hover, W.H., 2004. A Small Embankment Dam Breach Case Study: Livermore Pond Dam. U.S. Society on Dams Annual Conference, April, 2004.

Michael A. Powers, P.E., L.S.P.
Geotechnical / Environmental QA/QC

RESUME

Education

A.E., 1967, Civil Engineering, Wentworth Institute
B.S., 1972, Civil Engineering, University of Rhode Island
M.S., 1974, Civil Engineering, University of Rhode Island
Graduate Studies, 1976, Massachusetts Institute of Technology

Professional Registrations

1979, Professional Engineer, Massachusetts, 29905
1993, Licensed Site Professional, Massachusetts, 3436

Areas of Specialization

Civil Engineering
Groundwater Engineering
Landfill Engineering
Computer Modeling
Project Management

Summary of Experience

Mr. Powers is a Senior Principal and Registered Professional Engineer. He has proven managerial abilities, demonstrated by his five years as manager of GZA's Rhode Island office, and strong analytical skills.

Mr. Powers has been responsible for groundwater investigations in 15 states, Puerto Rico, and South America. He has participated in groundwater investigations at 13 National Priority List (NPL) sites and numerous industrial sites where groundwater contamination was a major issue. Projects under his direction also addressed town-wide groundwater management needs and construction dewatering.

His computer modeling experience dates back to 1974 and includes participation in and/or responsibility for the development of more than 20 digital groundwater flow models. Since the early 1980s, he has also been routinely responsible for the design of both short- and long-term groundwater collection/recharge systems. He has participated in numerous public meetings and provided expert testimony in court and in arbitration hearings. Relevant project experience includes:

Relevant Project Experience

Senior Engineer, Second Avenue Subway Project, New York, New York. Groundwater Developed a regional groundwater model to evaluate migration of potentially contaminated groundwater into excavations during construction. Reviewed results of groundwater models performed by staff to estimate groundwater inflow rates into cut-and-cover excavations and tunnels and cavern structures. Also, prepared geotechnical specifications for various methods of grouting, groundwater control, pressure relief and geotechnical instrumentation.

Senior Engineer, Historic Massachusetts State House, Boston, Massachusetts – Designed a well point dewatering system for the construction of an elevator foundation below this historic structure. The excavation is 40 feet below street level and adjacent to spread footings. The excavation is also less than 15 feet from the MBTA's orange line. The system had to be compact and efficient.

Senior Consultant, URI College of Pharmacy Building, Kingstown, Rhode Island. The foot print of the excavation for this structure is approximately 63,000. The depth of the excavation, in places, approaches 40 feet, and extends more than 15 feet below the reported water table. The proposed construction dewatering system is open sumping from interceptor trenches.

Senior Consultant/Designer, East Side CSO Tunnel Project, Portland, Oregon. GZA integrated the construction dewatering system with interlocking drilled secant piles. At one shaft extending the secant piles and open sampling proved adequate. At another shaft the dewatering plan required the use of three deep extractions rates with design extraction rate of 900 gpm.

Expert Witness, CSO Above Ground Storage, Acron, Ohio. – Project investigations (by others) failed to identify a deep (>110 feet) leaky artesian aquifer. These conditions rendered the excavation unstable (quick conditions). Working for the contractor we identified the extent of the problem, made recommendations, and reviewed deep well performance data. Mr. Powers represented the contractor at arbitration hearings. The contractor was awarded the full amount of his claim; $960,000.

GROUNDWATER/LANDFILL

Mr. Powers is a Senior Principal and Registered Professional Engineer. He has proven managerial abilities, demonstrated by his five years as manager of GZA's Rhode Island office, and strong groundwater engineering skills.

Mr. Powers has been responsible for groundwater investigations in 15 states and Puerto Rico. He has participated in groundwater investigations at 13 National Priority List sites and numerous other sites where groundwater contamination was a major issue. These sites include undeveloped land, landfills, uncontrolled hazardous waste sites, and industrial facilities. Projects under his direction have addressed local and town-wide groundwater management needs, as well as construction dewatering.

His computer modeling experience dates back to 1974 and includes participation in and/or responsibility for the development of more than 20 digital groundwater flow models. He has participated in numerous public meetings, provided expert testimony in court and in arbitration hearings, and has been responsible for remedial design at numerous sites, including two EPA-mandated RD/RA projects. Relevant project experience includes:

Senior Technical Consultant/Reviewer, Remedial Design/Remedial Action (RD/RA), Yaworski Superfund Site, Canterbury, Connecticut. The project included: developed of EPA-required plans and reports, production of construction plans, specifications, and bid documents, and construction oversight responsibilities. Our design included innovative features which reduced post-construction settlement of a RCRA cap, and lowered construction costs. Completion of construction took 13 months from the time we were given notice to begin, well within the time frame required by the consent agreement. Construction was completed for $1,200,000 approximately $200,000

below our estimate, and substantially below EPA FS estimates. In summary, we meet the client's expectations by being on time and below budget.

Principal-in-Charge, RI/FS for Central Landfill, Johnston, Rhode Island. One-million-dollar Remedial Investigation to identify groundwater remediation required at New England's largest landfill. Under his direction, GZA has identified the nature and extent of contamination and is currently evaluating a range of remedial actions.

Principal-in-Charge, Environmental Services, Central Landfill, Johnston, Rhode Island. GZA has been providing services on a continuous basis to RISWMC since 1984. These services have varied from: simple ESAs, to EPA mandated RI/FS projects on a Superfund site, to limited emergency response actions. The total value of these services approaches three and a half million dollars. The services were provided through a half dozen contracts which were awarded as the result of competitive selection processes. GZA's diverse environmental capabilities have allowed us to maintain continuity on a number of long duration projects and to be effective technical advocates.

Principal-in-Charge, Industrial Facility, Verona, Virginia. Design of groundwater recovery/hydraulic contamination system for groundwater contaminated with industrial solvents. Study completed for industrial client included state-mandated RI/FS program.

Principal-in-Charge, Groundwater Remediation, Industrial Facility, Staunton, Virginia. GZA was retained to evaluate the extent and consequences of groundwater contamination resulting from a release of an estimate of 10,000 pounds of TCE. Water quality data indicates DNAPL is present in bedrock. Based on meetings with Virginia Water Resource Board and a focused state mandated RI/FS, we designed and installed a groundwater containment system. That system utilizes a line of blasted bedrock to reduce uncertainties associated with flow in fractured rock. Hydraulic measurements and observations in an adjacent river satisfied all parties that the system contains the contaminated groundwater.

Principal-in-Charge, Groundwater Remediation, Industrial Facility, Montgomery, Alabama. GZA was retained to assist in due-diligence investigations for the acquisition of five industrial facilities. Our efforts identified

the presence of DNAPLs in the groundwater at one facility. We aided the buyer in negotiating a purchase price which reflected environmental conditions, and in presenting solutions to ADEM after the purchase of the facility. We also designed and contracted for the construction of a groundwater pump and treat system to contain contaminated groundwater at the site. That system is effectively pumping and treating contaminated groundwater at costs which are less than pre-purchase estimates.

Technical Consultant, Laidlaw Landfill, Plainville, Massachusetts. Multiphase hydrogeologic study to identify potential pathways and receptors of groundwater contaminant migration. Field studies included a variety of geophysical and aquifer testing techniques in soil and bedrock.

Principal-in-Charge, Industrial Facility, San German, Puerto Rico. Evaluation of existing industrial process water supply wells to act as containment/collection system led to a cost-effective remedial program.

Principal-in-Charge, Industrial Facility, Tempe, Arizona. Evaluation to assess extent of soil and groundwater contamination resulting from accidental process water release. Study included design and construction oversight of resulting recommended remediation.

Technical Consultant, Ottati & Goss/GLCC NPL Site, Kingston, New Hampshire. Provided technical oversight during FS on the design of a groundwater extraction system and subsequent expert court testimony for the Department of Justice.

Technical Consultant, Wastewater Treatment Facility, Orleans, Massachusetts. Proposed construction of a 1-MGD wastewater treatment facility. Raised questions as to the fate of wastewater and landfill leachate. A computer groundwater flow model was developed and calibrated to help address these issues.

Technical Consultant, Gilson Road Superfund Site, Nashua, New Hampshire. Designed an emergency hydrodynamic system to contain contaminated groundwater at the site while a slurry wall containment area was being designed and built. Was responsible for the groundwater modeling and resulting design of a groundwater extraction system within the slurry wall containment area.

Principal-in-Charge, Carroll Products RCRA Facility Investigation, Richmond, Rhode Island. Multiphase environmental investigation to assess the extent and nature of soil and groundwater contamination, and to select appropriate remedial alternatives. Studies are being performed for a former site owner to meet the requirements of a Federal Administrative Order.

MISCELLANEOUS PROJECTS

Principal-in-Charge, Old Stone Plaza, Providence, Rhode Island. Geotechnical investigations/studies were conducted to selection the proper foundation for this mid-rise building and associated parking garage. The selection foundations used both shallow footings and end bearing pipe piles.

Technical Reviewer, Big River Reservoir, Rhode Island. A geotechnical investigation was conducted for the Rhode Island Water Resources Board in support of proposed reservoir development. Issues considered dam construction, seepage losses, conduit design, and foundations for treatment facilities.

Professional Activities

Instructor, Civil Engineering, Northeastern University, 1980-1982
Instructor, Civil Engineering, University of Rhode Island, 1990
Member, American Society of Civil Engineers (ASCE)
Past President, Rhode Island Section of ASCE (1984)
Member, Boston Society of Civil Engineers
Member, American Arbitration Association
Member, URI Civil Engineering Advisory Council
Chairperson, DOD-URI Environmental Training Advisory Council
Member, Society of American Military Engineers

Professional Profile

Mr. LeBeau has extensive experience as a civil/structural engineer and has been involved with a variety of projects in both the public and private sectors. His engineering experience includes work in a variety of disciplines, including structural, civil/highway, and geotechnical engineering. Mr. LeBeau is lead structural engineer responsible for the analysis, design, and construction management of structural projects employing a wide variety of building materials such as reinforced concrete; prestressed and post-tensioned precast concrete; structural steel; aluminum; masonry; and wood structure for gravity, wind, and/or seismic forces. Structures that he has designed include simple span and continuous span bridges; mid- and low-rises structures; institutional, commercial, and industrial buildings - such as train stations, parking garages (cast in place, hybrid, and precast concrete), shopping centers, and historical building renovation; waterfront structures; and other structural design projects. In his career, Mr. LeBeau has provided unique solutions to difficult design problems and has improved cost and profitability for customers through efficient design.

Project Experience

RIDOT Round Top Bridge, No. 378, Burrillville, RI
Project Manager for geotechnical and hydrologic/hydraulic engineering services, bridge type study, and final design for the replacement of an existing bridge. The bridge is a butted box beam superstructure supported on pile supported precast abutments. The bridge type was selected to provide for accelerated construction techniques thereby minimizing the duration of street closure to two months. The road was closed for 41 days. The replacement bridge was dedicated on November 8, 2010.

Greenville Bridge Replacement, Greenville, RI
Conducted inspections and completed preliminary and final design, plans, and specifications for the bridge rehabilitation. The rehabilitation consisted of sliplining by jacking methods the existing structure with large diameter pipe and subsequently filling the annular space with lightweight foam concrete.

RIDOT Route 95 Safety Improvement Project
Structural Engineer responsible for conducting in-depth field inspections and evaluation, performing preliminary retrofitting assessment and cost evaluations, completing design computations, and final contract documents including plans and specifications for the rehabilitation of these bridge structures. The work varied from minor repair work to major rehabilitation, including deck repair and/or replacement, partial superstructure replacement, substructure repair and/or replacement, fatigue retrofitting, seismic retrofitting, and expansion joint elimination. Seismic retrofitting for the various bridges consisted of one or more or a combination of: column jacketing, beam seat retrofitting, removal of existing rocker bearings and replacement with seismic isolation bearings, and removal of existing bearings and replacement with elastomeric type bearings.

RIDOT Buckeye Brook Bridge, No. 1093, Warwick, RI
Project Manager for geotechnical and hydrologic/hydraulic engineering services, bridge type study, and final design for this new bridge that is part of the Warwick-East Greenwich Bicycle Network. This short span steel truss bridge incorporates a scenic overlook for viewing Buckeye Brook. This structure will be used for viewing the annual migration of blue back herring and alewives from Narragansett Bay to the Warwick Lake spawning grounds.

Michael E. LeBeau, PE, SE
Bridge QA/QC

Years Experience
27

Qualification Highlights
Extensive and Varied Structural Experience

Education/Training
MS, Civil Engineering,
Northeastern University, 1999

BS, Civil Engineering,
University of Rhode Island, 1993

AS, Engineering, Community College of Rhode Island, 1985

AS, Electronic Engineering Technology,
Rhode Island Junior College, 1980

Licenses/Registrations
Professional Engineer:
Connecticut # PEN.0024817
Florida # 63170
Indiana # 10505956
Kentucky # 24274
Maine # 10863
Maryland # 31636
Ohio # 70612
Virginia # 041168

Structural Engineer:
District of Columbia # 901511
Massachusetts # 42437
New Hampshire # 11626

Civil Engineer:
New Hampshire # 11626
Rhode Island # 6824

South Warren Bridge No. 125, Hope Street, Warren/Bristol, RI
Conducted an in-depth field inspection and evaluation on South Warren Bridge No. 125. This structure is one of the last remaining brick jack arch bridges in Rhode Island. Completed computations for final in-depth inspection, evaluation, and rating report with recommendations for rehabilitation and/or replacement.

RIDOT I-195 Providence River Bridge Project
The work included completion of geotechnical data and interpretive reports for the proposed relocation of the India Point interceptor sewer.

RIDOT Maskerchugg River Bridge, No. 1094, East Greenwich, RI
Project Manager for geotechnical and hydrologic/hydraulic engineering services, bridge type study, and final design for this new bridge that is part of the Warwick-East Greenwich Bicycle Network. This 170-foot steel truss pedestrian bridge spans between Warwick and East Greenwich, Rhode Island over the Maskerchugg River.

RIDOT Warwick/East Greenwich Bicycle Network
Structural Project Manager responsible for oversight of the preparation of preliminary and final structural design computations, plans, details and specifications for the multi-use pedestrian, bicycling, and recreational pathways linking sports complexes, bike trails, public parks, etc. For structures, conducted type studies that would be most technically appropriate and cost effective for a number of crossings, prepared geotechnical reports for structures, prepared hydrologic/hydraulic reports for bridges over stream crossings, conducted in-depth inspection and evaluation of an existing stone box culvert, and preliminary and final design of superstructure and substructure elements. Responsible for the preparation of construction plans, details, and specifications for all proposed bridge designs. The largest of these bridges is a 170-foot steel truss structure that carries pedestrian/bicycle traffic over the Maskerchugg River, which is located in East Greenwich.

MHD CA/T D029F (MDC) Tudor Wharf Underpass, Boston, MA
Project Manager for pedestrian walkway under the North Washington Street Bridge connecting Paul Revere Park with the Marriott Hotel. The design was not allowed to support structure off existing North Washington Street Bridge superstructure or substructure therefore an independent structure was designed in tight clearance situation. The structural components of the walkway were designed for modified vehicular loadings as required by the CA/T, DCR and the City of Boston. Steel reinforced plastic pile columns were embedded in drilled micropiles for low clearance solution. Timber floor system on steel pile caps used to match style of adjacent Revere Park walkway. Safety issues included the coordination of structural design of both high and low railings housing lighting bollards. Additional design details included coordination with Keyspan to incorporate a 36-inch diameter active gas line requiring very tight geometric layout of the substructure.

MHD Elm Street Bridge, Mansfield, MA
Project Engineer responsible for conducting type study, substructure reuse report, preliminary and final design of superstructure and substructure replacements. Responsible for the preparation of construction plans, details, and specifications for complete bridge replacement. This continuous three-span superstructure is supported on drilled shaft piers and integral abutments.

Michael E. LeBeau, PE, SE
Continued

Memberships/Affiliations

American Institute of Steel Construction

American Society of Civil Engineers

International Association of Foundation Drilling

International Conference of Building Officials

Precast/Prestressed Concrete Institute

Rhode Island Society of Professional Engineers

Structural Engineers Association of Rhode Island

Professional Profile

Mr. Brayton has performed numerous traffic and parking impact analyses for proposed developments. These studies include performing trip generation calculations and capacity analysis of roadways, as well as signalized and unsignalized intersections. In addition, he has performed accident analyses, site circulation reviews, and preliminary and final design engineering for numerous traffic improvement projects.

Mr. Brayton has also written Design Study Reports and Conceptual Design Reports for several projects including 1R Safety Improvements and High Hazard Interchange Evaluation projects. These reports have included evaluation of the safety and geometric aspects of roadways, intersections, and interchanges. Mr. Brayton has also prepared traffic control plans for many utility, highway, traffic, and bridge projects.

Project Experience

RIDOT Round Top Bridge, No. 378, Burrillville, RI
Project Manager for traffic engineering, including maintenance and protection of traffic control plans and a traffic management plan. Bryant performed a bridge type study, and final design for the replacement of an existing bridge and approach roadways. The bridge is a butted box beam superstructure supported on pile supported precast abutments. The bridge type was selected to provide for accelerated construction techniques thereby minimizing the duration of street closure to two months. The road was closed for 41 days. The replacement bridge was dedicated on November 8, 2010.

RIDOT Highway Improvements to Newport Avenue, Newman Avenue, and Pawtucket Avenue, East Providence and Pawtucket, RI
Highway and traffic improvements to Newport Avenue (U.S. Route 1A), Newman Avenue (R.I. Route 152), and Pawtucket Avenue (R.I. Route 114). This project involves 1R Highway Improvements, including the rehabilitation of the sidewalks and pavement structure of the roadway, the identification and correction of roadside hazards, and the upgrading of the signing and striping along the length of the project. As part of the project, operations at six signalized intersections were analyzed. New traffic signals were designed and installed, including a complex coordinated system of four signals on two separate roadways and a mid-block pedestrian signal. In addition, Bryant provided study and design services for the drainage improvements to Newman Avenue and to the Newport Avenue/Ferris Avenue drainage system.

RIDOT High Hazards Ramps – Atwells Avenue; Providence, RI
Responsible for preparation of Conceptual Design Report, including analysis of accident history, safety deficiencies, pavement condition, preliminary land use evaluation, and performance of benefit-cost analysis for proposed improvements for the I-95 Southbound, Atwells Avenue, and Service Road No. 7 intersection. The recommended improvements include replacement of the existing traffic signal system and widening of the off-ramp to improve capacity and access for larger vehicles.

RIDOT High Hazard Interchanges – C2, Providence and East Providence, RI
Responsible for preparation of Conceptual Design Report, including analysis of accident history, safety deficiencies, and performance of benefit-cost analysis for proposed improvements. Responsible for design of traffic signal and road improvement plans, as well as preparation of contract documents, including an estimate for the project.

Todd E. Brayton, PE
Highway/Utilities/Traffic Project Manager

Years Experience
11

Qualification Highlights
Traffic Impact Analyses

Signal Design

Education/Training
MS, Civil and Environmental Engineering, University of Rhode Island, 2002

BS, Civil and Environmental Engineering, University of Rhode Island, 1996

National Highway Institute Courses, etc:

- Road Safety Audits
- Low Cost Safety Improvements Workshop
- Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities
- New Approach to Highway Safety Analysis
- Introduction to System Engineering for Advanced Transportation
- Roundabout Design Workshop
- Intelligent Transportation System Procurement
- HMA Pavement Evaluation and Rehabilitation

Licenses/Registrations
Professional Engineer:
Rhode Island # 9000

Memberships/Affiliations
Institute of Transportation Engineers, Rhode Island Chapter

Intelligent Transportation Society, Rhode Island Chapter

Chi Epsilon Honor Society

Tau Beta Pi Honor Society

RIDOT High Hazard Intersections – C8; Providence, East Providence, and Bristol RI
Responsible for preparation of Conceptual Design Report, including analysis of accident history, safety deficiencies, and performance of benefit-cost analysis for proposed improvements. Potential improvements at several of the intersections include the installation of roundabouts.

RIDOT Safety Improvements to Route 94/Route 6 Intersection, Foster, RI
Responsible for preparation of a traffic signal warrant analysis for the Route 94/Route 6 intersection. Responsible for preparation of construction estimate, including contract documents for 6-mile resurfacing of Route 6 and reconstruction of the Route 94/Route 6 intersection.

RIDOT Downtown Sidewalks ADA Improvements; Providence, RI
Responsible for preparation of Design Study Report, including analysis of accident history, sidewalk condition and Americans with Disabilities Act compliance, safety deficiencies, drainage system, and proposed improvements in a busy downtown urban area. Responsible for design and preparation of the sidewalk improvement plans. The project includes numerous street trees within the sidewalk.

