



July 5, 2023

RFP# 54-12008772-CM

TECHNICAL PROPOSAL

TRANSIT SOFTWARE SOLUTION

 **TripMaster**
by CTS Software

PREPARED FOR

State of North Carolina
Christie Murphy
Business Relations Manager
1501 Mail Service Center
Raleigh, NC 27699
(919) 707-4848
clmurphy@ncdot.gov

PREPARED BY

CTS Software
Derek Platow
Director of Business Development
PO Box 57
Swansboro NC, 28584
(910) 512-0624
derek.platow@cts-software.com

STATE OF NORTH CAROLINA Department of Transportation	REQUEST FOR PROPOSAL NO. 54-12008772-CM	
	Offers will be publicly opened: June 19, 2023	
	Issue Date: April 4, 2023	
Refer <u>ALL</u> inquiries regarding this RFP to: Christie Murphy clmurphy1@ncdot.gov 919-707-4848	Commodity Number: 81162000	
	Description: Transit Software Solution	
	Purchasing Agency: Department of Transportation	
	Requisition No.: 12008772	

OFFER

The Purchasing Agency solicits offers for Services and/or goods described in this solicitation. All offers and responses received shall be treated as Offers to contract as defined in 9 NCAC 06A.0102(12).

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.

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

OFFEROR: Foxster Opco, LLC dba CTS Software		
STREET ADDRESS: PO Box 57	P.O. BOX: 57	ZIP: 28584
CITY, STATE & ZIP: Swansboro, NC, 28584	TELEPHONE NUMBER: (800) 704-0064	TOLL FREE TEL. NO
PRINT NAME & TITLE OF PERSON SIGNING: Derek Platow, Director of Business Development	FAX NUMBER: (866) 244-4351	
AUTHORIZED SIGNATURE: 	DATE: May 24th, 2023	E-MAIL: derek.platow@cts-software.com

Offer valid for ninety (90) days from date of offer opening unless otherwise stated here: ____ days

ACCEPTANCE OF OFFER

If any or all parts of this offer are accepted, an authorized representative of Department of Transportation shall affix its signature hereto and any subsequent Request for Best and Final Offer, if issued. Acceptance shall create a contract having an order of precedence as follows: Best and Final Offers, if any, Special terms and conditions specific to this RFP, Specifications of the RFP, the Department of Information Technology Terms and Conditions (Attachment B), the NCDOT Agency Terms and Conditions (Attachment C), and the agreed portion of the awarded Vendor's Offer. A copy of this acceptance will be forwarded to the awarded Vendor(s).

FOR PURCHASING AGENCY USE ONLY		Chief of Staff
Offer accepted and contract awarded this date 06/18/2025		
by cindy mcCleary		(Authorized representative of Department of Transportation).
A83AGBCE14B74D3...		

Brennon Fuqua

Chris Peoples

Director

Chief operating officer

DocuSigned by:

 F21F90D3B0CA4AF...

DocuSigned by:

 383C434421994A4...

06/18/2025

06/18/2025

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RFP# 54-12008772-CM

State of North Carolina
Christie Murphy
Business Relations Manager
1501 Mail Service Center
Raleigh, NC 27699
(919) 707-4848
clmurphy@ncdot.gov



Dear Christie,

CTS Software is pleased to present our response to the State of North Carolina Transit Software Solution. Our proposal illustrates our understanding of the established requirements and compliance standards, as well as our ability to fulfill them as stated in the solicitation.

We have outlined a Demand Response Scheduling software solution that will enhance the efficiency and coordination of North Carolina's Demand Response Operators (DROs). Our proposed system allows for seamless interagency communication and scheduling via a singular platform, TripMaster by CTS Software. Each DRO will be confident that they, and their customers, are receiving the most accurate and up-to-date information available. Our solution is both reliable and flexible, giving each agency the ability to customize each module to match how they provide service. CTS Software's turnkey solution will provide improved integrations, seamless coordination, and new mobility options for all agencies.

Our flagship web-based solution is TripMaster, a powerful, flexible, completely scalable, and feature-rich demand response scheduling platform. Since 1982, we've worked with a variety of organizations of all sizes. Our proposed suite of TripMaster modules ensures that the transportation goals of NCDOT are immediately fulfilled and will continue to expand as the needs of DROs, and their riders, expand in the future. We are most proud of our family-style commitment to customer service, and our customers will tell you that they appreciate reaching a real live person, who knows them by name, on the phone 24/7 if they ever need help.

As Director of Business Development at CTS Software, I am fully authorized to represent the company in negotiations and will sign any contracts required. We look forward to your review and are available to answer any questions, if needed. This proposal and associated pricing will be valid and binding for 90 days from the date of July 5, 2023.

Our solutions are designed to increase rider engagement, improve cost-savings, and reduce ecological footprints through the power of automation. We feel confident CTS Software's TripMaster Solution can not only meet North Carolina's expectations, but surpass them.

Best regards,

A handwritten signature in black ink, appearing to read 'Derek Platow'.

Derek Platow
Director of Business Development, CTS Software
derek.platow@cts-software.com

ATTACHMENT D: DESCRIPTION OF OFFEROR

Provide the information about the offeror.

Offeror's full name	Foxster Opco, LLC dba CTS Software
Offeror's address	PO Box 57, Swansboro, NC, 28584
Offeror's telephone number	(800) 704-0064
Ownership	☐ Public ☐ Partnership ☒ Subsidiary ☐ Other (specify)
Date established	1982
If incorporated, State of incorporation.	North Carolina
North Carolina Secretary of State Registration Number, if currently registered	2064767
Number of full-time employees on January 1 st for the last three years or for the duration that the Vendor has been in business, whichever is less.	20-50 Employees
Offeror's Contact for Clarification of offer: Contact's name Title Email address and Telephone Number	Derek Platow Director of Business Development derek.platow@cts-software.com (910) 512-0624
Offeror's Contact for Negotiation of offer: Contact's name Title Email address and Telephone Number	Derek Platow Director of Business Development derek.platow@cts-software.com (910) 512-0624
If Contract is Awarded, Offeror's Contact for Contractual Issues: Contact's name Title Email address and Telephone Number	Derek Platow Director of Business Development derek.platow@cts-software.com (910) 512-0624
If Contract is Awarded, Offeror's Contact for Technical Issues: Contact's name Title Email address and Telephone Number	Derek Platow Director of Business Development derek.platow@cts-software.com (910) 512-0624

CTS SOFTWARE

COMPANY OVERVIEW

CTS (Community Transit Systems) Software has been directly involved in the public transit industry since 1982.



Our flagship web-based solution is TripMaster—powerful, flexible, completely scalable, and feature-rich. This proposal includes a suite of effective modules to ensure that our solutions meet customer needs now, and as your organization's demands and goals change. We've gone to great lengths to design an overall feel and business logic that proves our commitment and dedication to you—plus a 100% satisfaction guarantee.

LEGAL NAME: Foxster Opco, LLC.

DBA: CTS Software

FEIN: 81-3263009

BUSINESS TYPE: Limited Liability Company

STATE OF BUSINESS REGISTRATION: North Carolina

PARENT COMPANY: Transit Technologies, LLC.

CORPORATE ADDRESS: PO Box 57, Swansboro NC 28584

COMPANY HISTORY

From 1982 until 1993, we managed transit properties in the United States. As part of our management contracts, we also assisted our properties in the preparation of Federal grants for vehicles, equipment, and operating funds. As with all transit operations receiving federal funds, we ensured that all our operations complied with the rules and regulations of the American with Disabilities Act of 1990.

While operating and managing these systems, we realized the need for functional, user-friendly transit software. We reviewed many products available at that time and while we saw many helpful features and benefits, no single provider had the package to meet the entire array of our needs. Thus, in 1986, CTS began in-house production of proprietary transportation management software. We knew we had real and practical business logic and industry experience, and consequently knew what was required of a software package. We hired programmers and began developing the products based on what we knew was needed in the transportation industry.

In 1993, we sold the transit management portion of our business to focus solely on our software products. To reflect this new focus, we incorporated under the name CTS Software and started marketing our products nationwide, confident that they would meet the needs of our current and potential customers across the country.

OUR PARTNERSHIP WITH PASSIO TECHNOLOGIES



Introduction to Passio Technologies

Passio Technologies provides modular and innovative fixed route solutions with over 10 years experience in the transit industry, and over 250 clients. Members of Passio's technical team have significant expertise in demand response transportation solutions. This expertise has benefited their partnership with CTS to help serve customers who encounter growing needs for diversified transit.

Why Passio Technologies?

Passio's modular ITS framework provides flexible technology combinations and options that are customizable to meet the needs of any size agency. Valuable real-time data is available and easily accessible for both riders and administrators using Passio's reliable and accurate CAD/AVL solutions. Their unique applications prioritize rider needs and when combined with their timely tech support, separate Passio from competitors. Passio shares the core belief that mobility is a universal right, and together with CTS, we are proud to offer the most comprehensive transit solution in the industry.

The Partnership

CTS Software is proud to join Passio Technologies as a Transit Mobility Alliance Partner. Our collaboration is paramount to offering our clients the best options possible to fit their exact transit needs. CTS Software solutions can be easily paired with modular solutions from Passio Technologies, which is owned and operated by the same parent company.

Passio Technologies' Offerings

Passio GO and Passio Navigator form Passio's core CAD/AVL solution with reliable and accurate location tracking data available for viewing and reporting in real-time. In addition to fast and accurate CAD/AVL, Passio allows you to quickly add voice announcements, signage, automated passenger counting, and telematics to your system. They offer several unique solutions such as BusBuzz Passenger Feedback, Passio Request & GO for deviated/flex routes, headway management, and yard management solutions.

How Integration works

CTS Software and Passio Technologies work together in every aspect to deliver the services at the highest quality to our shared clients. Through weekly meetings and daily conversations with the Passio Technologies team, we are able to ensure all needs of our clients are met. Our platform integrates with Passio solutions to provide seamless support for fixed route, flex-route, demand-response, NEMT, and on-demand operations.





QUALIFICATIONS AND EXPERIENCE



OVER 30 YEARS EXPERIENCE

CTS (Community Transit Systems) Software has been directly involved in the public transit industry since 1982. From 1982 until 1993, we managed transit properties in the United States. As part of our management contracts, we also assisted our properties in the preparation of Federal grants for vehicles, equipment, and operating funds. As with all transit operations receiving federal funds, we ensured that all our operations complied with the rules and regulations of the American with Disabilities Act of 1990.

While operating and managing these systems, we realized the need for functional, user-friendly transit software. We reviewed many products available at that time and while we saw many helpful features and benefits, no single provider had the package to meet the entire array of our needs. Thus, in 1986, CTS began in-house production of proprietary transportation management software. We knew we had real and practical business logic and industry experience, and consequently knew what was required of a software package. We hired programmers and began developing the products based on what we knew was needed in the transportation industry. In 1993, we sold the transit management portion of our business to focus solely on our software products. To reflect this new focus, we incorporated under the name CTS Software and started marketing our products nationwide, confident that they would meet the needs of our current and potential customers across the country.

CTS Software is confident that our history and practical experience is reflected through the understanding of this overall project. Our years of applied knowledge and experience, enhanced with the experiences of hundreds of satisfied customers, we will help ensure you that we will bring something special to the project that no other vendor can offer.

“

more

efficient

with

scheduling

”

Working with CTS and TripMaster has made our transit department more efficient with scheduling, reporting and overall ease of our daily operations.

– Allen COA, FL.



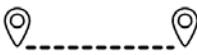


EXECUTIVE SUMMARY

The following narrative outlines the goals of NCDOT's RFP NO.54-12008772-CM Transit Software Solution and how CTS Software is uniquely positioned to meet and exceed those objectives.

CTS Software's TripMaster software has been recognized by many as the most intuitive and comprehensive demand response management system for the public transit industry. CTS's solution for NCDOT includes everything necessary to provide optimized Demand Response operations to all participating NC agencies.

OBJECTIVES

- 1** Client Management 
- 2** Easy reservations and scheduling 
- 3** Optimized dispatch and routing 
- 4** Fare payment integration 
- 5** Comprehensive reporting and data analytics 
- 6** Self-serve reservations via customer app 
- 7** Profile management 
- 8** Trip history 

These objectives are easily met as TripMaster is specifically designed for paratransit, NEMT, demand-response, deviated fixed route, shuttle service, and on-demand operations. No matter what type of service each agency provides, TripMaster and its integrated partners can fulfill the need. Having worked for many years in these industries, we have utilized decades of experience and customer feedback to ensure our software easy to use and intuitive. We have built-in functionality that allows NCDOT to manage every aspect of their transit operations: add riders, sites, accounts, and more in order to streamline scheduling and client registration. CTS Software's turnkey solution will provide improved integrations, seamless coordination, and new mobility options for all agencies. Our software is designed to be as scalable and flexible as possible, allowing us to make changes quickly to suit the needs of our customers and the industry.

With 40 years experience as industry leaders in transportation, CTS is positioned to meet the ever-changing needs of transit providers across North Carolina and the entire US.



Regardless of which TripMaster features an agency chooses initially, they can build and customize as their needs change, without having to relearn systems with each upgrade. Our robust reporting engine gives agencies real measures to evaluate every aspect of operations, particularly in a time when Medicare, State Medicaid, payer, and access legislation and regulations that affect the paratransit industry are changing rapidly. As an example, our reporting engine allows each agency to customize every report and bill to fit their specific needs.

We have implemented these solutions successfully with clientele across the country, such as in Oregon, Florida, and Tennessee. CTS is well-known in the transit industry for being able to service agencies of all sizes and with varying needs, which is why our technology is noted as the most customizable solution currently on the market.

SOLUTION GROUPS

We are proposing a solution that fully delivers on the objectives and outcomes detailed in the RFP. All Demand-Response transit operations strive to serve their riders and clients by improving the overall experience while reducing costs.

Our modular solution is 100% compatible with the core specifications listed in the RFP and the important phased approach. These core requirements are met by TripMaster's easy reservation builder, intelligent scheduling and mapping, driver tools, communications infrastructure, and business analytics. The advanced functionalities requested by individual DROs are met by our comprehensive messaging system, IVR/portal tools, and our mobile ticketing module.

To supplement these core and advanced functionalities as requested, CTS is proposing a wide array of transit technologies available from both CTS and our integrated partners. These advanced tools include mobile video, multiple fixed route service tools, automatic passenger counters, voice announcements, integrated signage, and more.

We are 100% committed to a continued partnership and environment of collaboration with all participating agencies. CTS and its partners will provide a dedicated team of transportation experts, technical staff, and customer success managers to ensure the goals of this project and others to come set the bar for excellence in transit.



RESERVATION PROCESS

“
team is
dedicated
to
customizing
”

It goes to show how your team is dedicated to customizing the software to meet our agency's needs.

- Exceptional Persons, Inc. IA

TripMaster offers users a visually pleasing, responsive, and intuitive reservation process.

CTS's development team released a newly-designed, cutting-edge reservation screen to enhance the process for operations and riders based on customer feedback and use. TripMaster calculates direct drive time and distance automatically, displays a map from point A to point B, and gives users all the tools they need on one primary screen.

Whether you are creating a one-time ride or a recurring reservation, TripMaster will streamline and optimize DROs.

The screenshot shows the TripMaster Reservation Screen on a computer monitor. At the top, it displays the name "Platow, Heidi", phone number "(910)512-0627", birth date "Not Set", and special directions: "Please wait for mother at drop-off location" and "Dispatcher Notes: Talk slowly when communicating with her". There are "Cancel" and "Save and Swap" buttons.

The main section is titled "RESERVATION" and contains several fields:

- Date:** 1/23/2019
- Priority Time:** 14:30
- Priority:** Dropoff
- Account:** MHC
- Mobility:** Ambulatory

Below these fields are two columns for location selection:

- Pickup:** Home, 451 Deering Ave, Portland, ME 04103, (910)512-0624. Includes a "Select a New Site" button and a "Make a Correction to this Site" button.
- Scheduled Time:** 13:48
- Dropoff:** Jacks Chowder, 150 Commercial St, Portland, ME 04101, Not Set. Includes a "Select a New Site" button and a "Make a Correction to this Site" button.
- Scheduled Time:** 14:14

On the right side, there is a map showing the route from the pickup location to the dropoff location. The map includes labels for "Deering Oaks Park", "Portland Observatory", "Bug Light Park", and "Southern Maine". A "Reservation Notes" section at the bottom right shows a distance of "2.52 mi, 10 mins".



TripMaster Reservation Screen

AGENCY BENEFITS

When utilizing the TripMaster, agencies see an increase in amount of passenger trips per hour and a decrease in deadhead miles, drive time, and even the number of vehicles needed on daily basis.

As the State works to enhance Demand Response services with improved cross-agency coordination, TripMaster is uniquely positioned to support this endeavor.

TripMaster can be configured to centralize multiple county operations within one centralized database. This allows information and daily operational objectives to be filtered by each county, but still operates as one comprehensive system. Our technology coordinates between all counties and creates a cohesive transit experience across multiple municipalities. For example, Down East Express (CCATS) utilizes TripMaster for operations to the Raleigh Durham area with stops in 6 counties.

TripMaster also has the ability to broker and share trip information with public or private transit agencies, such as the Department of Social Services (DSS). These solutions have been successfully deployed with dozens of transit agencies across the country, but specifically in North Carolina with Western Piedmont Regional Transportation Authority (WPRTA).

CTS Software is an innovative company that is constantly updating, expanding, and improving TripMaster's features based on shifting industry needs and the feedback we receive from our clients.



PARASCOPE MOBILE APP FOR DRIVERS

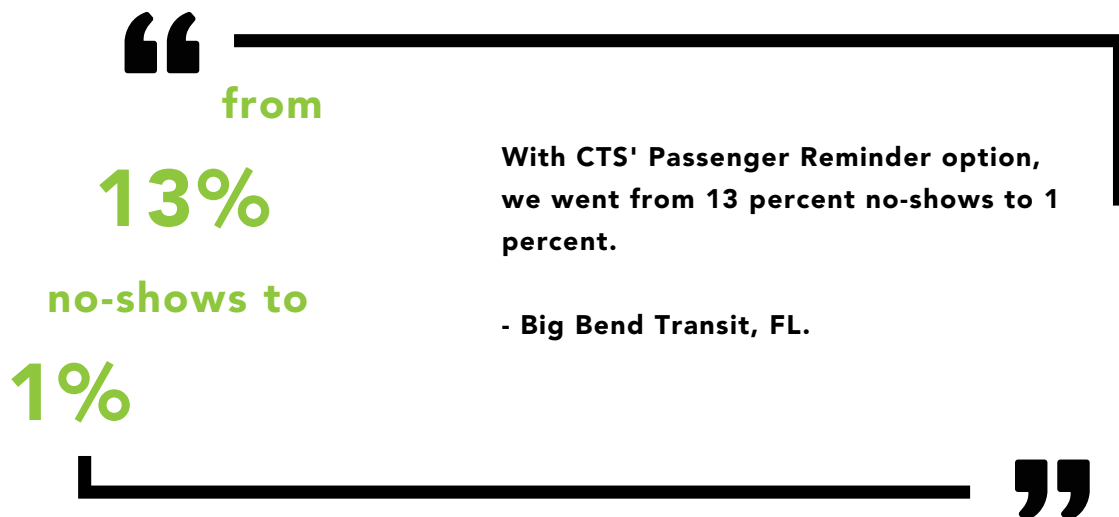
CTS Software's proposal also includes our in-house developed mobile application, ParaScope.

ParaScope is designed to run on Android or iOS operating systems for mobile devices such as tablets and smart phones. When drivers access ParaScope, TripMaster connects dispatch and drivers in real time, providing vehicle tracking, communication, and data consumption. ParaScope is also equipped with customizable, electronic pre- and post-trip inspections, streamlining the process for employees and easily storing all necessary data. Agencies utilizing both TripMaster and ParaScope report a decrease in radio communication and manual data input, and an increase in on-time performance and employee satisfaction.

OPTIMIZING RESOURCES WITH PASSENGER REMINDERS

One of the costliest challenges that public transportation agencies face is no-shows.

We recommend each DRO also implements our passenger reminder module to provide a customer-facing tool that drastically decreases no-shows and wait time. The passenger reminder automatically places a phone call and/or text message the night before a scheduled ride, as well as when the driver is en route. When utilizing this module, agencies see a 33% decrease in no-shows on average.



The regional, multi-agency solution offers a number of custom tools for Demand Response Operators. TripMaster gives DROs the ability to decide if and who to share rides with, publishes rides in a shared location, and allows them to accept, import, and serve shared rides. Dispatch is able to view the status and results of accepted rides by each DRO.

The solutions proposed herein will directly assist NCDOT in reaching their goals of efficient cross-agency coordination, simplified scheduling and fare collection, improved integration, and optimized Demand Response services.





RESPONSE TO SPECIFICATIONS AND REQUIREMENTS

1. Project Management			
a.	Project Manager and Key Staff		
1.a-1	The Vendor works closely with the State, the DROs, and the NCDOT Lead Representative for the initial implementations. This provides a project implementation framework for all subsequent implementations throughout North Carolina.	Core	CTS Software is an NC based company and has worked closely with the State, DROs, and NCDOT for the past 37 years. For this project we will maintain consistent and clear communication with these parties during the initial implementations and provide regular updates and health checks throughout the duration of the project to ensure that all parties are up to speed.
1.a-2	The Vendor assigns responsible and experienced individuals to serve as the Project Manager and Key Project Staff for each implementation.	Core	CTS Software is fortunate to have 7 experienced technical trainers right here in North Carolina. This local presence will provide unmatched support for project management and implementation.
1.a-3	At a minimum, the Vendor provides a qualified Project Manager who shall oversee and coordinate all the DROs implementations throughout the State. The Project Manager will be the single point of contact for the NCDOT Lead Representative.	Core	Kendall Keller has over 20 years of Project Management experience and will be the lead for this project. She will oversee and coordinate all the DRO implementation in NC. She will also provide a single point of contact for the NCDOT lead representative.

1.a-4	The Vendor's Project Manager possesses experience managing demand response scheduling software implementation projects.	Core	Kendall Keller has managed numerous statewide implementations of our TripMaster software that were similar in size and scope to this project. These include but are not limited to South Carolina, Ohio, Nebraska, and Tennessee.
1.a-5	The Vendor recommends one or more Deputy Project Manager(s) and other Key Staff to facilitate and manage the day-to-day implementation and onboarding of individual DROs within the State as needed	Core	James Young is the Product Owner, for TripMaster, and he will act as the Deputy Project Manager for this project.
1.a-6	All identified Key Project Staff will be subject to review by the DROs. Key Project Staff includes: 1. Project Manager 2. Deputy Project Manager(s) 3. Lead developer/engineer(s) 4. Implementation lead(s) 5. QA/QC lead(s) 6. Training lead(s) 7. Support lead(s)	Core	This is understood and acceptable.

b.	Project Meetings		
1.b-1	The Vendor facilitates progress review meetings and shares an agenda at least five (5) business days prior with the Agency Project Manager(s) for all implementations	Core	We use Zoho Projects as our Project Management tracking tool. This allows us to easily share live data with the Agency Project Managers and ensure everyone is aware of where we are in the process. We agree to ensure this is up to date and shared at least 5 days in advance of each review meeting.
1.b-2	The topics to be discussed and reviewed during progress meetings include, but are not limited to: 1. Minutes of the prior progress meeting and progress since the last meeting and action item log 2. Project schedule including sequencing of critical work 3. Project deliverables, with a focus on deliverables due before the next progress meeting 4. Master Issues list and Issues arising since the last meeting 5. Engineering, manufacturing, and quality control summary (if necessary) 6. Any needed corrective measures to maintain the project schedule 7. Any other issues related to the project 8. Other topics as required by the DROs The discussion	Core	This is understood and acceptable.

	topics may vary depending on project needs and priorities.		
1.b-3	The Vendor documents minutes for all monthly progress review meetings and submitting those minutes for review by the DRO within three (3) business days following each meeting	Core	These notes will be tracking in our PM tool, Zoho Projects, and they will be instantly available to all stakeholders.
1.b-4	All Key Project Staff relevant to the agenda topics are present during progress meetings or as required by the DRO.	Core	This is understood and acceptable.
c.	Project Management Deliverables		
1.c-1	The Vendor develops and maintains a Master Program Schedule (MPS). The MPS identifies all program activities, deliverables, and key milestones (including those owned by the DROs) with expected and actual completion dates.	Core	This will be handled by our PM tool, Zoho Projects.
1.c-2	The Vendor works with the DROs and the NCDOT Lead Representative to determine acceptable delivery/review timeframes for all DRO-owned deliverables/activities within	Core	This is understood and acceptable.

	the MPS. All proposed times are subject to review and approval by the DROs.		
1.c-3	The Vendor provides a Change Management Plan (CMP) for review and approval by the DROs and the NCDOT Lead Representative.	Core	We will provide a CMP as needed and ensure approval and review by the DROs and NCDOT Lead Representative.
1.c-4	The CMP documents critical changes to program stakeholders and change management and risk mitigation procedures. In addition, the CMP details the Vendors change control process and procedures.	Core	This is understood and acceptable.
1.c-5	Engineering Change Requests (ECRs) control software changes and updates to approved documents and data	Core	This is understood and acceptable.
1.c-6	ECRs include documentation describing the reasons for, effects of, and rollback plans for the change. The Vendor submits ECRs to the DROs for review and approval at least two (2) weeks before releasing the changes to allow for DRO-led testing (as needed).	Core	This is understood and acceptable.

1.c-7	The Purchasing DROs directly coordinate and approve exceptions for emergency changes or fixes by. Vendor provides comprehensive documentation describing the issue and resolution, and the plan to deploy the change or fix.	Core	Vendor will provide documentation describing the emergency issue and resolution if requested by DROs. In the interest of hitting our SLAs for emergency fixes and focusing on identifying and implementing an emergency fix as quickly as possible for our clients, we are unable to coordinate and get approval in such instances. However, we can provide documentation post fix."
1.c-8	The Vendor provides their standard Quality Assurance and Quality Control (QA/QC) policies and procedures. The QA/QC program defines methods for designing for, achieving, and maintaining quality. At a minimum the QA/QC program includes: 1. Surveillance overall work, including by SubContractors, to ensure compliance with all contract requirements 2. Verification of compliance, including audit; discrepancy identification, notification, and control; and corrective action 3. Evaluation and assessment of SubContractors QA programs 4. Provision of technical documentation, drawings, specifications, handbooks, manuals, data	Core	This is understood and approved. Documentation will be provided upon request.

	flow diagrams, and other technical publications for the new application 5. Design control and version management for changes to documents, drawings, data, and specifications 6. System software development (consistent with IEEE Standard 730 or equivalent ISO 9001 standards for software quality assurance) 7. System integration testing 8. Defect management, including explanations, on how defects will be identified, categorized, reported on, tracked, approved/rejected, and closed out 9. System configuration management 10. Qualification and certification for all personnel performing work under this Contract		
1.c-9	If damage, defect, error, or inaccuracy is found in any provided work, the DROs have the right to reject or require corrective action to bring the work into compliance with the contract requirements. The Vendor bears all costs	Core	This is understood and acceptable.

	incurred in correcting rejected work.		
1.c-10	The Vendor maintains an electronic Master Issues List (MIL) to track and manage project issues and action items.	Core	We utilize Microsoft DevOps as our electronic Master Issues List (MIL). Every bug, feature request, dev task, etc is tracked using this solution. We triage tickets daily and plan and schedule releases at least once per week.
1.c-11	The Vendor identifies and updates MIL items at design review meetings, weekly project coordination meetings, monthly progress review meetings, and on an ad-hoc basis.	Core	Every bug, feature request, dev task, etc is tracked using this solution. We triage tickets daily and plan and schedule releases at least once per week. We do road map meetings (project coordination meetings) and progress review meetings monthly and on an ad-hoc basis.
1.c-12	The MIL tracks the following attributes for each entry at a minimum: 1. Item number 2. Date opened 3. Requesting party 4. Description 5. Required action 6. Assigned party 7. Status (open/closed/in progress/deferred/etc.) 8. Date closed Other attributes may be required by the DROs. The Vendor assigns no action items to the DROs without the knowledge and consent of the DROs	Core	Our Microsoft DevOps tool tracks these items as requested and does not assign action items to the DROs without their knowledge and consent.
1.c-13	The Vendor develops and submits a System Implementation Plan (SIP) to be approved by the DROs that purchase systems. The	Core	After contract signing we will schedule a kickoff call with the DRO. During that time we will walk through the System Implementation Plan (SIP) together and

	SIP includes detailed implementation activities as it relates to the master program schedule. The SIP includes roles and responsibilities of parties (DROs, Vendor, or other parties) in the proposed project team, progress milestones and status, and assigned Vendor staff.		make any changes requested by the DRO. The System Implementation Plan (SIP) includes all requirements listed in 1.c-13.
1.c-14	The Vendor retains responsibility for accurately migrating existing customer records to the new customer database. Vendor provides a recommended Customer Data Migration (CDM) plan based on industry best practices and relevant experience migrating customer records.	Core	We will work with the DRO to provide our recommended Customer Data Migration (CDM) plan and are responsible for the accuracy of the data we convert.

