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Exhibit A
Project Implementation Schedule

Updated per Addendum 2 (4/17/2026)

Exhibit A – Project Implementation Schedule		
Major Milestone Description	Projected Start	Projected End
Notice to Proceed (NTP) of Implementation Phase	Sep 2026	--
Project Kickoff Meeting	Sep 2026	--
Project Planning Documentation (Project Schedule, Project Management Plan, Master Test Plan)	Sep 2026	60 Calendar Days after NTP
System Design		
Requirements Review and Business Rules Workshops	Nov 2026	Nov 2026
System Detailed Design Review	Nov 2026	Jan 2027
Bill of Materials	Dec 2026	Dec 2026
Third Party Hardware and Software Documentation Submitted	Jan 2027	Jan 2027
Draft System Detailed Design Document (SDDD) Approval	Jan 2027	Feb 2027
Final System Detailed Design Document (SDDD) Approval	Feb 2027	Mar 2027
Roadside Toll Collection System (RTCS) Installation Design and Documentation Package Approval	Jan 2027	Mar 2027
Final Installation Plan Approved	Apr 2027	May 2027
RTCS, Installation and Test		
Major Milestones: Factory Acceptance Test (FAT)	Jun 2027	Aug 2027
NCTA Operational Back Office (OBO) Interface Test	Sep 2027	Oct 2027
Maintenance Plan and Training Plan	Aug 2027	Oct 2027
Installation and System Acceptance (NTP2) NTP2 will be issued once design-build group has provided all scoped AET infrastructure for toll system integrator use.	Mar 2028 (Estimate)	
Installation and Commissioning Approved Ready for Go-Live - Tolling Location 1 Installation and OIT	--	40 Calendar Days after NTP2
Major Milestone: Toll Zone commissioning for revenue service during Site Installation Test - Installation and Site Installation Test of Complete 540 Phase 2 and RSS associated ITS Equipment. Installation and Commissioning Approved Ready for Go-Live - Tolling Locations 2 – 12.	--	120 Calendar Days after NTP2
Training Complete	--	30 Calendar Days prior to Go-Live
Complete 540 Phase 2 Go-Live	--	Jun 2028

Exhibit A – Project Implementation Schedule		
Major Milestone Description	Projected Start	Projected End
Final Testing and Phase Closeout		
Start of Maintenance	--	Go-Live
As-Built System Detailed Design Document (SDDD) Approved	--	Go-Live + 60 Calendar Days
As-Built Drawing Package Approved	--	Go-Live + 60 Calendar Days
System Acceptance Test	--	Go-Live + 60 Calendar Days

Note: Refer to the RFP Part V, Terms and Conditions for penalties associated with the deadlines for the **Major Milestones** which include the completion of **Factory Acceptance Testing** and **the commissioning of all Toll Zones and associated ITS equipment for revenue service**.

Exhibit B-1
Price Proposal Instructions

Per Addendum 2
(4/17/2026)

Table of Contents

1 GENERAL INSTRUCTIONS

Proposers shall complete their Price Proposals in accordance with the following instructions:

1. The Price Proposal Forms are provided in Excel format worksheets for ease of completion and checking.
2. Proposers shall submit their Price Proposals on the Price Proposal Forms included as Exhibit B-2. Price Proposals shall be sealed and submitted separate from the Technical Proposal.
3. The Price Proposal Forms shall constitute the full and complete Price Proposal for compensation for performance of the Contractor's obligations and Work under the Complete 540 Phase 2 Project.
4. Proposers must complete the Price Proposal Forms in their entirety. The Price Proposal Forms for the Project are as outlined in ***Table 1*** below.
5. Proposers should not fill in any grayed-out cells on the Price Proposal Forms, nor shall Proposers make any other entry on or alteration to the Price Proposal Forms other than in accordance with these Price Proposal Instructions.
6. NCTA may waive or correct any error appearing in a Proposer's completed Price Proposal Forms 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 be controlled. In the event of a mathematical miscalculation, the correct sum will be controlled.
7. An officer of the Proposer or an individual otherwise authorized in writing by an officer of the Proposer must sign and date Sheet 1 in the appropriate place as identified.
8. 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 Forms will be assumed to be included in the Price Proposal.
9. NCTA reserves the right to reject Price Proposals that are not completed in accordance with the instructions set forth herein.
10. Instructions for completion of each of the Price Proposal Forms are provided in Sections 2 through 12 below.
11. No price escalation will be allowed above the costs provided on the Price Proposal Sheets to complete this Work except as set forth in Section 12.
12. The Price Proposal shall be inclusive of all costs, fees and applicable taxes needed to meet the requirements of the RFP, included in **Part III, Scope of Work and Requirements**. ~~Implementation pricing should be entered in 2027 dollar values. Maintenance costs should be entered for each year with maintenance activities starting in 2028. No price escalation will be allowed above the costs provided on the Price Proposal Forms to complete the Work.~~ All pricing shall be provided in dollar values relative to the expected time the work will be performed. No price escalation will be allowed above the costs provided on the Price Proposal Forms.

2 INSTRUCTIONS ON COMPLETING THE PRICE PROPOSAL FORMS

1. The Price Proposal Forms, as detailed above, include pricing summary sheets (Sheets 1, 2, 3, 4, 5, 6, 7 and 8) and associated Backup information on Backup sheets for each pricing sheet. Backup sheets for each summary sheet are labeled to identify the corresponding summary pricing sheet; for example, Sheet 2-1 and Sheet 2-2 are Backup sheets to pricing Sheet 2. Backup sheets are located following summary sheets 1 through 8. The Additional Services Rates sheet 9-1 are standalone sheets and do not require a summary sheet.
2. Table 1 below summarizes the Price Proposal forms that shall be completed by all Proposers. Each form is located on a unique sheet in an Excel workbook. The table provides the following information for each form:
    a. The sheet number (e.g. 2, 2-1, etc.)
    b. The sheet title is listed at the top of each sheet

Table 1 – Price Proposal Form Summary

Sheet Number	Sheet Title
1	NCTA Triangle Expressway C540 P2 Project Summary
2	RSS Summary
2-1	Backup RSS 3 Lane
2-2	~~Backup ITS~~ Backup RSS 5 Lane
2-3	Backup RSS Spares
3	TRH Summary
3-1	Backup TRH
4	Toll System Implementation
4-1	Backup Toll System Implementation
5	RSS Maintenance
5-1	Backup Base Contract and Optional Extensions: Triangle Expressway C540 P2 RSS Maintenance Cost Summary – Labor and Other Direct Cost Items by Month
6	TRH Maintenance
6-1	Backup Base Contract and Optional Extensions: Triangle Expressway C540 P2 TRH Maintenance Cost Summary – Labor and Other Direct Cost Items by Month
7	Facility Maintenance
7-1	Backup Base Contract and Optional Extensions: Triangle Expressway C540 P2 Facility Maintenance Cost Summary – Labor and Other Direct Cost Items by Month
~~8~~	~~ITS Maintenance~~
~~8-1~~	~~Backup Base Contract and Optional Extensions: Triangle Expressway C540 P2 ITS Maintenance Cost Summary – Labor and Other Direct Cost Items by Month~~
9-1	Labor Rates for Future Additional Services

3. The Price Proposal Forms are password protected and shall not be unlocked by Proposers. Only in the unlocked cells may the Proposers enter data.
4. Blue colored tabs represent summary sheets that do *not* require Proposer input. Green tabs represent worksheets that require Proposer input.
5. On most sheets there are formulas that are automatically calculated based on data entered from elsewhere in the sheet or workbook. Font and background colors are used to indicate

different types of cells as follows:

- Black font – Indicates the cell cannot be altered by Proposer.
- Red font – Indicates the Proposer should enter data.
- Light yellow background – Indicates a cell where Proposer is expected to or may input data
- Light green background – Indicates that data has been entered into the cell. Light red and light-yellow background will change to light green when any non-zero data is entered. The background for any cells where the Proposer enters zero (0) will not change colors in this manner.

6. While NCTA has made every effort to ensure the Price Proposal Forms contain accurate formulas and calculation, Proposers are required to independently verify that formulas and calculations are being performed correctly.

3 TOTAL PROJECT COSTS

The Proposer's proposed total price shall be the aggregate of all costs included in Sheet 1. Sheet 1 will automatically roll-up and present the totals from Sheets 2 through Sheet 8. The total cost for the Implementation and Base Maintenance phases are aggregated in the row labelled "Total Implementation and Base Term Maintenance and Operations Cost", which will be the value used for the selection process. The Optional Extension costs are informational and will be referenced at the time of Contract Extension.

4 COMPLETION OF THE RSS ~~and ITS~~ COST SUMMARY - SHEETS 2, 2-1, 2-2, 2-3

The Proposer's total price for the RSS ~~and ITS~~ Systems portion of the Implementation Phase shall be the aggregate of all costs included in Sheet 2 which covers all costs associated with the RSS ~~and ITS~~ System portion of the Work for the Triangle Expressway C540 P2.

The costs for Sheet 2 shall include (without limitation) all Equipment, supplies, Software, parts and materials, overhead, burden, profit, taxes, duties, fees, Contractor-acquired permits, licenses, warranties, and other items necessary to meet the Contractor contractual requirements associated with the RSS ~~and ITS~~ portion of the System.
The prices on Sheet 2 and related Backup sheets shall not include charges and costs associated with the Operations and Maintenance Phase. These costs shall be provided on separate Price Proposal Sheets as described below.

To complete Sheets 2, 2-1, ~~and~~ 2-2, and 2-3 Proposers should do the following:

1. **Sheet 2**. This sheet will be automatically populated from Sheet 2-1, ~~and~~ 2-2, and 2-3. No Proposer input is required.
2. **Sheet 2-1**. In the columns provided under each cost component, enter a description for each price element for each component in as much detail as space allows. Moving to the right in the 2nd column (B) enter the quantity for each item and in the 3rd column (C) enter the unit costs. If the item is provided as a lump sum, the quantity should be shown as 1. Total item costs will be calculated automatically. Moving to the right, in the 5th column (E), enter the labor costs associated with each of the price elements. The costs for each price element will then automatically be calculated, and the summary will be shown in the appropriate line item on

Sheet 2. The costs entered into this first table are to be typical costs for a Toll Zone with two 12' shoulders and three 12 foot travel lanes. The second table on this sheet, titled "Initial RSS Spares and Miscellaneous" is provided to capture the cost of initial spares, any additional costs to accommodate deviations from the typical zone geometry (such as a wider shoulder) and any other roadside installation costs which do not fall into a per zone structure (such as a local storage facility during installation).

