

Exhibits

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Exhibit A

Project Schedules

Separate Project Schedules provided for:

Category A – Readers

Category B – TDM Transponders

Category C – Local Transponders

Exhibit A – Project Schedule Category A - Readers		
Major Milestone Description	Projected Start	Projected End
Notice to Proceed	November 11 29, 2016	
Project Kick-Off Meeting	November 11 29, 2016	
Documentation		
Maintenance and Repair Manual	December 2017 2016	January 2017
Interface Control Document	December 2017 2016	January 2017
Operating Documentation	December 2017 2016	January 2017
Project Planning Documentation	January 2017	
Preventive Maintenance Plan	February 2017	March 2017
RTCS Contractor Training	January 2017	
Deadline for Equipment Certifications	February 9 27, 2017	
Factory Acceptance Test	March 2017	
Triangle Expressway		
RF Surveys	February 2017	
FCC Licensing	March 2017	
RTCS FAT Support	April 2017	
Installation Support (First Zone)	May 2017	
OIT Support (First Zone)	May 2017	
Installation and Commissioning Test Support (First Zone)	May 2017	
Installation Support (remaining Zones)	May 2017	September 2017
OIT Support (remaining Zones)	May 2017	
Installation and Commissioning Test Support	August 2017	September 2017
Go-Live	October 1, 2017	
As-Built Reviews	December 2017	
US-74		
RF Surveys	February 2017	
FCC Licensing	March 2017	
RTCS FAT Support	June 2017	July 2017
Installation Support	August 2017	September 2017
OIT Support	October 2017	November 2017
Installation and Commissioning Test Support	January 2018	February 2018
Go-Live	March 1, 2018	
As-Built Reviews	May 2018	
Monroe Expressway		
RF Surveys	March 2017	March 2017

Exhibit A – Project Schedule Category A - Readers		
Major Milestone Description	Projected Start	Projected End
FCC Licensing	April 2017	
RTCS FAT Support	March 2018	April 2018
Installation Support (Zone 7)	May 2018	June 2018
OIT Support (Zone 7)	June 2018	
Installation and Commissioning Test Support (Zone 7)	June 2018	
Installation Support (remaining Zones)	June 2018	November 2018
OIT Support (remaining Zones)	June 2018	
Installation and Commissioning Test Support	September 2018	October 2018
Go-Live	November 26, 2018	
As-Built Reviews	January 2019	

Exhibit A – Project Schedule Category B – TDM Transponders	
Major Milestone Description	Projected Date
Notice to Proceed	November 11 ²⁹ , 2016
Project Kick-Off Meeting	November 11 ²⁹ , 2016
Deadline for Equipment Certifications	February 9 ²⁷ , 2017
Documentation	
End-User Instructions	March 2017
Transponder Disposal Documentation	March 2017
Tag Programmer and Handheld Reader Documentation	March 2017
Delivery of Tag Programmers	April 2017
Delivery of Handheld Readers	April 2017
CSC Contractor Training	May 2017
Delivery of First Transponder Order	August 2017

Exhibit A – Project Schedule Category C – Local Transponders	
Major Milestone Description	Projected Date
Notice to Proceed	November 11 29, 2016
Project Kick-Off Meeting	November 11 29, 2016
Deadline for Equipment Certifications	February 9 27, 2017
Documentation	
End-User Instructions	March 2017
Transponder Disposal Documentation	March 2017
Tag Programmer and Handheld Reader Documentation	March 2017
Delivery of Tag Programmers	April 2017
Delivery of Handheld Readers	April 2017
CSC Contractor Training	May 2017
Delivery of First Transponder Order	August 2017

Exhibit B

Payment Schedules

Separate Payment Schedules provided for:

Category A – Readers

Category B – TDM Transponders

Category C – Local Transponders

Exhibit B - Payment Schedule Category A - Readers		
Milestone	% Paid	Cumulative % Paid
Notice to Proceed	5.0%	5.0%
Approved Documentation	2.0%	7.0%
Equipment Certification	10.0%	17.0%
Factory Acceptance Testing	13.0%	30.0%
Triangle Expressway		
RTCS Factory Acceptance Testing	10.0%	40.0%
Installation and Commissioning Testing (2% for each of 9 locations)	18.0%	58.0%
As-Built Reviews	2.0%	60.0%
US-74 Express Lanes		
RTCS Factory Acceptance Testing	10.0%	70.0%
Installation and Commissioning Testing (2% for each of 1 location)	2.0%	72.0%
As-Built Reviews	2.0%	74.0%
Monroe Expressway		
RTCS Factory Acceptance Testing	10.0%	84.0%
Installation and Commissioning Testing (2% for each of 7 locations)	14.0%	98.0%
As-Built Reviews	2.0%	100.0%

Exhibit B - Payment Schedule Category B - TDM Transponders		
Milestone	% Paid	Cumulative % Paid
Notice to Proceed	5.0%	5.0%
Equipment Certification	45.0%	50.0%
Approved Documentation	5.0%	55.0%
Delivery of Transponder Programmers	10.0%	65.0%
Delivery of Handheld Readers	10.0%	75.0%
CSC Contractor Training Approved	25.0%	100.0%

Exhibit B - Payment Schedule Category C - Local Transponders		
Milestone	% Paid	Cumulative % Paid
Notice to Proceed	5.0%	5.0%
Equipment Certification	45.0%	50.0%
Approved Documentation	5.0%	55.0%
Delivery of Transponder Programmers	10.0%	65.0%
Delivery of Handheld Readers	10.0%	75.0%
CSC Contractor Training Approved	25.0%	100.0%

Exhibit C

Price Proposal Instructions

Single Price Proposal Instructions covers all Categories

I GENERAL INSTRUCTIONS

These instructions pertain to the Price Proposals for all three Categories: Category A – Readers, Category B – TDM Transponders, and Category C – Local Transponders.

Proposers shall submit their Price Proposals on the Price Proposal forms included in RFP. The Price Proposal forms are provided in Excel format worksheets for ease of completion and checking. The Excel versions of the Price Proposals are clipped to the PDF of the Exhibits.

Some Price Proposal sheets include the costs for both the Contract base term and optional extension periods. It is required that the Proposer complete the base term and optional extension Price Proposal sheets. Whether or not NCTA elects to exercise its option to extend the Contract for one or both of these periods is solely at NCTA's discretion.

Proposers shall complete the Price Proposal(s) in accordance with the following instructions:

1. Proposals shall be sealed and submitted separately from the Technical Proposal as instructed in **Section IV, Proposal Contents**, of the RFP. Price Proposals shall be submitted in the quantities and manner identified in **Section IV, Proposal Contents**, of the RFP.
2. The Price Proposal Sheets shall constitute the full and complete Price Proposal for compensation for performance of the Contractor's obligations and Work under the applicable Category of Work being proposed.
3. Proposers must complete the Price Proposal sheets in their entirety as described in these Price Proposal Instructions.
4. The Price Proposal sheets are password protected and shall not be unlocked by Proposers. Proposers may only enter data into the unlocked cells.
5. Blue colored tabs represent Summary Sheets that do not require Proposer input. Green tabs represent worksheets that require Proposer input.
6. Proposers should fill in white (no fill) cells on the Price Proposal sheets, and shall not make any other entry on or alteration to the Price Proposal sheets other than in accordance with these Price Proposal Instructions.
7. On most sheets there are formulas that are automatically calculated based on data entered from elsewhere in the sheet or workbook. Blue background color is used in each sheet to indicate cells that do not require input and cannot be altered.
8. While NCTA has made every effort to ensure the Price Proposal Sheets contain accurate formulas and calculation, Proposers are required to independently verify that formulas and calculations are being performed correctly.
9. NCTA may waive or correct any error appearing in a Proposer's completed Price Proposal if the correct amount can be clearly ascertained from the information provided; however, NCTA is under no obligation to do so. In the event of an inconsistency between the amount stated in numbers and the amount stated in written words, the amount stated in written words will control. In the event of a mathematical miscalculation, the correct sum will control.
10. An officer of the Proposer, or an individual otherwise authorized in writing by an officer of the Proposer, must sign and date each Pricing Summary Sheet (as applicable) in the identified area.
11. All elements of the Price Proposal must be completed. If zero quantities are included for a line item in the Proposal, a zero must be entered into the corresponding cell. In addition, all items identified by NCTA in the Price Proposal sheets will be assumed to be included in the Price Proposal.

12. NCTA reserves the right to reject Price Proposals that are not completed in accordance with the instructions set forth herein.
13. The Price Proposal shall be inclusive of all items including but not limited to labor, Equipment, Software, overhead, profit, fees, applicable taxes, warranty, insurance and shipping needed to meet the requirements of the RFP. No price escalation will be allowed above the prices provided on the Price Proposal Sheets to complete the Work.

I.1 General Concepts Used in the Sheets

1. **Quantity:** Quantities for some items are provided by NCTA while other items are left for the Proposer to enter in the applicable cell. Quantities provided by NCTA must not be changed by the Proposer. Transponder Quantities provided by NCTA are estimates for evaluation purposes only and do not constitute a guarantee by NCTA to purchase any specific quantities. Prices provided by the Proposer are binding, regardless of actual quantities purchased by NCTA.
2. **Guaranteed Delivery Lead Time:** Enter the number of (calendar) Days' advance notice required to be provided by NCTA when ordering Equipment in order to guarantee delivery on desired dates. See **Section III, Scope of Work and Requirements** for additional information on the Guaranteed Delivery Lead Time.
3. **Descriptions:** Descriptions for items are provided by NCTA in the left-hand column. In some cases, such as when entering specific Equipment items, space is left for the Proposer to fill in additional items. If the description is provided by NCTA, then it must not be changed.
4. **Price:** Enter unit prices in the Price column that correspond with the specific Service or Deliverable, unit, and quantity. Annualized or extended prices are derived from the unit price entry.
5. **Staff Position:** On the sheets related to staffing, titles have been provided for some staff positions and other items are left to the Proposer to fill in for any Proposer specific positions. If the title is provided, then it is fixed and must not be changed.
6. **Model Number:** On the Equipment detail sheets enter model numbers in the model number columns that corresponds with the item and quantities.

2 INSTRUCTIONS FOR COMPLETING THE PRICE PROPOSAL SHEETS FOR CATEGORY A – PROVIDE TRI-PROTOCOL READERS, ASSOCIATED EQUIPMENT AND SERVICES

1. The Price Proposal for this Category contains eight (8) sheets including one (1) Pricing Summary Sheet (Sheet A-1), five (5) Backup Sheets which contain the information used to automatically populate the Pricing Summary Sheet, one (1) sheet for On-Call Service Rates, and one (1) sheet for additional Equipment purchases.
2. Table C-1 provides the Price sheet number (e.g. A-1, A-1-1, etc.), sheet title, and a brief description of the purpose of each sheet:

Table C-1: Category A - Readers Price Proposal Sheets

Sheet Number	Sheet Title	Purpose
A-1	Category A – Readers Summary	Summarizes data from the Backup Sheets.
A-1-1	Project Level Items	This sheet collects the prices for the Project-level Services: Project Management, Equipment Certification, Testing, Maintenance Documentation, and Operating Documentation.
A-1-2	Roadway Level Equipment, Installation Support and Other Services Monroe Expressway	This sheet collects the prices of the Readers and their associated Equipment for installation and associated Services in the Monroe Expressway Toll Zones (M03 thru M16). This sheet also includes the prices of the initial, first year Spare Parts inventory for the Monroe Expressway Toll Zones.
A-1-3	Roadway Level Equipment, Installation Support and Other Services US-74 Express Lanes	This sheet collects the prices of the Readers and their associated Equipment for installation and associated Services in the US-74 Express Lanes Toll Zones (U01 and U02). This sheet also includes the quantity of the initial, first year Spare Parts inventory for the US-74 Express Lanes Toll Zones.
A-1-4	Roadway Level Equipment, Installation Support and Other Services Triangle Expressway	This sheet collects the prices of the Readers and their associated Equipment for installation and associated Services in the Triangle Expressway Toll Zones (1-1 thru 8-2 and V-1 and V-2). This sheet also includes the quantity of the initial, first year Spare Parts inventory for the Triangle Expressway Toll Zones.
A-1-5	Maintenance Phase - Monroe Expressway, US-74 Express Lanes and Triangle Expressway	This sheet collects the prices for the Maintenance activities for Monroe Expressway, US-74 Express Lanes and Triangle Expressway. Prices are collected for the base Contract term and the two optional Contract extensions.

Sheet Number	Sheet Title	Purpose
A-2	On-Call Service Rates	This sheet collects the hourly rates for on-call Services for each of the facilities: Monroe Expressway, US-74 Express Lanes, and Triangle Expressway.
A-3	Reader and Associated Equipment Purchases Planned Toll Facilities	This sheet collects the prices for additional Readers and their associated components for deployment on other planned Toll Facilities or systems, purchase of additional Spares or purchase for any other needs as required by NCTA. Prices are collected for the base Contract term and the two optional Contract extensions.

3 INDIVIDUAL FORM INSTRUCTIONS FOR CATEGORY A – READERS

3.1 Sheet A-I

The Proposer's total price for the Category A – Readers Summary shall be the aggregate of all prices included in Sheets A-I-1 thru A-I-5, which covers all prices associated with the Category A – Readers portion of the Work for the Monroe Expressway, the US-74 Express Lanes, and the Triangle Expressway. This is the total amount of the Price Proposal. No price escalation will be allowed above the prices provided on the Price Proposal Sheets to complete the Work.

Upon completion of the backup sheets, the summaries for the project column (Project Level Items), and each facility column (Monroe Expressway Price, US-74 Express Lanes Price, and Triangle Expressway Price) will be populated. Sheet A-I also includes the summaries for all of the Project and Toll Facilities by line item (Implementation and Maintenance), as well as the Category A – Readers Summary Total.

An officer of the Proposer or an individual otherwise authorized in writing by an officer of the Proposer must sign and date this sheet in the identified area.

3.2 Sheet A-I-1

This form collects prices for project management, Equipment Certification, testing, and Maintenance and Operating Documentation, as described in the RFP. In the column provided (Price), enter the lump sum price for each item listed.

3.3 Sheet A-I-2

This form collects model number, unit price (which shall include all prices, fees, warranty, applicable taxes and shipping to anywhere in the US needed to meet the requirements of the RFP) and quantity for each line item listed, by Toll Zone for the Monroe Expressway. In order to accommodate Proposers proposing a solution that requires the use of more than one type of any given Equipment item, the Equipment column contains duplicate Equipment items differentiated by "Type". In addition to each Toll Zone, an additional quantity column has been included for the initial spares inventory that shall be

delivered for this portion of the project. Additional spaces in the Equipment column have been provided for the Proposer to enter additional required components for their Reader solution not already detailed in the form. For each line item listed:

1. Enter the model number in the column provided (Model Number).
2. Enter the unit price in the column provided (Unit Price).
3. Enter the quantity in each of the columns provided (Quantity). There is a column associated with each Toll Zone (M03 thru M16) and the spares (Initial Spares Inventory).

3.4 Sheet A-I-3

This form collects model number, unit price (which shall include all prices, fees, warranty, applicable taxes and shipping to anywhere in the US needed to meet the requirements of the RFP), and quantity for each line item listed, by Toll Zone for US-74 Express Lanes. In order to accommodate Proposers proposing a solution that requires the use of more than one type of any given Equipment item, the Equipment column contains duplicate Equipment items differentiated by "Type". In addition to each Toll Zone, an additional quantity column has been included for the initial spares inventory that shall be delivered for this portion of the project. Additional spaces in the Equipment column have been provided for the Proposer to enter additional required components for their Reader solution not already detailed in the form. For each line item listed:

1. Enter the model number in the column provided (Model Number).
2. Enter the unit price in the column provided (Unit Price).
3. Enter the quantity in each of the columns provided (Quantity). There is a column associated with each Toll Zone (U01 and U02) and the spares (Initial Spares Inventory).

3.5 Sheet A-I-4

This form collects model number, unit price (which shall include all prices, fees, warranty, applicable taxes and shipping to anywhere in the US needed to meet the requirements of the RFP), and quantity for each line item listed, by Toll Zone for the Triangle Expressway. In order to accommodate Proposers proposing a solution that requires the use of more than one type of any given Equipment item, the Equipment column contains duplicate Equipment items differentiated by "Type". In addition to each Toll Zone, an additional quantity column has been included for the initial spares inventory that shall be delivered for this portion of the project. Additional spaces in the Equipment column have been provided for the Proposer to enter additional required components for their Reader solution not already detailed in the form. For each line item listed:

1. Enter the model number in the column provided (Model Number).
2. Enter the unit price in the column provided (Unit Price).
3. Enter the quantity in each of the columns provided (Quantity). There is a column associated with each Toll Zone (I-1 thru 8-2 and V-1 and V-2) and the spares (Initial Spares Inventory).

3.6 Sheet A-I-5

This form collects monthly Maintenance and support prices per Reader for the base Contract term and the two optional Contract extensions for each of the Monroe Expressway, US-74 Express Lanes, and Triangle Expressway. The number of Readers for each facility will be automatically populated based on

information entered on Backup Sheets A-1-2 - A-1-4. For each facility and for each year listed, enter the total monthly maintenance price (including warranty) per Reader (Total Monthly Price Per Reader).

3.7 Sheet A-2

This form collects the hourly rates, organized by staff position, for on-call Services for the Implementation Phase and the Maintenance Phase of the base Contract term and the two optional Contract extensions. Staff positions can be customized to fit the Proposer's On-Call Services solution by using the blank rows provided.

1. For each Staff Position listed, provide the fully burdened hourly straight-time rate for each year of the Contract.
2. In the box provided at the bottom of the sheet, provide the hourly rate differentials for:
 - a. Nighttime work;
 - b. Weekend work; and
 - c. Legal holidays.

3.8 Sheet A-3

This form collects the Guaranteed Delivery Lead Time, quantity and prices for additional Readers and their associated components for deployment on planned Toll Facilities or other purchases by NCTA. In order to accommodate Proposers proposing a solution that requires the use of more than one type of any given Equipment item, the Equipment column contains duplicate Equipment items differentiated by "Type". The unit prices provided are for the base Contract term as well as the two optional Contract extensions. Unit prices shall include all prices, fees, warranty, applicable taxes and shipping (to anywhere in the US) needed to meet the requirements of the RFP. Additional spaces have been provided for the Proposer to enter additional required components for their Reader solution not already detailed in the form. Enter the name of the additional component in the space provided under Description of Item. For each line item listed and written:

1. Enter the number of (calendar) Days' advance notice required to guarantee delivery on desired dates (Guaranteed Delivery Lead Time);
2. Enter the unit price for the base Contract term in the column provided (Base term);
3. Enter the unit price for the first optional Contract extension in the column provided (Extension 1); and
4. Enter the unit price for the second optional Contract extension in the column provided (Extension 2).

4 INSTRUCTIONS FOR COMPLETING THE PRICE PROPOSAL SHEETS FOR CATEGORY B – PROVIDE TDM TRANSPONDERS AND ACCESSORIES

1. The Price Proposal for this Category contains six (6) sheets, including one (1) Pricing Summary Sheet (Sheet B-1), four (4) Backup Sheets which contain the information used to automatically populate the Pricing Summary Sheet and one (1) sheet for Additional Accessories.
2. Backup Sheets are located following Summary Sheets.
3. Table C-2 provides the Price Sheet Number (e.g. B-1, B-1-1, etc.), sheet title, and a brief description of the purpose of each sheet:

Table C-2: Category B - TDM Transponders Price Proposal Sheets

Sheet Number	Sheet Title	Purpose
B-1	Category B – TDM Transponders Summary	Summarizes data from the Backup Sheets.
B-1-1	Implementation Phase Items	This sheet collects the prices for TDM Transponder Services, such as Approval, Equipment Certification, training and Documentation on the Accessories, as well as development of Transponder Documentation.
B-1-2	Implementation Phase Accessories	This sheet collects the price for the TDM Transponder Accessories.
B-1-3	TDM Transponders	This sheet collects the prices of the interior Hard Case Transponders, interior HOV self-declaration Transponders, and exterior Hard Case Transponders.
B-1-4	Maintenance Phase	This sheet collects the price for the Maintenance Phase.
B-2	Additional Accessories	This sheet collects the price for additional accessories to be purchased as required by NCTA. Prices are collected for the base Contract term and for the two optional Contract extensions

5 INDIVIDUAL SHEET INSTRUCTIONS FOR CATEGORY B – TDM TRANSPONDERS

5.1 Sheet B-1

The Proposer's total price for Category B – TDM Transponders Summary shall be the aggregate of all prices included in Sheets B-1-1 thru B-1-4, which covers all prices associated with the TDM Transponders portion of the Work. This is the total amount of the Proposal. No price escalation will be allowed above the prices provided on the Price Proposal Sheets to complete the Work. Upon completion of the backup sheets, summaries of quantities and prices will be populated on Sheet B-1. The

prices for B-I will include all Accessories and Services for the TDM Transponder Implementation Phase, TDM Transponders, and TDM Transponder Maintenance for the Contract.

An officer of the Proposer or an individual otherwise authorized in writing by an officer of the Proposer must sign and date this sheet in the identified area.

5.2 Sheet B-I-1

This sheet collects prices for Equipment Certification, training, and Documentation for Category B – TDM Transponders, as described in **Section III, Scope of Work and Requirements**. In the column provided (Price), enter the lump sum price for each item listed.

5.3 Sheet B-I-2

This sheet collects the Guaranteed Delivery Lead time and unit price for the initial quantity of Transponder Accessories required. The unit price includes warranty and shipping to North Carolina. For each line item listed:

1. Enter the number of (calendar) Days' advance notice required to guarantee delivery on desired dates (Guaranteed Delivery Lead Time); and
2. Enter unit price in the column provided (Unit Price).

5.4 Sheet B-I-3

This sheet collects the unit price for three TDM Transponder types: Interior, HOV Self Declaration, and Exterior, as described in **Section III, Scope of Work and Requirements**. The unit price includes the price of the Transponders, the associated mounting components where applicable, warranty and shipping to North Carolina. The sheet collects unit prices for the base Contract term and the optional Contract extensions.

For each Transponder type:

1. Enter the number of (calendar) Days' advance notice required to guarantee delivery on desired dates (Guaranteed Delivery Lead Time); and
2. Enter the unit price per Transponder in the column provided (Unit Price).

5.5 Sheet B-I-4

This sheet collects the price for Maintenance during the base Contract term and the optional Contract extensions. For each year listed:

1. Enter the total monthly Maintenance price per Handheld Reader (Total Monthly Price Per Handheld Reader);
2. Enter the total monthly Maintenance price per Transponder Programmer (Total Monthly Price Per Transponder Programmer); and

5.6 Sheet B-2

This sheet collects the Guaranteed Delivery Lead Time and prices for additional Transponder Accessories to be purchased as required by NCTA. The prices provided are for the base Contract term

and the two optional Contract extensions. The unit price includes warranty and shipping to North Carolina. For each line item listed:

1. Enter the number of (calendar) Days' advance notice required to guarantee delivery on desired dates (Guaranteed Delivery Lead Time);
2. Enter the unit price for the base Contract term in the column provided (Base Term);
3. Enter the unit price for optional Contract extension 1 in the column provided (Extension 1); and
4. Enter the unit price for optional Contract extension 2 in the column provided (Extension 2).

6 INSTRUCTIONS FOR COMPLETING THE PRICE PROPOSAL SHEETS FOR CATEGORY C – LOCAL TRANSPONDERS AND ACCESSORIES

1. The Price Proposal for this Category contains six (6) sheets, including one (1) Pricing Summary Sheet (Sheet C-1), four (4) Backup Sheets which contain the information used to automatically populate the Pricing Summary Sheet, and one (1) sheet for Additional Accessories.
2. Backup Sheets are located following Summary Sheets.
3. Each sheet is located on a unique sheet in an Excel workbook. Table C-3 provides the Price Sheet Number (e.g. C-1, C-1-1, etc.), sheet title, and a brief description of the purpose of each sheet:

Table C-3: Category C - Local Transponders Price Proposal Sheets Titles

Sheet Number	Sheet Title	Purpose
C-1	Category C – Local Transponders Summary	Summarizes data from the Backup Sheets.
C-1-1	Implementation Phase Items	This sheet collects the prices for Local Transponder Services, such as Approval, Equipment Certification, training and Documentation on the Accessories, as well as development of Transponder Documentation.
C-1-2	Implementation Phase Accessories	This sheet collects the price for the Local Transponder accessories.
C-1-3	Local Transponders	This sheet collects the prices of the Interior Sticker Transponders and optional exterior Sticker and Hard Case Transponders.
C-1-4	Maintenance Phase	This sheet collects the price for the Maintenance Phase.
C-2	Additional Accessories	This sheet collects the price for additional accessories to be purchased as required by NCTA. Prices are collected for the base Contract term and the two Contract extensions

7 INDIVIDUAL SHEET INSTRUCTIONS FOR CATEGORY C – LOCAL TRANSPONDERS

7.1 Sheet C-1

The Proposer's total price for Category C Summary – Local Transponders shall be the aggregate of all prices included in Sheets C-1-1 thru C-1-4, which covers all prices associated with the Local Transponders portion of the Work. This is the total amount of the Proposal. No price escalation will be allowed above the prices provided on the Price Proposal Sheets to complete the Work. Upon completion of the backup sheets, summaries of quantities and prices will be populated on Sheet C-1.

The prices for C-I will include all Accessories and Service for the Local Transponder Implementation Phase, Local Transponders, and Local Transponder Maintenance for the Contract.

An officer of the Proposer or an individual otherwise authorized in writing by an officer of the Proposer must sign and date this sheet in the identified area.

7.2 Sheet C-I-1

This sheet collects prices for Equipment Certification, training, and Documentation for Category C – Local Transponders, as described in the RFP. In the column provided (Price), enter the lump sum price for each item listed.

7.3 Sheet C-I-2

This sheet collects the Guaranteed Delivery Lead Time and unit price for the initial quantity of Transponder Accessories required. The unit price includes warranty and shipping to North Carolina. For each line item listed:

1. Enter the number of (calendar) Days' advance notice required to guarantee delivery on desired dates (Guaranteed Delivery Lead Time); and
2. Enter unit price in the column provided (Unit Price).