Ludlow Traffic Improvements, Ludlow, MA
Traffic Engineer for traffic improvement design services to the intersection of East Street at Chapin Street in Ludlow, MA. Coordinated a study and analyzed the results of the existing traffic movements through the intersection. Based on the study results, designed such items as additional turning lanes with sufficient queue lengths to the intersection, pedestrian improvements, upgrading traffic signal control equipment to improve signal timing phasing, and widening of the intersection to improve access for large truck traffic.

Moulton Square Improvements Project, Lowell, MA
Traffic Engineer responsible for design of roadway and sidewalk improvements to improve vehicular and pedestrian access through this urban square. The project consisted of narrowing of pavement width, including the installations of bump outs; installation of brick paved crosswalks; and the change in vehicular circulation. Responsibilities included pedestrian safety and amenities and traffic calming. Evaluated traffic flows and volumes, conceptual design alternatives and improvement plans, as well as final design, construction documents, and the cost estimate. Construction phase services were also provided.

RIDOT 1R Safety Improvements Project – Route 146, North Smithfield, RI
Responsible for preparation of Design Study Report and condition survey of the roadway, including pavement, drainage structures, and guardrail.

1R Safety Improvements Project – School Street, Lincoln, RI
Responsible for preparation of Design Study Report and field review of the roadway, including assessment of the pavement structure, sidewalk, and drainage structures.

1R Safety Improvements Project - Smith Street, Providence and North Providence, RI
Responsible for preparation of Design Study Report and performing field review of the roadway, including analysis of Americans with Disabilities Act compliance, as well as condition survey of the pavement, curbing, sidewalks, traffic signals, and lighting appurtenances.

Todd E. Brayton, PE
Continued

Publications/Presentations

The Effects of Maintenance and Rehabilitation Alternatives for Asphalt Pavements in New England and New York, Long-Term Performance Program: Making Something of It, ASCE and FHWA, 2001

Development of Performance-Based Mix Design for Cold In-Place Recycling of Asphalt Mixtures, Transportation Research Board 80th Annual Meeting, Washington, DC, January 7-11, 2001

Development of Modified Superpave Mix-Design for Cold In-Place Recycling, Asphalt Recycling and Reclaiming Association Semi-Annual Meeting, Cincinnati, OH, November 13-14, 2000

Development of Performance-Based Mix-Design for Cold In-Place Recycling of Asphalt Mixtures, 13th Rhode Island Transportation Forum, University of Rhode Island, October 13, 2000

Performance-Based Mix-Design Method for Cold In-Place Recycling of Bituminous Pavements for Maintenance Management, Proceedings of the Ninth Maintenance Management Conference, Juneau, Alaska, July 16-20, 2000

Laboratory Evaluation of Mix-Design Methods for Cold In-Place Recycling, Proceedings of the Fifth ASCE Materials Engineering Congress, Cincinnati, Ohio, May 10-12, 1999

Use of the Superpave Gyratory Compactor and Mix-Design for Cold In-Place Recycling, Transportation and Engineering Forum, University of Rhode Island, October 1998

Development of Performance-Based Mix Design for Cold In-Place Recycling of Bituminous Pavements, Transportation and Civil Engineering Forum, University of Rhode Island, October 1997

Witness Jurisdictions

Massachusetts
Wareham

Rhode Island
Coventry
Cranston
Cumberland
Narragansett
North Kingstown
Portsmouth
Scituate
Woonsocket

Professional Profile

As crew chief and project surveyor, Mr. Culligan has been involved in both field and office capacities on a variety of survey and engineering projects including the Relocation of I-195/I-95 in Providence, RI; North Central State Airport in Lincoln, RI; the Route 116/Route 146 Interchange in Lincoln, RI; Noonan Island at Roger Williams Park in Providence, RI; the NBC Johnston Sewer Interceptor Replacement project; and numerous other public and private site surveys. Prior to originally joining Bryant in 1994, he was employed by two surveying and engineering firms located in Connecticut working primarily on private development projects.

Project Experience

RIDOT Round Top Bridge, No. 378, Burrillville, RI
Surveyor for this bridge replacement that included geotechnical, hydrologic/hydraulic, civil and traffic engineering services. Bryant performed a bridge type study, and final design for the replacement of an existing bridge and approach roadways. The bridge is a butted box beam superstructure supported on pile supported precast abutments. The bridge type was selected to provide for accelerated construction techniques thereby minimizing the duration of street closure to two months. The road was closed for 41 days. The replacement bridge was dedicated on November 8, 2010.

RIDOT Reconstruction of Breakneck Hill Road, Lincoln, RI
Crew Chief and Project Surveyor for the reconstruction of 1.4 miles of Breakneck Hill Road (Route 123) from Route 246 to Great Road. Breakneck Hill Road is classified as an Urban Minor Arterial and serves approximately 10,000 vehicles per day. Survey services included obtaining topographic, right-of-way and property line data, preparation of base mapping and State Highway Plats.

RIDOT ADA Accessibility for Six Downtown Streets, Providence, RI
As Senior Project Surveyor, Mr. Culligan prepared topographic and utility surveys for several major streets in the downtown portion of the City. This base plan data was incorporated into design plans delineating proposed sidewalk and other improvements to improve ADA accessibility.

RIDOT High Hazard Interchanges – C2, Providence and East Providence, RI
Senior Project Surveyor for topographic and boundary surveys of hazardous interstate highway ramps. The prime objective of the project was to reduce the frequency and severity of accidents and improve traffic operations at these ramps by collecting and analyzing data.

Ludlow Traffic Improvements, Ludlow, MA
Bryant provided design services for traffic improvements to the intersection of East Street at Chapin Street in Ludlow, MA such as adding turning lanes to the intersection, pedestrian improvements, and upgrading traffic signal control equipment to improve signal timing phasing. As Senior Project Surveyor, Mr. Culligan prepared base mapping of topographic features, incorporated record plans of existing utilities and computed proposed easements required to facilitate roadway improvements.

Meshanticut Interchange 1R Improvements, Cranston, RI
Project Surveyor responsible for the preparation of topographic, Right-of-Way and property surveys for several State highways and City streets encompassing approximately two miles of roadway.

Thomas R. Culligan, Jr., PLS
Senior Project Surveyor

Years Experience
23

Qualification Highlights
Extensive and Varied Surveying Experience

Education
BS, Forestry, Purdue University, 1981

Education/Training
- Confined Space Entry
- OSHA 29CFR 1910.120 40-Hour Training for Hazardous Waste Operations
- OSHA 10-Hour Safety & Health Training
- AMTRAK Safety-Trained

Licenses/Registrations
Professional Land Surveyor:
Rhode Island # 1953
Connecticut # LSX.0070084

RIDOT Reconstruction of Park Avenue, Portsmouth, RI
Crew Chief and Senior Project Surveyor for topographic, Right-of-Way and property surveys needed for the reconstruction of approximately 1.2 miles of State highway. In addition, prepared state highway plats necessary to obtain temporary and permanent easements for roadway improvements.

RIDOT Reconstruction of Route 94, Foster Center Road, Foster, RI
Crew Chief and Survey Technician for existing conditions and Right-of-Way surveys necessary for the reconstruction of approximately two miles State highway.

RIDOT Relocation of Interstate Routes 95 and 195, Providence, RI
As crew chief, Mr. Culligan was involved in obtaining extensive topographic, street line, property line, State freeway line, State highway line and easement line data. As Senior Project Surveyor, Mr. Culligan processed and prepared topographic survey data for submittal to the design engineer. In addition, Mr. Culligan computed property line, street line and highway line data needed to facilitate the preparation of condemnation plats for this project spanning over three miles of interstate highways.

RIDOT Route 116/146 Interchange and the Northeast Quadrant Reconstruction Project, Lincoln, RI
Crew Chief and Senior Project Surveyor for the coordination and preparation of topographic roadway base mapping for approximately one mile of George Washington Highway (Route 116) and approximately two miles of Eddie Dowling Highway (Route 146) from Wilbur Road to I-295.

This project also involved property line and Right-of-Way determination incorporating several State highway alignments and numerous deeds and record plans.

Waterfront Drive & Warren Avenue Connector Right-of-Way Survey and Plats, East Providence, RI
Senior Project Surveyor for the coordination and preparation of topographic base mapping depicting existing conditions from Bold Point Park to Dexter Road, spanning approximately three miles. This project also involved property line and Right-of-Way determination, incorporating six railroad alignments, several State highway alignments, and hundreds of deeds and record plans. In addition, a sixteen-sheet condemnation plat was prepared for numerous easements and highway takings.

West Shore Road Right-of-Way Survey, Warwick, RI
Senior Project Surveyor for a topographic and Right-of-Way survey encompassing approximately two miles of West Shore Road (Route 117).

Bristol Ferry Road Survey, Portsmouth, RI
Senior Project Surveyor for the preparation of condemnation plats necessary for sidewalk and roadway improvements at the intersection of Bristol Ferry (Route No. 114) and Boyd's Lane.

Connecticut DOT Headquarters Construction Layout & Boundary Survey, Newington, CT
Instrument operator involved in all phases of field stake out for construction of the Connecticut DOT headquarters building, parking, roadways and utilities.

Professional Profile

Mr. Hoogasian joined Bryant as a survey instrument person/technician. As an instrument person, he participated in all phases of control surveys and is proficient in using electronic total stations, digital levels and GPS and GIS systems. Now, as a Project Surveyor, he is responsible for the planning and deployment of various surveying and GPS/GIS for various projects, such as locating state plane coordinates. He has also performed construction layout for foundation piles, mud mats, and foundation components for major structures, and provided confined workspace entry survey services.

Project Experience

RIDOT Round Top Bridge, No. 378, Burrillville, RI
Surveyor for this bridge type study, and final design for the replacement of an existing bridge and approach roadways. The bridge is a butted box beam superstructure supported on pile supported precast abutments. The bridge type was selected to provide for accelerated construction techniques thereby minimizing the duration of street closure to two months. The road was closed for 41 days. The replacement bridge was dedicated on November 8, 2010.

RIDOT 1R Safety Improvements to Rte 114 Hope Street, Halle Street to Ferry Street, Warren & Bristol, RI
Engineering services to remove and dispose of the existing drainage systems and construction of a new drainage system. The new system consists of batch basins, manholes, HOPE piping, a bulkhead, and elastrometric check valves. Maintenance level improvements were included to fully upgrade the intersection to meet the RIDOT standards. These upgrades consisted of new pavement, curbing, sidewalks, striping and signage. The proposed drainage system required a Costal Resources Management Council, Maintenance Assent subsurface utility investigation, relocation of existing gas lines, and CCTV drainage report of the existing drainage system.

RIDOT 1R Highway Improvements to Newport Avenue (US Route 1A), Newman Avenue (RI Route 152), and Pawtucket Avenue (RI Route 114), East Providence & Pawtucket, RI
Project Surveyor responsible for 2.8 miles of roadway improvements. The project included cold planning, resurfacing, adjusting utilities, utility locating, sidewalks, curbing, wheelchair ramps, signing and striping, reconfiguring lanes at intersections, signal improvements with mast arms, traffic signals and pedestrian heads, reconstructing catchbasins and drop inlets. The project also included regrading to eliminate roadway flooding.

RIDOT 1R Highway Improvements to Smithfield Avenue/Great Road (RI Route 152); Lincoln, RI
Project Surveyor for improvements to Smithfield Avenue, including cold planning, resurfacing, sidewalks, curb, wheelchair ramps, guardrail, loop detector, traffic signals, utility pole relocations, and drainage system design. The drainage system required one Vortech unit and one Aquashield unit to meet the requirement for an insignificant alteration permit from RIDEM.

King Street Improvement Project, East Greenwich, RI
Project Surveyor for an enhancement project that included 1,056 feet of pavement resurfacing, new sidewalks, curbs, wheelchair ramps, (exposed aggregate) drainage system, traffic islands, ornamental lighting, street signs and pavement markings.

Geoffrey S. Hoogasian, PLS
Project Surveyor

Years Experience
16

Qualification Highlights

Education/Training
AS, Mechanical Power Technology, Wentworth Institute of Technology, 1989

Various Courses in Surveying at Roger Williams University and Northeastern University

Independent study courses in AutoCAD

Confined Workspace Entry

OSHA 29CFR 1910.120
40-Hour Training for
Hazardous Waste Operations

Licenses/Registrations
Professional Land Surveyor:
Rhode Island # 1982

RIDOT Reconstruction of Breakneck Hill Road, Lincoln, RI
Engineering services for reconstruction of 1.4 miles of Breakneck Hill Road (Route 123) from Route 246 to Great Road. Breakneck Hill Road is classified as an Urban Minor Arterial and serves approximately 10,000 vehicles per day. The roadway presented many challenges to the engineer, with steep vertical grades (up to 7.9%) and meandering substandard horizontal alignment.

Ludlow Traffic Improvements, Ludlow, MA
Bryant provided design services for traffic improvements to the intersection of East Street at Chapin Street in Ludlow, MA such as adding turning lanes to the intersection, pedestrian improvements, and upgrading traffic signal control equipment to improve signal timing phasing. As Project Surveyor, Mr. Hoogasian prepared base mapping of topographic features, incorporated record plans of existing utilities and computed proposed easements required to facilitate roadway improvements.

Rhode Island Department of Transportation
Provided various types of property line and topographic survey services on numerous highway projects including Breakneck Hill Road; Lincoln, RI, Park Avenue; Portsmouth, RI, Rockville-Alton Road; Hopkinton, RI and Existing Sidewalk Facilities Survey for ADA Compliance in Providence County, RI.

Port of Galilee North Basin, Narragansett, RI
Topographic, bathymetric and property survey services necessary for design of contemplated improvements. The Port of Galilee, located in the southerly portion of Narragansett, RI provides docking facilities for commercial and recreational boats including the Block Island Ferry. Specifically, the survey included Piers “KK”, “MM”, “NN”, “PP”, “QQ” and “RR” and totaled approximately eight acres. Engineering design services for this project involved the replacement of approximately 530 linear feet of timber bulkhead, site improvements to the access road and adjacent parking area and included a new drainage system with pollution control.

Port of Galilee South Steel Bulkhead Survey, Narragansett, RI
Topographic/bathymetric survey for the rehabilitation of the existing steel sheet piling bulkhead from south of Pier A to State Pier 3. The South Steel Bulkhead Survey at the Port of Galilee was an existing conditions mapping project along the approximate 1100 feet of the busy State owned South Bulkhead and included portions of the abutting processing plants, freezing plants, fuel station, dock facilities, and 15 piers extending into Point Judith Pond. A bathymetric survey was provided and combined with landside survey to generate 1-foot contour intervals on this 4 acre site.

State Pier 9 Bulkhead & Site Improvements, Newport, RI
Topographic survey utilizing GPS of an area approximately 3.4-acres to determine the property and harbor, and the location of the existing bulkhead. The state-owned Pier 9 is home to 50 commercial fishing boats. The bulkhead underwent a $3.6 million dollar reconstruction completed in 2002. Bryant Associates provided existing conditions mapping necessary for designing improvements along approximately 1,200 feet of steel bulkhead, parking and loading facilities, and the storm drainage system.

ARCHITECT - ENGINEER QUALIFICATIONS

PART I – CONTRACT-SPECIFIC QUALIFICATIONS

A. CONTRACT INFORMATION

1. TITLE AND LOCATION *(City and State)*
DESIGN/BUILD Services for the Replacement of the Laurel Avenue Bridge #397, Coventry, RI

2. PUBLIC NOTICE DATE	3. SOLICITATION OR PROJECT NUMBER
February 25, 2011	BID #7448315

B. ARCHITECT-ENGINEER POINT OF CONTACT

4. NAME AND TITLE
Patricia D. Steere, P.E.

5. NAME OF FIRM
Steere Engineering Inc.

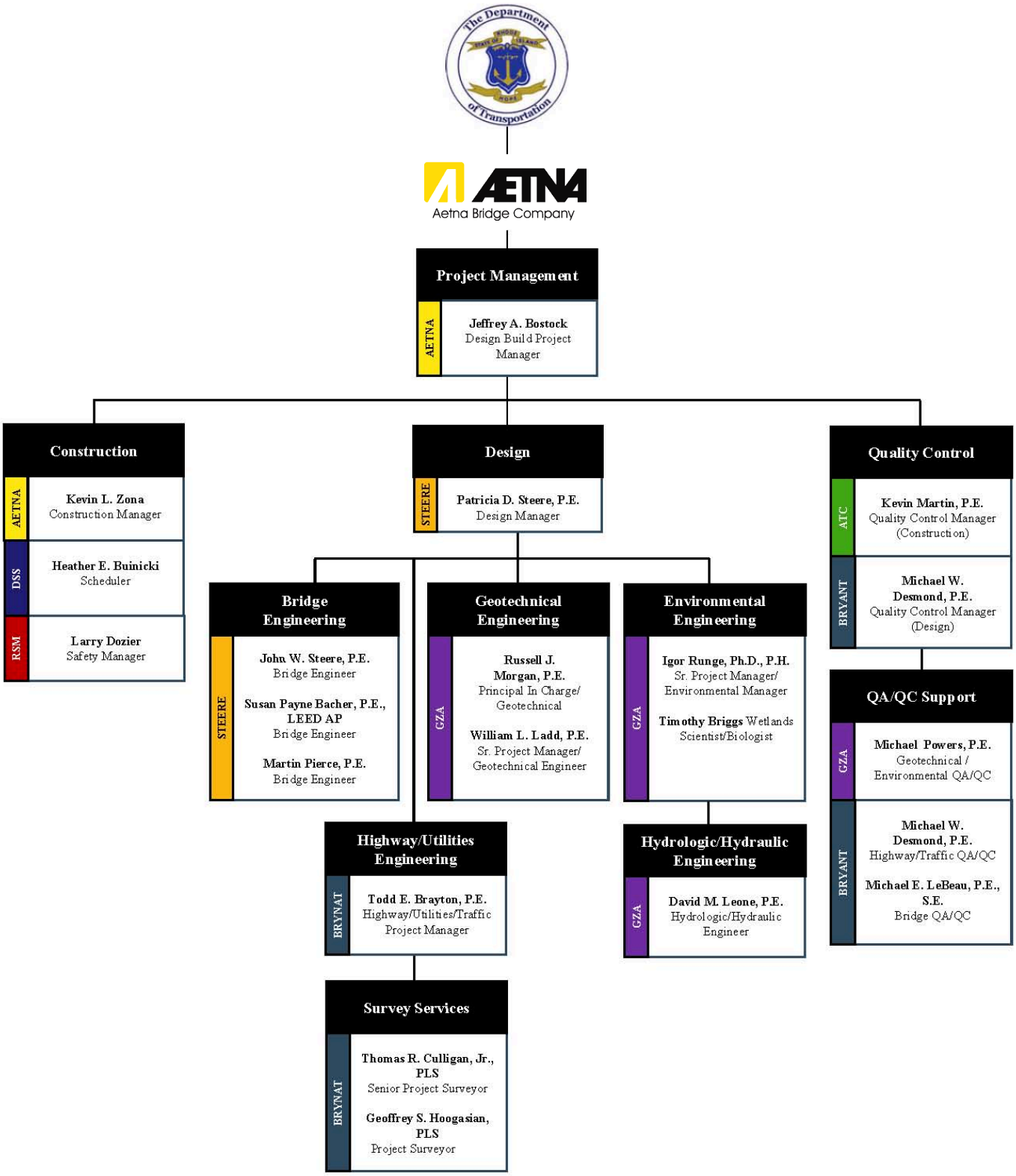
6. TELEPHONE NUMBER	7. FAX NUMBER	8. E-MAIL ADDRESS
(401) 258-9391	(401) 728-0189	patricia.steere@gmail.com

C. PROPOSED TEAM

(Complete this section for the prime contractor and all key subcontractors.)