3. **Sheet 2-2**. In the columns provided under each cost component, enter a description for each price element for each component in as much detail as space allows. Moving to the right in the 2nd column (B) enter the quantity for each item and in the 3rd column (C) enter the unit costs. If the item is provided as a lump sum, the quantity should be shown as 1. Total item costs will be calculated automatically. Moving to the right, in the 5th column (E), enter the labor costs associated with each of the price elements. The costs for each price element will then automatically be calculated, and the summary will be shown in the appropriate line item on Sheet 2. The costs entered into this first table are to be typical costs for a Toll Zone with two 12' shoulders and five 12 foot travel lanes.

~~2.~~4. **Sheet 2-3**.The table on this sheet, titled "Initial RSS Spares and Miscellaneous" is provided to capture the cost of initial spares, any additional costs to accommodate deviations from the typical zone geometry (such as a wider shoulder) and any other roadside installation costs which do not fall into a per zone structure (such as a local storage facility during installation).

~~3. **Sheet 2-2**. The ITS Device Integration table is expected to capture the per-device labor costs to integrate each ITS device into the RTCS ITSM and the NCDOT TMC. These per-device costs are then multiplied by the number of devices to calculate total cost in Sheet 1 Project Summary. ITS integration and maintenance are an optional scope of work, to be determined by NCTA. The inclusion or exclusion of this scope from the Project shall not influence any other costs on the project.~~

5 COMPLETION OF TOLL RECONCILIATION HOST COST – SHEETS 3 AND 3-1

The Proposer's proposed total price for the Toll Reconciliation Host (TRH) portion of the Implementation Phase shall be the aggregate of all costs included in Sheet 3 which covers all costs associated with the TRH System portion of the Work for the Triangle Expressway C540 P2.

The costs for Sheet 3 shall include (without limitation) all servers, supplies, software, communication equipment parts and materials, contractor-acquired lease, licenses, warranties, and other items necessary to meet the Contractor contractual requirements associated with the TRH portion of the System.

The prices on Sheet 3 and related Backup sheets shall not include charges and costs associated with the Operations and Maintenance Phase. These costs shall be provided on separate Price Proposal Sheets as described below.

1. **Sheet 3.** This sheet will be automatically populated from Sheet 3-1. No Proposer input is required.
2. **Sheet 3-1.** In the columns provided under each cost component, enter a description for each price element for each component in as much detail as space allows. Moving to the right in the 3rd column (C) enter the quantity for each item and in the 4th column (D) enter the unit costs. If the item is provided as a lump sum, the quantity should be shown as 1. Total item costs will be calculated automatically. Moving to the right, in the 6th column (F), enter the labor costs associated with each of the price elements. The costs for each price element will then

automatically be calculated, and the summary will be shown in the appropriate line item on Sheet 3. There are 4 separate tables in this sheet, which cover the 3 components of the TRH and licenses and warranties to be included in the Implementation Phase. All tables must be completed. If Proposers find there is not adequate space or categories to detail the TRH pricing for their project, they may use the optional Price Proposal Backup document to detail prices and correlate the aggregate to the free form rows provided in the existing TRH pricing tables.

6 COMPLETION OF TOLL SYSTEM IMPLEMENTATION COST SHEETS 4 and 4-1

The Proposer's proposed total price for the RTCS (including RSS and, TRH ~~and ITS~~) portion of the Implementation Phase, excluding installation and materials costs, shall be the aggregate of all costs included in Sheet 4. This sheet covers all costs associated with the RTCS (RSS, ~~ITS~~ and TRH) for the Triangle Expressway C540 P2 to complete the implementation, such as project management, engineering and Design, and Testing.

The total price shall include (without limitation) all overhead, burden, profit, taxes, duties, fees, warranties, and other items necessary for the Contractor to complete the Work. The costs shall also include (without limitation) all Equipment, supplies, Software, parts and materials, Contractor-acquired permits, licenses, warranties, and other items necessary to meet the Contractor contractual requirements associated with the RTCS (including RSS~~,~~ and TRH ~~and ITS~~) Cost applicable to these sheets.
The prices on Sheet 4 and related Backup shall not include charges and costs associated with the Operations and Maintenance Phase or costs otherwise covered on Sheets 2 and 3. These costs shall be set forth on separate Price Proposal Forms as described in Section 2 above.

Proposers shall complete Sheets 4 and 4-1 as follows:

1. **Sheet 4.** This sheet requires no input from the Proposer and will automatically be populated by values in Sheet 4-1 Backup Toll System Implementation.
2. **Sheet 4-1.** This Sheet contains 4 Tables, Toll System Project, Design, Testing and Implementation Documentation; Toll System Testing; Development and Testing Environment; and Potential Construction delay costs. Proposers shall provide a price for direct costs and labor for each item in these 4 Tables, in relation to the corresponding units provided. As shown in this sheet, NCTA will use an assumed 6-month construction delay to be included in the Proposer's price. The Proposer will not be eligible for any additional compensation due to project delay outside their control beyond the costs detailed in this Price Proposal under any circumstances. See section 2.5.2 Carrying Costs due to Project Delay Outside Contractor Control in Part V Terms and Conditions of the RFP for additional detail.

7 COMPLETION OF ROADSIDE HARDWARE MAINTENANCE AND SOFTWARE SUPPORT SERVICES COST (BASE AND OPTIONAL EXTENSIONS) SHEETS 5, and 5-1

The Proposer's proposed total price for the RSS Hardware Maintenance and Software Support Services Cost shall be the aggregate of all costs included in Sheet 5. This sheet covers all costs associated with the Maintenance of the RSS for the Triangle Expressway C540 P2.

The costs shall include (without limitation) all Contractor management, administrative and support labor costs, as well as all direct costs associated with maintaining the RSS Hardware Maintenance and Software Support Services Cost system. The total price shall include (without limitation) all overhead, burden,

profit, taxes, duties, fees, warranties, Equipment, supplies, Software, parts and materials, Contractor-acquired permits, licenses, warranties, and all other items necessary to meet the Contractor contractual requirements associated with the RSS Hardware Maintenance and Software Support Services Cost Maintenance. All labor rates shall be final for each respective year. No Escalation will be allowed above the costs provided on these Price Proposal Forms.

Proposers shall complete Sheets 5, 5-1 as follows:

1. **Sheet 5.** This sheet is automatically populated from Sheet 5-1; it requires no input from the Proposer.
2. **Sheet 5-1**. For the Base Contract for Maintenance (Years 1–5), as well as for the Optional Extension 1 (Years 6-8) and the Optional Extension 2 (Years 9-11) for Triangle Expressway C540 P2, each year is identified with a corresponding set of Work elements. Starting in column (B), enter the monthly per-zone cost associated with each price element for each year of the Base Contract Term and Optional Maintenance Phase. Proposers shall provide average per zone cost for the project, considering the distribution of different zone geometries.

8 COMPLETION OF TRH HARDWARE MAINTENANCE AND SOFTWARE SUPPORT SERVICES COST (BASE AND OPTIONAL EXTENSIONS) SHEETS 6, and 6-1

The Proposer's proposed total price for the TRH Hardware Maintenance and Software Support Services Cost shall be the aggregate of all costs included in Sheet 6. This sheet covers all costs associated with the Maintenance of the TRH for the Triangle Expressway C540 P2.

The costs shall include (without limitation) all Contractor management, administrative and support labor costs, as well as all direct costs associated with maintaining the Software Support Services. The total price shall include (without limitation) all overhead, burden, profit, taxes, duties, fees, warranties, Equipment, supplies, Software, parts and materials, Contractor-acquired permits, licenses, warranties, and all other items necessary to meet the Contractor contractual requirements associated with the TRH Hardware Maintenance and Software Support Services Cost Maintenance. All labor rates shall be final for each respective year. No Escalation will be allowed above the costs provided on these Price Proposal Forms.

Proposers shall complete Sheets 6, 6-1 as follows:

1. **Sheet 6.** This sheet is automatically populated from Sheet 6-1; it requires no input from the Proposer.
2. **Sheet 6-1**. For the Base Contract for Maintenance (Years 1–5), as well as for the Optional Extension 1 (Years 6-8) and the Optional Extension 2 (Years 9-11) for Triangle Expressway C540 P2, each year is identified with a corresponding set of Work elements. Enter the monthly cost associated with each price element. The Total Monthly costs for each year will then automatically be calculated, and the summary will be shown in the appropriate line item on Sheet 6-1. Rates must be provided for each year of the Base Term and Optional Extension Maintenance Phases. *There are three expansion rows provided for each year of maintenance.

9 COMPLETION OF FACILITY MAINTENANCE (BASE AND EXTENSIONS) SHEETS 7 and 7-1

The Proposer's proposed total price for the Facility Maintenance Cost shall be the aggregate of all costs included in Sheet 7. This sheet covers all costs associated with the Facility Maintenance for the Triangle Expressway C540 P2.

The costs shall include (without limitation) all Contractor management, administrative and support labor costs, as well as all direct costs associated with fulfilling all Facility Maintenance requirements in the Contract. The total price shall include (without limitation) all overhead, burden, profit, taxes, duties, fees, warranties, Equipment, supplies, Software, parts and materials, Contractor-acquired permits, licenses, warranties, and all other items necessary to meet the Contractor contractual requirements associated with Facility Maintenance. All labor rates shall be final for each respective year. No Escalation will be allowed above the costs provided on these Price Proposal Forms.