7.4 Sheet C-I-3

This sheet collects the unit price for three Local Transponder types: Interior Sticker, Optional External Sticker, and Optional Exterior Hard Case, as described in the RFP. The unit price includes the price of the Transponders, the associated mounting components where applicable, warranty and shipping to North Carolina. The sheet collects unit prices for the base Contract term and the optional Contract extensions.

The External Sticker and External Hard Case Transponders are not required to be proposed. If Proposer is proposing to provide one or both of these External Transponder types, for each External Transponder type proposed:

1. Enter the number of (calendar) Days' advance notice required to guarantee delivery on desired dates (Guaranteed Delivery Lead Time); and
2. Enter unit price in the column provided (Unit Price).

For each type of External Transponder which is **not** being proposed:

1. Enter "0" in each column.

7.5 Sheet C-I-4

This sheet collects the price for Maintenance during the base Contract term and the optional Contract extensions. For each year listed:

1. Enter the total monthly Maintenance price per Handheld Reader (Total Monthly Price Per Handheld Reader);
2. Enter the total monthly Maintenance price per Transponder Programmer (Total Monthly Price Per Transponder Programmer); and

7.6 Sheet C-2

This sheet collects the delivery lead time and prices for additional Transponder Accessories to be purchased as required by NCTA. The prices provided are for the base Contract term and the Contract extensions. The unit price includes warranty and shipping to North Carolina. For each line item listed:

1. Enter the number of (calendar) Days' advance notice required to guarantee delivery on desired dates (Guaranteed Delivery Lead Time);
2. Enter the unit price for the base Contract term in the column provided (Base Term);
3. Enter the unit price for optional Contract extension 1 in the column provided (Extension 1); and
4. Enter the unit price for optional Contract extension 2 in the column provided (Extension 2).

Exhibit D Forms

Form D-1 Proposal Cover Sheets
Form D-2 RS-2 Form
Form D-3 Recent Client List
Form D-4 Reference Forms Part 1
Form D-5 Reference Forms Part 2
Form D-6 Requirements Conformance Matrix
Form D-7 Price Proposals
Form D-8 Proposer Questions Form
Form D-9 Non-Collusion Forms
Form D-10 Surety Commitment Letters
Form D-11 Acknowledgement of Receipt of Addenda
Form D-12 Requirement Non-Conformance Detail

Form D-I

Proposal Cover Sheets

(Word versions of the Proposal Cover Sheets are “paper clipped” to this file for ease of completion.)

Separate Proposal Cover Sheet provided for:

Category A – Readers

Category B – TDM Transponders

Category C – Local Transponders

**NORTH CAROLINA TURNPIKE AUTHORITY
AVI READERS AND TRANSPONDERS
REQUEST FOR PROPOSALS**

**CATEGORY A – PROVIDE TRI-PROTOCOL READERS,
ASSOCIATED EQUIPMENT AND SERVICES**

EXECUTION: In compliance with this Request for Proposal, and subject to all the conditions herein, the undersigned offers and agrees to furnish any or all Services or goods upon which prices are offered, at the price(s) offered herein, within the time specified herein. By executing this offer, I certify that this offer is submitted competitively and without collusion.

Failure to execute/sign offer prior to submittal shall render Proposal invalid. Late offers are not acceptable.

BIDDER:		
STREET ADDRESS:	P.O. BOX:	ZIP:
CITY & STATE & ZIP:	TELEPHONE NUMBER:	TOLL FREE TEL. NO:
PRINT NAME & TITLE OF PERSON SIGNING:		FAX NUMBER:
AUTHORIZED SIGNATURE:	DATE:	E-MAIL:

Offer valid for two hundred and forty (240) days from Proposal Due Date.

**NORTH CAROLINA TURNPIKE AUTHORITY
AVI READERS AND TRANSPONDERS
REQUEST FOR PROPOSALS**

CATEGORY B – PROVIDE TDM TRANSPONDERS, ACCESSORIES AND SERVICES

EXECUTION: In compliance with this Request for Proposal, and subject to all the conditions herein, the undersigned offers and agrees to furnish any or all Services or goods upon which prices are offered, at the price(s) offered herein, within the time specified herein. By executing this offer, I certify that this offer is submitted competitively and without collusion.

Failure to execute/sign offer prior to submittal shall render Proposal invalid. Late offers are not acceptable.

BIDDER:		
STREET ADDRESS:	P.O. BOX:	ZIP:
CITY & STATE & ZIP:	TELEPHONE NUMBER:	TOLL FREE TEL. NO:
PRINT NAME & TITLE OF PERSON SIGNING:		FAX NUMBER:
AUTHORIZED SIGNATURE:	DATE:	E-MAIL:

Offer valid for two hundred and forty (240) days from Proposal Due Date.

**NORTH CAROLINA TURNPIKE AUTHORITY
AVI READERS AND TRANSPONDERS
REQUEST FOR PROPOSALS**

CATEGORY C – PROVIDE LOCAL TRANSPONDERS, ACCESSORIES AND SERVICES

EXECUTION: In compliance with this Request for Proposal, and subject to all the conditions herein, the undersigned offers and agrees to furnish any or all Services or goods upon which prices are offered, at the price(s) offered herein, within the time specified herein. By executing this offer, I certify that this offer is submitted competitively and without collusion.

Failure to execute/sign offer prior to submittal shall render Proposal invalid. Late offers are not acceptable.

BIDDER:		
STREET ADDRESS:	P.O. BOX:	ZIP:
CITY & STATE & ZIP:	TELEPHONE NUMBER:	TOLL FREE TEL. NO:
PRINT NAME & TITLE OF PERSON SIGNING:	FAX NUMBER:	
AUTHORIZED SIGNATURE:	DATE:	E-MAIL:

Offer valid for two hundred and forty (240) days from Proposal Due Date.

Form D-2 RS-2 Form

**(A fillable PDF of the RS-2 form is “paper clipped” to
this file for ease of completion.)**

Same RS-2 form to be used for all Categories

**NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
SUBCONSULTANT
TO BE USED WITH PROFESSIONAL SERVICES CONTRACT ONLY
RACE AND GENDER NEUTRAL**

TIP No. and/or Type of Work (Limited Services)

(Consultant/Firm Name and Federal Tax Id)

(Subconsultant/Firm Name and Federal Tax Id)

SERVICE / ITEM DESCRIPTION		Anticipated Utilization
TOTAL UTILIZATION:		
SUBMITTED BY: SUBCONSULTANT:	RECOMMENDED BY: CONSULTANT:	
*BY:	*BY:	
TITLE:	TITLE:	
SPSF Status: Yes <input type="checkbox"/> No <input type="checkbox"/>		

“SUBCONCONSULTANT” (FORM RS-2)
RACE AND GENDER NEUTRAL

Instructions for completing the Form RS-2:

1. Complete a Subconsultant Form RS-2 for each Subconsultant firm to be utilized by your firm.
2. Insert TIP Number and /or Type of Work (Limited Services)
3. Complete the Consultant/Firm name and Federal Tax ID Number for the primary firm information.
4. Complete the Subconsultant/Sub Firm name and Federal Tax ID Number for the sub firm information.
5. Enter Service/Item Description – describe work to be performed by the Sub Firm
6. Enter Anticipated Utilization – Insert dollar value or percent of work to the Subconsultant/Sub Firm
7. *Signatures of both Subconsultant and Prime Consultant **are required** on each RS-2 Form to be submitted with the Letter of Interest (LOI) to be considered for selection
8. Complete “SPSF Status” section - Subconsultant shall check the appropriate box regarding SPSF Status, check Yes if SPSF or No if not SPSF

In the event the firm has **no** subconsultant, **it is required that this be indicated on the Subconsultant Form RS-2 form by entering the word “None” or the number “ZERO” and signing the form.**

Form D-3 Recent Client List

**(A Word version of the Recent Client List is “paper clipped” to
this file for ease of completion.)**

Same Recent Client List form to be used for all Categories

[illegible]

Form D-4

Reference Forms Part I

(Word versions of the Reference Forms Part I are “paper clipped” to this file for ease of completion.)

Separate Reference Forms Part I provided for:

Category A – Readers

Category B – TDM Transponders and Category C – Local Transponders
(same form to be used for Categories B and C)

A) Proposer Minimum Experience for Category A – Readers

Proposer shall use this form to clearly demonstrate how it meets the minimum qualification requirements for Proposals with regard to AVI Readers. Each reference provided may be contacted by NCTA. Copy this form as needed to comply with the requirements outlined in the RFP.

Proposer's Name: _____

Reference Company/Agency Name:		
Address:		
City:	State:	Zip Code:
Phone Number:	Fax Number:	
Agency Project Manager Reference:		
E-mail:		
Alternate Reference*:		
Phone Number:	Fax Number:	
E-mail:		
Alternate Reference Role on Reference Project:		
*Must be completed in addition to the Project Manager reference		
Proposer's role on project and years of participation (mm/dd/yy to mm/dd/yy):		

Project location, scope, cost, start / end dates:
Operational functionality, facility types (AET, ORT, Express Lanes) number of lanes / plazas, transaction volumes, etc.:
Types and quantities of equipment provided by Proposer including protocols supported:
Comparison to NCTA requirements:
Installed System and Operations and Maintenance documented performance, as applicable:

Key Personnel involved and role who are also proposed on NCTA project:

B) Proposer Minimum Experience for Category B – TDM Transponders and Category C – Local Transponders

Proposer shall use this form to clearly demonstrate how it meets the minimum qualification requirements for Proposals with regard to TDM or Local Transponders as applicable. Each reference provided may be contacted by NCTA. Copy this form as needed to comply with the requirements outlined in the RFP.

Proposer's Name: _____

Reference Company/Agency Name:	
Address:	
City:	State: Zip Code:
Phone Number:	Fax Number:
Project Manager Reference:	
E-mail:	
Alternate Reference*:	
Phone Number:	Fax Number:
E-mail:	
Alternate Reference Role on Reference Project:	
*Must be completed in addition to the Project Manager reference	
Proposer's role on project and years of participation (mm/dd/yy to mm/dd/yy):	
Project location, scope, cost, start / end dates:	

Operational functionality, facility types (AET, ORT, Express Lanes) number of lanes / plazas, transaction volumes, etc.:
Types and quantities of Transponders provided (Protocol, Sticker / Hard Case, Declarable, etc.):
Other equipment supplied (Transponder Programmers, Handheld Readers, etc.):
Comparison to NCTA requirements:
Installed System and Operations and Maintenance documented performance, as applicable:

Form D-5

Reference Forms Part 2

(Word versions of the Reference Forms Part 2 are “paper clipped” to this file for ease of completion.)

Separate Reference Forms Part 2 provided for:

Category A – Readers

Category B – TDM Transponders and Category C – Local Transponders
(Same form to be used for Categories B and C)

A) Key Team Member References for Category A – Readers

Category A Proposer shall use this form for Key Personnel Team member references. Each reference provided may be contacted. Copy this form as needed to comply with the requirements of the RFP and the number of references cited.

Key Team Member _____

Proposed Position _____

Reference Company Name:	
Address:	
City:	State: Zip Code:
Phone Number:	Fax Number:
Project Manager:	
E-mail:	
Number of total years' experience of Key Personnel team member in similar role to one proposed for NCTA:	
Reference Project:	
Key Personnel team member role on reference project, including dates of participation and job description:	
Description of reference project location, scope, cost, start / end dates, etc.:	
Operational functionality, number of lanes, plazas, revenue collected, ORT, AET or Express Lane, etc.:	
Relevant equipment used:	
Key Personnel team member's major contributions and highlights:	

B) Key Team Member References for Category B – TDM Transponders and Category C – Local Transponders

Category B and Category C Proposers shall use this form for Key Personnel Team member references. Each reference provided may be contacted. Copy this form as needed to comply with the requirements of the RFP and the number of references cited.

Key Team Member _____

Proposed Position _____

Reference Company Name:	
Address:	
City:	State: Zip Code:
Phone Number:	Fax Number:
Project Manager:	
E-mail:	
Number of total years' experience of Key Personnel team member in similar role to one proposed for NCTA:	
Reference Project:	
Key Personnel team member role on reference project, including dates of participation and job description:	
Description of reference project location, scope, cost, start / end dates, etc.:	
Operational functionality, number of lanes, plazas, revenue collected, ORT, AET or Express Lane, etc.:	
Relevant equipment used:	
Key Personnel team member's major contributions and highlights:	

Form D-6

Requirements Conformance Matrix

Separate Requirement Conformance Matrices provided for:

Category A – Readers

Category B – TDM Transponders

Category C – Local Transponders

Form D-6

Requirements Conformance Matrix

Category A - Readers

(An Excel Version of the Requirements Conformance Matrix Category A – Readers is “paper clipped” to this file for ease of completion.)

Exhibit D-6, Category A - Readers: Instructions for Completing the Requirements Conformance Matrix	
1)	The Proposer shall complete and submit the Excel version of the Requirements Conformance Matrix (RCM) which is "paper clipped" to the AVI RFP Exhibits PDF.
2)	The RCM covers each of the requirements set forth in Section III, Scope of Work and Requirements .
3)	Proposers shall not alter the requirements listed in the RCM in any way and shall use the workbooks provided. The Proposer shall submit a PDF version of the completed RCM in Technical Proposal Section 5, in addition to submitting the Excel version of the RCM on CD/DVD, as directed in Section IV, Proposal Contents and Submission , Section 2.I Submission of Technical Proposal.
4)	Instructions for completing the RCM are as follows:
a)	There are four columns in the matrix as follows:
i.	Requirement # (Column A): A sequential number that matches the requirement number in Section III, Scope of Work and Requirements .
ii.	Requirement (Column B): A description of the requirement.
iii.	Status (Column C): Proposer must select one of the two (2) response codes for each Requirement and enter it in this column as further detailed in item "b)" below.
iv.	Comment (Column D): This field must be completed if the Conformance code is entered as "N = Non-Conforming" for the particular Requirement in order to explain why the Proposer is not conforming to the Requirement. In addition, Exhibit D-12, Requirement Non-Conformance Detail, must be completed for any such items.
b)	Proposers must complete the Status (Column C) in the following manner:
i.	C = Conforming: Enter a "C" in this column if the requirement described will be provided by the proposed Reader, Equipment or Services.
ii.	N = Non-Conforming: Enter an "N" if the Proposer will not provide the functionality and will not meet the requirement as part of its Proposal. If any row in the Status column is completed as "N" then Proposer must provide an explanation in the Comment (Column D) in the corresponding row. The Comment field may reference information that is included elsewhere in the Proposal.

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
2. Category A: Provide Tri-Protocol Readers, Associated Equipment and Services			
2.1 Physical / Environmental			
2.1.1 Physical Requirements			
1	Components shall comply with applicable safety requirements based on the environment in which they will be installed. All overhead and Roadside Equipment (RSE) shall comply with any safety regulations regarding collisions and break-away standards. Equipment shall not pose a health or safety hazard to persons or vehicles. Equipment shall be mountable in accordance with the current version of the Manual on Uniform Traffic Control Devices.		
2	Safety labels shall be placed on Equipment as appropriate based on prevailing laws, regulations, and standards. Contactor shall provide the Material Safety Data Sheet (MSDS) for all materials or Equipment that has a Material Safety Data Sheet. The Contractor shall provide any information regarding any other materials that may be considered hazardous or require special handling or disposal.		
3	The Reader and Antenna and all other components shall allow for proper grounding and protection against lightning strikes.		
4	Cabinets and enclosures shall be equipped with locks controlled by proximity card readers with key cylinder backup.		
5	Contractor shall coordinate with the RTCS Contractor to ensure cabinet and enclosure locking mechanisms and proximity cards are compatible with the RTCS Access Control and Security Monitoring System (ASCSMS).		
2.1.2 Environmental Requirements			
6	The Equipment to be supplied will be installed in areas exposed to the range of climatic conditions found in North Carolina. The Reader and Antenna must operate without degradation in performance in all weather conditions including extreme hot or cold weather, snow, heavy rain, fog and mist-like conditions, high humidity, high wind conditions (120 miles per hour), and vibrations caused either by wind or		
7	All Equipment provided under this Contract shall be corrosion resistant and remain corrosion resistant for the Contract Term or 10 years, whichever is greater.		
2.1.3 Standards Compliance			
8	Contractor shall meet all electrical codes, traffic control, seismic considerations, calibration, configuration, and environmental requirements of and including but not limited to:		
	• National Electric Safety Code;		
	• National Electrical Contractors Association (NECA);		
	• Occupational Safety and Health Act (OSHA);		
	• National Fire Protection Association (NFPA);		
	• National Electrical Manufacturers Association (NEMA);		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
	• Institute of Electrical and Electronic Engineers (IEEE);		
	• Applicable Electronic Industries Association (EIA) Standards for Interface and Intercommunication;		
	• Underwriters Laboratories (UL); and		
	• All locally adopted building codes.		
9	Contractor shall adhere to all specifications of the latest NCDOT Standard Specifications and Roadway Standard Drawings at time of construction unless Contractor receives written Approval by the NCTA. NCDOT Standard Specifications are located at: https://connect.ncdot.gov/resources/Specifications/pages/specifications-and-special-provisions.aspx		
10	It shall be Contractor's responsibility to procure all Documentation required to install and adhere to the proper Installation standards, law, ordinance, or codes.		
2.2 Hardware Requirements			
11	Contractor shall provide AVI Readers that are compatible with the protocols and Performance Requirements set forth in this Scope of Work and Requirements.		
12	Contractor shall provide an Enclosure for the Reader rated NEMA 4X or equivalent, suitable for mounting on a concrete pad adjacent to the Toll Zone gantries.		
13	All Reader Enclosures shall be solid, made of non-toxic material, and have no sharp edges.		
14	The Enclosures, mounting hardware, washers, brackets, screws, bolts and nuts exposed to the outdoor environment shall be constructed of a AISI Type 316L grade stainless steel or an NCTA Approved equal.		
15	Reader and Enclosure external cable ports shall be easily accessed for Installation and Maintenance.		
16	Contractor shall provide Antennas that are compatible with the protocols and Performance Requirements set forth in this Scope of Work and Requirements.		
17	The Antennas shall be rated NEMA 6P or equivalent.		
18	Contractor shall specify the types of RF cabling that can be used between the Reader and Antenna, and the conditions under which each cable type can be used including maximum run length for each cable type. Specified RF cables shall be commercially sourced cable that can be purchased separately by NCTA or another Contractor.		
19	Contractor shall specify any cabling required to implement RF synchronization between AVI Readers. Specified cable shall be commercially sourced cable that can be purchased separately by NCTA or another Contractor.		
20	Contractor shall provide any other ancillary components including, but not limited to, enclosure environmental controls, mounting brackets, fittings, pigtails, cords, and fasteners.		
21	Contractor shall coordinate with the RTCS Contractor to ensure Enclosures provide adequate room and environmental controls for both Contractor-supplied Equipment and any required items provided by the RTCS Contractor such as networking devices, power distribution units, etc.		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
22	Contractor shall provide sufficient quantities of AVI Readers, Antennas, Enclosures and other Equipment necessary to support the RTCS being deployed on the Monroe Expressway. Refer to Section III, Scope of Work and Requirements , Table III-3 and Attachment 4, Monroe Gantry and Layout 50 Percent		
23	Contractor shall provide sufficient quantities of AVI Readers, Antennas, Enclosures and other Equipment necessary to support the RTCS being deployed on the US-74 Express Lanes. Refer to Section III, Scope of Work and Requirements , Table III-4 and Attachment 5, US-74 Express Lanes Conceptual		
24	Contractor shall provide sufficient quantities of AVI Readers, Antennas, Enclosures and other Equipment necessary to support the replacement of AVI Equipment on the Triangle Expressway. Refer to Section III, Scope of Work and Requirements , Table III-2, Attachment I, Triangle Expressway Gantry and Conduit Drawings, and Attachment I I, Triangle Expressway As-Built RTCS Drawings.		
2.3 Functional Requirements			
2.3.1 Transponder Capture Zone			
25	The Transponder Capture Zone shall have a longitudinal dimension of approximately 10 feet when a Transponder is walked through the lane at a height of 48 inches from the ground.		
26	The Reader shall begin to report the Transponder approximately 3 feet before the leading edge of the entry loop and continue reporting within the next approximately 10 feet.		
27	The Transponder Capture Zones for main lanes and straddles shall be identical.		
28	The AVI Reader shall be configurable to allow for adjustments to the Transponder Capture Zone.		
2.3.2 Lane Coverage			
29	For the Triangle Expressway, the AVI Readers shall provide full coverage from roadway edge to roadway edge including all shoulders.		
30	For facilities other than the Triangle Expressway, the AVI Readers shall provide full coverage on and between all travel lanes in each Toll Zone. Transponders on vehicles straddling the shoulders by a distance of up to four (4) feet shall be read and reported to the RTCS.		
31	The Transponder Capture Zones in the lanes at a Toll Zone shall be tuned such that Transponders in vehicles traveling in the adjacent lanes, but opposite direction of travel, are not reported by the AVI		
32	Transponders on vehicles traveling in the general purpose traffic lanes adjacent to Express Lanes shall not be reported by the AVI Reader.		
2.3.3 Network Capability			
33	The AVI Reader shall be Internet Protocol (IP) addressable.		
34	The AVI Reader shall provide a remotely accessible user interface so that Software lane tuning, diagnostics, configuration changes, firmware upgrades, and other remote support shall be available to NCTA authorized personnel. Setup and configuration of the AVI Reader shall be achievable remotely and shall not require lane closure except for major lane tuning, when initially installed, or when an AVI Reader		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
35	The remotely accessible user interface shall provide access via industry standard protocols (e.g. SSH, Telnet, HTTP) and shall not require the use of specialized or proprietary client Software.		
36	The remotely accessible user interface shall be password protected and shall provide the ability to change the password(s).		
2.3.4 Multiple Reader Synchronization			
37	The AVI Reader shall implement a synchronization mechanism to prevent mutual RF interference between AVI Readers.		
38	Contractor shall support the RTCS Contractor in carrying out tests at each Installation site to determine if potential Reader-to-Reader RF interference exists which would impact performance.		
39	Contractor shall support the RTCS Contractor in implementing Reader-to-Reader synchronization as necessary to prevent performance degradation due to mutual RF interference.		
2.3.5 Tri-Protocol Support			
40	The AVI Reader shall be a tri-protocol Reader supporting the TDM, SeGo and 6C protocols.		
41	The AVI Reader shall provide the RTCS Contractor full flexibility in setting operational parameters per protocol, such as power and sensitivity, activation field strength, time multiplexing, timing adjustments based on Transponder type, and protocol command sequences.		
42	For the TDM protocol, the AVI Reader shall read and report the mode (HOV vs. Toll) of E-ZPass Flex and compatible declarable Transponders.		
43	For the TDM protocol, the AVI Reader shall support configuring the Transponder write capability based on the toll facility type. If enabled, data specified by NCTA shall be written to the Transponders. Such data shall include but not be limited to: time, location, and occupancy switch setting at the time the Transponder was read.		
44	It is preferred that the AVI Reader allow for configuration or weighting by protocol to allow for improved read Performance of one protocol over another.		
2.3.6 Interface			
45	The AVI Reader shall interface directly with the RTCS. Contractor shall provide an interface control document to the RTCS Contractor(s) in sufficient detail to allow the RTCS Contractor(s) to implement this interface so that the AVI Reader and RTCS can process Transponder reads in a seamless manner.		
46	For each Transponder read in the lane, the AVI Reader shall create and formulate a Transponder Read message to be sent to the RTCS which shall contain all information fields supported by the Transponder type being reported.		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
47	The AVI Reader shall report diagnostic messages to the RTCS indicating its operating status and alerting the RTCS of any component failures and switchover to any redundant components as applicable. Failures should be stored in a failure log capable of being reviewed by the RTCS Contractor or NCTA via a command message or interactive interface.		
2.3.7 Time Synchronization			
48	NCTA prefers that the AVI Reader shall support time synchronization via the Network Time Protocol (NTP). If the AVI Reader does not support NTP, it shall support a Time Synchronization message as part of its communications interface with the RTCS, allowing the RTCS to synchronize the AVI Reader's date and time with its own.		
2.3.8 Buffered Transponder Reads			
49	The AVI Reader shall buffer Transponder Reads when it is unable to communicate with the RTCS.		
50	The AVI Reader shall store buffered Transponder Reads in non-volatile memory with a capacity of not less than 100,000 Transponder Reads.		
51	The AVI Reader shall transmit buffered Transponder Reads to the RTCS when communications are reestablished, either automatically or upon receipt of a command from the RTCS.		
52	Transmittal of buffered Transponder Reads shall not interfere with, or delay, transmittal of real-time Transponder Reads.		
53	Buffered Transponder Reads shall include all data contained in a real-time Transponder Read, in addition to a flag or other indicator to distinguish it from a real-time Transponder Read.		
54	The AVI Reader shall allow for removal of buffered Transponder Reads via a portable data storage device in the event that communications cannot be restored.		
2.4 Performance Requirements			
2.4.1 Transponder Capture Rate			
55	A Transponder mounted in accordance with the manufacturer mounting instructions shall be captured by the AVI Reader under all conditions specified in this Scope of Work and Requirements with an accuracy of 99.9%, or no more than one (1) missed read or incorrect capture in one thousand (1,000) equipped vehicle passages.		
2.4.2 Transponder Reporting Accuracy			
56	A Transponder that is detected and read by the AVI Reader shall be reported to the RTCS with an accuracy of 100% under all conditions specified in this Scope of Work and Requirements.		
2.4.3 Transponder Reporting Speed			
57	The AVI Reader shall report the Transponder data to the RTCS within 70 milliseconds of the Transponder entering the Transponder Capture Zone.		
2.4.4 Transponder Write Performance			