	(Check) PRIME	JV	SUB	9. FIRM NAME	10. ADDRESS	11. ROLE IN THIS CONTRACT
a.	X			**STEERE ENGINEERING, INC.** ☐ CHECK IF BRANCH OFFICE	640 George Washington Highway Suite 103 Lincoln, RI 02865	Lead Designer, Bridge Engineering
b.			X	**GZA GEO ENVIRONMENTAL, INC.** ☒ CHECK IF BRANCH OFFICE	530 Broadway Providence, RI 02909	Geotechnical and Environmental Engineering
c.			X	**BRYANT ASSOCIATES, INC.** ☒ CHECK IF BRANCH OFFICE	14 Breakneck Hill Road Suite 200 Lincoln, RI 02865	Traffic and Roadway Engineering, Survey Services, and Design QA Lead
d.				☐ CHECK IF BRANCH OFFICE		
e.				☐ CHECK IF BRANCH OFFICE		
f.				☐ CHECK IF BRANCH OFFICE		

D. ORGANIZATIONAL CHART OF PROPOSED TEAM



E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Patricia D. Steere, P.E.	Design Manager Lead Design Engineer and Bridge Engineer	27	<1

15. FIRM NAME AND LOCATION *(City and State)*

Steere Engineering Inc.
640 Geo. Washington Hwy Suite 103
Lincoln, RI 02865

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
BS & MS Structural Engineering	Professional Engineer, RI, Civil, MA, Structural, CT, Civil

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

RI Urban Search and Rescue-Structural Specialist, ACSE,WTS, 2008 Providence Engineering Society Freeman Award Recipient
Architects & Engineers Emergency Response Task Force (Board)

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (*City and State*)
I-195 Relocation, 'Iway', Contract 7, Providence River Bridge

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2003
CONSTRUCTION (*If applicable*): 2007
☐ Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Engineer in charge of the design and analysis of the 7-span 1200' bridge including a 400' network arch span. Performed design and led the bridge design team for this $45M bridge. Main span is a network arch utilizing 3 arches due to its 160' width. West approach spans are trapezoidal steel box girders and east approach spans are concrete box beams made continuous for live load. Concrete piers and abutments were designed as well as drilled shafts.

b.

(1) TITLE AND LOCATION (*City and State*)
I-195 Relocation, Old Harbor, Contracts 1 and 3, Providence, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2003
CONSTRUCTION (*If applicable*): 2005
☐ Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Staff Engineer for the design of structures along the Providence River, consisting of retaining walls, including cast-in-place cantilever, concrete faced tied back sheeting walls, and historic stone masonry; and timber boardwalks and piles with concrete abutment seats for a multi-use path. Responsible for design, estimates, specifications and supervision of contract drawings through final design. Approx. cost was $8M.

c.

(1) TITLE AND LOCATION (*City and State*)
I-195 Relocation, 'Iway', Contract 6, Providence, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2004
CONSTRUCTION (*If applicable*): 2008
☐ Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Managing Engineer for the design and analysis of three ramp bridge for the I-195 Relocation project. These ramps consisted of curved steel trapezoidal box girders with composite decks. The foundations consisted of post-tensioned cast-in-place piers and cast-in-place abutments on h-pile foundations.

d.

(1) TITLE AND LOCATION (*City and State*)
Wilbur Road Bridge No. 415, Lincoln Rhode Island

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2010
CONSTRUCTION (*If applicable*): 2011
☐ Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Managing Engineer for the superstructure replacement design of bridge over Rt 146. This structure is a 2 span steel girder bridge which carries Wilbur Road over Route 146. The bridge consists of 8 girders in cross section and has a total width of 42 feet. Span 1 has a length of 79'-5" while the span 2 length is 34'-3". This contract consisted of replacing the steel superstructure, concrete deck and bearings.

e.

(1) TITLE AND LOCATION (*City and State*)
Braga Bridge, Fall River, MA

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2010
CONSTRUCTION (*If applicable*): 2011
☒ Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Working for the Contractor, performed formwork design and pour procedure submittal for MassDOT for the extensive repairs to the pier 18 cap. The cap is eight feet wide, 27 feet high and 90 feet long with a curved bottom surface requiring heavy formwork and careful pour timing to carry the weight of wet concrete. Also designed access platforms for work at the top of the 90 foot high pier cap.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
John W. Steere, P.E.	Bridge Engineer	35	<1

15. FIRM NAME AND LOCATION *(City and State)*

Steere Engineering Inc.
640 Geo. Washington Hwy Suite 103
Lincoln, RI 02865

16. EDUCATION *(DEGREE AND SPECIALIZATION)*
BS Structural Engineering

17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
Professional Engineer, RI, Civil

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*
RI Urban Search and Rescue-Structural Specialist, Architects & Engineers Emergency Response Task Force (Board)

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*
T.F. Green Airport, Warwick, RI

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2007	2010

☐ Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Responsible for the design of the 1200 foot long elevated pedestrian walkway. The project includes fourteen spans supported on reinforced concrete columns. Performed SAP analysis and design of superstructure and substructure.

b.

(1) TITLE AND LOCATION *(City and State)*
Holliston Sand Company, North Smithfield, RI

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2007	2007

☐ Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Responsible for the design of a new sand storage structure consisting of four eight-foot diameter steel tanks supported by a structural steel system such that the tanks could be used to top-load trucks. The structure also was required to support sand sifting equipment above the tanks so that each tank could store and dispense different grades of sand.

c.

(1) TITLE AND LOCATION *(City and State)*
Repair of Timber Roof Truss, Quonset, RI

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2010	2011

☒ Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Performed field inspection and design of repairs for timber roof truss. Cracks in truss were repaired with steel cover plates bolted to existing timber members. Performed check of GTStrudl analysis and check of design of steel plates and connections.

d.

(1) TITLE AND LOCATION *(City and State)*
Callahan School, Burrillville, RI

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2005	2006

☐ Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Responsible for the analysis and design of a new gymnasium, a new addition to accommodate a handicapped accessible entrance, offices and classrooms, as well as modifications to the old gymnasium for future use as a media center. In addition coordinated the drafting effort and interfaced with the architect.

e.

(1) TITLE AND LOCATION *(City and State)*
T.F. Green Airport, Warwick, RI

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2006	2007

☐ Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Responsible for the design of the new maintenance facility at the airport. The project consisted of a pre-engineered building supported on piles, a fueling building, a sand storage building and a system of retaining walls.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE a. TOTAL	b. WITH CURRENT FIRM
Susan Payne Bacher, P.E., LEED AP	Bridge Engineer	33	<1

15. FIRM NAME AND LOCATION *(City and State)*
Steere Engineering Inc.
640 Geo. Washington Hwy
Suite 103, Lincoln, RI 02865

16. EDUCATION *(DEGREE AND SPECIALIZATION)*
BS & MS Structural Engineering

17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
Professional Engineer, RI, Civil, MA, Civill, CT, Civil, FL, Civil

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*
ACE Mentor Program of Rhode Island

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (*City and State*)
I-195 Relocation, "Iway", Providence, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2003
CONSTRUCTION (*If applicable*): 2009
☐ Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE
Staff engineer involved with the design of various portions of the structural design work for this 600 million dollar project. The overall project included 15 new bridges and 61 new walls including a network arch, steel trapezoidal box girders, concrete box beams, MSE and cast-in-place retaining walls. The project included 15 separate construction contracts. Ms. Bacher's work on the project included the design of seismic bearing restraints and QAQC review of various elements throughout the project.

b.

(1) TITLE AND LOCATION (*City and State*)
On-call Bridge Ratings as sub to WSP Sell for RIDOT

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2011
CONSTRUCTION (*If applicable*): N/A
X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE
Engineer performing LRFD Ratings for 5 bridges. All are truss bridges. WSP Sells performed the inspections and Steere Engineering is performing the ratings. Ratings are being performed using the latest RIDOT LRFD Rating manual and using
Brass and SAP software.

c.

(1) TITLE AND LOCATION (*City and State*)
Wilbur Road Bridge No. 415, Lincoln Rhode Island

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2010
CONSTRUCTION (*If applicable*): 2011
☐ Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE
Staff engineer involved with the superstructure replacement design of bridge over Rt 146. This structure is a 2 span steel girder bridge which carries Wilbur Road over Route 146. The bridge consists of 8 girders in cross section and has a total width of 42 feet. Span 1 has a length of 79'-5" while the span 2 length is 34'-3". This contract consisted of replacing the steel superstructure, concrete deck and bearings.

d.

(1) TITLE AND LOCATION (*City and State*)
Pleasantville Toll Plaza Elevated Walkway, Atlantic City Expressway, Pleasantville, NJ

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2003
CONSTRUCTION (*If applicable*): 2004
☐ Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE
Lead structural engineer for the design of this enclosed walkway structure spanning several lanes of interstate highway. Included the design of tower structures at each end of the walkway acting as supporting abutments for the pre-engineered pedestrian walkway and housing access stairs and elevators. Foundations for the bridge and towers are pile supported. Concrete walls and the roof of the tower are unusually angled for architectural expression.

e.

(1) TITLE AND LOCATION (*City and State*)
Oak Bluffs Ferry Terminal Dock Reconstruction, Oak Bluffs, MA

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2009
CONSTRUCTION (*If applicable*): 2010
☐ Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE
Structural engineer for this project consisting of repair and reconstruction to piers used for access to ferries. Piers are supported by timber and steel pipe piles, designed for vehicular loads, pedestrian loads and wave impact. Inlcudes a 300 ft long pedestrian walkway with heavy timber truss superstructure and pavilions adjoing a new terminal building. The terminal building is constructed on an existing concrete seawall foundation. Redesign of existing concrete seawall/foundation walls was required when they were severely damaged during construction. The project was cited with a Silver excellence award by ACEC/MA.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Martin Pierce, P.E.	Bridge Engineer	15	<1

15. FIRM NAME AND LOCATION *(City and State)*

Steere Engineering Inc.
640 Geo. Washington Hwy Suite 103
Lincoln, RI 02865

16. EDUCATION *(DEGREE AND SPECIALIZATION)*
BS & MS Structural Engineering

17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
Professional Engineer, RI, Civil, FL, Civil

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*
American Concrete Institute member

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (*City and State*)
I-195 Relocation, 'Iway', Providence, RI: Contracts 6, 6A, 10 & 11 – Ramp NE, Ramp WS, Ramp WES, Ramp SE, Ramp PS, Clifford, Oxford, Public and O'Connell Street Bridges

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2003
CONSTRUCTION *(If applicable)*: 2010
☐ Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Assisted in the design, plan development and preparation of contract documents. Responsibilities included designing various elements relating to multiple span pre-stressed box beams, curved steel girder box beams, curved steel plate girders, substructure abutments, multiple column pier bents, hammerhead pier caps and columns, shallow and deep foundations, along with cantilever and mse retaining walls. Design forces and deformations obtained from the creation and analysis of multiple finite element models.

b.

(1) TITLE AND LOCATION (*City and State*)
Wilbur Road Bridge No. 415, Lincoln Rhode Island:

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2010
CONSTRUCTION *(If applicable)*: 2011
☐ Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

This structure is a 2 span steel girder bridge which carries Wilbur Road over Route 146. The bridge consists of 8 girders in cross section and has a total width of 42 feet. Contract consisted of superstructure replacement. Responsibilities included the design of the reinforced concrete deck, new elastomeric bearings and camber & deflection.

c.

(1) TITLE AND LOCATION (*City and State*)
India Point Park Pedestrian Bridge over I-195, Providence Rhode Island.

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2005
CONSTRUCTION *(If applicable)*: 2009
☐ Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

The India Point Park Pedestrian Bridge is a two-span butted precast pre-stressed concrete girder bridge constructed as simple spans and made continuous for live load supported by a two-span continuous, monolithic, stepped, rigid frame arch structure. Responsibilities included the design of the 2 span continuous pre-stressed butted box beams, design verification of rigid frame deck reinforcement and the design of multiple column pier caps and footings supporting the rigid frame arch.

d.

(1) TITLE AND LOCATION (*City and State*)
Garden Street Bridge/Pine Street Bridge, Pawtucket Rhode Island

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2010
CONSTRUCTION *(If applicable)*: 2013
☐ Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

The structures are 4 span steel I-girder bridges which carry Garden Street and Pine Street over Route 95. The bridges are similar and each consists of (9) cover plated I girders and has a total width of 54 feet. Contract consisted of superstructure and intermediate pier replacement. Responsibilities included the substructure design of the three intermediate multi-column pier caps and spread footings along with the design of seismic isolation bearings, used to reduce forces on the new piers.

e.

(1) TITLE AND LOCATION (*City and State*)
Massachusetts Bay Transportation Authority – Swanton Street Bridge No. W-40-009 – Winchester MA.

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2009
CONSTRUCTION *(If applicable)*: N/A
☐ Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Performed Load Rating analysis for built up riveted steel plate through girder bridge in accordance with AREMA specifications.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Russell J. Morgan, P.E.	**Principal In Charge/ Geotechnical**	**25**	**20**

15. FIRM NAME AND LOCATION *(City and State)*

GZA GeoEnvironmental, Inc., Providence, Rhode Island

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFFESIONAL REGISTRATION *(STATE AND DISCIPLINE)*
B.S./1982/Civil and Ocean Engineering **M.S./1984/Civil Engineering**	**CT, RI, MA/ Professional Engineer**

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Mr. Morgan's extensive waterfront experience includes inspection, rehabilitation, analysis, design, and construction monitoring of marine structures. He has specialized in structural and geotechnical engineering as applied to the marine environment. His marine design experience includes pile-supported structures, relieving platforms, bulkheads, retaining walls, cofferdams, and ship berthing and mooring systems. Mr. Morgan was co-author of the geotechnical section of the 1990 waterfront design reference text, entitled "Design of Marine Facilities for the Berthing, Mooring, and Repair of Vessels." In addition, Mr. Morgan has been involved in diving for more than 16 years and is still active in above-and below-water inspections of marine structures.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*

Stillwater Reservoir Dam Improvements
Smithfield, Rhode Island

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(if applicable)*
2002	**2005**

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — √ Check if project performed with current firm

Project Reviewer - Stillwater Reservoir Dam is a 20-foot –high, 660-foot long earthen and concrete structure that was reportedly constructed in 1910. The main dam also has earthen dikes on each side, ranging up to ten feet in height and 590 feet in length. GZA was the prime consultant for the repair project, providing RIDEM with an array of engineering services, including visual inspection, wetland delineation, topographic survey, geotechnical investigation, hydrologic and hydraulic analyses, design of embankment repairs, spillway capacity improvements, preliminary and final design plans, bid oversight, and construction contract management. GZA has also designed embankment repairs for the structure to address concerns regarding excessively steep slopes and to improve access for maintenance and ADA recreational use, to improve freeboard, and to provide erosion protection.

b.

(1) TITLE AND LOCATION *(City and State)*

Vehicular Bridge Replacement, Newport Navy Base
Newport, Rhode Island

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(if applicable)*
2007	**ongoing**

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — √ Check if project performed with current firm

Principal-in-Charge - Completed a geotechnical evaluation of a proposed 300-foot bridge structure between Coasters Insland and Aquidneck Island. Work included land and water based explorations, soil sampling, rock coring and geotechnical laboratory testing. GZA designed 4-foot diameter drilled caissons socked into bedrock. GZA provided full-time construction monitoring.

c.

(1) TITLE AND LOCATION *(City and State)*

Caribou Connector Design Building Project
Caribou, Maine

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(if applicable)*
ongoing	

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — √ Check if project performed with current firm

Principal-in-Charge - Mr. Morgan currently serves as Principal-in-Charge for this design build effort. The contract was successfully won Contractors Lane Construction and Sargent Corp. and Lead Designer Tylin International. The projects consist of several bridges and connect roadways. GZA is providing geotechnical engineering and construction phase services for the project.

d.

(1) TITLE AND LOCATION *(City and State)*

Port of Galilee Northwest Bulkhead and Improvement Project
Narragansett, Rhode Island

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(if applicable)*
2004	**2005**

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — √ Check if project performed with current firm

Project Manager, Replacement of Barrington and Warren River Bridges, Barrington and Warren, Rhode Island. Mr. Morg completed a significant geotechnical evaluation and foundation design for two replacement bridges carrying state highway Route 1 The exploration phase of the project included borings and soundings using peizo-electric cone penetrometers. The proposed p foundation was modeled for lateral capacity using the COM 624 computer program. The model was later field calibrated by full sc lateral load testing during the design phase. Mr. Morgan also provided/managed full-time construction monitoring during p installation.

e.

(1) TITLE AND LOCATION *(City and State)*

Veteran's Memorial Bridge Design-Build Project
Portland/South Portland, Maine

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(if applicable)*
1999	**2000**

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — √ Check if project performed with current firm

Principal-in-Charge - Reed & Reed / T.Y. Lin International design-build team for the Veteran's Memorial Bridge, currently under construction. GZA interpreted available subsurface information, developed interpretive subsurface profiles and completed engineering analyses to support design of the new bridge foundations and approach roadways. In addition to preparing geotechnical aspects of plans, specifications and reports in accordance with AASHTO LRFD and Maine BDG Standards, GZA participated in developing the Design Quality Management Plan (DQMP) and the Construction Quality Management Plan (CQMP). During the construction phase, GZA is providing review, instrumentation and consultation for the wick-drain surcharge embankment, pile driving services including construction consultation, Wave Equation analysis and Dynamic (PDA) Pile Testing with Signal Matching (CAPWAP) Analysis in support of the CQMP.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
William L. Ladd, P.E.	**Sr. Project Manager/ Geotechnical Engineer**	**18**	**18**

15. FIRM NAME AND LOCATION *(City and State)*

GZA GeoEnvironmental, Inc. – 530 Broadway, Providence, RI 02909

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFFESIONAL REGISTRATION *(STATE AND DISCIPLINE)*
B.S., 1987, Civil and Environmental Engineering, University of RI	**Registered Professional Engineer in Rhode Island**

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Mr. Ladd's experience includes a variety of soil, foundation and waterfront engineering projects. He has acted as field engineer or project engineer for projects involving geotechnical site investigations, testing and instrumentation, construction monitoring, and structural design.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Stillwater Reservoir Dam Improvements Smithfield, Rhode Island**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: **2002** — CONSTRUCTION *(if applicable)*: **2005**

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE √ Check if project performed with current firm

Project Reviewer - Stillwater Reservoir Dam is a 20-foot –high, 660-foot long earthen and concrete structure that was reportedly constructed in 1910. The main dam also has earthen dikes on each side, ranging up to ten feet in height and 590 feet in length. GZA was the prime consultant for the repair project, providing RIDEM with an array of engineering services, including visual inspection, wetland delineation, topographic survey, geotechnical investigation, hydrologic and hydraulic analyses, design of embankment repairs, spillway capacity improvements, preliminary and final design plans, bid oversight, and construction contract management. GZA has also designed embankment repairs for the structure to address concerns regarding excessively steep slopes and to improve access for maintenance and ADA recreational use, to improve freeboard, and to provide erosion protection.

b.

(1) TITLE AND LOCATION *(City and State)*: **Ashton Bridge, Blackstone River Bikeway, Segment 6, Lincoln and Cumberland, RI**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: **2002** — CONSTRUCTION *(if applicable)*:

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE √ Check if project performed with current firm

GZA's services included development and implementation of a subsurface exploration program. The explorations included test borings at each abutment, as well as in the middle of the river for a potential center pier. The soil conditions were found to be deposits of sands and gravels over glacial till and bedrock. Thin layers of organic river sediments were below the fill behind the abutments, but not below the foundation. A stability analysis of the new structure on the existing abutments was performed, and indicated that global stability did not meet current bridge engineering standards. Permanent steel sheet piling was driven at the toe of the abutments.

c.

(1) TITLE AND LOCATION *(City and State)*: **Relocated Route 403 Bridge 1005, North Kingstown, RI**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: **1995** — CONSTRUCTION *(if applicable)*: **N/A**

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE √ Check if project performed with current firm

Prepared a geotechnical report presenting foundation recommendations for the construction of a new, three-span bridge utilizing integral abutments supported on H-piles, and center piers on shallow foundations. The proximity of the piers to existing railroad track required the design of a soldier pile and lagging earth support system, with rock-socketed piles and internal bracing.

d.

(1) TITLE AND LOCATION *(City and State)*: **Barrington and Palmer River Bridges, Barrington, RI**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: **1997** — CONSTRUCTION *(if applicable)*: **1998**

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE √ Check if project performed with current firm

GZA has performed a variety of geotechnical engineering services for the contractors performing the work for both the construction of the temporary bridges, as well as the current replacement bridge construction.

For the temporary bridge, GZA provided engineering support for the driving and load testing of steel pipe piles installed in the river bed. Prior to driving the piles, GZA performed pre-construction condition surveys of residences located within 200 feet of the work, and vibration monitoring at the residences during the pile driving. GZA prepared the shop drawing submittal and provided field observation for the lateral load testing of the pipe piles socketed into bedrock.

e.

