STATE OF RHODE ISLAND
PROVIDENCE, SC

SUPERIOR COURT

STATE OF RHODE ISLAND,

Plaintiff,

v.

AECOM TECHNICAL SERVICES, INC., *et al.*,

Defendants.

C.A. No. PC-2024-04526

DEFENDANTS' JOINT RULE 30(b)(6) DEPOSITION NOTICE TO PLAINTIFF STATE OF RHODE ISLAND

DEPONENT: **Plaintiff, The State of Rhode Island**

DATE: **September 21, 2026**

TIME: **10:00 a.m.**

Please take notice that pursuant to Rule 30(b)(6) of the Rhode Island Rules of Civil Procedure, Defendants in the above-captioned action shall take the deposition upon oral examination of Plaintiff, The State of Rhode Island (the "State").

The deposition shall commence on the date and at the time set forth above at the offices of **Lewis Brisbois Bisgaard & Smith LLP, One Citizens Plaza, Suite 1120, Providence, RI 02903,** before a notary public or other person authorized by law to administer oaths, and shall continue from day to day until completed.

Pursuant to Rule 30(b)(6), the State shall designate one or more officers, directors, managing agents, employees, or other persons who consent to testify on its behalf concerning the matters set forth in **Schedule A** attached hereto, together with the additional topics set forth in the

riders attached hereto, and shall prepare such designee(s) to testify regarding information known or reasonably available to the State.

The testimony of the designated representative(s) shall constitute the testimony of the State of Rhode Island for purposes of Rule 30(b)(6).

Respectfully submitted,

Defendants, by and through Defendant AECOM Technical Services, Inc.'s Counsel,

LAMONTAGNE, SPAULDING & HAYES, LLP

/s/ Amanda Prosek
Amanda Prosek (#7677)
100 Midway Road, Suite 15
Garden City Center
Cranston, RI 02920
Tel: (401) 270-7094
Mobile: (401) 573-0053
aprosek@lshattorneys.com

COZEN O'CONNOR

/s/ Wendy Venoit
Courtney Richards (#10593)
Wendy Venoit (*admitted pro hac vice*)
Michael Filbin (*admitted pro hac vice*)
200 State Street, Suite 1105
Boston, MA 02109
Tel: (617) 849-5100
Fax: (857-488-4870
crichards@cozen.com
wvenoit@cozen.com
mfilbin@cozen.com

Lawrence M. Prosen (*admitted pro hac vice*)
2001 M Street, NW, Suite 500
Washington, DC 20036
Tel: (202) 304-1449
Fax: (202) 400-2715
lprosen@cozen.com

Dated: August 18, 2026

CERTIFICATE OF SERVICE

I hereby certify that on August 18, 2026, I electronically filed and served this document through the electronic filing system on all counsel of record.

The document is available for viewing and/or downloading from the Rhode Island Judiciary's electronic filing system.

/s/ Amanda R. Prosek
Amanda R. Prosek

SCHEDULE A

Schedule A contains the general deposition topics applicable to all Defendants. Attached riders identify additional deposition topics noticed by individual Defendants and are incorporated herein by reference.

Definitions:

a. "Amended Complaint" refers to the Amended Complaint filed by The State of Rhode Island on April 15, 2025, in the State of Rhode Island, Providence County Superior Court, docketed as *The State of Rhode Island v. AECOM Technical Services, Inc. et al*, Case No. PC-2024-04526.

b. "Bridge" or "Washington Bridge" means the structure formerly known as Washington Bridge North No. 700 (or Bridge No. 070001) carrying Interstate I-195 traffic between Providence and East Providence, Rhode Island.

c. "Bridge Structure File" refers to the Bridge Structure File referenced in Plaintiff's Amended Complaint (ref. ¶¶123, 139, 143, 148, 152, 157, 162, 166, 171, 176, 180, and 186) and answers to Interrogatories. This is also referred to as the "Bridge File" in the RIDOT Bridge Inspection Manual.

d. "Defendants" refers to all defendants named in the Amended Complaint in this Litigation.

e. "Litigation" means the above-captioned lawsuit pending in the State of Rhode Island, Providence County Superior Court, docketed as *The State of Rhode Island v. AECOM Technical Services, Inc. et al*, Case No. PC-2024-04526.

f. "RIDOT" means the Rhode Island Department of Transportation and includes any departments, segments, divisions, subdivisions, administrative entities and bodies, and other related entities, both presently existing and those which previously existed, of any of the foregoing entities, and any present or former officers, directors, employees, consultants, contractors, attorneys, and agents of the foregoing entity.

g. "State" refers to the State of Rhode Island, including any and all of its Executives, Departments (including RIDOT), Divisions, Sections, engineering teams, management, oversight committees, as well as any other individuals and groups responsible for the review, maintenance, inspection, rehabilitation, demolition, reconstruction, inspection, observation and oversight of bridges in the State of Rhode Island, including the Washington Bridge.

To the extent any term is not specifically called out herein, it shall have the meaning(s) referenced in the State's Amended Complaint and responses to discovery requests served by the Defendants.

30(b)(6) Deposition Topics

1. To the extent not specifically listed below, all of the State's allegations, causes of action, positions and damages asserted in, or relating to, the presently operative Amended Complaint.

2. The composition and structure of the State's Departments, Divisions, Sections, engineering teams, management, oversight committees and other individuals and groups responsible for the review, maintenance, inspection, rehabilitation, demolition, reconstruction, inspection, observation and oversight of bridges in the State of Rhode Island, including the Washington Bridge.

3. The State's qualifications and capacity to review, understand, interpret, analyze, and deliberate on technical and related data such as statics, dynamics and material sciences, in regard to bridge design, construction, maintenance, inspections, inspection and report interpretation and analysis.

4. The State's understanding of the terms "fracture critical" and "critical" elements in the context of bridge design, construction and inspections. With particular reference to the Washington Bridge, which elements the State contends are fracture critical or critical, why the State believes this to be the case, when the State made such a determination, whether and when each Defendant was informed of such a determination, and any facts or documents related to such a determination.

5. The State's understanding of the term "non-redundant steel tension member" in the context of bridge design, construction, and inspections. With particular reference to the Washington Bridge, which elements the State contends are non-redundant steel tension members, why the State believes this to be the case, when the State made such a determination, whether and when each Defendant was informed of such a determination, and any facts or documents related to such a determination.

6. The original "Design and Construction of the Washington Bridge" Westbound Span (ref. Amended Complaint, ¶¶18-32).

    a. Structural elements of the Bridge, including any elements the State contends are critical (or fracture critical elements) to its stability and integrity.

    b. As-built Plans showing the as-built construction of the Bridge both as originally constructed and any updates, modifications or repairs to the Bridge.

    c. Any documentation identifying elements that the State contends to be critical (or fracture critical) to the stability of the bridge.

7. The State's "Bridge Structure File" (ref. Amended Complaint, ¶123, 139, 143, 148, 152, 157, 162, 166, 171, 176, 180, and 186), including the contents and compilation thereof, and what does and does not constitute the contents thereof.

8. RIDOT's records keeping policies including but not limited to the "Bridge Structure File". This topic is to include testimony about how RIDOT has historically kept track of public records and other documents, the formatting, storage locations, decisions about what to keep, what not to keep, for how long etc. as well as records destruction policies. It shall include testimony about who has held custody of RIDOT documents, and who historically has made these decisions, what the basis for these decisions has been and how these policies have evolved over the years.

9. All Inspections of the Bridge between 1967 and present:

    a. The RIDOT Bridge Inspection Manual ("RIDOT Manual") (all editions or updates thereto during the aforementioned time frame), as well as any other manuals or standards, applicable to bridge inspections in, for or by the State of Rhode Island.

    b. All "Inventory (Initial)", "Routine", "Damage", "Fracture Critical", "Underwater", "Interim (Special)", and "Miscellaneous" Inspections[1] of the Bridge from 1968 to present, whether performed by the State itself or by a third party on the State's behalf, including the schedule, cadence, scope and findings/reports of such inspections.

    c. The State's procurement of inspection services from third parties, including the development, definition, revisions to, and other descriptions of the substance, type and scope of any such inspections. This includes Requests for Proposals (RFPs) and Invitations for Bid (IFBs), contracts, work orders, or requests for inspection services.

    d. The State's receipt, review and evaluation of inspection reports, recommendations and findings, as well as any decisions or actions taken in response thereto. This topic includes, without limitation, the State's decisions as to whether and to what extent to address any defects, recommendations, findings, ratings or other issues or concerns identified in, or reasonable discernable or inferable from, such inspection reports and inspection results.

    e. All "critical elements of the bridge's structural safety and integrity" identified in such inspection reports, recommendations and findings, as well as any such elements that the State contends should have been identified but were not (ref. Amended Complaint, ¶75).

    f. Identification of the State employees and representatives having responsibility and authority to:

        i. Review and analyze inspection reports;

        ii. Determine what repairs or findings warranted further analysis, consideration and addressment.

[1] Referenced terms have the meanings set forth in the RIDOT Bridge Inspection Manual, Chapter 3.

iii. Determine what if any actions should be taken in response to such findings.

10. Investigations, evaluations and studies performed by the State (or on its behalf) of any of the structural elements of the Bridge, including without limitation, the so-called "Lichtenstein & Associates Report" procured by the State in the early 1990's (as referenced Amended Complaint, ¶¶33-39), the Wiss, Janney, Elstner Associates, Inc. reports dated February 19, 2024 and April 5, 2024, and the VN Engineers, Inc. report dated February 21, 2024; as well as any decisions and actions (or inactions) taken by the State in response to such investigations, evaluations and studies.

11. All problems related to the Washington Bridge's tie-down rods, including but not limited to the following:

    a. the nature of such problems.

    b. any facts, documents, and information demonstrating the existence of such problems or otherwise relating to such problems.

    c. when and how the State learned of such problems.

    d. whether, when, and how the State informed each Defendant of such problems.

12. All problems related to the Washington Bridge's post-tensioned cantilever beams and post-tensioning system, including but not limited to the following:

    a. the nature of such problems.

    b. any facts, documents, and information demonstrating the existence of such problems or otherwise relating to such problems.

    c. when and how the State learned of such problems.

    d. whether, when, and how the State informed each Defendant of such problems.

13. Rehabilitation Projects:

    a. "The 1996-1998 Rehabilitation of the Washington Bridge" (ref. Amended Complaint, ¶¶40-41), including:

        i. The circumstances, events, concerns, needs and inspections leading to such rehabilitation.

        ii. The purpose, scope and extent of such rehabilitation.

        iii. What AECOM's involvement or responsibilities were on this Project.

        iv. Who from the State was involved in performing and making such analyses and decision making.

b. The 2013-2017 Rehabilitation Project (ref. Amended Complaint, ¶¶ 46-67):

i. The circumstances, events and inspections leading to such rehabilitation project.

ii. The State's procurement of "Complete Design Services" for such rehabilitation project, including the State's engagement of AECOM (ref. Amended Complaint ¶¶46-60).

iii. Information and documentation provided to or made available to AECOM in relation to its performance of such design services.

iv. The 2014 AECOM Contract and the scope of services required and not required thereby (ref. Amended Complaint ¶59).

v. The State's involvement in, and oversight of, the services performed by AECOM pursuant to the 2014 AECOM Contract.

vi. AECOM's Final Inspection Report dated on or about January 21, 2025 (ref. Amended Complaint, ¶61) and alleged deficiencies therein.

vii. The State's reviews and past performance reviews of AECOM's services.

viii. Any alleged errors or omissions relating to AECOM's performance under the 2014 AECOM Contract.

ix. The "2016 Construction Plans" (ref. Amended Complaint ¶¶63-65), including:

1. Any State input, reviews, analyses, recommendations, instructions, directives and decisions regarding the development and agreement upon the scope of Work for AECOM; all assumptions, constraints and content of the 2016 Construction Plans.

2. Any recommendations identified, analyzed or recommended by AECOM, its consultants or the State regarding the scope of the rehabilitation that were not incorporated into the 2016 Construction Plans and the reason(s) therefor, as well as who for the State was involved therein.

3. Any modifications made by any party(ies) to the as-issued 2016 Construction Plans.

4. Alleged deficiencies alleged by the State in such 2016 Construction Plans (ref Amended Complaint, ¶65).

5. Any alleged errors or omissions relating to the 2016 Construction Plans or the work performed thereunder which the State attributes to AECOM or others.

x. "The Cardi Corporation Contract" (ref. Amended Complaint, ¶¶66-67)

1. RIDOT's procurement of construction services for the 2013-2017 Rehabilitation Project.

2. The scope and terms of the Cardi Corporation Contract, including any change orders, modifications, revisions or amendments thereto (whether formal or informal, actual or constructive).

3. The work actually performed by Cardi Corporation pursuant to such contract, including any RIDOT oversight, approvals, rejections or directives relating to such work.

4. The State's termination of the Cardi Corporation Contract and the reasons therefor (ref. Amended Complaint ¶67).

5. The physical status of the Bridge and Cardi's work at the time of such termination.

6. All steps or actions taken to protect incomplete and exposed elements of the Bridge leading up to and after such termination.

7. The State's maintenance, repair, preservation, inspection and operation of the Bridge following the termination of the Cardi Corporation Contract.

8. The State's disputes with Cardi Corporation relating to this Contract and the outcome and resolution thereof.

9. Any alleged errors or omissions relating to the Cardi Corporation Contract or the work performed thereunder which the State attributes to AECOM.

10. Any alleged errors or omissions relating to the Cardi Corporation Contract or the work performed thereunder which the State attributes to Cardi.

c. The 2021-2024 Design-Build Rehabilitation Project (ref. Amended Complaint, ¶¶76-91):

i. The circumstances, events, concerns, physical findings and inspections leading to this rehabilitation project.

ii. "The 2019 AECOM Contract" (ref. Amended Complaint ¶¶76-77)

1. RIDOT's procurement of design services for such rehabilitation project, including RIDOT's engagement of AECOM

2. The 2019 AECOM Contract and the scope of services required thereby (ref. Amended Complaint ¶76).

3. Information, records, interviews, and documentation provided, or made available, to AECOM in relation to its performance of services pursuant to the 2019 AECOM Contract.

4. The State's involvement, assessment, payment, management in, and oversight of, the services performed by AECOM pursuant to the 2019 AECOM Contract.

5. Any alleged errors or omissions relating to the 2019 AECOM Contract or the work performed thereunder which the State attributes to AECOM or others.

iii. The "2019 Design Build Solicitation" (ref. Amended Complaint ¶77), including:

1. The State's input, recommendations, instructions, directives and decisions regarding the scope, assumptions, design, bridging documents, constraints and content of the 2019 Design Build Solicitation.

2. Any recommendations identified, analyzed or recommended by AECOM, its consultants or the State regarding the scope, specifications, conceptual design or bridging documents associated with the rehabilitation that were not incorporated into the 2019 Design Build Solicitation and the reason(s) therefor.

3. Any modifications made to the 2016 Construction Plans or specifications as part of the preparation of the 2019 Design Build Solicitation and the reasons therefor.

4. Any alleged deficiencies in such 2019 Design Build Solicitation.

5. Any alleged errors or omissions relating to the 2019 Design Build Solicitation or the work performed thereunder which the State attributes to AECOM or others.

iv. "The 2021 RFP" and Design-Build Procurement (ref. Amended Complaint, ¶¶78-91)

1. The 2021 Procurement of a design-build contractor to perform rehabilitation work.

2. The scope and terms of the Design-Build Contract between RIDOT and the Joint Venture, including any change orders or amendments thereto (whether formal or informal).

3. The Rehabilitation Plans prepared by the Joint Venture and its consultants/subcontractors (ref. Amended Complaint, ¶91), including any State input as to the scope, assumptions, constraints and content of those plans.

4. Any other work performed by the Joint Venture pursuant to its Design-Build Contract, including any State oversight, changes (actual or constructive), modifications, designs, approvals of design or submittals or directives of such work.

14. "The Emergency Closure of the Washington Bridge" in December 2023 (ref. Amended Complaint, ¶¶92-95):

    a. The circumstances, facts, decision making/deliberations and events leading to the closure of the Bridge in December 2023.

    b. All investigations, evaluations, deliberations, analyses and studies undertaken by the State (or on its behalf) that led to the closure of the Bridge.

    c. All investigations, evaluations, deliberations, analyses and studies undertaken by the State (or by other parties on the State's behalf) post-closure to evaluate the status of the Bridge as well as potential repair options (ref. Amended Complaint, ¶95).

    d. Who the decision maker(s) was/were regarding the closure of the Bridge and who else was involved in that decision and the associated deliberations.

    e. The status and location of all Bridge materials removed, moved or discarded during the investigation of the Bridge immediately preceding or post-closure.

    f. The chain of custody of all Bridge materials removed, moved or discarded during the investigation of the Bridge.

    g. The results of any examination or testing of such Bridge materials.

15. Demolition of the Bridge (ref. Amended Complaint, ¶95):

    a. The State's decision to demolish the existing bridge structures rather than implement repairs, including all circumstances, events, investigations, evaluations and studies leading to the State's conclusion that "the only reasonable option is to demolish and replace the existing bridge" and who made that decision, who was involved in that decision and the underlying deliberations and how that decision was documented. (ref. Amended Complaint, ¶95).

b. All options and alternatives considered by the State in reaching its decision to demolish and replace the then-existing Bridge.

c. The State's procurement of a demolition contractor to perform the demolition of the Bridge.

d. The State's procurement of a designer to design and implement the demolition of the Bridge.

e. The State's contracts with said demolition contractor and any demolition designer, respectively, including any change orders and amendments thereto.

f. The State's decision to expand the scope of the demolition contract to include not only the existing Bridge superstructure, but the substructure and foundation as well, inclusive of who participated in the analysis and deliberations that lead to that decision.

g. All costs incurred by the State to demolish the existing Bridge.

h. The status and location of all Bridge materials removed, moved or discarded during the demolition of the Bridge. The results of any examination or testing of such Bridge materials.

i. All non-privileged deliberations and discussions which took place relating to the Attorney General's decision to suspend demolition on September 17, 2024 (the "9/24 Suspension") to preserve evidence as articulated in a joint statement by Governor McKee and AG Neronha, as well as all documentation supporting that decision.

j. The status and location of all Bridge materials removed, moved or discarded as a result of the 9/24 Suspension.

16. Replacement of the Bridge:

a. The State's procurement of a contractor to design and construct a replacement bridge, including the decision to make that contract Design-Build (as opposed to design-bid-build), and the deliberations that resulted in that decision, inclusive of who was involved in that discussion/deliberation.

b. The State's contract(s) for such design and construction work, including any change orders and amendments thereto.

c. The design and construction of the replacement Bridge.

d. Costs incurred by the State to procure, design and construct the replacement Bridge.

17. The "known deteriorating condition of the Washington Bridge" alleged in paragraph 71 of the Amended Complaint, including but not limited to, the nature of such condition, all facts

demonstrating such condition, when such condition was known and by whom, and all documents related to such condition.

18. Any decisions to forego repairs or rehabilitation of the Washington Bridge, including but not limited to, the nature of such decisions, any facts supporting such decisions, the persons involved in making such decisions, and any documents related to such decisions.

19. Physical Wear and Tear Damage to the Eastbound Washington Bridge Span (ref. Amended Complaint, ¶¶96-106)

    a. Claims and documentation of increased traffic volume on the Eastbound Bridge Span following the emergency closure of the Westbound Bridge.

    b. The degree and cost of alleged increased wear and tear to the Eastbound Bridge Span as a result of such emergency closure.

    c. Ownership, operation and maintenance responsibilities of the Eastbound Bridge Span.

    d. Repairs performed on the Eastbound Bridge Span as a result of such alleged increased wear and tear, including the cost thereof (ref. Amended Complaint, ¶104).

    e. Physical maintenance to the Eastbound Bridge Span in the 5 years prior to, and since, the closure of the Westbound span, including the degree and cost of such alleged "more frequent" maintenance (ref. Amended Complaint, ¶105).

    f. The State's installation of "advanced monitoring systems", including the extent, timing and cost of such installation (ref. Amended Complaint, ¶106).

    g. Inspection reports and findings on the condition of the Eastbound Bridge Span from 2010 to present.

20. All issues referenced in the Gordon Proctor report attached as **Exhibit A**.

21. All issues referenced in the Rebuilding Rhode Island PowerPoint attached as **Exhibit B**.

22. All issues referenced in the Rebuilding Rhode Island PDF attached as **Exhibit C**.

23. All issues and decisions referenced in the June 11, 2013 interoffice memorandum attached as **Exhibit D**, including but limited to RIDOT's scoring system for bids and the reasoning behind all analyses of bids contained in that document.

24. Allegations against AECOM –

    a. The scope, timing and extent of AECOM's services to RIDOT in relation to the Bridge, including without limitation, all inspection, design, consultation and other services.

b. All breaches of contract that AECOM is alleged to have committed in the Amended Complaint, as well as the physical damage to property and economic damages allegedly suffered as a direct and proximate result of such breaches (ref. Amended Complaint, Counts I, IV and X).

c. What (if any) duties the State alleges AECOM owed to the State and RIDOT.

d. All negligent acts, omissions and breaches of the duty of care AECOM is alleged to have committed, as well as the physical damage to person or property and economic damages allegedly suffered as a direct and proximate result of such negligent acts, omissions and breaches (ref. Amended Complaint, Count II).

e. The source and extent of any fiduciary duties the State contends AECOM owed to the State.

f. All breaches of fiduciary duty AECOM is alleged to have committed, as well as the physical damage to property and economic damages allegedly suffered as a direct and proximate result of such breaches (ref. Amended Complaint, Count V).

g. All third-party claims or allegations for which the State seeks contractual and non-contractual indemnity and contribution, including the basis and *quantum* thereof (ref. Amended Complaint, Counts XVII, XVIII, XIX and XX).

h. All negligent misrepresentations AECOM is alleged to have made, as well as the physical damage to property and economic damages allegedly suffered as a direct and proximate result of such negligent misrepresentations (ref. Amended Complaint, Count XXI).

25. Allegations against Defendants –

a. The scope, timing and extent of each Defendant's services to RIDOT in relation to the Bridge, including without limitation, all inspection, design, consultation and other services, if applicable.

b. All breaches of contract that each Defendant is alleged to have committed in the Amended Complaint, as well as the physical damage to property and economic damages allegedly suffered as a direct and proximate result of such breaches

c. What (if any) duties the State alleges each Defendants owed to the State and RIDOT.

d. All negligent acts, omissions and breaches of the duty of care each Defendants are alleged to have committed, as well as the physical damage to person or property and economic damages allegedly suffered as a direct and proximate result of such negligent acts, omissions and breaches

e. The source and extent of any fiduciary duties if any, the State contends each Defendant owed to the State.

f. All breaches of fiduciary duty, if any, Defendants are alleged to have committed, as well as the physical damage to property and economic damages allegedly suffered as a direct and proximate result of such breaches

g. All third-party claims or allegations, if any, for which the State seeks contractual and non-contractual indemnity and contribution, including the basis and quantum thereof

h. All negligent misrepresentations, if any, of each Defendant.

26. Damages: The State's Damages asserted against AECOM and the other Defendants in this litigation, including:

a. Categories and types of damages claimed for each of the State's causes of action asserted against Defendants;

b. The causal link between (i) each alleged breach or negligent act, omission or representation allegedly committed by each Defendant and (ii) the damages the State asserts against that Defendant for each such breach, act, omission or representation.

c. Amount of damages claimed against each Defendant for each alleged breach, act, omission or representation;

d. Support and back-up for Damages claimed against AECOM for each alleged breach, act, omission or representation;

e. Allocation of Damages amongst AECOM, the State and the other Defendants or other parties not named as a party in this litigation; and

f. Any facts or documents supporting the State's damages calculation.

27. Any money, funding, grants, subsidies, or other resources that the State has received and/or expects to receive related to the closure, demolition, or replacement of the Washington Bridge, including but not limited to the following:

a. The specific purpose of each payment.

b. Who made such payment.

c. The amount of the payment.

d. The date of the payment.

28. To the extent not specifically listed above, the State's responses to Interrogatories, Requests for Production, and Requests for Admissions served by AECOM and the other Defendants to this litigation.

29. All privilege logs served by the State in this Litigation

RESERVATION OF RIGHTS

Defendants expressly reserve all rights to continue, supplement, reopen, reconvene, or seek additional Rule 30(b)(6) deposition testimony from the State concerning any topic identified in this Notice. In light of the State's ongoing document productions, supplemental discovery responses, and other outstanding discovery issues, Defendants further reserve all rights to seek additional corporate representative testimony regarding information, documents, witnesses, opinions, or other matters disclosed after the date of this deposition, or regarding matters for which meaningful examination is not reasonably possible due to incomplete, delayed, or deficient discovery responses by the State.

Vanasse Hangen Brustlin, Inc.'s Rider to Rule 30(b)(6) Deposition Topics for the State

In addition to all of the deposition topics included in the Defendants' Joint Rule 30(b)(6) deposition notice directed to the State, Vanasse Hangen Brustlin, Inc. ("VHB") also notices the following additional topics:

1. All claims directed against VHB by the State in the Amended Complaint.

2. All allegations directed against VHB by the State in the Amended Complaint.

3. The scope and terms of any contracts between the State and the Joint Venture referenced in paragraphs 78 - 91 of the Amended Complaint.

4. The scope and terms of any RFP between the State and the Joint Venture referenced in paragraphs 78 - 91 of the Amended Complaint.

5. All services provided by the Joint Venture including its subconsultants, including but not limited to VHB, as referenced in paragraphs 78 through 91 Amended Complaint.

6. Any and all alleged errors and omissions by the Joint Venture or any of its subconsultants, including but not limited to VHB, relating to the RFP and/or contract referenced in paragraphs 78 - 91 of the Amended Complaint.

7. Any and all communications of any kind or type between RIDOT and/or the State and VHB relating in any way to the Washington Bridge at any time.

8. The factual basis for the allegations of negligence contained in Count 16 of the Amended Complaint as directed specifically against VHB.

9. The factual basis for the allegations of negligence contained in Count 16 of the Amended Complaint as directed specifically against the Joint Venture.

10. The factual basis for the allegations of negligence contained in Count 16 of the Amended Complaint as directed specifically against Barletta.

11. The factual basis for the allegations of negligence contained in Count 16 of the Amended Complaint as directed specifically against AETNA.

12. The factual basis for the allegations in paragraph 185 of the Amended Complaint relating to alleged specific duties imposed by law directed against VHB.

13. The factual basis for the specific allegations contained in paragraph 186 of the Amended Complaint and directed against VHB.

Rider for Collins Engineers, Inc.

Allegations against Defendant Collins Engineers, Inc. ("Collins") related to the 2014 Inspection Contract and 2017 Inspection as alleged in Counts VIII and IX of the Amended Complaint: –

a. The scope, timing and extent of Collins's services to RIDOT in relation to the Bridge, including without limitation, all inspection, design, consultation and other services, if applicable;
b. All breaches of contract that Collins is alleged to have committed, as well as the physical damage to property and economic damages allegedly suffered as a direct and proximate result of such breaches;
c. What (if any) duties the State alleges Collins owed to the State and RIDOT;
d. All negligent acts, omissions and breaches of the duty of care Collins is alleged to have committed, as well as the physical damage to person or property and economic damages allegedly suffered as a direct and proximate result of such negligent acts, omissions and breaches; and
e. All third-party claims or allegations, if any, for which the State seeks contractual and non-contractual indemnity and contribution, including the basis and quantum thereof.