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
58	When configured to write to TDM Transponders, the AVI Reader shall successfully and accurately complete a write operation to associate data with a passing vehicle with an accuracy of 99.8%, or no more than two (2) missed or incorrect writes in one thousand (1,000) equipped vehicle passages, under all conditions specified in this Scope of Work and Requirements.		
2.4.5 Lane Identification Accuracy			
59	The AVI Reader shall report a Transponder in the lane or straddle in which it is located, or in an immediately adjacent lane or straddle, 99.95% of the time, or no more than five (5) incorrect reports in ten thousand (10,000) equipped vehicle passages.		
2.4.6 Conditions for Performance Requirements			
60	The AVI Reader shall meet the Performance Requirements set forth in this Scope of Work and Requirements under the following traffic conditions:		
	• Vehicles traveling up to 130 miles per hour;		
	• Stop-and-go traffic with continuous intermittent acceleration and deceleration between 0 and 15 miles per hour;		
	• Vehicles tailgating;		
	• Different mixes of all vehicle types encountered on North American roads including but not limited to cars, trucks, tractor-trailers, recreation vehicles, motorcycles, buses, and delivery vans;		
	• Vehicles arriving simultaneously at the Transponder Capture Zone; and		
	• Vehicles changing and/or straddling lanes.		
61	The AVI Reader shall meet the Performance Requirements set forth in this Scope of Work and Requirements under all weather conditions.		
2.4.7 Reliability and Availability			
62	The AVI Reader shall have a Mean Time Between Failures (MTBF) of not less than 30,000 hours.		
63	The AVI Reader shall have a Mean Time To Repair (MTTR) of not more than 30 minutes.		
64	The AVI Reader shall have a design Life Cycle of not less than 10 years.		
2.5 Equipment Certification			
65	The AVI Readers shall be compliant with IBTTA North American Toll Interoperability Program Electronic Toll Collection Protocol Requirements (see Attachment 3 - IBTTA NIOP Requirements Document).		
2.5.1 E-ZPass Group Equipment Certification			
66	The AVI Reader shall be formally approved in writing by the E-ZPass Group for use by a National Affiliate before being placed into service.		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
67	If the proposed AVI Reader has not previously been approved for use by a National Affiliate of the E-ZPass Group, Contractor shall complete to NCTA’s satisfaction the interoperable technology testing required within 90 days of Contract Award. Requirements for such testing are specified in Attachments 6 and 8 and Contractor shall provide NCTA with all necessary testing documentation.		
2.5.2 6C Equipment Certification			
68	The AVI Reader shall be certified by OmniAir Certification Services (OCS) for 6C Interoperability.		
69	If the proposed AVI Reader has not previously been certified by OCS for 6C Interoperability, Contractor shall undertake interoperable technology testing and obtain Certification by OCS within 90 days of Contract Award.		
2.5.3 SeGo Equipment Certification			
70	The AVI Reader shall be interoperable with SeGo Transponders. Contractor shall undertake interoperable technology testing similar to that specified in Attachments 6 and 8 and as Approved by NCTA. Successful completion of testing shall be required before the AVI Reader can be placed into service and shall take place within 90 days of Contract Award.		
2.6 Testing			
2.6.1 Factory Acceptance Testing			
71	The AVI Reader shall successfully complete a Factory Acceptance Test. The FAT shall demonstrate that the AVI Reader, when placed in tri-protocol mode and reading a mixed fleet of Transponder and vehicle types, can meet all Performance Requirements set forth in this Scope of Work and Requirements and produces consistent results in terms of Transponder read/write, lane identification, and Transponder Capture Zone boundaries across all three protocols and various Transponder types (e.g., interior, exterior, switchable, etc.).		
2.6.1.1. General FAT Requirements			
72	The FAT shall be conducted by Contractor at Contractor’s facility with actual vehicles and lanes simulating an ORT environment.		
73	The AVI Reader test configuration shall be representative of a production Installation at an NCTA Toll		
74	The FAT shall be conducted by Contractor to verify that the AVI Reader performs in conformance with the Contract Requirements.		
75	The FAT shall validate that the AVI Reader meets the Requirements of the Contract including but not limited to:		
	• Transponder Capture Zone;		
	• Lane Coverage;		
	• Multiple Reader Synchronization;		
	• Multi-Protocol Support;		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
	• Time Synchronization;		
	• Buffered Transponder Reads;		
	• Transponder Capture Rate;		
	• Transponder Reporting Accuracy (including Transponder data contents);		
	• Transponder Reporting Speed;		
	• Transponder Write Performance; and		
	• Lane Identification Accuracy.		
2.6.1.2. Factory Acceptance Test Plan			
76	Contractor shall provide to NCTA, for review, comment and final Approval, a Factory Acceptance Test Plan that outlines the scope and testing concepts to be used to validate the AVI Reader compliance to the Requirements in the Contract.		
77	Contractor shall provide to NCTA, for review, comment and final Approval a Detailed FAT Procedures Document that is based upon the Approved Factory Acceptance Test Plan.		
78	The Factory Acceptance Test Plan and the Detailed FAT Procedures Document shall be provided for NCTA Approval at least 45 Days prior to the scheduled Factory Acceptance Test.		
2.6.1.3. Factory Acceptance Test Conduct			
79	Contractor shall obtain Approval from NCTA and shall have met the entry conditions prior to start of each test, including but not limited to:		
	• Approved test procedures for each individual test;		
	• Approved test schedule;		
	• Successful dry run testing with results provided to NCTA;		
	• Submittal of the latest Approved version of the FAT Plan test validation against the Requirements;		
	• Confirmation that both the site(s) and the AVI Reader are ready for testing.		
80	Contractor shall be responsible for all aspects of testing performed as part of the FAT and to provide all necessary resources and facilities to conduct all tests including but not limited to:		
	• Test support personnel;		
	• Vehicles and drivers;		
	• Test facilities;		
	• Test Equipment, tools and safety devices;		
	• Test schedule and test sequence;		
	• Coordination with NCTA; and		
	• Conducting the test.		
81	Contractor shall provide thirty (30) days advance notice of the FAT to allow NCTA to schedule their participation in the testing and witness each test.		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
82	Contractor shall provide NCTA with full access to the test data and results of the test.		
2.6.1.4.	Factory Acceptance Test Report		
83	After the completion of the FAT, Contractor shall submit for NCTA's review and Approval a test report that documents the results of the test.		
84	The test report shall address the following, including but not limited to:		
	• The test summary;		
	• The results of each test case;		
	• Any anomalies and issues identified;		
	• The corrective action/resolution of each item;		
	• The test data;		
	• Calculations and back-up data supporting compliance to Requirements;		
	• Comments provided by NCTA and responses thereto; and		
	• The results of any re-tests necessary to successfully complete each testing phase.		
85	Testing will not be considered complete by NCTA until all anomalies and punch-list items are closed-out, and the final test report is Approved by NCTA.		
2.6.2	RTCS Factory Acceptance Test Support		
86	Contractor shall provide onsite and remote technical support to the RTCS Contractor as needed in carrying out the RTCS Factory Acceptance Tests (RTCS FAT) for the Monroe Expressway, US-74 Express Lanes, and Triangle Expressway. The RTCS FAT will be conducted by the RTCS Contractor at the RTCS Contractor's facility. There will be a separate RTCS FAT for each of the three facilities.		
87	Contractor shall work with the RTCS Contractor to ensure that the RTCS FAT verifies the full functionality of the AVI Reader and its compliance with the Contract Requirements in a controlled, onsite		
88	Contractor shall work with the RTCS Contractor to ensure that the RTCS FAT generates sufficient transactions to prove the AVI Reader can process Transponders accurately and meet the Performance Requirements set forth in this Scope of Work and Requirements.		
89	Contractor shall work with the RTCS Contractor to ensure that the RTCS FAT validates that the AVI Reader meets the Requirements of the Contract including but not limited to:		
	• Transponder Capture Zone;		
	• Lane Coverage;		
	• Multiple Reader Synchronization;		
	• Multi-Protocol Support;		
	• Time Synchronization;		
	• Buffered Transponder Reads;		
	• Transponder Capture Rate;		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
	• Transponder Reporting Accuracy (including Transponder data contents);		
	• Transponder Reporting Speed;		
	• Transponder Write Performance; and		
	• Lane Identification Accuracy.		
90	In the event the RTCS FAT does not meet project schedule due to Contractor's failure to provide the required support, NCTA will have the right to assess liquidated damages for failure to meet project progress milestones. Liquidated damages will be calculated as follows:		
	• For every day beyond the start date of the RTCS FAT identified in Exhibit A, Project Schedules: \$1,000 / day.		
2.6.3 Onsite Installation Testing Support			
91	Contractor shall provide onsite and remote technical support to the RTCS Contractor as needed in carrying out the OIT. The OIT will be conducted by the RTCS Contractor at each Installation site.		
92	Contractor shall review RTCS Installation drawings so as to ensure proper Installation, configuration and usage of Contractor's Equipment.		
93	Contractor shall work with the RTCS Contractor to ensure that the OIT verifies the full functionality of the AVI Reader and its compliance with the Contract Requirements in a controlled, onsite environment.		
94	Contractor shall ensure that, before the commencement of the OIT, all Equipment and Software that are required under the Contract are in place, in a production environment and configured for revenue operations.		
95	Contractor shall work with the RTCS Contractor to ensure that the OIT generates sufficient transactions to prove the AVI Reader can process Transponders accurately and meet the Performance Requirements set forth in this Scope of Work and Requirements.		
96	Performance Requirements shall be verified using a sample size and test scenarios approved by NCTA.		
97	Contractor shall work with the RTCS Contractor to ensure that the OIT validates that the AVI Reader meets the Requirements of the Contract including but not limited to:		
	• Transponder Capture Zone;		
	• Lane Coverage;		
	• Multiple Reader Synchronization;		
	• Multi-Protocol Support;		
	• Time Synchronization;		
	• Buffered Transponder Reads;		
	• Transponder Capture Rate;		
	• Transponder Reporting Accuracy (including Transponder data contents);		
	• Transponder Reporting Speed;		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
	<ul style="list-style-type: none">Transponder Write Performance; andLane Identification Accuracy.		
98	Contractor shall conduct an audit of the lanes using live traffic to verify that the RTCS is processing vehicles and Transponders accurately.		
99	In the event the OIT does not meet project schedule due to Contractor's failure to provide the required support then NCTA will have the right to assess liquidated damages for failure to meet project progress milestones. Liquidated damages will be calculated as follows:		
	<ul style="list-style-type: none">For every day beyond the start date of the OIT identified in Exhibit A, Project Schedule: \$1,000 /		
2.6.4 Installation and Commissioning Test Support			
100	Contractor shall provide onsite and remote technical support to the RTCS Contractor as needed in carrying out the Installation and Commissioning Test. The Installation and Commissioning Test will be conducted by the RTCS Contractor on each Tolling Zone as a part of the RTCS Contractor's Roadway		
101	During the Installation and Commissioning Test the AVI Reader and its interface to the lane/zone controller shall be verified by Contractor to be fully operational.		
102	Contractor shall ensure that, before the commencement of the Installation and Commissioning Test, all Equipment and Software that are required under the Contract are in place, in a production environment and configured for revenue operations.		
103	In the event the Installation and Commissioning Test does not meet project schedule due to Contractor's failure to provide the required support then NCTA will have the right to assess liquidated damages for failure to meet project progress milestones. Liquidated damages will be calculated as follows:		
	<ul style="list-style-type: none">For every day beyond the start date of the Installation and Commissioning Test identified in Exhibit A, Project Schedule: \$1,000 / day.		
2.7 Maintenance and Support			
2.7.1 Installation Support			
104	Contractor shall review, comment and provide approval on RTCS Contractor design documents to ensure that AVI Reader and associated Equipment requirements are met.		
105	Contractor shall fully cooperate and participate with the RTCS Contractor to support configuration, set-up, tuning and all other associated activities associated with the Installation of the AVI Reader and associated Equipment.		
106	Contractor shall provide approval of AVI Reader and associated Equipment installation.		
107	Contractor shall perform an RF site survey to identify any sources of potential RF interference at each site where the AVI Reader is to be installed. Contractor shall document the results of the RF site survey and provide such documentation to NCTA and/or its designees.		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
108	Contractor shall provide onsite and remote technical support to the RTCS Contractor as needed in performing Hardware and Software Installation and configuration of the AVI Readers. Contractor shall act in a supporting capacity only and shall not perform physical Installation.		
2.7.1.1. Triangle Expressway Transition Plan			
109	Contractor shall develop a Transition Plan for the replacement of the Triangle Expressway AVI Readers and associated Equipment.		
110	Contractor shall coordinate with the RTCS Contractor in the development of the Transition Plan to ensure that the AVI Reader replacement has minimal impact to RTCS performance.		
2.7.2 As-Built Reviews			
111	Contractor shall review RTCS As-Built Drawings and coordinate with the RTCS Contractor to ensure the Installation sites conform to all AVI Reader requirements.		
2.7.3 Licensing			
112	Contractor shall be responsible for developing, filing for an FCC license on behalf of the NCTA, and supporting NCTA in addressing any actions concerning RF interference or comments related to compliance with applicable federal, state and local licensing and regulations for the AVI technology.		
113	Contractor shall identify all related licensing and regulations associated with their Equipment and describe how licensing will be obtained and what is necessary to meet the relevant regulations.		
2.7.4 Maintenance			
114	Contractor shall provide on-call remote and on-site Maintenance Support Services, new and replacement parts, and other technical support for the AVI Reader and associated Equipment throughout the Contract Term.		
2.7.4.1. Preventive Maintenance			
115	Contractor shall submit a Preventive Maintenance Plan with respect to the AVI Reader and associated Equipment. The Plan shall provide a preliminary schedule or cycle based upon the particular service required to maintain each individual item of the AVI Reader and associated Equipment to the standards set forth in this Scope of Work and Requirements.		
116	Included within the Preventive Maintenance Plan shall be the predictive Maintenance activities and analysis. This would include the recommended replacement of limited-life and consumable components such as Antennas, Readers, boards, drives, and other components, before they fail in Services.		
117	Intervals for predictive replacement shall be based on reported Mean Time Between Failure for the components in question.		
118	The Preventive Maintenance Plan shall include provisions for periodic cleaning of all AVI Reader components exposed to the elements.		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
119	Contractor shall update the Preventive Maintenance Plan annually and submit an updated version on or before January 1 of each year of the Contract Term.		
2.7.4.2. Corrective Maintenance			
120	Contractor shall provide a detailed Maintenance and Repair Manual with respect to the AVI Reader and associated Equipment.		
121	The AVI Reader and associated Equipment shall be designed to ensure the ability to swap out failed or suspect parts with new parts.		
122	Contractor shall provide remote technical support to the RTCS Contractor as needed in the diagnosis and resolution of issues associated with Equipment supplied by Contractor.		
123	Remote support shall include domestic U.S. based staffed telephone support either live or beeper and include email capability. The Contractor shall adequately staff any hotlines to handle all calls from NCTA or the RTCS Contractor.		
124	Contractor shall provide Remote Support via phone on a 24/7 basis. All NCTA and RCTS Contractor requests for remote support shall be answered within fifteen (15) minutes and responded to with a remedy or proposed action plan within a 24-hour period of the inquiry.		
125	If an Equipment failure or problem cannot be resolved with remote Maintenance Support, Contractor shall dispatch Maintenance personnel to provide onsite assistance to the RTCS Contractor.		
126	Onsite Response Times shall be determined by Priority as described in Section III, Scope of Work and Requirements , Section 2.7.4.3.		
127	In the event that a support request is not answered within required time period (15 minutes), liquidated damages may be assessed. Liquidated damages shall be calculated as follows:		
	• For every 15-minute period beyond required response time, \$50 / period.		
2.7.4.3. Maintenance Priorities and Response Times			
128	Onsite Response Time is defined as the elapsed time from when failure or problem was reported to when Contractor Maintenance personnel arrived at the site of the failure or problem.		
129	Priority 1: Defined as any malfunction or fault that results in the immediate loss of revenue, security breach, closure of lanes outside of NCTA lane closure requirements, hazard to personnel or driving public, loss of audit data, loss of redundancy in any redundant System components, loss of functionality that impacts Interoperable Agencies, or failure that negatively impacts RTCS Operations.		
	This Priority shall have a twenty-four (24) hour Onsite Response Time.		
130	Priority 2: Defined as any malfunction or fault that degrades the RTCS performance but not the operational ability of the RTCS. It includes, but is not limited to inaccurate reporting, inability to reconcile revenue or loss of RTCS functionality that impacts access to data.		
	This Priority shall have a two (2) day Onsite Response Time.		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
131	Priority 3: Defined as any action or event that has the potential to result in a malfunction or degrading of the System performance but has not impacted performance and is not anticipated to immediately impact performance.		
	This Priority shall have a one (1) week Onsite Response Time.		
132	In the event Contractor does not provide Onsite Response within the required time period, liquidated damages may be assessed. Liquidated damages shall be calculated as follows:		
	• For Priority 1: every day beyond required twenty-four (24) hour response time, \$500 / day;		
	• For Priority 2: every day beyond required two (2) day response time, \$500 / day; and		
	• For Priority 3: every day beyond required one (1) week response time, \$500 / day.		
2.7.5 Spare Parts			
133	The Contractor shall be responsible for the maintenance of an adequate Spare Parts inventory during the Contract Period. Contractor shall be responsible for identifying the existing Spare Parts inventory, ordering Spare Parts as required, and proposing the quantities of Spare Parts needed to maintain the Performance Requirements set forth in this Scope of Work and Requirements.		
2.7.5.1. Spare Parts Inventory			
134	Contractor shall develop and submit the initial Spare Parts inventory list to NCTA for review and		
135	The Spare Parts inventory list shall identify all parts, Equipment, and components used in Contractor's solution and the recommended quantities of each.		
136	The Spare Parts inventory list shall include Guaranteed Delivery Lead Time for each part.		
137	The Spare Parts inventory list shall include Part Description, Model Number (if any), Vendor and Original Equipment Manufacturer (where applicable), part number, and part price.		
138	The Contractor shall, on an annual basis, update and resubmit the Spare Parts inventory list to NCTA for review and Approval.		
2.7.5.2. Procurement and Control of Spare Parts			
139	Contractor shall deliver Spare Parts to the RTCS Contractor. The RTCS Contractor will maintain physical control of the Spare Parts.		
140	Contractor shall coordinate with the RTCS Contractor as to the location and times that parts will be delivered and the storage space required to warehouse the spare parts inventory.		
141	Thirty (30) days prior to the Installation and Commissioning Test, the Contractor shall have delivered to the RTCS Contractor the agreed upon inventory of spare parts.		
142	The spare parts shall be owned by NCTA in a manner to ensure that NCTA receives the maximum benefit from any warranties associated with the spare parts.		
2.7.5.3. Spare Parts Availability			
143	Contractor shall maintain the required physical inventory levels of agreed-upon spare parts.		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
144	Contractor's failure to purchase or replenish the spare parts or consumables to levels necessary to meet the Performance Requirements is not an excusable failure and will not relieve the Contractor from Performance Requirements or any associated liquidated or actual damages resulting from the non-		
145	For failure to maintain spare parts inventory at agreed upon levels for the month, Contractor may be subject to liquidated damages. Liquidated damages shall be calculated as follows:		
	<ul style="list-style-type: none">For each month in which Contractor failed to maintain spare parts inventory per the counts required, \$1000 per month.		
2.7.5.4. Repair Depot			
146	Contractor shall be responsible for providing and staffing a repair depot for the return and repair of AVI Reader components.		
147	Contractor shall be responsible for repairing failed AVI Reader components and returning them to the spare parts inventory.		
148	Contractor shall indicate the details of the repairs performed on any components. This shall include but not be limited to boards and connectors replaced.		
149	If the replaced part is under warranty, the part shall be immediately replaced with a new part by Contractor. If the replaced part is out of warranty, Contractor shall make every effort to repair the replaced item to a usable status and place the part back into spares inventory. Except for Pervasive Defects, for out of warranty components, Contractor shall document why the component could not be repaired and advise NCTA that a new spare must be ordered.		
2.7.6 Software Upgrades and Updates			
150	For the Contract Term, and at no additional cost to NCTA, Contractor shall provide the following Software Maintenance Services as it pertains to the AVI Reader:		
	<ul style="list-style-type: none">Entitlement to all generally available AVI Reader Software or firmware updates, including patches, Maintenance releases, new releases of the Software or firmware and any subsequent product offerings issued as successors to the AVI Reader Software or firmware;		
	<ul style="list-style-type: none">Configuration Management of AVI Reader Software or firmware. Actual Installation of firmware will be carried out by RTCS Contractor;		
	<ul style="list-style-type: none">Release notes to NCTA and the RCTS Contractor for any Software or firmware changes or upgrades; and		
	<ul style="list-style-type: none">AVI Reader Software or firmware configuration adjustments in order to fine tune the solution to better meet the Performance Requirements.		
2.8 Training			
2.8.1 Training Program			

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
151	Contractor shall establish a training program for the AVI Reader. The training shall provide an overview of design, operations, and Maintenance of the AVI Reader. NCTA will provide a listing of designated personnel to whom Contractor will provide training.		
2.8.2 Training Courses			
152	The courses shall include instruction in proper Maintenance, monitoring and diagnostics of the Equipment and Software either supplied with or incorporated into the AVI Reader. The total package of courses shall be organized into the following sessions unless otherwise modified at the request of the RTCS Contractor and approved by NCTA:		
	• AVI Reader operation, configuration, interfaces and monitoring; and		
	• AVI Reader Preventive and Corrective Maintenance.		
153	One (1) training session of each type shall be held in Raleigh, NC, and shall be given in person by the Contractor. All training materials and aids shall be provided by the Contractor. NCTA will provide the location for the training sessions.		
2.9 Documentation			
2.9.1 Interface Control Documents (ICD)			
154	Contractor shall provide an ICD that documents all the required interfaces and functionality of messages. This includes the interface between the AVI Reader/Antenna and the Transponder, as well as between the AVI Reader and the RTCS. The ICD shall provide a message-level interface (including protocols used) as well as a brief concept of operations or examples describing how the messages are used.		
2.9.2 Operating Documentation			
155	Contractor shall provide Cut Sheets, Drawings, Operating Instructions, Installation Instructions, and Maintenance Instructions as applicable for all provided Equipment and components.		
156	Contractor shall provide Documentation that describes in detail any and all recommended training functions, test Equipment, Certifications, licenses and other support functions that Contractor considers necessary to ensure proper Installation, tuning and Maintenance of the AVI Reader.		
157	Contractor shall provide Documentation describing all recommended calibration and tuning levels necessary to meet the Performance Requirements set forth in this Scope of Work and Requirements.		
158	Contractor shall make updates to the Documentation whenever necessary due to Equipment or Software changes that affect any Maintenance or Installation procedures.		
2.10 Project Management Plan			
159	Contractor shall develop a Project Management Plan describing how Contractor plans to implement and manage the Project, including staffing, scheduling and communication procedures for controlling all correspondence, Submittals, and other communications between the Contractor and NCTA, and communications with third-party entities.		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
160	The Project Management Plan shall at a minimum include the following elements:		
	• Project scope and key Deliverables;		
	• A description of the management and organization of the Project, an organization chart, identification of Key Team Personnel and their responsibilities, percentage commitment to the Project, task leads for each functional area and location and identification of the resources to be used in fulfilling the Requirements of the Contract;		
	• Project team (Contractor, NCTA, NCTA Representatives, NCDOT, and the RTCS Contractor) contact information;		
	• A description of the Project planning, Documentation and reporting methods to be utilized, both for use within Contractor’s staff and externally to NCTA and other entities;		
	• A description of the process for communication, escalation and resolution of Project issues with NCTA;		
	• Meeting schedules with NCTA and other entities including the form of the meeting;		
	• Inclusion of the Approved Project schedule;		
	• A description of the process for reporting, updating and tracking the Project schedule and Project performance;		
	• Approach to change management, consistent with Contract Requirements, including a description of the process for documenting and submitting change requests, the Approval process and how the change management approach will be integrated into day-to-day Project management;		
	• Approach to document control, including Software (NCTA shall have the capability to download documents using this Software) and tools NCTA will use and have read-only access to via the Web;		
	• Approach to risk management;		
	• Approach to Quality Assurance and Quality Control;		
	• Documenting the invoice submission; invoice backup information; verification, and Approval		
	• A section with all Approved Project forms including but not limited to, meeting agenda; meeting notes; action items tracking log; monthly progress report, and invoices; and		
	• An emergency contact list.		
161	Contractor shall identify the tools and products used to manage the Project including Software development lifecycle and the internal controls instituted by the Contractor to guarantee successful		
162	Contractor shall develop and submit the Project Management Plan to NCTA for review and Approval.		
163	Contractor shall develop and submit the communication procedures to NCTA for review and Approval that address the following, including but not limited to:		
	• Correspondence: Correspondence shall be identified as to originator and designated receiver and include the form of transmission;		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
	<ul style="list-style-type: none">Document control: Tracking of document versions and changes including naming conventions;		
	<ul style="list-style-type: none">Invoices: All invoices shall be submitted with accompanying backup information as required by the Contract and consistent with NCTA processes and invoicing and auditing policies. Contractor shall work with NCTA to develop the appropriate invoice and back-up materials as a part of the Project Management Plan development;		
	<ul style="list-style-type: none">Submittals: All Submittals shall be delivered as an enclosure to Contractor's Submittal letter. Each Submittal letter shall be limited to a single subject or item. Contractor's letter shall identify the Contract number, Contract name and subject of the Submittal;		
	<ul style="list-style-type: none">Contract number and Contract name: All items of correspondence, invoices, Submittals and Documentation shall contain the Contract number and the designated Contract name; and		
	<ul style="list-style-type: none">Comments Log: Process for validating that all comments provided by NCTA on Contractor Deliverables are successfully addressed.		

Summary	
Conforming:	0
Non-Conforming:	0
Blank:	269

Form D-6

Requirements Conformance Matrix

Category B – TDM Transponders

(An Excel Version of the Requirements Conformance Matrix Category B – TDM Transponders is “paper clipped” to this file for ease of completion.)