(1) TITLE AND LOCATION *(City and State)*: **Improved Access from Interstate 95, Providence, RI**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: **1998** — CONSTRUCTION *(if applicable)*: **1999**

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE √ Check if project performed with current firm

Coordinated and managed a fast-track geotechnical site investigation program for new highway ramps at the Civic Center Interchange. Provided design recommendations and construction observation for the installation of 3-foot to 6-foot diameter drilled shafts for support of the new structures. Analysis of the shafts included rock and soil bearing values and lateral loading using the COM624 computer program. The project also included the use of mechanically stabilized earth (MSE) retaining walls, for which a global stability analysis was performed.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
David M. Leone, P.E.	**Hydrologic/Hydraulic Engineer**	**13**	**13**

15. FIRM NAME AND LOCATION *(City and State)*

GZA GeoEnvironmental, Inc., Norwood, MA

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
B.S., Civil Engineering, Worcester Polytechnic Institute **M.S., Civil Engineering, University of Massachusetts**	**2004 , Professional Engineer, MA #45877**

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Mr. Leone is a hydrologist and hydraulic engineer in GZA's GeoCivil Group who specializes in surface water hydrology, open-channel hydraulics, stream restoration, and groundwater hydrology. His expertise includes computer modeling of rainfall/runoff processes, hydraulic structures, and mapping using geographic information systems (GIS). Mr. Leone is well-versed in several hydrologic computer applications including HEC-1, HEC-6, HEC-RAS, and DAMBRK, and has also developed site-specific computer models for both watershed and reservoir-specific water balance simulation. He has performed spillway adequacy analyses and dam break simulations for dozens of dam and reservoir systems, including the largest dams of the City of New York water supply system. Mr. Leone also has specific expertise in the area of dam Emergency Action Planning (EAP), having developed EAPs for the City of New York, Commonwealth of Massachusetts, and many other municipalities and private dam owners.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If Applicable)*
California Jim's Pond Dam Replacement **South Kingstown, Rhode Island**	**1999**	**2000**

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — √ Check if project performed with current firm

Project Engineer - California Jim's Pond is an approximately 14-acre man-made reservoir located in Peace Dale, Rhode Island which failed on February 18, 1998 after heavy rains. GZA GeoEnvironmental, Inc was retained by the Town of South Kingstown to design a new spillway structure, obtain RIDEM permits, and to provide construction oversight services. The dam improvements included a new concrete drop spillway located at the location of the former drop inlet and dam breach. The 40-foot wide spillway was sized to accommodate the 100-year flood, and is spanned by a timber bridge. An 18-inch sluice gate and low-level outlet pipe was incorporated into the design. Improvements to the earthen embankment included flattening the side slopes to 3H:1V, the placement of a low permeability silt layer on the upstream slope, riprap erosion protection, and a new concrete walkway.

b.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If Applicable)*
Stillwater Reservoir Dam Improvements **Smithfield, Rhode Island**	**2003**	**2005**

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — √ Check if project performed with current firm

Project Engineer - GZA undertook a variety of engineering services related to the design of improvements to the Stillwater Reservoir Dam for the Rhode Island Department of Environmental Management, Division of Planning and Development (RIDEM). Stillwater Reservoir Dam is a 20-foot –high, 660-foot long earthen and concrete structure that was reportedly constructed in 1910. The main dam also has earthen dikes on each side, ranging up to ten feet in height and 590 feet in length. GZA was the prime consultant for the repair project, providing RIDEM with an array of engineering services, including visual inspection, wetland delineation, topographic survey, geotechnical investigation, hydrologic and hydraulic analyses, design of embankment repairs, spillway capacity improvements, preliminary and final design plans, bid oversight, and construction contract management. Among the technical challenges involved with the project was the refinement of existing hydrologic analyses related to the so-called "Spillway Design Flood (SDF)". GZA re-evaluated the hydrologic analysis for RIDEM with Federal Emergency Management Agency guidelines. As a result of the updated analyses, a lesser magnitude SDF was found to be appropriate, and new spillway repair options were developed.

c.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If Applicable)*
Mapping of Massachusetts Water Resource Authority Dams **Throughout Massachusetts**	**2007**	**N/A**

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — √ Check if project performed with current firm

Project Engineer, Hydrologic and Hydraulic Evaluation and Inundation and Mapping. As a follow-up to our Phase I Dam Inspection services to MWRA, Mr. Leone served as the lead hydrologic and hydraulic engineer for GZA's spillway adequacy analyses and dam breach evaluation services for about a dozen dams in the MWRA system. The work involved the development of rainfall-runoff to assess the ability of the spillway to safely pass the regulatory design flood and the preparation of dam breach computer models to develop dam breach inundation maps for inclusion into existing Emergency Action Plans.

d.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If Applicable)*
RI Department of Environmental Management Dam Hazard **Classification, Rhode Island**	**2009**	**N/A**

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — √ Check if project performed with current firm

Project Manager - Mr. Leone has project management, lead technical and GIS mapping duties for this dam hazard potential classification project. ' project involves updating the dam hazards in the RIDEM database for 68 public and private dams throughout the state. GZA is performing so-ca "simplified" dam break analyses for each of the dams, as well as site reconnaissance and mapping estimated inundation areas and downstream life resources in ArcView (GIS).

e.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If Applicable)*
Falls Pond and Hoadley Pond Dam Repair **Connecticut**	**2008**	**2008**

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — √ Check if project performed with current firm

Project Manager - GZA has undertaken dam repair engineering services on behalf of Aquarion Water Company for 2 dams: Falls Pond Dam in Redding and Hoadley Pond Dam in Seymour, Connecticut. Both dams are concrete and stone masonry gravity structures which are in poor structural condition. Mr. Leone is the project manager for the repair design, which include hydrologic and hydraulic analyses, stability analyses, structural and civil engineering design, and permitting coordination. Additionally, the repair of Falls Pond Dam includes local stakeholder outreach and coordination as a result of its location in a historically significant District. In response, GZA has prepared a context-sensitive repair design which has met the approval of local and state historic officials. The projects are currently under construction as of the Summer of 2007.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Igor Runge, Ph.D., PH	**Sr. Project Manager/ Environmental Manager**	**29**	**8**

15. FIRM NAME AND LOCATION *(City and State)*
GZA GeoEnvironmental, Inc., Providence, Rhode Island

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFFESIONAL REGISTRATION *(STATE AND DISCIPLINE)*
BS/1979/Meteorology MS/1980/Meteorology PhD/1989/Civil and Environmental Engineering	**Certified Professional Hydrologist, American Institute of Hydrology**

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*
As a Senior Project Manager at GZA, Dr. Runge is responsible for many environmental engineering and water quality/quantity projects conducted by the company, with an emphasis in regulatory permitting and storm water management. This includes oversight and design of construction dewatering alternatives, site development, federal, state, and local environmental permitting, surface water and groundwater remediation efforts, watershed flood mitigation planning and management activities, storm water runoff management, low impact development options, and hydrologic/hydraulic evaluations.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*
Electrical Transmission Line Regulatory Permitting, Johnston, Rhode Island.

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: **2010**
CONSTRUCTION *(if applicable)*:

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE
√ Check if project performed with current firm

Project Manager. As part of a new landfill gas to energy project, GZA conducted all due diligence investigations and secured regulatory permits for twin 115kV electrical transmission lines, which cross an extensive wetland area that will connect a proposed 42 MW power plant to existing overhead transmission lines. Dr. Runge worked in concert with National Grid (NG) personnel to ensure all NG protocols were satisfied. The permitting process included specific requirements from various state and federal programs, including the Rhode Island Pollutant Discharge Elimination System (RIPDES), U.S. Army Corps of Engineers Section 404 of the Clean Water Act, Rhode Island Freshwater Wetlands, Rhode Island Historic Preservation and Heritage Commission, and the Federal Wild and Scenic Rivers Act.

b.

(1) TITLE AND LOCATION *(City and State)*
Brushy Brook Master Plan Evaluation, Hopkinton, Rhode Island

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: **2010**
CONSTRUCTION *(if applicable)*:

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE
√ Check if project performed with current firm

Project Manager. GZA was retained by the Town of Hopkinton to evaluate a proposed major land development project in terms of potential environmental impacts and long-term safe carrying capacity of the 360 acre parcel. Our analyses included the development's compliance with the RI Freshwater Wetlands Act, the new RI Stormwater Design and Installation Standards (released December 2010), RI onsite wastewater treatment regulations, and the U.S. Clean Water Act. The project included several roadway stream crossings that required evaluation of cross sections with respect to stream impacts and a traffic study.

c.

(1) TITLE AND LOCATION *(City and State)*
Dewatering Permitting and Treatment- Capital Center Project Providence, Rhode Island

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: **On-going**
CONSTRUCTION *(if applicable)*: **2008**

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE
√ Check if project performed with current firm

Project Manager. Dr. Runge was responsible for design and RIPDES permitting of a groundwater treatment system to remove metals and volatile organic compounds from a perimeter dewatering system discharging 400 gallons per minute. This large capacity dewatering system was a last-minute design change made by the developer and required an intensive effort by GZA to secure appropriate RIDEM discharge and water quality permits in a very short time period. GZA is continuing to assist the building's owner with RIDEM permit requirements for the subsurface dewatering and treatment system.

d.

(1) TITLE AND LOCATION *(City and State)*
Regulatory Permitting for Seaboats Inc., Fall River, Massachusetts.

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: **2008**
CONSTRUCTION *(if applicable)*:

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE
√ Check if project performed with current firm

Project Manager. Seaboats Inc. owns a shipyard on the Taunton River in Fall River where large marine vessels are constructed, launched, and maintained. The facility includes two vessel berthing areas with crumbling stone walls and deteriorated timber piles. GZA was retained to prepare all required regulatory permitting to rebuild the docks. Dr. Runge coordinated a fast track permitting approach that included coordination with MADEP, National Park Service, US Army Corps of Engineers, Fall River Conservation Commission, and the City of Fall River. All permits were successfully secured.

e.

(1) TITLE AND LOCATION *(City and State)*
Pocasset River Floodwall Design and Watershed Plan Cranston/Johnston, Rhode Island

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: **2009**
CONSTRUCTION *(if applicable)*:

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE
√ Check if project performed with current firm

Project Manager. The Natural Resources Conservation Service retained GZA to evaluate mitigation practices to reduce flooding and associated property damage along the Pocasset River in central Rhode Island. Our work products included development of a TR-20 and HEC-RAS computer model to simulate discharges and water elevations during various design storms, evaluation of structural alternatives along the river, preparation of engineering designs of selected storm water mitigation practices (floodwalls, levies) GZA prepared an environmental impact statement, conducted a NEPA evaluation and developed a watershed plan.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Timothy L. Briggs	**Wetlands Scientist/Biologist**	**27**	**20**

15. FIRM NAME AND LOCATION *(City and State)*

GZA GeoEnvironmental, Inc., Norwood, MA

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
BS/ Fisheries Biology **MS/ Botany**	

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Mr. Briggs has extensive technical experience in ecological risk assessment of chemical releases to the environment. He is also an expert in environmental regulations governing land development and commercial/industrial land use, with particular focus on evaluating potential impacts to wetland and upland habitats, and water resources. Mr. Briggs has extensive experience in site evaluations and environmental permitting with projects including wetland permitting for residential and commercial developments, and environmental risk assessment associated with oil and hazardous material releases.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If Applicable)*
Electrical Transmission Line Regulatory Permitting, Johnston, Rhode Island	**2010**	

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — √ Check if project performed with current firm

As part of a new landfill gas to energy project, GZA conducted all due diligence investigations and secured regulatory permits for twin 115kV electrical transmission lines, which cross an extensive wetland area that will connect a proposed 42 MW power plant to existing overhead transmission lines. Mr. Briggs worked with GZA's Project manager and the utility company, National Grid, to minimize impacts to Rhode Island regulated wetland resources, in order to facilitate approval of the transmission line under state and federal programs, including the Rhode Island Pollutant Discharge Elimination System (RIPDES), U.S. Army Corps of Engineers Section 404 of the Clean Water Act, Rhode Island Freshwater Wetlands, Rhode Island Historic Preservation and Heritage Commission, and the Federal Wild and Scenic Rivers Act.

b.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If Applicable)*
Stonebridge Circle Wetland Alteration Mitigation, Natick, Massachusetts.	**ongoing**	**2009**

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — √ Check if project performed with current firm

NStar Electric & Gas hired GZA to respond the Natick Conservation Commission Enforcement Order related to unauthorized brush hog mowing of approximately one acre of wetland resource area. Mr. Briggs performed a wetland functions and values assessment that demonstrated that the mowing of the wetland did not significantly alter the predominate functions performed by this wetland. Mr. Briggs was able to limit the restoration program to supplemental planting of shrubs along the margin of the BVW and small areas of soil disturbance or areas that otherwise did not appear to support a dense woody root mat.

c.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If Applicable)*
Forge Pond Dam Breach, Freetown, Massachusetts	**2010**	**2010**

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — √ Check if project performed with current firm

GZA was contracted by the Massachusetts DCR to design and oversee an emergency dam breach project at Forge Pond Dam in Freetown, Massachusetts. Following construction of the permanent dam breach, Mr. Briggs evaluated pre- and post-breach wetland resources and hydrological conditions to evaluate likely changes in wetland resource allocation and potential conversion of some wetland areas to upland as the altered hydrology begins to affect the plant community composition and soil conditions within the footprint of the pre-breach pond and the areas at the margins of the pond. This assessment was included in an Expanded Environmental Notification Form submitted to MEPA; the EENF is still under review.

d.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If Applicable)*
Seaboats Inc., Fall River, Massachusetts	**2008**	

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — √ Check if project performed with current firm

Seaboats Inc. owns a shipyard on the Taunton River in Fall River where large marine vessels are constructed, launched, and maintained. The facility includes two vessel berthing areas with crumbling stone walls and deteriorated timber piles. GZA was retained to prepare all required regulatory permitting to rebuild the docks. Mr. Briggs characterized and delineated wetland resources in the vicinity of the project. These characterizations supported a fast track permitting approach that included coordination with MADEP, National Park Service, US Army Corps of Engineers, Fall River Conservation Commission, and the City of Fall River. All permits were successfully secured.

All permits were successfully secured.

e.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If Applicable)*
411 Waverley Oaks Road, Waltham, Massachusetts	**ongoing**	**2010**

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — √ Check if project performed with current firm

GZA has been retained to perform the investigation and remediation of this site, which was historically impacted by disposal of large quantities of waste oil in open excavated pits. This site has been managed as a Tier 1A site under the Massachusetts Contingency Plan. Mr. Briggs performed site investigation and a Stage II Ecological Risk Characterization, and designed the remediation program for a 3 acre area of Pond and vegetated wetland. A wetland remediation pilot program was implemented in 2010, and is on-going.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE a. TOTAL	14. YEARS EXPERIENCE b. WITH CURRENT FIRM
Michael A. Powers, P.E., L.S.P.	**Geotechnical / Environmental QA/QC**	**37**	**35**

15. FIRM NAME AND LOCATION *(City and State)*
GZA GeoEnvironmental, Inc., Providence, RI

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
MS / Civil Engineering **BS / Civil Engineering, AE/ Civil Engineering**	**MA / Professional Engineer and Licensed Site Professional**

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*
Mr. Powers has been responsible for groundwater investigations in 15 states, Puerto Rico, and South America. He has participated in groundwater investigations at 13 National Priority List (NPL) sites and numerous industrial sites where groundwater contamination was a major issue. Projects under his direction also addressed town-wide groundwater management needs and construction dewatering. His computer modeling experience dates back to 1974 and includes participation in and/or responsibility for the development of more than 20 digital groundwater flow models.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED PROFESSIONAL SERVICES	(2) YEAR COMPLETED CONSTRUCTION (If Applicable)
Metropolitan Transportation Authority and New York City Transit, Fulton Street Transit Center, New York	**ongoing**	**-**

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ✓ Check if project performed with current firm

Consultant Reviewer. GZA has evaluated soil and groundwater conditions for the project as they relate to: soil excavation and the handling, transportation and disposal of potentially contaminated soil; and groundwater quality and groundwater disposal. In addition, GZA has reviewed and supported consultant submissions for the Draft Environmental Impact Statement (DEIS), and authored various Design Criteria Manual and Constructability Report assessments. GZA ensured integration of the results of the environmental investigations into preliminary engineering and final design documents produced for the project, including various project Construction Specifications and a Draft Construction Environmental Protection Plan (CEPP).

b.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED PROFESSIONAL SERVICES	(2) YEAR COMPLETED CONSTRUCTION (If Applicable)
Narragansett Bay Commission- Woonasquatucket CSO Drop Shaft, Providence, Rhode Island	**2004**	**-**

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ✓ Check if project performed with current firm

Principal-in-Charge. A SOE failure (designed by others) prompted the contractor Walsh Construction NE to retain GZA for SOE design, dewatering and expert services during arbitration. The source of the failure was attributed to inadequate dewatering by unidentified artesian pressures in the overburden. The improved design (SOE and dewatering) proved successful and the issue was resolved before arbitration hearings started.

c.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED PROFESSIONAL SERVICES	(2) YEAR COMPLETED CONSTRUCTION (If Applicable)
East Side CSO Tunnel Project Portland, Oregon	**2009**	**-**

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ✓Check if project performed with current firm

Technical Consultant. Developed specifications and oversaw the performance of a pumping test at the OF43 drop shaft excavation. Testing identified the presence of a high-yield aquifer (T>8,000FT^2/day) that presented water disposal (Q>900 GPM) and potential settlement issues. The findings prompted the construction of a secant wall a solder pile and lagging supported excavation.

d.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED PROFESSIONAL SERVICES	(2) YEAR COMPLETED CONSTRUCTION (If Applicable)
Metropolitan Transportation Authority (MTA) and New York City Second Avenue Tunnel, New York, New York	**2004**	**-**

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ✓ Check if project performed with current firm

Senior Technical Consultant. GZA provided estimates on the volumes of flows and potential impacts of construction dewatering on this tunneling project. Our responsibilities included estimating flows to the rock tunnel and evaluating the potential consequences of construction, dewatering at the cut and cover sections required at the stations. The varied geologic conditions at the north and south ends of the alignment (varved silts and very pervious sands) required the use of numerical models.

e.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED PROFESSIONAL SERVICES	(2) YEAR COMPLETED CONSTRUCTION (If Applicable)
CSO Rack 40 and Basin Project Akron, Ohio	**2008**	**-**

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ✓ Check if project performed with current firm

Expert Testimony. During construction, the base of the 2-acre excavation, to be founded in a silt, became unstable, exhibiting silt boils and quick conditions. The source of the pressure was a deep (>200 feet) previously unmapped sand aquifer. The solution was pumping (>300 GPM) from this geologic unit. GZA provided recommendations on system shut-down and helped the contractor prevail in arbitration.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE a. TOTAL	b. WITH CURRENT FIRM
George F. Monaghan, Jr., PE	Principal In Charge - Highway and Survey	38	22

15. FIRM NAME AND LOCATION *(City and State)*

BRYANT ASSOCIATES
Engineers Surveyors Construction Managers

14 Breakneck Hill Road
Suite 200
Lincoln, RI 02865

16. EDUCATION *(DEGREE AND SPECIALIZATION)*

MS/Civil Engineering
BS/Construction Engineering
AS/Architectural Engineering

17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*

Professional Civil Engineer in MA and KY

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Affiliations: American Society of Civil Engineers, National Utility Contractors Association, American Public Works Association, Rhode Island Consulting Engineers, National Society of Professional Engineers

Publications/Awards: Coauthored "The Effects of Maintenance and Rehabilitation Alternatives for Asphalt Pavements in New England and New York", 1999 International LTPP Contest FHWA/ASCE Best Paper Zone I

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*
RIDOT Round Top Bridge, No. 378, Burrillville, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2010
CONSTRUCTION *(If applicable)*: 2010

X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Principal-in-Charge for a bridge replacement that included geotechnical, hydrologic/hydraulic, civil and traffic engineering services. Bryant performed a bridge type study, and final design for the replacement of an existing bridge and approach roadways. The bridge is a butted box beam superstructure supported on pile supported precast abutments. The bridge type was selected to provide for accelerated construction techniques thereby minimizing the duration of street closure to two months. The road was closed for 41 days. The replacement bridge was dedicated on November 8, 2010.

b.

(1) TITLE AND LOCATION *(City and State)*
Reconstruction of Breakneck Hill Road, Lincoln, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2003
CONSTRUCTION *(If applicable)*: 2003

X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Initially served as Project Manager and then as Principal-in-Charge for this roadway reconstruction project which included horizontal and vertical alignment modifications, ROW acquisitions, a historical land conversion, highway and drainage permitting, geotechnical explorations, bridge ratings for 3 bridges and rehabilitation of one bridge, and extensive public participation. This project is comprised of the reconstruction of 1.4 miles of Breakneck Hill Road (Route 123) from Route 246 to Great Road. Breakneck Hill Road is classified as an Urban Minor Arterial and services approximately 10,000 vehicles per day.

c.

(1) TITLE AND LOCATION *(City and State)*
High Hazard Ramps Interstate C-2, Providence and East Providence, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2000-Ongoing
CONSTRUCTION *(If applicable)*: Ongoing

X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Principal-in-Charge for design improvements to 21 hazardous interstate interchanges. The objective of this project was to reduce the frequency and severity of accidents while improving traffic operations. Based on the analysis of the data collected, Bryant prepared a conceptual design report, recommending three categories of improvements such as minor, intermediate, and major. Minor improvements were performed under existing statewide contracts. Final design plans and the contract documents were prepared for intermediate improvements, which included the redesign of four signal systems with signage and ADA compliance. Major improvements are being studied further for physical and fiscal feasibility.

d.