Proposers shall complete Sheets 7, 7-1 as follows:

1. **Sheet 7.** This sheet is automatically populated from Sheet 7-1; it requires no input from the Proposer.
2. **Sheet 7-1**. For the Base Contract for Maintenance (Years 1–5), as well as for the Optional Extension 1 (Years 6-8) and the Optional Extension 2 (Years 9-11) for Triangle Expressway C540 P2, each year is identified with a corresponding set of Work elements. Starting in column (C), enter the monthly per-zone cost associated with each price element. The Total Monthly costs for each year will then automatically be calculated, and the summary will be shown in the appropriate line item on Sheet 7-1. Enter the appropriate monthly rates for each year of the Base Contract Maintenance Term and the Optional Extension Maintenance Phases.

~~10 COMPLETION OF ITS HARDWARE MAINTENANCE AND SOFTWARE SUPPORT SERVICES COST (BASE AND OPTIONAL EXTENSIONS) SHEETS 8, and 8-1~~

~~The Proposer's proposed total price for the ITS Hardware Maintenance and Software Support Services Cost shall be the aggregate of all costs included in Sheet 8. This sheet covers all costs associated with the Maintenance of the TRH for the Triangle Expressway C540 P2. This portion of scope is optional at NCTA's determination. The inclusion or exclusion of this scope from the project shall not influence any other costs on the Project.~~

~~The costs shall include (without limitation) all Contractor management, administrative and support labor costs, as well as all direct costs associated with maintaining the ITS Hardware Maintenance and Software Support Services Cost system. The total price shall include (without limitation) all overhead, burden, profit, taxes, duties, fees, warranties, and labor. Contractor-acquired permits, licenses, warranties, and all other items necessary to meet the Contractor contractual requirements associated with the ITS Maintenance. All labor rates shall be final for each respective year. No escalation will be allowed above the costs provided on these Price Proposal Forms.~~

~~Proposers shall complete Sheets 8-1 as follows:~~

1. ~~**Sheet 8-1**. For the Base Contract for Maintenance (Years 1–5), as well as for the Optional Extension 1 (Years 6-8) and the Optional Extension 2 (Years 9-11) for Triangle Expressway C540 P2, each year is identified with a corresponding set of Work elements. Enter the annual cost associated with each unit as defined in row 2 of each column. These unit annual costs will be multiplied by the total number of units on the project to determine the total annual cost. Proposers must enter rates for each year of the Base Maintenance Term.~~

~~11~~10 COMPLETION OF ADDITIONAL SERVICES RATES SHEET 9-1

On Sheet 9-1, the Proposer shall provide a listing of staff positions and loaded hourly labor rates for the purpose of providing pricing for future Work not currently included in **Part III, Scope of Work and Requirements.** All changes to the Contract involving labor shall use the hourly labor rates in this table. All hourly labor rates shall be stated for the year 2028 and shall be inclusive of burden/overhead and profit. Hourly labor rates may be adjusted as detailed in Section 12 Cost Escalation.

~~12~~11 COST ESCALATION

No escalation shall be permitted toward any costs provided in the Pricing Sheet for the Implementation and Base Maintenance Term. Optional Extension pricing will be finalized at the time of extension, and these values do not contribute toward the total contract value during initial procurement. The Additional Service Rates provided on sheet 9-1 may be adjusted though Change Orders, as needed.

Exhibit B-2

Pricing Sheets

(An Excel version of *Exhibit B-2: Pricing Sheets* is "paper clipped" to this Exhibits file for completion.)

Updated per Addendum 2 (4/17/2026)

Exhibit C-1
Proposal Cover Sheet

(A Word version of the Proposal Cover Sheet is "paper clipped" to this Exhibits file for ease of completion.)

NORTH CAROLINA TURNPIKE AUTHORITY
COMPLETE 540 PHASE 2 REQUEST FOR PROPOSALS
PROPOSAL COVER SHEET

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.

Offer valid for one hundred and eighty (180) calendar days from Proposal Due Date.

Bidder Information

- Legal Name of Bidder:
- Street Address:
- P.O. Box (if applicable):
- City, State, and Zip Code:
- Primary Telephone Number:
- E-mail Address:

Authorization

- Print Name and Title of Signatory:
- Authorized Signature:
- Signature Date:

Exhibit C-2

List of Subcontractors and RS-2 Form

(PDFs of all forms are presented below. A fillable PDF of the RS-2 Form and a Word version of the List of Subcontractors Form are both "paper clipped" to this Exhibits file for ease of completion.)

Please duplicate this page as necessary to provide the requested information.

	SUBCONTRACTOR	SUBCONTRACTOR	SUBCONTRACTOR
Legal Name of Company			
Company's FEID Number			
Company Contact Name			
Company Address			
City, State, Zip Code			
Company Telephone No.			
Company Fax Number			
Company E-mail address			
Legal Name of Principal(s)			
Address of Principal(s)			
City, State, Zip Code			
Telephone No. of Principal(s)			
Fax Number of Principal(s)			
E-mail address of Principal(s)			
Corporate Number (if applicable)			
License Number (if applicable)			
Status of License (if applicable)			
Work to be Performed			
Expected Percentage of Total Work			

By: _____ Signature: (1) _____

President or Vice President

Attest: _____ Signature: (2) _____

Secretary (or Assistant Secretary)

(Affix Corporate Seal Below Dotted Line)

****

Subconsultant Form RS-2 *REV 1/15/08*

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 ☐ No ☐		

"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 this Subconsultant Form RS-2 form by entering the word "None" or the number "ZERO" and signing the form.**

Exhibit C-3
Recent Client List

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

#	Name of Client including Address and Telephone #	Project Name	Project Description	Start Date	End Date	Contract Amount
001						
002						

Exhibit C-4
Proposer Questions Form

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

#	Page	Section	Section Description	Proposer Question	NCTA Response
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					

Exhibit C-5
Non-Collusion Forms

(Please complete a single form that is applicable to your firm structure. Fillable PDFs of the form are "paper clipped" to this Exhibits file for ease of completion.)

Exhibit C-6
Acknowledgement of Receipt of Addenda

(A Word version is "paper clipped" to this Exhibits file for ease of completion.)

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.

Addenda	Date	By
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

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

Dated , 2026

Legal Name of Firm

By_____
Signature

_____
Title

NOTE: Attach additional pages as necessary

Exhibit C-7

HUB Supplemental Vendor Information Form

(A fillable PDF version is "paper clipped" to this Exhibits file for ease of completion.)

Exhibit C-7: HUB Supplemental Vendor Information

RFP Name : _____

Vendor Name: _____

Historically Underutilized Businesses (HUBs) consist of minority, women, and disabled business firms that are at least fifty-one percent owned and operated by an individual(s) from one of these categories. Also included in this category are disabled business enterprises and non-profit work centers for the blind and severely disabled.

Pursuant to G.S. 143B-1361(a), 143-48 and 143-128.4, the State invites and encourages participation in this procurement process by businesses owned by minorities, women, the disable, disabled business enterprises, and non-profit work centers for the blind and severely disabled. This includes utilizing individual(s) from these categories as subcontractors to perform the functions required in this Solicitation.

The Vendor shall respond to questions below, as applicable.

PART I: HUB CERTIFICATION

Is Vendor a NC-certified HUB entity? ☐ **Yes** ☐ **No**

If **yes**, provide Vendor #: _____

If **no**, does Vendor qualify for certification as HUB? ☐ **Yes** ☐ **No**

Vendors that check "yes" will be referred to the HUB Office for assistance in acquiring certification.

PART II: PROCUREMENT OF GOODS - SUPPLIERS

For *Goods* procurements, are you using Tier 2 suppliers? ☐ **Yes** ☐ **No**

If ***yes***, then provide the following information:

Company Name	Company Address	Website Address	Contact Name	Contact Email	Contact Phone	NC HUB certified?	Percent of total bid price

PART III: PROCUREMENT OF SERVICES - SUBCONTRACTORS

For *Services* procurements**,** are you using Subcontractors to perform any of the services being procured under this solicitation? ☐ **Yes** ☐ **No**

If ***yes***, then provide the following information:

Company Name	Company Address	Website Address	Contact Name	Contact Email	Contact Phone	NC HUB certified?	Percent of total bid price

Need more information?

Questions concerning the completion of this form should be presented during the Q&A period through the process defined in the Solicitation document.

Questions concerning NC HUB certification, contact the **North Carolina Office of Historically Underutilized Businesses** at 984-236-0130 or huboffice.doa@doa.nc.gov

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Exhibit C-8
Requirements Conformance Matrix

(An Excel version is "paper clipped" to this Exhibits file for ease of completion.)

Updated per Addendum 2 (4/17/2026)

Exhibit C-8: Instructions for Completing Requirements Conformance Matrix

1) The Proposer must complete and submit the Requirements Conformance Matrix for the functional requirements which is provided in *Tab 2: RFP Part III Functional Reqs* of this Exhibit C-8 file.