Exhibit D-6, Category B - TDM Transponders: Instructions for Completing the Requirements Conformance Matrix	
1)	The Proposer shall complete and submit the Excel version of the Requirements Conformance Matrix (RCM) which is "paper clipped" to the AVI RFP Exhibits PDF.
2)	The RCM covers each of the requirements set forth in Section III, Scope of Work and Requirements .
3)	Proposers shall not alter the requirements listed in the RCM in any way and shall use the workbooks provided. The Proposer shall submit a PDF version of the completed RCM in Technical Proposal Section 5, in addition to submitting the Excel version of the RCM on CD/DVD, as directed in Section IV, Proposal Contents and Submission , Section 2.I Submission of Technical Proposal.
4)	Instructions for completing the RCM are as follows:
a)	There are four columns in the matrix as follows:
i.	Requirement # (Column A): A sequential number that matches the requirement number in Section III, Scope of Work and Requirements .
ii.	Requirement (Column B): A description of the requirement.
iii.	Status (Column C): Proposer must select one of the two (2) response codes for each Requirement and enter it in this column as further detailed in item "b)" below.
iv.	Comment (Column D): This field must be completed if the Conformance code is entered as "N = Non-Conforming" for the particular Requirement in order to explain why the Proposer is not conforming to the Requirement. In addition, Exhibit D-12, Requirement Non-Conformance Detail, must be completed for any such items.
b)	Proposers must complete the Status (Column C) in the following manner:
i.	C = Conforming: Enter a "C" in this column if the requirement described will be provided by the proposed Reader, Equipment or Services.
ii.	N = Non-Conforming: Enter an "N" if the Proposer will not provide the functionality and will not meet the requirement as part of its Proposal. If any row in the Status column is completed as "N" then Proposer must provide an explanation in the Comment (Column D) in the corresponding row. The Comment field may reference information that is included elsewhere in the Proposal.

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
3. Category B: Provide TDM Transponders, Accessories and Services			
3.1 Transponder Types			
164	Contractor shall provide an Interior Hard Case Transponder supporting the TDM protocol in the quantities as may be requested by NCTA throughout the Contract Term.		
165	Contractor shall provide an Interior High-Occupancy Vehicle (HOV) Self Declaration Transponder supporting the TDM protocol in the quantities as may be requested by NCTA throughout the Contract Term.		
166	Contractor shall provide an Exterior Hard Case Transponder supporting the TDM protocol in the quantities as may be requested by NCTA throughout the Contract Term.		
3.1.1 Interior Transponder			
167	The Interior Transponder shall be a programmable, windshield mounted RFID Transponder that is packaged in a monolithic plastic case.		
168	The Interior Transponder shall be able to be detached from vehicle windshield and reattached back to the vehicle windshield without the use of any tools.		
169	All components used in the Interior Transponder shall be approved for safe use in consumer products. The Interior Transponder shall not give off dangerous substances at any time including when damaged.		
170	Contractor shall provide the appropriate adhesive material and/or devices to allow the Interior Transponder to be affixed to the windshield of the vehicle in accordance with manufacturer's mounting		
171	The attachment method shall allow removal without risk of damage to the Interior Transponder or vehicle. Any strips, tabs, cups or other mounting device used to meet these Requirements shall be completely removable without damaging or marring the vehicle in any way.		
172	The Interior Transponder shall not require any additional external power supply in order to meet the Performance Requirements described in this Scope of Work and Requirements.		
173	Interior Transponders shall be held stationary in their location by means sufficient to provide reliable attachment. The attachment methods shall be sufficient to prevent inadvertent displacement or projectile motion in case of rough road surfaces or accident.		
174	The Interior Transponder shall be marked in such a manner as to render unlikely incorrect orientation of the Interior Transponder upon Installation or reinstallation.		
3.1.2 Interior High-Occupancy Vehicle (HOV) Self Declaration Transponder			
175	The HOV Self Declaration Transponder shall be a programmable, windshield mounted RFID Transponder that is packaged in a monolithic plastic case.		
176	The HOV Self Declaration Transponder shall include a switch that when toggled causes the Transponder to switch from one status to another.		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
177	The HOV Self Declaration Transponder shall support two statuses: single occupancy vehicle (SOV) and high occupancy vehicle (HOV).		
178	The HOV Self Declaration Transponder shall emit a tone when its status is set to HOV.		
179	The HOV Self Declaration Transponder shall meet all Requirements for Interior Transponders as set forth in this Scope of Work and Requirements.		
3.1.3 Exterior Transponder			
180	The Exterior Transponder shall be a programmable RFID Transponder that is packaged in a monolithic plastic case.		
181	The Exterior Transponder shall be for Installation on surfaces outside of the passenger compartment of motor vehicles.		
182	The Exterior Transponder shall withstand ice, snow, steam, dirt, mud, and any solutions used in the lanes, as well as stones and other projectiles such as sand particles and gravel.		
183	The attachment methods shall be sufficient to prevent inadvertent displacement or projectile motion in case of rough road surfaces or accident.		
184	The attachment methods shall allow for removal without risk of damage to the Exterior Transponder or vehicle.		
185	The Exterior Transponder shall be marked in such a manner as to render unlikely incorrect orientation of the Exterior Transponder upon Installation or reinstallation.		
186	Contractor shall supply the required mounting material or hardware with all supplied Exterior Transponders.		
3.2 Functional Requirements			
187	Transponders shall be fully compatible with E-ZPass AVI systems.		
188	Transponder data format shall conform to the E-ZPass Group Transponder data format.		
189	Transponders shall implement full Read/Write functionality.		
190	The HOV Self Declaration Transponder shall implement HOV status declaration compatible with existing E-ZPass HOV Self Declaration Transponders.		
3.3 Form Factor			
3.3.1 Dimensions			
191	Interior Transponders shall be as small as possible and fit behind the rear view mirror.		
192	When properly mounted, Interior Transponders shall not obstruct the driver's field of vision.		
193	When properly mounted, Exterior Transponders shall not obscure the license plate numbering (numbers and letters) or issuing jurisdiction information.		
3.3.2 Transponder Bar Codes			

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
194	Transponders shall be bar coded to match the Transponder number physically encoded on the Transponder unit to support inventory control and automated input to the BOS customer account management system.		
3.3.3 Transponder Labeling			
195	Interior Transponders shall be branded "NC Quick Pass" or any other branding that NCTA may require in the future, and shall not carry any visible manufacturer or vendor brand names. NCTA will provide all required and appropriate "NC Quick Pass" logo artwork.		
196	In addition to any other branding required by NCTA, the Interior Transponders shall bear the "E-ZPass" logo. The "E-ZPass" logo may be embossed in the transponder case or printed on the label. If printed, the "E-ZPass" logo shall be colored in Pantone 259 Purple.		
197	NCTA will Approve final graphic design of all Transponders procured pursuant to this Contract.		
198	Contractor shall provide specifications and restrictions for pigments and labels to be used on Transponders to ensure that pigments or labels will not interfere with Transponder operation.		
3.4 Physical / Environmental			
3.4.1 Operating Environment			
199	Transponders shall be designed to operate without Performance degradation under worst case traffic conditions including the following:		
	• Vehicles traveling up to 130 miles per hour;		
	• Stop-and-go traffic with continuous intermittent acceleration and deceleration between 0 and 15 miles per hour;		
	• Vehicles tailgating;		
	• Different mixes of all vehicle types encountered on North American roads including but not limited to cars, trucks, tractor-trailers, recreation vehicles, motorcycles, buses, and delivery vans;		
	• Vehicles arriving simultaneously at the Transponder Capture Zone; and		
	• Vehicles changing and/or straddling lanes.		
200	Transponders shall be designed to operate without performance degradation under worst case environmental conditions that may be encountered in North America including but not limited to:		
	• Operating Temperatures ranging from -40° F to +185° F;		
	• Storage Temperatures ranging from -40° F to +185° F;		
	• Rain: 1/4 inch of rain per minute;		
	• Fog: 10 feet visibility;		
	• Relative Humidity: 0% - 100%;		
	• Ice: 1/4-inch thickness between the Transponder and the Antenna;		
	• All forms of driving precipitation (sleet, hail, blizzard, etc.); and		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
	<ul style="list-style-type: none">Direct sunlight.		
3.4.2 Electromagnetic Interference			
201	Transponders shall be resistant to electromagnetic interference or noise, electrical interference, and mechanical interference that may typically be found in an ORT environment from sources such as, but not limited to:		
	<ul style="list-style-type: none">Wireless data and voice Services;		
	<ul style="list-style-type: none">Satellite radio signals;		
	<ul style="list-style-type: none">GPS devices;		
	<ul style="list-style-type: none">Vehicle electronics;		
	<ul style="list-style-type: none">Ignition systems;		
	<ul style="list-style-type: none">Electrical appliances;		
	<ul style="list-style-type: none">Lightning (except for direct hits);		
	<ul style="list-style-type: none">Power tools;		
	<ul style="list-style-type: none">Power lines;		
	<ul style="list-style-type: none">Power transformers;		
	<ul style="list-style-type: none">Mobile and portable communications radios;		
	<ul style="list-style-type: none">Video Enforcement and Automatic Vehicle Classification Equipment, including inductive loops and lasers;		
	<ul style="list-style-type: none">Security systems;		
	<ul style="list-style-type: none">Lighting;		
	<ul style="list-style-type: none">Speed radar sources and detectors;		
	<ul style="list-style-type: none">Air conditioning units;		
	<ul style="list-style-type: none">Windshield wipers;		
	<ul style="list-style-type: none">Detuned engines;		
	<ul style="list-style-type: none">Defrosters; and		
	<ul style="list-style-type: none">Anything else that would reasonably be found in an ORT environment.		
3.5 Performance Requirements			
3.5.1 Read/Write Performance			
202	Vehicles properly equipped with Transponders passing through the Toll Zone shall be detected and read completely at least 99.9% of the time, or no more than one (1) missed read or incorrect detect in one thousand (1,000) equipped vehicle passages.		
203	Vehicles properly equipped with Transponders, passing through a Toll Zone configured to write to TDM Transponders, shall be successfully and accurately written to with an accuracy of 99.8%, or no more than two (2) missed or incorrect writes in one thousand (1,000) equipped vehicle passages.		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
3.5.2 Transponder Lifetime			
204	For each supplied Transponder model, life expectancy shall not be less than eight (8) years from the date of first use or after 12 months in storage, whichever occurs earlier.		
205	The HOV Self Declaration Transponder shall be warranted for a minimum of 5,200 switch transitions.		
3.5.3 Battery Performance			
206	Battery life shall be a minimum of eight (8) years from the date of first use or after 12 months in storage, whichever occurs earlier.		
3.6 Equipment Certification			
207	Transponders shall be compliant with International Bridge, Tunnel and Turnpike Association (IBTTA) North American Toll Interoperability Program Electronic Toll Collection Protocol Requirements (see Attachment 3, IBTTA NIOP Requirements Document).		
3.6.1 E-ZPass Group Equipment Certification			
208	Transponders shall be formally approved in writing by the E-ZPass Group for use by a National Affiliate before being placed into service.		
209	If any of the proposed Transponders have not previously been approved for use by a National Affiliate of the E-ZPass Group, Contractor shall complete to NCTA's satisfaction the interoperable technology testing required within 90 Days of Contract award. Requirements for such testing are specified in Attachments 6, 7, 8, 9 and 10 and Contractor shall provide NCTA with all necessary testing		
3.7 Inventory / Distribution			
210	Transponders shall comply with any and all current U.S. and international safety standards to permit unrestricted shipment by mail and commercial carriers with appropriate documentation and in the recommended packaging.		
211	Contractor shall ship Transponders in boxes with dividers and placeholders.		
212	Each box of Transponders shall contain Transponders with consecutive serial numbers starting at a numerical sequence determined jointly by NCTA and Contractor.		
213	Each box of Transponders shall have a barcode marked packing slip and exterior identification with the beginning and ending serial numbers for inventory tracking.		
214	Contractor shall provide a spreadsheet of boxes and serial number ranges along with each shipment of Transponders.		
215	Contractor shall coordinate with the CSC Contractor to develop the exact content and format of the spreadsheet.		
216	Each Transponder shall be provided with a metallic bag (Read Prevention Bag) that will not allow the Transponder to be read while the Transponder is in the bag.		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
217	In addition to the initial shipment of Read Prevention Bags, Contractor shall provide additional Read Prevention Bags in the quantities as may be requested by NCTA throughout the Contract Term.		
218	In addition to the initial shipment of Transponder mounting strips, tabs, cups or other mounting device, Contractor shall provide additional Transponder mounting strips, tabs, cups or other mounting device in the quantities as may be requested by NCTA throughout the Contract Term.		
219	NCTA has an ongoing requirement for the items indicated in this Scope of Work and Requirements. It is an express condition of any award that the successful Contractor shall maintain a reasonable stock on hand for delivery. NCTA will work with the successful Contractor by providing a 45 Day notice for		
220	Contractor is required to deliver Transponder orders according to the Guaranteed Delivery Lead Time for the Equipment ordered. In the event of late delivery, liquidated damage may be accessed. Liquidated damages shall be calculated as follows:		
	<ul style="list-style-type: none">For every week, or part thereof, beyond the indicated Guaranteed Delivery Lead Time, 5% of the total order dollar value per week (or part thereof).		
3.8 Disposal			
221	If there are environmental restrictions on disposal of any type of supplied Transponder, Contractor shall document the proper disposal procedures and the reason for the restrictions.		
3.9 Handheld Reader			
222	Contractor shall provide a Handheld Reader that will be compatible with the provided Transponders.		
223	The Handheld Reader shall be of ergonomic design and powered by a rechargeable battery.		
224	The Handheld Reader shall be able to be carried, moved and operated by one person.		
225	The Handheld Reader shall be able to read all compatible Transponders.		
226	The Handheld Reader shall be equipped with a display which displays data for each Transponder read, including but not limited to:		
	<ul style="list-style-type: none">Transponder ID;		
	<ul style="list-style-type: none">Transponder encoded vehicle class;		
	<ul style="list-style-type: none">Previous Toll Zone as written to the Transponder; and		
	<ul style="list-style-type: none">Position of HOV self-declaration switch at previous Toll Zone (if applicable).		
227	The Handheld Reader shall support an external interface allowing it to exchange all Transponder data with a desktop or laptop workstation (supplied by others).		
228	Contractor shall provide any Software for Installation on desktop or laptop workstations required to support interfacing with the Handheld Reader.		
229	For the Contract Term, and at no additional cost to NCTA, Contractor shall provide the following Software Maintenance Services as it pertains to the Handheld Reader:		
	<ul style="list-style-type: none">Updates to the Handheld Reader firmware;		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
	• Updates to Software for use on connected workstation;		
	• Release Notes for firmware and Software; and		
	• Documentation Updates.		
230	Contractor shall provide training to NCTA or its designated representatives in the use and Maintenance of the Handheld Reader.		
231	The microwave energy radiated from the Handheld Reader shall be well below the limits set by health and telecommunication authorities of United States, and these units shall be allowed for continuous use in an operational environment.		
232	Contractor is required to deliver Handheld Reader orders according to the Guaranteed Delivery Lead Time for the Equipment ordered. In the event of late delivery, liquidated damage may be accessed. Liquidated damages shall be calculated as follows:		
	• For every day beyond the indicated Guaranteed Delivery Lead Time, \$500 / day.		
3.10 Transponder Programmer			
233	Contractor shall provide a Transponder Programmer that will be compatible with the Transponders.		
234	The Transponder Programmer shall allow programming of all agency read-only data fields in the Transponders.		
235	Contractor shall provide any Software for Installation on desktop or laptop workstations required to support interfacing with the Transponder Programmer.		
236	For the Contract Term, and at no additional cost to NCTA, Contractor shall provide the following Software Maintenance Services as it pertains to the Transponder Programmer:		
	• Updates to the Transponder Programmer firmware;		
	• Updates to Software for use on connected workstation;		
	• Release Notes for firmware and Software; and		
	• Documentation Updates.		
237	Contractor shall provide training to NCTA or its designated representatives in the use and Maintenance of the Transponder Programmer.		
238	Contractor is required to deliver Transponder Programmer orders according to the Guaranteed Delivery Lead Time for the Equipment ordered. In the event of late delivery, liquidated damage may be accessed. Liquidated damages shall be calculated as follows:		
	• For every day beyond the indicated Guaranteed Delivery Lead Time, \$500 / day.		
3.11 Maintenance			
239	Contractor shall provide on-call remote and on-site Maintenance Support Services and other technical support for the Handheld Reader and Transponder Programmer throughout the Contract Term.		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
240	Contractor shall repair or replace failed Handheld Readers and Transponder Programmers throughout the Contract Term within fourteen (14) days of Equipment failure.		
241	For failure to repair or replace failed Equipment, Contractor may be subject to liquidated damages. Liquidated damages shall be calculated as follows:		
	• For each day beyond fourteen (14) days in which Contractor failed to repair or replace failed Equipment, \$500 per day.		
3.11.1 Maintenance Support			
242	Contractor shall provide remote technical support to the NCTA, the CSC Contractor, or the RTCS Contractor as needed in the diagnosis and resolution of issues associated with the Handheld Reader and Transponder Programmer,		
243	Remote support shall include domestic U.S. based staffed telephone support either live or beeper and include email capability. The Contractor shall adequately staff any hotlines to handle all calls from NCTA, the CSC Contractor, or the RTCS Contractor.		
244	Contractor shall provide Remote Support via phone on a 24/7 basis. All NCTA, CSC Contractor, and RCTS Contractor requests for remote support shall be answered within fifteen (15) minutes and responded to with a remedy or proposed action plan within a 24-hour period of the inquiry.		
245	If a failure or problem with the Handheld Reader or Transponder Programmer cannot be resolved with remote Maintenance Support, Contractor shall dispatch Maintenance personnel to provide onsite assistance to the RTCS Contractor or CSC Contractor.		
246	Onsite Response Times shall be determined by Priority as described in Section III, Scope of Work and Requirements , Section 3.11.2.		
247	In the event that a support request is not answered within required time period (15 minutes), liquidated damages may be assessed. Liquidated damages shall be calculated as follows:		
	• For every 15-minute period beyond required response time, \$50 / period.		
3.11.2 Maintenance Priorities and Response Times			
248	Onsite Response Time is defined as the elapsed time from when failure or problem was reported to when Contractor Maintenance personnel arrived at the site of the failure or problem.		
249	Priority 1: Defined as any malfunction or fault that has the potential to impact revenue or customer service, such as complete failure of a Handheld Reader used for HOV lane enforcement or to test customer Transponders at a service center.		
	This Priority shall have a two (2) day Onsite Response Time.		
250	Priority 2: Defined as any malfunction or fault that has not impacted revenue or customer service and is not anticipated to immediately impact revenue or customer service, such as the failure of a Handheld Reader or Transponder Programmer used in a bench test or laboratory setting.		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
	This Priority shall have a one (1) week Onsite Response Time.		
251	In the event Contractor does not provide Onsite Response within the required time period, liquidated damages may be assessed. Liquidated damages shall be calculated as follows:		
	• For Priority 1: every day beyond required two (2) day response time, \$500 / day; and		
	• For Priority 2: every day beyond required one (1) week response time, \$500 / day.		
3.12 Testing			
252	For each Transponder order placed, a sample (either partial or full) of Transponders may be lab tested (at NCTA's expense) from each batch delivered to ensure that they remain operationally consistent with previously delivered Transponders and to ensure the Transponder programming is correct. Any batches failing testing shall be replaced at Contractor's expense at NCTA's sole discretion. A batch is considered as failed if there are more than one (1) Transponder error per two hundred (200) tested (0.5%). NCTA will make available any supporting testing documentation.		
3.13 Documentation			
3.13.1 End-User Instructions			
253	Contractor shall provide instructions suitable for use by end users which document the means of attachment and mounting devices used by all supplied Transponder models.		
254	Contractor shall provide a list of vehicle features, such as metallic coated windshields or rearview mirrors with displays, that may interfere with Interior Transponders.		
255	Contractor shall provide a list of vehicle makes and models equipped with features which may interfere with Interior Transponders. Where applicable, Contractor shall indicate alternate mounting locations or other special instructions which would prevent the interference in particular vehicle types.		
256	Contractor shall update the lists of vehicle features that may interfere with Interior Transponders, and the vehicle makes and models equipped with such features, on an annual basis.		
3.13.2 Equipment Documentation			
257	Contractor shall provide instructions and Documentation regarding the storage, transport, issue, and disposal of all Transponder models as applicable.		
258	Contractor shall provide Cut Sheets, Operating Instructions, Installation Instructions, and Maintenance Instructions as applicable for the Handheld Reader and Transponder Programmer.		
3.13.3 Regulatory Compliance			
259	Contractor shall provide documentation stating that all provided Equipment and Transponder models are in compliance with appropriate regulations and standards.		
3.14 Project Management Plan			

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
260	Contractor shall develop a Project Management Plan describing how Contractor plans to implement and manage the Project, including staffing, scheduling and communication procedures for controlling all correspondence, Submittals, and other communications between the Contractor and NCTA, and communications with third-party entities.		
261	The Project Management Plan shall at a minimum include the following elements:		
	• Project scope and key Deliverables;		
	• A description of the management and organization of the program, an organization chart, identification of Key Team Personnel and their responsibilities, percentage commitment to the Project, task leads for each functional area and location and identification of the resources to be used in fulfilling the Requirements of the Contract;		
	• Project team (Contractor, NCTA, NCTA Representatives, NCDOT, and the BOS Contractor) contact information;		
	• A description of the Project planning, Documentation and reporting methods to be utilized, both for use within Contractor’s staff and externally to NCTA and other entities;		
	• A description of the process for communication, escalation and resolution of Project issues with		
	• Meeting schedules with NCTA and other entities including the form of the meeting;		
	• Inclusion of the Approved Project schedule;		
	• A description of the process for reporting, updating and tracking the Project schedule and Project performance;		
	• Approach to change management, consistent with Contract Requirements, including a description of the process for documenting and submitting change requests, the Approval process and how the change management approach will be integrated into day-to-day Project management;		
	• Approach to document control, including Software (NCTA shall have the capability to download documents using this Software) and tools NCTA will use and have read-only access to via the Web;		
	• Approach to risk management;		
	• Approach to Quality Assurance and Quality Control;		
	• Documenting the invoice submission; invoice backup information; verification, and Approval		
	• A section with all Approved Project forms including but not limited to, meeting agenda; meeting notes; action items tracking log; monthly progress report, and invoices; and		
	• An emergency contact list.		
262	Contractor shall identify the tools and products used to manage the Project including Software development lifecycle and the internal controls instituted by the Contractor to guarantee successful delivery of the Project.		
263	Contractor shall develop and submit the Project Management Plan to NCTA for review and Approval.		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
264	Contractor shall develop and submit the communication procedures to NCTA for review and Approval that address the following, including but not limited to:		
	• Correspondence: Correspondence shall be identified as to originator and designated receiver and include the form of transmission;		
	• Document control: Tracking of document versions and changes including naming conventions;		
	• Invoices: All invoices shall be submitted with accompanying backup information as required by the Contract and consistent with NCTA processes and invoicing and auditing policies. Contractor shall work with NCTA to develop the appropriate invoice and back-up materials as a part of the Project Management Plan development;		
	• Submittals: All Submittals shall be delivered as an enclosure to Contractor's Submittal letter. Each Submittal letter shall be limited to a single subject or item. Contractor's letter shall identify the Contract number, Contract name and subject of the Submittal;		
	• Contract number and Contract name: All items of correspondence, invoices, Submittals and Documentation shall contain the Contract number and the designated Contract name; and		
	• Comments Log: Process for validating that all comments provided by NCTA on Contractor Deliverables are successfully addressed.		

Summary	
Conforming:	0
Non-Conforming:	0
Blank:	178

Form D-6

Requirements Conformance Matrix

Category C – Local Transponders

(An Excel version of the Requirements Conformance Matrix Category C – Local Transponders is “paper clipped” to this file for ease of completion.)

Exhibit D-6, Category C - Local Transponders: Instructions for Completing the Requirements Conformance Matrix	
1)	The Proposer shall complete and submit the Excel version of the Requirements Conformance Matrix (RCM) which is "paper clipped" to the AVI RFP Exhibits PDF.
2)	The RCM covers each of the requirements set forth in Section III, Scope of Work and Requirements .
3)	Proposers shall not alter the requirements listed in the RCM in any way and shall use the workbooks provided. The Proposer shall submit a PDF version of the completed RCM in Technical Proposal Section 5, in addition to submitting the Excel version of the RCM on CD/DVD, as directed in Section IV, Proposal Contents and Submission , Section 2.I Submission of Technical Proposal.
4)	Instructions for completing the RCM are as follows:
a)	There are four columns in the matrix as follows:
i.	Requirement # (Column A): A sequential number that matches the requirement number in Section III, Scope of Work and Requirements .
ii.	Requirement (Column B): A description of the requirement.
iii.	Status (Column C): Proposer must select one of the two (2) response codes for each Requirement and enter it in this column as further detailed in item "b)" below.
iv.	Comment (Column D): This field must be completed if the Conformance code is entered as "N = Non-Conforming" for the particular Requirement in order to explain why the Proposer is not conforming to the Requirement. In addition, Exhibit D-12, Requirement Non-Conformance Detail, must be completed for any such items.
b)	Proposers must complete the Status (Column C) in the following manner:
i.	C = Conforming: Enter a "C" in this column if the requirement described will be provided by the proposed Reader, Equipment or Services.
ii.	N = Non-Conforming: Enter an "N" if the Proposer will not provide the functionality and will not meet the requirement as part of its Proposal. If any row in the Status column is completed as "N" then Proposer must provide an explanation in the Comment (Column D) in the corresponding row. The Comment field may reference information that is included elsewhere in the Proposal.