Deposition of the State of Rhode Island

30(b)(6) Topics

Michael Baker International Inc.'s Rider of Additional Topics

Definitions:

MBI incorporates the definitions in the AECOM Technical Services, Inc. Notice of Rule 30(b)(6) Deposition of the State of Rhode Island, and adds the following:

a. "MBI Inspection Contract" means Defendant Michael Baker International's ("MBI") agreement with the State under MPA #359 On-Call Statewide Bridge Inspection Services with effective dates July 1, 2014 to June 30, 2017 which effective dates were amended to extend the term on or around annually through 2020.

b. "MBI 2018 Inspection of the Bridge" means Defendant Michael Baker International's ("MBI") special inspection of the Washington Bridge that it performed on or around July 24, 2018.

To the extent any term is not specifically called out herein, it shall have the meaning(s) referenced in the State's Amended Complaint and responses to discovery requests served by the Defendants.

30(b)(6) Deposition Topics

MBI incorporates the Topics in the AECOM Technical Services, Inc. Notice of Rule 30(b)(6) Deposition of the State of Rhode Island, and adds the following:

1. The State's claims and allegations against MBI in the Amended Complaint.

2. The terms and scope of MBI's services related to the Bridge under the MBI Inspection Contract.

3. Any changes to the terms or scope of MBI services related to the Bridge under the MBI Inspection Contract.

4. The MBI scope of services related to the Bridge that the State contends MBI was required to perform, if any, under another agreement beyond the MBI Inspection Contract.

5. The alleged breaches of contract by MBI related to the MBI 2018 Inspection of the Bridge or otherwise as alleged in Amended Complaint Paragraph 162 along with all contract provisions, facts, circumstances, documents, and information related to the same.

6. The alleged errors, omissions, or negligent acts by MBI related to the MBI 2018 Inspection of the Bridge or otherwise including but not limited to the allegations in

Amended Paragraph 166 along with all facts, circumstances, documents and information related to the same.

7. MBI's services related to the Bridge.

8. State oversight, directions, instructions or the like related to MBI's performance of its services related to the Bridge.

9. State communications with MBI related to the Bridge.

10. All documents that were provided to or otherwise made available to MBI in connection with MBI's 2018 Inspection of the Bridge, including who provided each document and when it was provided.

11. All policies, procedures, guidelines, instructions, requirements, and protocols that the State contends governed MBI's 2018 Inspection of the Bridge.

SCHEDULE A TOPICS

Exclusive to TranSystems Corporation

1. The scope and terms of the 2014 and 2019 Inspection Contracts between the State and TranSystems Corporation as referenced in paragraph 137 of the Amended Complaint, including any change orders, modifications, revisions or amendments thereto (whether formal or informal, actual or constructive).

2. The work performed by TranSystems Corporation in accordance with said contracts, including any/all RIDOT oversight, approvals, rejections or directives relating to such work.

3. Any and all alleged errors or omissions relating to the 2014 and 2019 inspection contracts and the work performed thereunder, including but not limited to all facts and information in support of or relating in any way to the allegations set forth in paragraphs 139 and 143 of the Amended Complaint.

4. Any and all communications of any kind or type between RIDOT and/or the State and TranSystems Corporation relating in any way to the 2014 and 2019 inspection contracts and the work performed thereunder.

Jacobs Engineering Group, Inc.'s Rider to Rule 30(b)(6) Deposition Topics for the State

Definitions:

Jacobs Engineering Group, Inc. ("Jacobs") incorporates the definitions Defendants' Joint Rule 30(b)(6) deposition notice directed to the State, and adds the following:

a. "Jacobs' 2021 Inspection of the Washington Bridge" means Defendant Jacobs Engineering Group, Inc.'s ("Jacobs") routine, special, and underwater inspection of the Washington Bridge that it performed on or around June 21, 2021 through July 23, 2021.

30(b)(6) Deposition Topics

In addition to all of the deposition topics included in the Defendants' Joint Rule 30(b)(6) deposition notice directed to the State, Jacobs also notices the following additional topic:

1. The Jacobs' 2021 Inspection of the Washington Bridge and allegations against Jacobs, including but not limited to, the following:

    a. The full scope of services that Jacobs was required to perform as part of the Jacobs' 2021 Inspection of the Washington Bridge, including whether those services involved performing a load rating analysis, fracture critical analysis, non-redundant steel tension member analysis, and/or agency defined elements material testing analysis.

    b. The persons involved in Jacobs' 2021 Inspection of the Washington Bridge, including how they were involved, their roles, and job responsibilities.

    c. All documents relating to Jacobs' 2021 Inspection of the Washington Bridge.

    d. All contracts between Jacobs and the State relating to Jacobs' 2021 Inspection of the Washington Bridge, including the specific provisions of such contracts that Jacobs allegedly breached and how Jacobs allegedly breached such contracts, and any facts or documents supporting an alleged contractual breach.

    e. Any extra-contractual duties Jacobs allegedly owed the State in connection with Jacobs' 2021 Inspection of the Washington Bridge, including the basis for such duties and how Jacobs allegedly breached such duties, and any facts or documents supporting an alleged breach of an extra-contractual duty.

    f. The State's policies, procedures, guidelines, instructions, requirements, and protocols that governed Jacobs' 2021 Inspection of the Washington Bridge.

    g. The State's roles and responsibilities in connection with Jacobs' 2021 Inspection of the Washington Bridge.

h. All documents that were provided or otherwise made available to Jacobs in connection with Jacobs' 2021 Inspection of the Washington Bridge, including who provided each document and when it was provided.

i. The State's policies, procedures, guidelines, instructions, requirements, and protocols that governed work candidates or repair recommendations for the Washington Bridge in 2021.

EXHIBIT A

RIDOT Project Development Analysis

DRAFT Final

July 24, 2015

RI dot
Driven to get you there

This report was produced by Gordon Proctor & Associates which is solely responsible for its recommendations. This doc-

ument has not be approved nor accepted by the Rhode Island Department of Transportation. All findings are subject to review, amendment or change.

Contents

Table of Figures

Summary

This report examines some key project-development processes and staffing levels of the Rhode Island Department of Transportation against four peer groups. It also reviewed the RIDOT materials testing functions against peer states.

This report recommends that the Rhode Island Department of Transportation alter its management practices and structures to adopt the project-development best practices used by its peers in Vermont, New Hampshire, Maine and elsewhere. These improvements are needed if RIDOT hopes to reliably deliver a more ambitious construction program. The report also finds that the level of materials testing and staffing does not appear excessive and is comparable to peer states. Materials testing personnel may be understaffed for peak construction periods or if the construction program grows considerably above historic levels.

Among the recommendations are:

First, the report recommends that RIDOT develop an emphatic policy that it will identify a fiscally constrained two year list of projects for the State Transportation Improvement Program and then measure and manage to ensure the projects are delivered on time.

Second, RIDOT should conduct monthly project-tracking meetings in which a broad cross-section of the department staff reviews activities necessary to deliver the entire two-year program on time. These meetings should be inclusive of all disciplines that could identify problems and help resolve them to keep projects on track. These meetings should be given high priority, be chaired by a high-profile executive and be documented to ensure they are effective. The meetings should not focus only on projects scheduled for bid in the next three months but rather address the entire two-year program to ensure it is consistently delivered.

Third, the department should "clean house" in the Project Management Portal (PMP) and insist that projects that are not actively under development be removed and that active projects be updated with realistic schedules and budgets. The PMP currently does not serve an effective department-wide function of informing multiple participants of realistic schedules and budgets. This is an interim step pending a larger effort to develop a more effective project-tracking system discussed below.

Fourth, project-development staff should be organized in cross-disciplinary teams of engineers, planners, resource agency liaisons, utility specialists and right-of-way staff. Each team should be given responsibility for a number of projects and be expected to identify key milestones and activities and work cooperatively to ensure projects are let to bid on schedule. These teams could be given programmatic or geographic focus for greater efficiency. The teams could be divided into ones focusing on bridge preservation projects, bridge replacement/rehabilitation projects, urban paving and street-scape projects, traffic/operations projects and so forth. Or they could be divided geographically.

Fifth, high-profile monthly progress meetings with resource agencies should be instituted to address all permits and approvals needed for the upcoming two-year program. Resource agency approval will be critical to the increased bridge, pavement and drainage-maintenance activities. Four organizations were reviewed for this analysis. All rely on regular coordination meetings and standardized programmatic agreements with resource agencies to improve project-development reliability.

Sixth, RIDOT should identify a programming unit that plans, programs and scopes ALL projects. This unit should be integrated into the asset management group but have significant input from all the engineering disciplines. This unit would serve as the "funnel" through which suggested projects are sorted, realistic scopes identified, schedules and budgets set. No change to cost, scope or schedule should be approved without coordination with this unit that serves as the "traffic cop" for keeping the STIP fiscally constrained, realistic and addressing the MAP-21 performance requirements. This unit should operate cooperatively with other divisions to ensure that subject matter experts from structures, safety/traffic, roadway and maintenance have input into project-selection priorities and project scopes. However, this unit would function as the "keeper of the STIP" to ensure that project scopes, schedules, and budgets do not churn without coordination and approval by senior management.

Seventh, staff should complete scoping reports for complex projects before they enter design. For bridge projects, this scoping report would include development of a rehabilitation or replacement recommendation, assessment of the utility, right-of-way and environmental complexity, initial public involvement and estimated budget and schedule. For new structures it also would include a type, size and estimate (TS&E). For roadway projects, the scoping study would determine line, grade, typical section, construction and right of way limits and importantly community involvement regarding project scope elements such as streetscapes and sidewalks. Complex projects would be programmed initially in the STIP only for this planning phase. As the planning phase and scoping report is completed and project scope, cost and complexity are clarified, then the project would be programmed for final development and construction. Projects in this planning phase would be "in the bull pen" waiting matriculation into the financially constrained STIP. From that point, their milestones, scope and costs would be closely tracked through to their construction. Simple projects such as bridge preservation or pavement marking projects would skip the planning report phase and proceed from programming to project development.

Eighth, RIDOT should conduct in-depth benchmarking with staff at the Vermont Agency of Transportation, the New Hampshire Department of Transportation and the Maine Department of Transportation to further refine the staff-comparison information in this analysis. A district within the Ohio Department of Transportation also may provide promising insights as it is similar in size to RIDOT. This benchmarking is recommended because these organizations face similar challenges to RIDOT but all have attained 80 percent or better achievement of project-development milestones for several years, in some cases for nearly two decades. Comparing project-development staff levels with RIDOT and these agencies is complex because of significant differences in how RIDOT staffs and pursues its projects compared to these other agencies. Conclusions are that:

- It appears that RIDOT is understaffed in the areas of structures and environmental coordination compared to the four benchmark organizations.
- RIDOT's consultant expenditures appear to be significantly higher than peer states'. As a percentage of the construction program, RIDOT's consultant expenditures for 2010 to 2014 averaged 30.4 percent of the construction program. This is two to three times higher as a percentage than the benchmark organizations. (See Table 1) Even with this higher level of expenditure, RIDOT has less reliable project development schedules than its peers. While RIDOT staff levels appear to be low, staffing recommendations are clouded by the much higher level of consultant resources RIDOT uses.
- Head-to-head comparison of RIDOT project-development staffing to peer organizations is also muddied by RIDOT's unique practice of not having dedicated project managers who focus solely on developing projects. RIDOT instead co-mingles duties so that staff may be assigned to man-

age some projects but they also issue truck size and weight permits, process access-permits, meet with property owners and handle legislative enquiries. This practice is not seen in the benchmark agencies. While some variables such as overall program size or consultant assistance can be isolated for comparison to other agencies, it is unclear how much time these other duties demand of RIDOT staff.

- RIDOT staff work 35 hour weeks which reduces their per person hours by 13 percent compared to the peer states.

Ninth, it is the recommendation of this report that RIDOT segregate duties and appoint project-development staff to manage development of specific projects with clear expectations for achieving project-development milestones. Non-project-development duties such as issuing permits should be assigned to individuals without project-management responsibilities. However, it is not clear how many staff are needed for these non-project-management duties.

Tenth, this report recommends creating a small "strike force" to handle emergencies. Staff report that emergency projects, particularly bridge ones, arise frequently and churn their priorities. Having a dedicated team whose job it is to handle emergencies could buffer other project-development staff to focus on delivering the planned program.

Eleventh, RIDOT should begin replacing the Project Management Portal. It is wholly unsuited for managing a complex, modern transportation program.

Table 1 A comparison of selected metrics

Peer State Comparisons					
	RI	NH	VT	Maine	Ohio D7
Average Construction Program	$150,004,996	$192,918,154	$243,096,381	$283,780,000	$160,869,536
$ Consultants/ $ of Construction	30.44%	12%	5.0%	3.6%	4.8%
Output per project development staff	$2,205,956	$1,929,182	$3,716,796	Not Avail.	$3,497,164

Table 1 compares some key metrics from RIDOT to New Hampshire, Vermont, Maine and one district at the Ohio departments of transportation. The three states have comparable construction programs to Rhode Island, as does the one Ohio district. The Ohio District includes Dayton and its surrounding counties which collectively have a population and highway network comparable to Rhode Island's.

Rhode Island has the highest expenditures on consultants per size of construction program of any of the peers. In fact, it's more than 2.5 times larger proportionally than the next comparable peer. Also, it has the second lowest average production per engineering staff.

These data come from disparate sources. Vermont's expenditures come from its DOT budgets. New Hampshire's come from data produced from its purchasing computer system. Maine's comes from published construction reports and data provided by the department. Ohio's data come from internal Ohio DOT figures. Rhode Island consultant expenditures come from a report generated by the finance department on engineering contracts. Staff levels come from a review of personnel levels and construction volume comes from analyzing data from the Turino construction management firm. Such disparate data sources were needed because none of the states were tracking these costs in this way.

Background

The analysis of RIDOT's project-development process is prompted by the challenge of delivering a larger construction program when additional revenues are secured. The department recognizes the need for increased investments, particularly in its bridge program. These increases will require a larger construction program with reliable project-development processes.

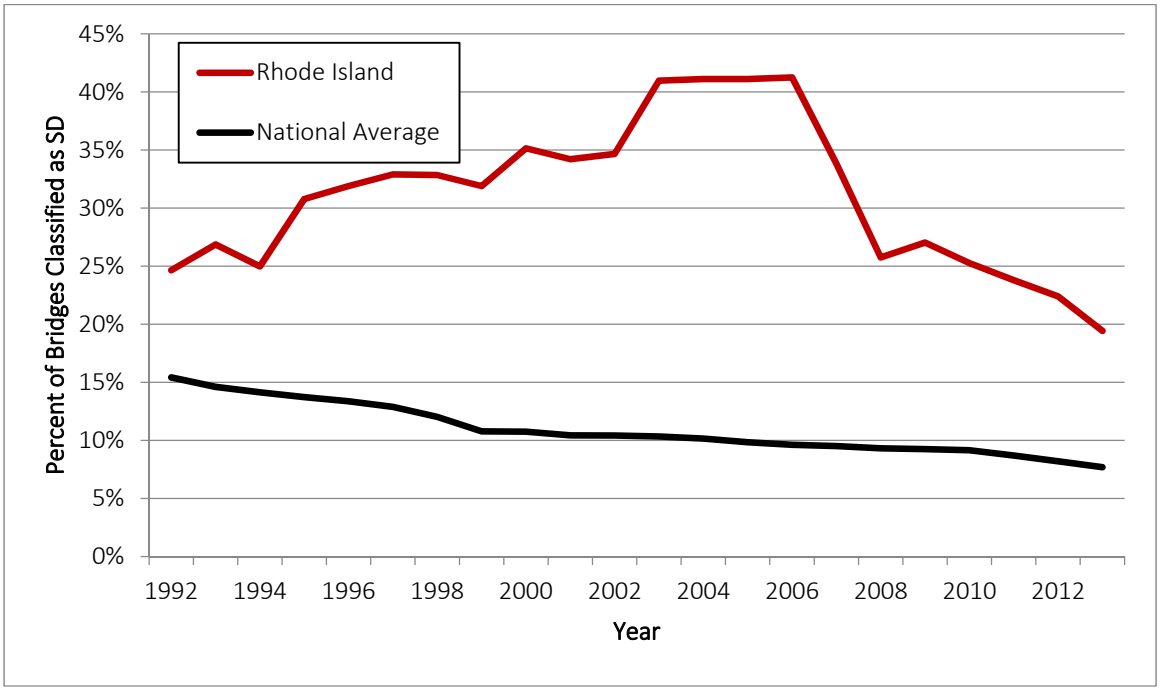


Figure 1 Trends in Rhode Island and U.S. bridge conditions

Figure 1 illustrates the category of bridge structural deficiency conditions compared to national averages. On a percentage basis, Rhode Island consistently ranks near the bottom nationally in bridge conditions. As seen in Figure 1, however, Rhode Island has made very substantial improvement and cut the percentage of its structurally deficient bridges by half in the past decade. Much of this improvement is the result of many large bridge projects that replaced hundreds of thousands of square feet of bridges with new structures. The department consistently spends more on structures than the Federal Highway Administration allocates to RIDOT in bridge funds and it has in recent years adopted a bridge preservation approach to further improve long-term conditions.

However, RIDOT faces a new challenge of delivering an increased number of bridge projects if it is to continue reducing bridge deficiencies. Even more importantly, sustaining the good bridge conditions once achieved will require delivering an increased number of bridge preservation projects. Although each bridge preservation project may be less complex than a bridge-replacement project, each one requires a set of plans, utility and right-of-way coordination, maintenance of traffic plans and possibly environmental permits and community coordination. RIDOT has averaged about 13 bridge projects per year let to construction between 2009 and 2013 according to data retrieved from the Torino Group consulting firm that manages RIDOT construction project tracking.

Although the next decade's bridge program is still under development, it is certain to increase in size. As significant as the number projects will be the importance of the timing of the bridge projects. Many will

be preservation projects scoped to improve a "fair" bridge before it deteriorates into the "poor" category. If the treatments are delayed to the point that the bridge has already deteriorated, the treatment may not be appropriate, would waste money and not adequately repair the bridge. If RIDOT cannot increase the delivery of its bridge projects and ensure they are delivered at the right time in the bridge lifecycle, it will not be able to achieve and sustain new Federal requirements that no more than 10 percent of bridges on the National Highway System (NHS) can be structurally deficient. RIDOT also will experience an overall decline in bridge conditions.

RIDOT faces a similar challenge with its pavements. Overall pavement conditions have declined when measured across the entire network as seen in Figure 4. RIDOT logically has prioritized its limited pavement dollars on the highest-volume routes and has kept its Interstate Highway System and limited access route pavements in good condition. However, conditions on the lower functional class routes have declined because of a lack of adequate budgets to keep the entire network in good condition. As seen in Figure 2, the overall network conditions have declined.

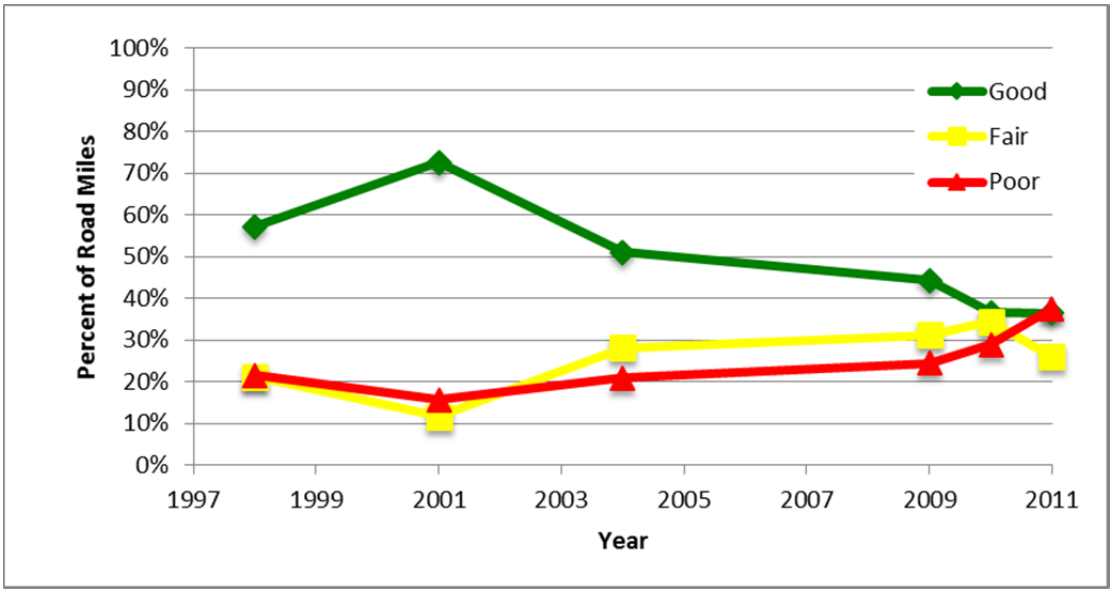
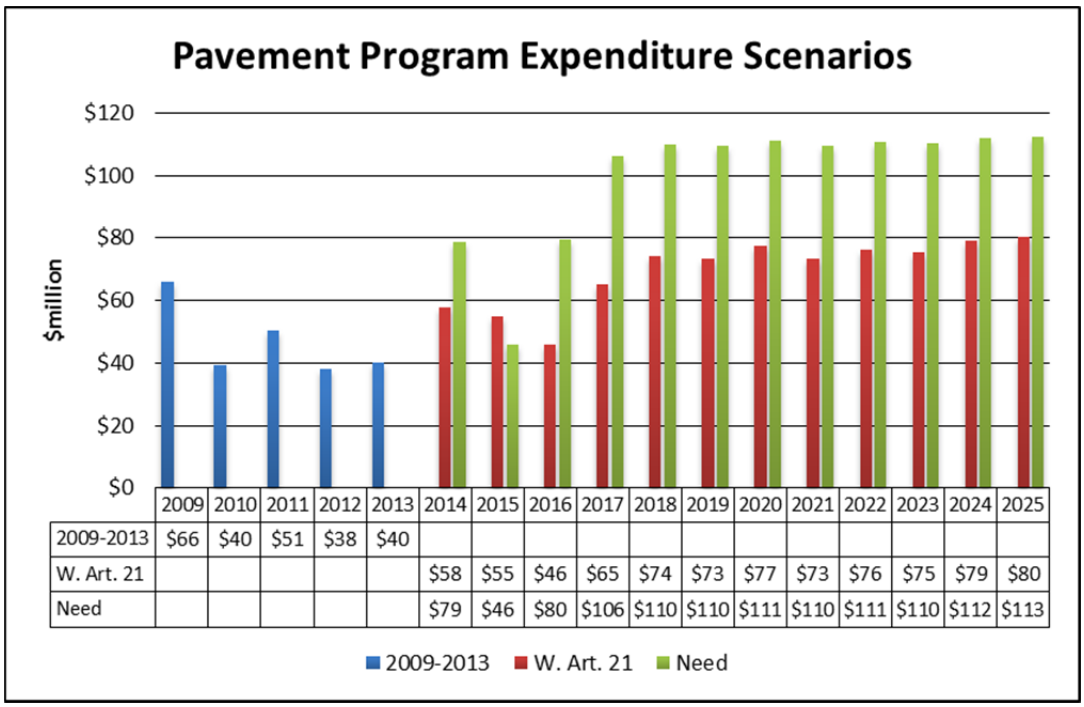


Figure 2 Pavement conditions from 1997 to 2011

As with the larger bridge program, if RIDOT were to receive enough funding to achieve its pavement targets it would require a significant increase in the level of effort to deliver the projects. As seen in Figure 3, the optimum pavement scenario represents a significant expansion of the pavement program compared to recent years. The blue bars represent the size of the roadway projects let to bid by RIDOT between 2009 and 2013. They ranged in total cost per year for all roadway projects from $66 million to $40 million for a five-year average of $47 million. With the Article 21 funds, the pavement program grows to a 10-year average of $69 million. If all needed funding were provided, the annual program would increase to an average of $104 million or a more than doubling of recent program size. As with the bridge program, this would require a significant increase in projects to be designed, permitted, coordinated with the municipalities and neighborhoods and then let to bid. More project engineers and inspectors would be required. Because many of these additional projects would be on the urban routes, they would require curbs, sidewalks, ADA coordination, drainage permitting and utility relocations. The degree of project management and coordination would increase substantially.

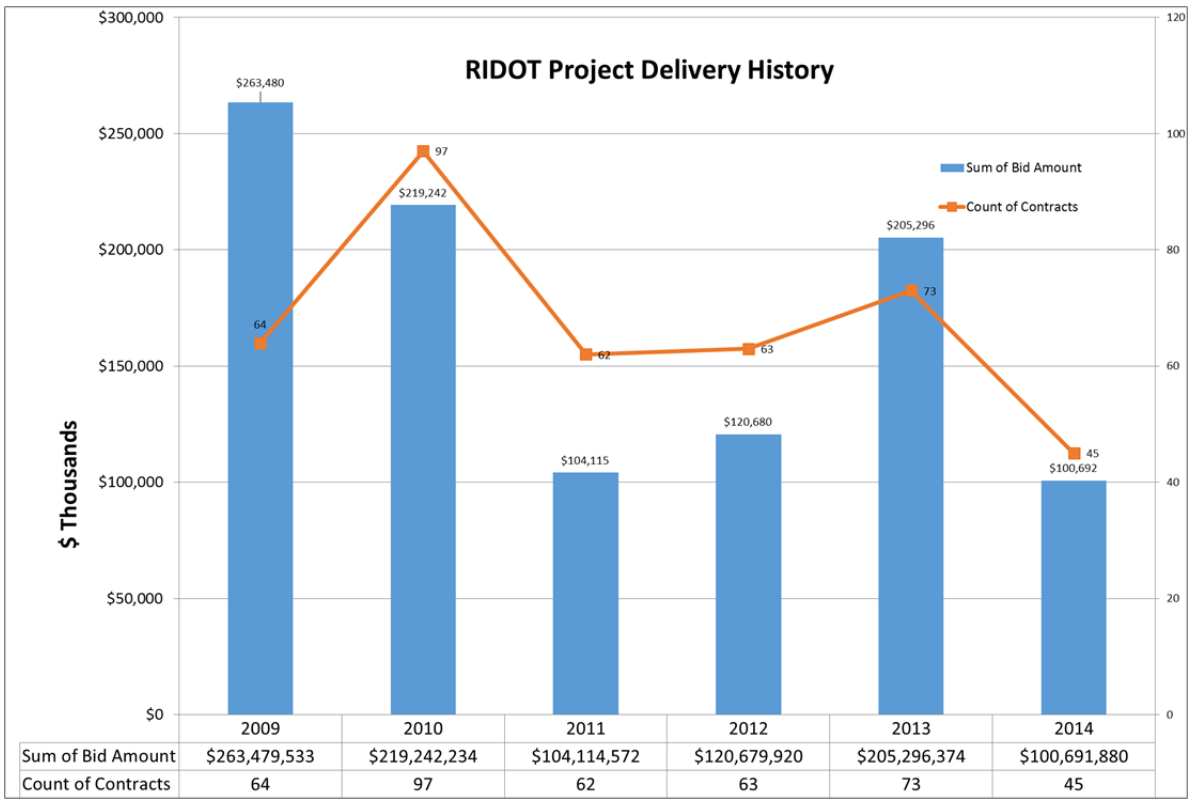


	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
2009-2013	$66	$40	$51	$38	$40												
W. Art. 21						$58	$55	$46	$65	$74	$73	$77	$73	$76	$75	$79	$80
Need						$79	$46	$80	$106	$110	$110	$111	$110	$111	$110	$112	$113

Figure 3 Projected increase in RIDOT pavement program under optimal pavement budgets.