2) The Matrix in Tab 2 covers each of the FUNCTIONAL requirements set forth in RFP Part III, Scope of Work and Requirements. *Note there may be gaps in the requirement numbering due to the removal of the non-functional requirements.*

3) Proposers shall not alter the requirements listed in the Requirements Conformance Matrix in any way and must use the provided Excel version of Exhibit C-8. The Proposer shall submit BOTH a PDF version AND Excel version of the completed Matrix in Technical Proposal Section 7. *See submittal instructions in **RFP Part IV**, *Section 1.1.I. I. Proposal Section 6: Adherence to the Scope of Work and Requirements, Terms and Conditions and Requirements Conformance Matrix*

4) The following are instructions for completion of Part III of the Requirements Matrix worksheet:

a) There are four (4) columns in the RFP Part III Functional Requirements listed in the Requirements Conformance Matrix worksheet as follows:

i. No. (Column A): A sequential number that matches the requirement number in the Requirements.

ii. Requirements (Column B): A description of each requirement.

iii. Status (Column C): Proposer must select one of the four (4) response codes for each Requirement and enter it in this column as further detailed in item "b)" below.

iii. Source (Column D): Indicate who will be providing the functionality; Proposer (P), Subcontractor (S), Third Party (T) and Not Applicable (NA).

iv. Subcontractor Name and/or 3rd Party Product/Vendor, If Applicable (Column E): If the functionality is provided by a Subcontractor or third party then please enter the name of the party/product.

v. Comments (Column F): This field must be completed if the Status code is entered as "E = not provided" for the particular requirement in order to explain why the Proposer is not complying with this Requirement.

b) Proposers must complete the Status (Column C) in the following manner:

i. Base Product = B: Enter an "B" in this column if the requirement described is already incorporated into the Proposer's baseline system and is provided in the proposed Roadside Toll Collection System.

ii. Base Modified = M: Enter an "M" in this column if the functionality exists and is provided in the proposed Roadside Toll Collection System but needs to be modified to meet the requirement.

iii. New Development = D: Enter a "D" if the Proposer's baseline system does not currently have the required functionality but the functionality will be provided in the proposed Roadside Toll Collection System and will be developed to meet the requirement.

iv. Exception = E: Enter an "E" 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 "E" then Proposer must provide an explanation in the Comments (column D) in the corresponding row. The comment field may reference information that is included elsewhere in the Proposal. **All Exceptions require an explanation.**

No.	Requirements	Required Inputs			
		Status	Source	If Applicable	Comments
		B-Base Product M-Base Modified D-New Development E-Exception	P-Proposer S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	Comment required if "Exception", optional otherwise.
200	All Hardware and Equipment supplied under this Contract shall be new, Commercial Off-the-Shelf (COTS). Materials and products that have been previously used for development work or the Contractor's internal Formal testing, or items that have been salvaged or rebuilt shall not be used in connection with this Contract.				
201	The RSS shall meet all functional requirements in all weather and lighting conditions.				
202	The RSS shall accurately capture and identify all vehicles that pass through the toll zone.				
203	The RSS shall be designed to ensure redundancy for critical functionality related to revenue collection.				
204	The RSS shall accurately identify the lane location of each transaction or buffered Transponder Read and identify if the vehicle straddled an adjacent lane or shoulder.				
205	The RSS shall assign a timestamp to all transactions or buffered Transponder records. The timestamp shall be associated with a defined event in the transaction formation process, to be determined during the design process.				
206	The transaction images produced by the RTCS shall support the OBO ICD and shall provide readable images of properly mounted and unobstructed license plates.				
207	The RSS shall accurately measure and report the travel speed for each vehicle associated with a Toll Transaction.				
208	The RSS shall use only gantry mounted equipment. No in-pavement sensors will be permitted. The total distributed load on a 3-lane 2-shoulder gantry is no greater than 2,300 pounds and on a 5-lane 2-shoulder gantry is no greater than 2,800 pounds. If the design exceeds this, all structural analysis is the responsibility of the Contractor and shall be subject to NCDOT approval.				
209	The RTCS shall support accurate assignment of fare to each transaction.				
210	All RTCS Software developed, furnished, and installed under this Contract shall be warranted, by the Contractor, against Software defects, security vulnerabilities, and deficiencies for the life of the Project.				
211	RTCS elements and subsystems shall be designed and installed in a manner that minimizes the need to close toll lanes for routine maintenance and minimizes the duration of any lane closures for maintenance.				
212	The Contractor shall provide, manage, and maintain all network Equipment within the RTCS and required to interface outward; including servers, switches, routers, and firewalls, and all network cabling.				
213	The RTCS shall include a minimum of two (2) network time servers each synchronized to a minimum of three (3) independent stratum 1-time servers.				
214	The RTCS shall synchronize all components of the RSS to within 1/1000 of a second.				
215	The RTCS shall support monitoring and collection of data on system and Equipment statuses continually 24 hours a day, 7 days a week.				
216	The RTCS shall generate a video record for all transactions generated using a frame rate and video quality that supports accurate identification of the vehicle and covers its complete traverse through the toll zone.				
217	The RTCS shall have a separate input for vehicle detection other than the AVDC system that will be used to identify variations and anomalies in the system's ability to detect vehicles.				
218	The DVAS shall provide continuous video recording of the lane(s) at all times and retain the video recordings as defined in Part III, Section 5.5 Data Retention.				
219	All Toll Zones shall be capable of processing and creating lane transactions for a minimum 2,000 vehicles per lane per hour with no loss of data and with all vehicles with front and rear license plates and an AVI Transponder. Simulation Software shall be accepted as a method of compliance with this requirement to ensure the system is properly sized, coded and configured to achieve the highest level of system efficiency for processing all types of transactions that shall be processed on the NCTA toll roads.				
220	The RSS shall provide supplemental illumination (if needed) for image based (Toll Invoice) tolling that does not interfere with vehicle travel or distract drivers and shall not cause light pollution to areas adjacent to the roadway.				
221	The RTCS shall not delete any information included in the lane transaction. Data in the lane transaction can only be created and amended.				
222	All transactions shall be uniquely identified within the RTCS.				
223	When multiple Transponders are detected within a vehicle the system shall include all detected transponders in the transaction sent to the OBO.				
224	The RTCS shall generate records for all buffered Transponder reads.				
225	The RTCS shall allow toll lanes operational modes to be changed by authorized users from the operations center.				
226	All in-lane Equipment controllers and RSS electronics, devices, servers, and associated communications Equipment shall be installed inside environmentally controlled Equipment cabinets at the roadside. The Contractor shall purchase and install the cabinets per the Requirements of this Contract.				
227	All cabinets and enclosures that shall be installed outdoors shall be designed to withstand typical North Carolina area environmental conditions and shall not suffer any visible or functional degradation over the term of the Contract.				
228	The cabinets shall have monitoring sensors (including humidity and temperature), and if environmental conditions inside the cabinets exceed the configurable threshold, alarms shall be generated and reported to the ITSM system. There shall be no loss of data in such conditions, and the integrity of the RSS shall be maintained.				
229	Access to all Equipment cabinets shall be recorded automatically and reported to the ITSM system. The data reported shall include, but not be limited to cabinet status, date, time of door open, time of door close, and any applicable alarm conditions.				

No.	Requirements	Required Inputs			
		Status	Source	If Applicable	Comments
		B-Base Product M-Base Modified D-New Development E-Exception	P-Proposer S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	Comment required if "Exception", optional otherwise.
230	The Contractor's services shall be designed, developed, implemented and maintained in a manner consistent with security requirements, defined as the requirements levied on Information Environments that are derived from laws, Executive Orders, directives, policies, standards, instructions, regulations, procedures, or organizational mission/business case needs to ensure that security and privacy protections are implemented in the collection, use, sharing, storage, transmittal, and disposal of information. Security requirements shall be supported in a manner that makes verification possible via analysis, observation, test, inspection, measurement, or other defined and achievable means. The Contractor shall meet the following requirements (where applicable): • 18 U.S. Code § 2721 — Driver's Privacy Protection Act • N.C.G.S § 143B-1375 — Security • N.C.G.S § 143B-1376. Statewide security standards • N.C.G.S. §143B-1331 — Business Continuity Planning • Functional Schedule for North Carolina State Agencies • North Carolina Statewide Information Security Manual • NCDOT Policies, Standards, Guidelines and Procedures • NCDIT-T Policies, Standards, Guidelines and Procedures • NCTA Policies, Standards, Guidelines and Procedures NC Statewide Information Security Manual can be currently viewed at: https://it.nc.gov/statewide-information-security-policies The policy regarding data classification and handling can be currently viewed at: https://it.nc.gov/documents/statewide-policies/statewide-data-classification-handling-policy/open The Functional Schedule for North Carolina State Agencies can be currently viewed at: https://archives.ncdcr.gov/government/state-government-agencies/functional-schedule/functional-schedule-search-guide The definitions in the Statewide Glossary of Information Technology Terms apply to all statewide information technology policies and standards and can be currently viewed at: https://it.nc.gov/documents/statewide-glossary-information-technology-terms The NIST Glossary of Information Technology Terms can be used to supplement the Statewide Glossary of Information Technology Terms and can be currently viewed at: https://csrc.nist.gov/glossary. Any exceptions to the standards described in this Requirement above and in Attachment 2: State of North Carolina, Statewide Information Security Manual shall be described in its Proposal by adding Appendix 3 in the Proposer's Technical Proposal Section 7. The Contractor shall describe any exception to the security policy and why they are exempt. The Contractors shall identify only of those exceptions within the policy with an explanation. Categorical exception to the policy shall be considered non-compliance.				
231	The RSS shall capture at least one front and one rear unique color image of the vehicle and its license plate(s) for every vehicle that passes through a travel lane within a Toll Zone.				
232	The RSS shall capture at least one rear unique color image of the vehicle and its license plate(s) for every vehicle that passes through a shoulder within a Toll Zone.				
233	The RSS shall use a camera equipped with a shutter capable of a readout speed of 5ms or less and, lens capable of framing a full 12-foot-wide lane and a minimum plate width of 250 pixels. The complete ICPS shall have coverage for all properly mounted rear license plates for all shoulder and lane areas within the toll zone and all front mounted license plates within the travel lanes.				
234	The histogram of the captured license plate region of interest (ROI) shall exhibit a bimodal distribution, with a minimum separation of 40 intensity levels (on an 8-bit scale) between the mode of the character pixels and the mode of the background pixels in the image transmitted to the OBO with no adjustments.				
235	The histogram of the captured license plate region of interest (ROI) shall not exhibit "Left-Walled" or "Right-Walled" data indicating lost detail due to over or under exposure in the image transmitted to the OBO with no adjustments.				
236	The RSS shall minimize image distortion by utilizing a maximum allowable pan or tilt angle for image capture of 30 degrees from the angle of incidence with the plate.				
237	The Contractor shall cooperate with NCTA's OBO provider on image characteristics such as contrast, sharpness and clarity to optimize OBO ALPR performance.				
238	The camera shall produce clear images that are without artifacts that impact the ability to read and process license plates.				
239	The camera shall not produce visual artifacts due to vehicle and infrastructure lights, the sun, and reflections of vehicles.				
240	The transaction images produced by the RTCS shall support the OBO ICD (found in **Attachment 6**) and shall provide readable images of properly mounted and unobstructed license plates.				
241	The RSS shall capture properly mounted transponders and accurately correlate them to their associated vehicle as they pass through the toll zone in a travel lane (shoulders excluded).				
242	The AVI system shall detect and read all toll transponders to determine the tag agency, tag protocol, and unique transponder ID in accordance with the NCTA interoperability and business rules. The AVI system shall accurately correlate all properly mounted transponders to the correct vehicle. These integration requirements shall include all the following anticipated protocols to be supported by the RSS in no specific order of precedence: a) PS111 (TDM/IAG E-ZPass Group); b) SOB_80K (SeGo); and c) ISOC (ISO 18000-63/6C).				
243	The AVI system shall use only Approved Equipment from current contracts as listed on the E-ZPass website, linked here, that meet the Requirements of this Project.				
244	The Contractor shall furnish and install all Hardware, cabinets, cabling (including RF, communication, and power cables), connectors, and associated mounting fixtures to form a fully functioning AVI system that meets the Requirements of this SOW.				
245	The Contractor shall be responsible for the physical tuning AVI Equipment, and for integrating the AVI system into the Contractor in-lane design. All AVI installation, configuration, and tuning shall be in compliance with the AVI vendor requirements.				
246	The RSS integrated with the AVI system shall process Transponders mounted on vehicles traveling in stop and go and bumper-to-bumper traffic and vehicles traveling at speeds of up to 100 mph.				
247	The RSS shall perform 6C UII Validation and associated transponder read handling as defined in **Attachment 1: NCTA Business Policies**.				
248	The RSS for shall accurately detect the number of vehicle axles and include all data in the Toll Transaction.				