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
4. Category C: Provide Local Transponders, Accessories and Services			
4.1 Transponder Types			
265	Contractor shall provide at least one type of Interior Sticker Transponder in the quantities as may be requested by NCTA throughout the Contract Term.		
266	It is desired, but not required, that Contractor provide at least one type of Exterior Sticker Transponder in the quantities as may requested by NCTA throughout the Contract Term.		
267	It is desired, but not required, that Contractor provide at least one type of Exterior Hard Case Transponder in the quantities as may requested by NCTA throughout the Contract Term.		
268	Interior and Exterior Local Transponders shall be compliant with either the SeGo or ISO 18000-63 (6C) standard.		
269	All of the Interior and Exterior Local Transponders shall be compliant with the same standard, either SeGo or 6C.		
4.1.1 Interior Transponder			
270	Interior Transponders shall be programmable, Sticker Transponders that are powered by radio frequency energy and shall not require a battery.		
271	The Interior Transponder shall be packaged as a flexible self-adhesive sticker.		
272	The Interior Transponder shall be designed such that once it is mounted to the windshield, any attempt to remove the Interior Transponder from its mounting location will result in it becoming permanently		
273	The Interior Transponder shall be designed in such a manner that attachment and removal will not cause damage to the surface to which it is attached.		
274	The Interior Transponder shall be marked in a manner that incorrectly orienting the Transponder upon Installation is unlikely.		
4.1.2 Exterior Transponder			
275	Exterior Transponders shall be programmable, Sticker or Hard Case Transponders that are powered by radio wave and shall not require a battery.		
276	The Exterior Transponders shall be for Installation on surfaces outside of the passenger compartment of motor vehicles.		
277	Exterior Transponders shall withstand ice, snow, steam, dirt, mud, any solutions used in the lanes, as well as stones and other projectiles such as sand particles and gravel.		
278	The Exterior Transponder shall be designed for operation from -40° F to +150° F and in all weather conditions.		
279	If the Exterior Transponder is a Sticker type, it shall be designed such that once it is attached to the vehicle, any attempt to remove the Transponder from its mounting location will result in it becoming permanently unusable.		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
280	If the Exterior Transponder is a Hard Case type, the Exterior Transponder and its attachment methods shall allow removal without risk of damage to the Exterior Transponder.		
281	The Exterior Transponder shall be designed in such a manner that attachment and removal will not cause damage to the surface to which it is attached.		
282	The Exterior Transponder shall be marked in such a manner as to render unlikely incorrect orientation of the Exterior Transponder upon Installation or reinstallation.		
4.2 Functional Requirements			
283	All Transponder types shall meet power level and activation Requirements to support RTCS Transponder Capture Zone Requirements set forth in Section III, Scope of Work and Requirements , Section 2.3.1, Transponder Capture Zone.		
284	If supplied, SeGo Transponders shall meet the following Requirements:		
	• Transponders shall conform to the current NCTA SeGo Transponder data format;		
	• Transponders shall be required to be consistent with the observed operational performance of the current NCTA SeGo Transponders both during product qualification, as well as the Contract Term;		
	• Transponders shall be required to be consistent with following measured characteristics of the current NCTA SeGo Transponders both during product qualification, as well as the Contract Term:		
	o Minimum activation energy;		
	o Return signal strength; and		
	o Polarization;		
	• Transponders shall be compliant with International Bridge, Tunnel and Turnpike Association (IBTTA) North American Toll Interoperability Program Electronic Toll Collection Protocol Requirements (see Attachment 3, IBTTA NIOP Requirements Document); and		
	• The Transponders shall be serialized to fit in with, and not conflict with, the Transponder serial number ranges already procured by NCTA. Specific details shall be requested by Contractor after award, prior to manufacturing.		
285	If supplied, 6C Transponders shall meet the following Requirements:		
	• Transponders shall be compliant with most recent ISO/EIC I8000-63 standard;		
	• Transponders shall be compliant with most recent 6C Toll Operators Coalition (6C TOC) AVI Transponder Programming Standard at the time of Contract Award (see Attachment 2, 6C TOC AVI Transponder Programming Standard for the current version);		
	• At NCTA's discretion and at no additional cost to NCTA, Contractor shall provide Transponders that are compliant with newer versions of the 6C TOC AVI Transponder Programming Standard over the life of the Contract; and		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
	<ul style="list-style-type: none">Transponders shall be compliant with International Bridge, Tunnel and Turnpike Association (IBTTA) North American Toll Interoperability Program Electronic Toll Collection Protocol Requirements (see Attachment 3, IBTTA NIOP Requirements Document).		
4.3 Form Factor			
4.3.1 Dimensions			
286	NCTA currently distributes windshield Sticker Transponders via a retail product called "NC Quick Pass". The current size of this Transponder is 2.89" W X 2.19" H. The Interior Sticker Transponder shall not exceed these dimensions.		
4.3.2 Transponder Bar Codes			
287	Transponders shall be bar coded to match the Transponder number physically encoded on the Transponder unit to support inventory control and automated input to the back office customer accounting system.		
4.3.3 Transponder Labeling			
288	Interior Transponders shall be branded "NC Quick Pass" or any other branding that NCTA may require in the future, and shall not carry any visible manufacturer or vendor brand names. NCTA will provide all required and appropriate "NC Quick Pass" logos and artwork.		
289	NCTA will Approve final graphic design of all Transponders procured pursuant to this Contract.		
290	Contractor shall provide specifications and restrictions for pigments and labels to be used on Transponders to ensure that pigments or labels will not interfere with Transponder operation.		
4.4 Physical / Environmental			
4.4.1 Operating Environment			
291	Transponders shall be designed to operate without Performance degradation under worst case traffic conditions including the following:		
	<ul style="list-style-type: none">Vehicles traveling up to 130 miles per hour;		
	<ul style="list-style-type: none">Stop-and-go traffic with continuous intermittent acceleration and deceleration between 0 and 15 miles per hour;		
	<ul style="list-style-type: none">Vehicles tailgating;		
	<ul style="list-style-type: none">Different mixes of all vehicle types encountered on North American roads including but not limited to cars, trucks, tractor-trailers, recreation vehicles, motorcycles, buses, and delivery vans;		
	<ul style="list-style-type: none">Vehicles arriving simultaneously at the Transponder Capture Zone; and		
	<ul style="list-style-type: none">Vehicles changing and/or straddling lanes.		
292	Transponders shall be designed to operate without performance degradation under worst case environmental conditions that may be encountered in North America including but not limited to:		
	<ul style="list-style-type: none">Operating Temperatures ranging from -40° F to +185° F;		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
	• Storage Temperatures ranging from -40° F to +185° F;		
	• Rain: 1/4 inch of rain per minute;		
	• Fog: 10 feet visibility;		
	• Relative Humidity: 0% - 100%;		
	• Ice: 1/4-inch thickness between the Transponder and the Antenna;		
	• All forms of driving precipitation (sleet, hail, blizzard, etc.); and		
	• Direct sunlight.		
293	Transponders will be exposed to direct sunlight, which has been known to cause issues with some Transponders failing to respond to AVI Reader requests and / or providing incorrect reads in some cases. Sunlight screening shall be built into both the Interior and Exterior Transponders to ensure they perform as well under conditions of direct sunlight as in overcast conditions.		
4.4.2 Electromagnetic Interference			
294	Transponders shall be resistant to electromagnetic interference or noise, electrical interference, and mechanical interference that may typically be found in an ORT environment from sources such as, but not limited to:		
	• Wireless data and voice Services;		
	• Satellite radio signals;		
	• GPS devices;		
	• Vehicle electronics;		
	• Ignition systems;		
	• Electrical appliances;		
	• Lightning (except for direct hits);		
	• Power tools;		
	• Power lines;		
	• Power transformers;		
	• Mobile and portable communications radios;		
	• Video Enforcement and Automatic Vehicle Classification Equipment, including inductive loops and lasers;		
	• Security systems;		
	• Lighting;		
	• Speed radar sources and detectors;		
	• Air conditioning units;		
	• Windshield wipers;		
	• Detuned engines;		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
	• Defrosters; and		
	• Anything else that would reasonably be found in an ORT environment.		
4.5 Performance Requirements			
4.5.1 Read Performance			
295	Vehicles properly equipped with Transponders passing through the toll point shall be detected and read completely at least 99.9% of the time, or no more than one (1) missed read or incorrect detect in one thousand (1,000) equipped vehicle passages.		
4.5.2 Transponder Lifetime			
296	For each supplied Transponder model, life expectancy shall not be less than eight (8) years from the date of first use or after 12 months in storage, whichever occurs earlier.		
4.6 Equipment Certification			
297	6C Transponders shall be certified by OmniAir Certification Services (OCS) for 6C Interoperability.		
298	If the Transponder has not previously been certified by OmniAir Certification Services (OCS) for 6C Interoperability, Contractor shall undertake interoperable technology testing and obtain Certification by OCS within 90 Days of Contract award.		
299	SeGo Transponders shall be interoperable with existing toll systems which use SeGo Readers and Transponders. Contractor shall undertake interoperable technology testing similar to that specified in Attachments 6 and 9 and as approved by NCTA. Successful completion of testing shall be required within 90 Days of Contract award.		
4.7 Inventory / Distribution			
300	Transponders shall comply with any and all current U.S. and international safety standards to permit unrestricted shipment by mail and commercial carriers with appropriate documentation and in the recommended packaging.		
301	Contractor shall ship Hard Case Transponders in boxes with dividers and placeholders.		
302	Each box of Transponders shall contain Transponders with serial numbers in sequential order starting at a numerical sequence determined jointly by NCTA and Contractor.		
303	Each box of Transponders shall have a barcode marked packing slip and exterior identification with the beginning and ending serial numbers for inventory tracking.		
304	Contractor shall provide a spreadsheet of boxes and serial number ranges along with each shipment of Transponders.		
305	Contractor shall coordinate with the BOS Contractor to develop the exact content and format of the spreadsheet.		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
306	NCTA has an ongoing requirement for the items indicated in this Scope of Work and Requirements. It is an express condition of any award that the successful Contractor shall maintain a reasonable stock on hand for delivery. NCTA will work with the successful Contractor by providing a 45-Day notice for		
307	Contractor is required to deliver Transponder orders according to the Guaranteed Delivery Lead Time for the Equipment ordered. In the event of late delivery, liquidated damage may be accessed. Liquidated damages shall be calculated as follows:		
	<ul style="list-style-type: none">For every week, or part thereof, beyond the indicated Guaranteed Delivery Lead Time, 5% of the total order dollar value per week (or part thereof).		
4.8 Disposal			
308	If there are environmental restrictions on disposal of any type of supplied Transponder, Contractor shall document the proper disposal procedures and the reason for the restrictions.		
4.9 Handheld Reader			
309	Contractor shall provide a Handheld Reader that is compatible with the provided Transponders.		
310	The Handheld Reader shall be of ergonomic design and powered by a rechargeable battery.		
311	The Handheld Reader shall be able to be carried, moved and operated by one person.		
312	The Handheld Reader shall be able to read data from all provided Transponders.		
313	The Handheld Reader shall be equipped with a display which displays, at a minimum, the Transponder ID of any Transponder that is read.		
314	The Handheld Reader shall support an external interface allowing it to be exchange all Transponder data with a desktop or laptop workstation (supplied by others).		
315	Contractor shall provide any Software for Installation on desktop or laptop workstations required to support interfacing with the Handheld Reader.		
316	For the Contract Term, and at no additional cost to NCTA, Contractor shall provide the following Software Maintenance Services as it pertains to the Handheld Reader:		
	<ul style="list-style-type: none">Updates to the Handheld Reader firmware;		
	<ul style="list-style-type: none">Updates to Software for use on connected workstation;		
	<ul style="list-style-type: none">Release Notes for firmware and Software; and		
	<ul style="list-style-type: none">Documentation Updates.		
317	Contractor shall provide training to NCTA or its designated representatives in the use and Maintenance of the Handheld Reader.		
318	The microwave energy radiated from the Handheld Reader shall be well below the limits set by health and telecommunication authorities of United States, and these units shall be allowed for continuous use in an operational environment.		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
319	Contractor is required to deliver Handheld Reader orders according to the Guaranteed Delivery Lead Time for the Equipment ordered. In the event of late delivery, liquidated damage may be accessed. Liquidated damages shall be calculated as follows:		
	<ul style="list-style-type: none">For every day beyond the indicated Guaranteed Delivery Time, \$500 / day.		
4.10 Transponder Programmer			
320	Contractor shall provide a Transponder Programmer that is compatible with the Transponders.		
321	The Transponder Programmer shall allow programming of all agency read-only data fields in the Transponders.		
322	Contractor shall provide any Software for Installation on desktop or laptop workstations required to support interfacing with the Transponder Programmer.		
323	For the Contract Term, and at no additional cost to NCTA, Contractor shall provide the following Software Maintenance Services as it pertains to the Transponder Programmer:		
	<ul style="list-style-type: none">Updates to the Transponder Programmer firmware;		
	<ul style="list-style-type: none">Updates to Software for use on connected workstation;		
	<ul style="list-style-type: none">Release Notes for firmware and Software; and		
	<ul style="list-style-type: none">Documentation Updates.		
324	Contractor shall provide training to NCTA or its designated representatives in the use and Maintenance of the Transponder Programmer.		
325	Contractor is required to deliver Transponder Programmer orders according to the Guaranteed Delivery Lead Time for the Equipment ordered. In the event of late delivery, liquidated damage may be accessed. Liquidated damages shall be calculated as follows:		
	<ul style="list-style-type: none">For every day beyond the indicated Guaranteed Delivery Lead Time, \$500 / day.		
4.11 Maintenance			
326	Contractor shall provide on-call remote and on-site Maintenance Support Services and other technical support for the Handheld Reader and Transponder Programmer throughout the Contract Term.		
327	Contractor shall repair or replace failed Handheld Readers and Transponder Programmers throughout the Contract Term within fourteen (14) days of Equipment failure.		
328	For failure to repair or replace failed Equipment, Contractor may be subject to liquidated damages. Liquidated damages shall be calculated as follows:		
	<ul style="list-style-type: none">For each day beyond fourteen (14) days in which Contractor failed to repair or replace failed Equipment, \$500 per day.		
4.11.1 Maintenance Support			

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
329	Contractor shall provide remote technical support to the NCTA, the CSC Contractor, or the RTCS Contractor as needed in the diagnosis and resolution of issues associated with the Handheld Reader and Transponder Programmer.		
330	Remote support shall include domestic U.S. based staffed telephone support either live or beeper and include email capability. The Contractor shall adequately staff any hotlines to handle all calls from NCTA, the CSC Contractor, or the RTCS Contractor.		
331	Contractor shall provide Remote Support via phone on a 24/7 basis. All NCTA, CSC Contractor, and RCTS Contractor requests for remote support shall be answered within fifteen (15) minutes and responded to with a remedy or proposed action plan within a 24-hour period of the inquiry.		
332	If a failure or problem with the Handheld Reader or Transponder Programmer cannot be resolved with remote Maintenance Support, Contractor shall dispatch Maintenance personnel to provide onsite assistance to the RTCS Contractor or CSC Contractor.		
333	Onsite Response Times shall be determined by Priority as described in Section III, Scope of Work and Requirements , Section 4.11.2.		
334	In the event that a support request is not answered within required time period (15 minutes), liquidated damages may be assessed. Liquidated damages shall be calculated as follows: <ul style="list-style-type: none">For every 15-minute period beyond required response time, \$50 / period.		
4.11.2 Maintenance Priorities and Response Times			
335	Onsite Response Time is defined as the elapsed time from when failure or problem was reported to when Contractor Maintenance personnel arrived at the site of the failure or problem.		
336	Priority 1: Defined as any malfunction or fault that has the potential to impact revenue or customer service, such as complete failure of a Handheld Reader used for HOV lane enforcement or to test customer Transponders at a service center. This Priority shall have a two (2) day Onsite Response Time.		
337	Priority 2: Defined as any malfunction or fault that has not impacted revenue or customer service and is not anticipated to immediately impact revenue or customer service, such as the failure of a Handheld Reader or Transponder Programmer used in a bench test or laboratory setting. This Priority shall have a one (1) week Onsite Response Time.		
338	In the event Contractor does not provide Onsite Response within the required time period, liquidated damages may be assessed. Liquidated damages shall be calculated as follows: <ul style="list-style-type: none">For Priority 1: every day beyond required two (2) day response time, \$500 / day; andFor Priority 2: every day beyond required one (1) week response time, \$500 / day.		
4.12 Testing			

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
339	For each Transponder order placed, a sample (either partial or full) of Transponders may also be lab tested (at NCTA's expense) from each batch delivered to ensure that they remain operationally consistent with previously delivered Transponders and to ensure the Transponder programming is correct. Any batches failing testing shall be replaced at Contractor's expense at NCTA's sole discretion. A batch is considered as failed if there are more than one (1) Transponder error per two hundred (200) tested (0.5%). NCTA will make available any supporting testing documentation.		
4.13 Documentation			
4.13.1 End-User Instructions			
340	Contractor shall provide instructions suitable for use by end users which document the means of attachment and mounting devices used by all supplied Transponder models.		
341	Contractor shall provide a list of vehicle features, such as metallic coated windshields or rearview mirrors with displays, that may interfere with Interior Transponders.		
342	Contractor shall provide a list of vehicles equipped with features which may interfere with Interior Transponders. Where applicable, Contractor shall indicate alternate mounting locations or other special instructions which would prevent the interference in particular vehicle types.		
4.13.2 Equipment Documentation			
343	Contractor shall provide instructions and Documentation regarding the storage, transport, issue, and disposal of all Transponder models as applicable.		
344	Contractor shall provide Cut Sheets, Operating Instructions, Installation Instructions, and Maintenance Instructions as applicable for the Handheld Reader and Transponder Programmer.		
4.13.3 Regulatory Compliance			
345	Contractor shall provide documentation stating that all provided Equipment and Transponder models are in compliance with appropriate regulations and standards.		
4.14 Project Management Plan			
346	Contractor shall develop a Project Management Plan describing how Contractor plans to implement and manage the Project, including staffing, scheduling and communication procedures for controlling all correspondence, Submittals, and other communications between the Contractor and NCTA, and communications with third-party entities.		
347	The Project Management Plan shall at a minimum include the following elements:		
	• Project scope and key Deliverables;		
	• A description of the management and organization of the program, an organization chart, identification of Key Team Personnel and their responsibilities, percentage commitment to the Project, task leads for each functional area and location and identification of the resources to be used in fulfilling the Requirements of the Contract;		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
	<ul style="list-style-type: none">Project team (Contractor, NCTA, NCTA Representatives, NCDOT, and the BOS Contractor) contact information;		
	<ul style="list-style-type: none">A description of the Project planning, Documentation and reporting methods to be utilized, both for use within Contractor's staff and externally to NCTA and other entities;		
	<ul style="list-style-type: none">A description of the process for communication, escalation and resolution of Project issues with		
	<ul style="list-style-type: none">Meeting schedules with NCTA and other entities including the form of the meeting;		
	<ul style="list-style-type: none">Inclusion of the Approved Project schedule;		
	<ul style="list-style-type: none">A description of the process for reporting, updating and tracking the Project schedule and Project performance;		
	<ul style="list-style-type: none">Approach to change management, consistent with Contract Requirements, including a description of the process for documenting and submitting change requests, the Approval process and how the change management approach will be integrated into day-to-day Project management;		
	<ul style="list-style-type: none">Approach to document control, including Software (NCTA shall have the capability to download documents using this Software) and tools NCTA will use and have read-only access to via the Web;		
	<ul style="list-style-type: none">Approach to risk management;		
	<ul style="list-style-type: none">Approach to Quality Assurance and Quality Control;		
	<ul style="list-style-type: none">Documenting the invoice submission; invoice backup information; verification, and Approval		
	<ul style="list-style-type: none">A section with all Approved Project forms including but not limited to, meeting agenda; meeting notes; action items tracking log; monthly progress report, and invoices; and		
	<ul style="list-style-type: none">An emergency contact list.		
348	Contractor shall identify the tools and products used to manage the Project including Software development lifecycle and the internal controls instituted by the Contractor to guarantee successful delivery of the Project.		
349	Contractor shall develop and submit the Project Management Plan to NCTA for review and Approval.		
350	Contractor shall develop and submit the communication procedures to NCTA for review and Approval that address the following, including but not limited to:		
	<ul style="list-style-type: none">Correspondence: Correspondence shall be identified as to originator and designated receiver and include the form of transmission;		
	<ul style="list-style-type: none">Document control: Tracking of document versions and changes including naming conventions;		
	<ul style="list-style-type: none">Invoices: All invoices shall be submitted with accompanying backup information as required by the Contract and consistent with NCTA processes and invoicing and auditing policies. Contractor shall work with NCTA to develop the appropriate invoice and back-up materials as a part of the Project Management Plan development;		

Requirement #	Requirement	Status (C - Conforming, N - Non-Conforming)	Comment (Required if "Non-Conforming" is selected, otherwise, optional)
	• Submittals: All Submittals shall be delivered as an enclosure to Contractor's Submittal letter. Each Submittal letter shall be limited to a single subject or item. Contractor's letter shall identify the Contract number, Contract name and subject of the Submittal;		
	• Contract number and Contract name: All items of correspondence, invoices, Submittals and Documentation shall contain the Contract number and the designated Contract name; and		
	• Comments Log: Process for validating that all comments provided by NCTA on Contractor Deliverables are successfully addressed.		

<u>Summary</u>	
Conforming:	0
Non-Conforming:	0
Blank:	170

Form D-7

Price Proposals

Separate Price Proposal forms provided for:

Category A – Readers

Category B – TDM Transponders

Category C – Local Transponders

Form D-7 Price Proposal Category A – Readers

(An Excel version of the Price Proposal Category A – Readers is “paper clipped” to this file for ease of completion.)

Price Sheet: A-1

Category A - Readers
Summary
(Summary Only - No Proposer Input Required)

Line	Description of Item	Project Level Items Price (\$) (Sheet A-1-1)	Monroe Expressway Price (\$) (Sheet A-1-2)	US-74 Express Lanes Price (\$) (Sheet A-1-3)	Triangle Expressway Price (\$) (Sheet A-1-4)	Grand Total Price (\$)
Implementation Phase						
1	Equipment		\$ -	\$ -	\$ -	\$ -
2	Installation Support		\$ -	\$ -	\$ -	\$ -
3	Other Services	\$ -	\$ -	\$ -	\$ -	\$ -
4	Implementation Phase Sub-Total:	\$ -	\$ -	\$ -	\$ -	\$ -
Maintenance Phase (Sheet A-1-5)						
5	Base Contract Term		\$ -	\$ -	\$ -	\$ -
6	Extension 1		\$ -	\$ -	\$ -	\$ -
7	Extension 2		\$ -	\$ -	\$ -	\$ -
8	Maintenance Phase Sub-Total:		\$ -	\$ -	\$ -	\$ -
9	Category A - Readers Summary Sub-Total:	\$ -	\$ -	\$ -	\$ -	
10	Category A - Readers Summary Total:					\$ -

Grand Total Dollars

Officer Signature	Date
Name:	
Title:	
Address:	
Phone:	

Price Sheet: A-1-1

Category A - Readers Project Level Items		
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Line	Description of Item	Unit	Price (\$)
Project Management			
1	Project Management (including Project Management Plan)	Lump Sum	
2	Project Management Sub-Total:		\$ -
Equipment Certification			
3	E-ZPass Group Certification	Lump Sum	
4	6C Certification	Lump Sum	
5	SeGo Compatibility Certification	Lump Sum	
6	Certification Sub-Total:		\$ -
Testing			
7	Factory Acceptance Testing	Lump Sum	
8	Testing Sub-Total:		\$ -
Maintenance Documentation			
9	Preventative Maintenance Plan	Lump Sum	
10	Maintenance and Repair Manual	Lump Sum	
11	Maintenance Documentation Sub-Total:		\$ -
Operating Documentation			
12	Interface Control Document	Lump Sum	
13	Operating Documentation	Lump Sum	
14	Operating Documentation Sub-Total:		\$ -
15	Category A - Readers Project Level Items Total:		\$ -

Price Sheet: A-1-2

Category A - Readers

Roadway Level Equipment, Installation Support and Other Services

Monroe Expressway

Line	Description of Item	Model Number	Unit	Unit Price (\$)
Equipment				
1	Tri-Protocol Readers - Type 1		Each	
2	Lane Kits - Type 1		Each	
3	Antennas - Type 1		Each	
4	Antenna Mounting Kits - Type 1		Each	
5	Reader Enclosures - Type 1		Each	
6	Enclosure Climate Control - Type 1		Each	
7	Tri-Protocol Readers - Type 2		Each	
8	Lane Kits - Type 2		Each	
9	Antennas - Type 2		Each	
10	Antenna Mounting Kits - Type 2		Each	
11	Reader Enclosures - Type 2		Each	
12	Enclosure Climate Control - Type 2		Each	
Other (add Line for each proposed Equipment not included above):				
13			Each	
14			Each	
15			Each	
16			Each	
17			Each	
18			Each	
19			Each	
20			Each	
21			Each	
22			Each	
23	Equipment Sub-Total:			
Installation Support				
24	Perform Radio Frequency Site Survey		Each	
25	Support Installation of Reader and Associated Equipment		Each	
26	Support Onsite Installation Testing (OIT)		Each	
27	Support Installation and Commissioning Testing		Each	
28	Installation Support Sub-Total:			
Other Services				
29	Training		Lump Sum	
30	RTCS FAT Support		Lump Sum	
31	FCC Licensing		Lump Sum	
32	Other Services Sub-Total:			
33	Category A - Readers Monroe Expressway Sub-Total:			
34	Category A - Readers Monroe Expressway Total:			

Price Sheet: A-1-2

Category A - Readers
Roadway Level Equipment, Installation Support and Other Services
Monroe Expressway

Description of Item		M03		M04	
Equipment		Quantity	Price (\$)	Quantity	Price (\$)
Tri-Protocol Readers - Type 1			\$ -		\$ -
Lane Kits - Type 1			\$ -		\$ -
Antennas - Type 1			\$ -		\$ -
Antenna Mounting Kits - Type 1			\$ -		\$ -
Reader Enclosures - Type 1			\$ -		\$ -
Enclosure Climate Control - Type 1			\$ -		\$ -
Tri-Protocol Readers - Type 2			\$ -		\$ -
Lane Kits - Type 2			\$ -		\$ -
Antennas - Type 2			\$ -		\$ -
Antenna Mounting Kits - Type 2			\$ -		\$ -
Reader Enclosures - Type 2			\$ -		\$ -
Enclosure Climate Control - Type 2			\$ -		\$ -
Other (add Line for each proposed Equipment not included above):					
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
Equipment Sub-Total:			\$ -		\$ -
Installation Support					
Perform Radio Frequency Site Survey			\$ -		\$ -
Support Installation of Reader and Associated Equipment			\$ -		\$ -
Support Onsite Installation Testing (OIT)			\$ -		\$ -
Support Installation and Commissioning Testing			\$ -		\$ -
Installation Support Sub-Total:			\$ -		\$ -
Other Services					
Training					
RTCS FAT Support					
FCC Licensing					
Other Services Sub-Total:					
Category A - Readers Monroe Expressway Sub-Total:		M03 Total:	\$ -	M04 Total:	\$ -
Category A - Readers Monroe Expressway Total:					

