The Connected Vehicle Pilot Deployment Program, Phase 1

Volume II: Business and Price

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Part I  Cost/Price Information
Part II  Subcontracts/Consultants
Part IIISubcontracting Plan
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SOLICITATION, OFFER AND AWARD

FEDERAL HIGHWAY ADMINISTRATION
OFFICE OF THE CHIEF FINANCIAL OFFICER
OFFICE OF ACQUISITION & GRANTS MGMT
1200 NEW JERSEY AVENUE, SE
WASHINGTON DC 20590
Location: B66-101

NOTE: In sealed bid solicitations "offer" and "offers" mean "bid" and "bidder".

6. Sealed offers in original and copies for furnishing the supplies or services in the Schedule will be received at the place specified in Item 8, or if hand carried, in the
depot located in See Box 7 until 1500 ES local time 03/16/2015

CAUTION: Late Submissions, Modifications, and Withdrawals: See Section L. All offers are subject to all terms and conditions contained in this solicitation.

10. FOR INFORMATION CALL:

A. NAME
Sarah H. Khan

B. TELEPHONE (NO COLLECT CALLS)
202-366-0220

C. E-MAIL ADDRESS
Sarah.Khan@dot.gov

11. TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>(x)</th>
<th>SEC.</th>
<th>DESCRIPTION</th>
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</table>

OFFER (Must be fully completed by offerer)

NOTE: Item 12 does not apply if the solicitation includes the provisions at 52.214-6, Minimum Bid Acceptance Period.

12. In compliance with the above, the undersigned agree, if this offer is accepted within 120 calendar days (60 calendar days unless a different period is inserted) by the offeror from the date of receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.

13. DISCOUNT FOR PROMPT PAYMENT

10 CALENDAR DAYS (%) 20 CALENDAR DAYS (%) 30 CALENDAR DAYS (%) CALENDAR DAYS (%)

14. ACKNOWLEDGEMENT OF AMENDMENTS

AMENDMENT NO. 000001 DATE 02/27/106 AMENDMENT NO. 000002 DATE 03/01/2015

15A. NAME AND ADDRESS OF OFFEROR

Joe Waggoner
Executive Director

Tampa Hillsborough Expressway Authority
1104 East Twigg Street, Suite 300
Tampa, Florida 33602

15B. TELEPHONE NUMBER

813 272-6740

16. NAME OF CONTRACTING OFFICER (Type or print)

Joseph A. Fusari

27. UNITED STATES OF AMERICA

28. AWARD DATE

3/27/15

AWARD (To be completed by government)

STANDARD FORM 32 (Rev. 8-97)
Prescribed by GSA - FAR (AS CFP) 52.214-6
PART I
Cost/Price Information
PRICING CHART
<table>
<thead>
<tr>
<th>Task No.</th>
<th>Description</th>
<th>Unit Price Paid Following Acceptance</th>
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<tbody>
<tr>
<td>Task 1</td>
<td>Final Program Management Plan</td>
<td>$113,527.73</td>
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<tr>
<td>Task 2</td>
<td>Final Stakeholder ConOps Review Panel Roster</td>
<td>$243,557.95</td>
</tr>
<tr>
<td>Task 2</td>
<td>ConOps Resolution Report (Final)</td>
<td>$129,318.18</td>
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<tr>
<td>Task 3</td>
<td>Security Management Operating Concept (Final)</td>
<td>$133,947.25</td>
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<tr>
<td>Task 4</td>
<td>Safety Management Plan (Final)</td>
<td>$168,619.33</td>
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<tr>
<td>Task 5</td>
<td>Performance Measurement Plan (Final)</td>
<td>$403,155.49</td>
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<td>Task 6</td>
<td>Final Stakeholder SyRS Review Panel Roster</td>
<td>$138,348.59</td>
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<td>Task 6</td>
<td>SyRS Resolution Report (Final)</td>
<td>$89,451.56</td>
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<tr>
<td>Task 6</td>
<td>Final SyRS</td>
<td>$98,026.25</td>
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<tr>
<td>Task 7</td>
<td>Application Deployment Plan (Final)</td>
<td>$220,807.77</td>
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<tr>
<td>Task 8</td>
<td>Human Use Approval Summary (Final)</td>
<td>$80,352.56</td>
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<tr>
<td>Task 9</td>
<td>Training and Education Plan (Final)</td>
<td>$116,006.41</td>
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<td>Task 10</td>
<td>Partnership Status Summary (Final)</td>
<td>$78,049.74</td>
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<tr>
<td>Task 11</td>
<td>Outreach Plan (Final)</td>
<td>$120,771.39</td>
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<tr>
<td>Task 12</td>
<td>Comprehensive Deployment Plan (Final)</td>
<td>$193,328.48</td>
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<tr>
<td>Task 13</td>
<td>Deployment Readiness Summary (Final)</td>
<td>$115,802.57</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>$2,443,071.25</td>
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</table>
ASSUMPTIONS OR CONDITIONS
## PRICING CHART ASSUMPTIONS AND CONDITIONS