No.	Requirements	Required Inputs			
		Status	Source	If Applicable	Comments
		B-Base Product M-Base Modified D-New Development E-Exception	P-Proposer S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	Comment required if "Exception", optional otherwise.
249	The RSS shall accurately measure and report the length, width and height of each vehicle associated with a Toll Transaction.				
250	The AVDC system shall determine the vehicle axle count as well as vehicle length, height and width to classify vehicles in accordance with the NCTA vehicle classification structure for all travel lanes and shall include the logic to handle the exceptions identified. Classification of vehicles traveling on the shoulder lanes is not required; however, the RSS shall detect vehicles that travel on the shoulder and trigger the Image Capture & Processing System (ICPS).				
251	The AVDC system shall be of non-invasive type, not requiring direct installation via core cuts, saw cuts, or other installation method that impacts the road surface.				
252	The NCTA vehicle classification structure for AET Lanes is defined as: i. Class 1 defined as a vehicle with 2 axles ii. Class 2 defined as a vehicle with 3 axles iii. Class 3 defined as a vehicle with 4 or more axles				
253	The AVDC system shall be provided with a redundant design that allows the subsystem to continue to operate and meet all functional requirements while experiencing any single point of failure.				
254	In the event of a power interruption, the Zone Controller shall open in the operational mode it was in before it was powered down.				
255	Authorized users shall be able to configure the operational mode both locally and remotely. Each time a mode change is requested, an alert message shall be sent to the ITSM system.				
256	When a lane is operating in a mode other than normal open mode (to be finalized during design), an alert shall be generated and sent to ITSM system at regular (configurable) intervals.				
257	The RTCS shall support various modes of operation that are managed and initiated by authorized users through the host.				
258	Transactions shall be processed according to different NCTA Business Policies either at the RSS level or the host level based on the mode of operation and the facility type. The Contractor shall be responsible for ensuring that all transactions are processed according to **Attachment 1: NCTA Business Policies** for NC Quick Pass and Roadside and transmitted correctly to the existing NCTA OBO.				
259	The RTCS shall provide functionality to operate in the following modes of operations:				
	a) Open mode: All transactions shall be processed normally in an open mode;				
	b) Maintenance mode: Transactions created in maintenance mode are processed as normal transactions but are identified as maintenance mode transactions and transmitted to the host. Transactions that occur during maintenance mode are not reported as traffic or revenue transactions; and				
	c) Emergency mode: Transactions created during emergency mode shall be identified as emergency mode transactions and processed in accordance with NCTA Business Policies for NC Quick Pass and Roadside to be determined during the design.				
260	The RTCS shall provide determination of the fare class at the tolling location or other supplemental systems prior to posting to the OBO based on the vehicle class.				
261	The fare class shall be determined in accordance with NCTA business rules and may vary by lane status including lane open, maintenance or closed statuses.				
262	The RTCS shall have a configurable default fare class to be used in the event classification data is not available.				
263	Tolls shall be assessed using the toll rates established for each tolling point. The RTCS shall support the toll rate and the NCTA vehicle classification structure based on the Toll Zone and facility. The initial toll rates shall be defined during RTCS design and shall be configurable to support periodic rate adjustments as Approved by NCTA.				
264	Images shall be captured and saved for all transactions, regardless of operating mode in accordance with the NCTA data retention policy as defined in Part III, Section 5.5 Data Retention.				
265	Images saved during ICPS loss of communication event shall be flagged and subsequently matched with the correct transaction data when communications resume with the Zone Controller. This matching can occur at the host but shall take place in a manner that does not interfere with or degrade real-time Zone Controller operations.				
266	In the event that the system captures vehicle images without any other supporting system data such as AVDC, these images shall be saved such that all non-valid Transponder transactions that occur during the AVDC malfunction can be subsequently pursued for collection. Sufficient data, such as image capture time stamps, shall be provided in the transactions to allow the TRH and OBO to process such transactions so that customers are not charged in error when lane operation is degraded.				
267	All parameters and settings required to run the Zone Controller application shall be maintained in configuration files. Access to configuration files required to support the Zone Controller operations shall be controlled, and access to these files shall be limited to authorized personnel.				
268	The configuration files shall be maintained at the host for configuration and version control. All Zone Controllers shall have default configuration files that shall allow the lane to start-up automatically.				
269	Authorized personnel shall be able to make changes to parameters and settings that are defined as configurable in this SOW and Requirements and in the Approved design documents. Authorized personnel shall be able to make changes to the configuration files in the field. Changes to configuration files shall be recorded in the ITSM. All changes made to the configuration files in the field shall be synchronized to the master configuration file that is maintained at the host.				
270	Each Zone Controller shall automatically back up its critical configuration files to a back-up server to be used to rebuild the master drive in the event of hard disk failures.				
271	The RTCS shall support exception handling in accordance with the NCTA business rules. Alarms shall be generated and reported to the ITSM system for all exceptions/errors.				
272	All messages generated at the Zone Controllers shall be transmitted to the host in real-time using a transport mechanism that performs error detection and correction to guarantee data transmission. All messages shall be uniquely identified and validated at the host to ensure there are no missing or duplicate messages. Failure of transmission of data to the host shall result in the generation and transmission of an alarm message to the ITSM system.				
273	All messages shall be confirmed as received by the OBO before they are flagged for write-over. In the event of communication failures, the messages shall be stored on the Zone Controller until the successful transmission is complete and verified.				
274	The Zone Controller shall transmit to the TRH or OBO all data, including but not limited to those identified below: a) all transaction messages generated in the lanes; b) all alarm and status messages generated in the lanes; c) all lane operational, communication status and self-health messages; d) all events generated in the lanes that are displayed on the roadway operations monitoring screen or are required at the host; and e) all events required by the DVAS for real-time review or playback.				
275	All RSS Software shall be downloaded to the Zone Controllers from the host, and versions on each Zone Controller shall be maintained, tracked, and recorded.				