Price Sheet: A-1-2

Category A - Readers Roadway Level Equipment, Installation Support and Other Services Monroe Expressway				
Description of Item	M05		M06	
	Quantity	Price (\$)	Quantity	Price (\$)
Equipment				
Tri-Protocol Readers - Type 1		\$ -		\$ -
Lane Kits - Type 1		\$ -		\$ -
Antennas - Type 1		\$ -		\$ -
Antenna Mounting Kits - Type 1		\$ -		\$ -
Reader Enclosures - Type 1		\$ -		\$ -
Enclosure Climate Control - Type 1		\$ -		\$ -
Tri-Protocol Readers - Type 2		\$ -		\$ -
Lane Kits - Type 2		\$ -		\$ -
Antennas - Type 2		\$ -		\$ -
Antenna Mounting Kits - Type 2		\$ -		\$ -
Reader Enclosures - Type 2		\$ -		\$ -
Enclosure Climate Control - Type 2		\$ -		\$ -
Other (add Line for each proposed Equipment not included above):				
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
Equipment Sub-Total:		\$ -		\$ -
Installation Support				
Perform Radio Frequency Site Survey		\$ -		\$ -
Support Installation of Reader and Associated Equipment		\$ -		\$ -
Support Onsite Installation Testing (OIT)		\$ -		\$ -
Support Installation and Commissioning Testing		\$ -		\$ -
Installation Support Sub-Total:		\$ -		\$ -
Other Services				
Training				
RTCS FAT Support				
FCC Licensing				
Other Services Sub-Total:				
Category A - Readers Monroe Expressway Sub-Total:	M05 Total:	\$ -	M06 Total:	\$ -
Category A - Readers Monroe Expressway Total:				

Price Sheet: A-1-2

Category A - Readers Roadway Level Equipment, Installation Support and Other Services Monroe Expressway					
Description of Item		M07		M08	
Equipment		Quantity	Price (\$)	Quantity	Price (\$)
Tri-Protocol Readers - Type 1			\$ -		\$ -
Lane Kits - Type 1			\$ -		\$ -
Antennas - Type 1			\$ -		\$ -
Antenna Mounting Kits - Type 1			\$ -		\$ -
Reader Enclosures - Type 1			\$ -		\$ -
Enclosure Climate Control - Type 1			\$ -		\$ -
Tri-Protocol Readers - Type 2			\$ -		\$ -
Lane Kits - Type 2			\$ -		\$ -
Antennas - Type 2			\$ -		\$ -
Antenna Mounting Kits - Type 2			\$ -		\$ -
Reader Enclosures - Type 2			\$ -		\$ -
Enclosure Climate Control - Type 2			\$ -		\$ -
Other (add Line for each proposed Equipment not included above):					
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
Equipment Sub-Total:			\$ -		\$ -
Installation Support					
Perform Radio Frequency Site Survey			\$ -		\$ -
Support Installation of Reader and Associated Equipment			\$ -		\$ -
Support Onsite Installation Testing (OIT)			\$ -		\$ -
Support Installation and Commissioning Testing			\$ -		\$ -
Installation Support Sub-Total:			\$ -		\$ -
Other Services					
Training					
RTCS FAT Support					
FCC Licensing					
Other Services Sub-Total:					
Category A - Readers Monroe Expressway Sub-Total:		M07 Total:	\$ -	M08 Total:	\$ -
Category A - Readers Monroe Expressway Total:					

Price Sheet: A-1-2

Category A - Readers Roadway Level Equipment, Installation Support and Other Services Monroe Expressway				
Description of Item	M09		M10	
	Quantity	Price (\$)	Quantity	Price (\$)
Equipment				
Tri-Protocol Readers - Type 1		\$ -		\$ -
Lane Kits - Type 1		\$ -		\$ -
Antennas - Type 1		\$ -		\$ -
Antenna Mounting Kits - Type 1		\$ -		\$ -
Reader Enclosures - Type 1		\$ -		\$ -
Enclosure Climate Control - Type 1		\$ -		\$ -
Tri-Protocol Readers - Type 2		\$ -		\$ -
Lane Kits - Type 2		\$ -		\$ -
Antennas - Type 2		\$ -		\$ -
Antenna Mounting Kits - Type 2		\$ -		\$ -
Reader Enclosures - Type 2		\$ -		\$ -
Enclosure Climate Control - Type 2		\$ -		\$ -
Other (add Line for each proposed Equipment not included above):				
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
Equipment Sub-Total:		\$ -		\$ -
Installation Support				
Perform Radio Frequency Site Survey		\$ -		\$ -
Support Installation of Reader and Associated Equipment		\$ -		\$ -
Support Onsite Installation Testing (OIT)		\$ -		\$ -
Support Installation and Commissioning Testing		\$ -		\$ -
Installation Support Sub-Total:		\$ -		\$ -
Other Services				
Training				
RTCS FAT Support				
FCC Licensing				
Other Services Sub-Total:				
Category A - Readers Monroe Expressway Sub-Total:	M09 Total:	\$ -	M10 Total:	\$ -
Category A - Readers Monroe Expressway Total:				

Price Sheet: A-1-2

Category A - Readers Roadway Level Equipment, Installation Support and Other Services Monroe Expressway				
Description of Item	M11		M12	
	Quantity	Price (\$)	Quantity	Price (\$)
Equipment				
Tri-Protocol Readers - Type 1		\$ -		\$ -
Lane Kits - Type 1		\$ -		\$ -
Antennas - Type 1		\$ -		\$ -
Antenna Mounting Kits - Type 1		\$ -		\$ -
Reader Enclosures - Type 1		\$ -		\$ -
Enclosure Climate Control - Type 1		\$ -		\$ -
Tri-Protocol Readers - Type 2		\$ -		\$ -
Lane Kits - Type 2		\$ -		\$ -
Antennas - Type 2		\$ -		\$ -
Antenna Mounting Kits - Type 2		\$ -		\$ -
Reader Enclosures - Type 2		\$ -		\$ -
Enclosure Climate Control - Type 2		\$ -		\$ -
Other (add Line for each proposed Equipment not included above):				
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
Equipment Sub-Total:		\$ -		\$ -
Installation Support				
Perform Radio Frequency Site Survey		\$ -		\$ -
Support Installation of Reader and Associated Equipment		\$ -		\$ -
Support Onsite Installation Testing (OIT)		\$ -		\$ -
Support Installation and Commissioning Testing		\$ -		\$ -
Installation Support Sub-Total:		\$ -		\$ -
Other Services				
Training				
RTCS FAT Support				
FCC Licensing				
Other Services Sub-Total:				
Category A - Readers Monroe Expressway Sub-Total:	M11 Total:	\$ -	M12 Total:	\$ -
Category A - Readers Monroe Expressway Total:				

Price Sheet: A-1-2

Category A - Readers Roadway Level Equipment, Installation Support and Other Services Monroe Expressway					
Description of Item		M13		M14	
Equipment		Quantity	Price (\$)	Quantity	Price (\$)
Tri-Protocol Readers - Type 1			\$ -		\$ -
Lane Kits - Type 1			\$ -		\$ -
Antennas - Type 1			\$ -		\$ -
Antenna Mounting Kits - Type 1			\$ -		\$ -
Reader Enclosures - Type 1			\$ -		\$ -
Enclosure Climate Control - Type 1			\$ -		\$ -
Tri-Protocol Readers - Type 2			\$ -		\$ -
Lane Kits - Type 2			\$ -		\$ -
Antennas - Type 2			\$ -		\$ -
Antenna Mounting Kits - Type 2			\$ -		\$ -
Reader Enclosures - Type 2			\$ -		\$ -
Enclosure Climate Control - Type 2			\$ -		\$ -
Other (add Line for each proposed Equipment not included above):					
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
Equipment Sub-Total:			\$ -		\$ -
Installation Support					
Perform Radio Frequency Site Survey			\$ -		\$ -
Support Installation of Reader and Associated Equipment			\$ -		\$ -
Support Onsite Installation Testing (OIT)			\$ -		\$ -
Support Installation and Commissioning Testing			\$ -		\$ -
Installation Support Sub-Total:			\$ -		\$ -
Other Services					
Training					
RTCS FAT Support					
FCC Licensing					
Other Services Sub-Total:					
Category A - Readers Monroe Expressway Sub-Total:		M13 Total:	\$ -	M14 Total:	\$ -
Category A - Readers Monroe Expressway Total:					

Price Sheet: A-1-2

Category A - Readers Roadway Level Equipment, Installation Support and Other Services Monroe Expressway				
Description of Item	M15		M16	
	Quantity	Price (\$)	Quantity	Price (\$)
Equipment				
Tri-Protocol Readers - Type 1		\$ -		\$ -
Lane Kits - Type 1		\$ -		\$ -
Antennas - Type 1		\$ -		\$ -
Antenna Mounting Kits - Type 1		\$ -		\$ -
Reader Enclosures - Type 1		\$ -		\$ -
Enclosure Climate Control - Type 1		\$ -		\$ -
Tri-Protocol Readers - Type 2		\$ -		\$ -
Lane Kits - Type 2		\$ -		\$ -
Antennas - Type 2		\$ -		\$ -
Antenna Mounting Kits - Type 2		\$ -		\$ -
Reader Enclosures - Type 2		\$ -		\$ -
Enclosure Climate Control - Type 2		\$ -		\$ -
Other (add Line for each proposed Equipment not included above):				
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
Equipment Sub-Total:		\$ -		\$ -
Installation Support				
Perform Radio Frequency Site Survey		\$ -		\$ -
Support Installation of Reader and Associated Equipment		\$ -		\$ -
Support Onsite Installation Testing (OIT)		\$ -		\$ -
Support Installation and Commissioning Testing		\$ -		\$ -
Installation Support Sub-Total:		\$ -		\$ -
Other Services				
Training				
RTCS FAT Support				
FCC Licensing				
Other Services Sub-Total:				
Category A - Readers Monroe Expressway Sub-Total:	M15 Total:	\$ -	M16 Total:	\$ -
Category A - Readers Monroe Expressway Total:				

Price Sheet: A-1-2

Category A - Readers
Roadway Level Equipment, Installation Support and Other Services
Monroe Expressway

Description of Item	Initial Spares Inventory		Extended	
	Quantity	Price (\$)	Summary	Total Price (\$)
Equipment				
Tri-Protocol Readers - Type 1	0	\$ -	0	\$ -
Lane Kits - Type 1	0	\$ -	0	\$ -
Antennas - Type 1	0	\$ -	0	\$ -
Antenna Mounting Kits - Type 1	0	\$ -	0	\$ -
Reader Enclosures - Type 1	0	\$ -	0	\$ -
Enclosure Climate Control - Type 1	0	\$ -	0	\$ -
Tri-Protocol Readers - Type 2	0	\$ -	0	\$ -
Lane Kits - Type 2	0	\$ -	0	\$ -
Antennas - Type 2	0	\$ -	0	\$ -
Antenna Mounting Kits - Type 2	0	\$ -	0	\$ -
Reader Enclosures - Type 2	0	\$ -	0	\$ -
Enclosure Climate Control - Type 2	0	\$ -	0	\$ -
Other (add Line for each proposed Equipment not included above):				
	0	\$ -	0	\$ -
	0	\$ -	0	\$ -
	0	\$ -	0	\$ -
	0	\$ -	0	\$ -
	0	\$ -	0	\$ -
	0	\$ -	0	\$ -
	0	\$ -	0	\$ -
	0	\$ -	0	\$ -
	0	\$ -	0	\$ -
	0	\$ -	0	\$ -
Equipment Sub-Total:		\$ -		\$ -
Installation Support				
Perform Radio Frequency Site Survey			0	\$ -
Support Installation of Reader and Associated Equipment			0	\$ -
Support Onsite Installation Testing (OIT)			0	\$ -
Support Installation and Commissioning Testing			0	\$ -
Installation Support Sub-Total:				\$ -
Other Services				
Training				\$ -
RTCS FAT Support				\$ -
FCC Licensing				\$ -
Other Services Sub-Total:				\$ -
Category A - Readers Monroe Expressway Sub-Total:	Initial Spares In \$			
Category A - Readers Monroe Expressway Total:				\$ -

Price Sheet: A-1-3

Category A - Readers
Roadway Level Equipment, Installation Support and Other Services
US-74 Express Lanes

Line	Description of Item	Model Number	Unit	Unit Price (\$)	U01		U02	
Equipment					Quantity	Price (\$)	Quantity	Price (\$)
1	Tri-Protocol Readers - Type 1		Each			\$ -		\$ -
2	Lane Kits - Type 1		Each			\$ -		\$ -
3	Antennas - Type 1		Each			\$ -		\$ -
4	Antenna Mounting Kits - Type 1		Each			\$ -		\$ -
5	Reader Enclosures - Type 1		Each			\$ -		\$ -
6	Enclosure Climate Control - Type 1		Each			\$ -		\$ -
7	Tri-Protocol Readers - Type 2		Each			\$ -		\$ -
8	Lane Kits - Type 2		Each			\$ -		\$ -
9	Antennas - Type 2		Each			\$ -		\$ -
10	Antenna Mounting Kits - Type 2		Each			\$ -		\$ -
11	Reader Enclosures - Type 2		Each			\$ -		\$ -
12	Enclosure Climate Control - Type 2		Each			\$ -		\$ -
Other (add Line for each proposed Equipment not included above):								
13			Each			\$ -		\$ -
14			Each			\$ -		\$ -
15			Each			\$ -		\$ -
16			Each			\$ -		\$ -
17			Each			\$ -		\$ -
18			Each			\$ -		\$ -
19			Each			\$ -		\$ -
20			Each			\$ -		\$ -
21			Each			\$ -		\$ -
22			Each			\$ -		\$ -
23	Equipment Sub-Total:					\$ -		\$ -
Installation Support								
24	Perform Radio Frequency Site Survey		Each			\$ -		\$ -
25	Support Installation of Reader and Associated Equipment		Each			\$ -		\$ -
26	Support Onsite Installation Testing (OIT)		Each			\$ -		\$ -
27	Support Installation and Commissioning Testing		Each			\$ -		\$ -
28	Installation Support Sub-Total:					\$ -		\$ -
Other Services								
29	Training		Lump Sum					
30	RTCS FAT Support		Lump Sum					
31	FCC Licensing		Lump Sum					
32	Other Services Sub-Total:							
33	Category A - Readers US-74 Express Lanes Sub-Total:				U01 Total:	\$ -	U02 Total:	\$ -
34	Category A - Readers US-74 Express Lanes Total:							

Price Sheet: A-1-3

Category A - Readers
Roadway Level Equipment, Installation Support and Other Services
US-74 Express Lanes

Description of Item		Initial Spares Inventory		Extended	
Equipment		Quantity	Price (\$)	Summary	Total Price (\$)
Tri-Protocol Readers - Type 1			\$ -	0	\$ -
Lane Kits - Type 1			\$ -	0	\$ -
Antennas - Type 1			\$ -	0	\$ -
Antenna Mounting Kits - Type 1			\$ -	0	\$ -
Reader Enclosures - Type 1			\$ -	0	\$ -
Enclosure Climate Control - Type 1			\$ -	0	\$ -
Tri-Protocol Readers - Type 2			\$ -	0	\$ -
Lane Kits - Type 2			\$ -	0	\$ -
Antennas - Type 2			\$ -	0	\$ -
Antenna Mounting Kits - Type 2			\$ -	0	\$ -
Reader Enclosures - Type 2			\$ -	0	\$ -
Enclosure Climate Control - Type 2			\$ -	0	\$ -
Other (add Line for each proposed Equipment not included above):					
			\$ -	0	\$ -
			\$ -	0	\$ -
			\$ -	0	\$ -
			\$ -	0	\$ -
			\$ -	0	\$ -
			\$ -	0	\$ -
			\$ -	0	\$ -
			\$ -	0	\$ -
			\$ -	0	\$ -
			\$ -	0	\$ -
Equipment Sub-Total:			\$ -		\$ -
Installation Support					
Perform Radio Frequency Site Survey				0	\$ -
Support Installation of Reader and Associated Equipment				0	\$ -
Support Onsite Installation Testing (OIT)				0	\$ -
Support Installation and Commissioning Testing				0	\$ -
Installation Support Sub-Total:					\$ -
Other Services					
Training					\$ -
RTCS FAT Support					\$ -
FCC Licensing					\$ -
Other Services Sub-Total:					\$ -
Category A - Readers US-74 Express Lanes Sub-Total:		Initial Spares In	\$ -		
Category A - Readers US-74 Express Lanes Total:					\$ -

Price Sheet: A-1-4

Category A - Readers
Roadway Level Equipment, Installation Support and Other Services
Triangle Expressway

Line	Description of Item	Model Number	Unit	Unit Price (\$)
Equipment				
1	Tri-Protocol Readers - Type 1		Each	
2	Lane Kits - Type 1		Each	
3	Antennas - Type 1		Each	
4	Antenna Mounting Kits - Type 1		Each	
5	Reader Enclosures - Type 1		Each	
6	Enclosure Climate Control - Type 1		Each	
7	Tri-Protocol Readers - Type 2		Each	
8	Lane Kits - Type 2		Each	
9	Antennas - Type 2		Each	
10	Antenna Mounting Kits - Type 2		Each	
11	Reader Enclosures - Type 2		Each	
12	Enclosure Climate Control - Type 2		Each	
Other (add Line for each proposed Equipment not included above):				
13			Each	
14			Each	
15			Each	
16			Each	
17			Each	
18			Each	
19			Each	
20			Each	
21			Each	
22			Each	
23	Equipment Sub-Total:			
Installation Support				
24	Perform Radio Frequency Site Survey		Each	
25	Support Installation of Reader and Associated Equipment		Each	
26	Support Onsite Installation Testing (OIT)		Each	
27	Support Installation and Commissioning Testing		Each	
28	Installation Support Sub-Total:			
Other Services				
29	Training		Lump Sum	
30	RTCS FAT Support		Lump Sum	
31	FCC Licensing		Lump Sum	
32	Other Services Sub-Total:			
33	Category A - Readers Triangle Expressway Sub-Total:			
34	Category A - Readers Triangle Expressway Total:			

Price Sheet: A-1-4

Category A - Readers
Roadway Level Equipment, Installation Support and Other Services
Triangle Expressway

Description of Item			1-1		1-2	
Equipment			Quantity	Price (\$)	Quantity	Price (\$)
Tri-Protocol Readers - Type 1				\$ -		\$ -
Lane Kits - Type 1				\$ -	#	\$ -
Antennas - Type 1				\$ -		\$ -
Antenna Mounting Kits - Type 1				\$ -		\$ -
Reader Enclosures - Type 1				\$ -		\$ -
Enclosure Climate Control - Type 1				\$ -		\$ -
Tri-Protocol Readers - Type 2				\$ -		\$ -
Lane Kits - Type 2				\$ -		\$ -
Antennas - Type 2				\$ -		\$ -
Antenna Mounting Kits - Type 2				\$ -		\$ -
Reader Enclosures - Type 2				\$ -		\$ -
Enclosure Climate Control - Type 2				\$ -		\$ -
Other (add Line for each proposed Equipment not included above):						
				\$ -		\$ -
				\$ -		\$ -
				\$ -		\$ -
				\$ -		\$ -
				\$ -		\$ -
				\$ -		\$ -
				\$ -		\$ -
				\$ -		\$ -
				\$ -		\$ -
Equipment Sub-Total:				\$ -		\$ -
Installation Support						
Perform Radio Frequency Site Survey				\$ -		\$ -
Support Installation of Reader and Associated Equipment				\$ -		\$ -
Support Onsite Installation Testing (OIT)				\$ -		\$ -
Support Installation and Commissioning Testing				\$ -		\$ -
Installation Support Sub-Total:				\$ -		\$ -
Other Services						
Training						
RTCS FAT Support						
FCC Licensing						
Other Services Sub-Total:						
Category A - Readers Triangle Expressway Sub-Total:			1-1 Total:	\$ -	1-2 Total:	\$ -
Category A - Readers Triangle Expressway Total:						

Price Sheet: A-1-4

Category A - Readers Roadway Level Equipment, Installation Support and Other Services Triangle Expressway				
Description of Item	V-1		V-2	
	Quantity	Price (\$)	Quantity	Price (\$)
Equipment				
Tri-Protocol Readers - Type 1		\$ -		\$ -
Lane Kits - Type 1		\$ -		\$ -
Antennas - Type 1		\$ -		\$ -
Antenna Mounting Kits - Type 1		\$ -		\$ -
Reader Enclosures - Type 1		\$ -		\$ -
Enclosure Climate Control - Type 1		\$ -		\$ -
Tri-Protocol Readers - Type 2		\$ -		\$ -
Lane Kits - Type 2		\$ -		\$ -
Antennas - Type 2		\$ -		\$ -
Antenna Mounting Kits - Type 2		\$ -		\$ -
Reader Enclosures - Type 2		\$ -		\$ -
Enclosure Climate Control - Type 2		\$ -		\$ -
Other (add Line for each proposed Equipment not included above):				
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
Equipment Sub-Total:		\$ -		\$ -
Installation Support				
Perform Radio Frequency Site Survey		\$ -		\$ -
Support Installation of Reader and Associated Equipment		\$ -		\$ -
Support Onsite Installation Testing (OIT)		\$ -		\$ -
Support Installation and Commissioning Testing		\$ -		\$ -
Installation Support Sub-Total:		\$ -		\$ -
Other Services				
Training				
RTCS FAT Support				
FCC Licensing				
Other Services Sub-Total:				
Category A - Readers Triangle Expressway Sub-Total:	V-1 Total:	\$ -	V-2 Total:	\$ -
Category A - Readers Triangle Expressway Total:				

Price Sheet: A-1-4

Category A - Readers Roadway Level Equipment, Installation Support and Other Services Triangle Expressway				
Description of Item	2-1		2-2	
	Quantity	Price (\$)	Quantity	Price (\$)
Equipment				
Tri-Protocol Readers - Type 1		\$ -		\$ -
Lane Kits - Type 1		\$ -		\$ -
Antennas - Type 1		\$ -		\$ -
Antenna Mounting Kits - Type 1		\$ -		\$ -
Reader Enclosures - Type 1		\$ -		\$ -
Enclosure Climate Control - Type 1		\$ -		\$ -
Tri-Protocol Readers - Type 2		\$ -		\$ -
Lane Kits - Type 2		\$ -		\$ -
Antennas - Type 2		\$ -		\$ -
Antenna Mounting Kits - Type 2		\$ -		\$ -
Reader Enclosures - Type 2		\$ -		\$ -
Enclosure Climate Control - Type 2		\$ -		\$ -
Other (add Line for each proposed Equipment not included above):				
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
Equipment Sub-Total:		\$ -		\$ -
Installation Support				
Perform Radio Frequency Site Survey		\$ -		\$ -
Support Installation of Reader and Associated Equipment		\$ -		\$ -
Support Onsite Installation Testing (OIT)		\$ -		\$ -
Support Installation and Commissioning Testing		\$ -		\$ -
Installation Support Sub-Total:		\$ -		\$ -
Other Services				
Training				
RTCS FAT Support				
FCC Licensing				
Other Services Sub-Total:				
Category A - Readers Triangle Expressway Sub-Total:	2-1 Total:	\$ -	2-2 Total:	\$ -
Category A - Readers Triangle Expressway Total:				

Price Sheet: A-1-4

Category A - Readers Roadway Level Equipment, Installation Support and Other Services Triangle Expressway					
Description of Item		3-1		3-2	
Equipment		Quantity	Price (\$)	Quantity	Price (\$)
Tri-Protocol Readers - Type 1			\$ -		\$ -
Lane Kits - Type 1			\$ -		\$ -
Antennas - Type 1			\$ -		\$ -
Antenna Mounting Kits - Type 1			\$ -		\$ -
Reader Enclosures - Type 1			\$ -		\$ -
Enclosure Climate Control - Type 1			\$ -		\$ -
Tri-Protocol Readers - Type 2			\$ -		\$ -
Lane Kits - Type 2			\$ -		\$ -
Antennas - Type 2			\$ -		\$ -
Antenna Mounting Kits - Type 2			\$ -		\$ -
Reader Enclosures - Type 2			\$ -		\$ -
Enclosure Climate Control - Type 2			\$ -		\$ -
Other (add Line for each proposed Equipment not included above):					
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
Equipment Sub-Total:			\$ -		\$ -
Installation Support					
Perform Radio Frequency Site Survey			\$ -		\$ -
Support Installation of Reader and Associated Equipment			\$ -		\$ -
Support Onsite Installation Testing (OIT)			\$ -		\$ -
Support Installation and Commissioning Testing			\$ -		\$ -
Installation Support Sub-Total:			\$ -		\$ -
Other Services					
Training					
RTCS FAT Support					
FCC Licensing					
Other Services Sub-Total:					
Category A - Readers Triangle Expressway Sub-Total:		3-1 Total:	\$ -	3-2 Total:	\$ -
Category A - Readers Triangle Expressway Total:					

Price Sheet: A-1-4

Category A - Readers Roadway Level Equipment, Installation Support and Other Services Triangle Expressway				
Description of Item	4-1		4-2	
	Quantity	Price (\$)	Quantity	Price (\$)
Equipment				
Tri-Protocol Readers - Type 1		\$ -		\$ -
Lane Kits - Type 1		\$ -		\$ -
Antennas - Type 1		\$ -		\$ -
Antenna Mounting Kits - Type 1		\$ -		\$ -
Reader Enclosures - Type 1		\$ -		\$ -
Enclosure Climate Control - Type 1		\$ -		\$ -
Tri-Protocol Readers - Type 2		\$ -		\$ -
Lane Kits - Type 2		\$ -		\$ -
Antennas - Type 2		\$ -		\$ -
Antenna Mounting Kits - Type 2		\$ -		\$ -
Reader Enclosures - Type 2		\$ -		\$ -
Enclosure Climate Control - Type 2		\$ -		\$ -
Other (add Line for each proposed Equipment not included above):				
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
Equipment Sub-Total:		\$ -		\$ -
Installation Support				
Perform Radio Frequency Site Survey		\$ -		\$ -
Support Installation of Reader and Associated Equipment		\$ -		\$ -
Support Onsite Installation Testing (OIT)		\$ -		\$ -
Support Installation and Commissioning Testing		\$ -		\$ -
Installation Support Sub-Total:		\$ -		\$ -
Other Services				
Training				
RTCS FAT Support				
FCC Licensing				
Other Services Sub-Total:				
Category A - Readers Triangle Expressway Sub-Total:	4-1 Total:	\$ -	4-2 Total:	\$ -
Category A - Readers Triangle Expressway Total:				