<table>
<thead>
<tr>
<th>Task No.</th>
<th>Description</th>
<th>Notes and Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task 1</td>
<td>Final Program Management Plan</td>
<td>Program Management costs are spread over other tasks.</td>
</tr>
<tr>
<td>Task 2</td>
<td>Final Stakeholder ConOps Review Panel Roster</td>
<td>Involves stakeholder engagement activities and workshops. Submit Stakeholder Review Panel Roster for COR approval. Upon approval, THEA will invoice the USDOT for this milestone accomplishment.</td>
</tr>
<tr>
<td>Task 2</td>
<td>ConOps Resolution Report (Final)</td>
<td>Includes the development of the draft ConOps to include Quantitative Performance Measures, Operational Practice Benchmarking, User Needs and Context Diagrams. Also includes resolution of comments and final comment resolution report for the ConOps. Upon approval, THEA will invoice the USDOT for this milestone accomplishment.</td>
</tr>
<tr>
<td>Task 2</td>
<td>Final ConOps</td>
<td>Includes addressing comments that have been resolved in the final ConOps document for submission and approval by USDOT. Upon approval, THEA will invoice the USDOT for this milestone accomplishment.</td>
</tr>
<tr>
<td>Task 3</td>
<td>Security Management Operating Concept (Final)</td>
<td>Concept includes both DSRC and non-DSRC applications. The majority of the applications are DSRC. Concept will be comprehensive, include analysis and security controls on current SCMS design, use of ISO Common Criteria methods. Upon approval, THEA will invoice the USDOT for this milestone accomplishment.</td>
</tr>
<tr>
<td>Task 4</td>
<td>Safety Management Plan (Final)</td>
<td>Includes a safety management process (vehicle and roadside) for field work, installation, testing and maintenance. Safety criteria related to THEA’s Reversible Express Lane System will be integrated into the plan. Upon approval, THEA will invoice the USDOT for this milestone accomplishment.</td>
</tr>
<tr>
<td>Task 5</td>
<td>Performance Measurement Plan (Final)</td>
<td>Plan includes comprehensive pre-pilot data collection, rigorous modeling and simulation, development and integration of multiple tools. Upon approval, THEA will invoice the USDOT for this milestone accomplishment.</td>
</tr>
<tr>
<td>Task 6</td>
<td>Final Stakeholder SyRS Review Panel Roster</td>
<td>Includes the development of traceable and verifiable functional, interface, performance, and data requirements. Submission of stakeholder review panel roster. Upon approval, THEA will invoice the USDOT for this milestone accomplishment.</td>
</tr>
<tr>
<td>Task 6</td>
<td>SyRS Resolution Report (Final)</td>
<td>Includes developing SyRS workbook and conducting SyRS walkthrough, addressing comments in draft walkthrough resolution reports. Upon approval, THEA will invoice the USDOT for this milestone accomplishment.</td>
</tr>
<tr>
<td>Task 6</td>
<td>Final SyRS</td>
<td>Includes addressing comments in final walkthrough and producing final walkthrough resolution reports. Upon approval, THEA will invoice the USDOT for this milestone accomplishment.</td>
</tr>
<tr>
<td>Task 7</td>
<td>Application Deployment Plan (Final)</td>
<td>Includes many of the contractors on the THEA team who will be implementing applications at traffic signals and along THEA’s Reversible Express Lanes. Applications are conceived to use both DSRC and non-DSRC. Upon approval, THEA will invoice the USDOT for this milestone accomplishment.</td>
</tr>
<tr>
<td>Task 8</td>
<td>Human Use Approval Summary (Final)</td>
<td>CUTR will obtain IRB approval. Upon approval, THEA will invoice the USDOT for this milestone accomplishment.</td>
</tr>
<tr>
<td>Task 9</td>
<td>Training and Education Plan (Final)</td>
<td>Includes TMC operations, traffic signal operations, access control system of the reversible express lanes. Upon approval, THEA will invoice the USDOT for this milestone accomplishment.</td>
</tr>
<tr>
<td>Task 10</td>
<td>Partnership Status Summary (Final)</td>
<td>Includes development and execution of formal agreements between THEA and other agencies. Much of the cost for this activity will be absorbed by THEA. Upon approval, THEA will invoice the USDOT for this milestone accomplishment.</td>
</tr>
<tr>
<td>Task 11</td>
<td>Outreach Plan (Final)</td>
<td>The costs for THEA’s staff, including THEA’s Executive Director, Planning Director, and Communication Director will be absorbed by THEA. Upon approval, THEA will invoice the USDOT for this milestone accomplishment.</td>
</tr>
<tr>
<td>Task 12</td>
<td>Comprehensive Deployment Plan (Final)</td>
<td>The Deployment Plan will leverage work done in other tasks of the Phase 1 - Concept Development. Upon approval, THEA will invoice the USDOT for this milestone accomplishment.</td>
</tr>
</tbody>
</table>
PART II
Subcontracts/Consultants
Volume II, Part II: Subcontracts/Consultants

HNTB CORPORATION
One Tampa City Center 201 N. Franklin Street, Suite 550
Tampa, Florida 33602

BOOZ ALLEN HAMILTON
20 M St SE, Suite 1000
Washington, DC 20003

SIEMENS ITS
9225 Bee Cave Rd
Building B, Ste 101
Austin, TX 78733

CUTR
4202 E. Fowler Ave., CUT100
Tampa, FL 33620

BMW OF NORTH AMERICA, LLC
200 Chestnut Ridge Rd, Bldg 150
Woodcliff Lake, NJ 07677

GLOBAL-5 COMMUNICATIONS, INC.
2180 West SR 434, Suite 1150
Longwood, FL 32779
PART III
Subcontracting Plan
Tampa Hillsborough Expressway Authority

SMALL BUSINESS SUBCONTRACTING PLAN

I. IDENTIFICATION DATA:

Address: 1104 East Twiggs, Suite 300, Tampa, FL, 33602
Date Prepared: March 27, 2015
Description of Supplies/Services: Connected Vehicle Pilot Deployment
Solicitation Number: DTFH6115R00003
Contract Number: n/a

Individual Plan Period:
Base: Date of award through 12 months
Option 1: 20 months
Option 2: 18 months

Estimated Contract Value
Base Period: $ 2,443,071.25  Option Period 1: $ 13,340,282.95  Option Period 2: $ 1,921,133.00

Place of Performance: Tampa, Florida
DUNS Number: n/a

II. TYPE OF PLAN – FAR 19.701

____ Commercial Plan

X Individual Plan

____ Master Plan (incorporated into Individual Plan)
III. GOALS:
Tampa Hillsborough Expressway Authority provides the following separate dollar and percentage goals, which are a percentage of the total subcontracting dollars for each business category:

<table>
<thead>
<tr>
<th>BASE GOALS are expressed in dollars and percentages of the total dollars planned to be subcontracted.</th>
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<tbody>
<tr>
<td>PLANNED SUBCONTRACTING TO:</td>
</tr>
<tr>
<td>1. Total Dollars to be Subcontracted</td>
</tr>
<tr>
<td>2. Large Businesses (Other than Small)</td>
</tr>
<tr>
<td>3. All Small Businesses (including ANCs &amp; Indian tribes)</td>
</tr>
<tr>
<td>4. Veteran-Owned Small Businesses (VOSB)</td>
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<tr>
<td>5. Service-Disabled Veteran-Owned Small Businesses (SDVOSB)</td>
</tr>
<tr>
<td>6. HUBZone Small Business (HUBZone)</td>
</tr>
<tr>
<td>7. Small Disadvantaged Businesses (SDB) (including ANCs &amp; Indian tribes)</td>
</tr>
<tr>
<td>8. Women-Owned Small Businesses (WOSB)</td>
</tr>
</tbody>
</table>

If applicable:

<table>
<thead>
<tr>
<th>1ST OPTION GOALS are expressed in dollars and percentages of total dollars planned to be subcontracted.</th>
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</thead>
<tbody>
<tr>
<td>PLANNED SUBCONTRACTING TO:</td>
</tr>
<tr>
<td>1. Total Dollars to be Subcontracted</td>
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</tr>
<tr>
<td>7. Small Disadvantaged Businesses (SDB) (including ANCs &amp; Indian tribes)</td>
</tr>
<tr>
<td>8. Women-Owned Small Businesses (WOSB)</td>
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</table>

If applicable:

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<td>3. All Small Businesses (including ANCs &amp; Indian tribes)</td>
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<tr>
<td>5. Service-Disabled Veteran-Owned Small Businesses (SDVOSB)</td>
</tr>
<tr>
<td>6. HUBZone Small Business (HUBZone)</td>
</tr>
<tr>
<td>7. Small Disadvantaged Businesses (SDB) (including ANCs &amp; Indian tribes)</td>
</tr>
<tr>
<td>8. Women-Owned Small Businesses (WOSB)</td>
</tr>
</tbody>
</table>

The principal types of supplies and/or services that Tampa Hillsborough Expressway Authority anticipates to be subcontracted and the identification of the type of business concern planned are as follows:
Tampa Hillsborough Expressway Authority used the following method to develop the subcontracting goals:

Firm fixed price proposals were received from all subcontractors for this project.