No.	Requirements	Required Inputs			
		Status	Source	If Applicable	Comments
		B-Base Product M-Base Modified D-New Development E-Exception	P-Proposer S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	Comment required if "Exception", optional otherwise.
276	The RSS shall institute checks whereby it detects issues with the data it receives from the host, including but not limited to: a) Incorrect versions of the data received; b) Corrupted data received; and c) Missing files when a file was expected.				
277	The RSS shall support exception handling in accordance with the NCTA Business Rules Approved during the design. Alarms shall be generated and reported to the ITSM system for all exceptions/errors.				
278	Each Zone Controller shall self-monitor the system health of internal components and all associated in-lane Equipment devices for status. All RSS components, including AVI system, AVDC system, and ICPS, shall be continuously polled for status. The health of some digital devices shall be inferred from events.				
279	The RTCS shall generate a recovery message and restore its operational status if a device recovers after reporting a failure. Recovery messages shall be recorded against the original failure work order, shall be reported through the ITSM system, and shall be available to authorized staff. Recovery messages shall not close the associated failure/work order but shall serve as supporting evidence of an Equipment recovery.				
280	All alarm, health, and recovery messages shall be transmitted and reported to the ITSM system.				
281	If communications from the Zone Controller to any host is unavailable, an alarm message shall be generated and reported to the ITSM system.				
282	If the lane is operating in any mode other than the normal open mode, an alert message shall be generated at configurable intervals and reported to the ITSM system.				
283	The Zone Controller shall operate in a stand-alone mode for a minimum of ninety (90) Calendar Days if communications to the host is down. When operating in stand-alone mode, the last files downloaded from the host shall be used for processing vehicles.				
284	The Zone Controller shall have an available data port to permit onsite manual uploading of Software or other pertinent data required for continued operation until communications with the host is re-established.				
285	Upon re-establishing communications with the host, all back-logged messages, including manually transferred messages, shall be transmitted and synchronized to the host without affecting the real-time operations or degrading the lane operations.				
286	The Contractor shall provide an Access Control and Monitoring System (ACSMS) to monitor access to the cabinets and toll site area.				
287	The ACSMS shall provide a central management user interface for a user to remotely view security events and related videos. The interface shall provide convenient navigation of security events and related videos.				
288	The ACSMS shall provide an overhead camera that captures the cabinet pad area and parking area and is capable of flagging video associated with alerts for events such as a cabinet door opening or movement after hours.				
289	The ACSMS shall provide a camera (or multiple cameras) in each cabinet that captures individuals accessing the cabinet from each door. The cameras shall record video triggered by events such as the door opening or motion detection.				
290	All cabinets on the project shall share a single key that is unique to the project and not widely available (such as a number 2 key).				
291	The Contractor shall integrate Constructor provided Automatic Transfer Switch (ATS) that will detect a utility power outage and activate the Constructor provided generator to power the RSS.				
292	The RTCS shall monitor the ATS and monitor ATS status and power status.				
293	The RTCS shall monitor generator status (on/off).				
294	The RTCS shall monitor and report generator fuel levels and provide remote access to this information.				
295	The Contractor shall place all RSS equipment behind a UPS that is connected to the Constructor provided ATS, receiving power from utility service or generator when appropriate.				
296	All roadside Hardware and Equipment required to operate the RSS shall be on UPS. The UPS shall be supplied by the Contractor.				
297	The UPS shall be capable of receiving power from the utility power service and the backup generator provided by the Constructor.				
298	The Contractor shall interface with the transfer switch and the Contractor-provided smart Power Distribution Units (PDUs) in the toll cabinetry to manage the roadside power distribution. Maintenance technicians shall have remote access to manage power to critical devices.				
299	The UPS shall support the RSS at each tolling location for a minimum of 2 hours on battery.				
300	The UPS shall provide all critical status updates to the ITSM including on battery, low battery and critical low battery.				
301	When utility power is restored, and Hardware/Equipment is no longer on the UPS, a notification shall be reported to the ITSM system.				
302	The RTCS shall alert TMC personnel via email within 10 seconds of a vehicle passing through a toll zone travelling in the wrong direction. The email shall identify the location and time of the event and include a link to a video recording of the event.				
303	The RTCS shall alert TMC personnel through a Contractor provided user interface within 10 seconds of a vehicle passing through a toll zone travelling in the wrong direction. The user interface alert shall be prominently displayed on the operator's monitor and include the time and location of the event and a five (5) second looping video of the vehicle passing through the zone.				
304	The WWVD alerting system shall be capable of interfacing with third party systems provided by NCTA, such as a unified Advanced Traffic Management System.				
305	The TRH shall be hosted in the cloud or virtual machine host and accessible to NCTA via a virtual private network Approved by NCTA and operate on any commercially available web browser application.				
306	The TRH shall include redundancy in the TRH (including transaction processing, reporting, and system monitoring) expandable to other NCTA facilities in the future if NCTA decides to consolidate or move any of its facilities.				
307	The TRH shall be designed to allow for transaction processing, reporting processing, as well as system monitoring and auditing processing to occur simultaneously.				
308	The Contractor shall provide, manage, and maintain all RTCS network Equipment including servers, switches, routers, and firewalls, and all network cabling required to operate the RTCS.				
309	The Contractor shall provide an IT Service Management System (ITSM) that monitors the RTCS and addresses all related requirements in this Contract.				
310	The RTCS shall monitor and collect data on system and Equipment statuses continually 24 hours a day, 7 days a week.				
311	The TRH shall provide an interface to access recorded color video of every toll lane and Toll Zone that allows for the visual identification of vehicle size and number of axles and length at all times of the day and under all environmental conditions. The frame rate shall be sufficient to clearly identify vehicle characteristics to support an audit.				
312	The Contractor shall provide associated data for Toll Transactions captured from the RTCS and sent to the NCTA OBO. The Contractor shall provide a Toll Transaction that is compliant with OBO to RTCS ICD as outlined in **Attachment 6: OBO ICD**. Refer to the current Interface control document as a reference for number of Web services and minimum data exchange elements. The Contractor shall describe its existing interface in its Technical Proposal.				

No.	Requirements	Required Inputs			
		Status	Source	If Applicable	Comments
		B-Base Product M-Base Modified D-New Development E-Exception	P-Proposer S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	Comment required if "Exception", optional otherwise.
313	The RTCS shall be capable of transmitting transaction records to the OBO in near real time from when the transaction is formed in the lane.				
314	The RTCS shall be capable of implementing a delay to the delivery of transaction records to the OBO through a simple configuration setting.				
315	The RTCS shall conform to **Attachment 6** for the transfer of Toll Transactions and all other necessary data from the TRH to the NCTA OBO.				
316	All transactions shall be uniquely identified and validated within the RTCS to ensure there are no missing or duplicate transactions prior to sending to the NCTA OBO.				
317	When multiple Transponders are detected within a vehicle the TRH shall include all detected transponders within the transaction record sent to the OBO.				
318	The RTCS shall account for every lane transaction that is the result of a buffered Transponder read for tracking and disposition which shall be reported to and auditable by NCTA.				
319	Transponder reads buffered during lane degradation where no other information or images are captured shall be sent to the NCTA OBO for processing as a transaction at the lowest toll class.				
320	The RTCS shall provide function to review the transaction accuracy, including the Toll Transactions sent to the OBO as well as transactions that were retained in the TRH for the purpose of: a) Audits conducted by the Contractor or NCTA and its agents. b) Provide an application or filtering capabilities that allows the Contractor or NCTA and its agents to select problem plates to be added to queue that requires manual image verification. The plates shall be added by the image verification Software or manually by an authorized user in the system. c) Support existing NCTA review and auditing processes to measure the system against the Performance Requirements. d) The Contractor shall be able to filter transactions including, but not limited to: 1. ALPR confidence levels 2. ALPR results based on location and Jurisdiction 3. Filtered criteria based random sampling for QA/QC (every XX transactions) 4. System exceptions as defined in this SOW and Requirements 5. Unusual occurrences as defined in this SOW and Requirements 6. Location 7. Date and Time				
321	The RTCS shall map transactions that are not subjected to audit for accuracy, defined as System Exceptions, including but not limited to: a) Auto flushes (tags read at the lane that did not correlate to a vehicle or lacks AVC data); b) Images that were not correlated to a transaction (video auto flush); c) Lane unavailable (transactions captured during a period of time when the system (lane or host) is deemed "unavailable"); and d) Transactions captured when in lane mode: maintenance.				
322	The RTCS shall map transactions to be used as indicators for potential lane issues, defined as Unusual Occurrences, including but not limited to: a) AVI failed 6C UII Validation b) Class mismatch of Transponder versus lane AVC (only applicable to transaction with programmed Transponders [6C and TDM]); c) Transaction without images; d) Transaction with unusual number of axles (7+); e) Wrong Way Vehicle (WWV); f) Speed over 100 mph; and g) Speed of 0 mph (not including auto flush transactions).				
323	The RTCS shall support manual audit and amendments to lane transactions.				
324	Interfaces shall allow authorized users to quickly search by various query criteria, including: a) Lane transaction number; b) Specific time and time range; c) Location (facility); d) Lane/Toll Zone; e) Class mismatch; and f) Any combination of these parameters.				
325	The RTCS shall automatically generate and track work orders for preventative maintenance, corrective maintenance, and emergency maintenance.				
326	The RTCS shall automatically alert maintenance staff once a work order has been generated.				
327	The RTCS shall support the assignment of maintenance priority levels based on the system configurable combination of severity level, facility, day and time.				
328	Data from the alerts, logs, Hardware and Software status, work orders, tickets and any items in the IT Service Management (ITSM) system shall not be deleted or modified for the duration of the Contract.				
329	The RTCS shall support the generation of ad-hoc work orders by authorized users.				
330	The RTCS shall track spares and inventory levels including serial numbers and associated warranty information for installed Equipment and inventoried Equipment.				
331	Error logs shall be transmitted to the ITSM system and available to authorized user in viewable form. Search and filter capability shall be provided to display and review up to one-hundred eighty (180) Calendar Days of data since the event.				
332	All work and diagnostics performed by Contractor staff on the RTCS shall be recorded and automatically reported to the ITSM system, including the technician identification, the time the maintenance was performed, and all status and recovery messages.				
333	Applicable industry standards and best practices for network and data communications shall be met.				
334	The Contractor shall supply all diagnostic Software and specialty tools required for support of maintenance activities, and NCTA will have full rights and access as further defined in the Contract to such diagnostic Software and specialty tools.				