Both the bridge and pavement programs anticipate a large, steady and sustained level of project delivery. This reflects the asset management philosophy behind both programs. In a performance-based asset management organization, asset-investment needs would be predicted years in advance. A calibrated mix of preservation, maintenance, rehabilitation and replacement projects would be planned years in advance to sustain highway assets for a reasonable lifecycle cost. Treatments would be delivered at the right time in an asset's lifecycle. When assets are still relatively sound, preservation and maintenance are emphasized. When the assets reach a point that preservation is no longer effective, rehabilitation is planned. When assets are beyond economical repair, they are scheduled for replacement and left to deteriorate and no further investment is made until the asset is replaced. Such a calibrated strategy can save substantially over the life of the asset.

Therefore, asset management cannot be effective without the timely delivery of projects and maintenance at the right points in the asset lifecycle. The steady, reliable delivery of projects anticipated in the Better Bridge and Reliable Roads projects can be contrast to the history of project delivery from 2009 to 2014 seen in Figure 4.



	2009	2010	2011	2012	2013	2014
Sum of Bid Amount	$263,479,533	$219,242,234	$104,114,572	$120,679,920	$205,296,374	$100,691,880
Count of Contracts	64	97	62	63	73	45

Figure 4 History of projects let to bid 2009 to 2014.

The size of the construction program varied from $263 million to $100 million and the number of projects varied from 97 to 45. The variability is caused by erratic funding. Increases occurred in 2009 because of the American Reinvestment and Recovery Act (ARRA) then funds fell sharply as Federal appropriations became uncertain and subject to short-term authorizations. Commendably, RIDOT project-development staff geared up and used all of the Federal funds provided by ARRA and used all regular FHWA appropriations. The staff is understandably proud of their ability to use the ARRA funds with such short timelines. Several staff members noted that RIDOT has lapsed no State or Federal funds because of inability to deliver enough projects.

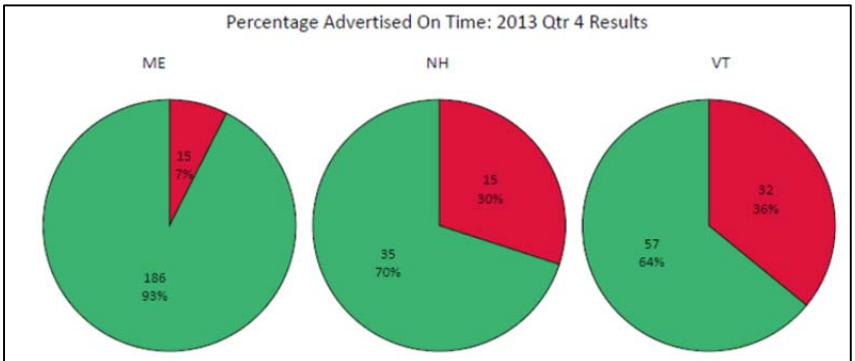
However, staff also describe the delivery of the ARRA program as requiring unsustainable, heroic efforts. They expressed surprise that they were able to deliver the large program. More than 40 staff members were interviewed and many expressed the opinion that they could not sustain the increased level of project delivery that ARRA represented with current processes. Many also expressed doubt that current project-development processes could deliver the size of program anticipated by the former Better Bridge and Reliable Roads efforts. Notably, RIDOT has no “shelf.” That is projects that have been designed, permitted and are ready to bid if additional funds become available. A “shelf” of projects is common in agencies with reliable project-development processes. RIDOT practices “just in time” project development because its project-development process is geared toward emergencies and developing only projects that can be funded with certainty in the fiscal year.

Comparisons to Vermont, New Hampshire, Maine and Ohio

The departments of transportation in Vermont, New Hampshire and Maine participate in a tri-state performance management consortium. They benchmark performance against one another and publish common performance measures. All three states focus upon reliable project-development and consider the reliable development and delivery of projects as a core mission and an important corporate value. Their agencies publish a year in advance a schedule of construction projects to be let to bid each month of the following fiscal year. They then track the delivery of that program and measure their performance. State executives have invested their credibility in reliable project delivery and expressed the following sentiment in their Tri-State Performance Measures Report. [i]

> "As agencies of state government, the most important asset we can build and maintain is the trust of the people we serve. Trust in our agencies not only makes projects go easier, it makes legislative and executive funding decisions a more straightforward process. When the public and our partners in industry believe in our ability to deliver on promises, they become stronger advocates for our agencies' goals, plans, and budgets.
>
> That trust is built by consistently doing three simple things: say what we intend to do, do it, and when necessary, clearly explain why something wasn't done. In the realm of capital project development, it begins and ends with schedules, budgets, and the quality of our final products."

Each agency follows a similar process. It produces a list of projects to be constructed in the following fiscal year and then measures performance against the number of those projects let to bid and the total dollar amount of the program. Monthly internal progress meetings are held to track the delivery. Monthly external coordination meetings are held with resource agencies and other stakeholders essential to the permitting, right-of-way and utility coordination process.



	Year-to-Date			Rest Of Year			Projected Year End		
State	On Time	Delayed or Removed	% On Time	On Time	Delayed or Removed	% On Time	On Time	Delayed or Removed	% On Time
ME	186	15	93%	0	0	0%	186	15	93%
NH	35	15	70%	0	0	0%	35	15	70%
VT	57	32	64%	0	0	0%	57	32	64%

Figure 5 Project delivery record of three peer states.

As seen in Figure 5, the 2013 results ranged from 93 percent on time delivery for the Maine DOT to a low of 64 percent for Vermont. However, Vermont was still affected by the aftermath of Hurricane Irene which affected planned schedules. As it responded to emergencies, its regularly scheduled projects were delayed. However, its end-of-year total program was 107 percent of its original planned program because of the additional emergency projects. RIDOT was also affected by Super Storm Sandy which affected its program. As seen in Figure 6, the agencies delivered the large majority of the value of their published capital programs.

Total Construction Value Delivered: 2013 Qtr 3 Results
(All Dollars in Millions)

State	Advertised to Date	Remainder of Calendar Year	Projected for Year	Construction Value of CAP	Percent of CAP
ME	$ 222.27	$0	$222.27	$224.94	99%
NH	$ 165.01	$0	$165.01	$175.60	94%
VT	$207.79	$0	$207.79	$193.43	107%

Figure 6 Value of capital programs delivered com

The following section will summarize some of the major strategies used by these three agencies. Also staffing levels and consultant volumes will be compared.

Selected Vermont Agency of Transportation Practices

The Vermont Agency of Transportation (VTrans) published the following statement of principles for its Project Development Division managers.

- We will meet or exceed the goal of 80% of projects being advertised on time in calendar year 2013 according to the Tri State Measure. We will do the same for other key milestones such as Clearances for NEPA, Utilities, and ROW.
- No excuses, and zero tolerance for finger pointing. We focus on solutions.
- If we fail, WE ALL FAIL.
- The Director's Office will work closely with everyone involved to include holding Monthly Production Meetings on the first Monday of each month with key stakeholders
- Everyone will communicate well. This includes listening.
- Section Heads are expected to solve communication break downs between Sections. Director's Office is the last resort.
- Innovation developed collaboratively is to be exercised when populating dates for Artemis project delivery milestones.
- The 80% Goal is not a reason for expecting and setting unrealistic project delivery milestone dates.
- We have not failed if some projects are not advertised on time. The 20% is for unexpected changes in a project schedule.
- These performance expectations are key to our success and will be included in your individual performance evaluations.

The VTrans publishes a detailed project list each year for the following year. The SFY 2016 program can be viewed at http://vtrans.vermont.gov/about-us/capital-programs/fy2016 . The overall program includes detailed listing of planned projects in the area of paving, interstate bridges, state highway bridges, roadway, safety and traffic operations, park and ride lots, bicycle and pedestrian facilities, and transportation alternative and multi-modal projects. Internally, the agency produces more detailed multi-year lists with milestones for complex projects, such as Interstate Highway System Bridges. Its Interstate bridge development list includes 28 projects scheduled for bid through 2019. Each is assigned to one of nine different project managers. Budget amounts for preliminary engineering, right-of-way and construction are specified for each of the six years. The total amount expected for construction ranges from $59 million to $18 million for each of the six years. Project-development milestones are tracked to ensure that the department keeps the projects on schedule, or adjusts them as budget or project-

development needs dictate. As the projects become more than 90 percent developed, they are added to the annual list of projects to be let to bid the following fiscal year.

VTRans also has an ambitious accelerated bridge program that includes 62 projects. The goal for each is to move from programming to construction in two years. Most of the bridges are small, deficient structures needing replacement and lacking complex permitting requirements. The program uses expedited project development tactics as well as relies on pre-fabricated bridge elements and full roadway closures to expedite development and construction. A team of nine staff manage the program. Two civil engineers manage consultant designed projects. A team of four civil engineers and two technicians manage the in-house developed accelerated bridge projects. The staff are overseen by a civil engineer manager who reports to the structures engineer.

The VTrans' accelerated bridge program succeeds in part because of a strong agency commitment to it and to substantial advanced scoping in the planning stage to identify critical problems. The following chart taken from the National Highway Institute risk management course illustrates the logic behind the VTrans scoping. Figure 7 is an adaptation by NHI of concepts from the Project Management Institute's Body of Knowledge. Both emphasize that the number of risks to a project's cost, scope and schedule are greatest at the beginning of a project when many of its details are unknown. However, the impact of those risks are lessened because the project manager has time to address them. Concurrently, a few risks late in the project schedule create much greater impacts to the budget, scope, schedule or quality of a project.

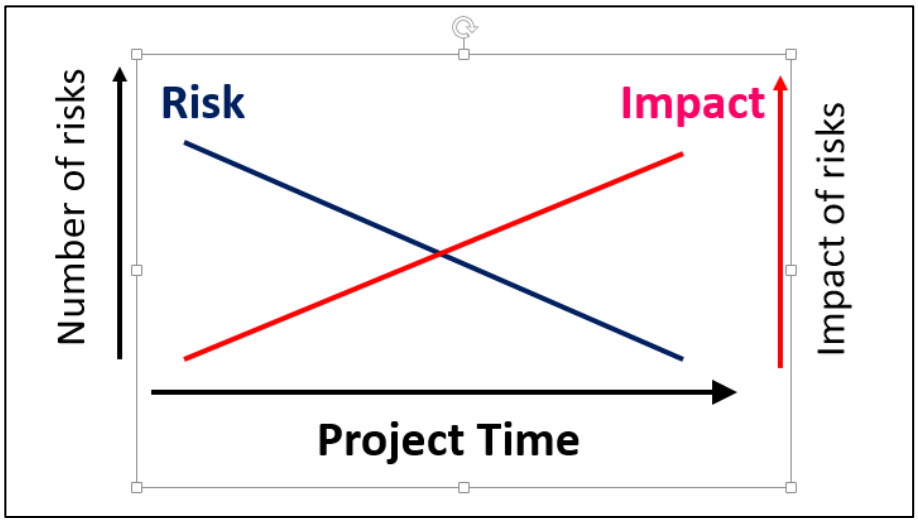


Figure 7 Risks identified early in a project have fewer impacts on project schedules than do those identified late in project development.

VTrans spends six months to a year developing a scoping document for each of the accelerated bridge projects. It also has sometimes conducted risk analysis early in the project to identify key risks. The scoping document involves field reviews of the structure and its surrounding environment to identify key issues that will affect maintenance of traffic, utility coordination, right-of-way acquisition and permitting. The scoping process also involves developing alternative structure and construction options which are coordinated with the community and the resource agencies. The scoping report summarizes the issues surrounding the project, the results of the community consultation, an expected budget and other issues critical to the timely delivery of the project. The scoping process reduces the risks to the remaining project schedule because fewer unknowns are likely to arise later in the project-development process.

The scoping report performs several important functions. It documents the community involvement and resource agency coordination results. It also demonstrates the agency has considered reasonable alter-

natives and selected one that balances engineering considerations, cost, community input and resource-agency requirements. The scoping report also supports reliable project delivery by clarifying the design and project-development issues that will need to be addressed once the project is programmed for design and construction. Once the scoping report is completed and the project assigned to design, then the tracking of its project-development milestones begins. The agency has more knowledge and more confidence with which to identify project-development milestones and has reasonable assurance that it can meet them. Finally, the scoping process involves all the pertinent units within the Agency of Transportation. This internal involvement allows key units such as traffic, safety, right-of-way and utility groups to understand their role in meeting the schedule and budget. Also, the inclusion of the construction team allows constructability issues to be identified early in the project.

The focus on project delivery is inherent in the name of VTrans units. One of the largest divisions is the Project Delivery Bureau. It has four units within it, Highway Safety and Design Unit, Environment and Hydraulics, Right of Way, Utilities and Survey, and Structures. Each of those sub-units focuses heavily on both in-house design and managing consultants. Although the precise breakdown of in-house to construction design was not available, the general numbers indicate VTrans relies much more on in-house design than does RIDOT. Table 2 includes selected comparative data.

Table 2 Selected comparative data for VTrans.

VTrans					
	Construction Contract Amount	Number of Contracts	Production Per Engineering Staff	Consulting Contract Volume	$Consultants/$ Construction
2011	$266,393,323		$3,551,911	$10,884,314	4.1%
2012	$244,063,266		$3,254,177	$9,748,451	4.0%
2013	$283,663,706		$3,782,183	$13,430,164	4.7%
2014	$294,021,891		$3,920,292	$17,485,405	5.9%
2015	$305,656,430		$4,075,419	$17,957,885	5.9%
Total	$1,393,798,616			$69,506,219	5.0%
5 Year Ave.	$278,759,723		$3,716,796	$13,901,243.80	5.0%
Project Development Highway		25			
Project Development Bridge		38			
Project Development Environ.		12			
Total		75			

VTrans has produced an average six-year program of $278 million compared to RIDOT's $150 million from 2010 through 2014. VTrans produced its program with 75 engineers, technicians and a few support staff and an average of $13.9 million annually in consultant support. The total production value per staff member for VTrans averaged $3.716 million for six years while for RIDOT it averaged $2.205 million.

Several factors are noticeable. VTrans relied much less on consultants, averaging about $30 million less per year than RIDOT. Also, VTrans has a larger environmental staff with 12 personnel compared to RIDOT's 7. Also, not seen in these figures is that VTrans appears to have a larger number of engineers and technicians devoted to bridge development projects. Its Project Delivery Bureau Structures

Table 3 Selected comparative data for RIDOT

RIDOT					
	Construction Contract Amount	Number of Contracts	Production per engineering staff*	Consulting Contract Volume	$Consultants/$ Construction
2010	$219,242,234	97	$3,224,151	$43,177,179	19.7%
2011	$104,114,572	62	$1,531,097	$39,935,907	38.4%
2012	$120,679,920	63	$1,774,705	$51,000,160	42.3%
2013	$205,296,374	73	$3,019,064	$46,671,998	22.7%
2014	$100,691,880	45	$1,480,763	$47,490,350	47.2%
Total	$750,024,980	340	$2,205,956	$228,275,594	30.4%
Five year average	$150,004,996	68	$2,205,956	$45,655,119	30.4%
RIDOT Engineering Staff		61			
RIDOT Environmental Staff		7			
Total staff for this analysis*		68			

has 15 personnel in the Project Development Team, nine civil engineers, five technicians and one manager. Those personnel are in addition to the nine in the Accelerated Bridge Program. In addition, another six – five engineers and one technician form the design/build consultant team. Six positions additionally are dedicated to project initiative and innovation. In total at VTrans there are 38 personnel devoted to bridge-development projects. These personnel only tangentially deal with outside issues such as truck permits. They are involved in community meetings but only during the project-development stage. RIDOT has about 30 personnel in its structures department. They manage all bridge functions including inspections, permits, Federal reporting and project management. At VTrans, in addition to the 38 personnel in the Project Development Bureau Structures there are another 11 in the Bureau of Asset Management Performance who handle bridge inspections and Federal reporting. **So in total, VTrans has about 49 personnel dedicated to bridges compared to RIDOT with about 30.**

For comparison, according to 2013 National Bridge Inventory Data, VTrans has 2727 structures over 20 feet totaling 9.5 million square feet compared to 757 RIDOT bridges totaling 8.3 million square feet.

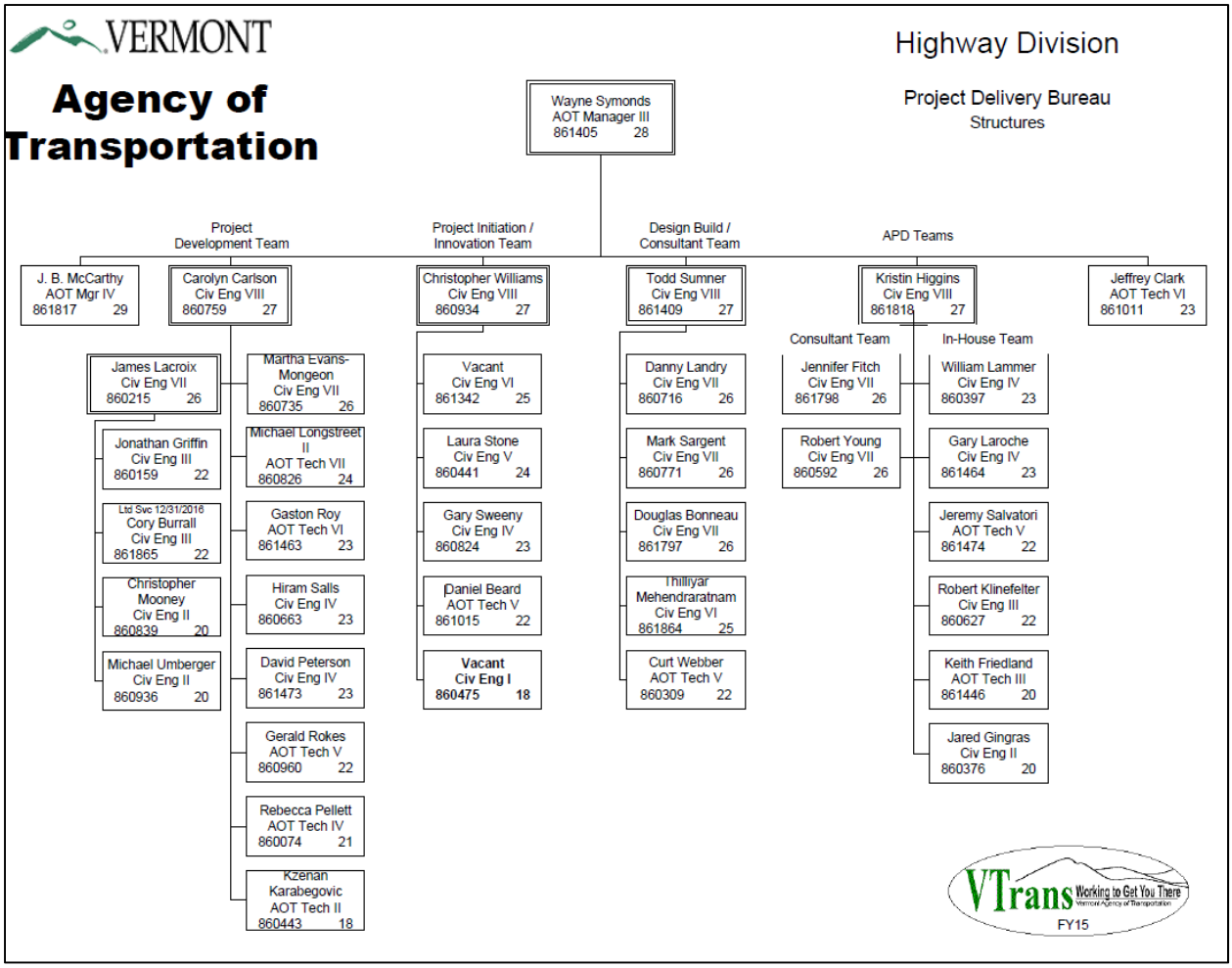


Figure 8 VTrans table of organization for Project Delivery Bureau Structures.

Comparative data for RIDOT are in Table 3. The data for construction contracts volume and number come from Torino. The consulting volumes come from a special report generated by the RIDOT finance and contracts office. Of particular note are the 68 RIDOT personnel assumed to be devoted to project management shown in Table 4. They include the green engineering and environmental staff. **The 22 blue engineering positions are not included in the analysis of the per capita project-delivery volume assuming they are managers.** Those in the blue category are assumed to be in management and not assumed to be available to assist with project delivery.

As can be seen by comparing Table 2 to Table 3, RIDOT has slightly fewer staff than VTrans, produces a smaller program but has much higher consultant expenditures.

Table 4 RIDOT staff included in this analysis are shown in the Green table. Those in Blue are excluded as being in management and not working on project development. The Blue table staff are shown here only to illustrate that all engineering staff were accounted for, and which of those were included in the analysis.

Engineering Management	
CHIEF ENGINEER (DOT) 00149A 1.0	1
DEPUTY CHIEF ENGINEER (DOT) 00145A 2.0 280,262 2.0 280,262	1
MANAGING ENGINEER (DOT) 00141A 6.0 697,223 6.0 697,223	3
ASSOCIATE CHIEF ENGINEER (DOT) 00143A 2.0 221,530 2.0 221,530	1
CHIEF CIVIL ENGINEER (BRIDGE DESIGN) 00138A 1.0 103,615 1.0 103,615	1
CHIEF CIVIL ENGINEER (ROAD DESIGN) 00138A 2.0 204,029 2.0 204,029	2
CHIEF CIVIL ENGINEER (TRAFFIC DESIGN) 00138A 1.0 99,046 1.0 102,080	2
CHIEF CIVIL ENGINEER (TRANSPORTATION 00138A 2.0 188,851 2.0 188,851	2
MANAGER OF SURVEY OPERATIONS (DOT) 00135A 1.0 91,145 1.0 92,233	1
SUPERVISING CIVIL ENGINEER (BRIDGE DESIGN) 02835A 2.0 170,994 2.0 170,994	1
CHIEF REAL ESTATE SPECIALIST (DOT) 00032A 1.0 83,248 1.0 83,248	1
SUPERVISING HISTORIC PRESERVATION 00031A 1.0 82,317 1.0 82,317	1
REAL ESTATE APPRAISER III 00032A 1.0 81,040 1.0 81,040	1
PROGRAMMING SERVICES OFFICER 00131A 2.0 153,185 2.0 153,185	2
PRINCIPAL CHEMIST 00029A 1.0 74,724 1.0 74,724	1
SUPERVISOR, CONSTRUCTION RECORDS 00030A 1.0 74,587 1.0 76,512	1
Subtotal Management	22

Engineering Production Staff	
PRINCIPAL CIVIL ENGINEER (DESIGN) 00033A 13.0 1,099,128 13.0 1,099,128	13
SENIOR CIVIL ENGINEER (DESIGN) 00031A 18.0 1,270,065 18.0 1,275,816	18
CIVIL ENGINEER 00027A 1 22.0 1,210,053 22.0 1,224,564	22
SENIOR LANDSCAPE ARCHITECT 00026A 1.0 53,977 1.0 53,977	1
SENIOR REAL ESTATE SPECIALIST (DOT) 00026A 8 3.0 172,265 3.0 172,686	3
CIVIL ENGINEERING ASSOCIATE 00025A 4.0 214,979 4.0 214,951	3
ASSISTANT ADMINISTRATIVE OFFICER 00121A 1.0 44,398 1.0 44,398	1
Subtotal Engineering Production Staff	61
Total Engineering Staff	83

Environmental and Resource Agency Staff	
SUPERVISING HISTORIC PRESERVATION 00031A 1.0 82,317 1.0 82,317	1
PRINCIPAL HISTORIC PRESERVATION SPECIALIST 00028A 1.0 70,079 1.0 70,079	1
ENGINEERING TECHNICIAN IV (NATURAL 00027A 1.0 67,605 1.0 67,605	1
SENIOR ENVIRONMENTAL SCIENTIST 00030A 2.0 124,650 2.0 129,088	2
ENVIRONMENTAL SCIENTIST 00026A 1.0 56,676 1.0 56,676	1
PRINCIPAL ENVIRONMENTAL SCIENTIST 02832A 1.0 76,719 1.0 76,719	1
Subtotal Environmental and Resource Agency	7
Total Personnel Assumed Engaged in Project Development	**68**

Selected New Hampshire Department of Transportation Practices

The New Hampshire Department of Transportation manages 2,155 state bridges totaling 10,385,500 square feet in deck area. It also manages 4608 centerline miles of highway. As in Vermont, the New Hampshire Department of Transportation publishes an annual list of projects up to two years in advance and closely tracks their delivery. The 2015-2016 advertising schedule can be viewed at http://www.nh.gov/dot/org/projectdevelopment/planning/documents/AdYr1.pdf

Table 5 NHDOT staffing levels

New Hampshire DOT Project Development Staff	
Project Management	
Chief	1
Project Managers	7
Administrative	3
Final Design	8
Preliminary Design	8
Plan Prep	2
CADD Support	4
Consultant Design	8
Design Services	1
Design Services Utilities	12
Survey	3
Records	3
Roadside	2
Bridge Administration	3
Design/Engineering Engineers	16
Bridge Design Techs	3
Environmental Project	
Management	9
Environmental Program	
Management	7
Total	100

The department averaged $192 million in construction projects let to bid between 2011 and 2014. It produced that program with about 100 staff with about 84 of those in the Division of Project Development and 16 in the Bureau of Environment. An additional 32 personnel are in the field including surveyors. Seven senior project managers serve beneath the Project Management Chief. They are augmented by five in-house design teams with six people each. Another team of eight addresses consultant reviews. The environmental staff consist of two teams. Nine persons focus on environmental issues relating to project management and another seven focus on program management. The program management staff includes specialist in cultural resources, air and noise, water quality, wetlands and contamination. Table 5 includes a summary of the NH project-development staff. NHDOT's staffing differs from RIDOT because the 100 staff include 12 utility services designers not included in the RIDOT engineering staff numbers.

New Hampshire DOT relies much more on in-house design than does RIDOT. Sixteen in-house bridge design engineers produce plans and are assisted by three in-house design techs. The total bridge team includes 33 people, including the designers and technicians mentioned and 12 people in the Existing Bridge unit that includes three engineers and nine bridge inspectors. The in-house team in 2014 designed nine bridge rehabilitation projects worth $16.8 million and five bridge preservation ones worth $4.6 million. They also reviewed plans worth $10.4 million designed by consultants. They also administered 29 consultant contracts for tasks such as design, complex inspections and load ratings, underwater inspections, quality assurance of steel fabrication, and paint inspection. It reported $9.92 million in bridge consultant services in 2014.

The bridge team also inspected 1,551 state bridges and 1,145 municipal bridges for a total of 2,696 inspections. They also reviewed 1,290 truck permits.

The Bureau of Highway Design reports that for 2014, its eight member Preliminary Design team worked on 25 projects in addition to reviewing Traffic Impact Studies. The 25 projects for which it produced pre-

liminary development plans will total $51 million in construction value. That team also reviewed 10 consultant projects in various stages that will total $420 million in construction value. The team also designed two task order resurfacing projects and reviewed 24 development proposals.

The eight person Final Design section developed and advertised 13 pavement and preservation projects and oversaw development of 12 safety projects worth $12.7 million. The Consultant Design Section oversaw development of a total of 28 Federal-aid projects worth $75.1 million, six State projects worth $6.4 million and 1 emergency project for $2 million.

NHDOT executives estimate that by dollar volume about half of their construction program is produced by consultants, however, their staff produce in-house more of the smaller, less-complex projects. They focus heavily on project-management activities. For instance, a long-running Interstate 93 expansion project is mid-way through a 10-year program. A senior project manager and two staff have been assigned for several years full time to that project.