Tampa Hillsborough Expressway Authority identifies potential subcontractors using the following source lists and organizations:

Contact lists and previous teaming relationships were employed. No other sources were used to identify subcontract sources. Such sources will be employed during Phases 2 and 3, Options 2 and 3 respectively in this document, to identify subcontractors for installation services and other commodities required for deployment.

Indirect costs ___X___ HAVE BEEN (or) ____ HAVE NOT BEEN included in the dollar and percentage subcontracting goals stated above.

*If indirect costs HAVE been included, the method used to determine the proportionate share of indirect costs to be incurred with small business concerns was as follows:*

Overhead and other indirect costs were determined by the WOSB using standard cost accounting methods. These costs were detailed in the WOSB’s cost proposal to Tampa Hillsborough Expressway Authority.

IV. PROGRAM ADMINISTRATOR:

Name: Joe Waggoner
Title/Position: Executive Director
Address: 1104 East Twiggs Street
City/State/Zip Code: Tampa, FL 33602
Telephone number: 813-272-6740
Fax number: 813-272-5985
Email Address: joe@tampa-xway.com
Alternate POC with contact information: Robert Frey, Planning Director bobf@tampa-xway.com
**Duties:*** In accordance with clause 52.219-9(d)(11)(e), in order to effectively implement this plan to the extent consistent with efficient contract performance, the contractor shall perform the following functions:

1. Assist SB, VOSB, SDVOSB, HUBZone, SDB and WOSB concerns by arranging solicitations, time for the preparation of bids, quantities, specifications, and delivery schedules so as to facilitate the participation by such concerns. Where the Contractor's lists of potential SB, VOSB, SDVOSB, HUBZone, SDB and WOSB subcontractors are excessively long, reasonable effort shall be made to give all such small business concerns an opportunity to compete over a period of time.

2. Provide adequate and timely consideration of the potentialities of SB, VOSB, SDVOSB, HUBZone, SDB and WOSB concerns in all “make-or-buy” decisions.

3. Counsel and discuss subcontracting opportunities with representatives of SB, VOSB, SDVOSB, HUBZone, SDB and WOSB firms.

4. Confirm that a subcontractor representing itself as a HUBZone small business concern is identified as a certified HUBZone small business concern by accessing the Central Contractor Registration (CCR) database or by contacting SBA.

5. Provide notice to subcontractors concerning penalties and remedies for misrepresentations of business status as SB, VOSB, SDVOSB, HUBZone, SDB and WOSB for the purpose of obtaining a subcontract that is to be included as part or all of a goal contained in the Contractor’s subcontracting plan.

6. Develop and promote company/division policy statements that demonstrate the company's/division’s support for awarding contracts and subcontracts to SB, VOSB, SDVOSB, HUBZone, SDB and WOSB concerns.

7. Develop and maintain bidders’ lists of SB, VOSB, SDVOSB, HUBZone, SDB and WOSB concerns from all possible sources.

8. Ensure periodic rotation of potential subcontractors on bidders’ lists.

9. Ensure that SB, VOSB, SDVOSB, HUBZone, SDB and WOSB concerns are included on the bidders' list for every subcontract solicitation for products and services they are capable of providing.

10. Ensure that subcontract procurement “packages” are designed to permit the maximum possible participation of SB, VOSB, SDVOSB, HUBZone, SDB and WOSB concerns.

11. Review subcontract solicitations to remove statements, clauses, etc., which might tend to restrict or prohibit SB, VOSB, SDVOSB, HUBZone, SDB and WOSB concerns.

12. Ensure that the subcontract bid proposal review board documents its reasons for not selecting any low bids submitted by SB, VOSB, SDVOSB, HUBZone, SDB and WOSB concerns.

13. Oversee the establishment and maintenance of contract and subcontract award records.

14. Attend or arrange for the attendance of company counselors at Business Opportunity Workshops, Minority Business Enterprise Seminars, Trade Fairs, etc.
15. Directly or indirectly counsel SB, VOSB, SDVOSB, HUBZone, SSB and WOSB concerns on subcontracting opportunities and how to prepare bids to the company.

16. Conduct or arrange training for purchasing personnel regarding the intent and impact of Section 8(d) of the Small Business Act on purchasing procedures.

17. Develop and maintain an incentive program for buyers that support the subcontracting program.

18. Monitor the company's performance and make any adjustments necessary to achieve the subcontract plan goals.

19. Prepare and submit timely reports.

20. Coordinate the company's activities during compliance reviews by Federal agencies.

**IF YOUR PROGRAM ADMINISTRATOR WILL PERFORM ADDITIONAL SUBCONTRACTING DUTIES NOT SHOWN ABOVE, PLEASE IDENTIFY THEM HERE:**

21. Additional Duties: n/a

**V. EQUITABLE OPPORTUNITY:**

Tampa Hillsborough Expressway Authority will make every effort to ensure that all small business concerns have an equitable opportunity to compete for subcontracts. These efforts may include one or more of the following activities:

A. Outreach efforts to obtain sources:
   - _x_ Contacting minority and small business trade associations
   - _x_ Contacting business development organizations
   - ___ Requesting sources from the Central Contractor Registration (CCR), Dynamic Small Business Search, which integrated data from the SBA PRO-Net database
   - ___ Attending small and minority business trade fairs and procurement conferences

B. Internal efforts to guide and encourage purchasing personnel:
   - ___ Presenting workshops, seminars and training programs
   - ___ Establishing, maintaining and using small, hubzone small, small disadvantaged, women-owned small, veteran-owned small, and service-disabled veteran-owned small business source lists, guides, and other data for soliciting subcontracts
   - _x_ Monitoring activities to evaluate compliance with the subcontracting plan

C. Other Additional efforts: n/a

**VI. ASSURANCES OF CLAUSE INCLUSION AND FLOW DOWN:**

FAR 19.704(a)(9) and clause 52.219-9(d)(9) require assurances that the offeror will include the clause at 52.219-8, Utilization of Small Business Concerns (see 19.708(a)), in all subcontracts that offer further subcontracting opportunities, and that the offeror will require all subcontractors (except small business concerns) that receive subcontracts in excess of $550,000 ($1,000,000 for construction) to adopt a plan that complies with the requirements of this clause (see 19.708(b)).
Tampa Hillsborough Expressway Authority agrees to include the FAR Clause 52.219-8, "Utilization of Small Business Concerns" in all subcontracts that offer further subcontracting opportunities, and will require all subcontractors (except small business concerns) that receive subcontracts in excess of $550,000 ($1,000,000 for construction) to adopt a plan that complies with the requirements of the clause at 52.219-9, Small Business Subcontracting Plan.