2. Common Design Specifications			
a	Application Programming Interface (APIs)		
2.a-1	The system uses APIs to share data and connect with third-party applications as required by the DROs. The Vendor provides documentation describing all API calls, data formats, and communication and security protocols used to support the system interfaces.	Core	We support many different APIs today and they are documented as requested in 2.a-1.
2.a-2	A system integrates with system applications such as Interactive Voice Response (IVR) system, mobile applications, customer websites, and other such applications using APIs.	Core	This is understood and approved.
2.a-3	The Vendor develops and exposes APIs that are managed using a commercial off the shelf (COTS) API management solution that supports functionality provided in the demand-response system, including: 1. Client management 2. Reservations 3. Dispatching	Core	We have a Partner API that provides access to the requested data elements in 2.a-3.

	and Scheduling 4. Customer service 5. Fare payment 6. Reporting Include in the proposal examples of APIs and a description of the features and functions supported by existing APIs.		
3. Demand Response Software			
a.	Demand Response General Specifications		
3.a-1	A secure, cloud-hosted, SaaS solution that includes administrative software to support demand response operations.	Core	TripMaster is fully hosted, 100% web-cloud based and is optimized for Chrome, Edge, and Internet Explorer. System data is stored in a Microsoft SQL 2016 relational database, hosted in the Microsoft Azure Cloud for HIPAA compliance as well as ePHI and FIPS encryption.
3.a-2	A system that reduces the need for manual data entry and duplicative data entry	Core	TripMaster meets and/or exceeds this specification.
3.a-3	A system with multi-user capability, allowing simultaneous users working at different workstations to access and effectively use the software for all associated activities.	Core	CTS Software will provide all licensed staff with credentials to access TripMaster. All actions performed are seamlessly integrated, updating all personnel in real time as they work simultaneously.
3.a-4	System security features limiting access to major	Core	TripMaster meets and/or exceeds this specification.

	functions based on assigned roles.		
3.a-5	A fully automated system providing real-time and batch order taking, scheduling, and dispatching for demand response transportation trips	Core	TripMaster's Auto Scheduler automatically batches all bookings for a travel day. The system is based on actual street networks in the service area by x- and y- coordinates, parameters associated with network segments as established in the GIS system, physical barriers, speed parameters, time of day, and appropriate dwell times for the boarding and alighting of passengers. The licensee will create "Schedule Profiles" to be used when running the Auto Scheduler. These profiles define, among other factors: • How long a passenger can be on the vehicle • How early a passenger can be dropped off prior to their appointment • How long a passenger can wait for pickup after an appointment • How much time to designate for boarding preparation • Additional time windows to load passengers with special assistances or mobility methods. TripMaster allows an unlimited number of Schedule Profiles to be configured and applied to riders and rides. Upon considering the Schedule profiles for each ride within that day's schedule, the Auto Scheduler will determine optimal route efficiency. The transportation provider will create a default Schedule Profile with general parameters the Auto Scheduler will take into consideration for passengers,

			trips, and routes. In coordination with how long passengers can be on the vehicle (“Max Ride Duration,”) the transportation provider may specify to add the “direct drive time” to the earliest pickup and last drop-off, to determine the route’s most beginning and end. The Auto Scheduler includes a built-in statistical analysis of the proposed schedule. After completing the optimization process, users are shown a detailed report with before and after results in several categories, including: • Average miles per ride • Average priority window violation • Total priority time variance • Total deadhead miles • Total service duration • Total unassigned rides After reviewing the statistical report, the user may make changes to the schedule, run the Auto Scheduler again, and continue this process, if necessary, until satisfied. Even after the user has accepted the Auto Scheduler results, they may still make changes to the schedule. The Auto Scheduler automatically excludes riders who are locked onto trips or marked as will-calls. Users configure Auto Scheduler settings under the Schedule Profile Master, including time windows, load time, and different weights for speed or distance,
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and the Auto Scheduler uses Esri's Real Street Network data to optimize routing.

The Auto Scheduler allows the end user to schedule trips with filter options; for example, assigning first scheduling priority to wheelchair assignments or specific accounts.

Ride Filters

SHOW ME ONLY SELECTED RIDES ☐ NO

SHOW WILL CALL RIDES ☒ YES

SHOW ME ONLY UNSEATED RIDES ☐ NO

ACCOUNT

PROVIDER

PURPOSE

PRIORITY TIME

PRIORITY

PICKUP CITY

DROPOFF CITY

MOBILITY

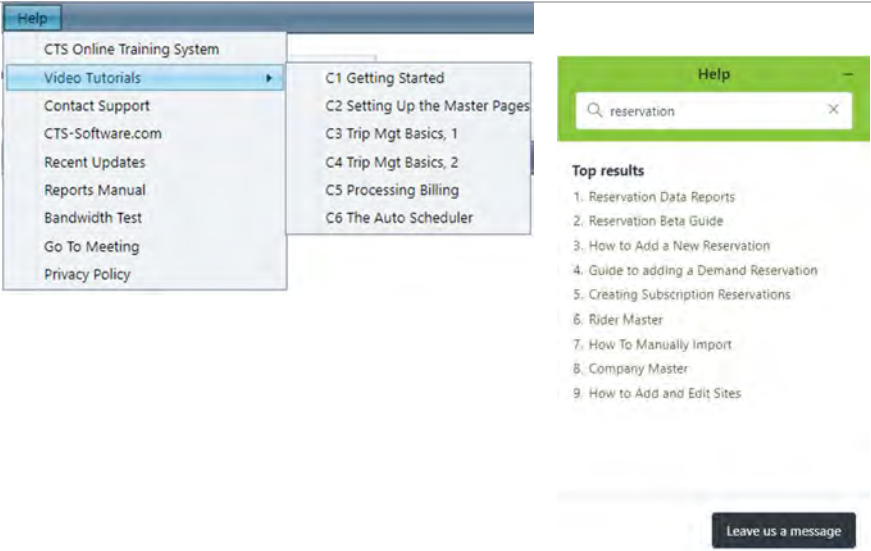
- 15 rides require a wheelchair
- 0 rides require a stretcher
- 37 rides are ambulatory

OK

Auto Scheduler optimization functions consider the following:

- speeds
- turn restrictions and impedances
- vehicle load capacities
- time
- historical traffic

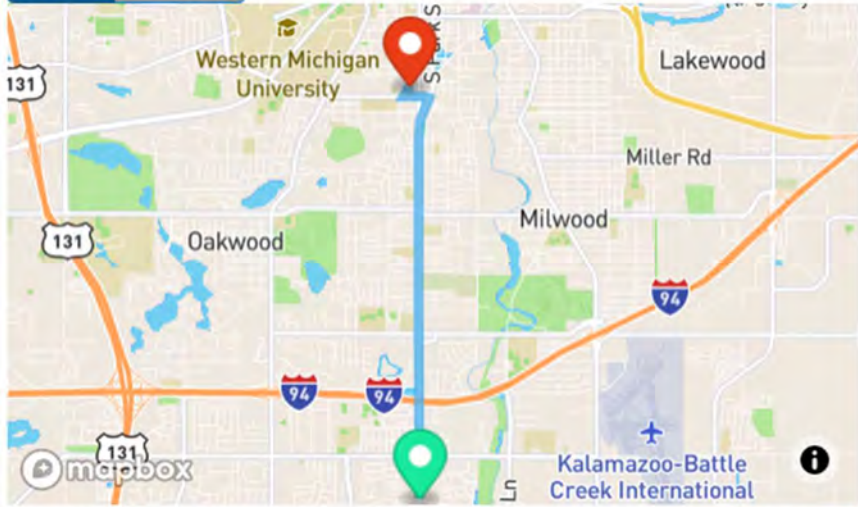
			▪ customer needs ▪ equipment availability ▪ time windows of equipment available ▪ time windows for customer pickup and drop-off ▪ priority of stops TripMaster offers users a detailed review process for optimization results before they accept a proposed schedule. Review options include: a specific order of assigned trips per route review; a step-by-step review displaying distance and time from stop to stop, and the option to display a detailed mapping screen to visually clarify the direction of travel.
3.a-6	A system providing accurate transaction history that includes: 1. Date/Timestamp for all actions taken in the software 2. Associated (and unique) user ID for all actions taken in the system 3. Record of all automated system actions to address system failures or issues 4. Any software malfunction resulting in failures or impacts normal operations	Core	As licensed personnel make additions, changes, or any other action within the program, the system will maintain a user-defined record of all actions performed on the data. This tracking ability creates a historical account of changes, including name of user, time and date the action was performed, and action performed. The licensee will have full access to these records and the information contained in the system cannot be altered.
3.a-7	A system with online “Help” that provides support for end users.	Core	TripMaster has lots of other training material that is always available to end users for retraining and new hires. From video tutorials to a help tab with irods, there is education and a knowledge base at your fingertips.

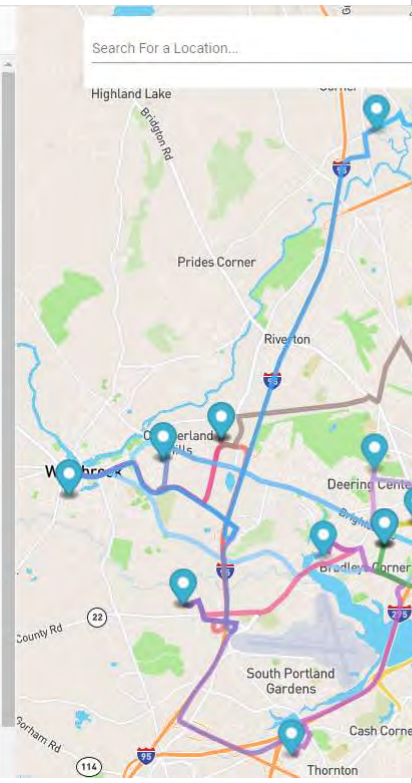
			
3.a-8	A system with a scalable architecture that handles expansion in use as the need arises without adversely impacting systems management and operations.	Core	TripMaster meets and/or exceeds this specification.
3.a-10	A system that utilizes a recognized relational database management system that allows for mission critical database management capabilities.	Advanced	TripMaster is fully hosted, 100% web-cloud based and is optimized for Chrome, Edge, and Internet Explorer. System data is stored in a Microsoft SQL 2016 relational database, hosted in the Microsoft Azure Cloud for HIPAA compliance as well as ePHI and FIPS encryption. Over the past 30 + years, CTS Software has been recognized as one of the most intuitive, easy-to-use software programs available in the transit industry. With

			nearly 700 agencies utilizing TripMaster, it is extremely adaptable and scalable. Additionally, CTS has built all modules and features in-house. Meaning that we do not depend on a third party or integrations to achieve such a robust program. This allows internal integrations between all the different modules and features available for you to choose from eliminating the need for manual entry or duplication of data.
3.a-11	A system that follows an open architecture design model, allowing the DROs to independently develop interfaces and/or enable integration with other internal or third-party systems, including but not limited to the following state programs: 1. Medicaid Brokers (currently ModivCare and OneCall) 2. North Carolina Cares 360 (NCCares360NCCARE360) 3. North Carolina Tracks (NCTracks)	Advanced	We have designed our server architecture to incorporate redundant instances of each server, always on configuration of our databases, and other cutting edge technologies to ensure you have access to your software at all times. CTS Software also performs a database backup every 30 minutes and a full system backup nightly. Our proposed system meets all core requirements using some of the most proven systems available and enables cost-effective integration with all North Carolina specific requirements including reporting (NC VUD, NC Ops Stat) and NC Medicaid (NC Tracks, ModivCare (formerly LogistiCare), and One Call). We are proposing an integrated solution that delivers fully on the objectives and outcomes detailed in the RFP. The main purpose of any transit service is to serve your riders and clients by improving their overall experience. With our continued efforts and integrations in the state of North Carolina, we are actively in communication regarding NCCARE360 and are ahead of the integration with our API capabilities.

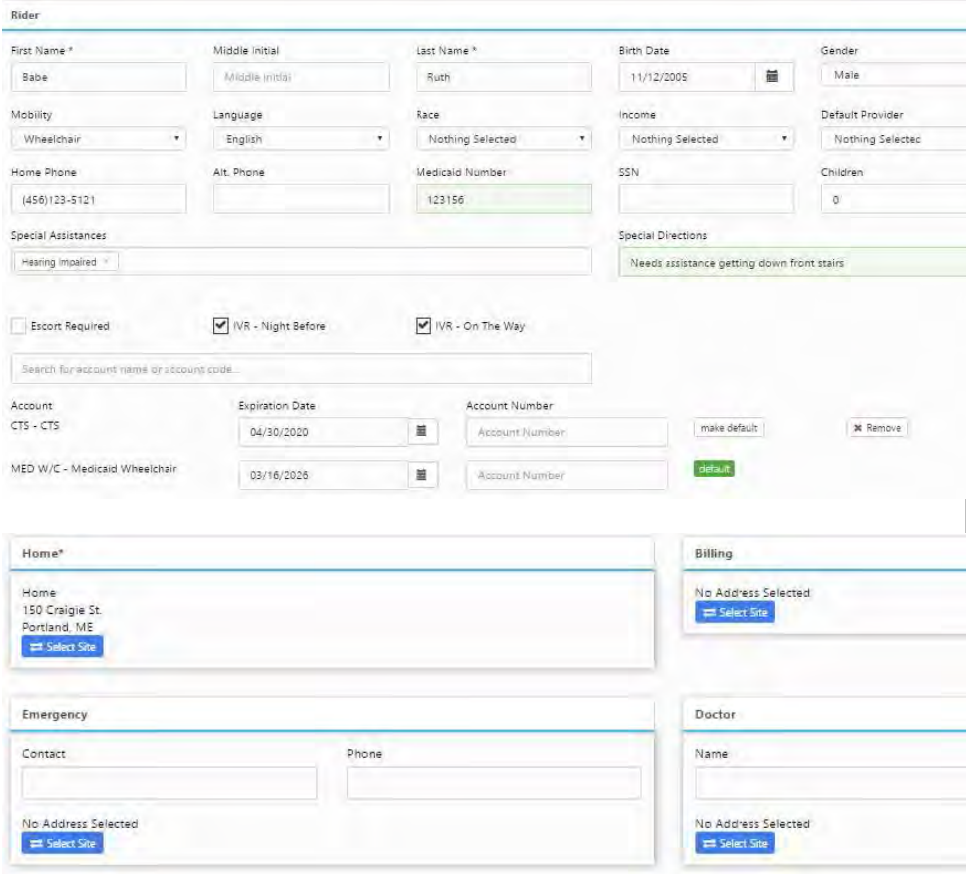
3.a-12	A system that supports the migration of existing manually geo-coded locations from the existing scheduling software to the new scheduling software. The DROs may have created manually coded locations to supplement existing mapping gaps for existing addresses.	Advanced	CTS Software will perform a database conversion of existing data from the licensee's current files into TripMaster. The converted data will be transferred confidentially, and CTS Software will ensure that appropriate high-level security measures are taken to protect the data's integrity and accuracy. If data in your current databases is accurate, CTS guarantees an accurate, comprehensive transfer of information to your new database. If any fields within the existing database are not supported, CTS Software will notify the licensee. While the integrity of data is ensured at the database level, we use a set of testing routines developed specifically for the data conversion process. We will follow up with a series of audits to ensure that all data has been converted accurately and works within TripMaster.
3.a-13	A system shall that provides address verification for all addresses entered and supports the ability to editing of mapping coordinates, or manually verifies the address if the system is unable to provide an accurate verification. Any changes or manual verification will be clearly noted as such, be available to all dispatchers, and be used for scheduling and routing.	Advanced	TripMaster's geocoding feature utilizes built-in accuracy checks on any new addresses before the agency performs functions requiring that data, including trip routing, autoscheduling, and vehicle tracking. Locations can be searched by name or address. If the address or location name is not found or misspelled by the licensee, TripMaster will populate similar addresses to assist with finding the correct location. Once a location has been selected, a cursor will be displayed on the map of that location. The licensee will then have the ability to move the cursor to a location on the map that may be more suitable or accurate for the pickup or drop-off. Such as a parking lot or different side of the building.

			When searching for a location, any location that has previously been selected for any other passenger that has matching text takes priority over locations that may not have been selected yet. TripMaster and the automated vehicle locator (AVL) connected with ParaScope, TripMaster's MDT solution, incorporate geocoding data to build accurate, detailed reports. Access to maps within TripMaster is seamless, and maps open in a new browser window, allowing the user to leave each map open for easy access.
3.a-14	A System that provides an integrated mapping solution that supports frequent mapping updates and is consistent with the map used for routing in the driver display and with scheduling and dispatch staff.	Advanced	We use MapBox professional series GIS data to power our geolocation-based applications. MapBox data includes map layers, road layers, road speed layers, and sites of local importance. Mapbox updates its dataset at least once a month and is considered the leading professional toolset for all serious geolocation and fleet management applications. We can import a selection of GIS and SHAPE files from third-party GIS systems. CTS Software provides mapping for the entire United States to all databases. The mapping is NOT limited to just your service area. It is important to CTS that transit providers can expand their service areas without additional expenses related to their software solution.

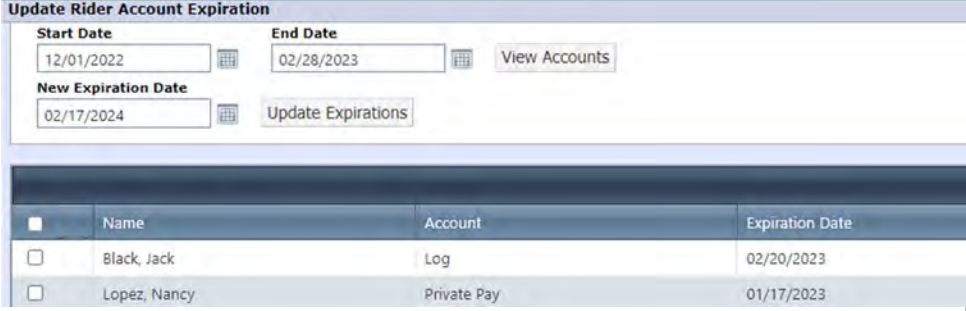
			Street Satellite  Reservation Notes 3.73 mi, 9.68 min
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3.a-15	A System that displays the approximate route of demand responsive vehicles in service based on their scheduled stops (either straight line or expected turn-by-turn route, with stops highlighted).	Advanced	Scheduled Stops 1 : Depot - Lobster Transit Garaging Address 2 : Pickup - Ruth , Babe : Home 3 : Pickup - Retton , Mary Lou : Home 4 : Dropoff - Retton , Mary Lou : Nosh Kitchen Bar 5 : Dropoff - Ruth , Babe : Nosh Kitchen Bar 6 : Pickup - Korbut , Olga : Home 7 : Pickup - Platow , Derek : Home 8 : Dropoff - Korbut , Olga : Fresenius Medical Care Casco Bay 9 : Dropoff - Platow , Derek : Spring Harbor Hospital 10 : Pickup - Gibson , Althea : Coastal Dialysis Center 11 : Dropoff - Gibson , Althea : Home 12 : Pickup - Platow , Derek : Spring Harbor Hospital 13 : Dropoff - Platow , Derek : Home 14 : Pickup - Ruth , Babe : Home 15 : Dropoff - Ruth , Babe : Maine Medical Center - North Side Entrance Search For a Location... 
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b.	Client Management		
3.b-1	A system that allows for real-time customer record updates allowing authorized staff to: 1. Add, remove, and modify client data 2. Suspend and activate clients	Core	Users may manually override any data within TripMaster. Users move reservations by clicking, dragging, and dropping. TripMaster tracks and records individual user actions, creating a historical account of changes, including name of user, time and date the action was performed, and action performed. The licensee has full access to these records, which cannot be altered. Users can “suspend” or “turn off” subscription rides as needed. For example, if a rider will be out of town for two weeks, the dispatcher can select a two-week suspension that will automatically revert to active status at the end of the period.
3.b-2	A system that includes the option to display, add, delete, and modify the following data for each client: 1. Client name(s) 2. Gender 3. Birth date 4. Fare type 5. Registration, expiration date, and current status 6. Complementary ADA eligibility, status, and renewal date 7. Mobility aides 8. Unique client identification number 9. Medicaid ID number 10. Ability to include multiple addresses including building name and number, unit name or number, city, state,	Core	While registering a client, the licensee can add specifics regarding a rider’s needs and requirements. The required data fields are first name, last name, and a geocoded address. A unique identification number is generated for each client, which can be used in place of their name for radio communication. An alert from the system notifies the user if they enter a duplicate client. Optional fields during client registration are: phone number, date of birth, gender (from a drop-down selection), disability status (from a customizable drop-down selection), Medicaid/Medicare number, Social Security number, alternative address, mobility aids, number of units, language, medical information, and emergency contact information. We propose using “Billing Address” for your

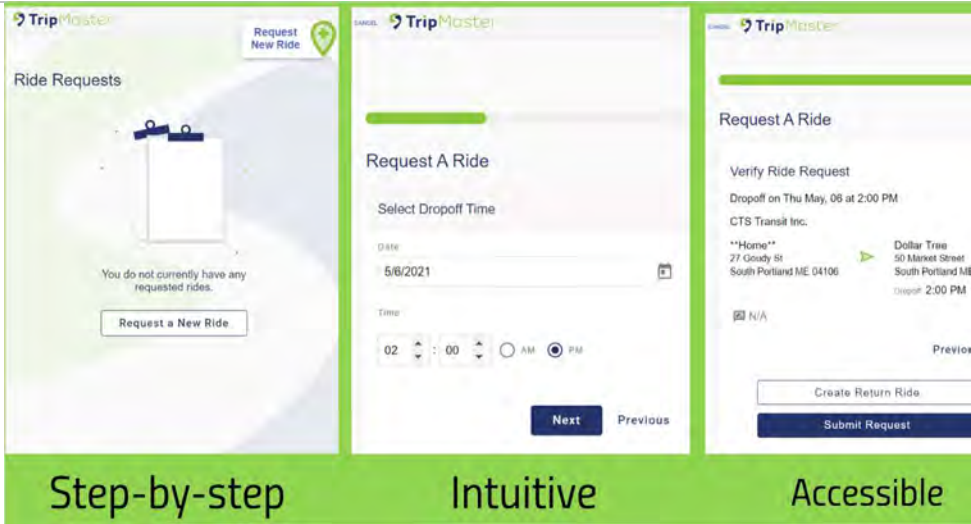
	zip code for pickup, and/or billing/mailling 11. Telephone number (at least two (2) telephone numbers) 12. Emergency contact name and telephone numbers (at least two (2)) 13. Additional passengers (e.g., personal care aid, companions, etc.) 14. Email 15. Comments field		municipality needs but have other ways in TripMaster to accommodate this requirement as well. 
3.b-3	A system that allows authorized staff to look up clients by data attached to the profile or client record	Core	TripMaster's allows an easy lookup for clients by last name, first name, phone number and/or Medicaid number. Typing the first few letters (or numbers) will begin to auto populate possible options for a quick and intuitive lookup.

	(e.g., name, date of birth, address, etc.).		
3.b-4	A system that allows authorized users to query tables of riders, reservations, and trips based on user-defined search parameters.	Core	CTS Software has developed an intense detailed reporting engine that is fully accessible to all users and is integrated into the software. These reports allow the user to easily narrow or broaden the search and even group the data the report generates by driver, vehicle, city, zip code, purpose and more. TripMaster is equipped with one of the most detailed, powerful reporting engines in the industry, including customizable pre-designed system reports. The custom reporting interface does not require knowledge of Crystal report queries or other reporting methodologies.
3.b-5	A system that displays the client's most recent trips, scheduled trips, reservations, canceled trips and no-shows.	Core	TripMaster's Rider Master, one of the areas where a reservation can be created, provides reservation history once a passenger has been selected. This provides a wealth of information to eliminate duplicate entry, better communication with the passenger and many other effective and efficient tasks at hand.

	upcoming eligibility expirations.		and future electronic eligibility specifications will be entertained if and when this level of integration is in need. We do have experience with client eligibility and client certifications through our open API.  <table border="1"> <thead> <tr> <th></th> <th>Name</th> <th>Account</th> <th>Expiration Date</th> </tr> </thead> <tbody> <tr> <td>☐</td> <td>Black, Jack</td> <td>Log</td> <td>02/20/2023</td> </tr> <tr> <td>☐</td> <td>Lopez, Nancy</td> <td>Private Pay</td> <td>01/17/2023</td> </tr> </tbody> </table>		Name	Account	Expiration Date	☐	Black, Jack	Log	02/20/2023	☐	Lopez, Nancy	Private Pay	01/17/2023
	Name	Account	Expiration Date												
☐	Black, Jack	Log	02/20/2023												
☐	Lopez, Nancy	Private Pay	01/17/2023												
3.b-8	A system that allows for the assignment of different eligibility levels with different expirations.	Advanced	TripMaster meets and/or exceeds this specification.												
3.b-9	A system that supports online comprehensive rider registration for both complementary ADA paratransit and non-ADA paratransit riders and clearly delineates between them.	Advanced	TripMaster meets and./or exceed this specification.												
3.b-10	System allows the DROs to include additional client data such as: 1. Primary language spoken (with the system automatically defaulting to English) 2. Sponsor/Eligible funding 3. Fare type and preferred fare payment method 4. Contact	Advanced	Optional fields during client registration are: phone number, date of birth, gender (from a drop-down selection), disability status (from a customizable drop-down selection), Medicaid/Medicare number, Social Security number, alternative address, mobility aids, number of units, language, medical information, and emergency contact information. We propose using "Billing												

	information formats (i.e. large print, Braille, etc.) 5. Client home GPS coordinates 6. Passenger-specific load time allowance, in minutes, in addition to the default or standard load time allowance 7. Certification/Denials/Appeals history		Address” for your municipality needs but have other ways in TripMaster to accommodate this requirement as well. Additional time windows to load passengers with special assistances or mobility methods is a primary function of the automated scheduling. Edit Walker Fields marked with an asterisk (*) are mandatory * Description Walker * Code WA * Additional minutes required to load 1 * Additional minutes required to unload 1 ☒ Disability ☐ Driver Required ☐ Vehicle Required Save Cancel
3.b-11	A System that includes a customer-facing application module that allows clients, caregivers, or care facilities to apply for demand response eligibility through any web browser. 1. The application module is be easy to navigate and meets ADA accessibility standards. 2. To reduce the need for manual data entry, the application module is be	Advanced	TripMaster’s TripPortal module has been built in-house and is directly embedded and integrated with TripMaster.

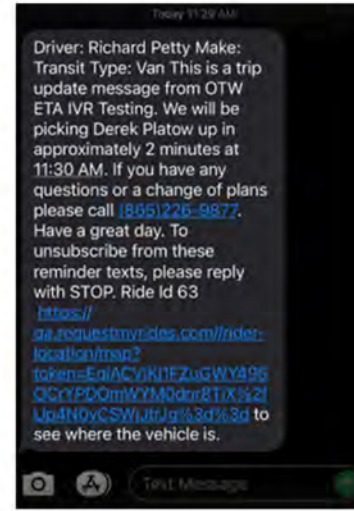
linked to the customer database and new client records are automatically created upon application approval



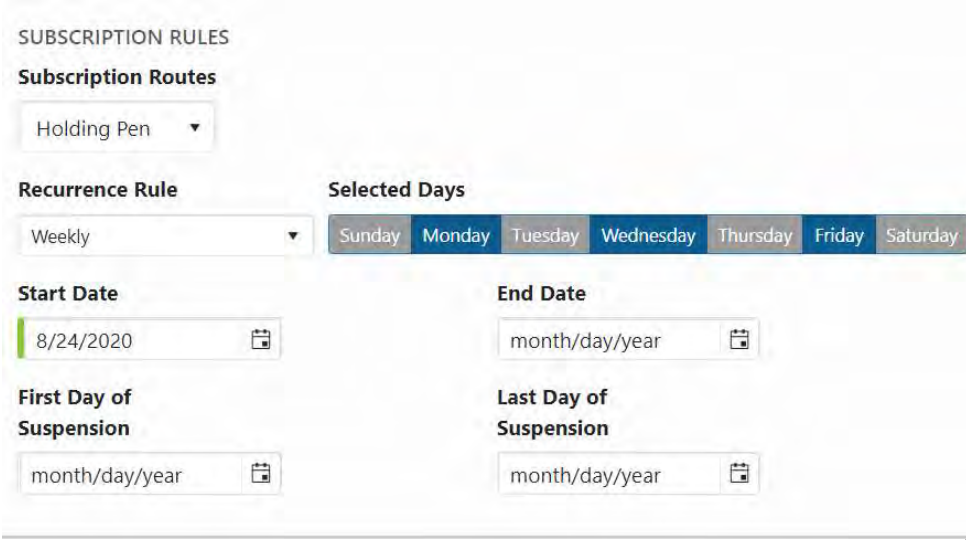
Convenience and time saving are also attributes of TripPortal, CTS’s rider portal. This online tool cuts down on the need to take reservations over the phone. TripPortal allows riders to easily self-serve by managing their ride requests from a computer or smartphone. The TripPortal app is compatible with both iOS and Android platforms. Simply enter an email address and click “Invite to Portal” to give riders access to use an intuitive, one-page wizard to enter the date, time, and places they want to go. Riders can also check their reservation status to see if it is pending, accepted, or rejected and a rejection reason.