The NHDOT executives say that delivering projects on time is an important agency priority. They say it has substantially increased their credibility with the public, legislators and with the contracting industry. The agency received a revenue increase last year which was in part attributed to confidence that the agency could invest the proceeds quickly into highway improvement projects.

Agency officials said in 2014, 57 percent of their projects were let to bid within 30 days of the advertised date, less than 33 percent were up to 90 days late and 10 percent were more than 90 days delayed. They said their schedules in 2014 were hampered by the uncertain Federal appropriations.

They said the original impetus for focusing on project delivery came as a result of the need to improve public perception of their agency. The reliable project delivery has been appreciated by the public and contracting industry that can better prepare bids knowing two years in advance which projects are expected. The agency also keeps a “shelf” of projects. The 2015 shelf consists of $23 million in projects and the 2016 shelf is expected to be $53 million. The shelf allows for rapid addition of projects if revenue exceeds expectations.

NHDOT staff emphasize monthly coordination meetings with resource agencies and utilities. They said right-of-way and utility delays used to be a constant source of complaint. They increased their coordination with resource agencies, the right-of-way staff and the utilities so that those complaints are much less common. The agency has standing monthly meetings with the cultural resource and natural resource review agencies. They also publish minutes of their review meetings to enable everyone, including outside stakeholders, to be able to keep abreast of project issues. Detailed minutes of individual projects are documented and published.
http://www.nh.gov/dot/org/projectdevelopment/environment/units/project-management/nracrmeetings.htm

As seen in Table 6, the New Hampshire staff over a four-year period produced on a per capita basis a lower dollar volume of projects than did the RIDOT staff. But the amount of consultant billings in New Hampshire appear to be about one third of the amount of Rhode Island’s. New Hampshire executives say they rely upon consultants for complex projects and for specialty areas such as safety studies, safety design projects, and roadway safety audits. Staff produce plans for many routine projects in-house.

Table 6 NH DOT program size, staffing levels and consultant volume.

New Hampshire				
	Construction Contract Amount	Production Per Engineering Staff	Consulting Contract Volume	$Consultants/$ Construction
2011	$226,299,314	$2,262,993	$22,938,723	10%
2012	$205,879,639	$2,058,796	$13,748,678	7%
2013	$165,010,000	$1,650,100	$29,840,113	18%
2014	$174,483,663	$1,744,837	$22,219,924	13%
Four Year Average	$192,918,154	$1,929,182	$22,186,860	12%
NH Project Develop Bureau Staff		84		
NH Environmental Staff		16		
Total staff for this analysis		100		

As does Vermont, the New Hampshire DOT also tracks internally the completion of milestones for complex, multi-year projects that are not yet mature enough to be advertised in the two-year program. It uses its ARTEMIS project-tracking system and its monthly review meetings to keep abreast of these multi-year projects.

Selected Maine Department of Transportation Practices

The Maine Department of Transportation has produced an average annual construction program of $283 million while achieving an approximate 80 percent on-time delivery rate. Its executives say that an 80 percent delivery rate is reasonable because one that is higher may force staff to cut corners or take other undesirable steps just to achieve the delivery target. Allowing up to 20 percent of projects to be delayed allows for a reasonable accommodation of inevitable project delays. However, the executives and staff say they are very focused on their 80 percent target. Staff have been known to print off charts of their performance and post them in offices to keep everyone focused upon the target of reliable project delivery.

The Maine DOT was the original model for the project delivery effort that was later emulated by Vermont and New Hampshire. It publishes a Maine DOT Work Plan http://maine.gov/mdot/projects/workplan/ that spells out overall capital program goals for the upcoming three years and lists the individual projects expected to go to construction each year. Maps and lists are published by county. Figure 9 illustrates the bridge project history and target included in the current Work Plan.

The Maine DOT takes a similar approach to that used in Vermont and New Hampshire. One of its four major bureaus is the Bureau of Project Development. The bureau is organized into teams that are led by project managers and include right-of-way and utility staff. They coordinate closely with the environmental sections that also work in teams. The teams are assigned projects and are expected to deliver them. Monthly progress meetings are held internally as well as monthly progress meetings with the resource agencies. Maine officials say they are on a first-name basis with the environmental agency staff because of their frequent meeting and close coordination.

The Maine officials say they began their emphasis on project delivery several years ago to counteract skepticism that the agency could reliably deliver a large program. They said they have found that the ability to reliably deliver a program lays the foundation for additional revenue.

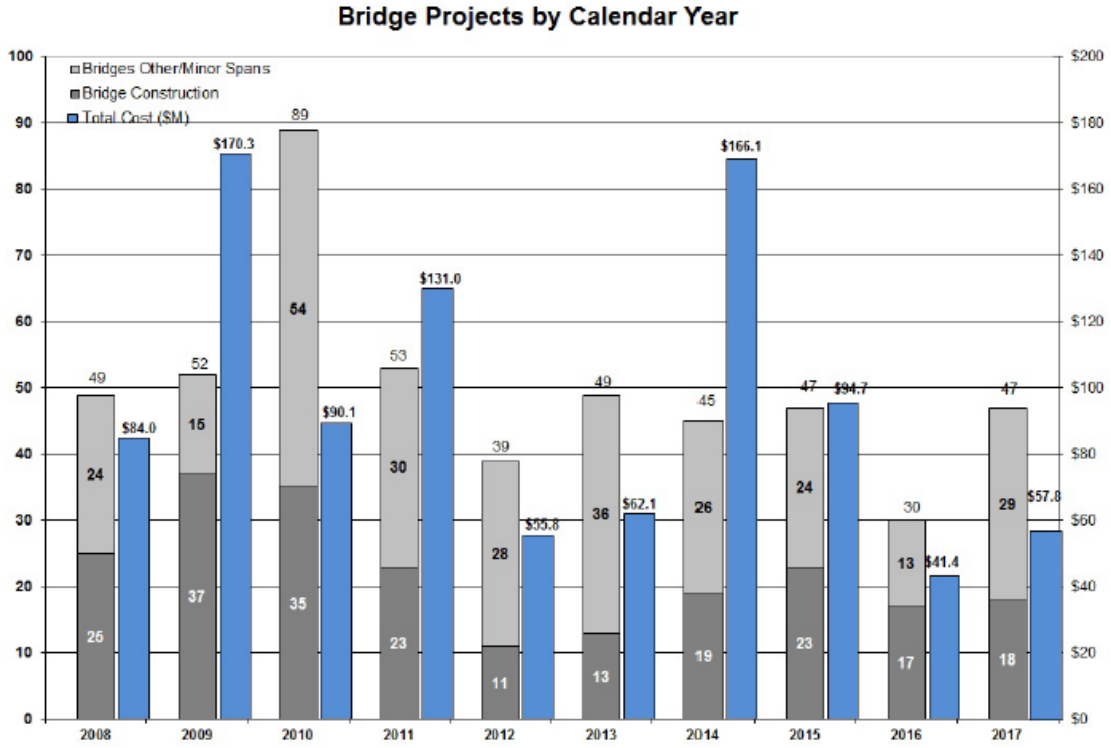


Figure 9 Past and forecasted Maine DOT bridge programs.

Like with Vermont's bridge scoping process, the Maine DOT emphasizes thorough project planning before committing a project to construction. Many complex projects are funded in the STIP only for preliminary engineering (PE) and stay in the PE phase until there is clarity about the project scope and impact. For a bridge project, the agency may determine the type, size and estimate from the preliminary planning phase and began coordination with the resource agencies. The project will not be committed to a construction year until the agency believes the scope is clear. **The Maine production staff focuses on production and is not expected to juggle other duties, such as handling permits**.

Details of employee levels were not available because the Maine organization is different than Rhode Island's and tables of organization were not provided to allow function-by-function comparisons. Overall about 350 people are in Maine's Project Development Division. Included in that division are construction, right of way, utilities, survey, aerial photography, contracts and specifications, testing and geotech, multi-modal programs as well has highway and bridge programs. Some years ago, Maine integrated right-of-way and utilities into the project development arm. In comparison, for the RIDOT analysis, functions such as construction, right of way, utilities, survey, materials testing and others were excluded.

The comparison of the Maine DOT to RIDOT is muddied by the different size of the two departments and the different ways in which the divisions are organized. However, superficially it appears that Rhode Island has about 320 personnel in the comparable divisions that comprise Maine's project-development

division that has 350. As mentioned earlier, RIDOT staff are expected to work only 35 hours weekly, versus 40 which affects any per-capital comparisons.

Maine DOT did provide consultant contract amounts and hours by consultants and in-house staff to produce project plans seen in Tables 7 and 8. According to their figures, consultant costs averaged only 3.6 percent of the total construction cost over the past six years. Although consultants are a relatively small part of the program, they have become a larger part of the total hours compared to the in-house staff as seen in Table 7.

Table 7 Comparative contract amounts and consultant costs

Maine DOT				
	Construction Contract Amount	Production per engineering staff	Consulting Contract Volume	$Consultants/$ Construction
2009	$371,520,000		$8,000,000	2.2%
2010	$286,580,000		$5,800,000	2.0%
2011	$296,590,000		$6,900,000	2.3%
2012	$220,720,000		$11,000,000	5.0%
2013	$236,170,000		$15,000,000	6.4%
2014	$291,100,000		$14,200,000	4.9%
Total	$1,702,680,000		$60,900,000	3.6%
Six year average	$283,780,000		$10,150,000	3.6%

Table 8 Consultant hours and costs by year.

Cal. Year	Consultant Hrs	Internal Staff Hours	Consultant Hrs Pct
2004	114,602	77,617	60%
2005	43,713	75,373	37%
2006	43,984	77,200	36%
2007	32,288	67,924	32%
2008	65,019	73,453	47%
2009	79,569	73,347	52%
2010	57,836	67,377	46%
2011	68,816	49,134	58%
2012	109,961	55,846	66%
2013	149,839	55,207	73%
2014	141,724	56,594	71%

Cal. Year	Consultant Services	Internal Staff	Consult. Pct
2004	$11.5	$3.1	79%
2005	$4.4	$3.0	59%
2006	$4.4	$3.1	59%
2007	$3.2	$2.7	54%
2008	$6.5	$2.9	69%
2009	$8.0	$2.9	73%
2010	$5.8	$2.7	68%
2011	$6.9	$2.0	78%
2012	$11.0	$2.2	83%
2013	$15.0	$2.2	87%
2014	$14.2	$2.3	86%

Ohio Department of Transportation District 7

A brief comparison will be made to the Ohio Department of Transportation District 7. It is of the approximate size of Rhode Island. ODOT's district 7 includes Dayton, Ohio, and the very busy Interstate 75 with daily total volumes of up to 112,000 vehicles with trucks exceeding 16,000 per average day. The district

has a population of about 972,000 compared to the 1.055 million in Rhode Island. As seen in table 8, the district has produced an annual average program of about $161 million over the past six years

Table 9 Ohio District 7 comparative production, staff and consultant numbers.

Ohio District 7				
	Contract Amounts	$ Product/Staff	Consulting	% Consultant Cost of Program
2009	$115,903,000	$2,519,630	$8,242,979	7.1%
2010	$234,985,000	$5,108,370	$10,102,898	4.3%
2011	$106,205,581	$2,308,817	$4,127,656	3.9%
2012	$85,488,661	$1,858,449	$5,025,990	5.9%
2013	$214,170,233	$4,655,875	$12,736,157	5.9%
2014	$208,464,738	$4,531,842	$6,091,262	2.9%
Total	$965,217,213		$46,326,942	4.8%
Average	$160,869,536	$3,497,164		
Project Development Staff	46			

with 46 staff and an average consultant percentage of 4.8 percent of the value of construction. These staff numbers are understated because for very complex projects the staff would receive assistance from ODOT central official specialists in the environmental or specialty review area. However, because the district would only let to bid one or two very complex projects per year such assistance would be a small part of the district's overall effort. The Ohio DOT relies heavily upon project tracking, frequent coordination meetings and reliance on programmatic agreements to expedite approval of small projects. The district has had a project-delivery rate consistently above 90 percent measured against the month in which projects were scheduled to bid.

Recommendations for Rhode Island

The examples from Vermont, New Hampshire and Maine illustrate that relatively small Northeastern states have developed reliable project-delivery processes. While those states with relatively small programs have achieved reliable project delivery rates so have larger states such as Ohio and Florida that have produced programs in excess of $2 billion while achieving very high rates of project delivery. The recommendations for RIDOT are based on a synthesis of the practices of these states and basic practices recommended by the Project Management Institute.

First, the report recommends that RIDOT develop an emphatic policy that it will identify a fiscally constrained two year list of projects for the State Transportation Improvement Program and then measure and manage to ensure the projects are delivered on time. The first step taken by the other states when they began to emphasize reliable project development was to adopt a policy and communicate emphatically that reliable project development was a priority. Reliable project delivery provides a department credibility with communities, legislators and the construction industry. Experience shows that reliable project development is a skill that can be learned by an organization. Once ingrained, it becomes like "muscle memory" and is routine to the dozens or hundreds of staff and consultants responsible for meeting the milestones. Reliable project delivery did not come immediately in any agency. Officials in each of the agencies said it took several years of focus but now has become routine.

This report recommends that RIDOT compare its current STIP with a realistic assessment of projects that are under development. With the large amounts spent on consultants, there is likely to be many projects under development that are well advanced in design. The department should identify a realistic two-year list of projects and, after careful review, publish them as a biennial work plan similar to that done in Vermont, New Hampshire, Maine, Ohio, Florida and other states. The published two-year Work Plan then becomes the target against which the subsequent steps are taken.

Presently, RIDOT cannot say what its project-delivery rate is. This is because it lacks a baseline of what projects it wants to construct and when. The Work Plan derived from an updated STIP will provide that baseline.

Second, RIDOT should conduct monthly project-tracking meetings in which a broad cross-section of the department staff reviews activities necessary to deliver the two-year program on time. These meetings should be inclusive of all disciplines that could identify problems and help resolve them to keep projects on track. These meetings should be given high priority, be chaired by a high-profile executive and be documented to ensure they are effective. It is important to review all projects in the two-year STIP and not only those scheduled for bid in the next quarter as is done currently. Also, the meetings should document changes in schedule, scope and cost to ensure accountability and to ensure the Work Plan is up to date.

Common in all the agencies studied are monthly, high-profile project-review meetings. These need to be inclusive with project managers, environmental staff, right-of-way staff, utility specialists and construction staff. It would greatly assist this effort to have staff dedicated to organizing and documenting the results of these meetings. The agenda would focus upon the two-year program and the status of each project and what is needed to keep it on schedule. Experience states that early meetings may be chaotic, disorganized and sometimes argumentative. At first, data regarding project cost, schedule and scope will be unreliable. Each meeting will reveal another set of obstacles or more poor data that will cause the schedule to churn. However, experience also shows that over time, the true status of projects is clarified and gradually the teams develop more accurate summaries of project status. To emphasize the importance of these meetings, they should be chaired by a high-level executive. Agendas should be formalized, minutes taken and follow-up action documented.

Third, the department should "clean house" in the Project Management Portal and insist that projects that are not actively under development be removed and that active projects be updated with realistic schedules and budgets. The PMP currently does not serve an effective department-wide function of informing multiple participants of realistic schedules and budgets. For project tracking and coordination across work units to be effective, everyone needs to literally be on the same page. Interviews with RIDOT staff revealed that the PMP is not viewed as reliable. Because the system is not used department-wide, much of its data is inaccurate. Access to it is limited to some staff and the production of ad hoc reports of projects' status is not possible. The monthly progress meetings and the tracking of project schedules will not be effective until a common database of projects with accurate costs, scopes and schedules is available. Presently, many staff keep their own spreadsheets and lists of project status, most of which are not shared. RIDOT will not be able to effectively track the status of hundreds of projects under development for the next few years if its project database is not accurate and credible. Closely related to the first two steps, is the need to update the status of all the projects in the PMP and to remove ones that are not actively under development.

This is an interim step pending a larger effort to develop a more effective project-tracking system discussed below.

Fourth, project-development staff should be organized in cross-disciplinary teams of engineers, planners, resource agency liaisons, utility specialists and right-of-way staff. This organization could be done by changing the table of organization or through a "matrixed" structure. In a matrix structure, personnel may still report to different supervisors but are expected to work "horizontally" on dedicated teams. An example could be the formation of three bridge teams each with two to three engineers, an environmental specialist, a utility specialist and a right-of-way specialist. Each team would be assigned a number of projects, say five per year for the next four years. Three such teams would appear to be adequate for the size of the bridge program RIDOT expects to deliver for the next five years. The formation of teams and the assignment of project-delivery duties to them assigns "owners" to each project and provides each team with the multi-disciplinary set of skills needed to deliver the projects. The perspectives of the different disciplines also keeps the teams focused on all the different types of risks and issues that must be addressed. As an executive of the Maine DOT said, "We don't have a lot of silos around here." He viewed the matrix approach as essential for identifying the many different types of problems that can affect projects particularly in the environmental, utility and rights-of-way areas. It is common for DOT staff to say that "the engineering is easy" meaning that design problems seldom are the cause of project delays. Instead, the external factors of utility relocations, environmental permits and right-of-way are the most common cause of delay and cost increases. The formation of teams acknowledges upfront that the path to success lies in addressing all the disciplines that are needed to ensure reliable achievement of project delivery.

Each team should be given responsibility for a number of projects and be expected to identify key milestones and activities and work cooperatively to ensure projects are let to bid on schedule. These teams could be given programmatic or geographic focus for greater efficiency. The teams could be divided into ones focusing on bridge preservation projects, bridge replacement/rehabilitation projects, urban paving and street-scape projects, traffic/operations projects and so forth. Or they could be divided geographically. Vermont "batches" its bridges geographically to create efficiency in field reviews. Staff can travel to one region and conduct multiple reviews. The formation of teams and the assignment of them to types of projects or to regions of the state can create experience and efficiencies essential to success.

Fifth, high-profile monthly progress meetings with resource agencies should be instituted. Resource agency approval will be critical to the increased bridge, pavement and drainage-maintenance activities. Four organizations were reviewed for this analysis. All rely on regular coordination meetings and standardized programmatic agreements with resource agencies to improve project-development reliability.

RIDOT currently coordinates with the resource agencies on a regular basis. This recommendation calls for a marginal increase in the level of effort and stature to the coordination. Having high-level RIDOT officials meeting regularly with high-level resource agency personnel to address issues is essential to a partnering approach. In the four agencies studied, none sought a confrontational relationship with the resource agencies. To the contrary, they viewed the resource agencies as critical stakeholders who hold the key to their success. In interviews with RIDOT, those who were closest to the resource agencies expressed the greatest doubt about RIDOT's ability to deliver a larger construction program because of resource agency issues.

Sixth, RIDOT should form a unit in the asset management division that plans, programs and scopes ALL projects. RIDOT staff repeatedly describe project scopes and schedules changing without coordina-

tion with other parties. Several said it was difficult to even determine the current scope of a project without personally contacting the project manager. Scope issues included elements such as pavement markings, signage and traffic control devices being added to project scopes while those same elements were in design in other projects. Communities requesting additional amenities were frequently cited as issues that drive up project cost and delay delivery. A lack of internal coordination left other units unclear of project work limits and unable to coordinate schedules of projects occurring in close proximity.

A centralized project scoping unit is needed that approves, documents and monitors project scopes. This unit should be based in an asset management division but have significant input from all the engineering disciplines. Linking the programming function to an asset management division can increase the data-driven approach to selecting projects. Project selection should be driven by asset conditions and they should be scoped to achieve the asset-condition targets.

This unit would serve as the "funnel" through which suggested projects are sorted, realistic scopes identified, schedules and budgets set. No change to cost, scope or schedule should be approved without coordination with this unit that serves as the "traffic cop" for keeping the STIP fiscally constrained and realistic. This unit should operate cooperatively with other divisions to ensure that subject matter experts from structures, safety/traffic, roadway and maintenance have input into project-selection priorities and project scopes. However, this unit would function as the "keeper of the STIP" to ensure that project scopes, schedules, and budgets do not churn without coordination and approval by senior management. The reports generated by this unit could inform all units about the elements within projects, their expected schedules and their budget. Major changes should not be made unless agreed to by the scoping group and then the changes documented to inform all other parties. A work unit of four to five people is anticipated for this group. They would be primarily coordinators and facilitators who serve as gatekeepers to projects that enter the project-development process.

Seventh, planning staff should complete scoping reports for complex projects before they enter design. Common in Maine, Vermont and Ohio is a longer, more formal preliminary development phase that clarifies project scopes before the projects are approved for final design. A major reason for reliable completion of project milestones is a lack of surprises. When projects enter design without extensive coordination the chance of surprises, delays and additional costs increase. Ohio has a formal and stratified preliminary development phase with more complexity for major projects and a more perfunctory preliminary development phase for less complex ones. Maine programs projects only for preliminary engineering until it is confident of the project scope, budget and environmental permitting requirements. Only then, are they scheduled for final design. The Vermont scoping reports bring the resource agencies, community and internal department units into agreement before final design begins.

A common complaint about relying on preliminary scoping reports is that some issues such as quantities of cuts and fills or right-of-way takes are not known until late in the design process. Although true, agencies such as Ohio, Vermont and Maine reduce the impact of delays by more constant coordination with the resource agencies and other stakeholders throughout the design process.

For bridge projects, this scoping report would include development of a rehabilitation or replacement recommendation, assessment of the utility, right-of-way and environmental complexity, initial public involvement and estimated budget and schedule. For new structures it also would include a type, size and estimate (TS&E). For roadway projects, the scoping study would determine line, grade, typical section, construction and right of limits and importantly community involvement regarding project scope elements such as streetscapes and sidewalks. Complex projects would be programmed initially in the

STIP only for this planning phase. As the planning phase and scoping report is completed and project scope, cost and complexity are clarified, then the project would be programmed for final development and construction. Projects in this planning phase would be "in the bull pen" waiting matriculation into the financially constrained STIP. From that point, their milestones, scope and costs would be closely tracked through to their construction. Simple projects such as bridge preservation or pavement marking projects would skip the planning report phase and proceed from programming to project development.

Eighth, RIDOT should conduct in-depth benchmarking with staff at the Vermont Agency of Transportation, the New Hampshire Department of Transportation and the Maine Department of Transportation to further refine the staff-comparison information in this analysis. A comparable district within the Ohio Department of Transportation also may provide promising insights because it is similar in size to RIDOT. This benchmarking is recommended because these four organizations face similar challenges to RIDOT but all have attained 80 percent or better achievement of project-development milestones for several years, in some cases for nearly two decades.

Initially it appears that RIDOT may be understaffed in the bridge and environmental areas. In the environmental area it has only 50 percent of the staff of Maine or New Hampshire. It appears to have eight to ten fewer bridge staff than the other states, **although those states have many more structures but not substantially more bridge area.**

However, the large size of the RIDOT consultant program makes head-to-head staff comparisons difficult. Unless the other agencies' published numbers are wrong, it appears they spend far less on consultants than does RIDOT, although their staffs are not commensurately larger. New Hampshire's project-development staff is 33 percent larger than RIDOT's but RIDOT's consultant billings are 300 percent larger proportionally than New Hampshire's.

Further complicating RIDOT's comparison to peers is its co-mingling of duties. It appears that no one at RIDOT is a pure project manager. They manage projects when they can around other duties such as handling access permits, truck size and weight permits or responding to public enquiries. Although difficult to quantify, this diversion from project management must lead to distractions and inefficiencies. A key first step is for RIDOT to determine how many personnel are needed for those non-project tasks and determine if those tasks can be staffed with current personnel, leaving the others to focus upon managing projects. Also, the department must determine if the "jack of all trades" interests of staff serve the best interest of the department.

This report recommends that RIDOT staff speak directly and at length with their counterparts in Vermont, New Hampshire, Maine and possibly Ohio. These apparent differences in the size of the consultant programs, productivity per staff, internal management processes and size of key staffs such as for environmental permitting should be understood in more detail. Also, the lessons learned from the other states will carry more weight if learned from peers rather than from a consultant's report.

Ninth, it is the recommendation of this report that RIDOT segregate duties and appoint project-development staff to manage development of specific projects with clear expectations for achieving project-development milestones. Non-project-development duties such as issuing permits should be assigned to individuals without project-management responsibilities. To be frank, RIDOT has among the worst bridge conditions in the country. It is hard to identify a higher and better use of engineering talent then to deliver a shelf of bridge projects and have them ready for any financial windfall that may arise. Bridge emergencies plague the department's project-development schedule. Having plans ready for the

structures that are in the worst condition can head off unexpected emergencies and demonstrate that the department is ready to deliver if additional money is provided.

Tenth, this report recommends creating a small "strike force" to handle emergencies. Staff report that emergency projects, particularly bridge ones, arise frequently and churn their priorities. Having a dedicated team whose job it is to handle emergencies could buffer other project-development staff to focus on delivering the planned program. A lack of staffing has prevented this long-recommended unit from being formed.

Eleventh, RIDOT should start development of a new project management system. The PMP is wholly inadequate for managing a complex, modern transportation program. A new management system should be developed to parallel the project-management process RIDOT identifies. The form of the system should follow the function that RIDOT wants for its project development process. For simple projects, RIDOT may want only a handful of project milestones. For more complex projects, it will want additional milestones. And for major projects, it will need many milestones reflecting the complexity of the projects. The management system should parallel these project-development rules and provide the data and reports to allow the department to aggregate the totality of its program and how it is tracking while allowing a manger to drill down to each milestone on each project. The program should be geolocated and tied to a data warehouse. This functionally would allow it to be linked to legacy databases and systems and allow the system to map projects and display project information spatially.

Managing the thousands of milestones that will be needed for reliable delivery of a $200 million annual construction program will require accurate, consistent data. Such data are not now produced by the PMP.

Project Development Conclusion

RIDOT needs better project-management processes and probably up to 20 additional staff in the areas of structures, environmental permitting and project management. However, having additional staff while retaining the large volume of consultant billings would put RIDOT's total project-development costs well above its peers. RIDOT should embark on a series of benchmarking meetings with its peers and understand how it can emulate their project-development successes while also assessing its need for such large consultant billings.

Comparative Analysis of the Rhode Island DOT Materials Staffing Levels

Summary and Conclusion

Senior management at the Rhode Island Department of Transportation (RIDOT) requested that an analysis be conducted of the staffing levels of the materials unit and compared to those of selected peer states. A comparison was conducted but no definitive conclusion could be reached because of the differences in how other states staff materials testing units and use consultant services. Superficially, RIDOT is more heavily staffed in the materials division than are peer states. However, the peer states rely more heavily on consultants and construction staff for some testing functions, which RIDOT does not. RIDOT's materials division also includes research, product evaluation and pavement preservation, which are handled by other divisions in other states. The other states also rely on contractor-certified testing, something the Federal Highway Administration (FHWA) will not allow in Rhode Island. Although the other states' expenditures on consultants are not easily obtained, it appears that when all costs are considered RIDOT's inspection costs probably are not higher than the peer states'.

Analysis

When narrowly defined, RIDOT may or may not have more personnel in the "materials" area than peer states based on a per dollar of construction basis. It has 53 staff in the materials area compared to 30 for the Vermont Agency for Transportation and 25 for the New Hampshire DOT. However, in New Hampshire and Vermont field testing and precast/prestress testing is performed by construction staff who are not included in their materials staffing numbers. Also, those states have much larger geotechnical staffs who perform some functions conducted by the RIDOT materials staff.