VII. REPORTING AND COOPERATION:

Tampa Hillsborough Expressway Authority agrees to:
(10)(i) Cooperate in any studies or surveys as may be required;
(ii) Submit periodic reports so that the Government can determine the extent of compliance by the offeror with the subcontracting plan;
(iii) Submit the Individual Subcontract Report (ISR), and the Summary Subcontract Report (SSR) using the Electronic Subcontracting Reporting System (eSRS) (http://www.esrs.gov), following the instructions in the eSRS;
(iv) Ensure that its subcontractors with subcontracting plans agree to submit the ISR and/or the SSR using the eSRS;
(v) Provide its prime contract number and its DUNS number and the e-mail address of the Government or Contractor official responsible for acknowledging or rejecting the reports, to all first-tier subcontractors with subcontracting plans so they can enter this information into the eSRS when submitting their reports; and
(vi) Require that each subcontractor with a subcontracting plan provide the prime contract number and its own DUNS number, and the e-mail address of the Government or Contractor official responsible for acknowledging or rejecting the reports, to its subcontractors with subcontracting plans.

Reports are to be submitted within 30 days after the close of each calendar period as indicated in the following chart:

<table>
<thead>
<tr>
<th>Calendar Period</th>
<th>Report Due</th>
<th>Date Due</th>
<th>Submit Reports to eSRS with email address for:</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/01–03/31</td>
<td>ISR</td>
<td>04/30</td>
<td>Contracting Officer/SBTA</td>
</tr>
<tr>
<td>04/01–09/30</td>
<td>ISR</td>
<td>10/30</td>
<td>Contracting Officer/SBTA</td>
</tr>
<tr>
<td>10/01–09/30</td>
<td>SSR</td>
<td>10/30</td>
<td>Contracting Officer/SBTA</td>
</tr>
</tbody>
</table>

THE eSRS WEB-BASED REPORTING REQUIREMENT INSTRUCTIONS CAN BE FOUND IN THE "ATTACHMENT TO SUBCONTRACTING PLAN" TAKEN FROM FAR CLAUSE 52-219-9.

VIII. RECORDKEEPING:

Tampa Hillsborough Expressway Authority will maintain records concerning procedures that have been adopted to comply with the requirements and goals in the plan, including establishing source lists; and a description of efforts to locate SB (including ANCs and Indian tribes), VOSB, SDVOSB, HUBZone, SDB (including ANCs and Indian tribes), and WOSB concerns and award subcontracts to them. The records shall include at least the following (on a plant-wide or company-wide basis, unless otherwise indicated):

1. Source lists (e.g., CCR), guides, and other data that identify SB (including ANCs and Indian tribes), VOSB, SDVOSB, HUBZone, SDB (including ANCs and Indian tribes), and WOSB concerns.

2. Organizations contacted in an attempt to locate sources that are SB (including ANCs and Indian tribes), VOSB, SDVOSB, HUBZone, SDB (including ANCs and Indian tribes), and WOSB concerns.

3. Records on each subcontract solicitation resulting in an award of more than $100,000, indicating:
(A) Whether small business concerns were solicited and, if not, why not;
(B) Whether veteran-owned small business concerns were solicited and, if not, why not;
(C) Whether service-disabled veteran-owned small business concerns were solicited and, if not, why not;
(D) Whether HUBZone small business concerns were solicited and, if not, why not;
(E) Whether small disadvantaged business concerns were solicited and, if not, why not;
(F) Whether women-owned small business concerns were solicited and, if not, why not; and
(G) If applicable, the reason award was not made to a small business concern.

4. Records of any outreach efforts to contact
   (A) Trade associations;
   (B) Business development organizations;
   (C) Conferences and trade fairs to locate small, HUBZone small, small disadvantaged, and
       women-owned small business sources; and
   (D) Veterans service organizations.

5. Records of internal guidance and encouragement provided to buyers through
   (A) Workshops, seminars, training, etc.; and
   (B) Monitoring performance to evaluate compliance with the program's requirements.

6. On a contract-by-contract basis, records to support award data submitted by the offeror to the Government,
   including the name, address, and business size of each subcontractor. **Contractors having commercial plans
   need not comply with this requirement.**

7. Other records to support your compliance with the subcontracting plan: n/a

IX. **STATUTORY REQUIREMENTS (Found at FAR 19.702)**

- Any contractor receiving a contract for more than the simplified acquisition threshold must agree in the
  contract that SB (including ANCs and Indian tribes), VOSB, SDVOSB, HUBZone, SDB (including ANCs and
  Indian tribes), and WOSB concerns will have the **maximum practicable opportunity** to participate in contract
  performance consistent with its efficient performance.
- It is further the policy of the United States that its prime contractors establish procedures to ensure the
  **timely payment** of amounts due pursuant to the terms of their subcontracts with SB (including ANCs and
  Indian tribes), VOSB, SDVOSB, HUBZone, SDB (including ANCs and Indian tribes), and WOSB concerns.
- See 19.702(a)(1) for requirements that are imposed in negotiated acquisitions, and (a)(2) for requirements
  that are imposed in sealed bidding acquisitions.
- As stated in **15 U.S.C. 637(d)(8)**, any contractor or subcontractor failing to comply in good faith with the
  requirements of the subcontracting plan is in **material breach of its contract**. Further, **15 U.S.C. 637(d)(4)(F)**
  directs that a contractor's **failure to make a good faith effort** to comply with the requirements of the
  subcontracting plan shall result in the imposition of **liquidated damages** (see 19.702(c) and 19.705-7).

X. **DESCRIPTION OF GOOD FAITH EFFORT** (Also refer to 13 CFR 125.3(d), Determination of
   Good Faith Effort)
In order to demonstrate your compliance with a good faith effort to achieve the small business subcontracting goals, outline the steps below that your company plans to take.

Tampa Hillsborough Expressway Authority will take the following steps to demonstrate compliance with a good faith effort in achieving small business subcontracting goals:
Outreach efforts will include contacting minority and small business trade associations and contacting business development organizations to engage small businesses. In order to assure a good faith effort, Tampa Hillsborough Expressway Authority will monitor activities to evaluate compliance with the subcontracting plan. In addition, if the opportunity arises, Tampa Hillsborough Expressway Authority will seek to engage small business subcontractors in Phases 2 and 3 respectively.

The above requirements will be negotiated with the contracting officer prior to approval. The contracting officer must ensure per FAR 19.705-5(a)(5) that an acceptable plan is incorporated into and made a material part of the contract.