			08/31/2022 CTS Transit Inc. ↓ Dropoff 1:00 PM **Home** 27 Goudy St South Portland, ME 04106 SeaWorld Orlando 7007 Sea World Drive Orlando, FL 32821 N/A 08/31/2022 CTS Transit Inc. ↑ Pickup 2:00 PM SeaWorld Orlando 7007 Sea World Drive Orlando, FL 32821 **Home** 27 Goudy St South Portland, ME 04106 N/A The TripPortal allows interagency communication, letting each agency assign delegates at a coordinating agency who can submit ride requests for certain passengers. The requests are approved or denied by the agency being asked to transport the client. Agency delegates are notified when rides are accepted or denied and given denial reasons. Upon accepting a ride request, a reservation screen appears with all information filled in for final review by the coordinating agency. TripPortal is also designed for online/app-based individual passenger booking of trips as well.
3.b-12	A System that automates correspondence with clients through text messages, emails, or prerecorded phone calls regarding eligibility approvals, expirations, denials, or appeals.	Advanced	The TripReminder module will notify the passenger of their upcoming trips via outbound notification. The outbound notification will verbally notify the passenger of the name of the responsible transportation provider, as well as the phone number to call if needed. The TripReminder module will notify the passenger when the driver is “on the way”. This call out feature can be turned off or turned on for a particular passenger indefinitely or per reservation.

			The Where's My Ride feature is an enhancement to the TripReminder module. When the driver clicks the On The Way button within ParaScope, that will trigger a text message to that rider with a hyperlink they can click on. That hyperlink pulls up a snapshot of where the vehicle is on a map, visually, and also provides the rider with a real-time ETA. Additionally, if the rider has a return ride marked as a "Will Call" in the holding pen, there will be a button the rider can select to notify dispatch (TripMaster) that they are ready to be picked up After our research and numerous customer polls centered around downloadable app adoption, the team here at TripMaster determined a text message for vehicle location and real-time ETA would serve as a better tool and more receptive to passengers.
3.b-13	A System provides tools or features to support adding clients (e.g., partners living	Advanced	TripMaster meets and/or exceeds this specification.

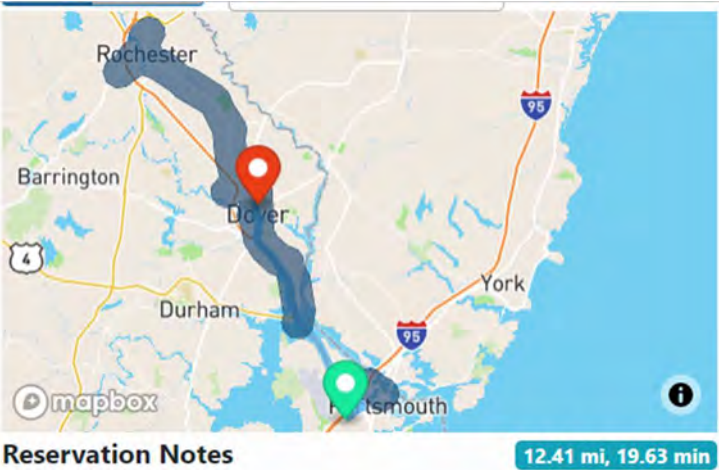


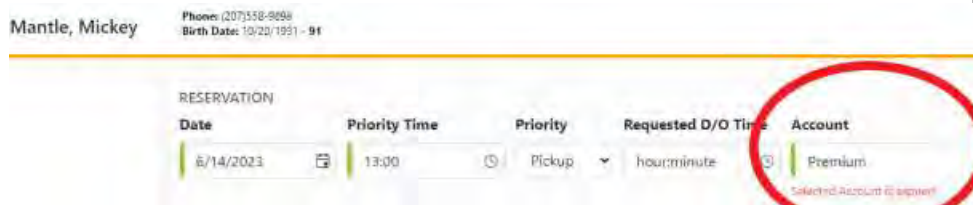
	at the same address, group homes, etc.) to facilitate rapid entry of client data.		
C.	Reservations		
3.c-1	A system that allows clients, caregivers, and DRO staff to easily view, create, modify, or cancel trips.	Core	TripPortal allows riders to easily self-serve by managing their ride requests from a computer or smartphone. The TripPortal app is compatible with both iOS and Android platforms. Please refer to 3.b-11 for additional details.
3.c-2	A System that: 1. books same-day trips, 2. schedules standing-order (subscription) trips, 3. accepts advanced reservations	Core	TripMaster meets and/or exceeds this specification.
3.c-3	A system that allows standing-order trips to be scheduled on a weekly (e.g., every Monday) or monthly (e.g. first and third Monday) basis. A system that allows the DROs to temporarily suspend standing-order trips without needing to modify trips outside of the suspension period.	Core	TripMaster's subscription tools allow the licensee to book standing order trips regardless of their recurrence, including daily, weekly, and bi weekly, as well as first, second, third, fourth, and fifth occurrence, and for the first or last workday of the month. A start date and end date can be recorded for subscription trips or the subscription trip can be left open-ended. Users can "suspend" or "turn off" subscription rides as needed. For example, if a rider will be out of town for two weeks, the dispatcher can select a two-week suspension that will automatically revert to active status at the end of the period. In the situation that a subscription trip needs to be changed but the change does not need to occur until a future date, it is recommended that a new subscription

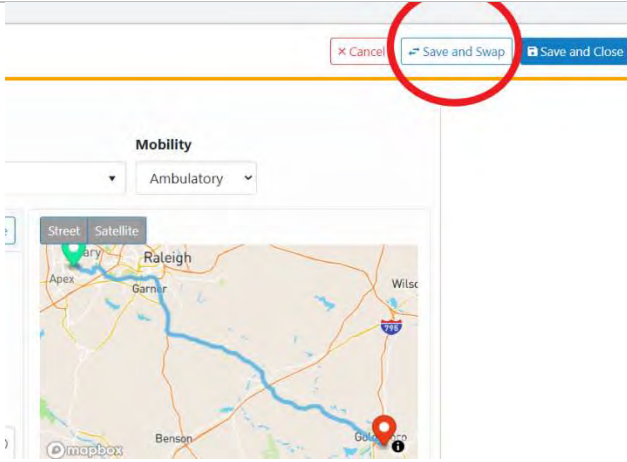
			trip is created with a start date for when the effective start date should occur for the change. 
3.c-4	A system that books trips based on pickup time or arrival time. When scheduling by arrival time, the system automatically factors in travel time from origin to destination.	Core	The end user will create a default scheduling profile to determine specific measurable perimeters for the automated scheduling engine to take in to consideration. The settings pertaining to this specification include; how long a passenger can be on the vehicle, how early the passenger can be dropped off or how much time, after the scheduled return ride is allowed for pickup. In addition the system will determine the appropriate time of arrival to load the passenger or unload the passenger to ensure a late arrival does not happen.
3.c-5	A system that generates a confirmation number for each reservation, revised	Core	TripMaster meets and/or exceeds this specification.

	reservation, and trip cancellation. The system allows users to query the system by confirmation numbers to display transactions.		
3.c-6	A system that provides safeguards that prevent errors such as past date booking, duplicate trips, and booking clients with expired applications, and booking outside the service area	Core	There are many safeguards in place within TripMaster. An alert from the system notifies the user if they enter a duplicate trip for a client. Also, if the clients eligibility has expired a notification to the user will be displayed and a block to select that funding source is in place.
3.c-7	A system that automatically removes an associated drop-off from the manifest if a pickup is canceled due to a no-show.	Core	This is a setting in TripMaster that can be turned off or on depending on the agency's specific needs and policies. We have found that this policy is not consistent with all transit agencies.
3.c-8	A system that automatically finds an earlier or later time for scheduling when a requested time is unavailable based on capacity constraints.	Core	The scheduling process and algorithms within TripMaster are based on either the pickup time or the dropoff time. The licensee will create "Schedule Profiles" to be used when running the Auto Scheduler. These profiles define, among other factors: • How long a passenger can be on the vehicle • How early a passenger can be dropped off prior to their appointment • How long a passenger can wait for pickup after an appointment • How much time to designate for boarding preparation

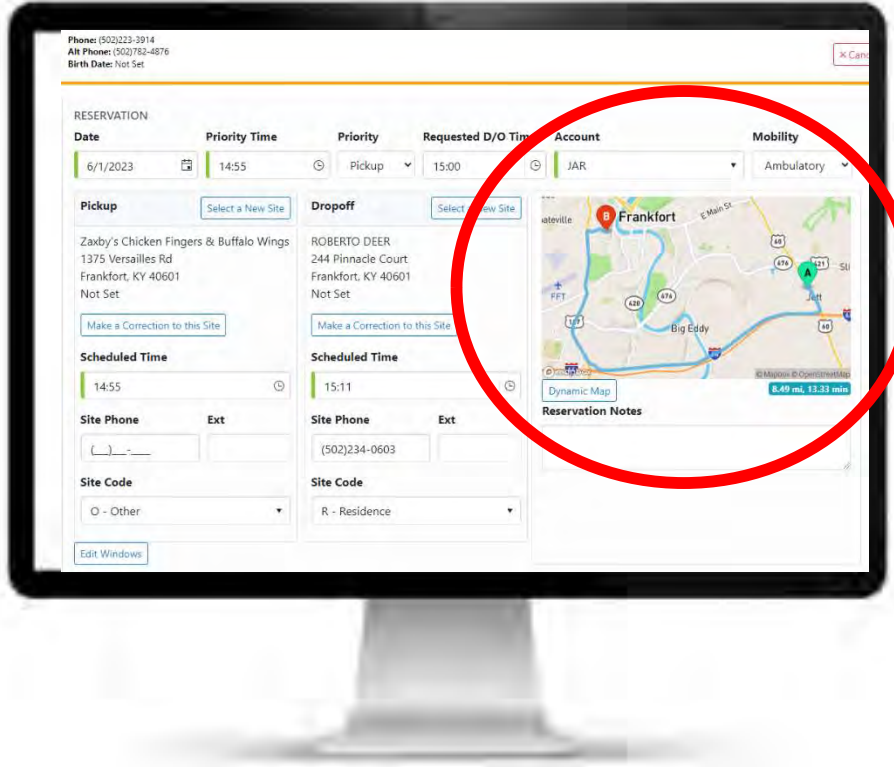
			• Additional time windows to load passengers with special assistances or mobility methods. TripMaster allows an unlimited number of Schedule Profiles to be configured and applied to riders and rides. Upon considering the Schedule profiles for each ride within that day's schedule, the Auto Scheduler will determine optimal route efficiency.
3.c-9	A system that sends automatic text or phone notifications to clients as a vehicle approaches a location for a pickup.	Core	The TripReminder module will notify the passenger when the driver is "on the way". This call out feature can be turned off or turned on for a particular passenger indefinitely or per reservation.
3.c-10	Vendor provides explanations of any limitations for scheduling rides including limitations for the number of vehicles and/or passenger trips that can be scheduled	Core	TripMaster does not support this specification.
3.c-11	A system that alerts the user when the origin or destination of a trip is not within the specified boundary during service hours and prevents the trip from being booked unless overridden by approved DRO staff.	Core	TripMaster allows you control of your service areas by the use of shapefiles or map overlays. These overlays can control how your riders can schedule through their rider application, and can show the reservationist information about where to place a ride or how much to charge. You can add and control these overlay shapefiles inside TripMaster.

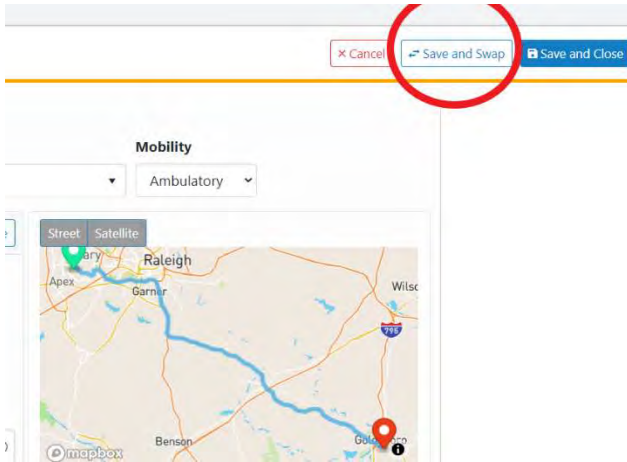
			
3.c-12	A system that provides an option to select locations without a street address (e.g., can identify a street corner or XY coordinates).	Core	TripMaster meets and/or exceeds this specification.
3.c-13	A system that prevents a user from booking a trip if the eligibility of the rider is suspended, except when suspension is because of an expired funding source. If a suspended rider has booked subscription trips or reservations before the suspension, the system will not schedule these trips while the rider is suspended.	Core	The call taker can suspend a client for a designated time, depending on the issue at hand, by selecting from a graphical calendar. This client will then be tagged in blue, notifying the agency that this client is not eligible for transportation and will be eliminated from any subscription trips during that time. The time period that has been applied for suspension relating to the specified client is viewed by simply placing the cursor over the client's status and a pop-up window will automatically appear with a date range for

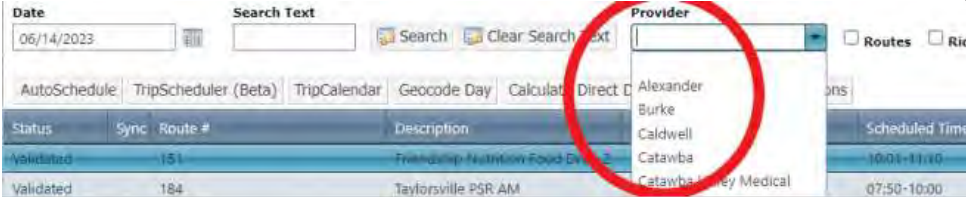
			suspension. 
3.c-14	When a subscription standing order trip is canceled, the system checks ahead and displays other trips for this rider that will be canceled. The system permits the user to cancel one, multiple or all future trips.	Core	TripMaster's Rider Master, one of the areas where a reservation can be created, provides reservation history once a passenger has been selected. This provides a wealth of information to eliminate duplicate entry, better communication with the passenger and many other effective and efficient tasks at hand.

			 The screenshot shows a web application interface. At the top, there are three buttons: 'Cancel', 'Save and Swap', and 'Save and Close'. The 'Save and Swap' button is circled in red. Below the buttons, there is a 'Mobility' section with a dropdown menu set to 'Ambulatory'. Below this is a map showing a route from Raleigh to Goldsboro, NC, with a red pin at the destination. The map is labeled with 'Street' and 'Satellite' views. The mapbox logo is visible in the bottom left corner of the map area.
3.c-16	The system allows a user to book disconnected legs of a trip.	Core	TripMaster meets and/or exceeds this specification.
3.c-17	The system allows reservations to be made for groups traveling together who have an identical origin and destination. These group reservations shall be assigned to the same vehicle to the maximum extent possible	Core	TripMaster meets and/or exceeds this specification.
3.c-18	The system displays all reservations by a rider or address to facilitate individual and/or group cancellations.	Core	Users can filter the schedule by destination or time and are able to manually schedule trips on existing routes or create a new route if necessary. The system provides numerous data views for the end-user to choose from. The views have different layouts and can be customized in several different

			ways. Dispatch logs can be grouped by Driver, Vehicle, Trip #, Rider Name, or Ride Time. These are great master sheets showing all riders for the day in one consolidated view
3.c-19	The system shall show estimated trip lengths for all trips created.	Core	TripMaster gives reservationists a visually pleasing, super responsive and intuitive reservation process. Late in 2018, CTS's development team released a newly designed, cutting-edge reservation screen to enhance the reservation taking process based on customer feedback and use. TripMaster calculates direct drive time and distance automatically, displays a map from point A to point B and has many more effective tools on this primarily used screen. Whether you are creating a one-time reservation or a recurring reservation, TripMaster will exceed expectations.

			
3.c-20	The system supports lists of vehicles, vehicle run numbers, run times (shifts), and drivers that the user can configure or edit.	Core	The TripMaster Assignments screen allows the user to easily swap drivers or vehicles in the case of breakdowns, or drivers calling in sick, etc. Should there be a breakdown and no other vehicles are available to perform the runs, then a user can take the vehicle out of service and rerun the Auto Scheduler to see if it can handle the day's trips with one less vehicle.
3.c-21	The system provides multiple user-defined seating/wheelchair	Core	TripMaster does not support this specification.

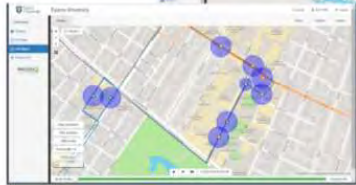
	arrangements for each type of vehicle. This must include a minimum of five (5) different arrangements to incorporate zero (0) to four (4) wheelchairs with corresponding seats.		
3.c-22	The system automatically generates trip reversals or return trips from destination to origin when trips are booked.	Advanced	Once all the information has been entered for the A-Leg or go to reservation, the end user will simply select “Save and Swap” which automatically creates the B-Leg or return reservation. Save and Swap can be selected again and again in the situation a passenger has multiple legs in a day or is requesting multiple reservation for multiple days. This can all be done without closing the reservation screen and opening up a new one.  The screenshot shows a web interface for TripMaster. At the top, there are three buttons: 'X Cancel', 'Save and Swap', and 'Save and Close'. The 'Save and Swap' button is circled in red. Below the buttons, there is a 'Mobility' dropdown menu set to 'Ambulatory'. Below that is a map showing a route between Raleigh and Goldsboro, NC, with a red pin at the destination. The map is labeled with 'Street' and 'Satellite' views.
3.c-23	The system provides quick access for a customer's most frequent trip origins and	Advanced	TripMaster includes a “Smart Search” capability, which automatically saves a list of frequent trip locations for each client in an easy-access drop-down field

	destinations for quick selection during booking		during scheduling reservations. This tool helps increase efficiency when entering reservations and scheduling.
3.c-24	The system supports multiple service providers. The parameters for each provider are configurable such that the service allocation may be based on predetermined factors including but not limited to the following: 1. Vehicle type 2. Geographic area 3. Day of the week 4. Time of day 5. Origin and/or destination 6. Nature of rider disabilities and/or physical aids	Advanced	TripMaster has been designed in a way that multiple counties, multiple types of transportation, or even multiple entities within an agency can utilize the software and separate this criteria by provider. The provider master allows the end user to enter the different data elements associated to different providers. From there, reservations, routes, reports, and more can all be defined by a provider. 

d.	Scheduling		
3.d-1	The system groups trips based on location to maximize service efficiency and provide the ability to lock recurring trip(s) to specific schedules, drivers, or vehicles to provide stability and consistency for customers with regular/recurring appointments	Core	TripMaster meets and/or exceeds this specification.
3.d-2	The system allows for trips to or from same origins, or to same destinations, to be combined to eliminate duplicate trips.	Core	TripMaster meets and/or exceeds this specification.
3.d-3	Vehicle assignments are automatically updated if a vehicle needs to be pulled from service or if a vehicle is running late.	Core	Although an automated scheduling process is in place, we feel it is extremely important that our customers are always in control of their schedules. For this reason, when running the scheduling wizard, TripMaster will produce three different methods for the end-user to review the results with a detailed explanation and make changes that will not be reverted if the scheduling process is run again.
3.d-4	The system considers capacity constraints of each vehicle or route. These constraints are adjustable and easily altered on a day-to-day basis.	Core	TripMaster provides end users with the ability to add or edit vehicles and all the information about the vehicles including the capacity for Ambulatory, Non ambulatory, and stretcher.

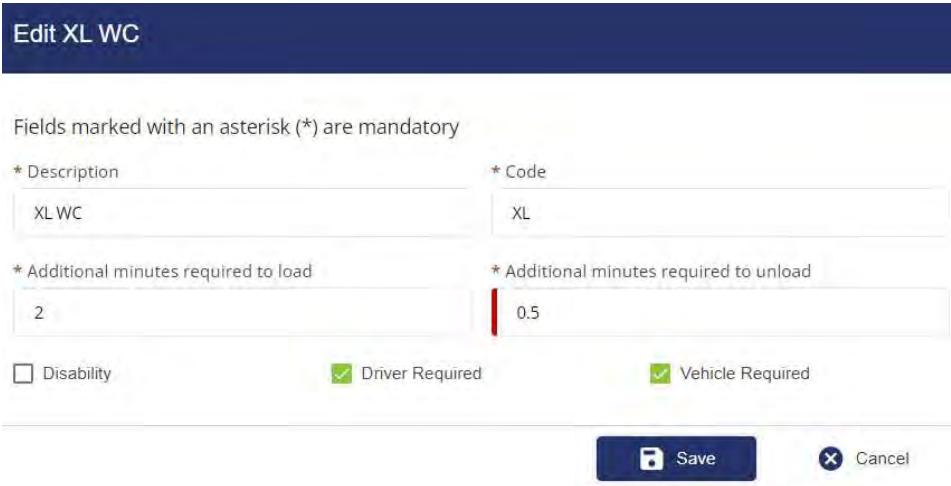
			Edit 08092MV Vehicle Number* 08092MV Make Dodge Year 2008 Automation Capacity 6 * Required Vehicle Type* Minivan Gallons 0 License Plate 91860V VIN 1D8HN44H28D176092 County Code Burke Owned / Funded By Rural Federal 5311 Automation Capacity 0 Automation Capacity 0 Fuel Type Gas Boating Protection Minutes* 2 Lift ☐ AutoSchedule ☐ Two Way Radio Installed ☐ Waiting F ☐ * Required Garaging Site: WPRTA - Burke (NEW) 517 W Fleming Dr Morganton NC, 28655 Select Address Special Assistances Add Assistance... Out of Service Periods + New Period Start Date End Date Notes
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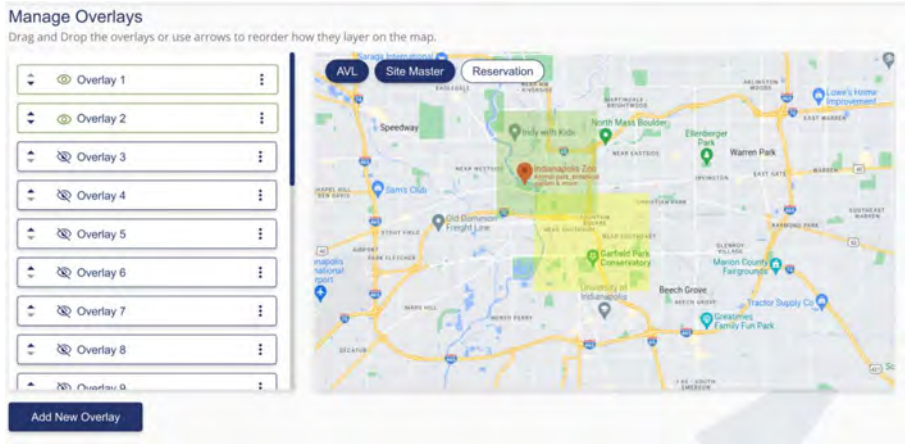
			▪ priority of stops
3.d-6	The system calculates actual non-revenue hours and mileage as well as actual revenue hours and miles for all vehicles on a daily basis.	Core	TripMaster meets and/or exceeds this specification.
3.d-7	The system prints vehicle manifests on a daily basis. The system formats printed manifests in a manner that minimizes paper waste, in a legible font size suitable for drivers to reference while enroute, and only includes minimal information (e.g., client name, pick up/drop off address, scheduled window, etc.). Printed manifest details and layout will be defined during design review	Core	TripMaster provides a number of different of paper manifest options depending on each agency's liking. When implementing and training ParaScope – mobile application for drivers, technical trainers will recommend paper manifests in addition to ParaScope until drivers are comfortable with the new technology.

3.d-8	The system allows users to view maps that illustrate fixed route bus routes and bus stops relative to trip origins and destinations.	Core	   Passio Navigator - Stop/AVA Geofence Map Passio Navigator - Reporting Module Visibility to all settings and the ability to make updates in real-time is incredibly valuable for customers. This industry leading tool for management and reporting provides customers with unparalleled access to information while ensuring simple straightforward access to reports and analytics. Updated configuration details through Passio Navigator. Add and edit stops, edit drivers, request route edits, and more. If you are unable to make an edit,
3.d-9	The system provides for manual mapping of addresses if the system map does not recognize an address	Core	TripMaster meets and/or exceeds this specification.
3.d-10	The mapping system is fully compatible with the mapping system used by tablets and based on an open architecture and integrated with Automatic	Core	TripMaster meets and/or exceeds this specification.

	Vehicle Locator (AVL) and tablet technology		
3.d-11	The system supports real-time and batch rescheduling.	Core	TripMaster meets and/or exceeds this specification.
3.d-12	All trip time changes are within the original promised time window and permit the rider to meet a stated appointment time.	Core	The licensee will create "Schedule Profiles" to be used when running the Auto Scheduler. These profiles define, among other factors: • How long a passenger can be on the vehicle • How early a passenger can be dropped off prior to their appointment • How long a passenger can wait for pickup after an appointment • How much time to designate for boarding preparation • Additional time windows to load passengers with special assistances or mobility methods. TripMaster allows an unlimited number of Schedule Profiles to be configured and applied to riders and rides. Upon considering the Schedule profiles for each ride within that day's schedule, the Auto Scheduler will determine optimal route efficiency.
3.d-13	The system maintains an open return list (e.g., will calls) for passengers with an uncertain pickup time for the return leg of a trip (e.g., after a medical appointment of uncertain duration).	Core	TripMaster provides three options for reservationist to select as the category of the trip. A priority pickup, priority dropoff, or a will call. Will Calls will be placed in the "holding pen" until either the client calls for the return ride or the client selects "Im ready" from the Where's My Ride text message which then will

			result in the trip being time stamped, highlighted in green, and ready to be scheduled.
3.d-14	When vehicles are removed from a service, the system converts any previously assigned trips for that vehicle to the status "unassigned" for reassignment. The system supports reassignment of all trips to a new vehicle/driver.	Core	TripMaster meets and/or exceeds this specification.
3.d-15	For cancellations, or changes to the pick-up time on a route, the system recalculates the remaining pickup and drop-off times.	Core	Although an automated scheduling process is in place, we feel it is extremely important that our customers are always in control of their schedules. For this reason, when running the scheduling wizard, TripMaster will produce three different methods for the end-user to review the results with a detailed explanation and make changes that will not be reverted if the scheduling process is run again.
3.d-16	The system allows the user to mark specific trips as "critical" or exempt from automated modification. If a critical trip must be modified manually, the system provides sufficient controls or notifications to the dispatcher	Core	TripMaster has the option to mark a route as excluded from automated scheduling. This is necessary when the route is assigned to a group run or when the end user determines that no modifications to this route is necessary. A special assistance field is available for dispatch to select where an item called "critical" could be created and tagged to a trip to fulfill this specification.