Price Sheet: A-1-4

Category A - Readers Roadway Level Equipment, Installation Support and Other Services Triangle Expressway					
Description of Item		5-1		5-2	
Equipment		Quantity	Price (\$)	Quantity	Price (\$)
Tri-Protocol Readers - Type 1			\$ -		\$ -
Lane Kits - Type 1			\$ -		\$ -
Antennas - Type 1			\$ -		\$ -
Antenna Mounting Kits - Type 1			\$ -		\$ -
Reader Enclosures - Type 1			\$ -		\$ -
Enclosure Climate Control - Type 1			\$ -		\$ -
Tri-Protocol Readers - Type 2			\$ -		\$ -
Lane Kits - Type 2			\$ -		\$ -
Antennas - Type 2			\$ -		\$ -
Antenna Mounting Kits - Type 2			\$ -		\$ -
Reader Enclosures - Type 2			\$ -		\$ -
Enclosure Climate Control - Type 2			\$ -		\$ -
Other (add Line for each proposed Equipment not included above):					
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
			\$ -		\$ -
Equipment Sub-Total:			\$ -		\$ -
Installation Support					
Perform Radio Frequency Site Survey			\$ -		\$ -
Support Installation of Reader and Associated Equipment			\$ -		\$ -
Support Onsite Installation Testing (OIT)			\$ -		\$ -
Support Installation and Commissioning Testing			\$ -		\$ -
Installation Support Sub-Total:			\$ -		\$ -
Other Services					
Training					
RTCS FAT Support					
FCC Licensing					
Other Services Sub-Total:					
Category A - Readers Triangle Expressway Sub-Total:		5-1 Total:	\$ -	5-2 Total:	\$ -
Category A - Readers Triangle Expressway Total:					

Price Sheet: A-1-4

Category A - Readers Roadway Level Equipment, Installation Support and Other Services Triangle Expressway				
Description of Item	6-1		6-2	
	Quantity	Price (\$)	Quantity	Price (\$)
Equipment				
Tri-Protocol Readers - Type 1		\$ -		\$ -
Lane Kits - Type 1		\$ -		\$ -
Antennas - Type 1		\$ -		\$ -
Antenna Mounting Kits - Type 1		\$ -		\$ -
Reader Enclosures - Type 1		\$ -		\$ -
Enclosure Climate Control - Type 1		\$ -		\$ -
Tri-Protocol Readers - Type 2		\$ -		\$ -
Lane Kits - Type 2		\$ -		\$ -
Antennas - Type 2		\$ -		\$ -
Antenna Mounting Kits - Type 2		\$ -		\$ -
Reader Enclosures - Type 2		\$ -		\$ -
Enclosure Climate Control - Type 2		\$ -		\$ -
Other (add Line for each proposed Equipment not included above):				
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
Equipment Sub-Total:		\$ -		\$ -
Installation Support				
Perform Radio Frequency Site Survey		\$ -		\$ -
Support Installation of Reader and Associated Equipment		\$ -		\$ -
Support Onsite Installation Testing (OIT)		\$ -		\$ -
Support Installation and Commissioning Testing		\$ -		\$ -
Installation Support Sub-Total:		\$ -		\$ -
Other Services				
Training				
RTCS FAT Support				
FCC Licensing				
Other Services Sub-Total:				
Category A - Readers Triangle Expressway Sub-Total:	6-1 Total:	\$ -	6-2 Total:	\$ -
Category A - Readers Triangle Expressway Total:				

Price Sheet: A-1-4

Category A - Readers Roadway Level Equipment, Installation Support and Other Services Triangle Expressway				
Description of Item	6-3		6-4	
	Quantity	Price (\$)	Quantity	Price (\$)
Equipment				
Tri-Protocol Readers - Type 1		\$ -		\$ -
Lane Kits - Type 1		\$ -		\$ -
Antennas - Type 1		\$ -		\$ -
Antenna Mounting Kits - Type 1		\$ -		\$ -
Reader Enclosures - Type 1		\$ -		\$ -
Enclosure Climate Control - Type 1		\$ -		\$ -
Tri-Protocol Readers - Type 2		\$ -		\$ -
Lane Kits - Type 2		\$ -		\$ -
Antennas - Type 2		\$ -		\$ -
Antenna Mounting Kits - Type 2		\$ -		\$ -
Reader Enclosures - Type 2		\$ -		\$ -
Enclosure Climate Control - Type 2		\$ -		\$ -
Other (add Line for each proposed Equipment not included above):				
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
Equipment Sub-Total:		\$ -		\$ -
Installation Support				
Perform Radio Frequency Site Survey		\$ -		\$ -
Support Installation of Reader and Associated Equipment		\$ -		\$ -
Support Onsite Installation Testing (OIT)		\$ -		\$ -
Support Installation and Commissioning Testing		\$ -		\$ -
Installation Support Sub-Total:		\$ -		\$ -
Other Services				
Training				
RTCS FAT Support				
FCC Licensing				
Other Services Sub-Total:				
Category A - Readers Triangle Expressway Sub-Total:	6-3 Total:	\$ -	6-4 Total:	\$ -
Category A - Readers Triangle Expressway Total:				

Price Sheet: A-1-4

Category A - Readers Roadway Level Equipment, Installation Support and Other Services Triangle Expressway				
Description of Item	7-1		7-2	
	Quantity	Price (\$)	Quantity	Price (\$)
Equipment				
Tri-Protocol Readers - Type 1		\$ -		\$ -
Lane Kits - Type 1		\$ -		\$ -
Antennas - Type 1		\$ -		\$ -
Antenna Mounting Kits - Type 1		\$ -		\$ -
Reader Enclosures - Type 1		\$ -		\$ -
Enclosure Climate Control - Type 1		\$ -		\$ -
Tri-Protocol Readers - Type 2		\$ -		\$ -
Lane Kits - Type 2		\$ -		\$ -
Antennas - Type 2		\$ -		\$ -
Antenna Mounting Kits - Type 2		\$ -		\$ -
Reader Enclosures - Type 2		\$ -		\$ -
Enclosure Climate Control - Type 2		\$ -		\$ -
Other (add Line for each proposed Equipment not included above):				
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
Equipment Sub-Total:		\$ -		\$ -
Installation Support				
Perform Radio Frequency Site Survey		\$ -		\$ -
Support Installation of Reader and Associated Equipment		\$ -		\$ -
Support Onsite Installation Testing (OIT)		\$ -		\$ -
Support Installation and Commissioning Testing		\$ -		\$ -
Installation Support Sub-Total:		\$ -		\$ -
Other Services				
Training				
RTCS FAT Support				
FCC Licensing				
Other Services Sub-Total:				
Category A - Readers Triangle Expressway Sub-Total:	7-1 Total:	\$ -	7-2 Total:	\$ -
Category A - Readers Triangle Expressway Total:				

Price Sheet: A-1-4

Category A - Readers Roadway Level Equipment, Installation Support and Other Services Triangle Expressway				
Description of Item	8-1		8-2	
	Quantity	Price (\$)	Quantity	Price (\$)
Equipment				
Tri-Protocol Readers - Type 1		\$ -		\$ -
Lane Kits - Type 1		\$ -		\$ -
Antennas - Type 1		\$ -		\$ -
Antenna Mounting Kits - Type 1		\$ -		\$ -
Reader Enclosures - Type 1		\$ -		\$ -
Enclosure Climate Control - Type 1		\$ -		\$ -
Tri-Protocol Readers - Type 2		\$ -		\$ -
Lane Kits - Type 2		\$ -		\$ -
Antennas - Type 2		\$ -		\$ -
Antenna Mounting Kits - Type 2		\$ -		\$ -
Reader Enclosures - Type 2		\$ -		\$ -
Enclosure Climate Control - Type 2		\$ -		\$ -
Other (add Line for each proposed Equipment not included above):				
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
		\$ -		\$ -
Equipment Sub-Total:		\$ -		\$ -
Installation Support				
Perform Radio Frequency Site Survey		\$ -		\$ -
Support Installation of Reader and Associated Equipment		\$ -		\$ -
Support Onsite Installation Testing (OIT)		\$ -		\$ -
Support Installation and Commissioning Testing		\$ -		\$ -
Installation Support Sub-Total:		\$ -		\$ -
Other Services				
Training				
RTCS FAT Support				
FCC Licensing				
Other Services Sub-Total:				
Category A - Readers Triangle Expressway Sub-Total:	8-1 Total:	\$ -	8-2 Total:	\$ -
Category A - Readers Triangle Expressway Total:				

Price Sheet: A-1-4

Category A - Readers
Roadway Level Equipment, Installation Support and Other Services
Triangle Expressway

Description of Item			Initial Spares Inventory		Extended	
Equipment			Quantity	Price (\$)	Summary	Total Price (\$)
Tri-Protocol Readers - Type 1				\$ -	0	\$ -
Lane Kits - Type 1				\$ -	0	\$ -
Antennas - Type 1				\$ -	0	\$ -
Antenna Mounting Kits - Type 1				\$ -	0	\$ -
Reader Enclosures - Type 1				\$ -	0	\$ -
Enclosure Climate Control - Type 1				\$ -	0	\$ -
Tri-Protocol Readers - Type 2				\$ -	0	\$ -
Lane Kits - Type 2				\$ -	0	\$ -
Antennas - Type 2				\$ -	0	\$ -
Antenna Mounting Kits - Type 2				\$ -	0	\$ -
Reader Enclosures - Type 2				\$ -	0	\$ -
Enclosure Climate Control - Type 2				\$ -	0	\$ -
Other (add Line for each proposed Equipment not included above):						
				\$ -	0	\$ -
				\$ -	0	\$ -
				\$ -	0	\$ -
				\$ -	0	\$ -
				\$ -	0	\$ -
				\$ -	0	\$ -
				\$ -	0	\$ -
				\$ -	0	\$ -
				\$ -	0	\$ -
				\$ -	0	\$ -
Equipment Sub-Total:				\$ -		\$ -
Installation Support						
Perform Radio Frequency Site Survey					0	\$ -
Support Installation of Reader and Associated Equipment					0	\$ -
Support Onsite Installation Testing (OIT)					0	\$ -
Support Installation and Commissioning Testing					0	\$ -
Installation Support Sub-Total:						\$ -
Other Services						
Training						\$ -
RTCS FAT Support						\$ -
FCC Licensing						\$ -
Other Services Sub-Total:						\$ -
Category A - Readers Triangle Expressway Sub-Total:			Initial Spares In \$ -			
Category A - Readers Triangle Expressway Total:						\$ -

Price Sheet: A-1-5

Category A - Readers Maintenance Phase Monroe Expressway, US-74 Express Lanes and Triangle Expressway

Line	Description of Item	Monroe Expressway			
		Total Monthly Cost Per Reader	# of Readers	Number of Months	Annual Price (\$)
Base Contract Term Costs for Maintenance*					
1	Year 1 Maintenance		0	12	\$ -
2	Year 2 Maintenance		0	12	\$ -
3	Year 3 Maintenance		0	12	\$ -
4	Year 4 Maintenance		0	12	\$ -
5	Year 5 Maintenance		0	12	\$ -
6	Base Contract Sub-Total:	\$ -			
First Optional Contract Extension Costs for Maintenance					
7	Extension 1, Year 1 Maintenance		0	12	\$ -
8	Extension 1, Year 2 Maintenance		0	12	\$ -
9	Extension 1, Year 3 Maintenance		0	12	\$ -
10	Extension 1 Sub-Total:	\$ -			
Second Optional Extension Costs for Maintenance					
11	Extension 2, Year 1 Maintenance		0	12	\$ -
12	Extension 2, Year 2 Maintenance		0	12	\$ -
13	Extension 2, Year 3 Maintenance		0	12	\$ -
14	Extension 2 Sub-Total:	\$ -			
15	Category A - Readers Maintenance Phase Sub-Total:	\$ -			
16	Category A - Readers Maintenance Phase Total:				

* Proposers should note that actual Monthly Maintenance Phase payments will be commensurate with the actual number of Readers in revenue service and may not reflect the counts as indicated on this sheet.

Price Sheet: A-1-5

<p>Category A - Readers Maintenance Phase Monroe Expressway, US-74 Express Lanes and Triangle Expressway</p>
--

Description of Item	US-74 Express Lanes			
	Total Monthly Cost Per Reader	# of Readers	Number of Months	Annual Price (\$)
Base Contract Term Costs for Maintenance*				
Year 1 Maintenance		0	12	\$ -
Year 2 Maintenance		0	12	\$ -
Year 3 Maintenance		0	12	\$ -
Year 4 Maintenance		0	12	\$ -
Year 5 Maintenance		0	12	\$ -
Base Contract Sub-Total:				\$ -
First Optional Contract Extension Costs for Maintenance				
Extension 1, Year 1 Maintenance		0	12	\$ -
Extension 1, Year 2 Maintenance		0	12	\$ -
Extension 1, Year 3 Maintenance		0	12	\$ -
Extension 1 Sub-Total:				\$ -
Second Optional Extension Costs for Maintenance				
Extension 2, Year 1 Maintenance		0	12	\$ -
Extension 2, Year 2 Maintenance		0	12	\$ -
Extension 2, Year 3 Maintenance		0	12	\$ -
Extension 2 Sub-Total:				\$ -
Category A - Readers Maintenance Phase Sub-Total:				\$ -
Category A - Readers Maintenance Phase Total:				

* Proposers should note that actual Monthly Maintenance Phase payments will be commensurate with the actual number of Readers in revenue service and may not reflect the counts as indicated on this sheet.

Price Sheet: A-1-5

Category A - Readers Maintenance Phase Monroe Expressway, US-74 Express Lanes and Triangle Expressway

Description of Item	Triangle Expressway			
	Total Monthly Cost Per Reader	# of Readers	Number of Months	Annual Price (\$)
Base Contract Term Costs for Maintenance*				
Year 1 Maintenance		0	12	\$ -
Year 2 Maintenance		0	12	\$ -
Year 3 Maintenance		0	12	\$ -
Year 4 Maintenance		0	12	\$ -
Year 5 Maintenance		0	12	\$ -
Base Contract Sub-Total:				\$ -
First Optional Contract Extension Costs for Maintenance				
Extension 1, Year 1 Maintenance		0	12	\$ -
Extension 1, Year 2 Maintenance		0	12	\$ -
Extension 1, Year 3 Maintenance		0	12	\$ -
Extension 1 Sub-Total:				\$ -
Second Optional Extension Costs for Maintenance				
Extension 2, Year 1 Maintenance		0	12	\$ -
Extension 2, Year 2 Maintenance		0	12	\$ -
Extension 2, Year 3 Maintenance		0	12	\$ -
Extension 2 Sub-Total:				\$ -
Category A - Readers Maintenance Phase Sub-Total:				\$ -
Category A - Readers Maintenance Phase Total:				

* Proposers should note that actual Monthly Maintenance Phase payments will be commensurate with the actual number of Readers in revenue service and may not reflect the counts as indicated on this sheet.

Category A - Readers Maintenance Phase Monroe Expressway, US-74 Express Lanes and Triangle Expressway

Description of Item	Total Annual Price (\$)
Base Contract Term Costs for Maintenance*	
Year 1 Maintenance	\$ -
Year 2 Maintenance	\$ -
Year 3 Maintenance	\$ -
Year 4 Maintenance	\$ -
Year 5 Maintenance	\$ -
Base Contract Sub-Total:	\$ -
First Optional Contract Extension Costs for Maintenance	
Extension 1, Year 1 Maintenance	\$ -
Extension 1, Year 2 Maintenance	\$ -
Extension 1, Year 3 Maintenance	\$ -
Extension 1 Sub-Total:	\$ -
Second Optional Extension Costs for Maintenance	
Extension 2, Year 1 Maintenance	\$ -
Extension 2, Year 2 Maintenance	\$ -
Extension 2, Year 3 Maintenance	\$ -
Extension 2 Sub-Total:	\$ -
Category A - Readers Maintenance Phase Sub-Total:	
Category A - Readers Maintenance Phase Total:	
	\$ -

* Proposers should note that actual Monthly Maintenance Phase payments will be commensurate with the actual number of Readers in revenue service and may not reflect the counts as indicated on this sheet.

Price Sheet: A-1-6

Category A - Readers
On-Call Service Rates

Depot Repair Services:

Depot repair services outside of normal Maintenance shall be performed on a time and material basis.

Additional Work:

Additional Work services shall be performed on a time and material basis.

Hourly Rates:

The following price information shall be the basis for pricing time and materials work authorized by the NCTA.

Labor Rates stated here shall be the fully burdened, straight-time hourly rate (6am - 8pm).

Line

Staff Position	Fully Burdened Hourly Straight-Time (6am - 8pm) Rate																																																											
	Base Contract Term						Extension 1			Extension 2																																																		
	Implementation Phase	Maintenance Phase					Year 6	Year 7	Year 8	Year 9	Year 10	Year 11																																																
Year 1		Year 2	Year 3	Year 4	Year 5																																																							
Depot Repair Service Technician	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____																																																
Field Service Technician	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____																																																
Hardware Engineer	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____																																																
Installation Technician	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____																																																
Maintenance Technician	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____																																																
Quality Assurance Analyst	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____																																																
Quality Assurance Manager	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____																																																
Software Engineer	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____																																																
System Analyst	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____																																																
System Architect	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____																																																
Technical Manager	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____																																																
Technical Writer	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____																																																
	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____																																																
	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____																																																
	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____																																																
	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____																																																
	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____																																																
	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____																																																
<table><tr><td colspan="12">Proposers shall</td></tr><tr><td colspan="11">- Nighttime work (8pm-6am)</td><td>____%</td></tr><tr><td colspan="11">- Weekend work (00:00 Saturday - 23:59 Sunday)</td><td>____%</td></tr><tr><td colspan="11">- Legal U.S. Holiday</td><td>____%</td></tr></table>													Proposers shall												- Nighttime work (8pm-6am)											____%	- Weekend work (00:00 Saturday - 23:59 Sunday)											____%	- Legal U.S. Holiday											____%
Proposers shall																																																												
- Nighttime work (8pm-6am)											____%																																																	
- Weekend work (00:00 Saturday - 23:59 Sunday)											____%																																																	
- Legal U.S. Holiday											____%																																																	

Price Sheet: A-1-7

**Category A - Readers
Reader and Associated Equipment Purchases
Planned Toll Facilities**

Line	Description of Item	Guaranteed Delivery Lead Time Days	Unit	Quantity	Unit Price (\$)		
					Base Contract Term	Extension 1	Extension 2
1	Tri-Protocol Readers - Type 1		Each	1	\$ -	\$ -	\$ -
2	Lane Kits - Type 1		Each	1	\$ -	\$ -	\$ -
3	Antennas - Type 1		Each	1	\$ -	\$ -	\$ -
4	Antenna Mounting Kits - Type 1		Each	1	\$ -	\$ -	\$ -
5	Reader Enclosures - Type 1		Each	1	\$ -	\$ -	\$ -
6	Enclosure Climate Control - Type 1		Each	1	\$ -	\$ -	\$ -
7	Tri-Protocol Readers - Type 2		Each	1	\$ -	\$ -	\$ -
8	Lane Kits - Type 2		Each	1	\$ -	\$ -	\$ -
9	Antennas - Type 2		Each	1	\$ -	\$ -	\$ -
10	Antenna Mounting Kits - Type 2		Each	1	\$ -	\$ -	\$ -
11	Reader Enclosures - Type 2		Each	1	\$ -	\$ -	\$ -
12	Enclosure Climate Control - Type 2		Each	1	\$ -	\$ -	\$ -
Other (add Line for each proposed Equipment not included above):							
13			Each	1	\$ -	\$ -	\$ -
14			Each	1	\$ -	\$ -	\$ -
15			Each	1	\$ -	\$ -	\$ -
16			Each	1	\$ -	\$ -	\$ -
17			Each	1	\$ -	\$ -	\$ -
18			Each	1	\$ -	\$ -	\$ -
19			Each	1	\$ -	\$ -	\$ -
20			Each	1	\$ -	\$ -	\$ -
21			Each	1	\$ -	\$ -	\$ -
22			Each	1	\$ -	\$ -	\$ -

Form D-7
Price Proposal
Category B – TDM Transponders

(An Excel version of the Price Proposal Category B – TDM Transponders is “paper clipped” to this file for ease of completion.)

Price Sheet: B-1

Category B - TDM Transponders Summary (Summary Only - No Proposer Input Required)

Line	Description of Item	Price (\$)
	Implementation Phase	
1	Equipment Certification	\$ -
2	Training	\$ -
3	Documentation	\$ -
4	Handheld Readers	\$ -
5	Transponder Programmers	\$ -
6	Implementation Phase Sub-Total:	\$ -
	Interior Transponder	
7	Base Contract Term	\$ -
8	Extension 1	\$ -
9	Extension 2	\$ -
10	Interior Transponder Sub-Total:	\$ -
	HOV Self Declaration Transponder	
11	Base Contract Term	\$ -
12	Extension 1	\$ -
13	Extension 2	\$ -
14	HOV Self Declaration Transponder Sub-Total:	\$ -
	Exterior Transponder	
10	Base Contract Term	\$ -
11	Extension 1	\$ -
12	Extension 2	\$ -
13	Exterior Transponder Sub-Total:	\$ -
	Maintenance Phase	
14	Base Contract Term	\$ -
15	Extension 1	\$ -
16	Extension 2	\$ -
17	Maintenance Phase Sub-Total:	\$ -
18	Category B - TDM Transponders Summary Total:	\$ -

Grand Total Dollars

Officer Signature	Date
Name:	
Title:	
Address:	
Phone:	

Price Sheet: B-1-1

Category B - TDM Transponders Implementation Phase Items

Line	Equipment Certification	Unit	Price (\$)
1	E-ZPass Group Certification	Lump Sum	\$ -
2	Certification Sub-Total:		\$ -
Training			
3	Handheld Reader Training	Lump Sum	\$ -
4	Transponder Programmer Training	Lump Sum	\$ -
5	Training Sub-Total:		\$ -
Documentation			
6	Transponder Documentation	Lump Sum	\$ -
7	Handheld Reader Documentation	Lump Sum	\$ -
8	Transponder Programmer Documentation	Lump Sum	\$ -
9	Documentation Sub-Total:		\$ -
10	Category B - TDM Transponders Implementation Phase Items Total:		\$ -

Pricing Sheet: B-1-2

Category B - TDM Transponders Implementation Phase Accessories				
Line	Description	Quantity	Guaranteed Delivery Lead Time (days)	Unit Price (\$)
	Extended Price (\$)			
	Handheld Readers	6		\$ -
	Transponder Programmers	6		\$ -
3	Category B - TDM Transponders Implementation Phase Accessories Total:			\$ -

Price Sheet: B-1-3
**Category B - TDM Transponders
Transponders**

		Quantity*	Guaranteed Delivery Lead Time (days)	Unit Price (\$)	Extended Price (\$)
Line	Interior Transponder w/Mounting Components				
1	Base Contract Term	100,000		\$	-
2	Extension 1	75,000		\$	-
3	Extension 2	50,000		\$	-
4	Interior Transponder Sub-Total: \$				
	HOV Self Declaration Transponder w/Mounting Components				
5	Base Contract Term	150,000		\$	-
6	Extension 1	100,000		\$	-
7	Extension 2	50,000		\$	-
8	HOV Self Declaration Transponder Sub-Total: \$				
	Exterior Transponder w/Mounting Components				
9	Base Contract Term	6,000		\$	-
10	Extension 1	3,600		\$	-
11	Extension 2	3,600		\$	-
12	Exterior Transponder Sub-Total: \$				
13	Category B - TDM Transponders - Transponders Total: \$				

* All quantities are estimates of the quantities that will be required. These quantities are for evaluation purposes only and do not constitute a commitment by NCTA to purchase said quantities.

Price Sheet: B-1-4

Category B - TDM Transponders Maintenance Phase
--

	Description of Items	Total Monthly Price Per Handheld Reader	# of Handheld Readers	Total Monthly Price Per Transponder Programmer	# of Transponder Programmers	Number of Months	Annual Price (\$)
Line	Base Contract Prices for Maintenance						
1	Year 1 Maintenance	\$ -	6	\$ -	6	12	\$ -
2	Year 2 Maintenance	\$ -	6	\$ -	6	12	\$ -
3	Year 3 Maintenance	\$ -	6	\$ -	6	12	\$ -
4	Year 4 Maintenance	\$ -	6	\$ -	6	12	\$ -
5	Year 5 Maintenance	\$ -	6	\$ -	6	12	\$ -
6	Base Contract Sub-Total:						\$ -
	First Optional Extension Prices for Maintenance						
7	Extension 1, Year 1 Maintenance	\$ -	6	\$ -	6	12	\$ -
8	Extension 1, Year 2 Maintenance	\$ -	6	\$ -	6	12	\$ -
9	Extension 1, Year 3 Maintenance	\$ -	6	\$ -	6	12	\$ -
10	Extension 1 Sub-Total:						\$ -
	Second Optional Extension Prices for Maintenance						
11	Extension 2, Year 1 Maintenance	\$ -	6	\$ -	6	12	\$ -
12	Extension 2, Year 2 Maintenance	\$ -	6	\$ -	6	12	\$ -
13	Extension 2, Year 3 Maintenance	\$ -	6	\$ -	6	12	\$ -
14	Extension 2 Sub-Total:						\$ -
15	Category B - TDM Transponders Maintenance Phase Total:						\$ -

Pricing Sheet: B-2

Category B - TDM Transponders
Additional Accessories

				Base Term	Extension 1	Extension 2
Guaranteed Delivery Lead Time (days)				Unit Price (\$)		
Line	Description of Item	Unit				
1	Handheld Readers	Each		\$ -	\$ -	\$ -
2	Transponder Programmers	Each		\$ -	\$ -	\$ -
3	Transponder Mounting Strips	1000		\$ -	\$ -	\$ -
4	Read Prevention Bags	1000		\$ -	\$ -	\$ -

Form D-7
Price Proposal
Category C – Local Transponders

(An Excel version of the Price Proposal Category C – Local Transponders is “paper clipped” to this file for ease of completion.)