SIGNATURE REQUIRED:

This subcontracting plan was SUBMITTED by:

Signature: [Signature]
Typed Name: Joe Waggoner
Company Title: Executive Director
Date Signed: March 27, 2015

Government Contracting Officer APPROVAL:

Signature: [Signature]
Printed Name: [Printed Name]
Agency: [Agency]
Date Signed: [Date Signed]
ATTACHMENT TO SUBCONTRACTING PLAN

Electronic Subcontracting Reporting System web-based reporting requirements found at FAR clause 52.219-9(l):

The Contractor shall submit ISRs and SSRs using the web-based eSRS at http://esrs.gov. Purchases from a corporation, company, or subdivision that is an affiliate of the prime Contractor or subcontractor are not included in these reports. Subcontract award data reported by prime Contractors and subcontractors shall be limited to awards made to their immediate next-tier subcontractors. Credit cannot be taken for awards made to lower tier subcontractors, unless the Contractor or subcontractor has been designated to receive a small business or small disadvantaged business credit from an ANC or Indian tribe.

1) ISR. This report is not required for commercial plans. The report is required for each contract containing an individual subcontract plan and shall be submitted to the Administrative Contracting Officer (ACO) or Contracting Officer, if no ACO is assigned.

1(i) The report shall be submitted semi-annually during contract performance for the periods ending March 31 and September 30. A report is also required for each contract within 30 days of contract completion. Reports are due 30 days after the close of each reporting period, unless otherwise directed by the Contracting Officer. Reports are required when due, regardless of whether there has been any subcontracting activity since the inception of the contract or the previous reporting period.

1(ii) When a subcontracting plan contains separate goals for the basic contract and each option, as prescribed by FAR 19.704(c), the dollar goal inserted on this report shall be the sum of the base period through the current option; for example, for a report submitted after the second option is exercised, the dollar goal would be the sum of the goals for the basic contract, the first option, and the second option.

1(iii) The authority to acknowledge receipt or reject the ISR resides—

(A) In the case of the prime Contractor, with the Contracting Officer; and

(B) In the case of a subcontract with a subcontracting plan, with the entity that awarded the subcontract.

2) SSR.

2(i) Reports submitted under individual contract plans—

(A) This report encompasses all subcontracting under prime contracts and subcontracts with the awarding agency, regardless of the dollar value of the subcontracts.

(B) The report may be submitted on a corporate, company or subdivision (e.g. plant or division operating as a separate profit center) basis, unless otherwise directed by the agency.

(C) If a prime Contractor and/or subcontractor is performing work for more than one executive agency, a separate report shall be submitted to each executive agency covering only that agency's contracts, provided at least one of that agency's contracts is over $550,000 (over $1,000,000 for construction of a public facility) and contains a subcontracting plan. For DoD, a consolidated report shall be submitted for all contracts awarded by military departments/agencies and/or subcontracts awarded by DoD prime Contractors. However, for construction and related maintenance and repair, a separate report shall be submitted for each DoD component.

(D) For DoD and NASA, the report shall be submitted semi-annually for the six months ending March 31 and the twelve months ending September 30. For civilian agencies, except NASA, it shall be submitted annually for the twelve month period ending September 30. Reports are due 30 days after the close of each reporting period.

(E) Subcontract awards that are related to work for more than one executive agency shall be appropriately allocated.

(F) The authority to acknowledge or reject SSRs in eSRS, including SSRs submitted by subcontractors with subcontracting plans, resides with the Government agency awarding the prime contracts.

2(ii) Reports submitted under a commercial plan—
(A) The report shall include all subcontract awards under the commercial plan in effect during the Government's fiscal year.

(B) The report shall be submitted annually, within thirty days after the end of the Government's fiscal year.

(C) If a Contractor has a commercial plan and is performing work for more than one executive agency, the Contractor shall specify the percentage of dollars attributable to each agency from which contracts for commercial items were received.

(D) The authority to acknowledge or reject SSRs for commercial plans resides with the Contracting Officer who approved the commercial plan.

(iii) All reports submitted at the close of each fiscal year (both individual and commercial plans) shall include a Year-End Supplementary Report for Small Disadvantaged Businesses. The report shall include subcontract awards, in whole dollars, to small disadvantaged business concerns by North American Industry Classification System (NAICS) Industry Subsector. If the data are not available when the year-end SSR is submitted, the prime Contractor and/or subcontractor shall submit the Year-End Supplementary Report for Small Disadvantaged Businesses within 90 days of submitting the year-end SSR. For a commercial plan, the Contractor may obtain from each of its subcontractors a predominant NAICS Industry Subsector and report all awards to that subcontractor under its predominant NAICS Industry Subsector.

<table>
<thead>
<tr>
<th>Contracting Officer</th>
<th>(insert e-mail addresses)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Business Technical Advisor</td>
<td>(email address for specific region/office/service/agency)</td>
</tr>
<tr>
<td>Subcontracting Manager, Office of Small Business Utilization</td>
<td>(<a href="mailto:janice.keys@gsa.gov">janice.keys@gsa.gov</a> or applicable alternate agency)</td>
</tr>
<tr>
<td>Small Business Administration Representative</td>
<td>(found at <a href="http://www.sba.gov/aboutsba/sbaprogms/gcbs/GC_PCRD1.html">www.sba.gov/aboutsba/sbaprogms/gcbs/GC_PCRD1.html</a>) (use address where contractor is located)</td>
</tr>
</tbody>
</table>
J.8 Subcontracting Plan

SUBCONTRACTING PLAN for Broad Agency Announcement Number
DTFH6115R00003

1. NOTES:
   - Where the bidder/offoror has an existing approved master subcontracting plan, those goals may be reflected in the proposed plan. Please note as such.
   - Where subcontracting opportunities will not exist, the bidder/offoror shall furnish a statement to that effect, signed by an official authorized to make that statement.
   - The following information shall be provided in the bidder/offoror subcontracting plan expressed in terms of goal percentages of the total planned subcontracting dollars. (Bidder/offoror may adapt this information to its own format, provided the information remains clear and consistent.)
   - Text lines may be added to this format as needed.

| SUBCONTRACTING PLAN for Broad Agency Announcement number DTFH6115R00003 |
|-----------------------------------------------------|-----------------|------------|
| a. Total prime contract amount:                      | $2,443,071.25   |            |
| b. Total planned subcontract awards:                 | $1,034,532.53   |            |
| c. Total planned subcontract awards to Large Business and non-profit concerns | $986,738.28     | (c/b)      | 95%        |
| d. Total planned subcontract awards to Small Business concerns (SB) (not elsewhere counted in e. f. g. h. or i. below) | $              | (d/b)      | %          |
| e. Total planned subcontract awards to Veteran-Owned Small Business concerns (VOSB): | $              | (e/b)      | %          |
| f. Total planned subcontract awards to Service-Disabled Veteran-Owned Small Business concerns (SDVOSB): | $              | (f/b)      | %          |
| g. Total planned subcontract awards to Small Business concerns located in Historically Underutilized Business zones (HUBz) | $              | (g/b)      | %          |
### h. Total planned subcontract awards to Small Disadvantaged Business concerns (SDB) (includes ANCs and Indian Tribes)

(Note: Title 15 U.S.C. §644 establishes a minimum goal of 5% for SDB. Please provide rationale below if establishing a lower goal.)