3.d-17	The system avoids sending a vehicle that does not meet the needs of the passenger's disability.	Core	TripMaster is equipped with a special assistance master which allows the end user to custom create different special assistances where are typically tied to different disabilities. These special assistances have the capabilities of adding more load time and/or unload time and additionally can be marked as “driver required” or “vehicle required” to make sure that the passenger with a special assistance need is matched up with the appropriate driver or vehicle. 
3.d-18	The system features automatic trip optimization. The system continuously updates and adjusts trips based on vehicle position, trip cancellations, and noshows. Automatic trip optimization maximizes service efficiency while reducing the need for	Advanced	Although an automated scheduling process is in place, we feel it is extremely important that our customers are always in control of their schedules. For this reason, if the schedule needs to be reoptimized for efficiency, the end user will initiate the request, review the results, and save the results. The end user can select which routes or schedules this impacts and can also save specific routes or schedules if the entire schedule doesn't need to be all be mixed up at once.

	manual schedule adjustments		This means that if you are looking to reoptimize your schedule, it is done by an authorized member to initiate the optimization. Otherwise, we find that shuffling your schedule without the authorization creates a sense of unknown and loss of control as a scheduler or dispatcher.
3.d-19	The system integrates with mapping and vehicle location services to perform route optimization functions and scheduling based on updated street network data. Route and turn-by-turn driving directions are highly desirable.	Advanced	Users configure Auto Scheduler settings under the Schedule Profile Master, including time windows, load time, and different weights for speed or distance, and the Auto Scheduler uses Esri's Real Street Network data to optimize routing.
3.d-20	The system allows the DRO to easily add, remove, and modify service boundaries based on service type and driver.	Advanced	 Importing JSON files can be best managed in TripMaster by the use of shapefiles or map overlays. In most situations, a deviated fixed route has a ¾ miles service area that can be identified by a color-coded map overlay.

			TripMaster displays a map on the reservation screen once the trip has a point a and point b.
3.d-21	The system routes and schedules trips according to configurable parameters including: 1. Shared rides 2. Pick up time window 3. Drop-off time 4. Mobility aids or mobility restrictions 5. Number of passengers/space available in vehicle 6. Assignment of runs to specified geographical zones The system allows DROs to modify all parameters	Advanced	An essential part of the implementation and training is identifying system parameters for scheduling, reporting, passenger experience and more. We will spend the initial kickoff call for this project discussing these items, managing expectations, and allowing for flexibility during the entire project. TripMaster's Auto Scheduler automatically batches all bookings for a travel day. The system is based on actual street networks in the service area by x- and y-coordinates, parameters associated with network segments as established in the GIS system, physical barriers, speed parameters, time of day, and appropriate dwell times for the boarding and alighting of passengers. TripMaster users can dynamically schedule riders from the "Holding Pen," a repository of unscheduled reservations, by right-clicking one or multiple rides and running the "Quick Seat" option. Once the user approves placement of the rides, the routes automatically update all scheduled pickups and drop-offs, and TripMaster automatically alerts drivers of updates on the MDTs. The licensee will create "Schedule Profiles" to be used when running the Auto Scheduler. These profiles define, among other factors: • How long a passenger can be on the vehicle • How early a passenger can be dropped off prior to their appointment

			• How long a passenger can wait for pickup after an appointment • How much time to designate for boarding preparation • Additional time windows to load passengers with special assistances or mobility methods. TripMaster allows an unlimited number of Schedule Profiles to be configured and applied to riders and rides. Upon considering the Schedule profiles for each ride within that day's schedule, the Auto Scheduler will determine optimal route efficiency. The transportation provider will create a default Schedule Profile with general parameters the Auto Scheduler will take into consideration for passengers, trips, and routes. In coordination with how long passengers can be on the vehicle ("Max Ride Duration,") the transportation provider may specify to add the "direct drive time" to the earliest pickup and last drop-off, to determine the route's most beginning and end. The Auto Scheduler includes a built-in statistical analysis of the proposed schedule. After completing the optimization process, users are shown a detailed report with before and after results in several categories, including: • Average miles per ride • Average priority window violation • Total priority time variance • Total deadhead miles
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- Total service duration
- Total unassigned rides

Ride Filters

SHOW ME ONLY SELECTED RIDES ☐ NO

SHOW WILL CALL RIDES ☒ YES

SHOW ME ONLY UNSEATED RIDES ☐ NO

ACCOUNT

PROVIDER

PURPOSE

PRIORITY TIME

PRIORITY

PICKUP CITY

DROPOFF CITY

MOBILITY

- 15 rides require a wheelchair
- 0 rides require a stretcher
- 37 rides are ambulatory

OK

Users configure Auto Scheduler settings under the Schedule Profile Master, including time windows, load time, and different weights for speed or distance, and the Auto Scheduler uses Esri's Real Street Network data to optimize routing.

The Auto Scheduler allows the end user to schedule trips with filter options; for example, assigning first scheduling priority to wheelchair assignments or specific accounts.

Auto Scheduler optimization functions consider the following:

- speeds
- turn restrictions and impedances

			• vehicle load capacities • time • historical traffic • customer needs • equipment availability • time windows of equipment available • time windows for customer pickup and drop-off • priority of stops TripMaster offers users a detailed review process for optimization results before they accept a proposed schedule. Review options include: a specific order of assigned trips per route review; a step-by-step review displaying distance and time from stop to stop, and the option to display a detailed mapping screen to visually clarify the direction of travel.
e.	Dispatching		
3.e-1	The system displays the following minimum information for dispatchers for all pick up/drop off: a. Vehicle number b. Passenger name, last name first c. Number of passengers, including attendants and companions. d. Pickup and drop-off address e. Promised arrival	Core	The Daily Schedule is the platform on which users schedule, dispatch, and monitor all aspects of day-to-day operation. On the Daily Schedule, route details appear in columns, including vehicles assigned, drivers assigned, and availability. Any routes that do not have a vehicle and/or driver assigned will be clearly visible to the licensee. Any routes that are not assigned any rides can be identified in a number of different ways on the Daily Schedule as well.

time window f. Estimated time of arrival g. Any special needs or problem address h. Notes

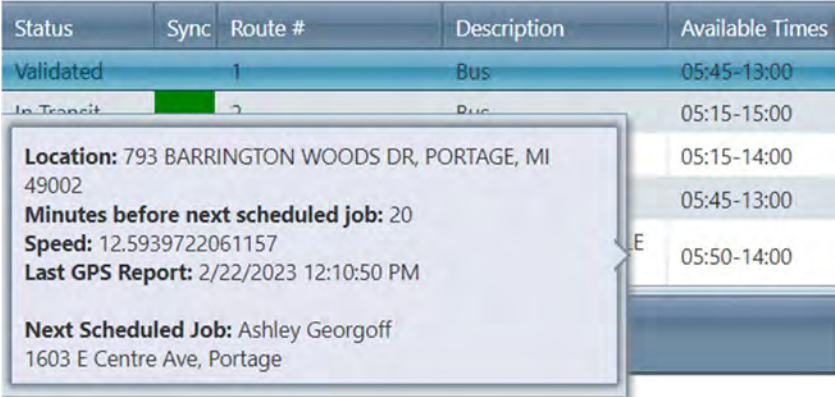
End users have the ability to edit general information and more. A simple right-click option and editing a run is available.

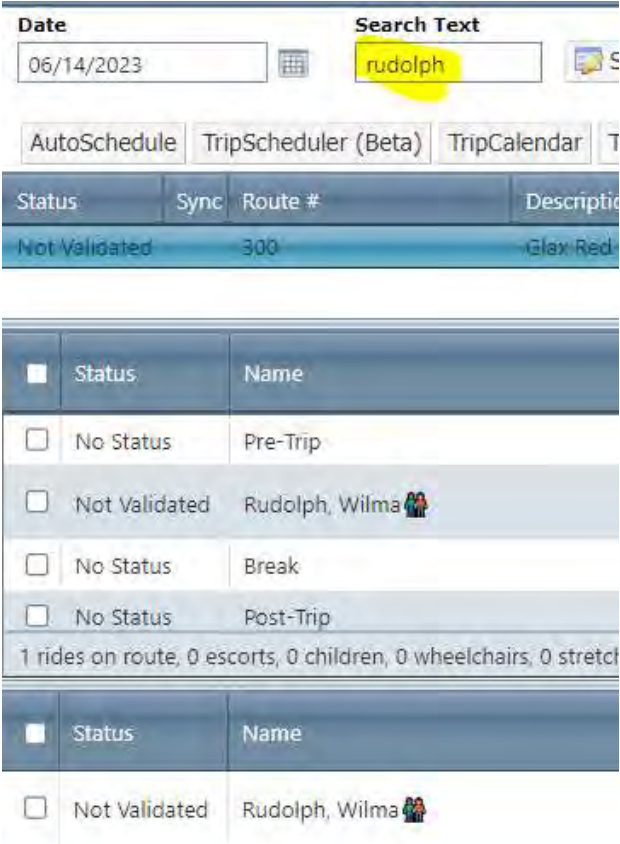
The screenshot displays the TripMasters software interface. At the top, there's a navigation bar with tabs: AutoSchedule, TripScheduler (Beta), TripCalendar, TripSync Ride(s), Ride Requests, Geocode Day, Calculate Direct Drives, Refresh, and More Options. Below the navigation bar is a table with columns: Status, Sync, Route #, Description, Available Times, Scheduled Times, Driver, Vehicle, and Mob. The first row shows a trip with Status 'Not Validated', Sync '100', Route # 'Demand Response', Available Times '0600-1200', Scheduled Times '0600-1200', Driver 'Eamhardt Jr., Dale', Vehicle 'None', and Mob 'A'. A right-click context menu is open over the first trip, showing options: Add Route, Edit Route, Cancel Route, Cancel Route and Assigned Rides, Assignments, Print Route Sheet, Expired Reservations, Validate, Map, Map Rides, and Export Reservation(s). The 'Edit Route' option is selected, leading to the 'Trip Info' page. The 'Trip Info' page contains various input fields: Trip Number (100), Description (Demand Response), Driver (Eamhardt Jr., Dale), Vehicle, Purpose, Provider (Florida 1), Available Start (06:00), Scheduled Start (?), Start Depot (No Site Selected), Available End (12:00), Scheduled End (?), End Depot (No Site Selected), and checkboxes for 'Include Pre-Trip', 'Include Post-Trip', 'Include Break', 'Exclude from AS GTFS Block', and 'Enable Flag Stops'. There are also fields for Pre-Trip Duration (5), Post-Trip Duration (15), Break Duration (0), Break Start Time (00:00), Break Window Open, and Break Window. A 'Notes' section is at the bottom.

Editing information about each run can be done on a specific day, which will not impact any other day. End users may also edit the Run Template which will impact each day moving forward. All fields available can be edited and most fields are customizable with dropdown options.

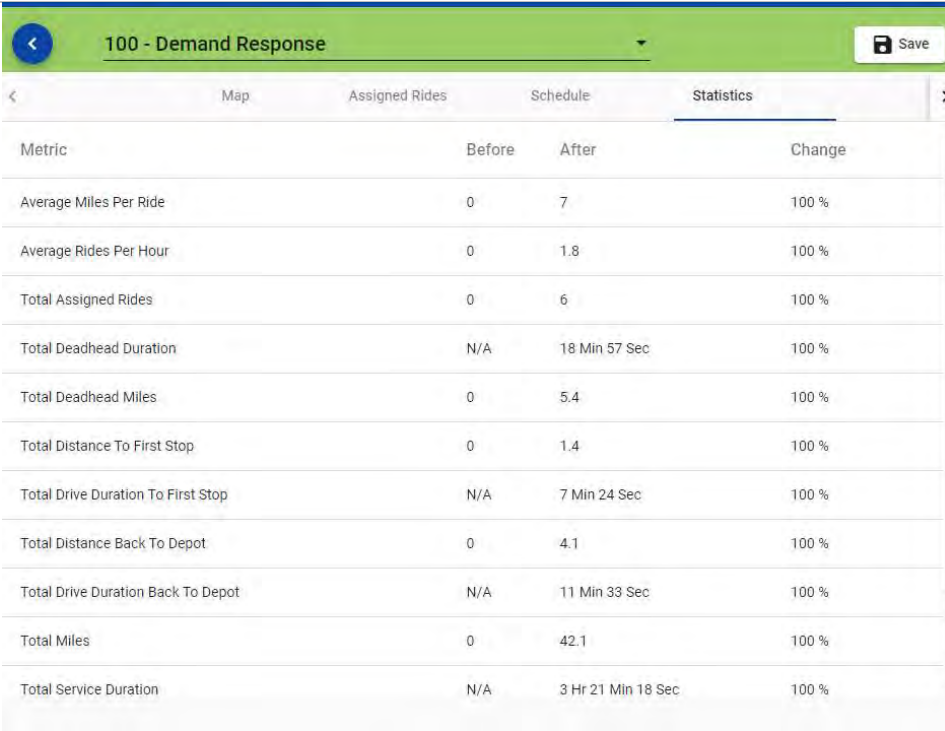
			TripMaster can either support creating empty or dummy runs within your real, active, live database or we will supply a testing/training database to eliminate the possibility of bad data.
3.e-2	The system provides necessary dispatching tools for making service day operational decisions. At a minimum, this includes tools for same day and standby trips, canceled trips, no-shows, late riders, vehicle breakdowns, and open returns. The system allows the dispatcher to move trips, change drivers and vehicles, and adjust the schedules	Core	TripMaster meets and/or exceeds this specification.
3.e-3	The system allows for a specific driver to be assigned to a route and allows the dispatcher to change a vehicle number.	Core	The TripMaster Assignments screen allows the user to easily swap drivers or vehicles in the case of breakdowns, or drivers calling in sick, etc. Should there be a breakdown and no other vehicles are available to perform the runs, then a user can take the vehicle out of service and rerun the Auto Scheduler to see if it can handle the day's trips with one less vehicle.
3.e-4	The system allows dispatchers to override routing due to road construction and traffic pattern changes on a one-day or permanent basis	Core	The CTS Software philosophy is that the licensee always has full control of their schedules. To that end, the licensee may manually schedule trips to a run with a simple drag and drop or move functionality.

			In addition, users may manually override any data within TripMaster even when using the automated scheduling engine. Upon accepting Auto Scheduler results, users can move, copy or delete rides using a drop-down selection box while reviewing the schedule development. Users move reservations by clicking, dragging, and dropping. TripMaster tracks and records individual user actions, creating a historical account of changes, including name of user, time and date the action was performed, and action performed. The licensee has full access to these records, which cannot be altered.
3.e-5	The system allows dispatchers to schedule driver breaks	Core	TripMaster includes many functions that take into consideration the Contract Labor Rules specified by individual Agencies. Upon creating a schedule or trip, the Agency has the option of providing break times, pre-trip inspection times, post-trip inspection times, and track the number of road hours that a driver has operated. There are two options when entering a break for a drivers shift. First option allows the end user to specify the exact time the driver is to take a break and the automated scheduling engine will take that time into consideration while scheduling trips around the break. The second option is to specify a window of opportunity to schedule a break for the driver. This option creates more efficiency by reviewing the ridership for that day and determining the most logistical time to schedule the break for the driver.

3.e-6	The dispatching module displays: 1. Selected route and associated trip details 2. Vehicle ID numbers and locations updated at least every 30 seconds 3. Scheduled arrival times 4. Real-time arrival predictions and on-time performance 5. Client names and the number of passengers per trip	Core	TripMaster's AVL opens and runs on a separate web page from the rest of the dispatching software, allowing the user to easily utilize multiple monitors. The system also provides many tools on the Daily Schedule screen for quick reference including vehicle location, speed, on or behind schedule, current load, and next scheduled job time.  ParaScope sends information within every 30 seconds that TripMaster users can access in many ways. The Daily Schedule screen constantly provides the current location, speed, load, next scheduled job time, and a measure of how far ahead or behind schedule that vehicle is running. Having this information at your fingertips allows the system users to better respond to last minute changes and be proactive when vehicles are behind schedule
3.e-7	The dispatching module displays one route at a time or multiple routes	Core	TripMaster meets and/or exceeds this specification.

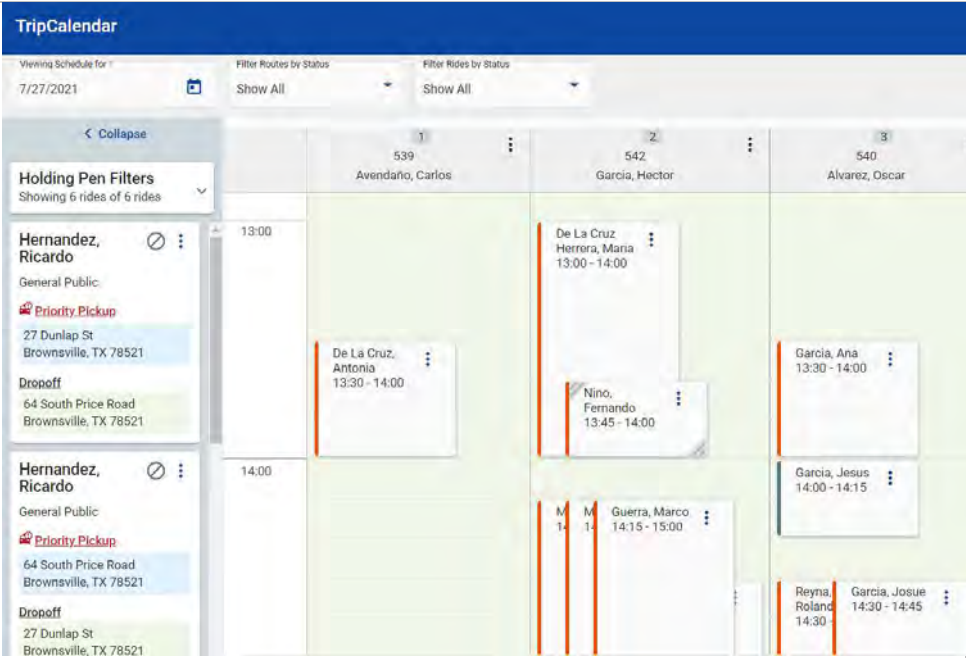
3.e-8	The system allows the user to display a list of all of the day's scheduled trips for a client.	Core	The TripMaster Daily Schedule screen provides end users with the ability to search the schedule for any text. Using a passengers name will filter our the enter schedule and display only that passenger, where they are scheduled, and all the information about each trip for that day.  The screenshot displays the TripMaster Daily Schedule interface. At the top, there is a 'Date' field set to 06/14/2023 and a 'Search Text' field containing 'rudolph'. Below these fields are buttons for 'AutoSchedule', 'TripScheduler (Beta)', and 'TripCalendar'. A table below shows the search results with columns for 'Status', 'Sync', 'Route #', and 'Description'. The first row shows 'Not Validated', '300', and 'Glax Red'. Below this is a detailed view of the trip with columns for 'Status' and 'Name'. The status is 'Not Validated' and the name is 'Rudolph, Wilma'. The trip details include '1 rides on route, 0 escorts, 0 children, 0 wheelchairs, 0 stretch'.
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3.e-7	The system allows the dispatcher to manually override each trip's assigned route and pickup or drop-off time.	Core	TripMaster meets and/or exceeds this specification.
3.e-8	The system allows the dispatcher to override batched trips and manually move them to an alternate route.	Core	The CTS Software philosophy is that the licensee always has full control of their schedules. To that end, the licensee may manually schedule trips to a run with a simple drag and drop or move functionality. In addition, users may manually override any data within TripMaster even when using the automated scheduling engine. Upon accepting Auto Scheduler results, users can move, copy or delete rides using a drop-down selection box while reviewing the schedule development. Users move reservations by clicking, dragging, and dropping. TripMaster tracks and records individual user actions, creating a historical account of changes, including name of user, time and date the action was performed, and action performed. The licensee has full access to these records, which cannot be altered.
3.e-9	The system allows users to easily transfer passenger trips from a selected route(s) based on least incremental mileage.	Core	TripMaster allows end users to view statistics about each route and determine if the solve meets and/or exceeds expectations before saving. Moving trips from one route to the other easy simply and new statistics will be provided to show the improvement before saving.

			 <table border="1"> <thead> <tr> <th>Metric</th> <th>Before</th> <th>After</th> <th>Change</th> </tr> </thead> <tbody> <tr> <td>Average Miles Per Ride</td> <td>0</td> <td>7</td> <td>100 %</td> </tr> <tr> <td>Average Rides Per Hour</td> <td>0</td> <td>1.8</td> <td>100 %</td> </tr> <tr> <td>Total Assigned Rides</td> <td>0</td> <td>6</td> <td>100 %</td> </tr> <tr> <td>Total Deadhead Duration</td> <td>N/A</td> <td>18 Min 57 Sec</td> <td>100 %</td> </tr> <tr> <td>Total Deadhead Miles</td> <td>0</td> <td>5.4</td> <td>100 %</td> </tr> <tr> <td>Total Distance To First Stop</td> <td>0</td> <td>1.4</td> <td>100 %</td> </tr> <tr> <td>Total Drive Duration To First Stop</td> <td>N/A</td> <td>7 Min 24 Sec</td> <td>100 %</td> </tr> <tr> <td>Total Distance Back To Depot</td> <td>0</td> <td>4.1</td> <td>100 %</td> </tr> <tr> <td>Total Drive Duration Back To Depot</td> <td>N/A</td> <td>11 Min 33 Sec</td> <td>100 %</td> </tr> <tr> <td>Total Miles</td> <td>0</td> <td>42.1</td> <td>100 %</td> </tr> <tr> <td>Total Service Duration</td> <td>N/A</td> <td>3 Hr 21 Min 18 Sec</td> <td>100 %</td> </tr> </tbody> </table>	Metric	Before	After	Change	Average Miles Per Ride	0	7	100 %	Average Rides Per Hour	0	1.8	100 %	Total Assigned Rides	0	6	100 %	Total Deadhead Duration	N/A	18 Min 57 Sec	100 %	Total Deadhead Miles	0	5.4	100 %	Total Distance To First Stop	0	1.4	100 %	Total Drive Duration To First Stop	N/A	7 Min 24 Sec	100 %	Total Distance Back To Depot	0	4.1	100 %	Total Drive Duration Back To Depot	N/A	11 Min 33 Sec	100 %	Total Miles	0	42.1	100 %	Total Service Duration	N/A	3 Hr 21 Min 18 Sec	100 %
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Average Rides Per Hour	0	1.8	100 %																																																
Total Assigned Rides	0	6	100 %																																																
Total Deadhead Duration	N/A	18 Min 57 Sec	100 %																																																
Total Deadhead Miles	0	5.4	100 %																																																
Total Distance To First Stop	0	1.4	100 %																																																
Total Drive Duration To First Stop	N/A	7 Min 24 Sec	100 %																																																
Total Distance Back To Depot	0	4.1	100 %																																																
Total Drive Duration Back To Depot	N/A	11 Min 33 Sec	100 %																																																
Total Miles	0	42.1	100 %																																																
Total Service Duration	N/A	3 Hr 21 Min 18 Sec	100 %																																																
3.e-12	The system provides the number of trips for each route and track driving speed history.	Core	TripMaster tracks the number of trips assigned to each route, the trips that were successfully performed, no-showed, canceled, etc. Along with reporting on the number of trips and the status, tracking of the vehicle speed is available in real-time as well as historically.																																																

			History Print History This report can take a long time. #1 - Scott Davis Validated 0 mph @ 00:00 C. Davis 768 Ride Date: Jun 13, 2023 Actual Start 08:28 Actual End 11:57 Time: 08:45 Speed: 1 mph 254 FAIRGROUND RD SPINDALE NC, 28160 Time: 08:46 Speed: 12 mph 1599 W MAIN ST FOREST CITY NC, 28043 Time: 08:46 Speed: 39 mph 1444 W MAIN ST FOREST CITY NC, 28043 Time: 08:47 Speed: 39 mph 1278 W MAIN ST FOREST CITY NC, 28043 Time: 08:47 Speed: 40 mph 1118 W MAIN ST FOREST CITY NC, 28043 Time: 08:48 Speed: 36 mph 946 W MAIN ST FOREST CITY NC, 28043
3.e-13	The system displays all dispatch activity for any route and allow the dispatcher to add dispatch activity notes.	Core	TripMaster meets and/or exceeds this specification.
3.e-14	The system allows the dispatcher to transfer single trips or a block of trips between vehicles/drivers.	Core	TripMaster allows for the end user to select a single trip or multiple trips at the same time to move between routes. A simple right click, move

			ride(s) from a list of options completes this task in a minimal amount of steps.
3.e-10	The system logs all dispatcher actions and attributes them to the logged in user.	Core	As licensed personnel make additions, changes, or any other action within the program, the system will maintain a user-defined record of all actions performed on the data. This tracking ability creates a historical account of changes, including name of user, time and date the action was performed, and action performed. The licensee will have full access to these records and the information contained in the system cannot be altered.
3.e-16	The system allows dispatchers to see: 1. Cancellations and insertions occurring within a configurable timeframe 2. Runs not covered by a driver 3. Unassigned trips	Advanced	When a user creates a reservation, it is placed into a field labeled “Holding Pen” for future scheduling. Similarly, any reservation marked as a “will-call” will be placed in the holding pen for manual or automated scheduling. The holding pen is located on the Daily Schedule as part of the full-screen view of the day’s entire schedule.
3.e-17	The system has dispatching tools that are simple to use and efficient to enter and retrieve information. The dispatching solution that is flexible and configurable for each dispatcher allowing dispatchers to create custom dispatch data views based on the type of dispatching methods performed.	Advanced	The system provides numerous data views for the end-user to choose from. The views have different layouts and can be customized in several different ways. Dispatch logs can be grouped by Driver, Vehicle, Trip #, Rider Name, or Ride Time. These are great master sheets showing all riders for the day in one consolidated view.

			 The screenshot displays the TripCalendar application interface. At the top, there's a header with the title 'TripCalendar'. Below it, there are filters for 'Viewing Schedule for' (7/27/2021), 'Filter Routes by Status' (Show All), and 'Filter Riders by Status' (Show All). A 'Collapse' button is visible. On the left, a 'Holding Pen Filters' section shows 'Showing 6 rides of 6 rides'. Below this, two ride cards for 'Hernandez, Ricardo' are listed, both marked as 'Priority Pickup' and 'Dropoff' at '64 South Price Road, Brownsville, TX 78521'. The main area is a grid of ride cards for different drivers: 'Avendaño, Carlos' (539), 'Garcia, Hector' (542), and 'Alvarez, Oscar' (540). Each driver's card shows a list of rides with passenger names and times. For example, under 'Garcia, Hector', there are rides for 'De La Cruz, Herrera, Maria' (13:00 - 14:00), 'Nino, Fernando' (13:45 - 14:00), 'Guerra, Marco' (14:15 - 15:00), 'Garcia, Ana' (13:30 - 14:00), 'Garcia, Jesus' (14:00 - 14:15), and 'Reyna, Roland' (14:30 - 14:45).
3.e-18	The system allows the DROs to manage unexpected enroute origin and destination changes.	Advanced	TripMaster meets and/or exceeds this specification.
3.e-19	The system provides the DROs with two-way text messaging from dispatch to DRO. Messages shall be saved or archived in the system for future reference.	Advanced	The licensee's dispatch staff will have the ability to send custom created messages to any or all drivers in transit. They can send Yes/No messages or standard messages that simply require the driver to acknowledge receipt. All inbound and outbound messages are shown on the left hand side of the daily schedule screen regardless of what part of the program the end user is currently working in, to ensure no messages are missed.

3.e-20	Incoming messages from drivers are grouped by vehicle/driver and sorted by prioritization (e.g., high priority messages on top). All messages include an audible tone or notification to alert the dispatcher when messages are received from the driver display solution.	Advanced	All messages that are communicated between drivers and dispatched are logged with details about the driver, the vehicle, and the dispatcher.
3.e-21	The system notifies dispatchers when a vehicle is running late by a configurable amount of time. These parameters are configurable based on the parameters set by the individual DROs (e.g., Client type, ADA status, etc.).	Advanced	The Daily Schedule screen constantly provides the current location, speed, load, next scheduled job time, and a measure of how far ahead or behind schedule that vehicle is running. Having this information at your fingertips allows the system users to better respond to last minute changes and be proactive when vehicles are behind schedule. In addition to providing the information listed above, the AVL page shows a color-coded map of all vehicles and their status. The transportation provider can easily overlay the route the driver is performing to review schedule adherence and possible deviations. Users can zoom to a particular site on the map in order to find the closest vehicle. From time to time it also becomes necessary to see where a vehicle has been and the speeds at each reported intervals. The user can print out a list of stops and the speed the vehicle was traveling at that time, for a quick review.

TripMaster's AVL opens and runs on a separate web page from the rest of the dispatching software, allowing the user to easily utilize multiple monitors. The system also provides many tools on the Daily Schedule screen for quick reference including vehicle location, speed, on or behind schedule, current load, and next scheduled job time.