(1) TITLE AND LOCATION *(City and State)*
High Hazard Ramps, Interstate C-2, Statewide, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2000-Ongoing
CONSTRUCTION *(If applicable)*: Ongoing

X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Principal-in-Charge for the preparation of Conceptual Design Report, including analysis of accident history, safety deficiencies, and performance of benefit-cost analysis for proposed improvements. Oversight for design of traffic signal and road improvement plans, as well as preparation of contract documents, including an estimate for the project.

e.

(1) TITLE AND LOCATION *(City and State)*
Warwick/East Greenwich Bicycle Network, Warwick & East Greenwich, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: Ongoing
CONSTRUCTION *(If applicable)*:

X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Principal-in-Charge for the design of three multi-use paths including pedestrian bridges. This project included site preparation, ROW Phase I and II environmental site assessment, horizontal and vertical alignments, super elevations, typical sections, cross-sections, grade plans, layout plans, drainage and utility plans, environmental permitting, and public meetings.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Michael W. Desmond, PE	Quality Control Manager (Design) Highway & Traffic QA/QC	43	11

15. FIRM NAME AND LOCATION *(City and State)*

BRYANT ASSOCIATES
Engineers Surveyors Construction Managers

14 Breakneck Hill Road
Suite 200
Lincoln, RI 02865-3925

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
BS/Civil Engineering Post Graduate Studies and Workshops	Professional Civil Engineer in CT, MA, RI, MD, and VT

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Affiliations: American Society of Civil Engineers, Institute of Transportation Engineers, Chi Epsilon Honor Fraternity, North Kingstown Rhode Island Planning Commission (Chairman)

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*
RIDOT Round Top Bridge, No. 378, Burrillville, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2010
CONSTRUCTION *(If applicable)*: 2010
X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Transportation Manager for a bridge replacement project that included geotechnical, hydrologic/hydraulic, civil and traffic engineering services. Bryant performed a bridge type study, and final design for the replacement of an existing bridge and approach roadways. The bridge is a butted box beam superstructure supported on pile supported precast abutments. The bridge type was selected to provide for accelerated construction techniques thereby minimizing the duration of street closure to two months. The road was closed for 41 days. The replacement bridge was dedicated on November 8, 2010.

b.

(1) TITLE AND LOCATION *(City and State)*
High Hazard Ramps, Interstate C-2, Statewide, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2000-Ongoing
CONSTRUCTION *(If applicable)*: Ongoing
X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Traffic Project Manager who oversaw the preparation of Conceptual Design Report, including analysis of accident history, safety deficiencies, and performance of benefit-cost analysis for proposed improvements. Responsible for design of traffic signal and road improvement plans, as well as preparation of contract documents, including an estimate for the project.

c.

(1) TITLE AND LOCATION *(City and State)*
1R Highway Improvements, Statewide, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 1999-Ongoing
CONSTRUCTION *(If applicable)*: Ongoing
X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Project Manager for the study and design of 1R improvements to eight arterial (including one limited access) roadways located in various municipalities throughout the state. Work included resurfacing, roadside improvements (curb and sidewalk), drainage, permitting, signing, striping, as well as a bridge evaluation. The approximate cost of the projects is $16 million.

d.

(1) TITLE AND LOCATION *(City and State)*
1R Highway Improvements to Smithfield Avenue/Great Road (RI Route 126), Lincoln, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2006
CONSTRUCTION *(If applicable)*: 2006
X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Project Manager for highway and traffic improvements to Smithfield Avenue/Great Road. As part of this 1R highway project, significant drainage improvements were undertaken. Bryant also provided design services for pavement resurfacing, curb and sidewalk installation, traffic signals, retaining walls, and implementation of a storm water prevention plan.

e.

(1) TITLE AND LOCATION *(City and State)*
Highway Improvements to Newport Avenue, Newman Avenue, and Pawtucket Avenue, East Providence and Pawtucket, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: Ongoing
CONSTRUCTION *(If applicable)*: N/A
X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Highway and traffic improvements to Newport Avenue (U.S. Route 1A), Newman Avenue (R.I. Route 152), and Pawtucket Avenue (R.I. Route 114). As part of the project, operations at six signalized intersections were analyzed. New traffic signals were designed and installed, including a complex coordinated system of four signals on two separate roadways and a mid-block pedestrian signal. In addition, Bryant provided study and design services for the drainage improvements to Newman Avenue and to the Newport Avenue/Ferris Avenue drainage system.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Michael E. LeBeau, PE, SE	Bridge QA/QC	27	7

15. FIRM NAME AND LOCATION *(City and State)*

BRYANT ASSOCIATES
Engineers Surveyors Construction Managers

14 Breakneck Hill Road
Suite 200
Lincoln, RI 02865-3925

16. EDUCATION *(DEGREE AND SPECIALIZATION)*

MS/Civil Engineering
BS/Civil Engineering
AS/Engineering
AS/Electronic Engineering Technology

17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*

Professional Civil/Structural Engineer in CT, DC, FL, IN, KY, MA, MD, ME, NH, OH, RI, and VA

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Affiliations: American Society of Civil Engineers, American Institute of Steel Construction, Precast/Prestressed Concrete Institute, International Association of Foundation Drilling, International Conference of Building Officials, Structural Engineers Association of Rhode Island

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*

RIDOT Round Top Bridge, No. 378, Burrillville, RI

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2010	2010

X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Project Manager for geotechnical and hydrologic/hydraulic engineering services, bridge type study, and final design for the replacement of an existing bridge. The bridge is a butted box beam superstructure supported on pile supported precast abutments. The bridge type was selected to provide for accelerated construction techniques thereby minimizing the duration of street closure to two months. The road was closed for 41 days. The replacement bridge was dedicated on November 8, 2010.

b.

(1) TITLE AND LOCATION *(City and State)*

RIDOT Maskerchugg River Bridge, No. 1094, East Greenwich, RI

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2009	2009

X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Project Manager for geotechnical and hydrologic/hydraulic engineering services, bridge type study, and final design for this new bridge that is part of the Warwick-East Greenwich Bicycle Network. This 170-foot steel truss pedestrian bridge spans between Warwick and East Greenwich, Rhode Island over the Maskerchugg River.

c.

(1) TITLE AND LOCATION *(City and State)*

South Warren Bridge No. 125, Hope Street, Warren/Bristol, RI

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2004	N/A

X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Conducted an in-depth field inspection and evaluation on South Warren Bridge No. 125. This structure is one of the last remaining brick jack arch bridges in Rhode Island. Completed computations for final in-depth inspection, evaluation, and rating report with recommendations for rehabilitation and/or replacement.

d.

(1) TITLE AND LOCATION *(City and State)*

RIDOT I-95 Safety Improvement Project, RI

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
1997	N/A

Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Conducted in-depth field inspections and evaluation, preliminary retrofitting assessment and cost evaluations, design computations and final contract documents including plans and specifications for the rehabilitation of bridge structures. The work ranged from minor repair to major rehabilitation, including deck repair and/or replacement, partial superstructure replacement, substructure repair and/or replacement, fatigue retrofitting, seismic retrofitting and expansion joint elimination. Seismic retrofitting for the various bridges consisted of one or more or a combination of column jacketing, beam seat retrofitting of existing rocker bearings and replacement with seismic isolation bearings and removal of existing bearings and replacement with elastomeric type bearings. Completed a geotechnical investigation for the project and provided abutment underpinning stabilization design at the Toll Gate Road Bridge. Underpinning consisted of the installation of 50 grouted mini-piles.

e.

(1) TITLE AND LOCATION *(City and State)*

RIDOT Warwick/East Greenwich Bicycle Network, Warwick-East Greenwich, RI

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Ongoing	

X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Structural Project Manager responsible for oversight of the preparation of preliminary and final structural design computations, plans, details and specifications for the multi-use pedestrian, bicycling, and recreational pathways linking sports complexes, bike trails, public parks, etc. For structures, conducted type studies that would be most technically appropriate and cost effective for a number of crossings, prepared geotechnical reports for structures, prepared hydrologic/hydraulic reports for bridges over stream crossings, conducted in-depth inspection and evaluation of an existing stone box culvert, and preliminary and final design of superstructure and substructure elements. Responsible for the preparation of construction plans, details, and specifications for all proposed bridge designs. The largest of these bridges is a 170-foot steel truss structure that carries pedestrian/bicycle traffic over the Maskerchugg River, which is located in East Greenwich.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Abram Koyfman, PE	Senior Structural Engineer	35	1

15. FIRM NAME AND LOCATION *(City and State)*

BRYANT ASSOCIATES Engineers Surveyors Construction Managers

98 North Washington Street
Suite B1
Boston, MA 02114

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
MSSE/Structural Engineering	Professional Structural Engineer in MA

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

American Society of Civil Engineers, Member

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*

MBTA State Street Station (Blue Line)
Boston, MA

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2005	

☐ Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Senior Structural Engineer for the structural design of this subway station modernization. Structural design including the 88-foot extension of the subway platform as well as the construction of a new elevator headhouse. Mr. Koyfman performed a constructability review in order to minimize the disruption to operations. He also provided design for the temporary deck construction.

b.

(1) TITLE AND LOCATION *(City and State)*

Central Artery C17A6 - I-93 Kneeland Street to Charles River
Boston, MA

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2005	2006

☐ Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Senior Structural Engineer for the design of two new 1,250-foot-long mainline cut-and-cover tunnels, including demolition and surface restoration. Mr. Koyfman also performed constructability reviews and met with construction personnel to ensure the tunnel was built to design standards.

c.

(1) TITLE AND LOCATION *(City and State)*

Central Artery C15A1 - North to Chardon Streets
Boston, MA

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2003	2004

☐ Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Senior Structural Engineer for the design of the temporary decking and support of open-cut excavation for construction between North and Chardon Streets. Mr. Koyfman determined the jacking sequence for the underpinning of the existing elevated artery. He also performed the analysis of the effect of excavation on historic structures, due the effects of soft soils.

d.

(1) TITLE AND LOCATION *(City and State)*

Logan Street & Breckinridge CSO Storage Basin
Louisville, KY

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Ongoing	

☒ Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Senior Structural Engineer currently designing a 16 Million Gallon Underground Storage Basin. Duties include identifying structural issues with the site, including impacts to existing railroad and creek, constructability issues related to soil conditions and tight restraints, as well as evaluation of preliminary designs and construction alternatives. Mr. Koyfman also performed constructability reviews for cast-in-place structure, double-decker basin, as well as oversized in line storage options for different schemes. He is presently designing the underground basin to 60 % design.

e.

(1) TITLE AND LOCATION *(City and State)*

MBTA Contract No. E02CN15: Tunnel under Russia Wharf and Fort Point Channel, Boston, MA

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2004	2004

☐ Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Structural design to support the excavation for the tunnel design under Russia Wharf and cofferdam next to Fort Point Channel.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE a. TOTAL	b. WITH CURRENT FIRM
Todd E. Brayton, PE	Highway/Utilities/Traffic Project Manager	11	11

15. FIRM NAME AND LOCATION *(City and State)*

BRYANT ASSOCIATES Engineers Surveyors Construction Managers

14 Breakneck Hill Road
Suite 200
Lincoln, RI 02865-3925

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
MS/Civil and Environmental Engineering BS/Civil and Environmental Engineering	ProfessionalEngineer in RI

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

American Society of Civil Engineers
Intelligent Transportation Society – Rhode Island Chapter

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*
Round Top Bridge, No. 378, Burrillville, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2010
CONSTRUCTION *(If applicable)*: 2010
X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Project Manager for traffic engineering, including maintenance and protection of traffic control plans and a traffic management plan. Bryant performed a bridge type study, and final design for the replacement of an existing bridge and approach roadways. The bridge is a butted box beam superstructure supported on pile supported precast abutments. The bridge type was selected to provide for accelerated construction techniques thereby minimizing the duration of street closure to two months. The road was closed for 41 days. The replacement bridge was dedicated on November 8, 2010.

b.

(1) TITLE AND LOCATION *(City and State)*
Preliminary Engineering/High Hazard Ramps, Interstate C-2, Statewide, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: Ongoing
CONSTRUCTION *(If applicable)*: Ongoing
X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

This project consisted of a series of 21 interstate interchanges that were reviewed with respect to their safety and traffic operations. Improvements have been recommended to achieve the greatest traffic service and safety benefits possible within the existing physical and environmental constraints at each interchange. Mr. Brayton's role in this project included preparation of the CDR and managing and assisting in the design of the proposed signal, roadway, and traffic improvements.

c.

(1) TITLE AND LOCATION *(City and State)*
Moulton Square Improvements, Lowell, MA

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2004
CONSTRUCTION *(If applicable)*: 2004
X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Traffic calming measures, including the narrowing of the roadways and the addition of bump outs around parking lanes, were implemented to direct traffic and reduce the speeds of the vehicles traveling through the Square while maintaining parking for the residents. Landscaping and brick pavers were utilized to provide an aesthetically pleasing area for both pedestrians and residents.

d.

(1) TITLE AND LOCATION *(City and State)*
Highway Improvements to Newport Avenue, Newman Avenue, and Pawtucket Avenue, East Providence and Pawtucket, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: Ongoing
CONSTRUCTION *(If applicable)*: Ongoing
X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Highway and traffic improvements to Newport Avenue (U.S. Route 1A), Newman Avenue (R.I. Route 152), and Pawtucket Avenue (R.I. Route 114). This project involves 1R Highway Improvements, including the rehabilitation of the sidewalks and pavement structure of the roadway, the identification and correction of roadside hazards, and the upgrading of the signing and striping along the length of the project. As part of the project, operations at six signalized intersections were analyzed. New traffic signals were designed and installed, including a complex coordinated system of four signals on two separate roadways and a mid-block pedestrian signal. In addition, Bryant provided study and design services for the drainage improvements to Newman Avenue and to the Newport Avenue/Ferris Avenue drainage system.

e.

(1) TITLE AND LOCATION *(City and State)*
1R Highway Safety Improvements to Rte 114 Hope Street, Halle Street to Ferry Street, Bristol, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2003-ongoing
CONSTRUCTION *(If applicable)*: Ongoing
X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Bryant Associates provided engineering design services for drainage improvements to eliminate flooding on Rt. 114. Design services included the removal and disposal of the existing drainage system and construction of a new drainage system. Maintenance level improvements included new pavement, curbing, sidewalks, striping, and signage.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE a. TOTAL	b. WITH CURRENT FIRM
Elizabeth R. Lavoie, PE	Senior Traffic Engineer	9	7

15. FIRM NAME AND LOCATION *(City and State)*

BRYANT ASSOCIATES Engineers Surveyors Construction Managers

14 Breakneck Hill Road,
Suite 200
Lincoln, RI 02865

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
BS University of Rhode Island – Civil Engineering	Rhode Island – PE (Civil Engineering)

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Chi Epsilon (Civil Engineering Honor Society)
Society of Women Engineers
Institute of Transportation Engineers

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*
Round Top Bridge, No. 378, Burrillville, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2010
CONSTRUCTION *(If applicable)*: 2010

X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Development of maintenance and protection of traffic control plans and traffic management plan. Performed field review; and quantity takeoff. Bryant performed a bridge type study, and final design for the replacement of an existing bridge and approach roadways. The bridge is a butted box beam superstructure supported on pile supported precast abutments. The bridge type was selected to provide for accelerated construction techniques thereby minimizing the duration of street closure to two months. The road was closed for 41 days. The replacement bridge was dedicated on November 8, 2010.

b.

(1) TITLE AND LOCATION *(City and State)*
1R Highway Improvements to Smithfield Avenue - Lincoln, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2006
CONSTRUCTION *(If applicable)*: 2008

X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Development of location plans and drainage details, coordination with underground utility locators, and preformed stormwater pollution prevention plan inspections.

c.

(1) TITLE AND LOCATION *(City and State)*
1R Highway Improvements to Route 114 - Warren/Bristol, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: Ongoing
CONSTRUCTION *(If applicable)*: N/A

X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Development of general plans, typical sections, details, grade plans, striping plans, detour plan, maintenance and protection of traffic control plan, and traffic management plan. Performed catch basin inspections; utility coordination, computer analysis of intersections using AutoTurn; quantity takeoff, and bid estimation. Prepared a PowerPoint presentation about the purpose and goals of the project, a design study report, stair inventory report, job specific specifications, and a pedestrian study for the downtown area.

d.

(1) TITLE AND LOCATION *(City and State)*
1R Highway Improvements to School Street - Lincoln, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: Ongoing
CONSTRUCTION *(If applicable)*: N/A

X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Development of general plans, drainage and utility plans, and cross-sections; utility coordination; preliminary cost estimate; and coordination with underground utility locators.

e.

(1) TITLE AND LOCATION *(City and State)*
1R Highway Improvements to Route 146 – North Smithfield, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2007
CONSTRUCTION *(If applicable)*: N/A

X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Development of general plans, profiles, grade plans, cross sections, details, and maintenance and protection of traffic control plans. Performed catch basin inspections; utility coordination, computer analysis of median opening using AutoTurn; roadway barrier detail review, roadway barrier layout, quantity takeoff, and bid estimation. Prepared a design study report, job specific specifications, and contract documents.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE a. TOTAL	b. WITH CURRENT FIRM
Dara Clough, PE	Traffic Engineer	7	7

15. FIRM NAME AND LOCATION *(City and State)*

BRYANT ASSOCIATES
Engineers Surveyors Construction Managers

14 Breakneck Hill Road
Suite 200
Lincoln, RI 02865

16. EDUCATION *(DEGREE AND SPECIALIZATION)*

BS/Civil Engineering
BA/Spanish

17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*

Professional Civil Engineer in RI

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Affiliations: Chi Epsilon Honor Society and Tau Beta Pi Honor Society
Women in Transportation Society (WTS), Rhode Island Chapter
Intelligent Transportation Society, Rhode Island Chapter
Institute of Transportation Engineers, Rhode Island Chapter

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*

Provide Accessibility to Existing Sidewalk Facilities per the Americans With Disabilities Act, South Main Street/North Main Street, Providence, RI

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(If applicable)*: Ongoing

X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

This project involves the review of existing sidewalks along 0.85 miles of South Main Street and North Main Street, from Transit Street to Smith Street. The sidewalks were evaluated for conformance to the requirements of the Americans with Disabilities Act and plans and contract documents are being prepared to address the non-conforming conditions encountered, including intersections without wheelchair ramps, excessive cross slopes, non-ADA compliant sidewalk clearances, and poor sidewalk surface condition. The pavement structure of the roadway will be rehabilitated, roadside hazards will be identified and corrected, and signing and striping will be upgraded. Construction costs are estimated to be approximately $1.6 million. Ms. Swanson's experience includes the completion of the Design Study Report and the creation of general plans and signing and striping plans.

b.

(1) TITLE AND LOCATION *(City and State)*

Round Top Bridge, No. 378, Burrillville, RI

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2010; CONSTRUCTION *(If applicable)*: 2010

X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Development of maintenance and protection of traffic control plans and traffic management plan for this replacement bridge. Bryant performed a bridge type study, and final design for the replacement of an existing bridge and approach roadways. The bridge is a butted box beam superstructure supported on pile supported precast abutments. The bridge type was selected to provide for accelerated construction techniques thereby minimizing the duration of street closure to two months. The road was closed for 41 days. The replacement bridge was dedicated on November 8, 2010.

c.

(1) TITLE AND LOCATION *(City and State)*

High Hazard Ramps Interstate C-2, Providence and East Providence, RI

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(If applicable)*: Ongoing

X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

The high hazard ramps are a series of 21 interstate interchanges that have been reviewed with respect to their safety and traffic operations. Improvements have been recommended to achieve the greatest traffic service and safety benefits possible within the existing physical and environmental constraints at each interchange. Ms. Swanson's experience on this project includes the analysis of accident data and the creation of collision diagrams, and the development of general plans and signing and striping plans.

d.

(1) TITLE AND LOCATION *(City and State)*

Highway Improvements to Newport Avenue, Newman Avenue, and Pawtucket Avenue, East Providence and Pawtucket, RI

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(If applicable)*: N/A

X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Highway and traffic improvements to Newport Avenue (U.S. Route 1A), Newman Avenue (R.I. Route 152), and Pawtucket Avenue (R.I. Route 114). This project involves 1R Highway Improvements, including the rehabilitation of the sidewalks and pavement structure of the roadway, the identification and correction of roadside hazards, and the upgrading of the signing and striping along the length of the project. As part of the project, operations at six signalized intersections were analyzed. New traffic signals were designed and installed, including a complex coordinated system of four signals on two separate roadways and a mid-block pedestrian signal. In addition, Bryant provided study and design services for the drainage improvements to Newman Avenue and to the Newport Avenue/Ferris Avenue drainage system. Ms. Swanson's experience on this project includes the analysis of the existing and proposed traffic signal timings using Synchro and the creation of traffic signal plans.

e.