<table>
<thead>
<tr>
<th></th>
<th>$</th>
<th>(h/b)</th>
<th>%</th>
</tr>
</thead>
</table>

### i. Total planned subcontract awards to Women-Owned Small Business concerns (WOSB)

(Note: Title 15 U.S.C. §644 establishes a minimum goal of 5% for WOSB. Please provide rationale below if establishing a lower goal.)

|   | $47,794.25 | (i/b) | 5 % |

### j. Combined total planned subcontract awards to all small business concerns:

(Note: If a subcontractor qualifies in more than one sub-category of SB above, show that amount in each applicable sub-category, but include that amount only once in this line.)

|   | $47,794.25 | (d+e+f+g+h+i) | 5 % |

### e. Offeror/bidder rationale if establishing a goal lower than 3% for SDVOSB:

The specialization and unique qualifications required for this project limit the opportunities to engage these business types.

---

### g. Offeror/bidder rationale if establishing a goal lower than 5% for SDB:

The specialization and unique qualifications required for this project limit the opportunities to engage these business types.

---

### h. Offeror/bidder rationale if establishing a goal lower than 5% for WOSB:

The offerer meets this goal.

---

2. The following principal types of supplies and/or services are planned to be subcontracted under this contract. (Indicate if planned to subcontract to a non-small business concern, SB, VOSB, SDVOSB, HUBz, SDB, or WOSB.)
### Broad Agency Announcement No. DTFH6115R00003

<table>
<thead>
<tr>
<th>Type of Supply/Service to be subcontracted</th>
<th>Company</th>
<th>Address</th>
<th>Subcontractor type: e.g., Non-SB, SB, VOSB, SDVOSB, HUBz, SDB, WOSB (enter one or more as applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Design Support Services</td>
<td>Booz Allen Hamilton, Inc.</td>
<td>8263 Greensboro Dr. McLean, VA 22102</td>
<td>Non-SB</td>
</tr>
<tr>
<td>Professional Design Support Svcs</td>
<td>Siemens ITS</td>
<td>9225 Bee Cave Rd Austin, TX 78736</td>
<td>Non-SB</td>
</tr>
<tr>
<td>Professional Design Support Svcs</td>
<td>Center for Urban Trans. Research</td>
<td>4202 E. Fowler, Tampa, FL 33620</td>
<td>Non-SB</td>
</tr>
<tr>
<td>Professional Design Support Svcs</td>
<td></td>
<td>200 Chestnut Ridge Rd. Wood</td>
<td>Non-SB</td>
</tr>
<tr>
<td>Professional Design Support Svcs</td>
<td>BMW of North America, LLC</td>
<td>2180 W. SR 434, Longwood, FL 32779</td>
<td>WOSB</td>
</tr>
<tr>
<td>Media Relations and Outreach</td>
<td>Global-5 Communications, Inc.</td>
<td></td>
<td>WOSB</td>
</tr>
</tbody>
</table>

3. The following method was used to develop the subcontract percentage goals:
   
   Firm fixed price proposals were received from all subcontractors on this project.

4. The following method was used to identify potential subcontract sources for solicitation purposes. (What source lists were used, such as CCR, Veterans service organizations, the National Minority Purchasing Council Vendor Information Service, the Research and Information Division of the Minority Business Development Agency in the Department of Commerce, or small, HUBZone, small disadvantaged, and women-owned small business trade associations, and what organizations were contacted to identify potential SB, VOSB, SDVOSB, HUBz, SDB, and WOSB subcontractors.):
   
   Contact lists and previous teaming relationships were employed. No other sources were used to identify subcontract sources. Such sources will be employed during Phases 2 and 3 to identify contractors for installation services and other commodities required for deployment.

5. Indirect costs (were) (were not) included in establishing the subcontracting goals specified in the table above.

6. If indirect costs were included, the following method was used to determine the proportionate share of indirect costs to be incurred with SB, SDVOSB, HUBz, SDB, and WOSB subcontractors:
   
   Overhead and other indirect costs were determined by the WOSB using standard cost accounting methods. These costs were detailed in the WOSB’s cost proposal to THEA.
7. The following individual will administer the subcontracting program:

Name: Joe Waggoner  
Title: THEA Executive Director & Concept Development Lead for this project.  
Address: 1104 E. Twiggs St. #300, Tampa, Florida 33602  
Telephone & e-mail: (813) 272-6740  joe@tampa-xway.com

This individual's specific duties, as they relate to the subcontracting program, are as follows:
Concept Development Lead responsible for the overall subcontracting and contract performance for the Tampa Hillsborough Expressway Authority.

8. The following efforts will be taken to ensure that SB, VOSB, SDVOSB, HUBz, SDB, and WOSB subcontractors will have an equitable opportunity to compete for subcontracts:
Procurement activities will be undertaken for contracted services and commodities required during Phase 2 and Phase 3.
SB, VOSB, SDVOSB, HUBz, SDB and WOSB vendors and contractors will be identified for such services through the THEA procurement process.

It is agreed that FAR Clause 52.219-8, Utilization of Small Business Concerns, will be included in all subcontracts, which offer further subcontracting opportunities. It is further agreed that all subcontractors (except small business concerns) at all tiers below the prime contractor who receive subcontracts in excess of $650,000 ($1,500,000 for construction of any public facility with further subcontracting possibilities) will be required to adopt and comply with a subcontracting plan in accordance with FAR Clause 52.219-9.