Status	Sync	Trip #	Available Times	Scheduled Times	Vehicle	Mob	CurrentLoad
Not Validated		7007	13:30-18:15	13:30-18:15	CC105	A	A:0, W:0, S:0
In Transit				06:00-18:30	CC103	WC	A:0, W:0, S:0
In Transit				06:00-18:30	CC104	WC	A:0, W:1, S:0
Not Validated				08:00-18:30	None	A	A:0, W:0, S:0
Validated		7011	08:00-12:30	08:00-12:30	CC105	A	A:0, W:0, S:0

Location: Not near an address

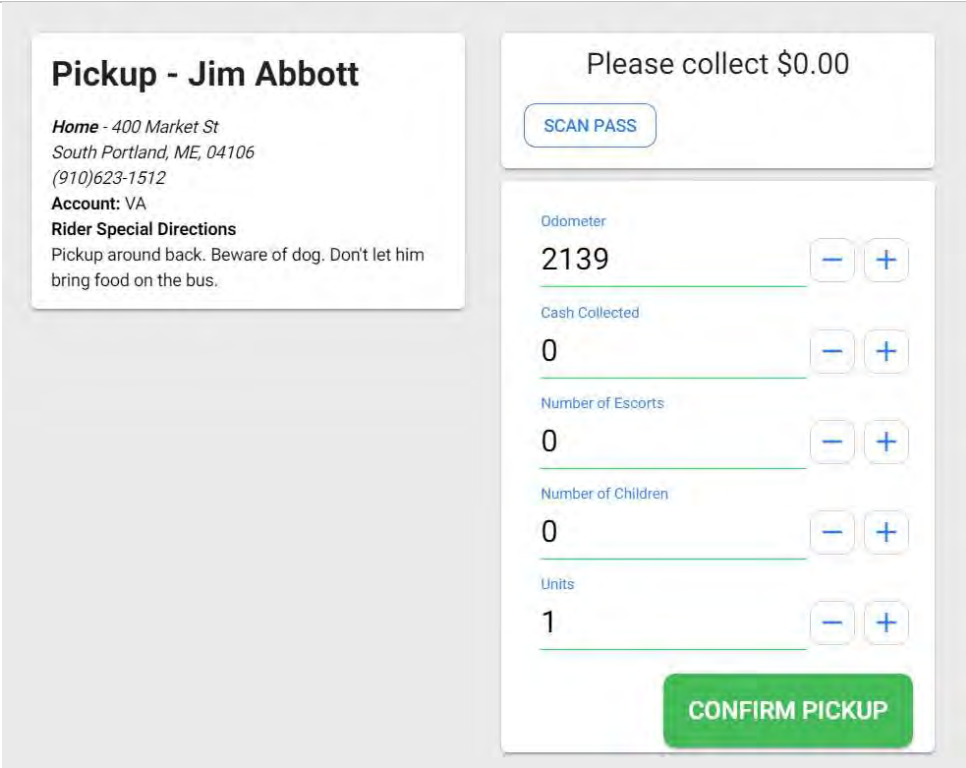
Minutes before next scheduled job: 10

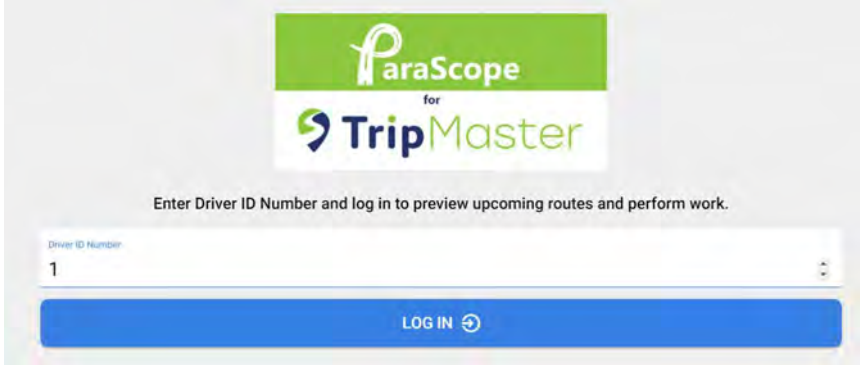
Speed: 63.19355

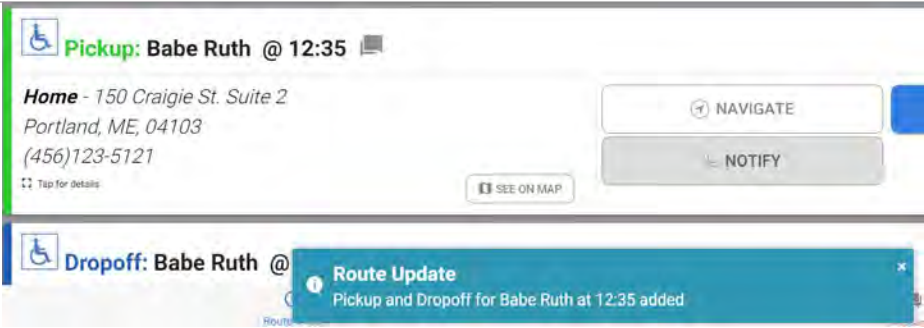
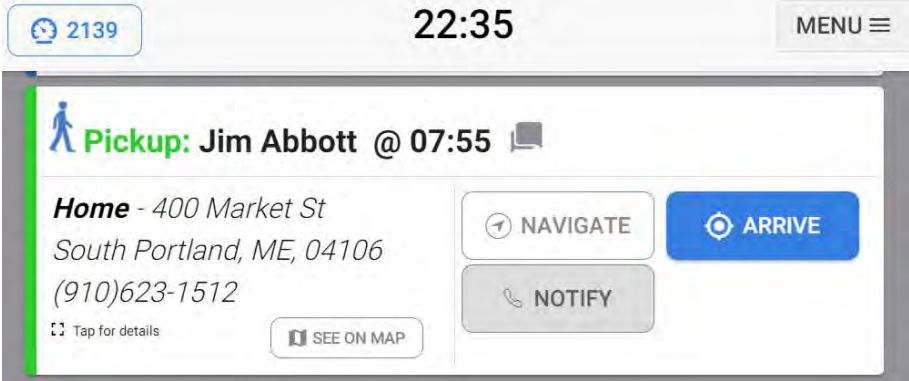
Last GPS Report: 12/19/2016 10:48:27 AM

There are no pending changes.

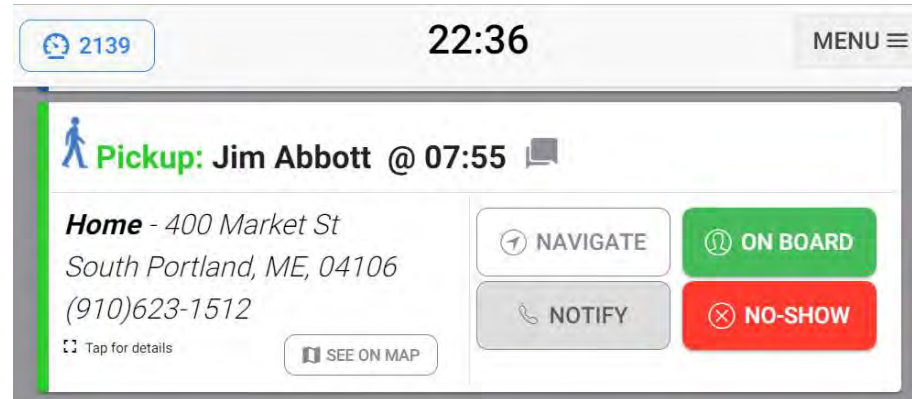
f.	Driver Display Functionality		
3.f-1	The driver display provides drivers with an overview of their complete schedule/manifest and allows them to view details for any pickup/drop off. Details include: 1. Client name(s) and companions/PCA 2. Mobility aids used by clients 3. Dispatch and scheduling comments 4. Fare/sponsor 5. Pickup and drop-off address and any applicable notes 6. Pickup and drop off window/appointment time 7. Business name/building name for each pickup or drop-off	Core	TripMaster, interfaced with ParaScope MDT software application, brings an immeasurable amount of value to any transportation department. While drivers are performing pickups and drop-offs throughout the day, the daily schedule screen is updating in real-time. With each status update TripMaster is capturing the arrival time, boarding time, drop-off time, and odometer readings automatically. This will eliminate the need for manual data entry to validate a driver's schedule and provide extreme accuracy for billing and reporting purposes. ParaScope tablet software application displays ALL upcoming stops on the Mobile Data Terminal for the entire route. The driver can select any trip on his manifest to view the details. Below is an example of what that screen will look like for the driver.

			 The ParaScope module will provide the driver with all the information they will need to perform their jobs without the need for paper manifests.
3.f-2	The driver display or tablet requires the Driver to logon using the DRO assigned credential. When applicable, the driver display allows the driver to enter (or confirm)	Core	On the home screen, the ParaScope icon will be displayed and the driver will tap the icon to pull up the log in screen.

	the current odometer reading for the vehicle.		This brings up the driver’s login screen, where the unique Personal Identification Number (PIN) will be entered. In the top field, tap your finger on the words “Enter PIN.” This brings up a keyboard to enter the PIN.  Drivers also have the option to select “Preview Upcoming Routes,” which displays information pertaining to routes for that driver in the future. This is typically used at the end of the current day’s route, so the driver has an idea what time their route starts for tomorrow, along with passengers, locations and times.
3.f-3	The driver display includes demand response specific functionality to display electronic manifests and receive updates in real-time from the Vendor provided dispatching system. Updates include changes to the schedule, trip specific detailed updates,	Core	In addition to data capture, real-time updates to drivers’ schedules are performed automatically and instantly any time a change, addition, or deletion is made to a reservation or the schedule itself. When office staff perform one of these actions, a notification is displayed on the MDT to the driver along with a notification tone. The action is then reflected on the driver’s schedule automatically and instantly.

	cancellations, and additions to the manifest.		
3.f-4	The driver display allows the driver to easily scroll through the entire manifest.	Core	TripMaster meets and/or exceeds this specification.
3.f-5	The driver display allows the driver to: Arrive, perform, cancel, and no-show trips as required by the DROs.	Core	As soon as you have parked your vehicle at the location, click “Arrive,” logging that your vehicle has arrived at the location. The dispatcher is able to track the vehicle’s location and log wait times. 

When you click “Arrive,” the button turns green and says “On Board” or “no-Show” Which is to be selected once the passenger boards the vehicle or a no-show has been confirmed.



Pickup - Jim Abbott

Home - 400 Market St
South Portland, ME, 04106
(910)623-1512

Account: VA

Rider Special Directions

Pickup around back. Beware of dog. Don't let him bring food on the bus.

Please collect \$0.00

SCAN PASS

Odometer

2139

- +

Cash Collected

0

- +

Number of Escorts

0

- +

Number of Children

0

- +

Units

1

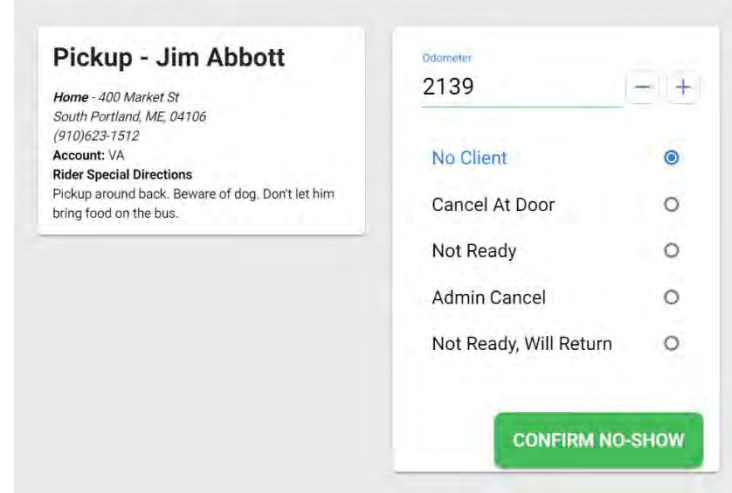
- +

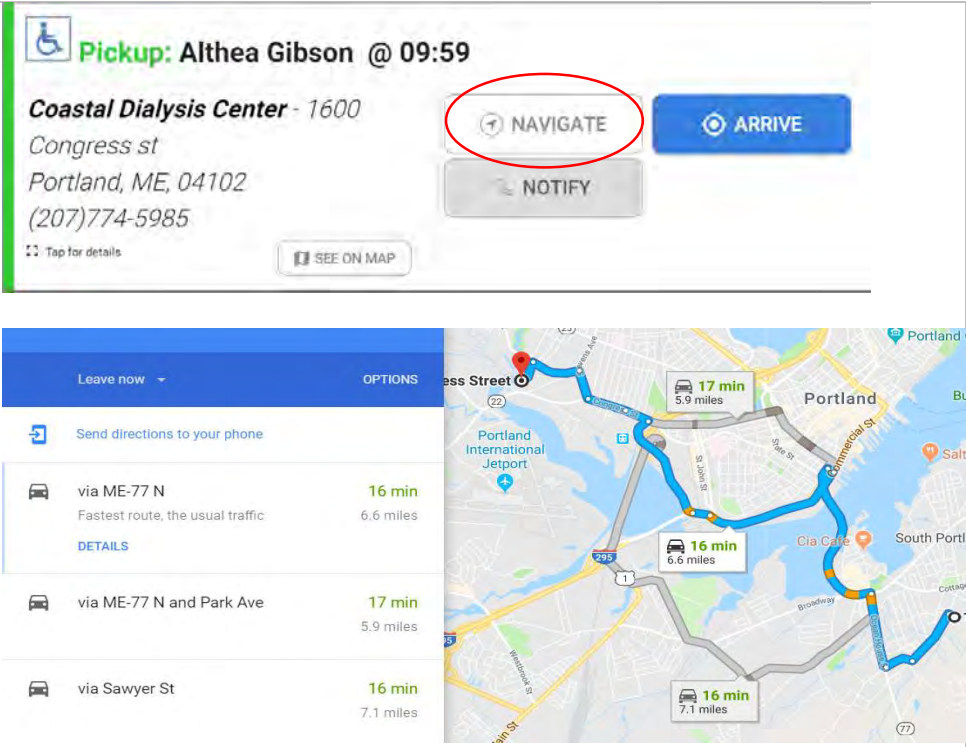
CONFIRM PICKUP

When you click “on-board” there are several fields available with prepopulated by editable information.

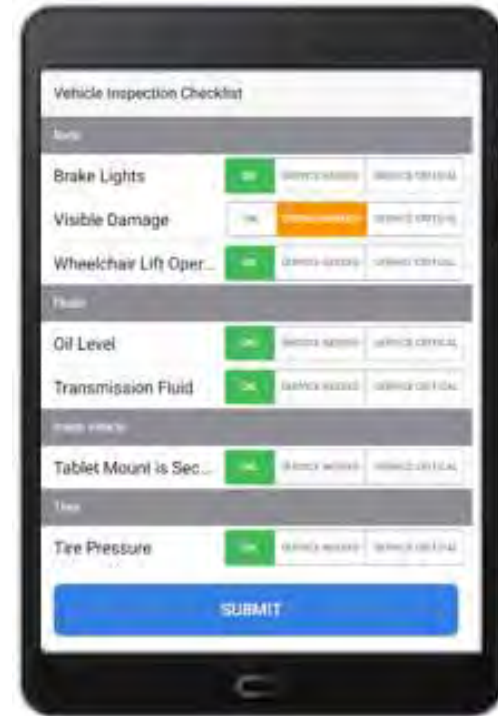
- The current odometer,
- Fare, if you collect cash from passengers. This will be 0 if you do not collect cash, and is ONLY filled in for cash. Tickets, cards, and non-cash items don't count! Only enter cash received.
- Number of children and escorts.
- Number of units

			Now we have arrived at the next location, and will go over some other possible scenarios. This time the client comes to the door to tell you they're not going to their appointment. We will still click the green "Perform" button, but this time will choose the red "No Show" option.
3.f-2	The driver display displays mapping using the same mapping software used to schedule the route.	Core	ParaScope's turn-by-turn directions are provided through whatever default mapping being used on that specific device. Navigation provides multiple route options, ETA's and real-time traffic. When the driver arrives at a destination, the navigation screen automatically closes, and client pickup or drop-off is displayed on the device for the driver to perform the job.



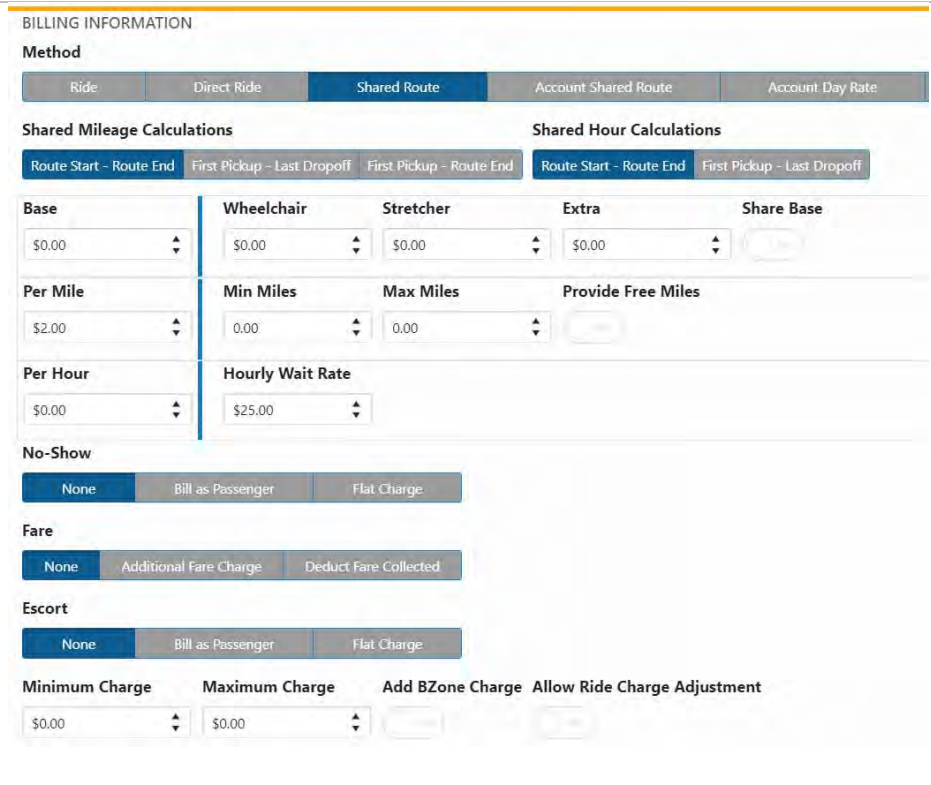
			
3.f-7	Additional trip information includes: 1. Map view 2. Trip ID 3. Client type (e.g., Attended) 4. Estimated time to arrival at destination	Advanced	TripMaster meets and/or exceeds this specification.

3.f-8	Where applicable, the driver display includes a pullout and pull in checklist for Drivers at the start and end of service. Items included on the checklist are configurable by the DROs	Advanced	As your agency moves in a digital direction, electronic inspections just make sense. When your drivers use ParaScope for inspections, information about vehicle issues is immediately communicated to TripMaster, letting you respond quickly. You can customize your pre- and post-trip inspections as well as acceptable results and hard stops for failed inspection items. The electronic inspection feature is included with ParaScope. There is NO additional charge. Driver pretrip inspection lists are defineable and setup by the licensee using the “Master Pages.” Drivers will have the option to pass the item by selecting “ok,” document that service is needed soon, or document a critical service needed.
3.f-9	The system allows drivers to provide pickup and drop-off comments for each trip. The system synchronizes with the client record and is	Advanced	TripMaster does not support this specification.



	available for future passenger trips		
3.f-10	The driver display shows the vehicle's current odometer reading as calculated by the previous odometer entry and allows the DRO to manually correct the calculated vehicle odometer value.	Advanced	With each status update TripMaster is capturing the arrival time, boarding time, drop-off time, and odometer readings automatically. This will eliminate the need for manual data entry to validate a driver's schedule and provide extreme accuracy for billing and reporting purposes. Even though the system is automatically updating the odometer reading, the driver does have the ability to update the odometer in the situation its off.
3.f-3	The driver display provides integrated canned messages that drivers may send to dispatch. Integrated canned messaging includes DROcustomizable messages that can be sent directly from the driver display to dispatch.	Advanced	A list of pre-populated messages for the driver to select, with the push of button, will communicate information to dispatch instantly. A log of all messages sent and receive is documented and viewable to the end user. 

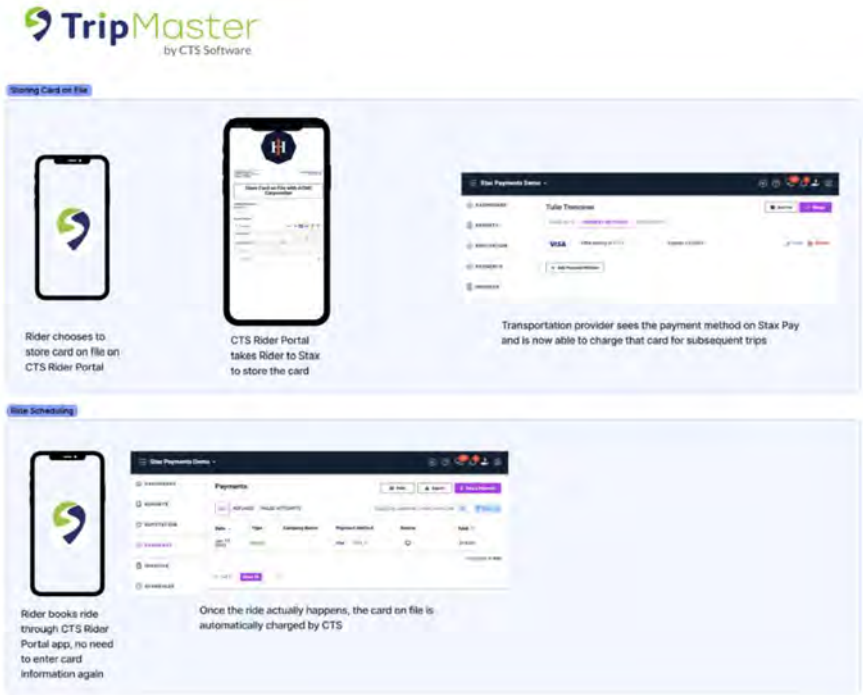
g.	Billing and Invoicing		
3.g-1	The system supports trip pricing through a billing and payment feature. The system supports any combination required by the DROs: 1. Zone 2. Vehicle miles and/hours (service & revenue) 3. Passenger (rider) mile 4. Direct mile (Taxi) 5. Flat rate 6. Hourly 7. Fixed route fares	Core	CTS Software has taken all measures to ensure that the products proposed include all components to a transportation agency's needs. This being said a specific function of TripMaster is the interface with the billing component. CTS has designed a section within the "Master Files" to create as many accounts or fare types as needed. The licensee will create billing accounts related to billing per mile, per ride, per hour, or any combination of the three. Several additional specifications can be adjusted to any account created. Some examples of these specifications are shared mile, shared trip, direct mile, and additional charges that may apply to wheelchair, wait time, escorts, or fares.

			
3.g-2	The system includes tariff management tools to administer all fare price and fare structure. The Agencies will establish the price of fares.	Core	The end user has the ability to create different funding sources with specific fares. Fares are also able to be updated, changed, or applied to each individual ride outside of the standard fare structure.
3.g-3	The system handles billing and invoicing functions for riders/trips.	Core	The billing interface is directly related to your ridership and calculated accordingly. Once a day has successfully been recorded in the database, creating bills and invoices is a simple click of the button. Trip Master Software provides the licensee with the ability to customize invoices and choose from

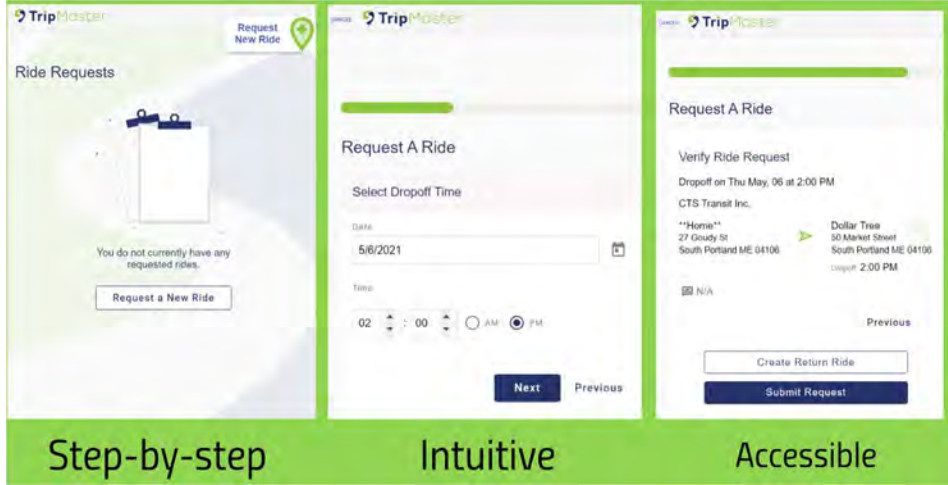
			several different formats. From a basic invoice for a quick mailing to a detailed full report for a complete breakdown of each individual ride, the billing component of this program will perform up to expectations.
3.g-4	The system allows the Agencies to generate and print monthly billing invoices for payment. The system generates and prints reports in a CSV or equivalent spreadsheet format.	Core	TripMaster meets and/or exceeds this specification.
3.g-5	The system automatically generates mailing labels for client billing and invoicing.	Core	TripMaster allows the end user to create a custom report which can be exported to in format that can then be converted to mailing labels.
3.g-6	The Vendor supports Payment Integration with State programs as a funding source for billing and payment. Vendor payment solutions provide Payment Card Industry Data Security Standard (PCIDSS) compliance and Vendor provides evidence of PCI compliance upon request by the DROs.	Core	CTS has been working with LogistiCare/ModivCare for over eight (8) years on the Advanced Transportation Management System (ATMS) interface. In August 2019, CTS was awarded a National contract with LogistiCare/ModivCare for supplying TripMaster to transit providers. Additionally, CTS Software spearheaded the OneCall API integration using the same methodology and process that had been developed with LogistiCare. TripMaster provides the right tools to help manage trips that LogistiCare/ModivCare and OneCall has assigned to your transit agency. The built-in import tool automatically imports and creates each trip in your TripMaster database without having to access the LogistiCare portal. Same-day

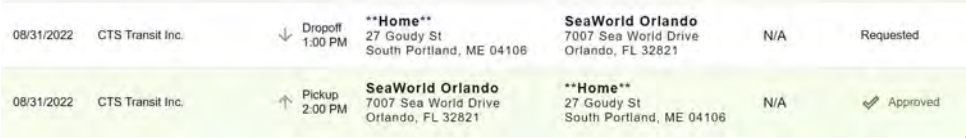
			add-ons, cancelations, or time changes made by LogistiCare/ModivCare and OneCall are updated to ensure you have the most recent information. Electronic signatures are approved by LogistiCare/ModivCare and OneCall with TripMaster software's mobile app, ParaScope. Drivers using Mobile Devices can capture passenger signatures while documenting passenger pickup and drop-off times. The electronic data received, will then be uploaded to the LogistiCare customer web portal for your billing and payment submissions. TripMaster has a fully supported and active integration with NCTracks to simplify the audit process and streamline billing submission, reducing time spent on manual billing. <i>"I just wanted to give a BIG THANK YOU to Adam and everyone who's been helping us here at OUTS with NCTracks. I would still be pulling my hair out if I didn't have such great support from the CTS Team. CTS provides invaluable service. Thanks to all!"</i> <i>-Beth Campbell, Onslow United Transit System</i> Riders are able to book rides online or through the TripPortal application. They will see in real time whether their ride has been scheduled, and view all their previous rides. An in-app, card-not-present (CNP) payment option is the desired state. In this case, the passenger would have the ability to input a payment method (CC and/or ACH) at time of ride reservation or via their securely stored user settings
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			in the TripPortal app. Any rides successfully carried out would then automatically be charged to the card-on-file (COF), saving the customer the hassle of having to key in a payment method for each ride, or to interact with a separate payment device. All transactions would be initiated via the customer's own device, and handled securely via our integration with the Stax Connect platform. Additionally, there would be a text-2-pay (T2P) option by which the customer would receive a text message with a payment link. They would tap the link, which would take them to a secure payment experience within either our app or via their browser, where they could key in their payment information either for a one-off payment or to be stored for future rides. This scenario would also be fully contactless and would rely only on the customer handling their personal devices.
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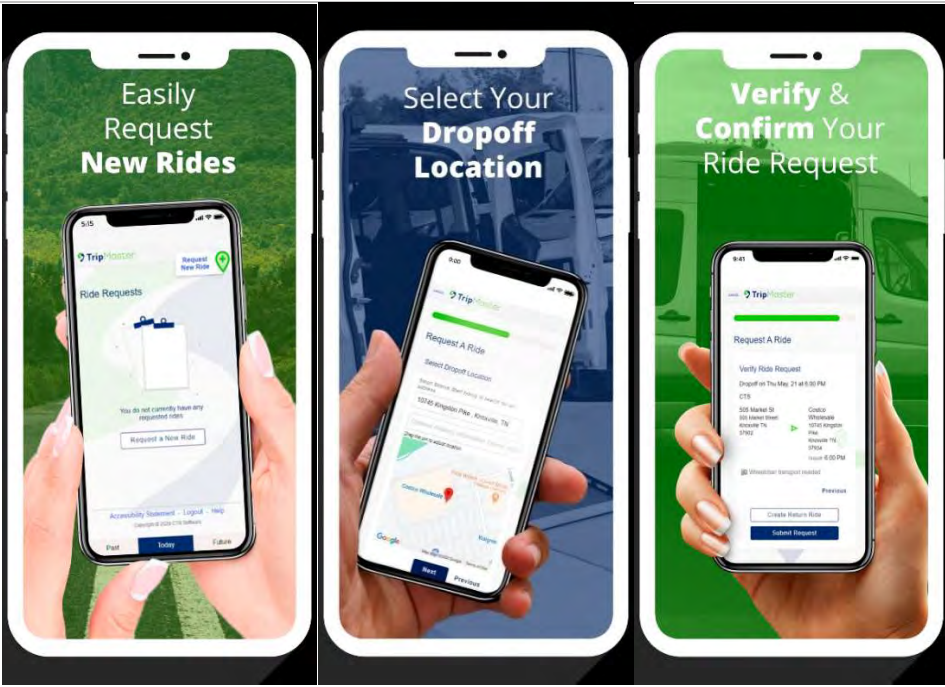
			 When an agency desires a credit card payment processing system, our supporting partner is PCI compliant and can provide a certificate or similar documentation.
3.g-7	The Vendor works with the DROs to confirm reporting level of detail for billing and invoicing purposes. Billing reports shall include, at a minimum: 1. Trip date(s) 2. Passenger name and number of passengers 3. Pickup/drop	Core	TripMaster meets and/or exceeds this specification.