No.	Requirements	Required Inputs			
		Status	Source	If Applicable	Comments
		B-Base Product M-Base Modified D-New Development E-Exception	P-Proposer S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	Comment required if "Exception", optional otherwise.
335	The Contractor's services shall be designed, developed, implemented and maintained in a manner consistent with security requirements, defined as the requirements levied on Information Environments that are derived from laws, Executive Orders, directives, policies, standards, instructions, regulations, procedures, or organizational mission/business case needs to ensure that security and privacy protections are implemented in the collection, use, sharing, storage, transmittal, and disposal of information. Security requirements shall be supported in a manner that makes verification possible via analysis, observation, test, inspection, measurement, or other defined and achievable means. The Contractor shall meet the following requirements (where applicable): •18 U.S. Code § 2721 — Driver's Privacy Protection Act •N.C.G.S § 143B-1375 — Security •N.C.G.S § 143B-1376. Statewide security standards •N.C.G.S. §143B-1331 — Business Continuity Planning •Functional Schedule for North Carolina State Agencies •North Carolina Statewide Information Security Manual •NCDOT Policies, Standards, Guidelines and Procedures •NCDIT-T Policies, Standards, Guidelines and Procedures •NCTA Policies, Standards, Guidelines and Procedures NC Statewide Information Security Manual can be currently viewed at: https://it.nc.gov/statewide-information-security-policies The policy regarding data classification and handling can be currently viewed at: https://it.nc.gov/documents/statewide-policies/statewide-data-classification-handling-policy/open The Functional Schedule for North Carolina State Agencies can be currently viewed at: https://archives.ncdcr.gov/government/state-government-agencies/functional-schedule/functional-schedule-search-guide The definitions in the Statewide Glossary of Information Technology Terms apply to all statewide information technology policies and standards and can be currently viewed at: https://it.nc.gov/documents/statewide-glossary-information-technology-terms The NIST Glossary of Information Technology Terms can be used to supplement the Statewide Glossary of Information Technology Terms and can be currently viewed at: https://csrc.nist.gov/glossary. Any exceptions to the standards described in this Requirement above and in Attachment 2: State of North Carolina, Statewide Information Security Manual shall be described in its Proposal by adding Appendix 3 in the Proposer's Technical Proposal Section 7. The Contractor shall describe any exception to the security policy and why they are exempt. The Contractors shall identify only of those exceptions within the policy with an explanation. Categorical exception to the policy shall be considered non-compliance.				
336	Remote access to all RTCS shall be VPN based and controlled through a central repository, with each user having a unique log-in.				
337	All remote access to the RTCS shall require two-factor authentication.				
338	User sign-on, access, and access failures, both local and remote, to any element of the RTCS shall be recorded and tracked for security audit proposes and reported to the ITSM system. The RTCS shall continuously and automatically monitor for unauthorized access; access violations shall be reported to the ITSM system as Priority 1 alert. These reports shall be provided to NCTA within one (1) hour of discovery.				
339	The RTCS shall support access levels, user roles, and privileges to be defined in a matrix during RTCS design with NCTA input and Approval. The RTCS shall allow for additional changes to the access levels, user roles, and the addition of personnel in a secure manner.				
340	A system-level account shall be provided for NCTA security systems to perform "credentialed" scans. Additionally, NCDOT IT security can request the Contractor to perform vulnerability, anti-malware and intrusion detection scans and provide reports through the term of the Contract.				
341	The Contractor shall not circumvent NCTA Approved RTCS security. All access to the RTCS and Approved changes made shall be recorded, monitored, and available for review and audit. Specific requirements for this shall be developed by the Contractor during RTCS design.				
343	The Contractor shall perform monthly vulnerability tests that are scheduled in the ITSM system, as well as every time a new Software release is deployed or new network Equipment, is added or replaced to evaluate the security risk to the RTCS and identify potential vulnerabilities. NCDOT IT security shall be a party to these security tests and shall be notified in advance of any scheduled tests.				
346	The TRH shall provide access to:				
	a) DVAS and ACSMS live and historical recordings;				
	b) Live and historical transaction records, including but not limited to video and images captured;				
	c) Audit application for transaction reconciliation and transaction accuracy verification;				
	d) User Interface screens and Operations reports;				
	e) ITSM;				
	n ACSMS; and				
	g) All required local wide area (LAN), and wide area networks (WAN).				
347	All Hardware and Equipment required to operate the TRH shall be on UPS, as applicable. The UPS shall be supplied by the Contractor.				
348	The Contractor shall interface with the transfer switch and the Contractor-provided smart Power Distribution Units (PDUs) to manage the TRH power distribution. Maintenance technicians shall have remote access to manage power to critical devices.				
349	The UPS shall support the RTCS at each tolling location for a minimum of 2 hours on battery.				
350	The UPS shall provide all critical status updates to the ITSM including on battery, low battery and critical low battery.				
351	When utility power is restored, and Hardware/Equipment is no longer on the UPS, a notification shall be reported to the ITSM system.				
352	ACSMS shall consist of a standardized solution designed to manage physical access to facilities while continuously monitoring security-related events. The system shall: 1.Detect all cabinet access events. 1.Record video of all toll equipment areas (24/7) and video of cabinet access from within the cabinet upon motion or activation of cabinet door. 2.Notify users upon user-definable activity via email, interface alert, or SMS.				
353	The Contractor shall integrate to a NCTA provided OBO with Toll Transaction data, DVAS, and all images.				
354	The Contractor shall transmit all data directly from the RTCS to the NCTA OBO. The Contractor shall describe its architecture in its Technical Proposal.				
355	The Contractor shall conform to the OBO ICD provided as **Attachment 6** to this RFP. This ICD is an initial draft, and it is expected that the Contractor will support the finalization of this ICD as part of the design, implementation and testing of this Project.				

No.	Requirements	Required Inputs			
		Status	Source	If Applicable	Comments
		B-Base Product M-Base Modified D-New Development E-Exception	P-Proposer S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	Comment required if "Exception", optional otherwise.
356	The Contractor shall provide a summary report of all events captured at the roadside. This report at a minimum will include: •Date •Events transmitted to the OBO This report will look back ninety (90) Calendar Days and will be delivered daily.				
358	The Contractor shall provide data through its interfaces in open commercially available toolsets.				
359	The Contractor shall provide read only user access to all databases, data integration services for its provided RTCS required data dictionary for structured and unstructured data. For structured data that is typically in a RDMS or data lake, the Contractor shall include roadside lane transaction data, image processing, service management ticket data and other toll rate data. For unstructured data, NCTA will also have access to real time log files for its independent audit and review of such data using data integration services native to the selected cloud or virtual machine host platform.				
360	The Contractor shall provide read-only access to its pertinent databases above 30 Calendar Days prior to the start of FAT and work with NCTA to establish access to its system via temporary access using a cloud or on-premises storage, with VPN or other access point.				
361	The cloud-based or virtual machine host infrastructure utilized to provide the collective system Host functionality shall be geographically and functionally redundant, and within the contiguous United States, such that service provision cannot be interrupted by the loss of a single cloud or virtual machine host site.				
362	The Disaster Recovery System shall provide all necessary functions to support the Disaster Recovery Plan requirements included in Part III, Section 3.9.				
363	The Disaster Recovery System shall support the RTCS to meet all functional and performance requirements in Part III, Section 5 RTCS Functional Requirements and Section 7 Performance Requirements – Maintenance and Operations.				
364	The Disaster Recovery System shall be accessible to NCTA and their supporting staff at all times.				
367	If a cloud solution is provided, the cloud service provider shall configure the collective cloud-based environment in such a manner that disruption of service at a single location shall not interrupt cloud-based service provision in any way. If the Contractor implements the TRH as a virtual machine on physical servers, the Disaster Recovery system shall be in a replicated and fully available environment, outside a 50-mile radius from the primary TRH.				
368	The Recovery Time Objective (RTO) shall be five (5) hours.				
369	The Recovery Point Objective (RPO) shall be one (1) minute.				
370	Transactions and system logs shall be retained online in the TRH for ninety (90) Calendar Days and then archived and purged.				
371	DVAS video shall be retained online for ninety (90) Calendar Days and purged.				
372	Images shall be retained online in the TRH for ninety (90) Calendar Days and purged.				
373	Zone Controller storage shall be sized to hold a minimum of ninety (90) Calendar Days of one hundred percent (100%) of transactions, images and event data for each lane at the tolling location supported by the Zone Controller.				
444	All preventive, pervasive, and predictive maintenance activities shall be reported in the same manner as corrective or emergency maintenance activities by the Contractor. The information shall be contained on the ITSM and shall be made available through various ITSM system reports.				
445	The Contractor and NCTA will utilize the ITSM for initiating the work orders. ITSM shall be utilized for recording and tracking all maintenance and Software support services performed on the RTCS. Additionally, all Equipment provided under this Contract shall be tracked through ITSM from the purchase to their disposal.				
446	In all cases, the Contractor is responsible for logging all reported maintenance activities into the ITSM. The Contractor shall also be responsible for documenting all information and issues related to a failure condition, including all actions taken to complete the correction into the ITSM.				
447	The work order shall contain as much information as possible in order for persons other than the technician or his supervisor to reasonably determine the fault, when it was worked on, the corrective action, and any other information pertaining to the individual maintenance event, including replacement of parts.				
448	All Maintenance performance metrics shall be recorded and tracked through the ITSM, and compliance to Performance Requirements shall be validated using ITSM reports.				
449	It is the Contractor's responsibility to ensure that its maintenance staff has real-time access to the ITSM and that all the required connections are established and ongoing to ensure that the maintenance staff has secure remote access Approved by NCTA. Maintenance staff shall be trained in the use of the ITSM.				
460	All performance metrics shall be measured according to the KPI Guidebook document, provided in **Attachment 9** to this RFP.				
463	Each AET Lane within a Toll Zone with all of its subsystems is properly functioning and available to collect revenue and send required transactions and images to the host 99.9% of the time excluding scheduled and Approved maintenance. Availability shall be calculated based on the following calculation: Availability = 1- (chargeable downtime min / (minutes in period-exception min in period))				
464	RTCS reports detailing the Lane availability along with ITSM and help desk tickets, work orders, and feedback from customers, BOS staff, NCTA staff, and consultants shall be utilized to identify availability failures.				
465	For any month in which **all** functions of the Toll Zones are not fully available and operational at least 99.9% of the time excluding scheduled and Approved maintenance, The Contractor shall be assessed 2.0 points for each 0.1% or portion thereof below the Performance Requirement.				
466	The Contractor shall create a single transaction for each vehicle which passes through a toll zone and send the transaction to the OBO. A single vehicle may include a vehicle and any additional attachment, such as a trailer. Errors in this metric shall be detected through the following: Detailed audits of toll zone video records (DVR) correlating transactions to vehicles, a video analytics system independent of the RTCS detection system, or another mutually agreed upon validation method.				
467	For any month in which the vehicle detection transaction accuracy falls below 99.9%, the Contractor shall be assessed 1.0 point for each 0.1% or portion thereof below the Performance Requirement.				
468	The Contractor shall correctly build transactions by capturing and correlating images as specified in the functional requirements and providing the images to the OBO as specified in the ICD(s). Errors may be detected through the following: a) Detailed audits of transactions b) Response Codes and acknowledgements received from and sent to the OBO				
469	For any month in which the image transaction capture and transmission accuracy falls below 99.9%, the Contractor shall be assessed 1.0 point for each 0.1% or portion thereof below the Performance Requirement.				
470	The Contractor shall correctly classify all vehicles according to the functional requirements in the Contract. The performance will be measured with automated audits using data analytics accompanied with detailed review.				