(1) TITLE AND LOCATION *(City and State)*

Reconstruction of Moulton Square, Lowell, MA

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2004; CONSTRUCTION *(If applicable)*: 2004

X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Moulton Square, located within a residential district, suffered from traffic patterns that left motor vehicle operators questioning the appropriate path of travel and also allowed for excessive speed. Traffic calming measures, including the narrowing of the roadways and the addition of bumpouts around parking lanes, were implemented to direct traffic and reduce the speeds of the vehicles traveling through the Square, while maintaining parking for the residents. In addition, landscaping and brick pavers were utilized to provide an aesthetically pleasing area for both pedestrians and residents. Ms. Swanson's experience on this project includes the creation of the conceptual and final design plans.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE a. TOTAL	b. WITH CURRENT FIRM
Thomas R. Culligan, Jr., PLS	Senior Project Surveyor	23	16

15. FIRM NAME AND LOCATION *(City and State)*

BRYANT ASSOCIATES
Engineers Surveyors Construction Managers

14 Breakneck Hill Road
Suite 200
Lincoln, RI 02865

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
BS/Forestry	Professional Land Surveyor in RI and CT.

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Certifications: OSHA 29 CFR 1910.120 40-Hour Training for Hazardous Waste Operations, AMTRAK Safety Training, Confined Space Entry Training

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*
Round Top Bridge, No. 378, Burrillville, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2010
CONSTRUCTION *(If applicable)*: 2010
X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Surveyor for this bridge replacement that included geotechnical, hydrologic/hydraulic, civil and traffic engineering services. Bryant performed a bridge type study, and final design for the replacement of an existing bridge and approach roadways. The bridge is a butted box beam superstructure supported on pile supported precast abutments. The bridge type was selected to provide for accelerated construction techniques thereby minimizing the duration of street closure to two months. The road was closed for 41 days. The replacement bridge was dedicated on November 8, 2010.

b.

(1) TITLE AND LOCATION *(City and State)*
Ludlow Traffic Improvements, Ludlow, MA

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2009
CONSTRUCTION *(If applicable)*: 2010
X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Bryant provided design services for traffic improvements to the intersection of East Street at Chapin Street in Ludlow, MA such as adding turning lanes to the intersection, pedestrian improvements, and upgrading traffic signal control equipment to improve signal timing phasing. As Senior Project Surveyor, Mr. Culligan prepared base mapping of topographic features, incorporated record plans of existing utilities and computed proposed easements required to facilitate roadway improvements.

c.

(1) TITLE AND LOCATION *(City and State)*
Reconstruction of Breakneck Hill Road, Lincoln, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2003
CONSTRUCTION *(If applicable)*: 2003
X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Surveyor for this roadway reconstruction project which included horizontal and vertical alignment modifications, ROW acquisitions, a historical land conversion, highway and drainage permitting, geotechnical explorations, bridge ratings for 3 bridges and rehabilitation of one bridge, and extensive public participation. This project is comprised of the reconstruction of 1.4 miles of Breakneck Hill Road (Route 123) from Route 246 to Great Road. Breakneck Hill Road is classified as an Urban Minor Arterial and services approximately 10,000 vehicles per day.

d.

(1) TITLE AND LOCATION *(City and State)*
High Hazard Ramps Interstate C-2, Providence and East Providence, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2000-Ongoing
CONSTRUCTION *(If applicable)*: Ongoing
X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Surveyor for design improvements to 21 hazardous interstate interchanges. The objective of this project was to reduce the frequency and severity of accidents while improving traffic operations. Based on the analysis of the data collected, Bryant prepared a conceptual design report, recommending three categories of improvements such as minor, intermediate, and major. Minor improvements were performed under existing statewide contracts. Final design plans and the contract documents were prepared for intermediate improvements, which included the redesign of four signal systems with signage and ADA compliance. Major improvements are being studied further for physical and fiscal feasibility.

e.

(1) TITLE AND LOCATION *(City and State)*
Newport Naval Station Training Building Design/Build, Newport, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2008
CONSTRUCTION *(If applicable)*: 2010
X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Survey services for this design/build project for the P-101 Training Building for the Navy Supply Corps School, and Renovations/Additions to building # 112 for Marine Detachment (MARDET). The project involved the demolition of an existing 2-story brick fire department building and site preparation for the new Navy Supply Corps School. Construction of a new 100-car parking lot and renovations to building # 112 including fire lanes and a 43-car parking lot. The site design required new utilities including water, sanitary and fire protection, and CRMC permits. Test pits were performed to locate utilities within the drainage alignment. Bryant Associates developed the existing conditions base map from topographic survey, utility test pit locations, drainage investigation, and plans supplied by NAVFAC.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE a. TOTAL	b. WITH CURRENT FIRM
Geoffrey S. Hoogasian, PLS	Project Surveyor	17	17

15. FIRM NAME AND LOCATION *(City and State)*

BRYANT ASSOCIATES Engineers Surveyors Construction Managers

14 Breakneck Hill Road
Suite 200
Lincoln, RI 02865

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
AS/Mechanical Power Technology	Professional Land Surveyor in RI.

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Certifications: OSHA 29CFR 1910.120 40-Hour Training for Hazardous Waste Operations, Confined Workspace Entry

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*
Round Top Bridge, No. 378, Burrillville, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2010
CONSTRUCTION *(If applicable)*: 2010
X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Surveyor for this bridge type study, and final design for the replacement of an existing bridge and approach roadways. The bridge is a butted box beam superstructure supported on pile supported precast abutments. The bridge type was selected to provide for accelerated construction techniques thereby minimizing the duration of street closure to two months. The road was closed for 41 days. The replacement bridge was dedicated on November 8, 2010.

b.

(1) TITLE AND LOCATION *(City and State)*
Ludlow Traffic Improvements, Ludlow, MA

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2009
CONSTRUCTION *(If applicable)*: 2010
X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Bryant provided design services for traffic improvements to the intersection of East Street at Chapin Street in Ludlow, MA such as adding turning lanes to the intersection, pedestrian improvements, and upgrading traffic signal control equipment to improve signal timing phasing. As Project Surveyor, Mr. Hoogasian prepared base mapping of topographic features, incorporated record plans of existing utilities and computed proposed easements required to facilitate roadway improvements.

c.

(1) TITLE AND LOCATION *(City and State)*
Reconstruction of Breakneck Hill Road, Lincoln, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2003
CONSTRUCTION *(If applicable)*: 2003
X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Surveyor for this roadway reconstruction project which included horizontal and vertical alignment modifications, ROW acquisitions, a historical land conversion, highway and drainage permitting, geotechnical explorations, bridge ratings for 3 bridges and rehabilitation of one bridge, and extensive public participation. This project is comprised of the reconstruction of 1.4 miles of Breakneck Hill Road (Route 123) from Route 246 to Great Road. Breakneck Hill Road is classified as an Urban Minor Arterial and services approximately 10,000 vehicles per day.

d.

(1) TITLE AND LOCATION *(City and State)*
High Hazard Ramps Interstate C-2, Providence and East Providence, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2000-Ongoing
CONSTRUCTION *(If applicable)*: Ongoing
X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Surveyor for design improvements to 21 hazardous interstate interchanges. The objective of this project was to reduce the frequency and severity of accidents while improving traffic operations. Based on the analysis of the data collected, Bryant prepared a conceptual design report, recommending three categories of improvements such as minor, intermediate, and major. Minor improvements were performed under existing statewide contracts. Final design plans and the contract documents were prepared for intermediate improvements, which included the redesign of four signal systems with signage and ADA compliance. Major improvements are being studied further for physical and fiscal feasibility.

e.

(1) TITLE AND LOCATION *(City and State)*
Newport Naval Station Training Building Design/Build, Newport, RI

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2008
CONSTRUCTION *(If applicable)*: 2010
X Check if project performed with current firm

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Survey services for this design/build project for the P-101 Training Building for the Navy Supply Corps School, and Renovations/Additions to building # 112 for Marine Detachment (MARDET). The project involved the demolition of an existing 2-story brick fire department building and site preparation for the new Navy Supply Corps School. Construction of a new 100-car parking lot and renovations to building # 112 including fire lanes and a 43-car parking lot. The site design required new utilities including water, sanitary and fire protection, and CRMC permits. Test pits were performed to locate utilities within the drainage alignment. Bryant Associates developed the existing conditions base map from topographic survey, utility test pit locations, drainage investigation, and plans supplied by NAVFAC.

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 1

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
I-195 Relocation, 'Iway', Contract 7, Providence, RI	2003	2007

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	B. POINT OF CONTACT NAME	C. POINT OF CONTACT TELEPHONE NUMBER
Rhode Island Department of Transportation (RIDOT)	Mr. Kazem Farhoumand, P.E. Chief Engineer	(401) 222-2053 x4100

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

The Providence River Bridge, also known as the 'Iway' Bridge, is a seven span, 1250-foot-long bridge carrying I-195 over the Providence River. The main span is a 400-foot-long network arch bridge. Based on research into network arch bridges, it was decided to use the network arch cable arrangement to reduce the moments in the arch tie, and reduce their cross sections to obtain a lightweight and structurally efficient design.

Network arches have been used in Europe and Japan, but the Providence River bridge is the first such bridge in the United States. Network arch bridges save considerable amounts of steel because they behave like trusses—as long as the cables do not relax under loading. This reduces the bending moments caused by uneven live loading and enables the arch and tie cross sections to be reduced.

The Providence River Bridge spans the Providence River and a portion of the east side and carries the heavily traveled I-195 into downtown Providence, RI. The bridge is designed to carry five lanes of traffic in each direction, resulting in a 165-footwide structure. Due to its large width it uses three arches rather than two. Three arches were used instead of four due to the site specific space constraints caused by the Fox Point Hurricane barrier to the north and a 110-year-old brick sewer siphon running to the south.

The bridge was built offsite and floated into place. This type of construction was made feasible by the lightness of the bridge.
Self-Propelled Modular Transporters were used for the first time in Rhode Island to transport the bridge from the pier at
Quonset Point to barges and floated to Providence. The move was featured on the History Channel's Mega Movers program on "Really Big Bridges" in 2007. The 'Iway' Bridge was also chosen by the American Council of Engineering Companies as the Grand Conceptor winner in the 2010 Engineering Excellence Awards competition for displaying the highest degree of innovation, achievement, and value.

Note: Steere Engineering Inc. engineers worked on this project while employed at Maguire Group Inc.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a.	Steere ENGINEERING INC Bridge and Structural Engineers	Lincoln, RI	Bridge design
b.	Bryant Associates	Lincoln, RI	Survey
c.	GZA	Providence, RI	Geotechnical

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 2

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
I-195 Relocation, 'Iway', Contract 6	2004	2008

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	B. POINT OF CONTACT NAME	C. POINT OF CONTACT TELEPHONE NUMBER
Rhode Island Department of Transportation (RIDOT)	Mr. Michael Savella, P.E. Bridge Engineer	(401) 222-2053 x4080

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

The I-195 Relocation Project in the city of Providence, RI relocated the junction of two major interstate highways, I-95 and I-195. The original intersection, built at the inception of the interstate in the late 1950s, had many substandard highway alignment features including left-hand exits as well as deteriorating bridges. As part of the project to correct and bring the highways up to modern standards, a series of seven ramp bridges were built.

The seven ramp bridges are multi-span steel, trapezoidal box girder bridges with the longest ramps over 1,500 feet in total length. Spans are up to 250 feet long. The bridges feature three integral pier caps and uneven span lengths due to the congested urban site where they were built. High performance steel was used for the fracture critical integral pier caps, as well as the two-girder bridges.

The bridges were modeled in three dimensions using a combination of SAP2000 and Descus. They were designed in accordance with AASHTO Standard Specifications for Highway Bridges, 17th Edition for an HS-25 loading and seismic loads.

Note: Steere Engineering Inc. engineers worked on this project while employed at Maguire Group Inc.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a.	Steere ENGINEERING INC Bridge and Structural Engineers	Lincoln, RI	Bridge design
b.	Bryant Associates	Lincoln, RI	Survey
c.			
d.			

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 3

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
I-195 Relocation, 'Iway', Contracts 1 and 3, Providence, RI	2003	2005

23. PROJECT OWNER'S INFORMATION

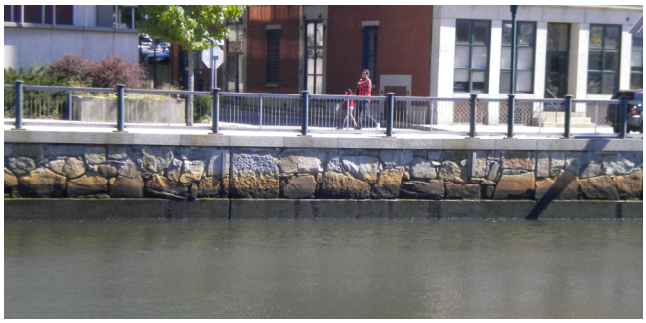
a. PROJECT OWNER	B. POINT OF CONTACT NAME	C. POINT OF CONTACT TELEPHONE NUMBER
Rhode Island Department of Transportation (RIDOT)	Mr. Kazem Farhoumand, P.E. Chief Engineer	(401) 222-2053 x4100

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Walls and boardwalks were designed along the Providence River in downtown Providence as an expansion of the parks along the river which include Waterplace Park. Several types of walls were designed including a tied back sheeting wall with a concrete and granite face, cast-in-place concrete walls on timber piles, wall extensions on top of an existing bulkhead, and repairs to historic stone masonry walls. The layer of organic silt in this area along the river required deep foundations for all the structures.

Several boardwalks were designed for an unusually heavy (150 psf) live load in order to accommodate future events along the river which is host to Waterfire and Shakespeare in the Park among other events. The boardwalks were designed using tropical hardwoods and piles.

Steere Engineers, while at another firm, performed the design of the walls and boardwalks. The construction cost of the river walls and boardwalk contracts 1 and 3, including associated roadways, utilities, etc. was $4M and $5M respectively. Design was completed in 2003 and construction was completed in 2005.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a.	Steere ENGINEERING INC Bridge and Structural Engineers	Lincoln, RI	Wall and boardwalk design

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 4

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Wilbur Road Bridge No. 415, Lincoln, RI	2010	2011

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	B. POINT OF CONTACT NAME	C. POINT OF CONTACT TELEPHONE NUMBER
Rhode Island Department of Transportation (RIDOT)	Ms. Georgette Chahine, P.E. Bridge Engineer	(401) 222-2053 x4069

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

The Wilbur Road Bridge project was a superstructure replacement project. The original bridge had a 13'-8" under-clearance and had been struck and damaged by trucks travelling on Route 146. Several previous contracts had involved designing pier extensions to raise the bridge and designing steel repairs for damaged girders. However, the bridge was hit again during design and it was decided to replace the superstructure due to the extensive damage.

The replacement bridge is a two span steel girder bridge. Each span's cross section consists of eight girders. The spans are approximately 79 feet and 34 feet long and the width of the bridge is 42 feet. Simple spans were used on the existing substructures due to the discrepancy in span length to avoid uplift issues. The new deck is a reinforced concrete deck with a 3" asphalt wearing surface. Two five foot sidewalks were provided. Pier and abutment heights were adjusted by demolishing the existing caps and pedestals and adding cast-in-place additions to provide 14'-10" of clearance. The bridge was designed in accordance with AASHTO LRFD Bridge Design Specifications.

Note: Steere Engineering Inc. engineers worked on this project while employed at Maguire Group Inc.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a.	Steere ENGINEERING INC Bridge and Structural Engineers	Lincoln, RI	Bridge design
b.			
c.			
d.			
e.			

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*			20. EXAMPLE PROJECT KEY NUMBER **5**
21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED		
Veteran's Memorial Bridge Design-Build Project Portland/South Portland, Maine	PROFESSIONAL SERVICES On-going	CONSTRUCTION *(if applicable)* On-going	

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
T.Y. Lin International (sub to Reed & Reed)	Mr. Jeffrey Andrews	207-443-9747

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

GZA serves as geotechnical engineer on the Reed & Reed / T.Y. Lin International design-build team for the Veteran's Memorial Bridge, currently under construction. The team was short listed and prepared a competitive submission including a technical proposal and 30-percent design plans and specifications. GZA interpreted available subsurface information, developed interpretive subsurface profiles and completed engineering analyses to support design of the new bridge foundations and approach roadways. The principal geotechnical challenges on the project were caused by the extensive deposits of compressible, moderate-strength marine clay. Deep foundations were developed to provide sufficient axial and lateral resistance in the moderate strength deposits. Several alternatives were considered for mitigating settlement of the new approach embankments where they were to be constructed on the marine clay, including wick drains and surcharging, lightweight fill, sheet pile retaining walls, and pile supported embankments. A wick drain and surcharging scheme was implemented that relied on anchored sheet pile retaining walls to temporarily support the surcharge fill. Instrumentation was included to monitor the preload embankment for settlement, horizontal movement, and pore pressure dissipation. The preload has been constructed, settlement is ongoing, and to date the embankment performance has met expectations. The Portland approach embankments were designed in accordance with a successful Alternative Technical Concept ATC that called for a more westerly alignment and a tie in to the Fore River Parkway. The benefits of the ATC resulted in a superior technical score and a clear best value to the Maine DOT. In addition to preparing geotechnical aspects of plans, specifications and reports in accordance with AASHTO LRFD and Maine BDG Standards, GZA participated in developing the Design Quality Management Plan (DQMP) and the Construction Quality Management Plan (CQMP). These plans form th e basis for quality control and quality assurance throughout the course of the project. GZA has assigned staff to administer specific aspects of these plans including the lead design engineer, design quality assurance manager and design quality control manager. During the construction phase, GZA is providing review, instrumentation and consultation for the wick-drain surcharge embankment, pile driving services including construction consultation, Wave Equation analysis and Dynamic (PDA) Pile Testing with Signal Matching (CAPWAP) Analysis in support of the CQMP.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a.	GZA GeoEnvironmental, Inc.	Providence, RI/Portland, ME	Geotechnical Engineer
b.			
c.			

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER **6**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(if applicable)*
Stillwater Reservoir Dam, Design of Improvements Smithfield, Rhode Island	2002	2005

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Rhode Island Department of Environmental Management	Russ Chaufty	401-222-2776

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

GZA GeoEnvironmental, Inc. (GZA) has undertaken a variety of engineering services related to the design of improvements to the Stillwater Reservoir Dam for the Rhode Island Department of Environmental Management, Division of Planning and Development (RIDEM). Stillwater Reservoir Dam is a 20-foot –high, 660-foot long earthen and concrete structure that was reportedly constructed in 1910. The main dam also has earthen dikes on each side, ranging up to ten feet in height and 590 feet in length. The condition of the dam has deteriorated since 1910, requiring safety improvements. GZA is the prime consultant for the repair project, providing RIDEM with an array of engineering services, including visual inspection, wetland delineation, topographic survey, geotechnical investigation, hydrologic and hydraulic analyses, design of embankment repairs, spillway capacity improvements, preliminary and final design plans, bid oversight, and construction contract management.

Among the technical challenges involved with the project was the refinement of existing hydrologic analyses related to the so-called "Spillway Design Flood (SDF)". Previous analyses by another consultant resulted in a series of recommendations for expensive spillway repairs with the installation of spillway gates. GZA re-evaluated the hydrologic analysis for RIDEM with Federal Emergency Management Agency guidelines. As a result of the updated analyses, a lesser magnitude SDF was found to be appropriate, and new spillway repair options were developed. The final design provided a 100-foot wide concrete spillway with hydraulics that closely matched the existing spillway up to the 100-year flood, along with a 400-foot long emergency spillway protected with articulated concrete blocks (ACBs) to pass the total 500-year SDF.

GZA has also designed embankment repairs for the structure to address concerns regarding excessively steep slopes and to improve access for maintenance and ADA recreational use, to improve freeboard, and to provide erosion protection. Concrete repairs were designed to protect the upstream face of the dam and the existing gatehouse structure, and to provide fishing stations with handicapped access. Other site improvements included upgrading a maintenance access road and paving of an existing parking lot.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a.	GZA GeoEnvironmental, Inc.	Providence, Rhode Island	Geotechnical Engineering

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER **7**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Round Top Bridge, No. 378, Burrillville, RI	2007 - 2010	2010

23. PROJECT OWNER'S INFORMATION

A. PROJECT OWNER	B. POINT OF CONTACT NAME	C. POINT OF CONTACT TELEPHONE NUMBER
Rhode Island Department of Transportation (RIDOT)	Mr. Kazem Farhoumand, P.E. Chief Engineer	(401) 222-2053 x4020

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Description: The bridges leading across Burrillville were in disrepair and were either structurally deficient or functionally obsolete. The bridges were posted and emergency vehicles were unable to respond across town without violating the load restriction signs. The Town of Burrillville, RI was in a difficult position. To accelerate the repair of this bridge, the Town agreed to finance the design of a new bridge, providing RIDOT the committed the funds to construct the bridge.