Also, the other states regularly augment staff with consultants during peak summer construction periods which RIDOT does not do. The other states could not produce a cost estimate of their consultant usage because those costs are embedded within contractors' bids and other spending categories that could not be readily summarized. However, a Vermont testing official estimated that his staff are augmented with 30 consultants in the summer construction season. Vermont could not produce accurate costs for inspection services because they are spread between consultant costs, and some costs imbedded in contractors' bids.

In RIDOT also, some testing and acceptance functions such as concrete field testing that are done by the "construction" units in other states are performed by "materials" staff in RIDOT. To make an accurate comparison a much more in-depth task-by-task comparison would be needed to make a complete "apples to apples" comparison.

Staff in the RIDOT materials division perform some tasks such as geotechnical assistance, research, product evaluation and pavement preservation activities that are handled by other units in the other states. Because of RIDOT's small size, it lacks the number of divisions, such as a soils and geotechnical division, and a Pavement Preservation division, which are common in other states. Those duties are included in the RIDOT materials staff functions and are co-mingled with their materials duties.

RIDOT does not use contractor test results for acceptance like some other states based upon insistence from the Federal Highway Administration and RIDOT's own policies. The approach is based on experience that the state's contractors need close oversight to ensure compliance with specifications and materials standards. Some of these functions that RIDOT performs that other states do not include:

- RIDOT has an inspector in every asphalt and concrete plant for each production run when the plants are producing materials for RIDOT while other states may visit plants only on a random, weekly basis.
- Other states sometimes rely on consultants to inspect asphalt and concrete plans, which RIDOT does not allow.
- RIDOT staff also perform detailed plan reviews related not only to materials but construction and specification writing, which in other states may be conducted by specialists in the design section. Again, because of its small size, RIDOT materials specialists provide comments on pavement designs and other issues that in larger states are handled by design specialists
- RIDOT does not accept contractor test results, which are accepted in some states.
- The relatively small size of RIDOT and its construction program creates proportionately higher overhead for fixed costs, such as operating a laboratory.
- The relatively small RIDOT projects do not create economies of scale for inspection and testing. Each small project needs testing which creates higher per-project testing costs. In states with more large projects, the per-dollar cost of testing can be lower.

Every state reviewed has different sampling rates, which complicates testing comparisons. RIDOT tests 1 of every 600 tons of asphalt or per production run, New Hampshire one of every 750 tons and Ohio one of every 500 tons. There are hundreds of materials sampling and testing procedures and each would need to be compared to make a thorough comparison. However, the RIDOT testing rates are not much different, and are in fact lower, than in some states.

The Table 10 highlights the major comparisons between RIDOT and the peer states.

Table 10 Selected comparative data regarding materials testing.

	5 Year Average Program	Material Staff	Geotech Staff	Consultant Use	Inspect Plants	Use of Contractor Tests
Rhode Island	$150,004,996	53*	0	Very Low	Continuous	None
Vermont	$243,096,381	30	13	High	Continuous	High
New Hampshire	$192,918,154	27	26	High	Continuous	Low
Maine	$283,780,000	36	25**	Low	Spot Checks	Low
Ohio District 7	$160,869,536	18	2	Moderate	Spot Checks	High
ODOT	$1,773,960,372	135	18	High	Spot Checks	High
* Does not Include 22 Vacancies						
** Approximate						

Another significant difference is that Vermont does not test materials with its staff on fast-tracked design/build projects which removes tens of millions of dollars of bridge projects from more in-depth testing requirements. Vermont uses contractor-supplied test results for acceptance, which is less labor intensive, for design/build projects. Also, many of the design/build projects use pre-cast components, which are tested at the plant and which lower testing requirements. RIDOT does not use design/build frequently.

New Hampshire has a smaller staff but tests such as asphalt density core tests that are done by RIDOT staff are done by contractors in New Hampshire and sent to independent laboratories for certification. In addition New Hampshire DOT uses construction staff for ready-mix concrete and other testing on-site. The New Hampshire DOT also has three standing on-call contracts for other testing support such as testing of pre-cast products which are cast out of state. RIDOT staff believe the consultant inspection of pre-cast testing to be inadequate. It was the subject of a FHWA inquiry when a precast item in another state was supposed to have reinforcing steel, but did not. New Hampshire also has a separate geotechnical unit of 26 people, while Rhode Island has one person in the design section and one in materials who provide geotechnical advice as needed. The New Hampshire materials staff don't conduct plan reviews which they do in Rhode Island. The New Hampshire staff said they would be reluctant to compare their overall level of effort for testing against Rhode Island's because of the differences in how the two states rely on consultant assistance.

The Ohio DOT has substantially lower staffing levels but it relies heavily upon contractor-supplied testing. Ohio also has a flexible inspection and testing staff. Highway technicians can be trained in inspection and will flex over to inspection and testing when construction programs are high. When the construction program in a district or county is light, they will flex back to maintenance activities or plowing snow. Such practices are not permitted under RIDOT's labor agreements.

A significant consideration in the RIDOT approach to testing is the Federal Highway Administration's insistence that the state not relax inspection and testing processes. Staff and FHWA have anecdotal examples of contractors providing substandard materials on RIDOT projects when inspectors were not present or were untrained, and on non-RIDOT projects when inspection was not provided. FHWA and RIDOT materials division have reduced testing frequencies in many areas in recent years and believe that testing personnel are understaffed due to the number of projects and plants that need to be covered. FHWA and RIDOT report that during the busy construction season, materials staff must cover several projects simultaneously and it is convinced that contractors will cut corners if inspectors are not present. The FHWA Rhode Island Division does not support a move toward using contractor test results for acceptance.

RIDOT staff contend their testing and acceptance processes result in longer-lasting pavements. They cite the 15+-year life of high-volume routes' surface courses and more than 25+ year life for low-volume roadways as evidence that the higher standards save money by providing longer service lives for materials, especially for pavements.

Conclusion

Although exact comparisons are difficult because of the differences in how states staff and test materials, it does **not** appear that RIDOT's overall level of effort on testing is excessive or the materials division overstaffed. During peak construction periods the testing personnel may be understaffed and unable to serve all projects to the extent desired by FHWA. This may be particularly true for pavement projects and geotechnical applications.

Although RIDOT does not allow contractor test results for acceptance as some states do, the RIDOT position is strongly endorsed by FHWA, whose staff say they will not allow it in Rhode Island. FHWA believes it has seen contractors attempt to use substandard materials and will not support a shift to contractor acceptance testing. A shift to contractor acceptance testing is not intended to be used to reduce state staffing per FHWA detailed in the document, "Optimal Procedures for Quality Assurance Specifications."

RIDOT relies on staff to test nearly all materials while other states rely more heavily on consultants. The consultant costs for the other states could not be isolated and were often embedded in contractors' prices. RIDOT materials staff insist consultant costs are 20 percent higher than staff costs, and that consultant quality is weak in the materials testing area.

RIDOT's small size also causes its materials staff to conduct some activities that are performed in other division in peer states. These functions include plan review, geotechnical consultation, specification writing and management of a pavement preservation program. Although exact "apples to apples" comparisons were not possible without the peer states expending considerable effort to isolate all testing costs, it does not appear that RIDOT's testing processes are excessive.

Also, unlike the project-development process, for materials testing there are clear national protocols which are accepted by FHWA and AASHTO. RIDOT follows those nationally recognized procedures and its testing frequencies do not appear to exceed them.

[i] Tri-State Performance Measures Report accessed at http://vtransengineering.vermont.gov/sites/aot_program_development/files/documents/publications/2013%20Tri-State%20Report.pdf p. 3

EXHIBIT B

RIDOT

Rebuilding the Department

Rebuilding RHODE ISLAND

RIDOT: A HISTORY OF UNDERPERFORMANCE

- Unpredictable, Unreliable Funding
- Poor Planning and Underinvesting in Maintenance ⇒ Increased Costs
- Lack of Accountability

UNPREDICTABLE, UNRELIABLE FUNDING

Without a predictable source of funding, Rhode Island is vulnerable to erratic federal funding levels, making it difficult to prioritize and plan.

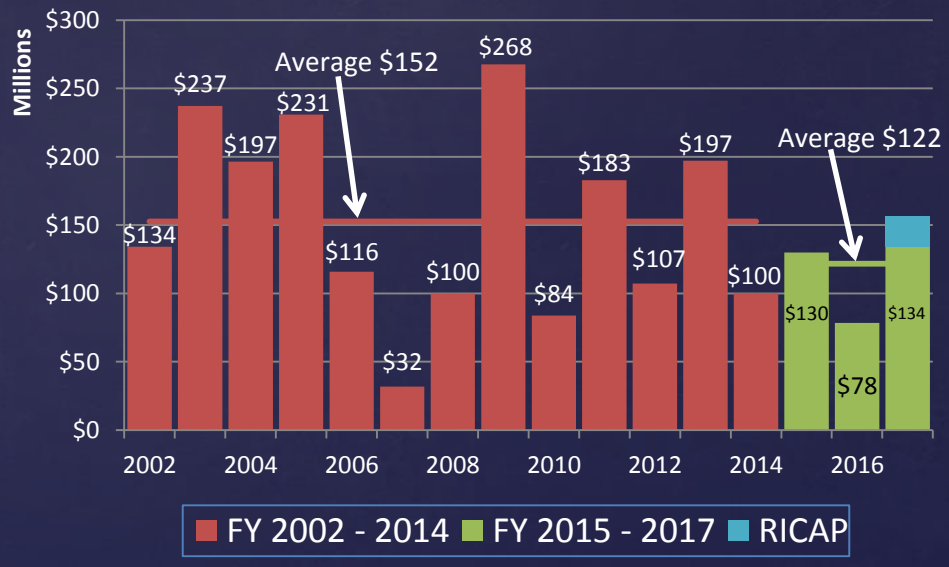
Over reliant on Federal Dollars

RI tied with MT as state with greatest dependence on federal funds – more than 2x national average

	Spending (in thousands)		Total spending	
	Federal	State and Local	Federal	State and Local
R.I.	268,294	220,532	55%	45%
U.S.	50,107,690	155,913,696	24%	76%

*Source - "Average spending on surface transportation by level of government 2007-11," Pew Charitable Trusts, 2014.

History of Erratic Funding For Construction Projects



POOR PLANNING

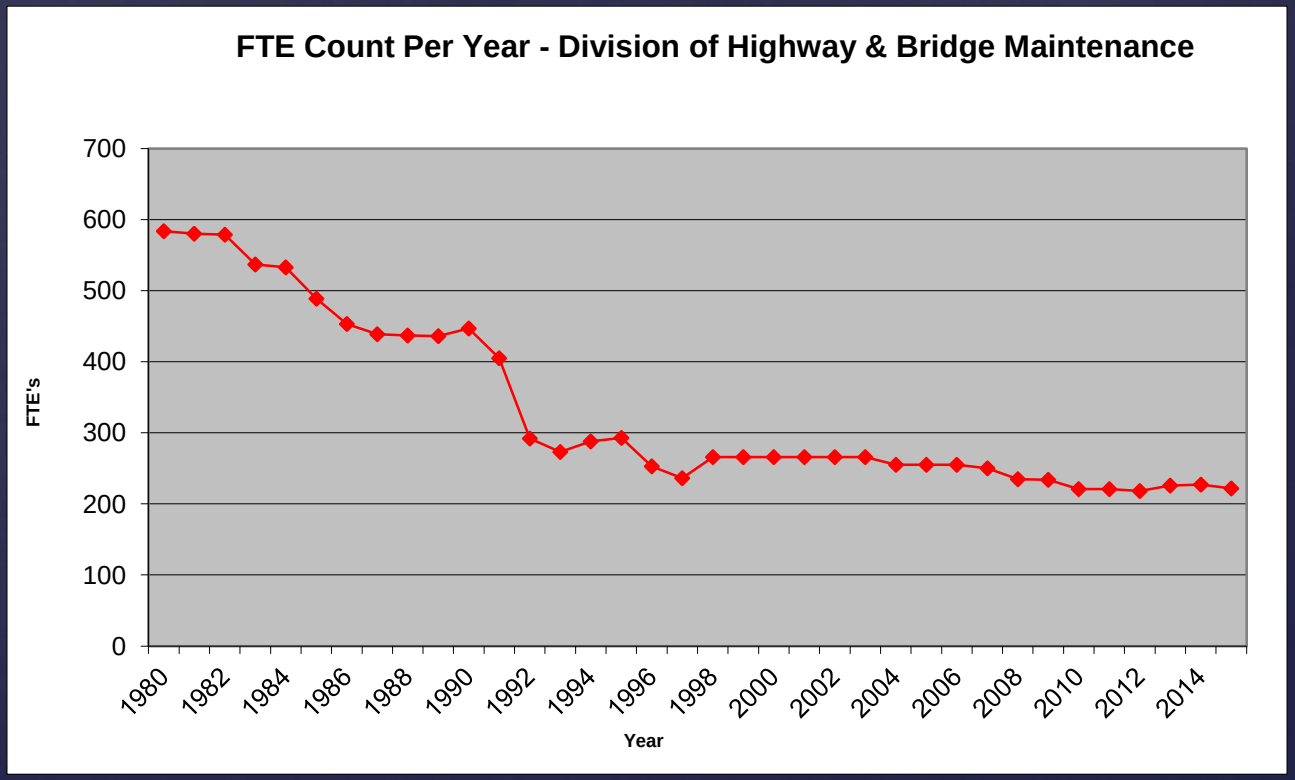
Poor planning has led to bad project prioritization.

- **Projects were often designed but never funded.**
- **Projects in planning often did not have detailed schedules.**
- **Projects in construction often did not have detailed budgets.**
- **Projects often not selected based on principles of asset management.**

6/10 interchange project has been in design for **30 years**

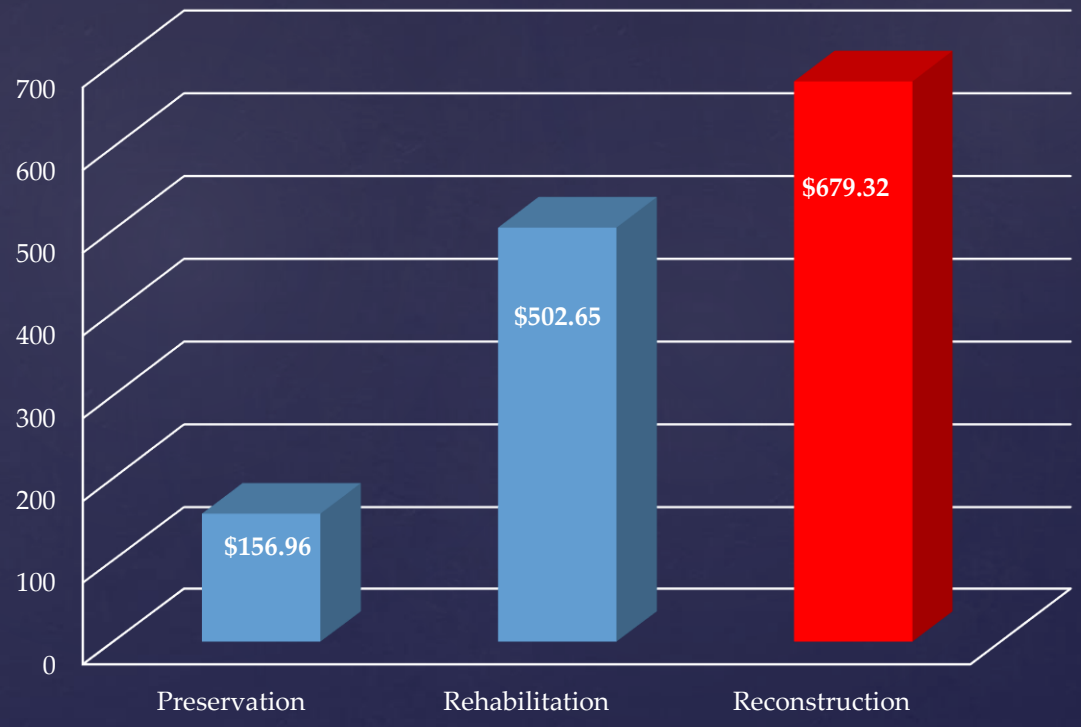
UNDERINVESTING IN MAINTENANCE

Rhode Island has underinvested in maintenance, making it harder to keep our roads and bridges from falling into a state of disrepair and increasing costs overall.



POOR PLANNING AND LACK OF MAINTENANCE HAS LED TO OUT OF CONTROL COSTS

Costs are 4x higher for bridge reconstruction than bridge preservation. Underinvestment in maintenance leads to higher costs overall.



Cost per square foot for bridge work

Data Source: Actual RIDOT project data

LACK OF ACCOUNTABILITY - PROJECTS

Without project managers, many projects lacked appropriate oversight:

- Insufficient Budgeting
- Insufficient Scheduling
- No Month over Month Tracking
- No One Responsible

Too many silos. Unlike most states, Rhode Island does not have project-development staff organized in cross-disciplinary teams.

– Gordon Proctor, RIDOT Project Development Analysis (draft), July 24, 2015.

THESE PROBLEMS HAVE LED TO:

Too much of our construction dollars spent on engineering and design for projects that never get built instead of shovels in the ground.

Table 1 A comparison of selected metrics

Peer State Comparisons					
	RI	NH	VT	Maine	Ohio D7
Average Construction Program	$150,004,996	$192,918,154	$243,096,381	$283,780,000	$160,869,536
$ Consultants/ $ of Construction	30.44%	12%	5.0%	3.6%	4.8%
Output per project development staff	$2,205,956	$1,929,182	$3,716,796	Not Avail.	$3,497,164

Table 1 compares some key metrics from RIDOT to New Hampshire, Vermont, Maine and one district at the Ohio departments of transportation. The three states have comparable construction programs to Rhode Island, as does the one Ohio district. The Ohio District includes Dayton and its surrounding counties which collectively have a population and highway network comparable to Rhode Island's.

Rhode Island has the highest expenditures on consultants per size of construction program of any of the peers. In fact, it's more than 2.5 times larger proportionally than the next comparable peer. Also, it has the second lowest average production per engineering staff.

– Gordon Proctor, RIDOT Project Development Analysis (draft), July 24, 2015.

THESE PROBLEMS HAVE LED TO:

BRIDGES :

One out of every five Rhode Island bridges is structurally deficient

PAVEMENT:

The condition of our roads puts us at 2nd worst nationwide

STORMWATER DRAINAGE:

Systems not maintained and in disrepair

THESE PROBLEMS HAVE LED TO:

Unresolved Legal Issues

The new administration is facing several issues stemming from prior management of ongoing projects and agreements.

- Iway Guardrail
- Providence Viaduct Schedule Delays
- Barrington Bridge Water Line Defect
- Sakonnet River Bridge Cracks
- Pawtucket Bridge Defective Lighting
- Wickford Junction Development Agreement
- Stormwater Drainage Permit Compliance with DEM
- Ongoing Personnel Actions
- Narragansett Indian Tribe Mitigation Agreement
- Federal Payment of Overhead Rates

SOLUTIONS

1. Develop 10 Year Plan with Project Prioritization Based on Asset Protection

2. Culture of Accountability

3. Adopt Industry Best Practices

4. Predictable, Reliable Source of Funding

Develop 10 Year Plan with Project Prioritization based on Asset Protection

Solution:

- Produce a plan detailing every bridge, pavement and drainage project in the state for the next 10 years
- Update the plan every year

Impact:

- Eliminates unnecessary design costs
- Focuses more funding on construction
- Saves taxpayers money by prioritizing maintenance and infrastructure renewal

Status:

- RIDOT produced a 10 year plan in support of the RhodeWorks initiative last spring. This plan not only reconstructs 150 structurally deficient bridges, but also prevents another 500 from falling into structurally deficient status through preventative maintenance.
- Will be submitted as Rhode Island's Statewide Transportation Improvement Plan (STIP) to the State Planning Council this fall.

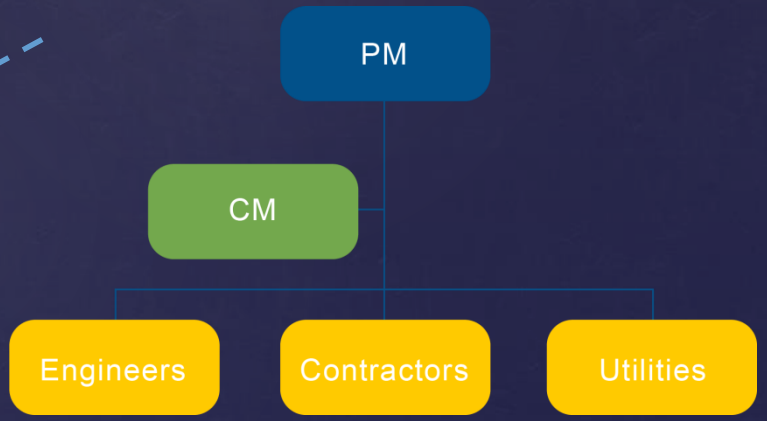
Culture of Accountability

Solution:

- New Faces
- Reorganize RIDOT
- Project Managers for every project
- Create and track budgets and schedules for every project
- Employee Performance Assessments
- Upgrade Accounting and Project Management Systems

Impact:

- Increases accountability
- Improves project delivery



Status:

- FY 16 budget enabled largest re-organization in the history of RIDOT.
- Public hearings on the new organization will be held this fall
- Project Manager Training scheduled for this winter.
- Detailed project budgets and schedules developed for all active projects.
- Initiated monthly project meetings, 6 already held.

REFORMING PERSONNEL RULES

The Raimondo Administration is focused on reforming antiquated personnel rules across State Government. Key principles :

- **Enhancing our ability to hold people accountable; and**
- **Expanding efforts to reward employees that excel.**

Adopt Industry Best Practices

Solution:

- Improved cash flow management
- Increase in house maintenance personnel to prevent infrastructure from falling into disrepair
- Developing improved approach to procurement

Impact:

- Reduces unnecessary administrative costs
- More money for construction projects = shovels in the ground
- Accelerates project delivery and economic impact.

Status: It's Already Working…

- Cash management: $40 million in additional projects put out for bid this year alone, a 30 percent increase.
- 40 new maintenance jobs created by eliminating vacant administrative positions.
- Streamlined the operation and maintenance of the Wickford Junction commuter rail station, a move that is expected to save $3 million over the next 10 years.

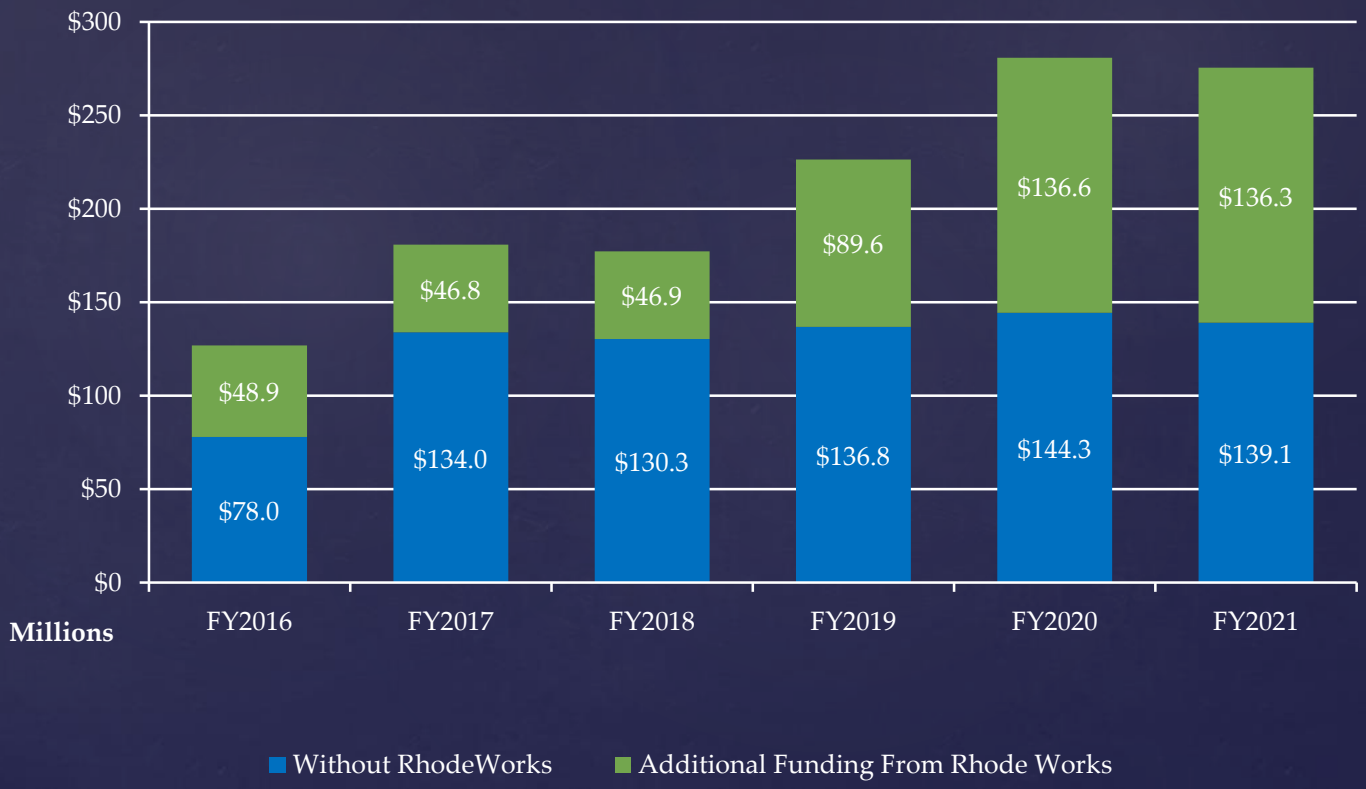
But we still need a reliable source of funding...

"If RIDOT cannot increase the delivery of its bridge projects and ensure they are delivered at the right time in the bridge lifecycle, it will not be able to achieve and sustain new Federal requirements that no more than 10 percent of bridges on the National Highway System (NHS) can be structurally deficient."

– Gordon Proctor, RIDOT Project Development Analysis (draft), July 24, 2015.

RHODE WORKS

Increase In Construction Awards With RhodeWorks



With RhodeWorks, we will invest an additional $1 billion and increase the number of structurally sufficient bridges from **78** percent to **90** percent in **10** years.

If we continue along the current path, the number of structurally sufficient bridges is expected to drop to **nearly 1 in 2**.