	off location(s) 4. Total number of trips by passenger 5. Total amount owed for each trip		
3.g-8	The Vendor provides customer service support to the DROs during system and financial audits.	Advanced	TripMaster meets and/or exceeds this specification.
4. Customer Applications			
a.	Mobile Applications		
4.a-1	The Vendor provides Mobile Applications and website user interface and user experience accessibility testing using a qualified accessibility expert with relevant experience utilizing assistive technologies.	Core	TripMaster meets and/or exceeds this specification.
4.a-2	The Mobile Applications are designed and tested for cross-platform compatibility, including Android and iOS mobile application platforms.	Core	All mobile applications developed and designed by CTS Software are compatible with both Android and IOS platforms.
4.a-3	The Mobile Applications support the most recent version of Google Android and Apple iOS mobile platforms at launch. Mobile Applications will be backwards compatible with a	Core	TripMaster meets and/or exceeds this specification.

	minimum of two (2) previous versions.		
4.a-4	The Mobile Applications are free to download from Apple App Store or Google Play Store	Core	TripMaster meets and/or exceeds this specification.
4.a-5	The Mobile Applications support the following functions: 1. Create an account 2. Link Client ID 3. Manage account (payment, contact information, personal care attendant, emergency contact and frequent address of travel) 4. View scheduled trips 5. Book a trip 6. Modify a trip 7. Cancel one or many trip reservations	Core	TripMaster's TripPortal module has been built in-house and is directly embedded and integrated with TripMaster.  Convenience and time saving are also attributes of TripPortal, CTS's rider portal. This online tool cuts down on the need to take reservations over the phone. TripPortal allows riders to easily self-serve by managing their ride requests from a computer or smartphone. The TripPortal app is compatible with both iOS and Android platforms. Simply enter an email address and click "Invite to Portal" to give riders access to use an intuitive, one-page wizard to

			enter the date, time, and places they want to go. Riders can also check their reservation status to see if it is pending, accepted, or rejected and a rejection reason. 
4.a-6	The Mobile Applications support shared permissions allowing personal care attendants or caregivers to manage customer profile, book a trip, modify a trip or cancel a trip.	Core	The TripPortal allows interagency communication, letting each agency assign delegates at a coordinating agency who can submit ride requests for certain passengers. The requests are approved or denied by the agency being asked to transport the client. Agency delegates are notified when rides are accepted or denied and given denial reasons. Upon accepting a ride request, a reservation screen appears with all information filled in for final review by the coordinating agency. TripPortal is also designed for online/app-based individual passenger booking of trips as well.
4.a-7	The Mobile Applications send a notification to the user when the ride is approaching/on the way.	Core	The TripReminder module will notify the passenger of their upcoming trips via outbound phone calls and/or text message notifications. The outbound notification will verbally notify the passenger of the name of the responsible transportation provider, as well as the phone number to call if needed. When the driver clicks the On The Way button within ParaScope, that will trigger a text message to that rider

			The TripReminder module will notify the passenger when the driver is “on the way”. This call out feature can be turned off or turned on for a particular passenger indefinitely or per reservation.
4.a-8	The Mobile Applications adhere to branding guidelines of the DROs and will be approved during Final Design Review (FDR)	Core	TripMaster’s mobile application for passengers and delegates can not be white labeled at this time. This is planned for future development and will have an added cost to do so.
4.a-9	The Mobile Applications display text in alternate languages including, but not limited to, Spanish.	Core	TripMaster’s mobile application for passengers and delegates does not support languages other than English.
4.a-8	The Mobile Applications are intuitive, easy to use, and meet relevant accessibility standards of the ADA, World Wide Web Consortium.	Core	Although we are biased about our mobile app being intuitive and easy to use, we have also heard time-and-time again from the users, that its intuitive and easy to use.

			
4.a-9	The system's Mobile Applications are integrated with the DROs' fare structures and reservations systems to allow the customer to indicate their payment preference when making a reservation (e.g., cash, payment card, etc.).	Core	TripMaster allows for fare collection of cash, or by the use of contactless prepaid passes (TripPass). Additionally, passengers have the ability to pay for their ride once the ride is booked online through the TripPortal with a credit card. Office staff will also have the ability to take a credit card over the phone from the passenger when and if needed. TripMaster supplies transit agencies with the option to incorporate an Electronic Fare Collection module called TripPass. TripPass allows you to easily track fare payments in a manner that is also safe and simple for riders.

Consumers are drawn to convenience and flexibility and TripPass brings those qualities, thereby attracting and increasing ridership.

TripPass is designed with flexibility for transit agencies use as they see fit. Loading a pass with an actual dollar amount, number of available trips, or an active data range are all available using the same system.

Pass Id: 81b4cafb-0465-526a-f3e5-2b8d4bc96609

Balance: \$110.50

Pass Type: Cash

Rider Type: Child

Active: Yes

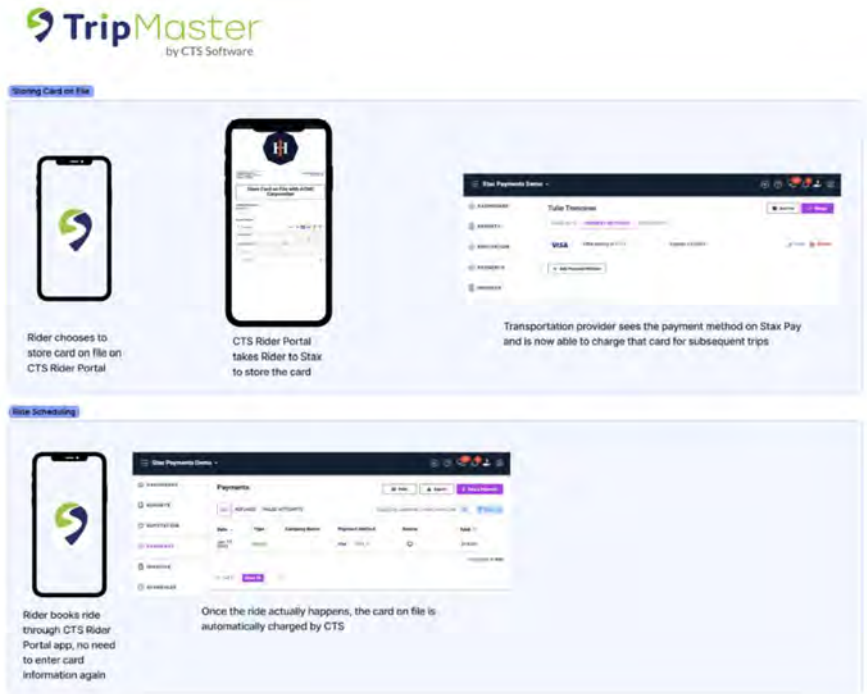
Rider Name: Platow, Heidi

First < 1 2 > Last

▲Date	Type	Amount	Purchaser / Rider	User / Driver	Description
10/31/2018 09:35	New Purchase	\$100.00	Heidi Platow	dplatow	
12/21/2018 10:20	Debit	-\$1.50	Platow, Heidi	Earnhardt Jr., Dale	Pass used for ride at Portland ME

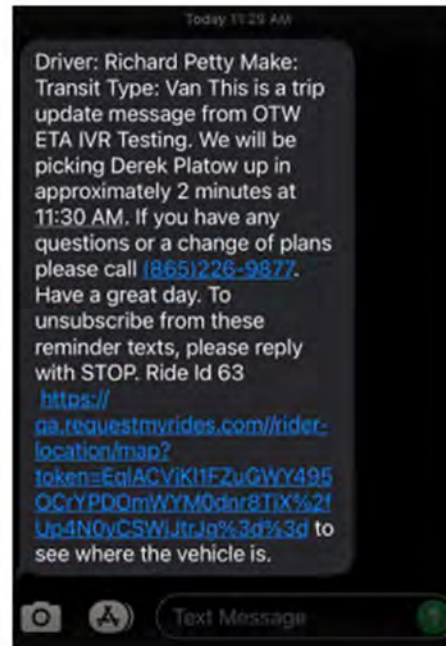
When a driver scans the pass as a passengers boards the vehicle a screen is displayed to the driver and passenger notifying them of their available funds, amount deducted for this transaction and their remaining balance. If a passenger is using a different passengers pass, an alert will pop up notifying the driver that this pass belongs to another passenger (displaying the other

		passengers name) and giving the driver the option to provide the ride or deny the ride. Rider fare has been accepted REMOVE PASS Ride Cost: \$1.50 Pass Balance: \$92.50 Cash Collected: \$0.00 Remaining Pass Balance after debit: \$91.00 An in-app, card-not-present (CNP) payment option is the desired state. In this case, the passenger would have the ability to input a payment method (CC and/or ACH) at time of ride reservation or via their securely stored user settings in the TripPortal app. Any rides successfully carried out would then automatically be charged to the card-on-file (COF), saving the customer the hassle of having to key in a payment method for each ride, or to interact with a separate payment device. All transactions would be initiated via the customer’s own device, and handled securely via our integration with the Stax Connect platform. Additionally, there would be a text-2-pay (T2P) option by which the customer would receive a text message with a payment link. They would tap the link, which would take them to a secure payment experience within either our app or via their browser, where they could key in their payment information either for
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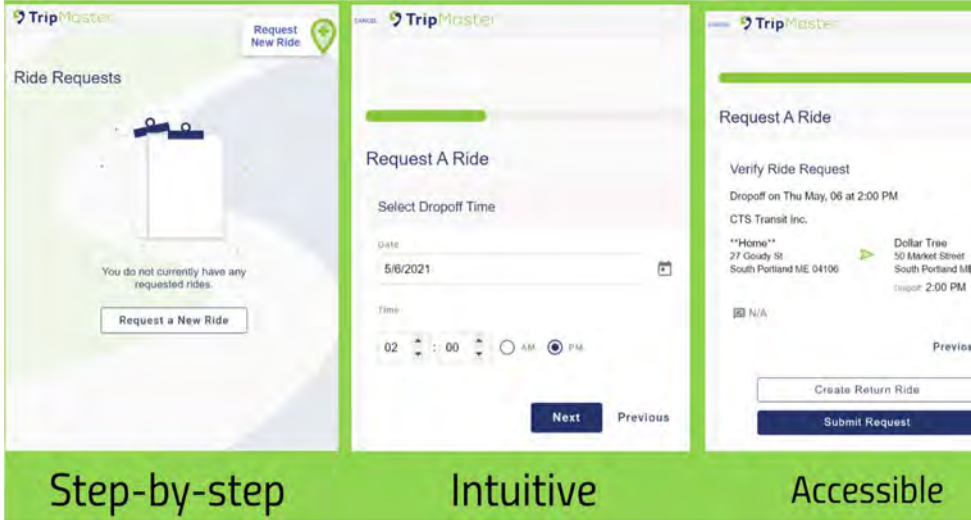
			 The diagram illustrates the TripMaster payment flow in two main sections: "Storing Card on File" and "Ride Scheduling". Storing Card on File: - A rider chooses to store a card on file on the CTS Rider Portal. - The CTS Rider Portal takes the rider to Stax to store the card. - The card is stored on the Stax Payments Server. - Transportation provider sees the payment method on Stax Pay and is now able to charge that card for subsequent trips. Ride Scheduling: - A rider books a ride through the CTS Rider Portal app, no need to enter card information again. - Once the ride actually happens, the card on file is automatically charged by CTS.	a one-off payment or to be stored for future rides. This scenario would also be fully contactless and would rely only on the customer handling their personal devices.
4.a-12	The system's Mobile Applications allows customers to view the vehicle's location and estimated pickup (arrival)	Advanced	After our research and numerous customer polls centered around downloadable app adoption, the team here at TripMaster determined a text	

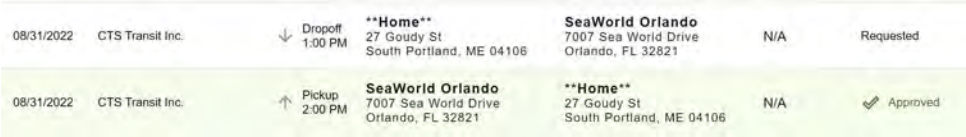
time on a map-based interface

message for vehicle location and real-time ETA would serve as a better tool and more receptive to passengers.

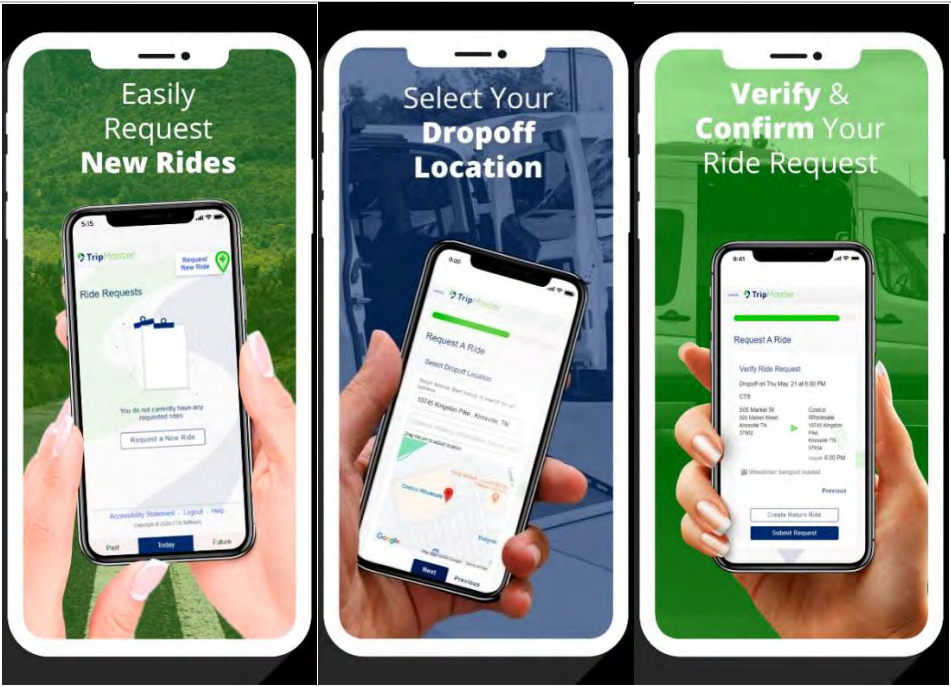


The Where's My Ride feature is an enhancement to the TripReminder module. When the driver clicks the On The Way button within ParaScope, that will trigger a text message to that rider with a hyperlink they can click on. That hyperlink pulls up a snapshot of where the vehicle is on a map, visually, and also provides the rider with a real-time ETA.

b.	Customer Website		
4.b-1	The self-service Customer Website supports the following functions: 1. Apply for demand response eligibility 2. Create an account 3. Link Client ID 4. Manage account (payment, contact information, personal care attendant, emergency contact and frequent address of travel) 5. View scheduled trips 6. Book a trip 7. Modify a trip 8. Cancel one or many trip reservations	Core	TripMaster’s TripPortal module has been built in-house and is directly embedded and integrated with TripMaster.  Convenience and time saving are also attributes of TripPortal, CTS’s rider portal. This online tool cuts down on the need to take reservations over the phone. TripPortal allows riders to easily self-serve by managing their ride requests from a computer or smartphone. The TripPortal app is compatible with both iOS and Android platforms. Simply enter an email address and click “Invite to Portal” to give riders access to use an intuitive, one-page wizard to enter the date, time, and places they want to go. Riders can also check their

			reservation status to see if it is pending, accepted, or rejected and a rejection reason. 
4.b-2	The Customer Website s is compatible with Windows and Apple operating systems and support the current browser version in addition to the previous three (3) versions. The Customer Website Portal functions on a desktop device (such as a PC), tablet, and wireless smartphone using popular browsers, including but not limited to: Chrome, Edge, Internet Explorer, Firefox, and Safari.	Core	All mobile applications developed and designed by CTS Software are compatible with both Android and IOS platforms.
4.b-3	The Customer Website supports shared permissions allowing personal care attendants or caregivers to manage customer profile, book a trip, modify a trip, and/or cancel a trip	Core	The TripPortal allows interagency communication, letting each agency assign delegates at a coordinating agency who can submit ride requests for certain passengers. The requests are approved or denied by the agency being asked to transport the client. Agency delegates are notified when rides are accepted or denied and given denial reasons. Upon accepting a ride request, a reservation screen appears with all information filled in for final review by the coordinating

			agency. TripPortal is also designed for online/app-based individual passenger booking of trips as well.
4.b-4	The Customer Website adheres to the branding guidelines of the DROs and will be approved during FDR.	Core	TripMaster's mobile application for passengers and delegates can not be white labeled at this time. This is planned for future development and will have an added cost to do so.
4.b-5	The Customer Website displays text in alternate languages including, but not limited to, Spanish	Core	TripMaster's mobile application for passengers and delegates does not support languages other than English.
4.b-6	The Customer Website is intuitive, easy to use, and meet ADA accessibility standards.	Core	Although we are biased about our mobile app being intuitive and easy to use, we have also heard time-and-time again from the users, that its intuitive and easy to use.

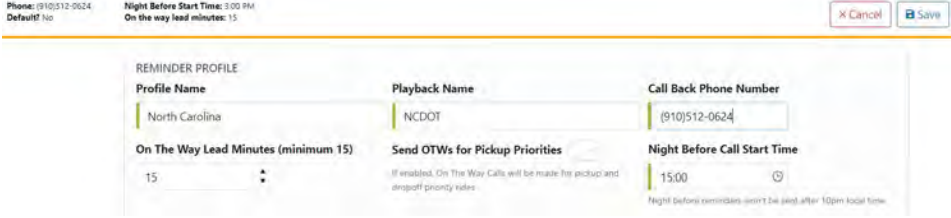
			
4.b-7	The Customer Website allows customers to view the vehicle's location and estimated pickup (arrival) time on a map-based interface	Advanced	After our research and numerous customer polls centered around downloadable app adoption, the team here at TripMaster determined a text message for vehicle location and real-time ETA would serve as a better tool and more receptive to passengers.

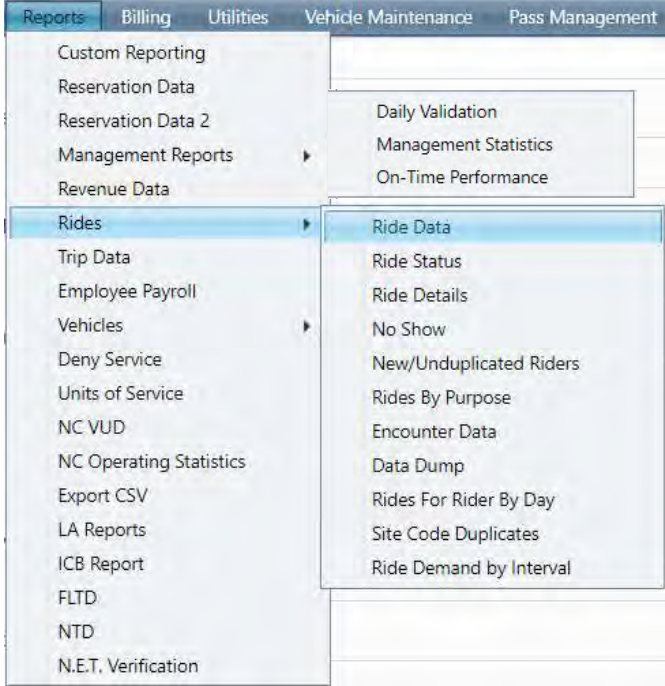
			Today 11:29 AM Driver: Richard Petty Make: Transit Type: Van This is a trip update message from OTW ETA IVR Testing. We will be picking Derek Platow up in approximately 2 minutes at 11:30 AM. If you have any questions or a change of plans please call (865)226-9877. Have a great day. To unsubscribe from these reminder texts, please reply with STOP. Ride Id 63 https://ga.requestmyrides.com/rider-location/map?token=EqlACVik11EFZuQWY495QCxYPQOmWYM0dnr8TIX%2fUp4NOvCSWlJtrJg%3d%3d to see where the vehicle is. TripMaster Estimated Pickup Time: 1/10/2022 11:30 AM Refresh Location Roots at Lindgumme When you are ready to be picked up at Home, 27 Goudy Street, South Portland, ME 04106 click the "I'm Ready" button below or call us at (865)226-9877 to let us know you are ready. I'm Ready
			The Where's My Ride feature is an enhancement to the TripReminder module. When the driver clicks the On The Way button within ParaScope, that will trigger a text message to that rider with a hyperlink they can click on. That hyperlink pulls up a snapshot of where the vehicle is on a map, visually, and also provides the rider with a real-time ETA.

C.	Phone Notification		
4.c-1	The system interfaces with an interactive voice response (IVR) system to provide customer alerts related to trip reminder and real-time arrival information.	Core	TripMaster's IVR system is built in-house and is 100% integrated without the need the for subcontractors.
4.c-2	The system provides the name of the DRO and welcome message as its first response when the IVR is initialized. The system allows additional messages to be spoken after the welcome message as part of the IVR-decision flow.	Core	SMS Customer Messages and IVR Customer Communication are both functionality of the same module provided by CTS Software called Passenger Reminders. With an industrywide annual average of 3.5 percent rider no-shows, we have developed our IVR to help decrease wasted drive time, fuel, and vehicle wear and tear by minimizing this percentage. Your riders can receive a call or text message the day before and/or shortly beforehand on the day of their pickup, minimizing no-shows and your staff's frustration. The IVR system requires no effort from your staff—everything is performed seamlessly through TripMaster and remote servers, and because the entire process is web-based, your phone lines remain free the entire time. TripMaster gives you the freedom to customize the messages by using templates stored in the Reminder Profile Message in order to convey the exact message you would like to get across to your passengers. Messages will always

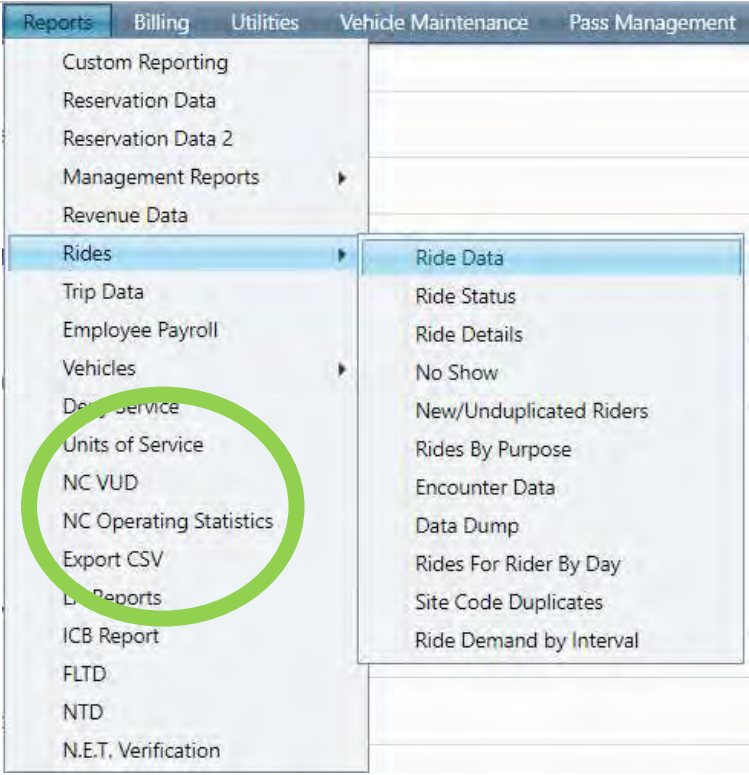
			include a call back number which will be determined by the licensee so all outbound calls display your number for passenger recognition.
4.c-3	The system allows users to interact with the system using their voice or telephone keypad.	Core	Due to past experiences with users being able to interact with the notification and the negative impact this had on the ridership and transit agencies, TripMaster has eliminated the voice or telephone keypad interaction. The main problem we faced were based on the user pushing buttons without realizing they were canceling their ride.
4.c-4	The system supports a skip-ahead feature that allows the customer to choose their option at any point	Core	TripMaster IVR system does not support this specification.
4.c-5	The system supports a time-out parameter when no voice or no-keypad tone is identified, the customer is transferred to a Customer Service Representative. The time-out parameter will be approved by the DROs.	Core	TripMasters IVR system does time-out if and when the call is not answered by the user or by voice message. The system will attempt to call up to two more times before listing the call as “not answered”. The user is not transferred to a customer service representative because the call was never answered to be able to transfer.
4.c-6	The system supports languages including, but not limited to, English and Spanish.	Core	TripMaster meets and/or exceeds this specification based on the text to speech functionality.
4.c-7	The system supports incoming calls through an automated menu where	Core	TripMaster does not support this specification.

	customers are encouraged to use an automated menu as a first choice before being transferred to a Customer Service Representative.		
4.c-8	The Vendor provides a list of IVR recordings and prompts to the DRO for review and approval prior to implementation. The system permits DROsto customize system prompts and customer information messages at no charge.	Core	TripMaster gives you the freedom to customize the messages by using templates stored in the Reminder Profile Message in order to convey the exact message you would like to get across to your passengers. Messages will always include a call back number which will be determined by the licensee so all outbound calls display your number for passenger recognition.
4.c-9	In addition to customer alerts, the system supports messages related to eligibility requirements, usage policies and important contact information specific to the DROs.	Core	TripMaster does not support this specification.
4.c-10	The system allows prompts to the customer to identify a trip reservation, cancel one or many reservations, and confirm the cancellation	Core	Due to past experiences with users being able to interact with the notification and the negative impact this had on the ridership and transit agencies, TripMaster has eliminated the voice or telephone keypad interaction. The main problem we faced were based on the user pushing buttons without realizing they were canceling their ride.

4.c-11	The system is configurable and allows the DROs to configure the reminder and arrival parameters. The DROs will define these parameters during initial implementation	Core	TripMaster meets and/or exceeds this specification. 
4.c-12	The system contacts the customer with a reminder call about their trip the day before their scheduled service.	Core	Your riders can receive a call or text the night before and/or shortly beforehand on the day of their pickup, minimizing no-shows, wait time and your staff's frustration.
4.c-12	The system contacts the customer the day of their service trip with a service reminder when the vehicle is fifteen (15) minutes away from arrival.	Core	Your riders can receive a call or text the night before and/or shortly beforehand on the day of their pickup, minimizing no-shows, wait time and your staff's frustration.