The Town solicited for professional services in 2006 and selected Bryant Associates to perform the design of the replacement structure. The Town was in negotiations with RIDOT until the spring of 2007. On May 7 2007, Bryant received a Notice to Proceed from the Town to proceed with the design of the replacement structure. The design project duration was two years, and was completed on May 31, 2009. The construction was scheduled for FY 2008 and FY 2009. Bryant provided geotechnical engineering, hydrologic/hydraulic engineering and scour analyses. Following these studies, Bryant completed a bridge type study and subsequently entered the design stage. The contract documents were prepared and the project authorized for adverting by FHWA on November 9, 2009.

The replacement bridge is a butted box beam superstructure supported on pile supported precast abutments. The bridge type was selected to provide for accelerated construction techniques thereby minimizing the duration of street closure to two months. The road was closed for 41 days. The replacement bridge was dedicated on November 8, 2010.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a.	BRYANT ASSOCIATES Engineers Surveyors Construction Managers	Lincoln, RI	Survey, Civil/Site Design, Structural Engineering and Traffic Engineering

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER **8**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(if applicable)*
Barrington and Warren River Bridges **Barrington, Rhode Island**	2005	2010

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
RI Dept. of Transportation	Mr. Kazem Farhoumand, P.E.	401-222-2053 x4100

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

The existing concrete arch bridges that carry County Road over the Barrington and Palmer Rivers are being replaced with new structures. Temporary bridges have been constructed adjacent to the existing bridges to allow the reconstruction of the permanent bridges. GZA has performed a variety of geotechnical engineering services for the contractors performing the work for both the construction of the temporary bridges, as well as the current replacement bridge construction.

For the temporary bridge, GZA provided engineering support for the driving and load testing of steel pipe piles installed in the river bed. Prior to driving the piles, GZA performed pre-construction condition surveys of residences located within 200 feet of the work, and vibration monitoring at the residences during the pile driving. GZA prepared the shop drawing submittal and provided field observation for the lateral load testing of the pipe piles socketed into bedrock.

GZA was also retained by the contractor to design four cofferdams for the temporary bridge abutments. Due to shallow bedrock conditions and the necessity for the cofferdams to support the bridge abutments as shallow foundations, circular steel cells were used. The design also included cantilevered walls and raker-anchored bulkheads for the approach embankments.

The construction of the new, permanent replacement bridge at the Barrington River is currently under construction. GZA has designed and prepared shop drawing submittals for the contractor for the steel sheet pile cofferdams necessary to construct the piers within the river. GZA has also performed pre-construction surveys and vibration monitoring for this construction.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a.	GZA GeoEnvironmental, Inc.	Providence, Rhode Island	Geotechnical Engineering
b.			
c.			

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*			20. EXAMPLE PROJECT KEY NUMBER **9**
21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED		
Ridgewood Power Electrical Transmission Line Environmental Permitting, Johnston, Rhode Island	PROFESSIONAL SERVICES On-going	CONSTRUCTION *(if applicable)* On-going	

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Ridgewood Renewable Power	Mr. Kevin Hubanks	401-447-9000

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Ridgewood Renewable Power (aka Broadrock Renewables, LLC) is in the process of developing a new landfill gas to energy facility in Johnston, Rhode Island. A portion of the project involves the construction of approximately 2,000 feet of twin 115kV transmission lines to connect the proposed facility to existing high voltage electrical power lines owned by National Grid. The proposed alignment traverses a wetland complex owned by the Rhode Island Resource Recovery Corporation. GZA was retained to conduct a review of the required environmental permits to insure all National Grid protocols were satisfied. Portions of the required easement associated with the proposed transmission lines, is located within the 50-foot wetland buffer of the Upper Simmons Reservoir.

GZA worked closely with multiple project stakeholders, including National Grid, to identify project needs and address requirements of state and federal programs including the Rhode Island Pollutant Discharge Elimination System, Section 404 of the Clean Water Act (U.S. Army Corps of Engineers), Rhode Island Freshwater Wetlands Act, Rhode Island Natural Heritage Program, the Federal Wild and Scenic Rivers Act, Rhode Island State Historic Preservation Office, and the U.S. Fish and Wildlife Service.

A challenging obstacle was conformance with Rhode Island Department of Environmental Management's (RIDEM's) Freshwater Wetlands Act requirements to minimize proposed clearing within the wetland buffer. This necessitated changing proposed transmission line heights and alignment, providing vegetation planting details, and use of specific steel pole structures to minimize impacts to the maximum extent practicable.

All required environmental permits were secured, including an Insignificant Alteration Permit issued by RIDEM for the proposed project.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a.	GZA GeoEnvironmental, Inc.	Providence, Rhode Island	Environmental Engineer
b.			
c.			
d.			
e.			

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*			20. EXAMPLE PROJECT KEY NUMBER **10**
21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED		
Brush Brook Master Plan Review Hopkinton, Rhode Island	PROFESSIONAL SERVICES 2010	CONSTRUCTION *(if applicable)* N/A	

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Town of Hopkinton	William McGary	401-377-7790

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Recently GZA was retained by the Town of Hopkinton, Rhode Island, to evaluate a developer's Master Plan for a proposed a 300-unit residential development on a 360-acre parcel located near Brushy Brook, to be serviced by individual wells and individual on-site wastewater treatment systems.

GZA's objective was to review and assess the project with respect to overall planning and traditional civil engineering parameters, in addition to applicable zoning ordinances and subdivision regulations pertaining to the proposed project. Tasks encompassed planning/land use and natural resource evaluation; traffic engineering review; and an environmental water and wastewater review, including the following:

- Review of proposed layout and management of onsite wastewater treatment systems and nutrient loading potential, including a nutrient loading analysis to evaluate potential groundwater impacts.
- Analysis of a Yield Plan Map to evaluate the 'by right" density for the parcel.
- Review of existing grade/topographic information to evaluate potential impacts to resources within and surrounding the parcel, plus the preparation of avoidance/minimization recommendations to reduce potential impacts.
- Evaluation of pre- and post-development drainage and runoff patterns, as well as the Master Plan's approach to post-development stormwater management.
- Review of the basic elements of the site's layout and proposed development density with respect to long term sustainability and potential threats to anthropogenic (manmade) and natural resources, including wetlands, forests, streams, etc.
- Evaluation of proposed use of Low Impact Development (LID) techniques.
- Review of proposed Master Plan with respect to relevance of proposed layout.
- Evaluation for compliance with RI Freshwater Wetlands Act and the U.S. Clean Water Act with respect to on-site wetlands impacts, downstream water resource impacts, and wildlife habitat corridors.
- Evaluation of potential impacts to groundwater supplies from proposed on-site individual potable water wells.
- Review of proposed storm water pollution prevention best management practices to be implemented during construction to control sediment and erosion.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a.	GZA GeoEnvironmental, Inc.	Providence, Rhode Island	Geotechnical Engineering
b.	Bryant Associates	Lincoln, Rhode Island	Transportation Engineering

G. KEY PERSONNEL PARTICIPATION IN EXAMPLE PROJECTS

26. NAMES OF KEY PERSONNEL (From Section E, Block 12	27. ROLE IN THIS CONTRACT (From Section E, Block 13)	28. EXAMPLE PROJECTS LISTED IN SECTION F (Fill in "Example Projects Key" section below before completing table. Place "X" under project key number for participation in same or similar role.)									
		1	2	3	4	5	6	7	8	9	10
Patricia D. Steere, P.E.	Design Manager Lead Design Engineer and Bridge Engineer	X	X	X	X						
John W. Steere, P.E.	Bridge Engineer										
Susan Payne Bacher, P.E., LEED AP	Bridge Engineer	X	X	X	X						
Martin Pierce, P.E.	Bridge Engineer		X		X						
Russell J. Morgan, P.E.	Principal In Charge, Geotechnical					X	X		X		
William L. Ladd, P.E.	Senior Project Manager, Geotechnical	X				X	X		X		
David M. Leone, P.E.	Hydrologic/Hydraulic Engineer						X				
Igor Runge, Ph.D., P.H.	Senior Project Manager, Environmental Manager									X	X
Timothy Briggs	Wetlands Scientist/Biologist									X	X
Michael Powers, P.E.	Geotechnical/ Environmental QA/QC										
George F. Monaghan, Jr., PE	Principal In Charge - Highway and Survey	X	X	X				X			
Michael W. Desmond, PE	QA/QC Manager (Design) Highway & Traffic QA/QC							X			X
Michael E. LeBeau, PE, SE	Bridge QA/QC							X			
Abram Koyfman, PE	Senior Structural Engineer										
Todd E. Brayton, PE	Project Manager Highway/Utilities/Traffic							X			X
Dara Clough, PE	Senior Traffic Engineer							X			X
Elizabeth R. Lavoie, PE	Traffic Engineer							X			
Thomas R. Culligan, Jr., PLS	Senior Project Surveyor	X	X	X							
Geoffrey S. Hoogasian, PLS	Project Surveyor	X	X	X							

29. EXAMPLE PROJECTS KEY

NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)	NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)
1	I-195 Relocation, 'Iway', Contract 7, Providence, RI	6	Stillwater Reservoir Dam, Design of Improvements, Smithfield, RI
2	I-195 Relocation, 'Iway', Contract 6, Providence, RI	7	Round Top Bridge, No. 378, Burrillville, RI
3	I-195 Relocation, 'Iway', Contracts 1 and 3, Providence, RI	8	Barrington and Warren River Bridges, Barrington, RI
4	Wilbur Road Bridge No. 415, Lincoln, RI	9	Ridgewood Power Electrical Transmission Line, Environmental Permitting, Johnston, RI
5	Veteran's Memorial Bridge Design-Build Project, Portland/South Portland, ME	10	Brush Brook Master Plan Review, Hopkinton, RI

H. ADDITIONAL INFORMATION

30. PROVIDE ANY ADDITIONAL INFORMATION REQUESTED BY THE AGENCY. ATTACH ADDITIONAL SHEETS AS NEEDED.

Aetna Bridge Company (Aetna) is pleased to submit our Teams' proposal and bid for the Design/Build Services for the Replacement of the Laurel Avenue Bridge. ***Aetna*** has assembled a team which is well known to the Department and has a proven record of quality construction and design services. ***Aetna*** would welcome the opportunity to complete another successful project working for the Rhode Island Department of Transportation (RIDOT).

The Design Build (D/B) Team will be led by ***Aetna*** as the Lead Contractor and ***Steere Engineering Inc. (Steere)*** serving as the Lead Designer for this project. Mr. Jeffrey A. Bostock, Vice President Construction at ***Aetna***, and Ms. Patricia D. Steere, P.E., President of ***Steere***, a DBE/WBE firm, will serve as the D/B team principal contacts, and will remain as such throughout the life of the project. The D/B team is also supported by several Consultants for this project. ***Bryant Associates, Inc. (Bryant)*** will provide the project's overall Design QA/QC services and be responsible for the design and construction surveys and the roadway and traffic engineering services. ***GZA GeoEnvironmental, Inc. (GZA)*** will provide the services required for the hydrologic/hydraulic, geotechnical and environmental aspects of the project. ***Dynamic Scheduling Solutions (DSS),*** a DBE/WBE firm, will provide scheduling services, ***ATC Associates, Inc. (ATC)*** will provide construction quality control services and ***Risk & Safety Management Inc. (RSM)*** shall be responsible for construction safety. The Team is also supported by several DBE sub-consultants on the construction side, which is represented within Section 4.3 DBE and OJT Requirements, and within the Price Proposal as part of the RIDOT DBE Utilization Plan.

Aetna is a corporation, and will provide the general contracting for this project. Hugo R. Mainelli, Sr. founded ***Aetna*** in 1945. Since that time, ***Aetna*** has successfully completed over 800 bridge projects. Today, ***Aetna*** is an acknowledged leader in bridge construction and rehabilitation, marine construction and demolition services. The company provides quality comprehensive construction services throughout New England to various state highway departments, cities, towns, with our primary focus on Rhode Island and Southeastern Massachusetts areas.

From the original construction of the Washington Bridge in Providence to the reconstruction of the Cranston St Viaduct and the Joseph A. Russo Bridge in Cumberland/Lincoln, to ***Aetna's*** most current project on Union Ave. in Providence, ***Aetna*** has always maintained our reputation of integrity while producing high quality work. In the last 10 years, ***Aetna*** has completed over 30 bridge projects for RIDOT worth over $110 million. ***Aetna*** is still owned and managed today by the Mainelli family, with Hugo R. Mainelli, Jr. son of the founder, as President/CEO and Chip Mainelli, grandson of the founder, as Senior Vice President. Mr. Mainelli, Jr. and Mr. Mainelli have 50 years and 22 years of dedicated construction experience, respectively. The company's main office is located in Pawtucket, Rhode Island. The Management Team located at the main office includes Mr. Jeffrey A. Bostock, Vice President-Construction; Mr. Daniel Kelley, Vice President-Estimating; Mr. Mark Mainelli, Vice President-Contract Administration; and Mr. Robert Barber, Vice President-Finance. The main office is supported by a staff of six full time employees. The field staff is comprised of five project managers, and approximately 50 to 100 union construction workers. All of ***Aetna's*** project managers are degreed civil engineers and have at least ten years of field experience. These qualities give ***Aetna*** the ability to technically collaborate with design engineers and consultants. ***Aetna's*** foremen and work crews are experienced and knowledgeable in all phases of bridge construction and repair. ***Aetna*** has a full complement of aerial, marine, demolition, concrete placement, and excavation equipment. Through the years, ***Aetna*** has maintained a great working relationship with local subcontractors, vendors, and owners by being fair, professional, and responsive.

As Lead Designer, ***Steere*** will be providing the bridge engineering services for this project and will also fulfill the design DBE requirements. ***Steere*** is a corporation and the only certified DBE, Mission 360° Partner, bridge and structural engineering firm headquartered in Rhode Island. ***Steere*** has a broad range of bridge design experience which includes the first network arch bridge built in the United States, steel trapezoidal box girders and I-girders, as well as cast-in-place and precast concrete bridges. Owner Ms. Patricia D. Steere, P.E. was the lead bridge design engineer for the Iway project, the largest project in the history of the Rhode Island Department of Transportation. The ***Steere*** Team also brings a wide range of experience in the construction support services that may be needed on this project. ***Steere's*** structural analysis and design includes many sophisticated analyses of various structure types, including linear and non-linear finite element analysis and seismic analysis. ***Steere*** has four bridge/structural engineers who will provide the engineering for this bridge. Ms. Steere will be supported by Mr. John Steere, P.E. and Ms. Susan Bacher, P.E., who each have over 33 years of experience in bridge and structural engineering, and Mr. Martin Pierce, P.E., who has over 15 years experience including experience with Ms. Steere on many RIDOT projects.

Bryant will be providing design for the traffic engineering, roadway engineering, and survey services for this project, as well as overall quality control services for the design of the bridge and associated roadway. Founded in 1976, ***Bryant*** is a minority-owned professional consulting engineering firm that provides civil, structural, and traffic engineering, water resources, construction management and surveying services to public and private clients throughout New England and the mid Atlantic region.

H. ADDITIONAL INFORMATION

30. PROVIDE ANY ADDITIONAL INFORMATION REQUESTED BY THE AGENCY. ATTACH ADDITIONAL SHEETS AS NEEDED.

Bryant is a corporation and is headquartered in Boston with offices in Lincoln, RI; Landover, MD; and Louisville, KY. ***Bryant's*** Team of 57 people includes registered engineers and land surveyors complemented by a flexible and creative technical staff.

GZA will be providing geotechnical and environmental engineering services for the project, including foundation analysis and design, hydrologic and hydraulic evaluation, and environmental permitting. ***GZA*** is a multidisciplinary consulting firm offering services in the fields of geotechnical, civil, and environmental engineering, hazardous waste assessment and remediation, as well as related construction design-related services. Founded in 1964, ***GZA*** is a corporation, and has grown into a full-service company providing its clients with a wide range of geotechnical engineering, dam engineering, water resources, environmental consulting, and remediation services. ***GZA*** employs over 560 engineers, scientists, and technical support staff in more than 18 offices in the U.S. Over 50 of these highly qualified technical staff are located in the Providence, RI office. In 2010, ***GZA*** was ranked 125 in the Engineering News Record list of the Top 500 Design Firms.

DSS, a corporation, will be providing the CPM scheduling services for this project. Over the past 5 years, ***DSS*** has performed scheduling services on over 100 projects totaling $800M. The primary focus of ***DSS*** is working for contractors on RIDOT projects. ***DSS*** has provided scheduling services on 40 RIDOT projects and is well versed with the specifications and requirements of Section 12.108.3.

ATC is a national corporation specializing in testing of quality control, inspection, and testing of construction materials and processes. ***ATC*** was founded in 1982 and has 1,600 employees nation-wide. The local branch is located in Avon, MA. ***ATC*** provides systematic testing and inspection services to assure materials utilized during construction meet project specifications and sustainability goals. ***ATC*** has the QA/QC expertise to meet the needs of the project. ***ATC*** has routinely provided testing and inspection services during construction of foundations, highways, railroads, dams, bridges, towers, low and high-rise buildings, airports, auto plants, distribution centers, industrial plants, stadiums, healthcare facilities, schools, water supply and sewage treatment facilities, dock and waterway facilities, power plants and many other construction projects. ***ATC*** works with architects, engineers, owners, general contractors and participants throughout each phase of the project – from feasibility/planning, design development, construction and fabrication and post-construction operations. ***ATC's*** services have saved significant money by preventing change orders during construction and reducing future maintenance and repair cost.

Incorporated in 1992, ***RSM*** is a Rhode Island corporation, which has been providing safety support services and safety inspections for construction companies for over a decade. The services that ***RSM*** provides to ensure compliance to local and federal safety regulations include Certified OSHA & MSHA trainers, site inspections, safety manual review and update, safety program review, job specific hazard analysis, and assistance during and follow-up to OSHA inspections. All inspectors for ***RSM*** are OSHA authorized and are qualified to teach within the areas of their expertise.

Aetna shall be responsible for guaranteeing the delivery of the project on time and on budget in accordance with the contract provisions. ***Aetna*** will undertake the financial responsibility and bonding for the project. ***Aetna*** confirms and certifies that the information enclosed in this Proposal remains true and accurate. ***Aetna*** also acknowledges receipt of the complete RFP and all six (6) addenda's.

The ***Aetna*** Team trusts that this proposal expresses the Teams' expertise and abilities to provide the needed services for this contract. The D/B Team principal contacts are committed that, if selected, this assignment will receive the needed resources and support to deliver this project on time and on budget. Should the Department representatives have any questions, please feel free to contact either of the D/B Team representatives listed below. The ***Aetna*** Team looks forward to the Departments favorable consideration.

I. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

31. SIGNATURE	32. DATE
Patricia D. Steere	04/20/11

33. NAME AND TITLE

Patricia D. Steere, P.E.

ARCHITECT-ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER *(If any)*: BID #7448315

PART II - GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME	Steere Engineering Inc.
2b. STREET	640 George Washington Hwy, Suite 103
2c. CITY	Lincoln
2d. STATE	RI
2e. ZIP CODE	02865
3. YEAR ESTABLISHED	2010
4. DUNS NUMBER	047235779
5. OWNERSHIP a. TYPE	Corporation
b. SMALL BUSINESS STATUS	Small, DBE/WBE RI&MA
6a. POINT OF CONTACT NAME AND TITLE	Patricia D. STeere
6b. TELEPHONE NUMBER	401-258-9391
6c. E-MAIL ADDRESS	patricia.steere@gmail.com
7. NAME OF FIRM *(If block 2a is a branch office)*	N/A

8a. FORMER FIRM NAME(S) *(If any)*	8b. YR. ESTABLISHED	8c. DUNS NUMBER

9. EMPLOYEES BY DISCIPLINE

a. Function Code	b. Discipline	c. No. of Employees (1) FIRM	c. No. of Employees (2) BRANCH
57	Structural Engineer	4	
	Other Employees		
	Total		

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Profile Code	b. Experience	c. Revenue Index Number *(see below)*
	N/A - newly established	

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

(Insert revenue index number shown at right)

a. Federal Work	1
b. Non-Federal Work	1
c. Total Work	1

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

1. Less than $100,000
2. $100,00 to less than $250,000
3. $250,000 to less than $500,000
4. $500,000 to less than $1 million
5. $1 million to less than $2 million
6. $2 million to less than $5 million
7. $5 million to less than $10 million
8. $10 million to less than $25 million
9. $25 million to less than $50 million
10. $50 million or greater

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE: Patricia D. Steere

b. DATE: 4/14/11

c. NAME AND TITLE: Patricia D. Steere, P.E., President

ARCHITECT – ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER *(If any)*
BID #7448315

PART II – GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME
GZA GeoEnvironmental, Inc.