No.	Requirements	Required Inputs			
		Status	Source	If Applicable	Comments
		B-Base Product M-Base Modified D-New Development E-Exception	P-Proposer S-Sub T-Third Party NA-Not Applicable	Subcontractor Name and/or 3rd Party Product/Vendor	Comment required if "Exception", optional otherwise.
471	For any month in which the classification accuracy falls below 99.5%, the Contractor shall be assessed 1.0 point for each 0.1% or portion thereof below the Performance Requirement.				
472	The RTCS shall provide images of sufficient image quality to achieve the Contractor's desired automation rate and NCTA's Requirements such that less than 0.1% of the images are rejected for reasons under the Contractor's control. Reject reasons not under the Contractor's control are: a) The vehicle has no plate; b) The plate is not in the normal camera field of view because it is not mounted in accordance with State laws; c) The plate is covered by dirt, a trailer hitch, tailgate, or some other material such that the numbers/letters are not human-readable; or d) The plate is damaged so that numbers/letters are not human readable.				
473	The number of images rejected for reasons within the Contractor's control shall be compared to the number of images transactions produced at the lane that month to calculate whether or not the Contractor's image quality met the standard.				
474	This metric will be reported by NCTA using data reported from the Image Verification Services, provided by others.				
475	For any month in which the requirement is not met, the Contractor shall be assessed 1.0 point for each 0.1% or portion thereof below the Performance Requirement.				
476	The Contractor shall correctly read and assign properly mounted transponders to the correct vehicle and report the correct declared transponder status. The performance will be measured by NCTA with automated audits using data analytics accompanied with detailed review.				
477	For any month in which the AVI accuracy falls below 99.5%, the Contractor shall be assessed 1.0 point for each 0.1% or portion thereof below the Performance Requirement.				
478	The Contractor shall process and transmit all transactions and associated images to NCTA's OBO within four (4) hours after the vehicle travels through the tolling point.				
	a) System reporting detailing the transaction date/time and the date/time that the transaction was acknowledged by the OBO shall be compared to a matching TRH Report. The report shall show both the volume and percentage of both compliant and non-compliant transactions for each day as well as totals for the month.				
	b) The RTCS and OBO validate the transactions to ensure that they comply with the agreed-upon ICD, and transactions that do not meet the ICD shall be rejected as incomplete or inaccurate. Unless a rejected transaction is corrected and resubmitted within four (4) hours, they shall not meet this KPI.				
479	For any month in which 100% of the image transactions are not transmitted in accordance with the Approved ICD to the OBO within 4 hours, the Contractor shall be assessed 1.0 point for each 0.1% or portion thereof below the Performance Requirement.				
495	The Contractor shall describe in detail how the performance against a requirement shall be tracked, tested, and reported, identifying specific reports and data elements all in alignment with the KPI Guidebook provided as **Attachment 9** to this RFP. In the case of a KPI which cannot be tracked by the RTCS, the form of manual tracking or testing shall be described and included in the Maintenance Plan.				
496	The Contractor shall prepare and submit to NCTA the performance report package on an agreed-upon Business Day each month as defined in these requirements.				
497	The performance report package shall include a performance scorecard calculating the non-compliance points assessed that month, if applicable, a series of reports, one (1) per Performance Requirement detailing the Contractor's performance against the requirement that month supporting the scorecard for each KPI and a historical report detailing the Contractor's performance against each requirement for the most recent twelve (12) months. See Section 7 Performance Measurement for details on these reports. Copies of all corrective action plans related to failures for that month shall be Approved and included.				
498	The performance report package shall provide all detailed data and calculations in a transparent and auditable format.				
499	The Contractor shall provide the required performance report package to NCTA before an invoice is considered for payment.				
500	Performance reporting by the Contractor and any associated adjustments related to Performance Requirements shall begin for the period beginning on the first Business Day of the Operations and Maintenance Phase and shall continue for the duration of the Contract.				

Exhibit C-9
Proposer Company Reference Form

(A Word version is "paper clipped" to this Exhibits file for ease of completion.)

Proposer Minimum Experience for AET/ORT

Proposer shall use this form to clearly demonstrate how it meets the minimum qualification requirements for Proposals with regard to AET or ORT Proposer project experience. Each reference provided may be contacted by NCTA. Copy this form as needed to comply with the requirements outlined in the RFP for each of the Implementation and Operations and Maintenance Phase minimum requirements. NCTA may or may not contact references to obtain more information about the Proposer experience at NCTA sole discretion.

Proposer's Name: _____

Please check off which qualifications requirement this reference is intended to address (you may check more than one box to cover both Implementation and Maintenance requirements as long as the explanation below is sufficiently detailed to cover both).

☐ Implementation ☐ Operations and Maintenance

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) number of lanes / plazas, revenue collected, etc.:
Relevant equipment and systems used:
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:

Exhibit C-10
Surety Commitment Letter

(A Word version of the Surety Commitment Letter is "paper clipped" to this Exhibits file for ease of completion.)

CONSENT OF SURETY

TO: North Carolina Turnpike Authority

We have reviewed the proposal of _____
(Proposer)

_____
(Address)

for the Complete 540 Phase 2 Roadside Support System for which Proposals will be received on:

_____
(Proposal Due Date)

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 Phase and Operations and Maintenance Phase. Such bonds will be in the amounts identified in the Price Proposal as referenced in the RFP Part I, Section 5.1 Notice 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]

(Affix Corporate Seal below this line. If no seal, write "No Seal" below this line and sign.)

****

Exhibit D
Payment Schedule

Exhibit D: Payment Schedule

A. Payments for Implementation Roadside Toll Collection System Design and Development (Notice to Proceed)

Payment Number	Payment Milestone	Pay Items (Paid as a percent of implementation costs, excluding costs of installation and materials)	% Paid	Cum. % Paid
A-1	Notice to Proceed	Implementation Phase Notice to Proceed	5.00%	5.00%
A-2	Roadside Toll System Development and Administration	Project Management Documents Approved (PMP, Project Schedule and Baseline RTM)	3.00%	8.00%
A-3	Roadside Toll System Design	Design Documents Approved (System Detailed Design Document, Installation Drawings, Bill of Materials and RTM tracking all requirements to their design details)	12.00%	20.00%
A-4	Roadside Toll System Factory Acceptance Testing (FAT) and Installation Readiness	Testing, Installation Planning and FAT Approved (MTP, All Test Procedures, updated RTM aligning all test procedures with requirements, Installation Plan and Factory Acceptance Testing and Test Report Approved)	15.00%	35.00%
A-5	Roadside Toll System Onsite Installation Testing (OIT)	Onsite Installation Testing Approved - First Site and Production TRH	7.00%	42.00%
A-6	Roadside Toll System Manuals and Training	All Manuals Approved and Training Plan and Training Materials Approved	2.00%	44.00%
A-7	Roadside Toll System Commissioning	Installation and Commissioning Approved Ready for Go Live		
A-7a	Roadside Toll System Commissioning	Installation and Commissioning Approved Ready for Go Live - Tolling Location 1	3.00%	47.00%
A-7b	Roadside Toll System Commissioning	Installation and Commissioning Approved Ready for Go Live - Tolling Location 2	3.00%	50.00%
A-7c	Roadside Toll System Commissioning	Installation and Commissioning Approved Ready for Go Live - Tolling Location 3	3.00%	53.00%
A-7d	Roadside Toll System Commissioning	Installation and Commissioning Approved Ready for Go Live - Tolling Location 4	3.00%	56.00%
A-7e	Roadside Toll System Commissioning	Installation and Commissioning Approved Ready for Go Live - Tolling Location 5	3.00%	59.00%
A-7f	Roadside Toll System Commissioning	Installation and Commissioning Approved Ready for Go Live - Tolling Location 6	3.00%	62.00%
A-7g	Roadside Toll System Commissioning	Installation and Commissioning Approved Ready for Go Live - Tolling Location 7	3.00%	65.00%
A-7h	Roadside Toll System Commissioning	Installation and Commissioning Approved Ready for Go Live - Tolling Location 8	3.00%	68.00%
A-7i	Roadside Toll System Commissioning	Installation and Commissioning Approved Ready for Go Live - Tolling Location 9	3.00%	71.00%
A-7j	Roadside Toll System Commissioning	Installation and Commissioning Approved Ready for Go Live - Tolling Location 10	3.00%	74.00%
A-7k	Roadside Toll System Commissioning	Installation and Commissioning Approved Ready for Go Live - Tolling Location 11	3.00%	77.00%
A-7l	Roadside Toll System Commissioning	Installation and Commissioning Approved Ready for Go Live - Tolling Location 12	3.00%	80.00%
A-8	Operational Documentation	Maintenance Plan and Disaster Recovery Plan Approved	3.00%	83.00%
A-9	Training Execution	All Training Complete	2.00%	85.00%
A-10	Roadside Toll System Acceptance	Operational and System Acceptance Test Approved, As-builts Approved and Implementation Phase Closed Out	15.00%	100.00%

B. Payments Related to Hardware, Equipment and Installation

Payment Number	Hardware and Installation Pay Items (Paid as % of hardware and installation costs)	% Paid	Cum.% Paid
B-1	Materials Ordered and Verified: All Materials Ordered (Purchase Order data correlated to the BOM and submitted to NCTA for approval)	20.00%	20.00%
B-2	Materials Received and Verified: All Materials Received (Packing slips correlated to Purchase Orders correlated to the BOM and submitted to NCTA for approval. Subject to onsite verification of materials by NCTA)	20.00%	40.00%
B-3	Installation Approved		
B-3a	Installation Approved - Tolling Location 1 (Installation Checklist completed by Contractor and Approved by NCTA)	5.00%	45.00%
B-3b	Installation Approved - Tolling Location 2 (Installation Checklist completed by Contractor and Approved by NCTA)	5.00%	50.00%
B-3c	Installation Approved - Tolling Location 3 (Installation Checklist completed by Contractor and Approved by NCTA)	5.00%	55.00%
B-3d	Installation Approved - Tolling Location 4 (Installation Checklist completed by Contractor and Approved by NCTA)	5.00%	60.00%
B-3e	Installation Approved - Tolling Location 5 (Installation Checklist completed by Contractor and Approved by NCTA)	5.00%	65.00%
B-3f	Installation Approved - Tolling Location 6 (Installation Checklist completed by Contractor and Approved by NCTA)	5.00%	70.00%
B-3g	Installation Approved - Tolling Location 7 (Installation Checklist completed by Contractor and Approved by NCTA)	5.00%	75.00%
B-3h	Installation Approved - Tolling Location 8 (Installation Checklist completed by Contractor and Approved by NCTA)	5.00%	80.00%
B-3i	Installation Approved - Tolling Location 9 (Installation Checklist completed by Contractor and Approved by NCTA)	5.00%	85.00%
B-3j	Installation Approved - Tolling Location 10 (Installation Checklist completed by Contractor and Approved by NCTA)	5.00%	90.00%
B-3k	Installation Approved - Tolling Location 11 (Installation Checklist completed by Contractor and Approved by NCTA)	5.00%	95.00%
B-3l	Installation Approved - Tolling Location 12 (Installation Checklist completed by Contractor and Approved by NCTA)	5.00%	100.00%