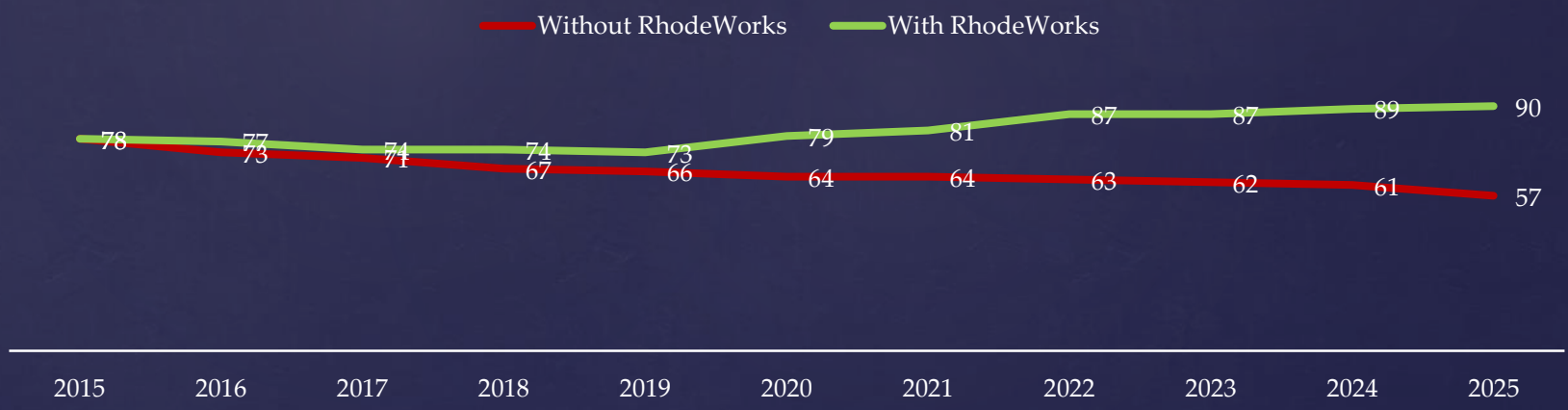


EXHIBIT C

Rebuilding RIDOT, Rebuilding Rhode Island

Rhode Island Department of Transportation begins a sweeping reorganization to improve results for Rhode Island taxpayers and build a world-class transportation system

"We need to make government operate at the speed of business, and improving results at the Department of Transportation is a top priority. With these important changes, RIDOT will be much better positioned to deliver high-quality results, on time and on budget. Rhode Island families deserve a government that works – and roads and bridges that are safe and reliable."
-- Governor Gina M. Raimondo

Overview: We need to stop managing a decline

For far too long, RIDOT has been managing a decline:

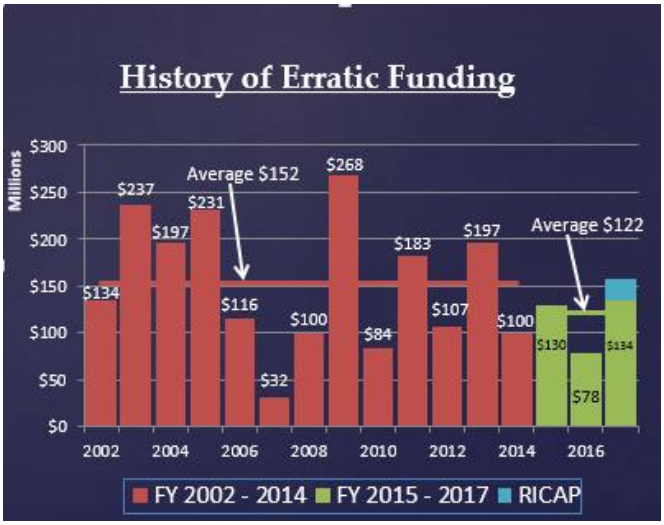
- We have the worst bridges in the country, they're ranked 50th out of 50 states: 1 out of 5 Rhode Island bridges is structurally deficient.
- The condition of our roads ranks 2nd worst nationwide.
- Our stormwater drainage systems are not maintained, and do not meet state and federal regulations.
- We are facing several unresolved legal issues stemming from prior management of ongoing projects and agreements.

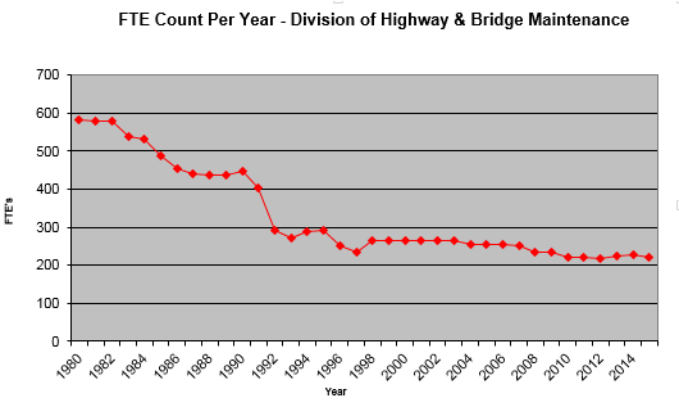
How We Got Here: A history of underperformance

- **Unpredictable, unreliable funding**:
  - Without a predictable source of funding, Rhode Island is vulnerable to erratic federal funding levels, making it difficult to prioritize and plan. Rhode Island is tied with Montana as the state with the greatest dependence on federal funds.

- **Lack of accountability:**
  - Projects often had no budgets, no schedules, no month-over-month tracking, and no one responsible.

- **Poor planning and underinvesting in maintenance has led to out of control costs:**
  - Poor planning has led to bad project prioritization: projects often designed but never funded, projects often moving forward without detailed schedules, and projects often going into construction without detailed budgets.
  - At the same time, RIDOT has cut maintenance staff, making it harder and harder to keep roads and bridges from falling into disrepair. The number of maintenance employees has dropped from 600 men and women in the 1980s, to about 200 today.





This combination has led to out-of-control costs – it's 4x more expensive to reconstruct a bridge than to prioritize and plan for bridge preservation.

"PREVENTATIVE MAINTENANCE IS CRITICAL TO KEEP OUR ROADS AND BRIDGES IN GOOD CONDITION AND EXTENDING THEIR SERVICE LIFE. NONE OF US WOULD BUY A NEW CAR, NEVER MAINTAIN IT, AND EXPECT IT TO RUN FOR A LONG TIME WITHOUT BREAKING DOWN. IT'S JUST COMMON SENSE."

– RIDOT DIRECTOR PETER ALVITI

How We Move Forward: The Solutions

RIDOT is implementing changes after a 6-month detailed review of operations, and on the heels of legislation signed into law this June to enable a significant reorganization of RIDOT.

- **Develop a 10-year plan with project prioritization based on asset protection:**
  - RIDOT produced a 10-year plan earlier this year – this plan includes the reconstruction of 150 structurally deficient bridges, and would also prevent another 500 from falling into disrepair.
  - RIDOT will submit the plan as Rhode Island's Statewide Transportation Improvement Plan to the State Planning Council this fall. The 10-year plan should be updated every year.
  - A long-term plan will help reduce unnecessary design costs, focus more funding on construction, and save taxpayers money by prioritizing maintenance and infrastructure renewal.

- **Build a culture of accountability**
  - Project Managers for every project.
  - Budgets and schedules for every project.
  - Performance Assessments for Management.
  - These changes will increase accountability and improve project delivery.

- **Adopt industry best practices**
  - Implement cash flow management – these practices have already enabled RIDOT to put out $40 million in additional projects for bid this year alone, a 30 percent increase.
  - Increase in-house maintenance levels to prevent infrastructure from falling into disrepair – in fact, 40 new maintenance jobs are already being created by eliminating funded, but vacant, administrative positions.
  - Improve procurement process – no projects will go out to design that are not funded.
  - These changes will reduce unnecessary administrative costs, make more money available for construction projects, and accelerate project delivery.

- **Create a predictable, reliable source of funding**
  - With RhodeWorks, we can invest an additional $1 billion and bring our bridges to 90% sufficiency in 10 years.

"WHILE WE'RE WORKING HARD TO SUPPORT THE IMPROVEMENT OF OUR ROADS AND BRIDGES, A PRIMARY FOCUS OF THE NEW ADMINISTRATION ALSO HAS BEEN TO MOVE QUICKLY TO GET OUR HOUSE IN ORDER AND PUT THE DEPARTMENT IN THE BEST POSITION FOR SUCCESS. THESE CHANGES TO ADOPT INDUSTRY BEST PRACTICES WILL ENSURE THAT THE TAXPAYERS' DOLLARS ARE PROTECTED AS WE BUILD A WORLD-CLASS TRANSPORTATION SYSTEM AND A STRONGER RHODE ISLAND."

– RIDOT Director Peter Alviti

EXHIBIT D

State of Rhode Island and Providence Plantations
Inter-Office Memorandum

TO: Christos S. Xenophontos
Administrator/Contract Administration
DEPT: TRANSPORTATION

DATE: June 11, 2013
Rev. June 20, 2013

FROM: Mary Vittoria-Bertrand, P.E. MVB
Chairwoman, RIDOT Technical Evaluation Committee
DEPT: TRANSPORTATION

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JUN 24 2013
RI DEPT. OF TRANSPORTATION
ADMINISTRATIVE DIVISION

SUBJECT: BID #7461338 – Complete Design Services for the Rehabilitation of Washington Bridge North No. 700 – Mainline, Approach and Ramp Bridges, Providence and East Providence, RI
FINAL SELECTION RECOMMENDATIONS
******HIGH PRIORITY PROJECT******

The RIDOT Technical Evaluation Committee (TEC) has completed the final selection recommendation process for the above referenced project. The TEC review for this project consists entirely of TECHNICAL components. PRICING was not a component for consideration. The TEC held several meetings to discuss and evaluate proposal documents to ensure technical evaluations were in strict conformance with RFP project requirements and selection criteria. As TEC Chairwoman, I hereby submit the following for RIDOT review and Final Selection recommendation.

TECHNICAL EVALUATION

TEC MEMBERSHIP: The following individuals comprised the **voting** TEC membership assigned to evaluate and score Proposals based on the selection criteria defined in the RFP:

Mary Vittoria-Bertrand, P.E.
TEC Chairwoman
Senior Civil Engineer
Bridge Engineering

Michael Savella, P.E.
Principal Civil Engineer
Bridge Engineering

Robert Pavia, P.E.
Principal Civil Engineer
Bridge Engineering

Sean Raymond, P.E.
Principal Civil Engineer
Traffic Engineering

BACKGROUND: The subject bridge was originally constructed in 1969 and was last rehabilitated in 1998 under RIDOT Contract #9603. The last NBIS inspection was performed on August 3, 2011. Based on this inspection, the Bridge Inspection Consultant developed a Bridge Rating dated July 10, 2012 later revised on September 13, 2012. ***Due to the substantial concrete deterioration found during the inspection, it has been determined that further deterioration would require posting the bridge for a weight restriction.*** As a result, this is a **HIGH PRIORITY project** for the Department and RIDOT is seeking structural engineering consultant services to include preliminary engineering, final design and construction services for the rehabilitation design of the Washington Bridge #700 as defined per the tasks and details specified within the RFP solicitation requesting LETTERS OF INTEREST/TECHNICAL PROPOSALS (LOI/TECH).

In accordance with the RFP solicitation, it is anticipated that at a minimum, the following bridge components will be included in the Rehabilitation of Washington Bridge North No. 700:

- Corbels, dapped ends of prestressed concrete I-beams, and diaphragms at spans 1-6 & 8-14. Consideration should be given to bonding reinforced polymer fabric over repaired spalled areas to increase the live load carrying capacity of the bridge and to prolong the life of the bridge.
- Post-tensioned cantilever beams
- Concrete deck at all joints, including elimination of joints as determined feasible per a deck joint elimination study
- I-beam ends & diaphragms at spans 15-18
- Pier columns & cap beams at piers 15-18
- Spandrel Walls
- Gano Street Ramp box beam flange repairs
- Gouges in light pole
- Cleaning and flushing of bridge drainage scuppers
- Sign structure grout pad repairs
- Replacement of deck waterproofing membrane and bituminous pavement resurfacing
- Re-pointing of lead wool (or other) masonry pointing
- Bird guano removal
- Bridge inspection and evaluation to confirm the scope of the rehabilitation work
- Development of a study to determine the feasibility of deck joint elimination
- Development of maintenance & protection of traffic scenarios to address temporary traffic conditions during design and construction.

Nine (9) LETTERS OF INTEREST/TECHNICAL PROPOSALS (LOI/TECH) received were evaluated based on the following criteria: PROJECT APPROACH, STAFF QUALIFICATIONS, PAST PERFORMANCE, CURRENT WORKLOAD, PAST/RELEVANT EXPERIENCE, FIRM'S SUITABILITY TO LEVEL OF PROJECT COMPLEXITY, and DBE PARTICIPATION, as detailed herein. The final scoring and ranking established will determine the recommended Consultant Firm; RIDOT will select only the **TOP ONE (1) ranked FIRM** to submit a formal financial proposal to the RIDOT, and negotiations will be completed on a cost plus fixed fee basis.

CONTRACT TERM: The project will be 100% federally funded resulting in the award of **ONE (1) CONTRACT** that will have a contract completion date of **FORTY-EIGHT (48) MONTHS** after the date of authorization to commence work. It is expected that the Study and Development phase will be completed within the first 12 MONTHS, the Final Design phase be completed in 12 MONTHS, and the Construction stage be completed prior to the 48th MONTH of the Contract.

DBE PARTICIPATION: This contract has been assigned a **10% Disadvantaged Business Enterprise (DBE) Goal.** In order to comply with this requirement, a detailed disclosure of RI certified DBE firm(s) and proposed task assignment(s) to be performed was to be included in LOI/TECH PROPOSAL SUBMISSION along with a copy of current state certification letter(s). DBE certifications must be approved at the time of technical proposal submission to ensure DBE compliance and availability. The total cost of the DBE work assigned must meet or exceed 10% of Total Contract costs. This requirement will apply for the LIFETIME OF THE CONTRACT; The PRIME Consultant will be responsible to submit a MONTHLY DBE UTILIZATION REPORT documenting aggregated TOTAL contract costs and TOTAL DBE participation to date to the RIDOT.

A letter dated May 29, 2013, see attached, containing a list of the proposed DBE's from each respondent was sent to the RIDOT/Office of Business and Community Resources (RIDOT/BCR). In this letter, the RIDOT/BCR was asked to verify in writing that the proposed DBE firms hold current and valid certifications and are therefore considered approved DBE firms for utilization on this project. The RIDOT/BCR responded with a letter dated May 26, 2013, see attached, that all the proposed DBEs were currently certified in the RI Minority Business Enterprise Directory.

PROJECT "MUST-HAVES": To be considered responsive, the following administrative and technical information was required from each Respondent:

- Company Introduction: Respondents were to include a complete description of the firm and other relevant information documenting organizational structure and expertise specific to services requested.

- Relevant Firm Experience: Respondent Firms, including any key sub-consultants, were to include a listing of the firm's projects similar in concept to the project being proposed. Respondents must demonstrate *a minimum of FIVE (5) YEARS structural design experience* as well as describe the experience of the Project Team and provide reference contact information for at least THREE (3) previous clients who are familiar with the services provided by their firm.

- Current Workload: Respondents must include a current listing of projects contracted to perform and anticipated completion dates.

- Staff Qualifications: The firm selected must designate a **Project Manager** with the authority and expertise to assign personnel to specific tasks and to schedule tasking as required. The Project Manager must be flexible in his/her approach to this contract. Respondents were to include 1) a listing of experienced personnel currently on staff, 2) resumes of proposed personnel to be assigned to this project, including identification of the Project Manager and 3) the approximate percentage of each employee's time to be expended on this project.

- Organizational Chart of the proposed project team must be included, describing how the proposed organizational structure addresses the full scope of this project.

- Standard Federal Form 330 (effective 6/8/04) must be completed by the PRIME Respondent only and included in each LOI/TECH Proposal.

- Sub-Consultant(s): The Respondent must disclose the identity and work arrangements established between the PRIME and proposed Sub-Consultant firm(s) to be assigned to this project. Full disclosure of the proposed project team requires 1) a listing of experienced personnel currently on staff, 2) resumes of proposed personnel to be assigned to this project, including identification of the key Project Manager, and 3) the approximate percentage of each employee's time to be expended on this project.

- Project Approach: Respondents must provide a detailed technical synopsis of the work proposed and the design services anticipated as cited in the *SCOPE OF WORK*.

- Work Plan and Project Schedule: A detailed work plan and proposed project schedule that addresses each of the project requirements as described in the *SCOPE OF WORK*.

- Mandatory RI DBE Certification Requirement: This contract has been assigned a 10% Disadvantaged Business Enterprise (DBE) Goal. In order to comply with this requirement, a detailed disclosure of RI certified DBE firm(s) and proposed task assignment(s) to be performed MUST be included in the LOI/TECH PROPOSAL SUBMISSION along with a copy of current state certification letter(s).

- Certificate of Authorization and applicable Rhode Island registration(s): Persons or firms practicing engineering services in the State of Rhode Island must possess a proper

registration and/ or Certificate of Authorization in accordance with RI Gen Laws 5-8. A copy of the current Rhode Island Certificate of Authorization FOR THE FIRM *and* current Rhode Island registrations(s), FOR THE INDIVIDUAL(S) who would perform the specified engineering services required. Any Respondent who does **NOT** have a current Certificate of Authorization for the firm and applicable Rhode Island registration(s) MUST acknowledge non-compliance with this requirement and confirm *in writing* that, if selected for the project, will expedite acquisition of a Rhode Island registration(s) and Certificate of Authorization ***prior to award.***

TECHNICAL SELECTION CRITERIA: Selection evaluations were based on the following **SEVEN (7) selection criteria** and their respective maximum scores. Proposed Sub-Consultant(s) and DBE firm(s) were also reviewed relative to the same aforementioned criteria in conjunction with the Respondent's proposal.

1. **PROJECT APPROACH** inclusive of proposed Work Plan and Project Schedule.	**0 – 25 POINTS MAX**
2. **STAFF QUALIFICATIONS**	**0 – 20 POINTS MAX**
3. **PAST PERFORMANCE** in terms of quality of work, timeliness of submissions and adherence to project schedule.	**0 – 20 POINTS MAX**
4. **CURRENT WORKLOAD**	**0 – 15 POINTS MAX**
5. **PAST / RELEVANT EXPERIENCE**	**0 – 10 POINTS MAX**
6. **FIRM'S SUITABILITY TO LEVEL OF PROJECT COMPLEXITY**	**0 – 5 POINTS MAX**
7. **DBE PARTICIPATION** in terms of disclosure of RI certified DBE Firm(s) and assigned tasks.	**0 – 5 POINTS MAX**
MAXIMUM TOTAL SCORE	**100 POINTS**

The RIDOT TEC used the following methodology to score each Respondent's proposal:

The RIDOT TEC Members individually reviewed and preliminarily scored each of the 9 Respondent's LETTERS OF INTEREST / TECHNICAL PROPOSALS (LOI/TECH) for the stated selection criteria noted above in strict accordance with the SCOPE OF WORK & RFP SOLICITATION. Specific attention was made by each TEC member as to how each Respondent appropriately addressed the specific requirements of the RFP SOLICITATION and SCOPE OF WORK.

After all of the TEC members had finished their independent review, the RIDOT TEC convened over the course of three separate meetings held from May 22-May 24th, 2013 to discuss the submitted LOI/TECH and to finalize the scoring and ranking of each Respondent's proposal. Each proposal was thoroughly discussed in detail by the TEC for each of the seven selection criteria. As the RFP was specific for the rehabilitation of Bridge 700, more weight was given by the TEC to a respondent's structural approach, as the TEC felt the primary Scope of Work was for structural rehabilitation and that the traffic approach, while important, was secondary to the scope of the RFP. After thorough discussion of a specific selection criterion as it related to the Respondent's proposal and the RFP /SCOPE OF WORK, the TEC members individually indicated to the rest of the committee their preliminary score for the specific criteria. Based on the preliminary score noted by each TEC member, further discussion ensued, a consensus was formulated by the TEC and one Consensus Score was established for the specific selection criteria for the Respondent. This process was then repeated for each of the seven selection criteria and repeated for each of the nine (9) submitted LOI/TECH proposals. Upon completion of this process, the scores were tallied and the Respondent's were appropriately ranked.

Based on the TOTAL SCORES received, RIDOT TEC will recommend for acceptance to the DOT Advisory Consultant Selection Panel that only the **TOP ONE (1) RANKED FIRM** submit a formal financial proposal to the RIDOT, and negotiations will be completed on a cost plus fixed fee basis.

Final TEC scoring and review comments presented IN RANK ORDER:

The following scores shown below for each criterion denote the "consensus score" of the committee members. The consensus scores for each criterion were then combined to determine each Firm's TOTAL TECHNICAL SCORE based on a scale of 0 to 100.

AECOM TECHNICAL SERVICES, INC. (AECOM)

SUB-CONSULTANTS: STEERE ENGINEERING, INC. (DBE/WBE) – Bridge Inspection & Design
PRIME ENGINEERING, INC. (DBE) – Bridge Inspection & Design
ARIES SUPPORT SERVICES, INC. (DBE/WBE) – Traffic Control & Material Testing

Project Approach:

AECOM had the **best overall structural approach** of all of the respondent's proposals. AECOM recognized and demonstrated in their approach that the focus of this RFP is to rehabilitate the structure to bring it up to current load requirements and not replacement. They presented an **excellent** understanding of the structure's deficiencies in their proposal, utilizing the most recent RIDOT inspection reports to highlight those deficiencies, including pointing out that some of the post tensioned cantilever arms which were exhibiting cracking were the same areas retrofitted under the 1996 rehab contract. They appeared to have thoroughly researched the background and history of Bridge 700. As part of the initial project approach, AECOM will perform a detailed inspection of the structure with a focus on avoiding traffic delays and awareness of the existing guano situation on the Gano Street Ramps, testing materials with the use of GPR and ultrasonic / hammer sounding methods, and review existing inspection reports. AECOM Inspectors will do "Preliminary Engineering and Constructability" during the inspection of the structure and discussed importance of determining accurate quantities for repair. Their structural project approach was a **very detailed approach** as to the repairs and what they would propose, which included a preliminary joint assessment narrative as to how many joints they may be able to eliminate for Bridge 700 as part of the proposal. ***Based on their preliminary assessment, AECOM feels that they can potentially reduce the number of joints from 32 to 11 +/- (a 2/3rd reduction of joints) and went on to provide a joint elimination scenario they could preliminarily envision by each span and structure type.*** In addition AECOM went into an in depth discussion on evaluation of the forces needed to address the joint reductions. AECOM explained how they would approach and propose to do the beam repairs, discussing the use of FRP and other types of concrete repairs extensively in the proposal. In addition to the repairs, they are also proposing to clean the bridge drainage system and replace all steel scupper pipes with PVC pipe to reduce future bridge drainage issues. AECOM's traffic approach was good, but not as project specific as their structural approach. However they did mention analyzing three different traffic scenarios and recognized the need to have to collect traffic data to develop a model through a VISSIM micro-simulation to thoroughly evaluate. AECOM intends to utilize **three sub-consultants** as part of their project approach, **Steere Engineering, Inc. (DBE/WBE)** and **PRIME Engineering, Inc. (DBE)** for bridge inspection and design support services, as well as **Aires Support Services, Inc. (DBE/WBE)** for materials testing and traffic control. Any permitting and historical coordination required for the project will be handled by AECOM. A project schedule was provided in Primavera covering all tasks, consistent with the requirements of the RFP.

CONSENSUS SCORE: 24

Staff Qualifications:

AECOM is a large national firm with a wealth of resources available to them, currently ranked #1 in "Engineering News Record" (ENR). AECOM proposes the use of **Robert Wright, PE** as Project Manager, who is very professional and can "get the job done"; **Corey Richard, PE** , for bridge inspection/evaluation analysis and traffic, who is very thorough, well qualified, knowledgeable and receives good feedback from the RI Bridge Inspection Section; and **Richard Prior, PE** who will be used for structural design who has vast experience on major large scale projects. In addition, AECOM proposes the use of technical experts, including but not limited to, **Firooz Panah, PE, Mehrdad Mirzakashani, PE, Mohsen G. Kashi, PhD, PE.** Overall their staff has numerous years of experience and appears **well qualified**. AECOM intends to utilize their local staff and sub-consultants, but stated that they can supplement staff from their other locations to ensure appropriate resources are utilized as they have a large availability of resources in-house, and have identified their additional resources they intend to utilize as presented in their resume section. A basic organization chart was provided, however it was noted that not all of the staff AECOM intends to utilize as indicated in their resume section was shown included in the chart. AECOM intends to utilize **three (3) sub-consultants, Steere Engineering, Inc. (DBE/WBE)** for structural support in bridge inspection and design, **PRIME Engineering, Inc. (DBE)** for support in bridge inspection and design, and **Aries Support Services, Inc. (DBE/WBE)** for materials testing and traffic control.

CONSENSUS SCORE: 18

Past Performance:

AECOM has a **very good** reputation with RIDOT personnel. They are responsive; deliver a quality product, well qualified and very professional. They have demonstrated their abilities to RIDOT through the quality of their work on the current RIDOT Statewide Bridge Inspection Program, as well as their past performance designing and managing the multi-million dollar Freight Rail Improvement Project (FRIP) for RIDOT.

CONSENSUS SCORE: 18

Current Workload:

AECOM **does not currently possess much** RIDOT work, with the exception of the RI Statewide Bridge Inspection program and the Barrington/Warren Bike Path Bridges. The RI Statewide Bridge Inspection Program is currently ongoing and the Barrington/Warren Bike Path Bridges are currently in preliminary type study/10% design. In addition to their RIDOT workload, AECOM currently is working on the Green Line Expansion project in Massachusetts

CONSENSUS SCORE: 13

Past / Relevant Experience:

AECOM is ranked #1 in **"Engineering News Record" (ENR)**, with over 12,700 employees worldwide. They have performed major large scale complex projects for RIDOT, most notably the multi-million dollar Freight Rail Improvement Project (FRIP) with its numerous contracts, which was a major achievement for RI freight rail infrastructure. ***AECOM has demonstrated joint elimination study experience, most notably with a joint retrofit project in Pennsylvania where they eliminated more the half from the existing structure.*** In addition to joint elimination, AECOM has also ***performed structural retrofits and strengthening projects***, such as the Cranston Viaduct and Hummocks Ave. Bridge projects. It should be noted that for the Cranston Viaduct, AECOM solved the problems with the post tensioning ducts of the structure in addition to providing complex traffic phasing during construction. In their proposal, AECOM has demonstrated that they ***possess bridge inspection experience***, as they currently are providing bridge inspection services under the RI Statewide Bridge Inspection Program. Under this program, they have assisted in inspecting large structures, such as the Sakonnet River Bridge No. 250. In addition to their structural experience, AECOM cited some traffic analysis projects.