9. The Contractor agrees to:

a. Cooperate in any studies or surveys as may be required.

b. Submit periodic reports as may be required so that the Government can determine the extent of compliance by the Contractor with the subcontracting plan.

c. Submit Subcontracting Report for Individual Contracts and Summary Subcontract Report, to the following Electronic Subcontract Reporting System (ESRS) web site: http://esrs.gov/

d. Ensure that its large business subcontractors with subcontracting plans agree to submit ESRS documents online as required.
10. The following types of records concerning procedures that have been adopted to comply with the requirements and goals in the plan should be maintained through completion of the contract:

   a. Source lists, guides, and other data that identify SB, VOSB, SDVOSB, HUBz, SDB, and WOSB concerns.

   b. Organizations contacted in an attempt to locate sources that are SB, VOSB, SDVOSB, HUBz, SDB, and WOSB concerns.

   c. Records on each subcontract solicitation over $150,000 indicating:
      i. whether Small businesses were solicited, and if not, why not;
      ii. whether VOSB were solicited, and if not, why not;
      iii. whether SDVOSB were solicited, and if not, why not;
      iv. whether HUBz's were solicited, and if not, why not;
      v. whether SDB's were solicited, and if not, why not;
      vi. whether WOSB's were solicited, and if not, why not; and if applicable, vii. the reason award was not made to a small business concern.

   d. Any outreach efforts to contact:
      i. trade associations,
      ii. business development organizations,
      iii. conferences, and trade fairs to locate SB, VOSB, SDVOSB, HUBz, SDB, and WOSB sources
      iv. veterans service organizations

   e. Records of internal guidance and encouragement provided to buyers through:
      i. Workshops, seminars, training programs, etc.
      ii. Monitoring performance to evaluate compliance with the program’s requirements.

   f. On a contract-by contract basis, data submitted by the Contractor to the Government to support awarded subcontracts, including the name, address and business size of each subcontractor.

Signed

Joe Waggoner

Printed Name

Tampa Hillsborough Expressway Authority

Company Name and Address

March 27, 2015

Date
PART IV
Organizational Information
Part IV: Other Financial/Organizational Information

TERMINATED CONTRACTS
THEA has not terminated for convenience of the Government any contracts within the past three (3) years.

SECTION K
The Tampa Hillsborough Expressway Authority (THEA) is registered and has completed registrations and certifications in the System for Award Management.

CONFLICTS OF INTEREST
The Tampa Hillsborough Expressway Authority (THEA) attests that there are no past, present, or planned organizational, contractual, or other interest(s), which may affect THEA’s ability to perform the proposed contract in an impartial and objective manner.

TERMS AND CONDITIONS
The Tampa Hillsborough Expressway Authority agrees to all terms and conditions of the model contract of this Broad Agency Announcement solicitation number DTFH6115R00003, which consists of Sections A through J, including all documents, exhibits, and all other attachments that are incorporated therein by reference and made a part thereof.
PART V
Past Performance
Part V — Past Performance

The Tampa Hillsborough Expressway Authority (THEA) has successfully planned, delivered, and maintained many advanced projects over the years. Several of these projects have involved the latest emerging technologies and have required collaboration between agencies, partners, and stakeholders. All of the partners proposed on the team have extensive experience with the work involved and will apply lessons learned for our approach to the THEA Connected Vehicle Pilot Program. The processes, tools and plans developed during these projects, combined with experience in applying ITS and tolling technology, will be leveraged to support the success of this project. The following details a sample of recent relevant projects successfully completed by the THEA Team.
1. LEE ROY SELMON EXPRESSWAY

July 28, 2014 Audi AV Demonstration

Tampa Hillsborough Expressway Authority (THEA) | Contract No. N/A
1104 East Twiggs Street, Suite 300
Tampa, Florida 33602
Joe Waggoner, Executive Director, 813-272-6740

Total Value: N/A (OST-R Affiliated Test Bed Project with VW of America)

Implementation Period: 2014

In July 2014, as part of the OST-R Affiliated Test Bed Program, the Tampa Hillsborough Expressway Authority (THEA) partnered with Audi of America to bring autonomous vehicle technology on the Selmon Expressway to test and demonstrate one aspect of Audi piloted driving.

This particular Audi piloted driving technology was focused on enhancing, not replacing, the driver. Audi’s goal in the test was to allow drivers the option of letting the car handle the task when driving is tedious, as in slow or stop and go commuting traffic. The technology Audi tested in Tampa was the “Traffic Jam Pilot” for use below 35 miles per hour. In “Traffic Jam Pilot”, the driver is not required to monitor driving task or environment at all times, but the driver must be able to regain control of the vehicle in less than 10 seconds. According to government research, human error is a factor in at least 90% of accidents. The Audi in “Traffic Jam Pilot” application the vehicle also monitors driver attentiveness. If the driver is unresponsive, warnings and a safe stop sequence begins. All information, or side tasks, must be routed through the car to focus driver attention on existing vehicle infrastructure to help minimize takeover time. The “Traffic Jam Pilot” could be available within 3 years, laws permitting.

Audi piloted driving used a range of overlapping inputs to ‘see’ its environment, including:
- Long range and mid-range radar
- Video 3D + top-view camera
- Lidar and sonar
- Map data
- If one sensor fails, others can compensate until human takeover occurs

The diagram shows the configuration of the July 25, 2014 test that Governor Rick Scott attended. Audi was on the Selmon Expressway for five days and operated in a variety of conditions. The Audi engineers were pleasantly surprised that Tampa provided not only normal temperatures, but also extremes in heat, rain and changing conditions.
The Tampa-Hillsborough Expressway Authority (THEA) in partnership with the Hillsborough Area Regional Transit Authority (HART) conducted the Bus Toll Lanes Proof-of-Concept Study funded by a grant from the Federal Highway Administration (FHWA) Value Pricing Pilot Program (VPPP). The local match for the study was provided by the Florida Department of Transportation (FDOT) using a “soft match” of toll credits. The Bus Toll Lanes (BTL) project introduced a transit-based solution to create a financially sustainable transit service with increased potential to move more people as the facility matures.

BTL is a method to maximize person throughput by employing proven transit and tolling practices combining the capital funding resources of transit with the long-term revenue strength of tolls. This combination produces a more effective and sustainable public transportation system that can be developed sooner than either mode could produce on its own. The Bus Toll Lane Concept Feasibility Study (BTL Study) was undertaken to determine the operational and financial viability of this new idea.

The financial potential of a BTL to cover 100% of transit O&M costs from fare box revenues is unmatched by any known public transportation system within the United States. According to the American Public Transportation Association (APTA), in 2010, the average US public transit system returned slightly more than 32% of operating expenses from the passenger fare.

The findings from the BTL study showed that all sampled networks covered not only the operating and debt service for the toll road, but the transit operating cost shortfall as well, while producing significant amounts of additional revenue for the transit agency to grow future service, as shown in the figure below. As a result of this study THEA was approved to use the remaining funds to investigate actual networks in Hillsborough County.
3. LEE ROY SELMON EXPRESSWAY | TOLLING OPERATIONAL BACK OFFICE

Tampa Hillsborough Expressway Authority (THEA) | Contract No. N/A
1104 East Twiggs Street - Suite 300
Tampa, Florida 33602
Joe Waggoner, Executive Director, 813-272-6740

Total Value: $2.1 million
Implementation Period: 2012-2013 (Currently in production)

THEA's Toll Operational Back Office consists of an Image Concentrator (IC) and Enhanced Image Processor (EIP) systems. Together, they provide greater efficiency and operational control for the reconciliation, storage, transmission, reporting, and operations of both transponder and video-based toll transactions recorded at the roadside in-lane systems. Toll transaction data combines Radio-frequency Identification (RFID) signals for Automatic Vehicle Identification (AVI), and vehicle license-plate images through the transmission of the data to the Back Office for processing in a guaranteed delivery method. These systems are the result of operational experience in running an All Electronic Tolling (AET) system and understanding the limitations and opportunities to improve efficiency and toll-revenue collection rates.