3. YEAR ESTABLISHED
1964

4. DUNS NUMBER
05-345-2827

2b. STREET
530 Broadway

5. OWNERSHIP

a. TYPE
Private Corporation

2c. CITY
Providence

2d. STATE
RI

2e. ZIP CODE
02909

b. SMALL BUSINESS STATUS
No

6a. POINT OF CONTACT NAME AND TITLE
John P. Hartley, Principal

7. NAME OF FIRM *(If block 2a is a branch office)*
GZA GeoEnvironmental Technologies, Inc.

6b. TELEPHONE NUMBER
401.421.4140

6c. E-MAIL ADDRESS
jhartley@gza.com

8a. FORMER FIRM NAME(S) *(If any)*
N/A

8b. YR. ESTABLISHED
N/A

8c. DUNS NUMBER
N/A

9. EMPLOYEES BY DISCIPLINE

a. Function Code	b. Discipline	c. No. of Employees (1) FIRM	(2) BRANCH
02	Administrative	70	8
08	CADD Technician	9	2
11	Chemist	3	0
12	Civil Engineer	33	6
19	Ecologist	3	0
23	Environmental Engineer	80	12
24	Environmental Scientist	16	0
27	Foundation/Geotechnical	52	10
30	Geologist	55	3
34	Hydrologist	2	1
	Hydrogeologist	7	1
36	Industrial Hygienists	1	0
	Laboratory Experts	19	0
50	Risk Assessor	1	0
51	Safety/Occupational Health	8	0
52	Sanitary Engineer	1	0
55	Soils Engineer	6	0
58	Technician/Analyst	26	7
59	Toxicologist	2	0
62	Water Resources Engineer	6	1
	Other Employees	23	1
	Total	**423**	**52**

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Profile Code	b. Experience	c. Revenue Index Number *(see below)*
A04	Air Pollution Control	4
A10	Asbestos Abatement	6
B02	Bridges	5
D02	Dams (Earth; Rock); Dikes; Levees	4
E09	Environmental Impact Studies, Assessments	2
E12	Environmental Remediation	7
E13	Environmental Testing and Analysis	5
H03	Hazardous, Toxic, Radioactive Waste	6
H07	Highways; Streets; Airfield Paving; Parking	6
I03	Industrial Waste Treatment	3
P12	Power Generation, Transmission,	7
R10	Risk Analysis	5
S01	Safety Engineering; Accident Studies; OSHA	1
S05	Soils & Geologic Studies; Foundations	5
S07	Solid Wastes; Incineration; Landfill	6
T02	Testing & Inspection Services	1
	Toxicology and Hazardous Materials	4
T06	Tunnels & Subways	6
	Underground Storage Tanks	5
W02	Water Resources; Hydrology; Ground Water	4
	Wetlands	2

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS
(Insert revenue index number shown at right)

a. Federal Work	**4**
b. Non-Federal Work	**10**
c. Total Work	**10**

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

1. Less than $100,000
2. $100,000 to less than $250,000
3. $250,000 to less than $500,000
4. $500,000 to less than $1 million
5. $1 million to less than $2 million
6. $2 million to less than $5 million
7. $5 million to less than $10 million
8. $10 million to less than $25 million
9. $25 million to less than $50 million
10. $50 million or greater

12. AUTHORIZED REPRESENTATIVE
The foregoing is a statement of facts.

a. SIGNATURE
W. Fred Lenz

b. DATE
April 18, 2011

c. NAME AND TITLE
W. Fred Lenz, P.E., Principal

ARCHITECT - ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER *(if any)*

BID #7448315

PART II – GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME Bryant Associates, Inc.		3. YEAR ESTABLISHED 1990	4. DUNS NUMBER 79-675-1238
2b. STREET 14 Breakneck Hill Road, Suite 200		5. OWNERSHIP	
2c. CITY Lincoln	2d. STATE RI	2e. ZIP CODE 02865	a. TYPE Corporation
6a. POINT OF CONTACT NAME AND TITLE George F. Monaghan, Jr., PE, Senior Vice President, Director of Operations - RI			b. SMALL BUSINESS STATUS MBE, VOSB, DBE in 541330, 234990, 236220, 237310, 237110
6b. TELEPHONE NUMBER (401) 722-7660 x2215	6c. E-MAIL ADDRESS gmonaghan@bryant-engrs.com		7. NAME OF FIRM *(If block 2a is a branch office)* Bryant Associates, Inc.
8a. FORMER FIRM NAME(S) *(If any)*		8b. YR. ESTABLISHED	8c. DUNS NUMBER

9. EMPLOYEES BY DISCIPLINE

a. Function Code	b. Discipline	c. No. of Employees (1) FIRM	c. No. of Employees (2) BRANCH
02	Administrative	8	2
08	CADD Technician	1	0
12	Civil Engineers	10	2
15	Construction Inspectors	15	2
16	Construction Managers	3	1
38	Land Surveyors	10	2
52	Sanitary Engineers	1	0
57	Structural Engineers	2	0
58	Technician/Analyst	3	0
60	Transportation Engineers	4	4
	Total	57	13

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Profile Code	b. Experience	c. Revenue Index Number (see below)
A06	Airports; Terms. & Hangars; Freight Hndlg.	1
B02	Bridges	2
C15	Construction Management	2
C16	Construction Surveying	1
L02	Land Surveying	1
P06	Planning (Site, Installation, and Project)	2
P08	Prisons and Correctional Facilities	1
R04	Recreation Facilities (Parks, Marinas)	2
R06	Rehab. (Bldgs; Structures; Facilities)	1
S04	Sewage Collection, Treatment & Disposal	2
S09	Structural Design; Special Structures	1
S10	Survey; Platting; Mapping; FP Studies	1
S13	Storm Water Handling & Facilities	2
T03	Traffic & Transportation Engineering	3
U02	Urban Renewals; Community Dev.	1
W03	Water Supply; Treatment & Distribution	2

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

(Insert revenue index number shown at right)

a. Federal Work	1
b. Non-Federal Work	5
c. Total Work	5

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

1. Less than $100,000
2. $100,000 to less than $250,000
3. $250,000 to less than $500,000
4. $500,000 to less than $1 million
5. $1 million to less than $2 million
6. $2 million to less than $5 million
7. $5 million to less than $10 million
8. $10 million to less than $25 million
9. $25 million to less than $50 million
10. $50 million or greater

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE	**b. DATE** 04/15/11
c. NAME AND TITLE George F. Monaghan, Jr., PE, Senior Vice President, Director of Operations - RI	

ARCHITECT - ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER *(if any)*

BID #7448315

PART II – GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME Bryant Associates, Inc.		3. YEAR ESTABLISHED 1976	4. DUNS NUMBER 08-158-5929
2b. STREET 98 North Washington Street, Suite B1		5. OWNERSHIP	
2c. CITY Boston	2d. STATE MA	2e. ZIP CODE 02114	a. TYPE Corporation
6a. POINT OF CONTACT NAME AND TITLE Jeffrey C. Bryant, PE, Chief Executive Officer			b. SMALL BUSINESS STATUS MBE, VOSB, DBE in 541330, 234990, 236220, 237310, 237110
6b. TELEPHONE NUMBER (617) 248-0300 x2136	6c. E-MAIL ADDRESS jcbryant@bryant-engrs.com		7. NAME OF FIRM *(If block 2a is a branch office)* Bryant Associates, Inc.
8a. FORMER FIRM NAME(S) *(If any)*		8b. YR. ESTABLISHED	8c. DUNS NUMBER

9. EMPLOYEES BY DISCIPLINE

a. Function Code	b. Discipline	c. No. of Employees (1) FIRM	c. No. of Employees (2) BRANCH
02	Administrative	8	5
08	CADD Technician	1	1
12	Civil Engineers	10	4
15	Construction Inspectors	15	2
16	Construction Managers	3	0
38	Land Surveyors	10	8
52	Sanitary Engineers	1	1
57	Structural Engineers	2	2
58	Technician/Analyst	3	0
60	Transportation Engineers	4	0
	Total	57	23

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Profile Code	b. Experience	c. Revenue Index Number (see below)
A06	Airports; Terms. & Hangars; Freight Hndlg.	1
B02	Bridges	2
C15	Construction Management	2
C16	Construction Surveying	3
L02	Land Surveying	2
P06	Planning (Site, Installation, and Project)	2
P08	Prisons and Correctional Facilities	1
R03	Railroad; Rapid Transit	2
R04	Recreation Facilities (Parks, Marinas)	2
R06	Rehab. (Bldgs; Structures; Facilities)	1
S04	Sewage Collection, Treatment & Disposal	3
S09	Structural Design; Special Structures	1
S10	Survey; Platting; Mapping; FP Studies	2
S13	Storm Water Handling & Facilities	3
T03	Traffic & Transportation Engineering	3
T06	Tunnels & Subways	3
U02	Urban Renewals; Community Dev.	2
W03	Water Supply; Treatment & Distribution	2

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

(Insert revenue index number shown at right)

a. Federal Work	1
b. Non-Federal Work	5
c. Total Work	5

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

1. Less than $100,000
2. $100,000 to less than $250,000
3. $250,000 to less than $500,000
4. $500,000 to less than $1 million
5. $1 million to less than $2 million
6. $2 million to less than $5 million
7. $5 million to less than $10 million
8. $10 million to less than $25 million
9. $25 million to less than $50 million
10. $50 million or greater

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE	**b. DATE** 04/15/11
c. NAME AND TITLE Jeffrey C. Bryant, PE, Chief Executive Officer	

Evidence of Insurance

BID #7448315: Laurel Avenue Bridge #397

Steere Engineering Inc.

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 04/19/2011

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Insurance Center Inc
91 Tollgate Road

Warwick, RI 02886

CONTACT NAME:
PHONE (A/C, No, Ext): (401)738-7250 FAX (A/C, No): (401)738-1699
E-MAIL ADDRESS:
PRODUCER CUSTOMER ID #:

INSURED
Steere Engineering, Inc.
640 George Washington Highway
Suite 103
Lincoln, RI 02865

INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A :	EA KELLEY	
INSURER B :		
INSURER C :		
INSURER D :	Beacon Mutual	
INSURER E :	EA KELLEY	
INSURER F :		

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	**GENERAL LIABILITY**			IMA285761	2/24/2011	2/24/2012	EACH OCCURRENCE	$ 1000000
	X COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 100000
	CLAIMS-MADE X OCCUR						MED EXP (Any one person)	$ 5000
							PERSONAL & ADV INJURY	$ 1000000
							GENERAL AGGREGATE	$ 2000000
	GEN'L AGGREGATE LIMIT APPLIES PER:						PRODUCTS - COMP/OP AGG	$ INCLUDED
	POLICY PRO-JECT LOC							$
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$
	ANY AUTO						BODILY INJURY (Per person)	$
	ALL OWNED AUTOS						BODILY INJURY (Per accident)	$
	SCHEDULED AUTOS						PROPERTY DAMAGE (Per accident)	$
	HIRED AUTOS							
	NON-OWNED AUTOS							$
								$
	UMBRELLA LIAB OCCUR						EACH OCCURRENCE	$
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	$
	DEDUCTIBLE							$
	RETENTION $							$
D	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** Y / N			6115507	1/3/2011	1/3/2012	WC STATU-TORY LIMITS OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? **(Mandatory in NH)**	N / A					E.L. EACH ACCIDENT	$ 100000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 500000
							E.L. DISEASE - POLICY LIMIT	$ 100000
E	ERRORS & OMISSIONS CLAIMS MADE			EO00014705-01	9/8/2010	9/8/2011	$2,000,000 EACH CLM/ $2,000,000 AGGREGATE	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER

STEERE ENGINEERING, INC.
355 LOG ROAD
SMITHFIELD, RI 02917

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Nancy C Lanito

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ACORD 25 (2009/09)

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Aetna Bridge Company

Steere ENGINEERING INC Bridge and Structural Engineers

BRYANT ASSOCIATES Engineers Surveyors Construction Managers

GZA

Aetna Bridge Company, Inc.

ACORD™ CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 4/4/2011

PRODUCER
GOODRICH-BLESSING AGENCY, INC.
ONE HARRY STREET
CRANSTON, RI 02907
(401) 944-9400

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED
AETNA BRIDGE COMPANY
30 LOCKBRIDGE STREET
PAWTUCKET, RI 02860

INSURERS AFFORDING COVERAGE	NAIC#
INSURER A: BEACON MUTUAL INS CO	24017
INSURER B: HARTFORD UNDERWRITERS	30104
INSURER C: HARTFORD INS CO	19682
INSURER D: TWIN CITY FIRE INS CO	29459
INSURER E: NATIONAL UNION FIRE INS	19445

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	ADD'L INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
D		GENERAL LIABILITY X COMMERCIAL GENERAL LIABILITY CLAIMS MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT LOC	02CQT1453	12/31/10	12/31/11	EACH OCCURRENCE	$ 2,000,000
						DAMAGE TO RENTED PREMISES (Ea occurence)	$ 300,000
						MED EXP (Any one person)	$ 5,000
						PERSONAL & ADV INJURY	$ 2,000,000
						GENERAL AGGREGATE	$ 4,000,000
						PRODUCTS - COMP/OP AGG	$ 4,000,000
C		AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS HIRED AUTOS NON-OWNED AUTOS	02UENQT1454	12/31/10	12/31/11	COMBINED SINGLE LIMIT (Ea accident)	$ 2,000,000
						BODILY INJURY (Per person)	$
						BODILY INJURY (Per accident)	$
						PROPERTY DAMAGE (Per accident)	$
		GARAGE LIABILITY ANY AUTO				AUTO ONLY - EA ACCIDENT	$
						OTHER THAN AUTO ONLY: EA ACC	$
						AGG	$
E		EXCESS/UMBRELLA LIABILITY X OCCUR CLAIMS MADE DEDUCTIBLE X RETENTION $ 10,000	BE 33106209	12/31/10	12/31/11	EACH OCCURRENCE	$ 5,000,000
						AGGREGATE	$ 5,000,000
							$
							$
							$
		WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below	B MA 02WEQT1452 A RI 62125	12/31/10 12/31/10	12/31/11 12/31/11	X WC STATU-TORY LIMITS OTH-ER	
						E.L. EACH ACCIDENT	$ 1,000,000
						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
						E.L. DISEASE - POLICY LIMIT	$ 1,000,000
C		OTHER CONTRACTORS EQUIPMENT	02UUMTD1768	12/31/10	12/31/11	SPECIAL FORM $150,000. LIMIT LEASED OR RENTED	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

OPERATIONS IN CONNECTION WITH RIDOT PROJECT NO. 7448315, LAUREL AVENUE BRIDGE REPLACEMENT, DESIGN/BUILD, COVENTRY, RI. THE STATE OF RHODE ISLAND AND THE DEPT OF TRANSPORTATION ARE INCLUDED AS ADDITIONAL INSURED.

CERTIFICATE HOLDER

STATE OF RHODE ISLAND
DEPT. OF TRANSPORTATION
TWO CAPITOL HILL
PROVIDENCE, RI 02903

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 030 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE D.L. Goodrich

ACORD 25 (2001/08)

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CNA SURETY

April 8, 2011

State of Rhode Island
Department of Transportation
2 Capitol Hill
Providence RI 02903

RE: **AETNA BRIDGE COMPANY**
Bid No. 7448315 – Design/Build Services for the Replacement of Laurel Avenue Bridge #397, Coventry RI

To Whom It May Concern:

As Surety for Aetna Bridge Company, Western Surety Company hereby agrees to furnish the 100% Performance Bond and 100% Labor and Materials Payment Bond, as required by the specifications, for Design/Build Services for the Replacement of Laurel Avenue Bridge #397, Coventry RI, in the event that such firm is the successful bidder for this project.

Western Surety Company has an A.M. Best Rating of A and holds a Certificate of Authority as an acceptable surety company with the U.S. Department of the Treasury and is licensed to do business in all 50 states.

Should you require further information, please do not hesitate to contact us.

Very truly yours,

Kathleen M Flanagan
Attorney-in-Fact

100 Newport Avenue Extension
Quincy MA 02171

Western Surety Company

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That WESTERN SURETY COMPANY, a South Dakota corporation, is a duly organized and existing corporation having its principal office in the City of Sioux Falls, and State of South Dakota, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Richard A Leveroni, Kathleen M Flanagan, Individually

of Boston, MA, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind it thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the corporation and all the acts of said Attorney, pursuant to the authority hereby given, are hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law printed on the reverse hereof, duly adopted, as indicated, by the shareholders of the corporation.

In Witness Whereof, WESTERN SURETY COMPANY has caused these presents to be signed by its Senior Vice President and its corporate seal to be hereto affixed on this 22nd day of December, 2009.

WESTERN SURETY COMPANY

WESTERN SURETY COMPANY CORPORATE SEAL SOUTH DAKOTA

Paul T. Bruflat, Senior Vice President

State of South Dakota
County of Minnehaha } ss

On this 22nd day of December, 2009, before me personally came Paul T. Bruflat, to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is the Senior Vice President of WESTERN SURETY COMPANY described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to the said instrument is such corporate seal, that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation.

My commission expires
November 30, 2012

D. KRELL
SEAL NOTARY PUBLIC SEAL
SOUTH DAKOTA

D. Krell, Notary Public

CERTIFICATE

I, L. Nelson, Assistant Secretary of WESTERN SURETY COMPANY do hereby certify that the Power of Attorney hereinabove set forth is still in force, and further certify that the By-Law of the corporation printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said corporation this 8th day of April, 2011.

WESTERN SURETY COMPANY

WESTERN SURETY COMPANY CORPORATE SEAL SOUTH DAKOTA

L. Nelson, Assistant Secretary

Form F4280-09-06

WESTERN SURETY COMPANY
Sioux Falls, South Dakota
Statement of Condition and Affairs
December 31, 2010

ASSETS

Bonds	$1,325,363,817
Stocks	21,890,144
Cash and short-term investments	37,261,545
Uncollected premiums and agents' balances	33,361,392
Amounts recoverable from reinsurers	335,279
Funds held by or deposited with reinsured companies	22,831,236
Net deferred tax asset	18,318,016
Electronic data processing equipment and software	2,016,332
Investment income due and accrued	17,101,571
Other assets	2,812,199
Total Assets	$1,481,291,531

LIABILITIES AND SURPLUS

Losses		$255,341,187
Loss adjustment expense		77,225,536
Contingent and other commissions payable		4,572,077
Other expense		31,451,726
Taxes, licenses and fees		2,605,647
Federal and foreign income taxes payable		16,293,774
Unearned premiums		239,599,691
Retroactive reinsurance reserve assumed		10,222,969
Other liabilities		18,340,246
Total Liabilities		655,652,853
Surplus Account:		
Capital paid up	$4,000,000	
Gross paid in and contributed surplus	176,435,232	
Unassigned funds	645,203,446	
Surplus as regards policyholders		$825,638,678
Total Liabilities and Capital		$1,481,291,531

I, Philip E. Lundy, Vice President and Treasurer of Western Surety Company hereby certify that the above is an exact copy of the financial statement of the Company dated December 31, 2010, as filed with the various Insurance Departments and is a true and correct statement of the condition of Western Surety Company as of that date.

KATHRYN J. SCHROEDER
SEAL NOTARY PUBLIC SOUTH DAKOTA SEAL

Western Surety Company

By Philip E. Lundy
Vice President, Treasurer

Subscribed and sworn to me this 22nd day of February, 2011.

My commission expires:

KATHRYN J. SCHROEDER
My Commission Expires 7-21-2015

Kathryn J. Schroeder
Notary Public

Aetna Bridge Company, Inc.

30 Lockbridge Street
Pawtucket, RI 02860
Phone: (401) 728-0400
Fax: (401) 728-0189
Jeffrey A. Bostock – Vice President Construction
Lead Contractor
Email: jbostock@aetnabridge.com

Steere Engineering, Inc.

640 George Washington Highway, Suite 103
Lincoln, RI 02865
Phone: (401) 258-9391
Fax: (401) 728-0189
Patricia D. Steere, P.E. – President
Lead Designer
Email: patricia.steere@gmail.com