CONSENSUS SCORE: 9

Firm's Suitability to Level of Project Complexity:
AECOM is ranked #1 in "Engineering News Record" (ENR), with over 12,700 employees worldwide. They possess local offices in both RI and MA. They have performed major large scale complex projects for RIDOT, most notably the multi-million dollar Freight Rail Improvement Project (FRIP) with its numerous contracts. As they currently perform inspections for the RI Statewide Bridge Inspection Program, they possess the "know-how" and expertise to identify and evaluate structural deficiencies. They demonstrated that they have the resources available and an excellent project approach for the structure.
CONSENSUS SCORE: 5

DBE Participation:
AECOM met the DBE participation of the RFP with the utilization of three DBE firms, **Steere Engineering, Inc., PRIME Engineering, Inc.,** and **Aries Support Services, Inc.** Proposed Scope of Work of the DBEs clearly defined and presented in both the prime and sub consultant proposals and demonstrates that the 10% goal as stated in the RFP will be able to be met and/or exceeded.
CONSENSUS SCORE: 5

AECOM TECHNICAL SERVICES, INC. - TOTAL CONSENSUS SCORE: 92

COMMONWEALTH ENGINEERS & CONSULTANTS, INC. (CE&C)

SUB-CONSULTANTS: STEERE ENGINEERING, INC. (DBE/WBE) – Bridge Inspection, Deck Joint Elimination, Structural Analysis and Design

Project Approach:
CE&C's project approach and ideas were strong in focus in regards to the structural issues and needs of the project; however their traffic phasing discussion was not as strong in comparison. *As part of their structural approach and unique only to CE&C's proposal, they recommended the possibility that it may be best and quicker to remove some of the worst beams instead of attempting to repair them.* They also mentioned the *possibility of utilizing precast full depth deck panels to eliminate the necessity of shoring underneath the beams*, thus allowing three lanes to be kept open to traffic during construction. In addition, CE&C proposed to utilize consultant designed shoring systems and *use of a different type of temporary shoring system with above deck beam jacking*. They were the only consultant who mentioned this and cited that **Witold Kloczkowski, PE** designed the "above deck" beam jacking performed in the original 1996 rehabilitation contract of Bridge 700. CE&C's work plan was detailed and well thought out. They indicated that another two years has passed since the last inspection and another inspection is needed. Their work approach utilizes the use of FRP for repairs and hammer sounding of the deck. Contrary to their emphasis on the structure, traffic was not seen as much a critical part of their project approach. A schedule was provided with very good correlation demonstrated between all work tasks and the schedule & durations with a 24 month duration provided for Phase I and II of design. Potential critical path was focused in schedule as well as spending 4 months on inspection & testing and 5 months on the deck and joint elimination study up front.
CONSENSUS SCORE: 22

Staff Qualifications:
Overall very good staff qualifications that demonstrate they are well qualified and possess the necessary expertise. **Mark Greenleaf, PE** is the proposed project manager who is very professional and excellent at getting things done. He has experience managing large scale projects as he was also the Project Manager for both the Sakonnet River Bridge No. 250 and

Bridge 550. **Vartan Sahakian, PE** is also well qualified and professional, and currently is involved in the Northeast Prestress Committee. CE&C possess a lot of well qualified and good staff which are being proposed to be assigned to this project. In addition they have structural staff **(Witold Kloczkowski, PE)** who had worked on the original 1996 rehabilitation of Bridge 700. Traffic and highway staff is very good and well experienced (**Thomas Cunningham PE** and **Norman Orrall PE**). CE&C provided and organization chart, detailing the percentage of each staff to be dedicated to the project. Only **one (1) sub-consultant, Steere Engineering, Inc. (DBE/WBE)** is being proposed to be utilized to assist in bridge inspection, the deck joint elimination study, analysis and shoring design.
CONSENSUS SCORE: 18

Past Performance:
CE&C has a **very good** long standing history and working relationship with RIDOT. CE&C always goes above and beyond and is always available to RIDOT at a moment's notice. CE&C will deliver to RIDOT deadlines and will work doing whatever it takes if they know the importance to the Department to get the project out. They have demonstrated excellent performance on both the Sakonnet River Bridge project and Bridge 550, both large scale major complex projects and have included commendation letters that they have received on other past projects from RIDOT. Their proposal noted the very few/low percentage of change orders on both Sakonnet and the Bridge 550 projects, and noted success due to the extensive coordination and communication with RIDOT Design, Construction, and the Contractor.
CONSENSUS SCORE: 18

Current Workload:
CE&C currently has **a significant amount of workload** with RIDOT. However, they promised outright that they "can do" this project and all other commitments with RIDOT. Currently they have many design projects that will be finishing up design at the end of this year and thus will have a lot of projects in construction when this project will be in design. The TEC felt there may be difficulty with balancing staff to cover the needed construction services of other projects and the design demand of this project. In addition, CE&C has other numerous projects currently in various phases of design (i.e. Kingston RR Bridge, Kingston Road Bridge, Broadway On-ramp, Sakonnet Demolition contract, Sakonnet Secondary Roadway Contract). Lastly, the 6/10 interchange project was noted throughout their proposal, yet there was no mention of it in their current workload section. This project is currently on hold/in early design.
CONSENSUS SCORE: 12

Past / Relevant Experience:
Commonwealth Engineers & Consultants, Inc. (CE&C) was founded in 1987 as a multi-disciplinary Profession Civil and Structural Engineering Firm and provides comprehensive services in Transportation & Structural Engineering, Site Development, Utility Design, Construction Services, and Environmental Planning. CE&C has performed large scale major bridge projects for RIDOT, such as the $165 million Sakonnet River Bridge 250 and the Pawtucket River Bridge 550, bridge rehabs and evaluations and traffic phasing projects including the I-95 Bridge Preservation contract. In addition, ***they possess staff (Witold Kloczkowski, PE) that had worked on the original Bridge 700 rehabilitation in 1996.*** However, overall **demonstrated relevance** in response to the RFP specifics was **not very strong**, with the exception of staff working on the original Bridge 700 rehabilitation contract. CE&C cites experience with traffic analysis and VISSIM and working with the community & customer service regarding ramp closures, bridge inspections, etc.
CONSENSUS SCORE: 8

Firm's Suitability to Level of Project Complexity:
CE&C is a local firm with a close proximity to RIDOT. They have performed large scale major projects, such as the $165 million Sakonnet River Bridge 250 and the Pawtucket River Bridge 550 for RIDOT, as well as numerous rehabs and evaluations. In addition they have performed major traffic control phasing for projects on I-95 and has staff that had worked on the original Bridge 700 rehab in 1996. Overall the CE&C is well qualified and is not proposed to be dependent on sub-consultants for this project.
CONSENSUS SCORE: 5

DBE Participation:
CE&C met the DBE participation of the RFP with the utilization of one DBE firm **Steere Engineering, Inc.** Proposed Scope of Work of the DBE clearly defined and presented in both the prime and sub consultant proposal and demonstrates that the 10% goal as stated in the RFP will be able to be met and/or exceeded.
CONSENSUS SCORE: 5

COMMONWEALTH ENGINEERS & CONSULTANTS, INC. (CE&C)
- TOTAL CONSENSUS SCORE: 88

VANASSE HANGEN BRUSTLIN, INC. (VHB)

SUB-CONSULTANTS:
STEERE ENGINEERING, INC. (DBE/WBE) – Bridge Inspection Support
ARIES SUPPORT SERVICES, INC. (DBE/WBE) – Maintenance & Protection of Traffic
INNOVATIVE RESOURCES GROUP, INC. (DBE/MBE) – Printing
INFRASENSE – Penetrating Radar Survey
CREATIVE ENVIRONMENTAL CORPORATION – Electrical Engineering
APPLEDORE ENGINEERING, INC.– Marine Engineering

Project Approach:
VHB's project approach was very focused on traffic scenarios but not on the actual proposed structural repairs, with very minimal structural focus comparatively to their traffic approach. Their structural approach contained only one paragraph discussing the joints and corbels. VHB points out in their project approach the reoccurring problems from the bridge joints and *did not know if joint elimination was feasible for this structure*. They went on to *clearly state in their proposal that if the joint elimination was not feasible based on their joint elimination study, then VHB would recommend bridge replacement to RIDOT rather than rehabilitation*. The reiteration of "joint elimination, if feasible" did not inspire the TEC and it was noted they *were the only respondent who recommended replacement rather than rehabilitation in their project approach*. The TEC felt that this was not the intent or Scope of the RFP. VHB failed to mention the use of FRP as an option, nor was the use of ultrasonic/hammer sounding techniques mentioned as a method of deck rehabilitation. Additionally, VHB pointed out in their approach that rehab, such as the corbels, prestressed girders in Spans 14-18, and beam strengthening would be by supplemental agreement. VHB did propose to utilize sub-consultant **Steere Engineering, Inc. (DBE/WBE)** for bridge inspection support only to supplement their bridge inspection crews. Contrary to their less than adequate structural approach, VHB's proposed traffic approach was excellent and very thorough. The TEC noted only 2 traffic control scenarios/approaches and alternatives were discussed in their project approach, and they did not discuss a third, as per the RFP. Their first approach maintained three 11 foot lanes in two phases and their second approach utilized Bridge 200 and maintained two 12 foot lanes westbound and three 11 foot lanes eastbound. Both approaches involved temporary detours and ramp closures, although their second approach allowed the possibility of reconfiguring the Taunton Ave on ramp so it could remain open during construction. Conceptual M&PT plans of

both traffic approaches were provided as supplemental exhibits to their proposal, yet it was noted by the TEC that VHB had already begun preparing conceptual M&PT plans under their existing contract. ***In addition to their project approach, VHB suggested other good traffic improvements involving three potential locations for shoulder and lane reconfigurations on I-195 East and West***; however the TEC noted the questionability of this being out of scope of this RFP, but did note they were good suggestions and would improve traffic flow. VHB proposed a very aggressive and clearly presented design schedule that will finish design 6 months ahead of the 24 month schedule as stated in the RFP. However, the TEC questioned whether this was possible and if quality of work be affected. It was also noted that VHB eliminated the 10% submission, required per the RFP, from their proposed schedule and proceed directly to 30% after the Bridge Inspection/Evaluation.
CONSENSUS SCORE: 21

Staff Qualifications:
Overall VHB has a **very good** team that is well qualified and experienced. They currently have 27 local staff dedicated and available in aspects of structural, highway and traffic engineering. VHB proposes to use **Bharat Patel, PE** as project manager, who is well experienced in managing many past large scale RIDOT projects. Structural engineers include **Peter Chui, PE** and **Thomas Hennessey, PE**. Traffic engineers include **Robert Clinton, PE**. All of their proposed staff are well qualified and responsive. An organizational chart was provided, including disciplines and QA/QC for both structural and traffic disciplines with a table provided detailing the percentages of staff devoted to the project. A decent section was provided on the proposed **six (6) sub-consultants**. Proposed sub-consultants include **Steere Engineering, Inc. (DBE/WBE)** for bridge inspection support, **Aries Support Services, Inc. (DBE/WBE)** for traffic control, **Innovative Resources Group, Inc. (DBE/MBE)** for printing, **Creative Environmental Corporation** for electrical engineering, **Appledore Engineering, Inc.** for marine engineering, and **Infrasense** for the penetrating radar survey of the deck.
CONSENSUS SCORE: 18

Past Performance:
VHB briefly discussed their performance in two paragraphs, but it was well presented. They have done the mall ramps, Bridge 200, and Bridge 578. All had aggressive schedules. They have an excellent reputation for getting the job done and a good working relationship with RIDOT. They have excellent and responsive traffic engineers. ***It was noted to the TEC that there were issues in Construction on the Henderson Bridge project with the joints, of which they cited as a relevant project.*** The Bridge Section project manager indicated an unbuildable design that had to be modified in construction, thus costing the State extra in change orders.
CONSENSUS SCORE: 17

Current Workload:
VHB presented a good summary and explanation of their existing workload. Currently VHB has **a significant amount of workload**, with 6 active bridge projects with RIDOT, but they are a large firm and have resources. They claim that most projects will be completed when this project is in design, however this was noted by the TEC to not be true, as VHB currently has the Providence Viaduct Bridge #578 SB intensely in early construction; NB design ongoing at 30%; Goat Island Bridge at 30%; Pell Bridge Approaches at 30%, which include 1 at type study, 2 at 30%, 2 in construction and 1 on hold; Pleasant Valley Bridge currently at PS&E and soon to construction; and Henderson Bridge is on hold. VHB was very confident in their proposal and provided a strong statement promising to meet the project requirements. They claim their workload is dwindling and can handle more, but the TEC felt they appear to have a lot of workload; however since VHB has large staff pool available it may allow them to take on additional workload.
CONSENSUS SCORE: 12

Past / Relevant Experience:
Since 1979, VHB has partnered with private and public sector clients to provide high-quality technical skills with a high level of professional service and technical expertise. VHB currently ranks 76th of the top 500 engineering firms nationwide in "Engineering News Record" (ENR) and CE News consistently names VHB among the "Top 25 Best Civil Engineering Firms to Work For." Overall, VHB demonstrated relevant experience in their proposal. Most notably their most relevant experience was *VHB was the design consultant who worked on the original Bridge 700 rehabilitation contract in 1996 and has intimate knowledge of the project area. While it was most relevant, the TEC also found it questionable as to why RIDOT is now soliciting another rehabilitation contract only 15 years later, but could not attribute whether the repairs were designed improperly, was poorly constructed, was a lack of maintenance, or due to the inadequacies of the original 1969 design.* VHB has also performed traffic analysis for the Providence Viaduct Bridge 578, has prepared complex traffic simulation models of the Providence metro network, performed VISSIM models for entire Providence highway network and has performed phased traffic models & design for Bridge 700 already. In addition, VHB designed FRP repairs for the Stillwater Viaduct, designed the 2003/2009 Washington Bridge 200 and the Providence Viaduct Bridge 578 replacement projects, and stated they performed a joint elimination study for the Henderson Bridge, however in discussion with the RIDOT Project Manager for this project, it was not a joint elimination project, but modifications of existing joints and drainage at the joints and there were issues in construction where the design was unbuildable. VHB did better than other respondents in pointing out the relevance of example projects in regards to inspection, structural and traffic.
CONSENSUS SCORE: 9

Firm's Suitability to Level of Project Complexity:
VHB is a national firm with adequate staff size and a local presence in Providence, RI. They have studied traffic in the area, have previously inspected Bridge 700, and did the previous rehabilitation design in 1996. As a result they are very familiar and intimate with the structure and therefore strong suitability wise, however there is doubt by the TEC as to why we are going back to rehabilitate the structure so soon after only 15 years.
CONSENSUS SCORE: 5

DBE Participation:
VHB met the DBE participation of the RFP with the utilization of three DBE firms, Steere Engineering, Inc., Aries Support Services, Inc. and Innovative Resource Group, Inc. Proposed Scope of Work of the DBEs clearly defined and presented in both the prime and sub consultant proposals and demonstrates that the 10% goal as stated in the RFP will be able to be met and/or exceeded.
CONSENSUS SCORE: 5

VANASSE HANGEN BRUSTLIN, INC. - TOTAL CONSENSUS SCORE: 87

MICHAEL BAKER ENGINEERING, INC. (BAKER)

SUB-CONSULTANTS: STEERE ENGINEERING, INC. (DBE/WBE) - Bridge Inspection & Design
FITZGERALD & HALLIDAY, INC. (DBE) – Traffic Studies & Environmental Services

Project Approach:
Project approach was good overall, with a little too much emphasis on environmental, yet covers all the bases and the Scope of Work of the RFP. Overall project approach slightly lower level compared to some of the others in regards to the thorough details, but not bad overall as they *highlighted a few specific and unique ideas*. Their expert, Frank Russo, PhD, PE, will

perform the deck joint elimination study on the main bridge with 3D modeling to evaluate stresses to be developed for the structure. **Steere Engineering, Inc. (DBE/WBE)** will perform the same study for the Gano Street off ramp spans and Spans 15-18. ***Russo has performed a joint elimination study for a 2.5 mile long bridge in Wisconsin with ship lap joints that are very similar in nature to the Bridge 700 joints.*** On that structure Baker was able to eliminate every other joint and is optimistic that similar results can be achieved. Baker also mentions that they will coordinate models with Steere and focus on the joints to remain. ***A very interesting discussion was provided in their proposal with Baker proposing to investigate chloride extraction methods to eliminate all residual chloride ions from the concrete and arrest further deterioration rather than just patching and repairs that still leave the chlorides present in the concrete that can still be a source of future corrosion***. This was ***very unique*** to Baker's proposal and the TEC took notice. In addition to the deck joint study and chloride extraction study, Baker mentions performing GPR & ultrasonic testing of the deck, utilizing FRP in their project approach, and the potential for painting the structural steel in Span 7 as well as the bearings. **A traffic approach** is provided and seems appropriate with three traffic control scenarios mentioned however not much detail was provided and it was **relatively weak**. The majority of the focus presented was on bridge inspection and outlining the repairs. Others areas noted in their work approach were public involvement, quality control to avoid duplication of efforts, ***submitting major special provisions at the 30% stage of design instead of at the 90% stage***, and addressing the environmental and historical issues in detail, of which the TEC felt there was too much emphasis on. Baker provided a very detailed and extensive project schedule. Overall duration was 12 months for Phase I and 12 months for Phase II, however Baker discussed having some tasks being done "in parallel" to expedite the project during design and shorten the overall duration. Lastly, it was noted that Baker's overall proposal was not tabbed, although sectioned off internally, which made it difficult for the reviewer to find the various sections and the evaluation criteria.

CONSENSUS SCORE: 20

Staff Qualifications:

Baker proposes to staff this project from their RI office and supplement with staff from their Rocky Hill, CT office. **Kyle Turshman, PE** is the proposed project manager with over 28 years of experience in bridge rehabilitation and design. Some of their staff has design build experience (**Greg Lassiter, PE**), but this is not a design build project nor was it specific to the RFP. Traffic staff has over 15 years experience and Baker proposes to utilize two traffic engineers. Some **staff seems well qualified and others seem less experienced** and not as convincing. Baker provided an organizational chart and showed technical advisors that may be utilized although it was not clear as to what their roles would entail. **Two (2) sub-consultants** are proposed, **Steere Engineering, Inc. (DBE/WBE)** and **Fitzgerald & Halliday, Inc. (DBE)**, and decent discussions as to their demonstrated experiences were provided, however, Fitzgerald's experience does not appear very relevant to this RFP.

CONSENSUS SCORE: 17

Past Performance:

Under this section of the proposal, Baker cited past projects in this section but did not discuss performance. It should be noted that while Baker does not have any design consulting projects with RIDOT, Baker's performance under the RI Statewide Bridge Inspection Program has been **very good** based on the feedback received from the RIDOT Bridge Inspection section. Baker has been very responsive, delivers quality work products, and has acted immediately when RIDOT has needed their inspection services on short notice.

CONSENSUS SCORE: 18

Current Workload:
Baker currently is providing only bridge inspection and load rating services to RIDOT under the RI Bridge Inspection Program. They are also currently updating the RIDOT Bridge Inspection Manual. In addition to their RIDOT work, Baker is providing inspection and design services to many other agencies in the New England area (i.e. MassDOT, ConnDOT, etc.) utilizing some of the same staff being proposed for use on this project. This may not be an issue as Baker is a large national company and has a huge pool of resources available. Under this section, in addition to their own, Baker provided a table for each sub-consultant as to their current workload and discussed the overall workload in a few paragraphs and promised that they "can do".
CONSENSUS SCORE: 13

Past / Relevant Experience:
Baker is a large national firm, ranked **5th** amongst Bridge Design consulting firms in **"Engineering News Record" (ENR)**. Baker has inspected over 300 bridges to date for RIDOT under the RI Statewide Bridge Inspection Program and ***they have performed the most recent bridge inspection and load rating of Bridge 700 which alerted RIDOT to its current condition and as such are very familiar with the structure's current deficiencies*** and noted that they are "already considering required repairs". ***Baker has an expert Frank Russo, PhD, PE who has performed deck joint elimination evaluation studies, and most notably for a structure in Wisconsin that is very similar to Bridge 700***, which the TEC noted as their most relevant project. Baker demonstrates that they have a lot of bridge inspection experience, but **only showcased a few** projects as **relevant** project experience in regards to the RFP. Sub-consultant **Fitzgerald & Halliday** is a **questionable value** as presented in the proposal, as RIDOT is unfamiliar with their work and has no demonstrated past experience with them.
CONSENSUS SCORE: 8

Firm's Suitability to Level of Project Complexity:
Baker is a large national firm, ranked **5th** amongst Bridge Design consulting firms in **"Engineering News Record"(ENR)**. They are not a local firm but do have an office in RI and is looking to expand in RI even further. They currently have approximately 30 employees locally, but will rely on **two (2) sub-consultants, Fitzgerald & Halliday, Inc (DBE)** for traffic and environmental and **Steere Engineering, Inc. (DBE/WBE)** for bridge inspection and design services as part of their proposal. Baker has performed a joint elimination study for a 2.5 mile long bridge in Wisconsin with similar ship lap joints as Bridge 700. **Fitzgerald & Halliday** is a **questionable value** as presented in the proposal, as RIDOT is unfamiliar with their work.
CONSENSUS SCORE: 4

DBE Participation:
Michael Baker Engineering, Inc. met the DBE participation of the RFP with the utilization of **two** DBE firms, **Steere Engineering, Inc.** and **Fitzgerald & Halliday, Inc.** Proposed Scope of Work of the DBEs clearly defined and presented in both the prime and sub consultant proposals and demonstrates that the 10% goal as stated in the RFP will be able to be met and/or exceeded.
CONSENSUS SCORE: 5

MICHAEL BAKER ENGINEERING, INC. – TOTAL CONSENSUS SCORE: 85

PARSONS BRINCKERHOFF (PB)

SUB-CONSULTANTS: STEERE ENGINEERING, INC. (DBE/WBE) – Bridge Inspection and Phase I & II Design & Construction Services for Gano St. Exit Ramp
GREEN INTERNATIONAL AFFILIATES (DBE/MBE)– Bridge Inspection
ARIES SUPPORT SERVICES, INC. (DBE/WBE)– Traffic Control & Materials Testing
NDT CORPORATION – On-Site Investigation
THE PUBLIC ARCHAEOLOGY LABORATORY, INC. (PAL) – Historical Consultant

Project Approach:
PB's project approach appears to have all the bases covered with a very thorough discussion of structural aspects of the project, demonstrating their experience in rehabilitation of prestressed concrete structures. Their detailed work approach provided some potential solutions to the problems presented with Bridge 700 and was broken down into *five defined tasks*. Their structural project approach was very strong and only second to AECOMs. As part of their structural approach PB mentions paying close attention to the joints, with a deck joint elimination study being performed by **Joe Tse, PE**, an extremely well qualified structural engineer and expert. *Unique to their proposal only, PB proposes to perform a post tensioned duct investigation of the existing structure to assess the integrity of the existing grout with the tendon ducts.* PB feels additional post tensioning, jacking and shoring, fiber reinforced or draping additional tendons will be required and *has demonstrated experience in modifying prestressed concrete bulb tees*. Additionally, PB proposes bearings to be installed at the fixed supports and provided a potential bearing installation and sketch as part of their project approach. In regards to material testing and nondestructive testing of the bridge deck, PB proposes to utilize sub-consultant **NDT Corporation**. On the contrary, PB's traffic approach was not strong and was unimpressive in comparison to their structural approach, with brief discussion of providing the required three traffic control scenarios and utilizing VISSIM for modeling. Other areas noted in their project approach were tasks devoted to environmental permitting and public outreach. While these tasks were not specific evaluation criteria, they were well presented plans, with mention of public participation/meetings and a website for the project. PB proposes to use sub-consultants **Steere Engineering, Inc (DBE/WBE)** and **Green International Affiliates (DBE/MBE)** for bridge inspection support services. As part of their bridge inspection, PB noted their use of snoopers as a less expensive means of bridge inspection rather than barge lift access. The TEC noted this will result in lane closures that may cause traffic delays on I-195. PB's overall project management sounded well structured and well detailed and they proposed producing a QC Manual for preparation of the project deliverables. Project Manager Steve Kaufman has many years of experience inspecting prestressed and post tensioned structures, and most notably the Jamestown Bridge for RIDOT. Lastly, a clearly stated project schedule was included as an exhibit.
CONSENSUS SCORE: 22

Staff Qualifications:
All staff proposed by PB for this project will be staffed from offices located in Boston, NYC and CT. They have indicated that they have numerous people on staff, as indicated in the proposal; however, so many resumes were included that it was questionable as to whether all these staff members would be working on the project. PB proposes utilizing **Steve Kaufman** as Project Manager; however his RI PE registration is currently pending. Kaufman is located out of the NYC office, so his availability to manage the project 65% of the time and be on call immediately due to distance is questionable. RIDOT past experience on the Jamestown bridge project with Kaufman demonstrated he was able to be here whenever required and the distance was not an issue. The structural staff is extremely well qualified, experienced, and have experts familiar with prestress and post tensioning on staff (**Mike Abrahms, PE** and **Joe Tse, PE**). The proposed traffic team for the project was very weak, with lead and assigned staff each having only 5 years of experience. *For this reason alone the TEC committee deducted points from their overall staff qualifications, even though their structural staff was extremely well qualified. It*

appeared to the TEC that traffic was significantly downplayed as not being important. While the structural repairs bears the primary focus of the RFP, traffic control is also very important considering the high volume of traffic that utilizes the I-195 corridor daily. PB's organizational chart provided was very detailed, thorough and more comprehensive than others, with percentages of staff allocation noted, yet the weak focus was traffic. Proposing the use of **six (6) sub-consultants**, including **Steere Engineering, Inc. (DBE/WBE)** and **Green International Affiliates (DBE/MBE)** for bridge engineering, structural inspection/evaluation and analysis, and clearly defined their tasks and responsibilities Lastly, there is some concern with availability due to distance and amount of staff being assigned to the project based on their organizational chart.

CONSENSUS SCORE: 16

Past Performance:

PB's staff is highly qualified and experienced and has **successfully performed** for RIDOT on the Wickford Junction and Jamestown Bridge projects. *It was noted to the TEC that there had been a design error issue concerning light support brackets on the Sakonnet River Bridge project that was developed out of their Boston office, which lends some questionability to their performance, however RIDOT does hold high confidence in the NYC office and staff.* RIDOT experience on the Jamestown bridge project with the proposed project manager Steve Kaufman, demonstrated he was able to be here whenever required and the distance was not an issue. RIDOT staff who worked with him on the Jamestown Bridge project indicated he delivered timely submissions.

CONSENSUS SCORE: 17

Current Workload:

PB's current workload was not clearly defined in their proposal, instead a list of projects was provided with no write up. It was not indicated whether they could get the work done with their current workload. They currently had no workload specified in their proposal for RIDOT; however PB appears to have a **significantly heavy workload**, particularly in the New England and New York areas. In addition, PB does have a deck repair and painting contract with the RI Turnpike and Bridge Authority. There may be concerns for dedicated availability, but they are a very large firm and may be able to distribute work load accordingly, as they have over 13,885 employees world wide and 214 employees in the Boston branch alone.

CONSENSUS SCORE: 10

Past / Relevant Experience:

Parson Brinkerhoff has provided bridge design, permitting, and construction management services to state agencies and municipalities throughout New England for decades, with local offices in Boston, NYC and CT. The firm is a **recognized leader of technical excellence and innovation in bridge engineering** and construction phasing. Parsons Brinckerhoff has worked successfully in virtually every phase of bridge engineering – from planning, type studies and alternatives analysis, to new design, inspection, maintenance and rehabilitation. They are a strong firm with a lot of experience in complex projects and with prestressed and post tensioned concrete structures. Their relevant project section was **very good** overall as to relevant projects referenced in response to the RFP.