5. Reporting			
a.	General Reporting		
5.a-1	The system includes a reporting module that meets all National Transit Database and Federal Transit Administration reporting requirements and allows for the quick analysis of performance and service metrics such as: 1. Overall system report 2. Service hours and miles (revenue and nonrevenue) 3. Deadhead hours and miles 4. No- Shows/Cancellations 5. Ridership and passenger hours 6. Client Management (e.g., new clients, suspended clients, etc.) 7. On-time performance 8. Trips and Trip origins and destinations 9. Billing and Invoicing	Core	Trip Master is equipped with one of the most detailed, powerful reporting engines in the industry, including customizable pre-designed system reports. The custom reporting interface does not require knowledge of Crystal report queries or other reporting methodologies. All reports are created by queries run through SQL and displayed in Active Reports Web Viewer.. Standard reports include:  The screenshot displays a web-based reporting interface. At the top, there are tabs for 'Reports', 'Billing', 'Utilities', 'Vehicle Maintenance', and 'Pass Management'. The 'Reports' tab is active, showing a list of report categories. A sub-menu is open for 'Rides', listing various report types such as 'Ride Data', 'Ride Status', 'Ride Details', 'No Show', 'New/Unduplicated Riders', 'Rides By Purpose', 'Encounter Data', 'Data Dump', 'Rides For Rider By Day', 'Site Code Duplicates', and 'Ride Demand by Interval'. Other categories visible in the main menu include 'Custom Reporting', 'Reservation Data', 'Reservation Data 2', 'Management Reports', 'Revenue Data', 'Trip Data', 'Employee Payroll', 'Vehicles', 'Deny Service', 'Units of Service', 'NC VUD', 'NC Operating Statistics', 'Export CSV', 'LA Reports', 'ICB Report', 'FLTD', 'NTD', and 'N.E.T. Verification'.

10. Taxi and Brokered services report 11. System Performance Monitoring 12. National Transit Database (NTD) 13. The standard North Carolina reporting package, including operating statistics, origin destination data, and vehicle utilization.		All state or federally required reports will be added to your TripMaster database at no additional charge. Additionally, we will make an effort during the project management phase to better understand and design reports which might support your agency's needs specifically. TripMaster already has all reports listed in this RFP including; NC VUD, NC Ops Stat, and the necessary integrations with NC Tracks, ModivCare (formerly LogistiCare), and One Call.
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5.a-2	The system supports reporting analyses through ad hoc report generation. The system includes at least the following: 1. A display of the number of passengers per vehicle for a user-specified time interval 2. The number of cancellations, no-shows and late pick ups for a given rider for a userspecified data	Core	Each custom report created can be saved for future use, and there is no limit to the number of custom reports that can be created. All reports are created by queries run, on the back end, through SQL, and displayed in Active Reports Web Viewer. All reports and other documents are exportable to formats including Excel, PDF, and Word. Our detailed training sessions cover all reports thoroughly.

	range 3. A query of trips by vehicle ID, rider ID, rider name, location name, zone, city, type of trip (e.g., ambulatory, subscription, canceled), travel duration, travel time interval, etc		
5.a-3	The system runs reports based on service type (e.g. Demand response or Shuttle Van) and service days (weekday, Saturday, or Sunday) is required.	Core	TripMaster meets and/or exceeds this specification.
5.a-4	The Reporting System first presents data in a summary format and then allows the DRO staff to drill-down and drill-through the tables for further details. Any graphical illustrations are provided as necessary.	Core	TripMaster meets and/or exceeds this specification.
5.a-5	The system runs custom reports using any of the data elements included in the database. Custom reports are intuitive and require minimal user configuration.	Core	Each custom report created can be saved for future use, and there is no limit to the number of custom reports that can be created. All reports are created by queries run, on the back end, through SQL, and displayed in Active Reports Web Viewer. All reports and other documents are exportable to formats including Excel, PDF, and Word. Our detailed training sessions cover all reports thoroughly.
5.a-6	The system provides the DROs and the State with access to both aggregated	Core	TripMaster meets and/or exceeds this specification.

	and non-aggregated raw data for research and reporting.		
5.a-7	The system allows users to generate and save ad hoc reports easily.	Core	Each custom report created can be saved for future use, and there is no limit to the number of custom reports that can be created. All reports are created by queries run, on the back end, through SQL, and displayed in Active Reports Web Viewer. All reports and other documents are exportable to formats including Excel, PDF, and Word. Our detailed training sessions cover all reports thoroughly.
5.a-8	The system allows reports to be viewed on screen, sent to a printer or saved to a file	Core	TripMaster meets and/or exceeds this specification.
5.a-9	The Reporting System allows report files to be exportable as pdf, Word, Excel, and GIS data formats. Origin and destination reports shall export location addresses as well as geocoded coordinates	Core	All reports and other documents are exportable to formats including Excel, PDF, and Word. Our detailed training sessions cover all reports thoroughly
5.a-10	The Vendor provides the DROs with a list of available reports, sample of detail reports and degree to which the reports can be customized.	Core	TripMaster supplies a complete reports manual which defines each report and defines every data field available with a description of how the data is pulled.
5.a-11	The Reporting System provides standard reports based on stored data. The DROs prefer the standard	Core	TripMaster meets and/or exceeds this specification.

	reports provide at least the following features: 1. Log on/ Log off Summary 2. Trips Provided 3. Non-Revenue vehicle hours 4. Passenger travel time by run, trip and user group 5. Cancellations 6. No-shows 7. Vehicle hours/miles 8. Driver??? attributes (DL endorsement, expiration, certification)		
5.a-12	The Reporting System accesses the database to allow technical staff to generate, create and save ad hoc reports.		TripMaster meets and/or exceeds this specification.

b.	Performance Monitoring Analytic		
5.b-1	The Vendor creates canned reports that can be run, viewed, and downloaded by the DROs using a Vendor-provided Reporting System.	Core	CTS Software has developed an intense detailed reporting engine that is fully accessible to all users and is integrated into the software. These reports allow the user to easily narrow or broaden the search and even group the data the report generates by driver, vehicle, city, zip code, purpose and more. TripMaster is equipped with one of the most detailed, powerful reporting engines in the industry, including customizable pre-designed system reports. The custom reporting interface does not require knowledge of Crystal report queries or other reporting methodologies. With these tools an agency can create hundreds of different reports with the touch of a button. Should these tools not provide the agency with the data they need, we also have a report that provides the user access to every single field in the database in an easy to use excel file so that you can create custom reports or use pivot tables to gather unique information not provided in our standard reporting. This gives the agency the best of both worlds; simplified reporting that is quick and easy to use, and unlimited access to queries of any data stored in the agency's database.
5.b-2	The system generates reports without manual data entry by the Vendor wherever possible.	Core	With the use of ParaScope, the driver application, TripMaster meets and/or exceeds this specification.
5.b-3	The reports include tables and graphical charts showing	Core	TripMaster meets and/or exceeds this specification.

	the current and historical performance of each device or feature of the system under measurement where applicable		Start: 6/15/2023 End: 6/15/2023 Display: Charts Calculate hourly count by: Tables Past days counts include: Priority Time Passengers Onboard Completed Rides Only Completed & Scheduled Rides June 15, 2023 <table><thead><tr><th>Hour</th><th>Completed Rides Only (Red)</th><th>Completed & Scheduled Rides (Blue)</th></tr></thead><tbody><tr><td>5:00</td><td>1</td><td>0</td></tr><tr><td>6:00</td><td>0</td><td>0</td></tr><tr><td>7:00</td><td>8</td><td>1</td></tr><tr><td>8:00</td><td>3</td><td>1</td></tr><tr><td>9:00</td><td>9</td><td>1</td></tr><tr><td>10:00</td><td>7</td><td>6</td></tr><tr><td>11:00</td><td>4</td><td>2</td></tr><tr><td>12:00</td><td>10</td><td>6</td></tr><tr><td>13:00</td><td>8</td><td>3</td></tr><tr><td>14:00</td><td>3</td><td>1</td></tr><tr><td>15:00</td><td>3</td><td>4</td></tr><tr><td>16:00</td><td>1</td><td>2</td></tr><tr><td>17:00</td><td>2</td><td>0</td></tr><tr><td>18:00</td><td>0</td><td>0</td></tr><tr><td>19:00</td><td>1</td><td>0</td></tr><tr><td>20:00</td><td>0</td><td>0</td></tr><tr><td>21:00</td><td>0</td><td>0</td></tr><tr><td>22:00</td><td>0</td><td>1</td></tr></tbody></table>	Hour	Completed Rides Only (Red)	Completed & Scheduled Rides (Blue)	5:00	1	0	6:00	0	0	7:00	8	1	8:00	3	1	9:00	9	1	10:00	7	6	11:00	4	2	12:00	10	6	13:00	8	3	14:00	3	1	15:00	3	4	16:00	1	2	17:00	2	0	18:00	0	0	19:00	1	0	20:00	0	0	21:00	0	0	22:00	0	1
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5.b-4	The reports include a calculation of any credits to be assessed in the current month based on current and prior performance.	Core	The billing interface is directly related to your ridership and calculated accordingly. Once a day has successfully been recorded in the database, creating bills and invoices is a simple click of the button. Trip Master Software provides the licensee with the ability to customize invoices and choose from several different formats. From a basic invoice for a quick mailing to a detailed full report for a complete breakdown of each individual ride, the billing component of this program will perform up to expectations.																																																									
5.b-5	The Vendor commences performance reporting during Pilot Testing and continues to perform this	Core	TripMaster meets and/or exceeds this specification.																																																									

	activity throughout the operations agreements		
5.b-6	The system provides data and reports in a consistent format (e.g., CSV or equivalent spreadsheet format) and structure to support status reporting for active projects/contracts across participating DROs.	Core	TripMaster meets and/or exceeds this specification.
6. Implementation			
a.	System Design Reviews		
6.a-1	The Vendor prepares a comprehensive System Design/Configuration set of documents (SDD) describing the functionality, user interfaces, network and system interfaces, and other elements to fully describe the system.	Core	CTS' approach to implementation is 100% dependent on each individual installation. For over 30 years we have dialed in on a proven method to provide a successful, stress-free timeline that is tailored to your specific needs, desires, and future. It is very important that the installation, start-up and ongoing operation of the software goes smoothly in order for you to optimize the value realized by using the software. As a result, CTS focuses on making sure the pre go-live and post go-live experiences are as seamless and successful as possible. We accomplish this by hiring high quality, customer focused team members who take pride in their work as well as investing in technology tools for tracking and communication. An account executive will schedule a time to conduct an initial project management visit to help determine your training needs. Once the

			account executive identifies the best approach for training, we will assign trainers to work with you through the training process, which will include a combination of on-site and remote trainings. CTS follows a detailed technical implementation roadmap, which is shown in the Implementation portion of this proposal and invested in project management software to ensure we are closing monitoring and meeting training timelines and deliverables associated with the roadmap. Based on training needs, we utilize a communication platform to provide reminders to those in training of activities needed to be completed in order to smoothly progress through training. CTS internal communication is equally as important as communication with customers. At the end of every day of training, the assigned trainer emails the CTS training team a detailed review of what was covered and any noteworthy information. This practice ensures another trainer can easily step in in the unlikely event the assigned trainer becomes unexpectedly unavailable, such as in the case of illness. Additionally, the trainers participate in a daily, brief stand-up to apprise their teammates of progress, discuss potential roadblocks and identify solutions. In addition to the progress tracking on a Gantt chart and daily training communication, CTS also has a weekly call with the trainer, account executive and Director of Finance to discuss the status of individual customers' training and any potential issues. In the event of a concern, the account executive will get involved if appropriate or
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escalate to the executive team to address. The executive team is apprised of training progress every Friday and will contact the customer if necessary. Note that if an urgent concern were to arise, the team would not wait until a standing touchpoint to bring it to the attention of executive leadership.

While getting you up and running is crucial, your experience after go-live is just as important. Your account executive checks in after training is complete and periodically post go-live. They and your trainer are only a phone call or email away once you're live with the system. Typically customers' progress is monitored for 30 days post go-live, with the trainer being the primary point of contact during that time, at which point, customers transition to the CTS support team if the assigned trainer feels the customer is ready. The support team is second to none in customer service and issue resolution and is available 24/7/365 to help you.

Implementation Plan		
Tasks	Day	Duration (days)
Signed Agreement	1	1
Kickoff Call	3	1
Data Conversion and Access to TripMaster	3	3
Access Provided to Online Training Portal	3	3
Testing of Access	4	2
Complete Getting Started & Master Pages	6	3
Master Pages Training Session 1	9	1

			Complete Subscription & Daily Schedule	10	3
			Subscription & Daily Schedule Training Session 2	13	1
			Tablets Ordered Deadline	13	1
			Install ParaScope On Tablets	13	3
			Complete Remaining Online Training Portal	14	7
			One-On-One Training Session 3	16	1
			One-On-One Training Session 4	19	1
			All Drivers Watched Training Video	19	6
			Testing Period	19	10
			Errors, Corrections, and Fixes	19	10
			Final Testing	23	6
			One-On-One Training Session 5	24	1
			Onsite Training / Go Live / Week 1	27	5
			Acceptance	30	1
			Onsite Training / Week 2 (optional)	30	4
			Training continues after go-live with a customer-wide free monthly training webinar as well as on-line training resources that are available at any time. We also have a communication platform that provides in-app and emails for important announcements such as the release of new features. A comprehensive implementation plan will be developed to deliver the proposed ITS system. The implementation plan will include a seven-point plan that will encompass the following: ➤ Management and Control and Program/Project Management ➤ Governance and Accountability ➤ Planning		

- | | | | |
|--|--|--|---|
| | | | <ul style="list-style-type: none">➤ Resource Management➤ Risk Management➤ Stakeholder Engagement➤ Review, Monitoring, and Evaluation |
|--|--|--|---|

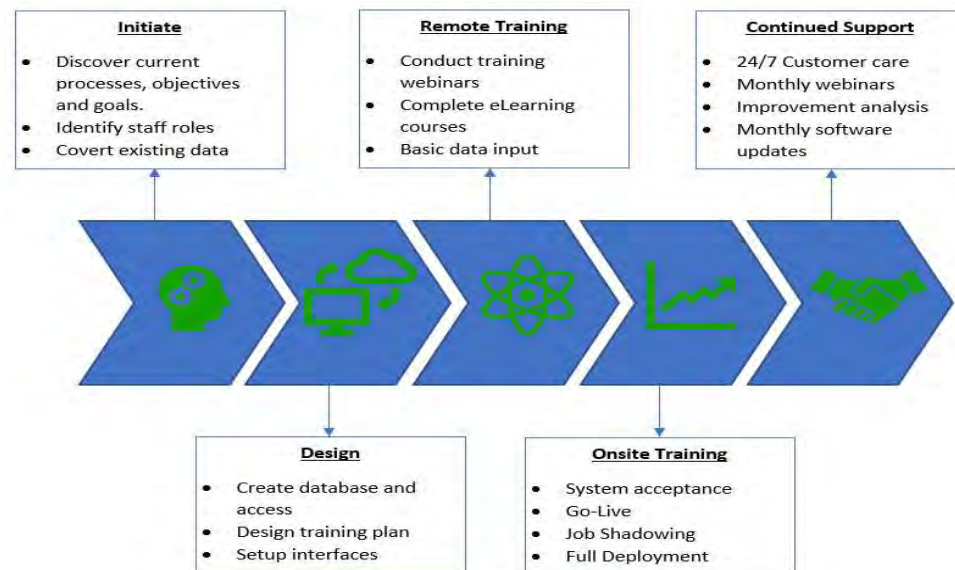
The actual delivery is highly dependent on the options you select in any agreement, the functionality you require from your ITS hardware and software services, and the availability and accuracy of any existing data you have.

Training methodology

CTS Software will provide both onsite training and remote, online training for this proposal. We will conduct a series of five (5) online webinars using Zoom during the initial system setup phases. This process allows for the TripMaster users to become familiar with basic data input, navigation and overall feel of the software prior to onsite training and go-live. Once onsite, your technical trainer(s) will work directly with the licensee's project manager and all other staff by what is known as "job shadowing". We believe in understanding your operation and fitting the software in to your world rather than you having to fit in to the software.

Training guide

This guide sets expectations for the upcoming steps of implementation. Each step gives you a general idea of both the "when" and the "who" in the contracting, setup, and go-live processes. Please use this as a reference as you begin your journey with TripMaster.



I. Initiate

Task: We want to get you trained as quickly as possible, so you can quickly benefit from TripMaster. When you sign a contract, CTS Software will schedule a comprehensive kickoff session with your account executive, technical trainers, and other key stakeholders. During this **on-site meeting** we will discover your current challenges, goals and objectives.

		Action Step: Review the completed orientation document and organize an implementation plan that best fits the licensee’s timeline and expectations. Task: Identify any data that may need to be converted from your existing software or data sheets. Action Step: CTS Software will convert your existing data from an existing software or if your data is stored in a data sheet such as excel. This will save you and your staff countless hours of data entry. II. Design Task: Your account executive will introduce you to your technical trainers and work with you to develop an implementation plan to accomplish your goals and help guarantee success. Action Step: Schedule your personalized implementation plan and first training session. At this time assigning project roles and understanding staff positions will be discovered. Task: Create your TripMaster database and licensing with permissions. Action Step: The licensee will provide CTS with their licensing information including staff first name, last name, email and access permissions. CTS will then create Task: Address any third part of interface needs. Action Step: In the situation there are interfaces needed with your organization, these would have been addressed earlier. At this time, CTS will diligently work with your third party to accommodate any particular needs or requirements. Task: Hardware Installation Action Step: CTS Software will coordinate the installation of all related hardware, specifically the installation of the MDT hardware in the designated vehicles.
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			VI. Remote Training Task: Start training your staff and end users with CTS Software’s 360 Online Training. Action Step: Watch and learn from role-based documentation, help videos, short quizzes, and follow-up meetings with your technical trainer to train your end users and staff. The online training also consists of five (5) remote training sessions through a webinar of choice that are roughly an hour each as a one-on-one training with your staff. Task: Once you complete classes in CTS Software’s 360 Online Training you will begin setting up your database by entering your company’s administrative, rider, and trip data. Action Step: To make the most of your database, you need to keep up with your data entry and database setup as you progress through the training. We provide a checklist to ensure entry of all data in the necessary order. VII. Onsite Training 1 Task: It’s time to roll out TripMaster! Your technical trainer(s) will schedule a week of onsite, in-person training. Action Step: This week, your technical trainer(s) are expected to work in your environment. At CTS Software, our proven methodology is to not conduct “classroom” style training but rather job shadowing so we can apply TripMaster to your day-to-day operation. Task: “Go Live” Action Step: A day determined and agreed upon by both you and your technical trainer will be established to “go live” with TripMaster. This day will include TripMaster scheduling, dispatching and drivers live with ParaScope (driver mobile application).
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		Task: Continue full deployment for the rest of the week. Action Step: Your technical trainer will continue to identify areas of TripMaster that need additional training all while continuing the full deployment including billing and reporting and creating specific custom reports. VIII. Onsite Training 2 (optional) Task: Refresh users on system functionality presented in the initial training as well as to address questions that may have arisen in the intervening period. Action Step: Much like week 1, this week your technical trainer(s) are expected to work in your environment. At CTS Software, our proven methodology is to not conduct “classroom” style training but rather job shadowing so we can apply TripMaster to your day-to-day operation. IX. Continued Support Task: Let TripMaster work for YOU! Send us details on special requests and suggestions, and we will prioritize them to get your items on our development plan for future software updates and releases. If you need it, we can build it. Action Step: If you need a little extra help, sign up for our free monthly training sessions, log back in to CTS Software 360 Online, or contact us directly. Task: Our technical trainer(s) will eventually introduce you to the CTS Software technical support team. Action Step: It is our top priority that TripMaster customers have 24/7/365 availability to our customer care. The relationship you build between your project manager and your technical trainer(s) will not be replaced but these CTS Software staff members will be working to on-board other valued customers. A handoff to
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			our technical support team is in order to insure you have someone to talk to 24/7/365 with a same day resolution guarantee.
6.a-2	The SDD includes at a minimum: 1. System overview, architecture, and configuration information 2. All onboard and system software and functionality 3. All system interfaces, including data communications and interfaces with other systems 4. All system configurations for all of the participating DROs 5. Performance measures and overall testing and acceptance process	Core	This is understood and acceptable. Please refer to 6.a-1 for details.
6.a-3	The Vendor presents the design documents and related information in initial implementation meetings. The Vendor facilitates a general demonstration of the system identifying each application or module provided under this Contract. The Vendor clearly	Core	This is understood and acceptable. Please refer to 6.a-1 for details.

	articulates to the DROs the decisions required to configure the system or design elements of the system.		
6.a-4	Design review meetings will be held at DRO offices or using approved video conferencing tools and will include an overall System Design Review meeting, followed by detailed reviews for each application or module provided by the Vendor. This includes: 1. Client Management 2. Reservations and Scheduling 3. Dispatching and operations 4. Fare payment 5. Customer applications (e.g., mobile app, phone, website) 6. On-demand services 7. Reporting 8. Integrations 9. Hardware (e.g., mobile data terminal (MDT) or tablets) 10. System support and maintenance	Core	This is understood and acceptable. Please refer to 6.a-1 for details.
6.a-5	The Vendor conducts interactive workshops using demonstration equipment to “walk through” system operation and develop the screens for all user interfaces.	Core	This is understood and acceptable. Please refer to 6.a-1 for details.

6.a-6	The Vendor conducts interactive workshops to demonstrate the system operation's final design, including final screens for user interfaces and customer facing applications.	Core	This is understood and acceptable. Please refer to 6.a-1 for details.
6.a-7	If preferred by the DRO, the Vendor conducts a series of design meetings with the DROs throughout the project implementation rather than conduct the initial implementation meetings. If this is the preferred method, the Vendor must clearly describe the alternative process in the proposal.	Core	This is understood and acceptable. Please refer to 6.a-1 for details.

b.	Testing		
6.b-1	The Vendor provides all labor and materials required for system testing, including but not limited to multiple phone types and sizes across iOS and Android platforms, funding sources, and all support services and facilities required to test the system.	Core	<pre> graph BT A[UNIT TESTING] --> B[INTEGRATION TESTING] B --> C[SYSTEM TESTING] C --> D[ACCEPTANCE TESTING] </pre> User Acceptance Testing (UAT), also known as beta or end-user testing, is defined as testing TripMaster by the user or client to determine whether it can be accepted or not. This is the final testing performed once the functional, system, and regression testing are completed. <i>The main purpose of this testing is to validate TripMaster against the business requirements. This validation is carried out by the end-users who are familiar with the business requirements.</i> <i>We comply and agree with the following criteria</i>

			• <i>Be delivered as proposed</i> • <i>Function as proposed for at least 30-days</i> • <i>Be tested and approved for ADA compliance and accessibility optimization for customer-facing tools by a committee formed by your agency</i> Who Performs UAT? Users or client – The team can be comprised of beta testers or the customer should select UAT members internally from every group of the organization so that every user role can be tested accordingly. 1. Gather the key acceptance criteria. All the key business functionality should get validated, but due to various reasons, including time, it is not practical to do it all. Therefore, a meeting or two with the client or the users who are going to be involved in this testing can give us an idea of how much testing is going to be involved and what aspects are going to be tested. These items will be documented in a way of a checklist as seen on the following page for example. 2. General Import and map existing data Paper-based data collection Local service environment with remote support Web-based, completely hosted environment Off-shelf MDC option Onsite training, quantity TBD
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			Printed and online user support manuals Fully integrated industry-standard GIS 3. Back Office Interface Point & click geocoding of addresses Batch scheduling Trip importing Audit Trail Communications log/archive Printed manifests Browser-based Interactive AVL Fleet messaging "on-the-fly" scheduling 3rd party trip brokering Data auditing tool 4. Driver Interface Real-time turn-by-turn directions Store & forward capability for signal loss Call passenger request Real-time schedule update notifications 5. Passenger Interface Web/app trip requests IVR, TXT/Call alerts Agency account management Vehicle Maintenance 6. Reporting
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			Canned reports Canned NTD form reports Custom report building tool 7. Define the scope of involvement Our involvement would be training the UAT users on how to use TripMaster and be on standby during this testing to make sure that we can help the users in case of any difficulty. Or in some cases, in addition to being on standby and assisting, we might share their responses and record the results or log bugs, etc., while the users perform the actual testing. The primary objectives are: i. To confirm that TripMaster performs business functions as intended per the business requirements or specifications. ii. To confirm that TripMaster is usable from an end-user perspective (operational ease-of-use). iii. To confirm that TripMaster is compliant with regulatory and/or legal requirements.
6.b-2	The Vendor prepares and submits a comprehensive testing plan for review and approval by the DROs.	Core	This is understood and acceptable. Please refer to 6.b-1 for details.
6.b-3	The Vendor documents all tests. The DOR and the Vendor will monitor and sign	Core	This is understood and acceptable. Please refer to 6.b-1 for details.

	off to indicate completion of the tests		
6.b-4	The Vendor provides a comprehensive set of test use cases and testing scripts for the DROs to use to test the system. Testing includes: 1. All features and functions provided under this Contract, configured for the Agencies as determined during design review 2. Testing setup/pre-conditions, step by step instructions to complete the test and expected results for each test 3. Test success/acceptance criteria The Vendor generates sufficient data to thoroughly test the reports provided under this Contract for reporting testing.	Core	This is understood and acceptable. Please refer to 6.b-1 for details.
6.b-5	The Vendor provides the testing use cases to the DROs no later than two (2) weeks prior to the start of testing for review and approval.	Core	This is understood and acceptable. Please refer to 6.b-1 for details.
6.b-6	The Vendor corrects any and all software not passing inspection or testing and retests it at no additional cost to the DRO.	Core	This is understood and acceptable. Please refer to 6.b-1 for details.

6.b-7	The DRO may, at its discretion, assign a DRO representative to witness and or/audit all testing.	Core	This is understood and acceptable. Please refer to 6.b-1 for details.
6.b-8	Prior to the start of any formal testing, the Vendor conducts a “dry-run” review and testing of software components to identify and resolve any issues that arise.	Core	This is understood and acceptable. Please refer to 6.b-1 for details.
6.b-9	The Vendor provides a test environment for the system to fully test all features and functions provided under this Contract. The testing environment will be separate from the development and production environments.	Core	This is understood and acceptable. Please refer to 6.b-1 for details.
6.b-10	The Vendor facilitates and leads three (3) stages of testing: 1. Functional Testing 2. Pilot Testing or Public Beta Testing 3. System Acceptance Testing (SAT)	Core	This is understood and acceptable. Please refer to 6.b-1 for details.
6.b-11	Successful completion of each of the three (3) testing stages will be subject to the approval of the DROs based on the test criteria mentioned in specification 6.2-10.	Core	This is understood and acceptable. Please refer to 6.b-1 for details.

6.b-12	Functional Testing includes comprehensive testing of the system as configured for the DROs. Testing is conducted on all components provided under this Contract. The Vendor completes functional tests for the application which demonstrate and verify all functions provided as part of this Contract, including the review and usability testing of all user-accessible screens and commands.	Core	This is understood and acceptable. Please refer to 6.b-1 for details.
6.b-13	After Functional Testing is successfully completed, Vendor provides a Functional Testing report to the DROs for review and approval before the Vendor proceeds to the next stage of testing.	Core	This is understood and acceptable. Please refer to 6.b-1 for details.
6.b-14	For DROs conducting optional Public Beta Testing, the Vendor facilitates Public Beta Testing of the Mobile App and supports all public beta testers including, but not limited to: 1. Recruiting public beta testers 2. Support beta testers through the testing phase 3. Summary of issues identified	Core	This is understood and acceptable. Please refer to 6.b-1 for details.