Price Sheet: C-1

Category C - Local Transponders Summary (Summary Only - No Proposer Input Required)

Line	Description of Item	Price (\$)
	Implementation Phase	
1	Equipment Certification	\$ -
2	Training	\$ -
3	Documentation	\$ -
4	Handheld Readers	\$ -
5	Transponder Programmers	\$ -
6	Implementation Phase Sub-Total:	\$ -
	Interior Transponder	
7	Base Contract Term	\$ -
8	Extension 1	\$ -
9	Extension 2	\$ -
10	Interior Transponder Sub-Total:	\$ -
	Exterior Sticker Transponder	
11	Base Contract Term	\$ -
12	Extension 1	\$ -
13	Extension 2	\$ -
14	Exterior Sticker Transponder Sub-Total:	\$ -
	Exterior Hard Case Transponder	
10	Base Contract Term	\$ -
11	Extension 1	\$ -
12	Extension 2	\$ -
13	Exterior Hard Case Transponder Sub-Total:	\$ -
	Maintenance Phase	
14	Base Contract Term	\$ -
15	Extension 1	\$ -
16	Extension 2	\$ -
17	Maintenance Phase Sub-Total:	\$ -
18	Category C - Local Transponders Summary Total:	\$ -

Grand Total Dollars

Officer Signature	Date
Name:	
Title:	
Address:	
Phone:	

Price Sheet: C-1-1

Category C - Local Transponders Implementation Phase Items

Line	Equipment Certification	Unit	Price (\$)
1	6C Certification	Lump Sum	\$ -
2	SeGo Certification	Lump Sum	\$ -
3	Equipment Certification Sub-Total:		\$ -
Training			
4	Handheld Reader Training	Lump Sum	\$ -
5	Transponder Programmer Training	Lump Sum	\$ -
6	Training Sub-Total:		\$ -
Documentation			
7	Transponder Documentation	Lump Sum	\$ -
8	Handheld Reader Documentation	Lump Sum	\$ -
9	Transponder Programmer Documentation	Lump Sum	\$ -
10	Documentation Sub-Total:		\$ -
11	Category C - Local Transponders Implementation Phase Items Total:		\$ -

Pricing Sheet: C-1-2

Category C - Local Transponders Implementation Phase Accessories				
Line	Description of Item	Quantity	Guaranteed Delivery Lead Time (days)	Unit Price (\$)
	Extended Price (\$)			
	Handheld Readers	6		\$ -
	Transponder Programmers	6		\$ -
3	Category C - Local Transponders Implementation Phase Accessories Total:			\$ -

Price Sheet: C-1-3

**Category C - Local Transponders
Transponders**

		Quantity*	Guaranteed Delivery Lead Time (days)	Unit Price (\$)	Extended Price (\$)
Line	Interior Transponder w/Mounting Components				
1	Base Contract Term	300,000			\$ -
2	Extension 1	180,000			\$ -
3	Extension 2	18,000			\$ -
4	Interior Transponder Sub-Total: \$ -				
	Exterior Sticker Transponder w/Mounting Components				
5	Base Contract Term	12,000			\$ -
6	Extension 1	7,200			\$ -
7	Extension 2	7,200			\$ -
8	Exterior Sticker Transponder Sub-Total: \$ -				
	Exterior Hard Case Transponder w/Mounting Components				
9	Base Contract Term	12,000			\$ -
10	Extension 1	7,200			\$ -
11	Extension 2	7,200			\$ -
12	Exterior Hard Case Transponder Sub-Total: \$ -				
13	Category C - Local Transponders - Transponders Total: \$ -				

* All quantities are estimates of the quantities that will be required. These quantities are for evaluation purposes only and do not constitute a commitment by NCTA to purchase said quantities.

Price Sheet: C-1-4

Category C - Local Transponders Maintenance Phase							
Description of Item		Total Monthly Price Per Handheld Reader	# of Handheld Readers	Total Monthly Price Per Transponder Programmer	# of Transponder Programmers	Number of Months	Annual Price (\$)
Line	Base Contract Prices for Maintenance						
1	Year 1 Maintenance	\$ -	6	\$ -	6	12	\$ -
2	Year 2 Maintenance	\$ -	6	\$ -	6	12	\$ -
3	Year 3 Maintenance	\$ -	6	\$ -	6	12	\$ -
4	Year 4 Maintenance	\$ -	6	\$ -	6	12	\$ -
5	Year 5 Maintenance	\$ -	6	\$ -	6	12	\$ -
6	Base Contract Sub-Total:				\$ -		
First Optional Extension Prices for Maintenance							
7	Extension 1, Year 1 Maintenance	\$ -	6	\$ -	6	12	\$ -
8	Extension 1, Year 2 Maintenance	\$ -	6	\$ -	6	12	\$ -
9	Extension 1, Year 3 Maintenance	\$ -	6	\$ -	6	12	\$ -
10	Extension 1 Sub-Total:				\$ -		
Second Optional Extension Prices for Maintenance							
11	Extension 2, Year 1 Maintenance	\$ -	6	\$ -	6	12	\$ -
12	Extension 2, Year 2 Maintenance	\$ -	6	\$ -	6	12	\$ -
13	Extension 2, Year 3 Maintenance	\$ -	6	\$ -	6	12	\$ -
14	Extension 2 Sub-Total:				\$ -		
15	Category C - Local Transponders Maintenance Phase Total:				\$ -		

Pricing Sheet: C-2

Category C - Local Transponders Additional Accessories

Line	Description of Item	Guaranteed Delivery Lead Time (days)	Unit	Base Term			Extension 1	Extension 2
				Unit Price (\$)				
1	Handheld Readers		Each	\$	-	\$	-	\$ -
2	Transponder Programmers		Each	\$	-	\$	-	\$ -

Form D-8

Proposer Questions Form

(A Word version of the Proposer Questions Form is “paper clipped” to this file for ease of completion.)

Same Proposer Questions form to be used for all Categories

Proposer Questions			North Carolina Turnpike Authority (NCTA)		
#	Page	Section	Section Description	Proposer Question	NCTA Response
1.					
2.					
3.					
4.					

Form D-9

Non-Collusion Forms

(Please complete a single form that is applicable to your firm structure. PDFs of each form are presented below. Fillable PDFs of the form are “paper clipped” to this file for ease of completion.)

Same Non-Collusion forms to be used for all Categories

Non-Collusion Affidavit, Debarment Certification, and Gift Ban Certification are required prior to bidding.
Submit to the Prequalification Office.

Rev. 5-19-11

NON-COLLUSION AFFIDAVIT, DEBARMENT CERTIFICATION AND GIFT BAN CERTIFICATION

CORPORATION

The prequalified bidder being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the prequalified bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the prequalified bidder intends to do the work with its own bonafide employees or subcontractors and will not bid for the benefit of another contractor.

By submitting this non-collusion affidavit, the Contractor is certifying his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF PREQUALIFIED BIDDER

Full name of Corporation

Address as Prequalified

Attest _____

Secretary/Assistant Secretary
Select appropriate title

By _____

President/Vice President/Assistant Vice President
Select appropriate title

Print or type Signer's name

Print or type Signer's name

CORPORATE SEAL

AFFIDAVIT MUST BE NOTARIZED

Subscribed and sworn to before me this the

_____ day of _____ 20__.

NOTARY SEAL

Signature of Notary Public

of _____ County

State of _____

My Commission Expires: _____

DEBARMENT CERTIFICATION

Conditions for certification:

1. The prequalified bidder shall provide immediate written notice to the Department if at any time the bidder learns that his certification was erroneous when he submitted his debarment certification or explanation filed with the Department, or has become erroneous because of changed circumstances.
2. The terms *covered transaction*, *debarred*, *suspended*, *ineligible*, *lower tier covered transaction*, *participant*, *person*, *primary covered transaction*, *principal*, *proposal*, and *voluntarily excluded*, as used in this provision, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. A copy of the Federal Rules requiring this certification and detailing the definitions and coverages may be obtained from the Contract Officer of the Department.
3. The prequalified bidder agrees by submitting this form, that he will not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in NCDOT contracts, unless authorized by the Department.
4. For Federal Aid projects, the prequalified bidder further agrees that by submitting this form he will include the Federal-Aid Provision titled *Required Contract Provisions Federal-Aid Construction Contract (Form FHWA PR 1273)* provided by the Department, without subsequent modification, in all lower tier covered transactions.
5. The prequalified bidder may rely upon a certification of a participant in a lower tier covered transaction that he is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless he knows that the certification is erroneous. The bidder may decide the method and frequency by which he will determine the eligibility of his subcontractors.
6. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this provision. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
7. Except as authorized in paragraph 6 herein, the Department may terminate any contract if the bidder knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available by the Federal Government.

Non-Collusion Affidavit, Debarment Certification, and Gift Ban Certification are required prior to bidding.
Submit to the Prequalification Office.

Rev. 5-19-11

DEBARMENT CERTIFICATION

The prequalified bidder certifies to the best of his knowledge and belief, that he and his principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records; making false statements; or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph b. of this certification; and
- d. Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- e. Will submit a revised Debarment Certification immediately if his status changes and will show in his bid proposal an explanation for the change in status.

If the prequalified bidder cannot certify that he is not debarred, he shall provide an explanation with this submittal. An explanation will not necessarily result in denial of participation in a contract.

Failure to submit a non-collusion affidavit and debarment certification will result in the prequalified bidder's bid being considered non-responsive.

☐

Check here if an explanation is attached to this certification.

Non-Collusion Affidavit, Debarment Certification, and Gift Ban Certification are required prior to bidding.
Submit to the Prequalification Office.

Rev. 5-19-11

NON-COLLUSION AFFIDAVIT, DEBARMENT CERTIFICATION AND GIFT BAN CERTIFICATION

INDIVIDUAL DOING BUSINESS IN HIS OWN NAME

The prequalified bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the prequalified bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the prequalified bidder intends to do the work with its own bonafide employees or subcontractors and will not bid for the benefit of another contractor.

By submitting this non-collusion affidavit, the Contractor is certifying his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF PREQUALIFIED BIDDER

Name of Prequalified Bidder _____
Print or type name

Address as Prequalified

Signature of Prequalified Bidder, Individually

Print or type Signer's Name

Signature of Witness

Print or type Signer's name

AFFIDAVIT MUST BE NOTARIZED

Subscribed and sworn to before me this the

NOTARY SEAL

____ day of _____ 20__.

Signature of Notary Public

of _____ County

State of _____

My Commission Expires: _____

DEBARMENT CERTIFICATION

Conditions for certification:

1. The prequalified bidder shall provide immediate written notice to the Department if at any time the bidder learns that his certification was erroneous when he submitted his debarment certification or explanation filed with the Department, or has become erroneous because of changed circumstances.
2. The terms *covered transaction*, *debarred*, *suspended*, *ineligible*, *lower tier covered transaction*, *participant*, *person*, *primary covered transaction*, *principal*, *proposal*, and *voluntarily excluded*, as used in this provision, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. A copy of the Federal Rules requiring this certification and detailing the definitions and coverages may be obtained from the Contract Officer of the Department.
3. The prequalified bidder agrees by submitting this form, that he will not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in NCDOT contracts, unless authorized by the Department.
4. For Federal Aid projects, the prequalified bidder further agrees that by submitting this form he will include the Federal-Aid Provision titled *Required Contract Provisions Federal-Aid Construction Contract (Form FHWA PR 1273)* provided by the Department, without subsequent modification, in all lower tier covered transactions.
5. The prequalified bidder may rely upon a certification of a participant in a lower tier covered transaction that he is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless he knows that the certification is erroneous. The bidder may decide the method and frequency by which he will determine the eligibility of his subcontractors.
6. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this provision. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
7. Except as authorized in paragraph 6 herein, the Department may terminate any contract if the bidder knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available by the Federal Government.

Non-Collusion Affidavit, Debarment Certification, and Gift Ban Certification are required prior to bidding.
Submit to the Prequalification Office.

Rev. 5-19-11

DEBARMENT CERTIFICATION

The prequalified bidder certifies to the best of his knowledge and belief, that he and his principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records; making false statements; or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph b. of this certification; and
- d. Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- e. Will submit a revised Debarment Certification immediately if his status changes and will show in his bid proposal an explanation for the change in status.

If the prequalified bidder cannot certify that he is not debarred, he shall provide an explanation with this submittal. An explanation will not necessarily result in denial of participation in a contract.

Failure to submit a non-collusion affidavit and debarment certification will result in the prequalified bidder's bid being considered non-responsive.

☐

Check here if an explanation is attached to this certification.

Non-Collusion Affidavit, Debarment Certification, and Gift Ban Certification are required prior to bidding.
Submit to the Prequalification Office.

Rev. 5-19-11

NON-COLLUSION AFFIDAVIT, DEBARMENT CERTIFICATION AND GIFT BAN CERTIFICATION

INDIVIDUAL DOING BUSINESS UNDER A FIRM NAME

The prequalified bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the prequalified bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the prequalified bidder intends to do the work with its own bonafide employees or subcontractors and will not bid for the benefit of another contractor.

By submitting this non-collusion affidavit, the Contractor is certifying his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF PREQUALIFIED BIDDER

Name of Prequalified Bidder

Individual name

Trading and doing business as

Full name of Firm

Address as Prequalified

Signature of Witness

Signature of Prequalified Bidder, Individually

Print or type Signer's name

Print or type Signer's name

AFFIDAVIT MUST BE NOTARIZED

Subscribed and sworn to before me this the

NOTARY SEAL

____ day of _____ 20__.

Signature of Notary Public

of _____ County

State of _____

My Commission Expires: _____

Non-Collusion Affidavit, Debarment Certification, and Gift Ban Certification are required prior to bidding.
Submit to the Prequalification Office.

Rev. 5-19-11

DEBARMENT CERTIFICATION

Conditions for certification:

1. The prequalified bidder shall provide immediate written notice to the Department if at any time the bidder learns that his certification was erroneous when he submitted his debarment certification or explanation filed with the Department, or has become erroneous because of changed circumstances.
2. The terms *covered transaction*, *debarred*, *suspended*, *ineligible*, *lower tier covered transaction*, *participant*, *person*, *primary covered transaction*, *principal*, *proposal*, and *voluntarily excluded*, as used in this provision, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. A copy of the Federal Rules requiring this certification and detailing the definitions and coverages may be obtained from the Contract Officer of the Department.
3. The prequalified bidder agrees by submitting this form, that he will not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in NCDOT contracts, unless authorized by the Department.
4. For Federal Aid projects, the prequalified bidder further agrees that by submitting this form he will include the Federal-Aid Provision titled *Required Contract Provisions Federal-Aid Construction Contract (Form FHWA PR 1273)* provided by the Department, without subsequent modification, in all lower tier covered transactions.
5. The prequalified bidder may rely upon a certification of a participant in a lower tier covered transaction that he is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless he knows that the certification is erroneous. The bidder may decide the method and frequency by which he will determine the eligibility of his subcontractors.
6. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this provision. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
7. Except as authorized in paragraph 6 herein, the Department may terminate any contract if the bidder knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available by the Federal Government.

Non-Collusion Affidavit, Debarment Certification, and Gift Ban Certification are required prior to bidding.
Submit to the Prequalification Office.

Rev. 5-19-11

DEBARMENT CERTIFICATION

The prequalified bidder certifies to the best of his knowledge and belief, that he and his principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records; making false statements; or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph b. of this certification; and
- d. Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- e. Will submit a revised Debarment Certification immediately if his status changes and will show in his bid proposal an explanation for the change in status.

If the prequalified bidder cannot certify that he is not debarred, he shall provide an explanation with this submittal. An explanation will not necessarily result in denial of participation in a contract.

Failure to submit a non-collusion affidavit and debarment certification will result in the prequalified bidder's bid being considered non-responsive.

☐

Check here if an explanation is attached to this certification.

Non-Collusion Affidavit, Debarment Certification, and Gift Ban Certification are required prior to bidding.
Submit to the Prequalification Office.

Rev. 5-19-11

NON-COLLUSION AFFIDAVIT, DEBARMENT CERTIFICATION AND GIFT BAN CERTIFICATION

LIMITED LIABILITY COMPANY

The prequalified bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the prequalified bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the prequalified bidder intends to do the work with its own bonafide employees or subcontractors and will not bid for the benefit of another contractor.

By submitting this non-collusion affidavit, the Contractor is certifying his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF PREQUALIFIED BIDDER

Full Name of Firm

Address as Prequalified

Signature of Witness

Signature of Member/Manager/Authorized Agent
Select appropriate title

Print or type Signer's name

Print or type Signer's Name

AFFIDAVIT MUST BE NOTARIZED

Subscribed and sworn to before me this the

NOTARY SEAL

____ day of _____ 20__.

Signature of Notary Public

of _____ County

State of _____

My Commission Expires: _____

DEBARMENT CERTIFICATION

Conditions for certification:

1. The prequalified bidder shall provide immediate written notice to the Department if at any time the bidder learns that his certification was erroneous when he submitted his debarment certification or explanation filed with the Department, or has become erroneous because of changed circumstances.
2. The terms *covered transaction*, *debarred*, *suspended*, *ineligible*, *lower tier covered transaction*, *participant*, *person*, *primary covered transaction*, *principal*, *proposal*, and *voluntarily excluded*, as used in this provision, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. A copy of the Federal Rules requiring this certification and detailing the definitions and coverages may be obtained from the Contract Officer of the Department.
3. The prequalified bidder agrees by submitting this form, that he will not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in NCDOT contracts, unless authorized by the Department.
4. For Federal Aid projects, the prequalified bidder further agrees that by submitting this form he will include the Federal-Aid Provision titled *Required Contract Provisions Federal-Aid Construction Contract (Form FHWA PR 1273)* provided by the Department, without subsequent modification, in all lower tier covered transactions.
5. The prequalified bidder may rely upon a certification of a participant in a lower tier covered transaction that he is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless he knows that the certification is erroneous. The bidder may decide the method and frequency by which he will determine the eligibility of his subcontractors.
6. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this provision. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
7. Except as authorized in paragraph 6 herein, the Department may terminate any contract if the bidder knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available by the Federal Government.

Non-Collusion Affidavit, Debarment Certification, and Gift Ban Certification are required prior to bidding.
Submit to the Prequalification Office.

Rev. 5-19-11

DEBARMENT CERTIFICATION

The prequalified bidder certifies to the best of his knowledge and belief, that he and his principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records; making false statements; or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph b. of this certification; and
- d. Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- e. Will submit a revised Debarment Certification immediately if his status changes and will show in his bid proposal an explanation for the change in status.

If the prequalified bidder cannot certify that he is not debarred, he shall provide an explanation with this submittal. An explanation will not necessarily result in denial of participation in a contract.

Failure to submit a non-collusion affidavit and debarment certification will result in the prequalified bidder's bid being considered non-responsive.

☐ Check here if an explanation is attached to this certification.

Non-Collusion Affidavit, Debarment Certification, and Gift Ban Certification are required prior to bidding.
Submit to the Prequalification Office.

Rev. 5-19-11

NON-COLLUSION AFFIDAVIT, DEBARMENT CERTIFICATION AND GIFT BAN CERTIFICATION

PARTNERSHIP

The prequalified bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the prequalified bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the prequalified bidder intends to do the work with its own bonafide employees or subcontractors and will not bid for the benefit of another contractor.

By submitting this non-collusion affidavit, the Contractor is certifying his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF PREQUALIFIED BIDDER

<hr/>	
Full Name of Partnership	
<hr/>	
Address as Prequalified	
<hr/>	
<hr/>	By <hr/>
Signature of Witness	Signature of Partner
<hr/>	<hr/>
Print or type Signer's name	Print or type Signer's name

AFFIDAVIT MUST BE NOTARIZED

Subscribed and sworn to before me this the

NOTARY SEAL

____ day of _____ 20__.

Signature of Notary Public

of _____ County

State of _____

My Commission Expires: _____

DEBARMENT CERTIFICATION

Conditions for certification:

1. The prequalified bidder shall provide immediate written notice to the Department if at any time the bidder learns that his certification was erroneous when he submitted his debarment certification or explanation filed with the Department, or has become erroneous because of changed circumstances.
2. The terms *covered transaction*, *debarred*, *suspended*, *ineligible*, *lower tier covered transaction*, *participant*, *person*, *primary covered transaction*, *principal*, *proposal*, and *voluntarily excluded*, as used in this provision, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. A copy of the Federal Rules requiring this certification and detailing the definitions and coverages may be obtained from the Contract Officer of the Department.
3. The prequalified bidder agrees by submitting this form, that he will not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in NCDOT contracts, unless authorized by the Department.
4. For Federal Aid projects, the prequalified bidder further agrees that by submitting this form he will include the Federal-Aid Provision titled *Required Contract Provisions Federal-Aid Construction Contract (Form FHWA PR 1273)* provided by the Department, without subsequent modification, in all lower tier covered transactions.
5. The prequalified bidder may rely upon a certification of a participant in a lower tier covered transaction that he is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless he knows that the certification is erroneous. The bidder may decide the method and frequency by which he will determine the eligibility of his subcontractors.
6. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this provision. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
7. Except as authorized in paragraph 6 herein, the Department may terminate any contract if the bidder knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available by the Federal Government.

Non-Collusion Affidavit, Debarment Certification, and Gift Ban Certification are required prior to bidding.
Submit to the Prequalification Office.

Rev. 5-19-11

DEBARMENT CERTIFICATION

The prequalified bidder certifies to the best of his knowledge and belief, that he and his principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records; making false statements; or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph b. of this certification; and
- d. Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- e. Will submit a revised Debarment Certification immediately if his status changes and will show in his bid proposal an explanation for the change in status.

If the prequalified bidder cannot certify that he is not debarred, he shall provide an explanation with this submittal. An explanation will not necessarily result in denial of participation in a contract.

Failure to submit a non-collusion affidavit and debarment certification will result in the prequalified bidder's bid being considered non-responsive.

☐

Check here if an explanation is attached to this certification.

Form D-I0

Surety Commitment Letters

(Word versions of the Surety Commitment Letters are “paper clipped” to this file for ease of completion.)

Separate Surety Commitment Letter provided for:

Category A – Readers

Category B – TDM Transponders

Category C – Local Transponders

CONSENT OF SURETY

CATEGORY A – READERS

TO: North Carolina Turnpike Authority

We have reviewed the proposal of _____

 (Proposer)

 (Address)

for the AVI Readers, for which Proposals will be received on ~~September 28~~October 14, 2016,
 and wish to advise that should this Proposal of the Proposer be accepted and the Contract awarded to,
 such Proposer, this company agrees to become the surety and provide the Payment and Performance
 Bonds required by the Contract for both the Implementation and Maintenance Phases. Such bonds will be
 in the amounts identified in the Price Proposal as referenced in the RFP Section I, Administrative, Section
 4.I Notification of Award with terms of the bonds as also provided in that section.

We are duly authorized to do business in the State of North Carolina.

Surety Company/Address:

 (Authorized Signature)

ATTEST:

[Attach Power of Attorney]

(Corporate Seal, if any. If no seal, write “No Seal” across this place and sign.)

CONSENT OF SURETY

CATEGORY B – TDM TRANSPONDERS

TO: North Carolina Turnpike Authority

We have reviewed the proposal of _____

 (Proposer)

 (Address)

for the TDM Transponders, for which Proposals will be received on ~~September 28~~ October 14, 2016, and wish to advise that should this Proposal of the Proposer be accepted and the Contract awarded to, such Proposer, this company agrees to become the surety and provide the Payment and Performance Bonds required by the Contract for both the Implementation and Maintenance Phases. Such bonds will be in the amounts identified in the Price Proposal as referenced in the RFP Section I, Administrative, Section 4.I Notification of Award with terms of the bonds as also provided in that section.

We are duly authorized to do business in the State of North Carolina.

Surety Company/Address:

 (Authorized Signature)

ATTEST:

[Attach Power of Attorney]

(Corporate Seal, if any. If no seal, write "No Seal" across this place and sign.)

CONSENT OF SURETY

CATEGORY C – LOCAL TRANSPONDERS

TO: North Carolina Turnpike Authority

We have reviewed the proposal of _____
(Proposer)

(Address)

for the Local Transponders, for which Proposals will be received on ~~September 28~~ October 14, 2016, and wish to advise that should this Proposal of the Proposer be accepted and the Contract awarded to, such Proposer, this company agrees to become the surety and provide the Payment and Performance Bonds required by the Contract for both the Implementation and Maintenance Phases. Such bonds will be in the amounts identified in the Price Proposal as referenced in the RFP Section I, Administrative, Section 4.1 Notification of Award with terms of the bonds as also provided in that section.

We are duly authorized to do business in the State of North Carolina.

Surety Company/Address:

(Authorized Signature)

ATTEST:

[Attach Power of Attorney]

(Corporate Seal, if any. If no seal, write "No Seal" across this place and sign.)

Form D-I I

Acknowledgement of Receipt of Addenda

(A Word version of the Acknowledgement of Receipt of Addenda is “paper clipped” to this file for ease of completion.)

Same Acknowledgement of Receipt of Addenda form to be used for all Categories

ACKNOWLEDGEMENT OF RECEIPT OF ADDENDA

The Proposer shall acknowledge receipt of each addendum to this Request for Proposal by completing this form and including same in the Technical Proposal.

<u>Addenda</u>	<u>Date</u>	<u>By</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Failure to confirm receipt of addenda may result in rejection of the Proposer's Proposal.

Dated _____, 2016

Legal Name of Firm

By _____
Signature

Title

NOTE: Attach additional pages as necessary

Form D-12

Requirement Non-Conformance Detail

**(A Word version of the Requirement Non-Conformance Detail is “paper clipped”
to this file for ease of completion.)**

Same Requirement Non-Conformance Detail form to be used for all Categories

Section #	Requirement #	Explanation of Non-Conformance