CONSENSUS SCORE: 9

Firm's Suitability to Level of Project Complexity:
PB is not a local firm; however they do have offices located in NYC, Boston and CT. They are a very large national firm with experience in large scale, complex projects, and have particular expertise with prestressed and post tensioned structures.
CONSENSUS SCORE: 5

DBE Participation:
PB met the DBE participation of the RFP with the utilization of two DBE firms, **Steere Engineering, Inc.** and **Green International Affiliates.** Proposed Scope of Work of the DBEs clearly defined and presented in both the prime and sub consultant proposals and demonstrates that the 10% goal as stated in the RFP will be able to be met and/or exceeded.
CONSENSUS SCORE: 5

PARSONS BRINKERHOFF - TOTAL CONSENSUS SCORE: 84

GORDON R. ARCHIBALD, INC. (GRA)

SUB-CONSULTANTS: STEERE ENGINEERING, INC. (DBE/WBE) – Bridge Design
ARIES SUPPORT SERVICES, INC. (DBE/WBE) – Traffic Control & Materials Testing
AI ENGINEERS, INC. – Bridge Inspection
CAMBRIDGE SYSTEMATICS – Traffic Modeling
PRECISION DATA INDUSTRIES, LLC – Traffic Data Collection

Project Approach:
GRA's project approach was a typical summary of what work they were going to perform in response to the RFP, and the structural work plan was lower level and weak on project specific structural issues. Overall project approach was generally basic and not very detailed, specifically as it related to the technical work proposed. GRA did provide a thorough discussion of traffic strategy analysis and design, mentioning providing three traffic control scenarios with up to three modifications; however, relatively little discussion was given pertaining to the structure or its' elements, noting that FRP and joint elimination was not discussed. GRA noted that some bridge work will be done by sub-consultants and provided a detailed plan as to what tasks were being done by whom. GRA also indicated that traffic control will be completed by GRA, however the micro simulation will be performed by sub-consultant **Cambridge Systematics** and data collection by **Precision Data Industries, LLC.** Other sub-consultants being proposed include **AI Engineers, Inc.** for Bridge Inspection, **Aires Support Services, Inc. (DBE/WBE)** for Traffic Control & Materials Testing, and **Steere Engineering, Inc. (DBE/WBE)** for bridge inspection, design and analysis for all three phases (Phase I through Construction Services). Coordination amongst sub-consultants will be key in order to deliver on schedule. A reasonable master schedule was provided; however it was noted by the TEC that while at the time this project is in design, GRA's design workload will be relatively light yet they will have projects active in the early stages of construction over the next two years being staffed by the same engineers tasked to work on this project in design.
CONSENSUS SCORE: 15

Staff Qualifications:
Small local firm that is well qualified and experienced. GRA structural engineers (**Wayne Singleton, PE** as Project Manager, **John Wayland, PE** and **John St. Cyr, PE**) are well qualified and knowledgeable and GRA seems to possess good Traffic experience. GRA provided a good summary showing percentages of the work load distribution including Traffic and an organizational chart also detailing sub-consultant involvement. GRA is utilizing five (5) sub-consultants, including some for areas outside their expertise. **Steere Engineering, Inc.**

(DBE/WBE) will be providing Bridge Engineering support, **Aries Support Services, Inc.** (DBE/WBE) will be providing Traffic Control and Materials Testing, **Cambridge Systematics** will be performing Traffic Modeling, and **Precision Data Industries, LLC** will be performing Traffic Data Collection. In addition, **AI Engineers, Inc.**, who will be providing Bridge Inspection services, has been providing Bridge Inspection services to RIDOT for the last 8 years, however there has been some quality issues with some of their Inspection Reports, and inspection is a critical part to this project.
CONSENSUS SCORE: 18

Past Performance:
The quality of GRA's work on other RIDOT projects is always **very good**, they are responsive, and stay on budget. Traffic control plans are typically good, yet Bridge Design did have one isolated experience with their Traffic Staff not delivering a submission in a timely fashion on an on-call project utilizing GRA Traffic Resources.
CONSENSUS SCORE: 18

Current Workload:
GRA provided a table of their current workload in their proposal and stated that they were committed to being able to meet the schedule requirements for Bridge #700. Their **moderate** current workload for RIDOT in Final design includes, but is not limited to, Great Island Bridge 499, I-195 Taunton Ave/Warren Ave Interchange Improvements, and they are currently an on-call bridge design consultant. The majority of their active projects will be in construction when this project will be design, however ***GRA has limited staff who will also be manning active projects in construction at the same time that this project will be in design; therefore availability may be questionable***.
CONSENSUS SCORE: 12

Past / Relevant Experience:
GRA, established since 1970 with a staff of 23 employees, has over 40 years of experience providing planning, design engineering and construction-related services over a wide range of public infrastructure and private development projects. In their proposal, GRA cited a number of key projects (i.e. Rte. 403, Bridge 750, On call Bridge design, I-195 Taunton Ave/Warren Ave Interchange Improvements) and did a good job outlining the key design/construction elements and activities that were involved; however the projects provided were **not very relevant** to the specific needs of Bridge 700. GRA proposes utilizing sub-consultant **Cambridge Systematics**, who did the modeling for the Taunton Avenue Interchange adjacent to Bridge 700.
CONSENSUS SCORE: 7

Firm's Suitability to Level of Project Complexity:
GRA is a small local firm in close proximity to RIDOT with experience. In their proposal, GRA only dedicated one paragraph in regards to firm's suitability, basically indicating that GRA's experience is in Structures and Traffic and is well suited to the project. However, ***relevant project specific experience in regards to the structural needs of Bridge 700 in the rest of the proposal was relatively weak***. In addition, GRA proposes to utilize many sub-consultants to perform the tasks specified in the RFP, and there may be issues with being able to coordinate and deliver to the project schedule.
CONSENSUS SCORE: 3

DBE Participation:
GRA met the DBE participation of the RFP with the utilization of two DBE firms, **Steere Engineering, Inc.** and **Aries Support Services, Inc.** Proposed Scope of Work of the DBEs clearly defined and presented in both the prime and sub consultant proposals and demonstrates that the 10% goal as stated in the RFP will be able to be met and/or exceeded.
CONSENSUS SCORE: 5

GORDON R. ARCHIBALD, INC. (GRA) - TOTAL CONSENSUS SCORE: 78

CDR-MAGUIRE, INC. (MGI)

SUB-CONSULTANTS: STEERE ENGINEERING, INC. (DBE/WBE) – Structural Design Support & Bridge Inspection
LIN ASSOCIATES, INC. (DBE) – Structural Design Support & Bridge Inspection
BETA GROUP, INC. – Structural Design Support, Bridge Inspection & Traffic Design

Project Approach:
CDR-Maguire's project approach met the RIDOT requirements of the RFP, provided a somewhat detailed approach to the up front work required, but thereafter just described the typical RIDOT design process and **was not project specific**. Overall **not a high level plan**. For their structural approach, a decent discussion on joint elimination with 3D Finite Element Model evaluation was provided. In addition, it was noted that an initial in-depth inspection with materials testing would be conducted with comparison to prior inspections as well as performing internal QA/QC during design. For their traffic approach, CDR-Maguire provided a thorough plan, mentioning the three traffic control scenarios with up to three modifications to evaluate different scenarios for lane widths to minimize closures and disruptions to ramp traffic and will develop an evaluation matrix with such findings. However, ***they recommend the use of SYNCHRO for traffic analysis versus VISSIM, yet pointed out in their proposal that SYNCHRO is not as effective in analyzing gore areas and ramp junctions. The TEC questioned why they would chose to utilize this software knowing that this project contains these scenarios that will need to be analyzed.*** The TEC agreed it was a poor choice on their part as other respondents have proposed to use VISSIM. In addition, there was no mention of who would be providing traffic control during the bridge inspection. Lastly, a project schedule was provided but was not impressive or clear. Schedule was found to be confusing as tasks were shown in days and not in weeks or months and should have been summarized to show it was within the limits specified in the RFP.
CONSENSUS SCORE: 15

Staff Qualifications:
CDR-Overall staff qualifications were **good**, but not the best in comparing with other respondents. **Peter Wu, PhD., PE** who Maguire proposes to utilize as Project Manager is highly qualified and well educated, as well as **Dave Freeman, PE** who is being proposed to be utilized for Quality Control. Key personnel proposed have done well on past RIDOT projects. **Traffic staff appears to be weak**. Proposing to utilize sub-consultant **BETA Group** for Traffic engineering, however BETA are not traffic experts based on the limited past experience with RIDOT traffic related projects. CDR-Maguire's team is composed primarily of Maguire staff and supplemented by **three (3) sub-consultants, Steere Engineering, Inc. (DBE/WBE), BETA Group** and **Lin Associates (DBE)**; however they appear to have ***a heavy dependence on sub-consultants*** for a bulk of the work to be performed. CDR-Maguire proposes 36% of the work to be performed by these sub-consultants, with BETA Group performing 20%, Steere Engineering, Inc. (DBE/WBE) 8%, and Lin Associates, (DBE) 8%.
CONSENSUS SCORE: 14

Past Performance:
CDR-Maguire's demonstrated past performance relied heavily on their I-way performance. In their proposal they emphasized that many of the I-way contracts were bid under budget. It was noted by the TEC that they were potentially low bid by the contractor as the I-way did have numerous change orders, yet the TEC noted that this may not be a reflection on Maguire's past performance. A TEC member cited Maguire's design on the IWAY, involving placing expansion joints over fracture critical members, which is not desirable. A large percentage of the staff who worked for Maguire on the I-way are no longer employed by them, therefore ***while past performance has been relatively good; it is questionable as to their future performance with their current staff***. Past performance with sub-consultant **BETA** has been average.
CONSENSUS SCORE: 16

Current Workload:
CDR-Maguire currently has a **very light workload** with RIDOT, which involves Crack repair & Bolt painting on the Providence River Bridge. In addition they have approximately 6 active small scale MassDOT projects. They have stated in their proposal that their staff will be available full time due to their current workload.
CONSENSUS SCORE: 14

Past / Relevant Experience:
CDR-Maguire Inc. is a well established firm with a long history and good working relationship with RIDOT. Throughout its 75-plus year history, they have had extensive experience in the full range of transportation engineering throughout Rhode Island, including all aspects of bridge, highway and traffic engineering for RIDOT. CDR-Maguire currently has a local staff of over 70 personnel, with approximately two dozen whom are dedicated to providing services for bridge engineering, roadway design, and traffic improvements. CDR-Maguire has performed many major large scale projects, most notably as the design consultant for the I-way project; however there was no mention in the proposal that a large amount of the staff who worked on the I-way are no longer employed with the firm. Overall **relevant** project experience as related to the specifics of the RFP **was not demonstrated** well in the proposal, as projects noted were neither bridge rehabilitation projects nor similar structure types. Other relevant projects included the Ashton Viaduct, however as with the I-way, much of the staff who worked on this project no longer work for Maguire and are with other firms. Sub-consultant **Steere Engineering, Inc. (DBE/WBE)** had demonstrated some relevant experience as it was noted that Steere provided contractor support services for the Washington Pedestrian Bridge project.
CONSENSUS SCORE: 7

Firm's Suitability to Level of Project Complexity:
CDR-Maguire has experienced structural engineers and their workload is relatively light; however they are very weak on traffic in their proposal. They claim they are "experienced" and "familiar with RIDOT" however they did a relatively poor job at demonstrating relevant experience in their proposal to show suitability to the project.
CONSENSUS SCORE: 3

DBE Participation:
CDR-Maguire, Inc. met the DBE participation of the RFP with the utilization of **two** DBE firms, **Steere Engineering, Inc.** and **Lin Associates, Inc.** Proposed Scope of Work of the DBEs clearly defined and presented in both the prime and sub consultant proposals and demonstrates that the 10% goal as stated in the RFP will be able to be met and/or exceeded.
CONSENSUS SCORE: 5

CDR - MAGUIRE, INC. - TOTAL CONSENSUS SCORE: 74

PARE CORPORATION (PC)

SUB-CONSULTANTS: STV INCORPORATED – Bridge Engineering
ARIES SUPPORT SERVICES, INC. (DBE/WBE) – Materials Testing
ARCHAEOLOGICAL & HISTORICAL SERVICES, INC. (DBE/WBE)– Cultural Resources Coordination
GREEN INTERNATIONAL AFFILIATES (DBE/MBE) – Hydraulics
ARCHITECTURAL ENGINEERS, INC. (DBE/WBE)– Electrical Engineering
TRANSPORTATION DATA CORPORATION – Traffic Counts
EXPERT CON, INC. (DBE/MBE) – Contract Time Determination (as required)

Project Approach:
PARE's overall project approach was **underwhelming and low level**, noting the basic requirements of the RFP and the typical design process, and **lacking technical specifics** as related to the proposed bridge rehabilitation and overall project. Their approach was not strong in regards to traffic and very weak as to structural specifics with focus sometimes diverted to irrelevant issues. Several issues were "covered" in proposal that were not required in the RFP, such as hydraulics and electrical; however the priorities were overlooked, with little discussion provided concerning Bridge 700 specific structural needs, with only a brief notation of a joint elimination study being performed. PARE briefly mentions proposing accelerated bridge construction techniques (ABC) and FRP, as well as the possibility of post tensioning the prestress items, but nothing technically specific was proposed. For material testing, both GPR and ultrasonic methods were mentioned with additional hammer sounding proposed to determine the extent of deterioration. A shorter discussion was presented on their traffic approach, proposing to perform three traffic scenarios utilizing VISSIM models, but ***failed to discuss traffic data collection methods***. PARE proposes to hire a lighting consultant for the electrical work, perform utility coordination, and would perform public outreach if needed. A CTD scheduling consultant, if needed, was proposed although per the RFP addendum it was stated that the Department has its own master scheduler. PARE's proposed schedule was detailed, with critical path noted and most expected design tasks, however the inspection and the construction phase were not noted and RIDOT review times appeared too aggressive.
CONSENSUS SCORE: 14

Staff Qualifications:
PARE assembled a team with all disciplines covered. The PARE staff is very small and their proposal appears to be **dependent on sub-consultants**. There is a **heavy reliance on sub-consultant STV, Inc.** with ***at least 50% of the work is being performed by STV, Inc.*** STV, which is located in Boston, appears to be well qualified as they are ranked 13th in ENR, yet RIDOT has no experience with STV, so there is uncertainty due to their unfamiliarity to RIDOT standards. Overall **structural staff appears to be well experienced**, qualified, and strong (**Kevin Viveiros, PE (PARE); and Greg Berube, PE (PARE) and Mark Ennis, PE (STV)**) although the **proposed traffic staff appears to be weak** as staff appeared to have more "pedestrian analysis" experience and with little or no mention of modeling analysis. PARE included a table and well structured organizational chart, breaking down staff assignments to specific roles for both PARE and STV and the percentages of staff time to be devoted to the project. However a variety of **seven (7) sub-consultants** are being proposed. Therefore it ***may be difficult to coordinate and deliver the project in a timely manner due to the heavy reliance on sub-consultants.***
CONSENSUS SCORE: 15

Past Performance:
Past performance was **not specifically addressed** in the proposal, however past experience on RIDOT projects with PARE has been that they are very responsive and professional; however from a traffic perspective, younger ***traffic engineers on staff can be lacking at times*** due to lack of expertise. Sub-consultant STV is a **questionable value** as presented in the proposal, as RIDOT is unfamiliar with their work and has no demonstrated past experience with them.
CONSENSUS SCORE: 16

Current Workload:
PARE's current workload appears to not be very heavy, as presented in their proposal; however the overall firm size is small. Currently they have two (2) to three (3) active bridge projects with RIDOT and a few active projects with MassDOT and P&W Railroad. Sub-consultant **STV, Inc.**, as stated in the proposal, has workload primarily in MA, with approximately four (4) projects active in design and three (3) projects active in construction. As part of their proposal, PARE included a table with PARE's and STV's current workload; yet stated their "willingness to make this project a priority".
CONSENSUS SCORE: 13

Past / Relevant Experience:
PARE Corporation brings 43 years of consulting experience in New England providing bridge evaluation, inspection, load ratings, and design services. PARE has been responsible for a broad range of bridge evaluation and/or design projects completing hundreds of bridge projects, which include inspection and load rating reports, evaluation and recommendation studies, and final design and construction phase services for the RIDOT, MassDOT, ConnDOT and P&W Railroad Company. Although RIDOT has no prior experience with sub-consultant **STV, Inc.**, STV appears experienced with adequate staff resources, has extensive experience in CT and MA, and is currently **ranked 13th in the Top 25 consulting firms by "Engineering News Record" (ENR).** They have also done large scale projects in excess of $250 million. PARE's example projects provided in the proposal reveal *little relevant experience demonstrated* in response to this RFP. They primarily have smaller scale bridge experience (i.e. Central Bridge No. 182, Pocasset Bridge No. 23, Pascoag Bridge No. 198). None of the projects listed in SF-330 clearly demonstrated experience with fiber wrap, joint elimination and rehabilitations as specifically related to the RFP. Sub-consultant STV did provide an example of one project in the proposal with difficult construction phasing and another example involving a long joint-less bridge project.
CONSENSUS SCORE: 6

Firm's Suitability to Level of Project Complexity:
Firm's suitability was not specifically addressed in the write up of the proposal. PARE is a local RI firm but they are small in size. Heavy reliance on sub-consultants, specifically **STV, Inc.** based out of Boston, MA *Based on the breakdown presented in their proposal, it appears approximately 50% of the work will be performed by PARE and 50% by STV.* This appeared more like a joint venture to the evaluation committee, although not stated such in the proposal and PARE notes STV as a sub-consultant.
CONSENSUS SCORE: 3

DBE Participation:
PARE met the DBE participation of the RFP with the proposed utilization of five DBE firms: **Aries Support Services, Inc., Archaeological & Historical Services, Inc., Green International Affiliates, Architectural Engineers, Inc.**, and **ExPERT Con, Inc.** Proposed Scope of Work of the DBEs clearly defined and presented in both the prime and sub consultant proposals and demonstrates that the 10% goal as stated in the RFP will be able to be met and/or exceeded.
CONSENSUS SCORE: 5

PARE CORPORATION - TOTAL CONSENSUS SCORE: 72

WSP-SELLS (SELLS)

SUB-CONSULTANTS: STEERE ENGINEERING, INC. (DBE/WBE) – Structural Engineering & Construction Document Reviews

Project Approach:

WSP-SELLS project approach was **weak** and **short on specifics** addressing the technical approach of the proposed bridge rehabilitation and specific needs of the RFP and was more a summary of the usual design process, particularly in comparison with other Respondents. In their work plan, WSP-SELLS emphasized that Phase I was the "most important" phase of the project to establish the extent and feasibility of the structural modifications required, thus proposing to focus more up-front time on inspection & evaluation with "proper diligence and attention to detail" to determine the extent of rehabilitation, ensuring RIDOT will get the best value. Their approach mentioned performing a joint elimination study and a need for a load path analysis, although this discussion was relatively brief and was not elaborated. No discussion was provided on nondestructive testing for the bridge deck. WSP-SELLS will provide traffic modeling and three alternatives were mentioned, however no specifics were provided in their project approach. ***WSP-SELLS did provide supplemental information as to innovative bridge inspection access techniques, such as barge lifts and rope access, that their firm utilizes and inspectors are trained in, which could potentially reduce the need for lane closures during inspection and save time overall during the inspection period.*** WSP-SELLS work plan and schedule were broken down clearly and extensively into individual tasks, with the duration of tasks noted in weeks next to each specific task. Lastly, WSP-SELLS proposed the use of sub-consultant **Steere Engineering, Inc. (DBE/WBE)**, who is familiar with RIDOT policies, standards, and procedures, to assist in the construction document review of their plans and specifications to ensure conformance with RIDOT Standards, as they have not yet performed design consulting services for RIDOT.

CONSENSUS SCORE: 14

Staff Qualifications:

Overall **key personnel appear well experienced** with over 20+ years experience and qualified on both large and small scale design and inspection projects (**John Wicks, PE** and **Rich Lenox, PE**). The proposed **traffic engineer (Z. Teng, PE) appears less experienced** with only 11 years experience, yet has experience in micro traffic simulation. WSP-SELLS proposes to utilize **one (1) sub-consultant, Steere Engineering, Inc. (DBE/WBE)**, for 10% of the work. Steere Engineering will be primarily providing structural engineering and construction document review support services. WSP-SELLS provided a well presented organizational chart as part of their proposal.

CONSENSUS SCORE: 16

Past Performance:

Few details and examples were provided in the proposal as to past performance. WSP-SELLS currently provides Bridge Inspection and Load Rating services to RIDOT under the MPA for RI Statewide Bridge Inspection. Current experience with them under this program has been **very good** to date, however RIDOT has ***yet to utilize them in a design consultant service capacity and therefore there is uncertainty as to probable performance in this capacity.***

CONSENSUS SCORE: 17

Current Workload:

WSP-SELLS provided a list of projects for their current workload as part of their proposal. They currently **only have one active project with RIDOT**, the RI Statewide Bridge Inspection Program, which involves bridge inspection and evaluation, as well as **numerous projects with Mass Highway** in preliminary design and/or in construction. As a result the TEC felt their workload was overall **heavy**. WSP-SELLS did not demonstrate or articulate in the proposal their

ability as to how they would dedicate their staff to this project for RIDOT or to what degree while still actively performing the duties of their current workload.
CONSENSUS SCORE: 10

Past / Relevant Experience:
WSP SELLS is a large firm, incorporated in 1925 in New York, providing multi-disciplined consulting services concentrating in highway and bridge projects and is a major consulting firm **ranked by "Engineering News Record" (ENR) in the top thirty firms** concentrating in transportation engineering services in the northeast, as well as in the top 25 Bridge Consulting Firms. WSP-SELLS has over 250 engineers and technicians on staff and has a location in Massachusetts. Overall they have been involved in large complex bridge projects, most notably working on a 1 billion dollar project in NY involving reconstruction and the largest bridge design project in NY State. WSP-SELLS demonstrated a **strong bridge inspection background** experience on both large and small scale, and currently are performing the inspection of the Newport Pell Bridge. They have not provided design consulting services to RIDOT to date, only bridge inspection services under the RI Bridge Inspection Program. Overall, ***little relevant experience demonstrated*** in the proposal in response to this RFP, as examples of relevant work experience cited were the RI Bridge Inspection Program, 2 bridges over rivers, traffic phasing and construction support services.
CONSENSUS SCORE: 5

Firm's Suitability to Level of Project Complexity:
WSP-SELLS appears to be a suitable firm, however their lack of a RI presence may not allow them to be readily available and ***their closing statement in their proposal did not lend confidence*** to the evaluation committee as to whether they could perform the work in question.
CONSENSUS SCORE: 3

DBE Participation:
WSP-SELLS met the DBE participation of the RFP with the utilization of only **one** DBE firm, **Steere Engineering, Inc.** Proposed Scope of Work of the DBE clearly defined and presented in both the prime and sub consultant proposal and demonstrates that the 10% goal as stated in the RFP will be able to be met and/or exceeded.
CONSENSUS SCORE: 5

WSP – SELLS - TOTAL CONSENSUS SCORE: 70

CONCLUSION:

The TEC concluded that overall majority of the Firms evaluated were highly qualified to perform the services required as per the RFP and Scope of Work; however, in line with the Department's Scope of Services, RIDOT will select only the **TOP ONE (1) RANKED FIRM** to submit a formal financial proposal to the RIDOT, and negotiations will be completed on a cost plus fixed fee basis.

Therefore, based on the TEC'S final evaluation and ranking, we recommend that the following **ONE (1) FIRM** be selected to provide the requested services: **AECOM Technical Services, Inc.** We formally request that this project be placed on the agenda for the next RIDOT Advisory Consultant Selection Panel Meeting for formal final selection presentation and Departmental approval.

Upon review of this submission, please contact me at Ext. 4291 should you have any questions or require any additional information.

Approved: _____
Robert A. Smith, P.E.
Deputy Chief Engineer/Design

Date: 6/20/13

Approved: _____
Kazem Farhoumand, P.E.
Chief Engineer/Design

Date: 6/20/13

MVB/MVB
Attachments
cc: Bertrand, Crum, Fish, Murray, Pavia, Raymond, Savella; File (w/att.)

7461338 – COMPLETE DESIGN SERVICES FOR THE REHABILITATION OF WASHINGTON BRIDGE NORTH NO. 700 – MAINLINE, APPROACH AND RAMP BRIDGES								
FINAL EVALUATION								
CONSULTANT *Presented in Rank Order*	**PROJECT APPROACH**	**STAFF QUALIFICATIONS**	**PAST PERFORMANCE**	**CURRENT WORKLOAD**	**PAST / RELEVANT EXPERIENCE**	**FIRM'S SUITABILITY**	**DBE PARTICIPATION**	***TOTAL CONSENSUS SCORE***
	MAX 25 PTS	MAX 20 PTS	MAX 20 PTS	MAX 15 PTS	MAX 10 PTS	MAX 5 PTS	MAX 5 PTS	
AECOM	24	18	18	13	9	5	5	92
CE&C	22	18	18	12	8	5	5	88
VHB	21	18	17	12	9	5	5	87
BAKER	20	17	18	13	8	4	5	85
PB	22	16	17	10	9	5	5	84
GRA	15	18	18	12	7	3	5	78
MAGUIRE	15	14	16	14	7	3	5	74
PARE	14	15	16	13	6	3	5	72
WPS-SELLS	14	16	17	10	5	3	5	70

State of Rhode Island and Providence Plantations
Inter-Office Memorandum

Date: May 29, 2013

To: Vanessa Crum, Esq.
Chief / Business & Community Resources
Transportation

From: Mary Vittoria-Bertrand, P.E.
Senior Civil Engineer / Bridge Engineering
Technical Evaluation Committee Chairwoman
Transportation

MVB

Subject: **BID # 7461338**
Complete Design Services for the Rehabilitation of Washington Bridge North No. 700 – Mainline, Approach and Ramp Bridges
Providence and East Providence, Rhode Island
Current DBE Certification Verification Request

We are kindly requesting that your office please verify in writing that the attached list of DBE firms proposed to be utilized by the nine (9) Respondents submitting Letters of Interest/Technical Proposals (LOI/TECH) for the above subject BID #7461338 hold current and valid certifications and are therefore considered approved DBE firms for utilization on this project.

MVB/MVB
Attachment

cc: File (w/att)

BID #7461338
Complete Design Services for the Rehabilitation of Washington Bridge North No. 700
PRIME Consultant's Proposed DBE Subconsultants

Prime Consultant	Proposed DBEs	Current Certificate?
AECOM	Aries Support Services, Inc.	
	Prime Engineering (dba PEI, Inc.)	
	Steere Engineering, Inc.	
Baker	Fitzgerald & Halliday, Inc.	
	Steere Engineering, Inc.	
CE&C	Steere Engineering, Inc.	
GRA	Aries Support Services, Inc.	
	Steere Engineering, Inc.	
Maguire	Lin Associates	
	Steere Engineering, Inc.	
Pare	Aries Support Services, Inc.	
	Archaeological & Historical Services, Inc.	
	Architectural Engineers, Inc.	
	ExPERT Con, Inc.	
	Green International Affiliates	
Parsons Brinckerhoff	Aries Support Services, Inc.	
	Green International Affiliates	
	Steere Engineering, Inc.	
VHB	Aries Support Services, Inc.	
	Innovative Inc. (dba Innovative Resource Group)	
	Steere Engineering, Inc.	
WSP-Sells	Steere Engineering, Inc.	

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
INTEROFFICE MEMO

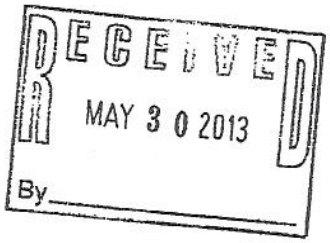
TO: David W. Fish, P.E. **DATE:** May 29, 2013
Managing Engineer/ Bridge Engineering
DEPT: Transportation

FROM: Vanessa Crum, Administrator VC
Business and Community Resources
DEPT: Transportation

SUBJECT: RFP No: 7461338
Complete Design Services for the Rehabilitation of
Washington Bridge North No. 700 –
Mainline, Approach and Ramp Bridges
Providence and East Providence, Rhode Island
D.B.E. Review/Approval

In response to the nine (9) firms that submitted proposed DBE's as part of their Letters of Interest/ Technical Proposals (LOI/TECH) for the above referenced solicitation, the following is a list of the approved D.B.E. firms as certified in the RI Minority Business Enterprise Directory:

Archaeological and Historical Services, Inc.
Architectural Engineers, Inc.
Aries Support Services, Inc.
ExPERT Con, Inc.
Fitzgerald & Halliday, Inc.
Green International Affiliates
Innovative, Inc. (dba Innovative Resource Group)
Lin Associates
Prime Engineering
Steere Engineering, Inc.



If you have any questions, please call Jean Heiss at ext. 4402.

cc: K. Farhoumand, K. Farwell, L. Murray, R. Smith, M. Vittoria-Bertrand,
C. Xenophontos; File