THEA's IC provides for the elements of data storage, guaranteed data transmission, optical character recognition (OCR) processing for image quality control, performance reporting, and access/retrieval of real-time toll-transactional data necessary for billing purposes.

A key element within the IC project that especially fits with the Connected Vehicle Pilot Deployment is the application of business rules that govern the decisions. These rules control when and how each of the IC tools is applied based on rigorous testing and reporting. The entire cost-effectiveness of the IC relies on regular performance audits of the system to ensure the automation and error rates are meeting expectations.

THEA's EIP is a complete, self-contained vehicle license-plate image review system that combines automated license plate reader (ALPR) software, high-volume transaction processing, and manual image review capabilities. The EIP's goal is to be at, or greater than, 99.95% accuracy at 70% automation, and allow less than 0.1% revenue leakage rate.

THEA's Back Office contains an augmented video transmission system with cutting edge technology hardware and software enhancements for the THEA AET revenue collection activities. US toll agencies that have converted to AET with video toll collection have upwards of 25-30% of their traffic volume processed as image transactions. Image review errors related to these transactions may result in toll bills or violations being sent to the wrong vehicle owner. This project allows THEA to operate in the top percentile for toll recovery.

In Fiscal Year 2014, the THEA IC/EIP system was able to achieve an error rate of 0.04% on the full range of license plate images - processing 50,000+ image-based toll transaction daily. This rate is better than the typical accuracy specification within the US toll industry. Also similar to CV applications - THEA's Back Office systems are designed with a highly redundant software and hardware architecture to ensure high-levels of system availability.
4. LEE ROY SELMON EXPRESSWAY | ALL ELECTRONIC TOLLING CONVERSION

Tampa Hillsborough Expressway Authority (THEA) | Contract No. N/A
1104 East Twiggs Street - Suite 300
Tampa, Florida 33602
Joe Waggoner, Executive Director 813-272-6740

Total Value: $13 million

Implementation Period: 2009-2010

In 2010, the Tampa Hillsborough Expressway Authority (THEA) converted the Lee Roy Selmon Expressway (the Selmon) in Tampa, Florida from a mixed cash and electronic tolling operation to an All-Electronic Toll (AET) toll collection system. Factoring into the decision to convert was that the majority of Selmon Expressway drivers are frequent users (commuters), and 77% of drivers on the Selmon Expressway were already tolled electronically, using “SunPass.” Converting to AET provided benefits to our users and the agency, including:

- Cost Savings – 40% of THEA toll operations budget was spent to collect less than 25% of our revenue from cash customers.
- Increased Efficiency – users saved gas without stop-and-go traffic around toll booths.
- Customer Convenience – no cash or exact change is needed.
- Time Savings/Delay Reduction – no waiting in line to pay.
- Safety – 58% of all accidents on toll roads happen at toll booths.
- Environmentally Friendly – emissions produced by idling vehicles dramatically decreased.

The project consisted of integrating All Electronic Tolling (AET) lane systems, image servers, an associated Image Concentrator, and On-Line Management System host equipment capable of supporting THEA’s AET implementation into an existing 40 year old toll road. The AET system is capable of collecting tolls through the use of “SunPass” transponders and a Video Tolling image capture system. The system is able to correlate a transponder identifications and images to the correct vehicle, detect and separate vehicles, and properly classifying vehicles to an axle based vehicle classifications for proper billing. The AET system supports and is interfaced to backroom Violation Processing System (VPS) and account processor for account maintenance and collections. The process of converting to an AET system was similar to the CV Pilot Deployment Phase I tasks as THEA was integrating next generation technology with an existing mature infrastructure. The Preliminary Design approach included: system level overview and introduction; hardware & software interface design documents; lane hardware and integration processes; back office interfaces & image servers; business rules requirements outline hardware components & software functionality; reports - variety and types of reports and provisions for ad hoc reports for monitoring.

Many of the projects involved with operating a toll road and keeping up with changing technology mirror that the CV deployments will go through. Conversion to an AET system was a significant risk for an agency solely dependent on its toll revenue, especially when 25% of that revenue had been based on a cash system. It was critical that the job was done well. This was accomplished with considerable planning and attention to execution. THEA has successfully managed this type of project.
5. LEE ROY SELMON EXPRESSWAY | REVERSIBLE EXPRESS LANES

Tampa Hillsborough Expressway Authority (THEA) | Contract No. N/A
1104 East Twiggs Street - Suite 300
Tampa, Florida 33602
Joe Waggoner, Executive Director 813-272-6740

Total Value: $420 million

Implementation Period: 2003-2006

The Tampa Hillsborough County Expressway Authority owns and operates one of the most unique toll roads in the world, the Selmon Expressway Reversible Express Lanes (REL). The project opened to customers in July, 2006 and was the first anywhere to address urban congestion by combining the innovations of land-based concrete segmental bridges, reversible express lanes, cashless multi-lane open road tolling and full electronic controls - all constructed within the existing right-of-way of Tampa's Lee Roy Selmon Expressway.

The REL was the Authority’s innovative solution to relieve severe peak-hour congestion and improve access by building 10 miles of reversible express toll lanes between Interstate 75 and downtown Tampa. Most of the project was constructed as a concrete segmental bridge built using only six feet of space within the existing Expressway median, dramatically limiting right-of-way needs and reducing project costs and impacts to the community and the environment.

The ability of the Expressway to provide direct service to the heart of the City is vital to new developments in the Channelside District and the Central Business District while supporting the continued expansion of the Port of Tampa, Florida’s largest deep water port.

The REL project increased the traffic-carrying capacity of the existing Selmon Expressway by 150%, completely eliminating congestion during peak commuting hours. It was the first transportation project in Florida to employ totally cashless (all-electronic) toll collection. In cooperation with Hillsborough Area Regional Transit (HART), two express bus routes were specifically developed to take advantage of the reliable schedule that would be offered by the REL project, these routes will now be part of THEA's Connected Vehicle Pilot Deployment submittal.

At both ends of the REL project, the Authority constructed beautiful “gateway” arterial entrances, in lieu of ramps, to provide direct access to the reversible lanes and to enhance mobility within the suburban area known as Brandon, and for Tampa’s central business district. In addition to their value as transportation projects, these gateways in both Brandon and Tampa also feature major investments in urban architecture, landscaping and public facilities that have been a catalyst for almost a billion dollars in new private investment in the two communities. The west gateway, Meridian Avenue, is the focal point of THEA's Connected Vehicle Pilot Deployment submittal.