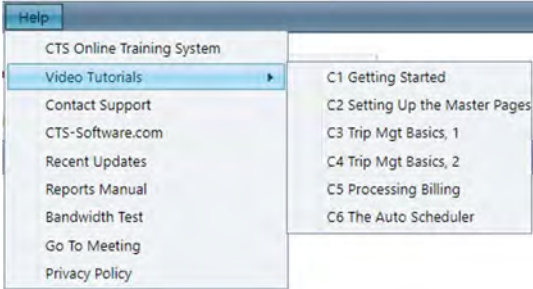
	by beta testers 4. Readiness report for Go-Live		
6.b-15	The Vendor provides a minimum of one (1) week onsite support during public launch.	Core	This is understood and acceptable. However, depending on the scope and size of the project we have found that two (2) weeks of onsite may be necessary.
6.b-16	SAT begins after full public launch of the complete solution for all system components and will continue for 45 days.	Core	This is understood and acceptable
6.b-17	SAT is performed in the production environment with all features and functions provided under this Contract.	Core	This is understood and acceptable. Please refer to 6.b-1 for details.
6.b-18	The Vendor supports all elements of SAT, including, but not limited to, system maintenance, reporting, and customer support.	Core	This is understood and acceptable. Please refer to 6.b-1 for details.
6.b-19	If the applicable performance requirements defined in agreed SLA are not attained during the 45-day	Core	This is understood and acceptable.

	period, the SAT is extended a minimum of 90-days to allow for three consecutive 30-day periods in which the requirements are met.		
6.b-20	The Vendor identifies and implements remedial action at no cost to the DRO if an applicable system component fails to conform to specifications or performance requirements during SAT.	Core	This is understood and acceptable.
6.b-21	During SAT, the DRO and the Vendor meet no less than two (2) times per week to discuss progress, issues, and results. The Vendor provides formal reports on system performance at the end of the 45- day period.	Core	This is understood and acceptable.
6.b-22	The Vendor provides all testing data, reports, and other testing information to the DROs for review and approval within 10 days following the Completion of SAT	Core	This is understood and acceptable.
6.b-23	3 The Vendor is responsible for all system operation and maintenance until the DROs issue approval of SAT.	Core	This is understood and acceptable.

c.	Training and Manuals																										
6.c-1	The Vendor offers comprehensive onsite training to the DROs' staff on all provided hardware and software. Digital copies of user manuals, training materials, and all other system documentation will be made available to the DROs	Core	CTS will provide both onsite training and remote, online training for this proposal. We will conduct a series of five (5) online webinars using Zoom during the initial system setup phases. This process allows for the TripMaster users to become familiar with basic data input, navigation, and overall feel of the software prior to onsite training and go-live. Once onsite, your technical trainer(s) will work directly with the licensee's project manager and all other staff by what is known as "job shadowing". We believe in understanding your operation and fitting the software into your world rather than you having to fit into the software. We are not here to change your processes but rather enhance them.																								
6.c-2	The Vendor keeps all training materials current based on current modifications and releases. The date and version shall be tracked on all training materials.	Core	This is understood and acceptable.																								
6.c-3	The Vendor provides training courses for at least the following positions: 1. Scheduler 2. Dispatcher 3. Administrative Staff 4. DRO Training Instructors (Train the Trainer) 5. DROs 6. Customer Service Representatives 7. Transportation Supervisors	Core	<table><tr><td>Implementation Plan</td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td>Tasks</td><td>Day</td><td>Duration (days)</td></tr><tr><td>Signed Agreement</td><td>1</td><td>1</td></tr><tr><td>Kickoff Call</td><td>3</td><td>1</td></tr><tr><td>Data Conversion and Access to TripMaster</td><td>3</td><td>3</td></tr><tr><td>Access Provided to Online Training Portal</td><td>3</td><td>3</td></tr><tr><td>Testing of Access</td><td>4</td><td>2</td></tr></table>	Implementation Plan						Tasks	Day	Duration (days)	Signed Agreement	1	1	Kickoff Call	3	1	Data Conversion and Access to TripMaster	3	3	Access Provided to Online Training Portal	3	3	Testing of Access	4	2
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	and Managers 8. System Administrator/System Engineer (IT Staff) 9. Database Administrator (IT Staff)		<table><tr><td>Complete Getting Started & Master Pages</td><td>6</td><td>3</td></tr><tr><td>Master Pages Training Session 1</td><td>9</td><td>1</td></tr><tr><td>Complete Subscription & Daily Schedule</td><td>10</td><td>3</td></tr><tr><td>Subscription & Daily Schedule Training Session 2</td><td>13</td><td>1</td></tr><tr><td>Tablets Ordered Deadline</td><td>13</td><td>1</td></tr><tr><td>Install ParaScope On Tablets</td><td>13</td><td>3</td></tr><tr><td>Complete Remaining Online Training Portal</td><td>14</td><td>7</td></tr><tr><td>One-On-One Training Session 3</td><td>16</td><td>1</td></tr><tr><td>One-On-One Training Session 4</td><td>19</td><td>1</td></tr><tr><td>All Drivers Watched Training Video</td><td>19</td><td>6</td></tr><tr><td>Testing Period</td><td>19</td><td>10</td></tr><tr><td>Errors, Corrections, and Fixes</td><td>19</td><td>10</td></tr><tr><td>Final Testing</td><td>23</td><td>6</td></tr><tr><td>One-On-One Training Session 5</td><td>24</td><td>1</td></tr><tr><td>Onsite Training / Go Live / Week 1</td><td>27</td><td>5</td></tr><tr><td>Acceptance</td><td>30</td><td>1</td></tr><tr><td>Onsite Training / Week 2 (optional)</td><td>30</td><td>4</td></tr></table>	Complete Getting Started & Master Pages	6	3	Master Pages Training Session 1	9	1	Complete Subscription & Daily Schedule	10	3	Subscription & Daily Schedule Training Session 2	13	1	Tablets Ordered Deadline	13	1	Install ParaScope On Tablets	13	3	Complete Remaining Online Training Portal	14	7	One-On-One Training Session 3	16	1	One-On-One Training Session 4	19	1	All Drivers Watched Training Video	19	6	Testing Period	19	10	Errors, Corrections, and Fixes	19	10	Final Testing	23	6	One-On-One Training Session 5	24	1	Onsite Training / Go Live / Week 1	27	5	Acceptance	30	1	Onsite Training / Week 2 (optional)	30	4
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6.c-4	The DROs will provide employee list and number of staff attending above training sessions during Training Plan review.	Core	This is understood and acceptable.																																																			
6.c-5	The Vendor conducts training prior to Pilot Testing for the selected employees participating in Pilot Testing. All DROs must be trained before SAT.	Core	This is understood and acceptable.																																																			
6.c-6	The Vendor provides additional training and updated training materials to the DROs prior to SAT at	Core	Training continues after go-live with a customer-wide free monthly training webinar as well as online training resources that are available at any time. We																																																			

	no additional cost under the following circumstances: 1. If major modifications are made to the system after the initial training due to system upgrades or changes made under warranty or 2. If SAT occurs at least six (6) months after the completion of training, due to delays for which the Vendor is responsible		also have a communication platform that provides in-app and emails for important announcements such as the release of new features.
6.c-7	During the System Maintenance Agreement (SMA) period, the Vendor provides additional training to DRO staff at no additional cost. Additional training may include pre-recorded sessions, however, live support from the Vendor is provided to answer any follow up questions from trainees	Core	This is understood and acceptable.
6.c-8	The Vendor provides an online-based training module (on-demand version) that is built into the base system and allows for future training of the DROs.	Core	TripMaster has lots of other training material that is always available to end users for retraining and new hires. From video tutorials to a help tab with irods, there is education and a knowledge base at your fingertips.

			 
6.c-9	The Vendor provides a Training Plan, including objectives, schedule, and course outline to the DROs for review at least four (4) weeks in advance of the start of training. The Training Plan shall include: 1. Total number of onsite training session(s) proposed 2. Total number of web-based training session(s) proposed 3. List of training course(s) 4. Number of classes per course 5. Maximum number of attendees per class 6. Preferred day and duration of sessions	Core	This is understood and acceptable and will be unique to each individual DRO.

6.c-10	The Training Plan shall be approved by the DROs prior to the start of any trainings.	Core	This is understood and acceptable.
6.c-11	The Vendor furnishes all tools, equipment, and training aids to conduct training courses during the training course.	Core	Onsite training is usually performed at the DRO's physical location. Although we agree to furnish all necessary tools, equipment, and training aids, there are also necessary items such as internet, computers, space, etc. that will be necessary to receive from the DRO.
6.c-12	The Vendor provides an instructor with a thorough knowledge and understanding of the system. In addition, the instructor has a familiarity within transit and will effectively leads students in a classroom setting	Core	TripMaster's approach to onsite, in-person training is slightly different. Once onsite, your technical trainer(s) will work directly with the licensee's project manager and all other staff by what is known as "job shadowing". We believe in understanding your operation and fitting the software in to your world rather than you having to fit in to the software. What this means, is that we work alongside of staff in their environment so we gain knowledge of their day-to-day operation rather than sitting down in a classroom environment where real case scenarios are not observed or practiced. In the situation an agency requests classroom style training we can accommodate but it is not recommend.

7. Ongoing System Operations and Maintenance

a.	System Maintenance Agreement (SMA)		
7.a-1	Provide a SMA that covers the operations and maintenance of the system for a period of two (2) years plus three (3) one- (1-) year options for a total of five (5) years.	Core	This is understood and acceptable.
7.a-2	During the SMA, the Vendor retains responsibility for the operations and maintenance of the services, applications and any hardware provided .	Core	This is understood and acceptable.
7.a-3	The Vendor provides comprehensive testing during the SMA for any significant changes to the system. The determination of the significance of the change will be collaboratively determined between the Vendor and the DROs' representatives	Core	This is understood and acceptable.
7.a-4	The Vendor provides at least five (5) business days' notice to the DROs before deploying system updates to Production, except when	Core	This is understood and acceptable. All product upgrades, new releases, patches, etc. will be granted to the licensee throughout the entire contract period. CTS performs at least monthly updates to

	critical updates require immediate action		TripMaster, which are published to all customers after thorough testing. These updates include performance enhancements, technology advancements, customer requests, new features, and much more. They are always provided at no additional cost.
7.a-5	The Vendor ensures the system is up to date with OS level security updates and patches.	Core	This is understood and acceptable. CTS Software will ensure that appropriate high-level security measures are taken to protect the data's integrity and accuracy.
7.a-6	The Vendor implements Change Management Processes for software and application releases.	Core	This is understood and acceptable.
7.a-7	The Vendor provides maintenance support when new OS versions are released and deployed to the system	Core	For as long as you have any form of a maintenance contract with us all the software applications and services we are proposing will be continuously updated. CTS is continuously updating TripMaster to the latest and current version, and we will continuously introduce new and enhanced features with every new software release.
7.a-8	The Vendor releases new versions of the Mobile Apps, including obtaining approval through app store deployment processes	Core	This is understood and acceptable.
7.a-9	The Vendor maintains the app store pages and metadata for the Mobile Apps and configuring the	Core	This is understood and acceptable.

	application for free downloadable.		
7.a-10	The Vendor monitors the System for security threats and vulnerabilities and notifies the DROs immediately in the event of a suspected breach of the System for DROs, rider(s), or identified fraudulent use.	Core	Maintaining the integrity of customers' data is critical. All databases are single tenant, meaning they are specific to each transportation provider. Incremental backups are taken every 15 minutes, full backups are taken hourly and all backups are stored for several months. Referential integrity and column indexes are maintained by SQL Azure and nightly index optimization processes. We undergo a third-party HIPAA assessment annually to ensure our security and privacy measures meet or exceed those required by HIPAA. This year's assessment concluded in July and we again received our HIPAA certification and scored in the top 5% of all customers evaluated by Avertium, an award-winning and nationally recognized leader in the security space. We would be happy to share a copy of our HIPAA policies and/or audit results should you wish to read them.
7.a-11	The Vendor provides a phone number and e-mail account for the reporting of software defects or malfunctions, and system outages, 24-hours a day, 7-days a week.	Core	To best serve CTS customer's needs, there are multiple ways CTS customers to contact Technical Support to help resolve issues, provide feature requests, or simply ask questions. Our support staff is available 24/7/365 days a year via a toll-free number and you can also log issues with our support team by emailing the "Support Helpdesk". All assets, tickets raised, issues, and communication with staff can be tracked through a web-accessible customer service portal. You will be sent frequent updates on ticket issues you have opened within our portal. Additionally, we can guarantee a very rapid response to an initial request.

7.a-12	During the SMA, the Vendor responds to reports of system outages within 15-minutes of notification, 24-hours a day, 7-days a week. A fully qualified service representative arrives onsite within 24- hours after being contacted by the DROs if it is determined that a physical presence is needed to resolve the identified issue.	Core	Severity	Target Response	Target Resolution	Criteria
			Critical	15 minutes	1 hour	Customer's production system is down. Product is unusable with no workaround.
			High	1 hour	24 hours	Major feature/function failure. Restricted operations with available workaround.
			Medium	1 hour	14 business days	Minor feature/function failure. Product does not operate as designed, minor impact on usage, available workaround.
			Low	1 hour	25 days	Minor issue. Documentation, general information, enhancement request.
7.a-13	During the SMA, the Vendor responds to a report of any software defect or malfunction within two (2) hours of notification. A fully qualified service representative arrives onsite within 24-hours after being contacted by the DROs if it is determined that a physical presence is needed to resolve the identified issue.	Core	This is understood and acceptable.			

7.a-14	The Vendor attempts to fix software problems impacting revenue collection within three (3) hours of being reported.	Core	This is understood and acceptable.
7.a-15	If the software problem impacts revenue collection, and the repair will take longer than three (3) hours, the Vendor reports the cause of the problem as soon as it becomes evident and provides status reports at least every four (4) hours thereafter, until the problem is corrected, or a workaround is established.	Core	This is understood and acceptable.
7.a-16	The Vendor submits to the DROs, no less than monthly, a notification of planned modifications and updates to the system, upgrade schedules, and a calendar of key dates for system changes for the coming three (3) months and beyond.	Core	All product upgrades, new releases, patches, etc. will be granted to the licensee throughout the entire contract period. CTS performs at least monthly updates to TripMaster, which are published to all customers after thorough testing. These updates include performance enhancements, technology advancements, customer requests, new features, and much more. They are always provided at no additional cost. A “Recent Updates” menu option within TripMaster links to a web page with detailed information about changes made in each release. In addition, CTS emails all customers before and after each release with general information about the update.

b.	Service Level Agreement (SLA) And Key Performance Indications (KPIs)		
7.b-1	The system completes reports within five (5) minutes of initiating the generation or creation of a standard or ad-hoc report.	Core	TripMaster meets and/or exceeds this specification.
7.b-2	The maximum average response time for all dispatch functions averages less than twenty (20) seconds for up to twenty (20) active workstations using the hardware and software in the Specification.	Core	TripMaster meets and/or exceeds this specification.
7.b-3	The system supports each DRO's rider base within the service area without any appreciable degradation of overall system performance.	Core	TripMaster meets and/or exceeds this specification.
7.b-4	The system schedules a full day's trips in less than thirty (30) minutes.	Core	TripMaster meets and/or exceeds this specification.
7.b.5	System accuracy is determined based on any incident where a device or backoffice-generated transaction is recorded incorrectly within the associated system. See below:	Core	This is understood and acceptable.

c.	Issue Resolution and Remedies		
7.c-1	The Vendor and the DRO will establish an Issue Resolution Team (IRT) for each participating DRO as part of the ongoing operations and maintenance. The IRT will be established prior to Pilot Testing/Public Beta Testing and evaluates the system and back-office issues throughout the term of the Contract.	Core	<pre> graph BT A[UNIT TESTING] --> B[INTEGRATION TESTING] B --> C[SYSTEM TESTING] C --> D[ACCEPTANCE TESTING] E[SOFTWARE TESTING LEVELS] --- A E --- B E --- C </pre> User Acceptance Testing (UAT), also known as beta or end-user testing, is defined as testing TripMaster by the user or client to determine whether it can be accepted or not. This is the final testing performed once the functional, system, and regression testing are completed. The main purpose of this testing is to validate TripMaster against the business requirements. This validation is carried out by the end-users who are familiar with the business requirements. We comply and agree with the following criteria

			• <i>Be delivered as proposed</i> • <i>Function as proposed for at least 30-days</i> • <i>Be tested and approved for ADA compliance and accessibility optimization for customer-facing tools by a committee formed by your agency</i> Who Performs UAT? Users or client – The team can be comprised of beta testers or the customer should select UAT members internally from every group of the organization so that every user role can be tested accordingly. 8. Gather the key acceptance criteria. All the key business functionality should get validated, but due to various reasons, including time, it is not practical to do it all. Therefore, a meeting or two with the client or the users who are going to be involved in this testing can give us an idea of how much testing is going to be involved and what aspects are going to be tested. These items will be documented in a way of a checklist as seen on the following page for example. 9. General Import and map existing data Paper-based data collection Local service environment with remote support Web-based, completely hosted environment Off-shelf MDC option Onsite training, quantity TBD
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			Printed and online user support manuals Fully integrated industry-standard GIS 10. Back Office Interface Point & click geocoding of addresses Batch scheduling Trip importing Audit Trail Communications log/archive Printed manifests Browser-based Interactive AVL Fleet messaging "on-the-fly" scheduling 3rd party trip brokering Data auditing tool 11. Driver Interface Real-time turn-by-turn directions Store & forward capability for signal loss Call passenger request Real-time schedule update notifications 12. Passenger Interface Web/app trip requests IVR, TXT/Call alerts Agency account management Vehicle Maintenance 13. Reporting
--	--	--	--

			Canned reports Canned NTD form reports Custom report building tool 14. Define the scope of involvement Our involvement would be training the UAT users on how to use TripMaster and be on standby during this testing to make sure that we can help the users in case of any difficulty. Or in some cases, in addition to being on standby and assisting, we might share their responses and record the results or log bugs, etc., while the users perform the actual testing. The primary objectives are: iv. To confirm that TripMaster performs business functions as intended per the business requirements or specifications. v. To confirm that TripMaster is usable from an end-user perspective (operational ease-of-use). vi. To confirm that TripMaster is compliant with regulatory and/or legal requirements.
7.c-2	The intent of the IRT is to create a clear and consistent process to settle disputes based on the requirements and facilitate resolution for issues related to the Vendor-provided system.	Core	This is understood and acceptable. Please see 7.c-1 for additional details.

	The IRT will use best judgment to collaboratively address scenarios where the requirements are silent or unclear. If the IRT cannot resolve a decision or dispute collaboratively, the DRO representative will make the final and binding decisions for any dispute that remains open by the IRT after a period of 10 business days		
7.c-3	The IRT shall evaluate failures and determine the severity and remedies assessed against the monthly SMA payment.	Core	This is understood and acceptable. Please see 7.c-1 for additional details.
7.c-4	At a minimum, critical failures shall include incidents that produce a major or substantial business impact or impact to normal operations, such as: 1. Non-trivial loss of revenue or expense 2. Significant negative customer experience 3. Limited or loss of access to a production application 4. System operation at a degraded level, such that normal business operations cannot be conducted. 5. Application	Core	This is understood and acceptable.

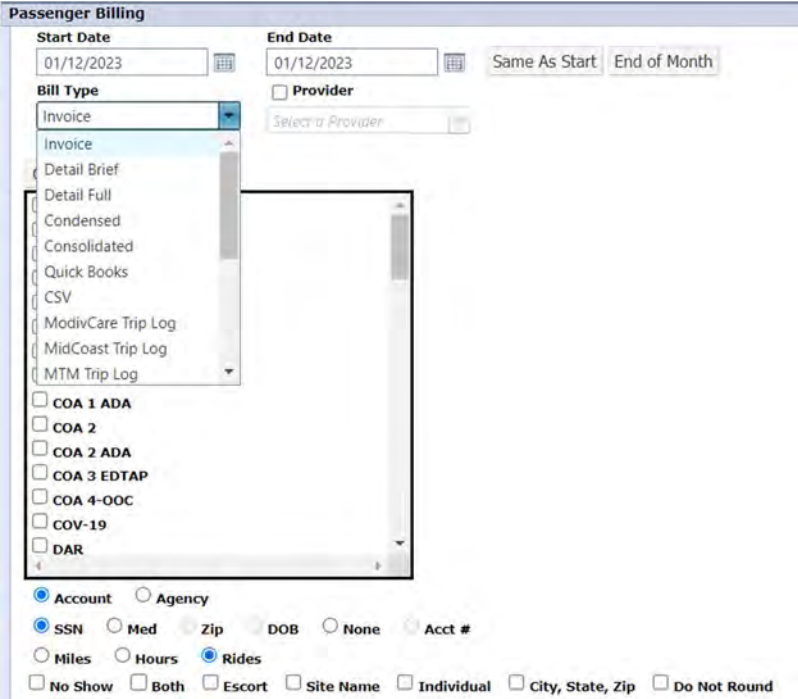
	or system experiencing continual or repeated issues		
7.c-5	A credit to the DRO's monthly subscription service payment will be assessed for a failure to meet any KPIs identified as having an associated credit.	Core	This is understood and acceptable.
7.c-6	A failure will result in the percentage in the "Credit Assessed" column being applied to the full amount of the operations payment identified in the "Payment Impacted" column for the month of measurement.	Core	This is understood and acceptable.
7.c-7	A failure to meet the same KPI for two (2) or more months in a row will constitute a persistent failure and result in a multiplier being applied to the credit percentage.	Core	This is understood and acceptable..
7.c-8	The credit multiplier will increase by a factor of one for each month that a KPI is not met (e.g., if a KPI is not met two (2) months in a row, the credit will be doubled in the second month; if a KPI is not met three (3) months in a row,	Core	This is understood and acceptable..

	the credit will be tripled in the third month).																													
7.c-9	Successfully meeting a KPI will end a persistent failure and reset the credit multiplier	Core	This is understood and acceptable.																											
7.c-10	The total credit applied to an SMA payment will be capped at 25% of the full amount of that payment in a calendar month. Credits will not be carried over from month to month.	Core	This is understood and acceptable.																											
7.c-11	The Vendor reports on credits in the system performance reports and deducts credits directly from any invoices submitted to the DROs	Core	This is understood and acceptable.																											
7.c-12	System accuracy is determined based on any incident where a device or back office-generated transaction is recorded incorrectly within the associated system. See below the chart below for requirements and remedies for the devices. <table><tr><th>Issue Resolution Time (IRT) Specifications</th><th>Feature</th><th>Response</th></tr><tr><th>Device</th><th>Requirement</th><th>Measurement Period</th></tr><tr><td>Client Overhead</td><td>< 2 incidents</td><td>Calendar Month</td></tr><tr><td>Reservations</td><td>< 2 incidents</td><td>Calendar Month</td></tr><tr><td>Departments</td><td>< 2 incidents</td><td>Calendar Month</td></tr><tr><td>Scheduling</td><td>< 2 incidents</td><td>Calendar Month</td></tr><tr><td>Order display</td><td>< 2 incidents</td><td>Calendar Month</td></tr><tr><td>Billing, Pricing and Integrated payment</td><td>< 2 incidents</td><td>Calendar Month</td></tr><tr><td>Customer applications (Mobile application and website)</td><td>< 2 incidents</td><td>Calendar Month</td></tr></table>	Issue Resolution Time (IRT) Specifications	Feature	Response	Device	Requirement	Measurement Period	Client Overhead	< 2 incidents	Calendar Month	Reservations	< 2 incidents	Calendar Month	Departments	< 2 incidents	Calendar Month	Scheduling	< 2 incidents	Calendar Month	Order display	< 2 incidents	Calendar Month	Billing, Pricing and Integrated payment	< 2 incidents	Calendar Month	Customer applications (Mobile application and website)	< 2 incidents	Calendar Month	Core	This is understood and acceptable.
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Customer applications (Mobile application and website)	< 2 incidents	Calendar Month																												

8. Priced Options			
a.	Hardware (Option)		
	Ruggedized Tablets	TripMaster recommends the use of commercial grade tablets (Andriod or IOS) protected by ruggedized cases purchased through the DRO’s local cellular provider of choice.	
	Integrated Payment Systems	TripMaster has included our integrated payment system which accepts credit card payments through the passenger application (TripPortal) or manual processing over the phone between clients and DRO staff. No additional hardware is needed for this module.	
	Closed-Circuit Television (CCTV)	TripMaster is proposing our industry leading Camera Solution (TripView).	
	Peripheral Components	TripMaster does work with all peripheral components.	
b.	Payment Hardware (Option)		
8.b-1	The Vendor is responsible for settlement of funds, reconciliation accounting, and the DROs’ apportionment.	Option	This is automated through a partner, Stax.

8.b-2	The Vendor reconciles refunds, chargebacks, and adjustments.	Option	This is automated through our partner, Stax.
8.b-3	The system secures transmission and storage of Personal Identifiable Information (PII) acquired and used by the system for payment integration and processing.	Option	Our partner, Stax, takes security seriously for all Partners, sub-merchants, and cardholders. As part of Stax's commitment to its Partners, all of the integrated payments technology is backed by a team of experts. Stax is also a payment facilitator, meaning sub-merchants can be onboarded more quickly with enhanced security for PCI compliance. Stax only uses PCI and Federal Information Processing (FIP) approved protocols, including exclusive use of the TLS1.3. This layered approach to security means sub-merchants can accept and manage payments in one of the industry's most secure environments.
8.b-4	Confidential and sensitive data is encrypted and transmitted securely throughout the system.	Option	Our partner, Stax, is a Level 1 PCI Service provider. Level 1 is the highest level of PCI compliance, and protecting sensitive data is a top priority. Level 1 service providers must attain a yearly Report on Compliance from a Qualified Security Assessor (QSA) or Internal Security Assessor after an onsite audit.
8.b-5	Customers may add, modify, and delete payment methods to their customer account.	Option	TripMaster meets and/or exceeds this specification.
8.b-6	Customers may utilize all major payment card brands (i.e., Visa, Mastercard, American Express, and Discover) to purchase fare.	Option	TripMaster's TripPay solution is currently available for passengers to pay for the trip as soon as they book the trip online or through the TripPortal mobile app.

	This includes the use of Transit Benefit credit/debit cards, pre-paid transit credit/debit cards, and payment cards issued for government-funded or sponsored funds for low-income riders to purchase fare.		The other options is for a licensed user at the DRO to take the information from the passenger over the phone and process payment manually.
8.b-7	The Vendor prepares financial reports that include daily, weekly, monthly, quarterly, and annual sales and revenue for the DROs.	Option	The billing interface is directly related to your ridership and calculated accordingly. Once a day has successfully been recorded in the database, creating bills and invoices is a simple click of the button. The TripMaster provides the licensee with the ability to customize invoices and choose from several different formats. From a basic invoice for a quick mail out to a detailed full report for a complete breakdown of each ride, the billing component of this program will perform up to expectations.

			 Additionally TripMaster offers full event tracking, so you can pull reports on which user changed which field at any point in the process. These reports are permanently stored along with fare and billing data.
8.b-8	The system allows for multiple funding sources per rider and at least one funding source per rider per trip. Describe how funding data are stored and how funding sources are selected or automatically applied to trips.	Option	CTS has designed a section within the “Master Files” to create as many accounts or fare types as needed. The licensee will create billing accounts related to billing per mile, per ride, per hour, or any combination of the three. There are several additional specifications that can be adjusted to any account created. Some

examples of these specifications are shared mile, shared trip, direct mile, and additional charges that may apply to a wheelchair, wait time, escorts, or fares.

BILLING INFORMATION

Method

Ride

Direct Ride

Shared Route

Account Shared Route

Account Day Rate

Shared Mileage Calculations

Shared Hour Calculations

Route Start - Route End

First Pickup - Last Dropoff

First Pickup - Route End

Route Start - Route End

First Pickup - Last Dropoff

Base

Wheelchair

Stretcher

Extra

Share Base

\$0.00

\$0.00

\$0.00

\$0.00

Per Mile

Min Miles

Max Miles

Provide Free Miles

\$2.00

0.00

0.00

Per Hour

Hourly Wait Rate

\$0.00

\$25.00

No-Show

None

Bill as Passenger

Flat Charge

Fare

None

Additional Fare Charge

Deduct Fare Collected

Escort

None

Bill as Passenger

Flat Charge

Minimum Charge

Maximum Charge

Add BZone Charge

Allow Ride Charge Adjustment

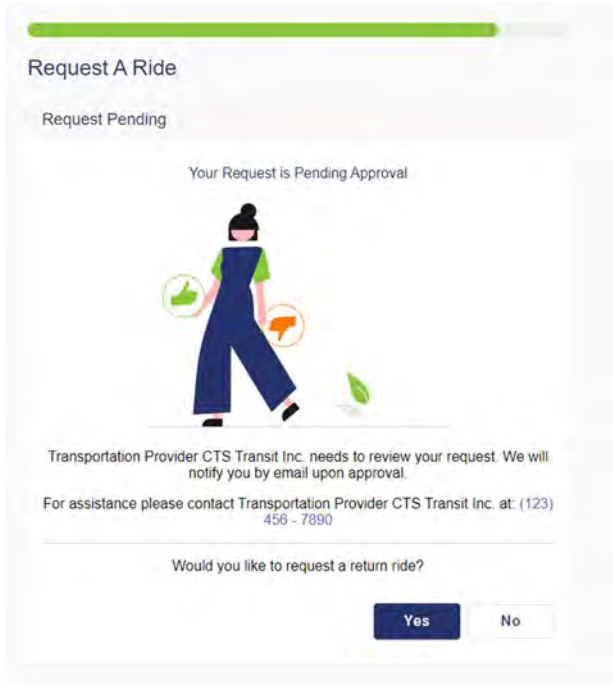
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\$0.00

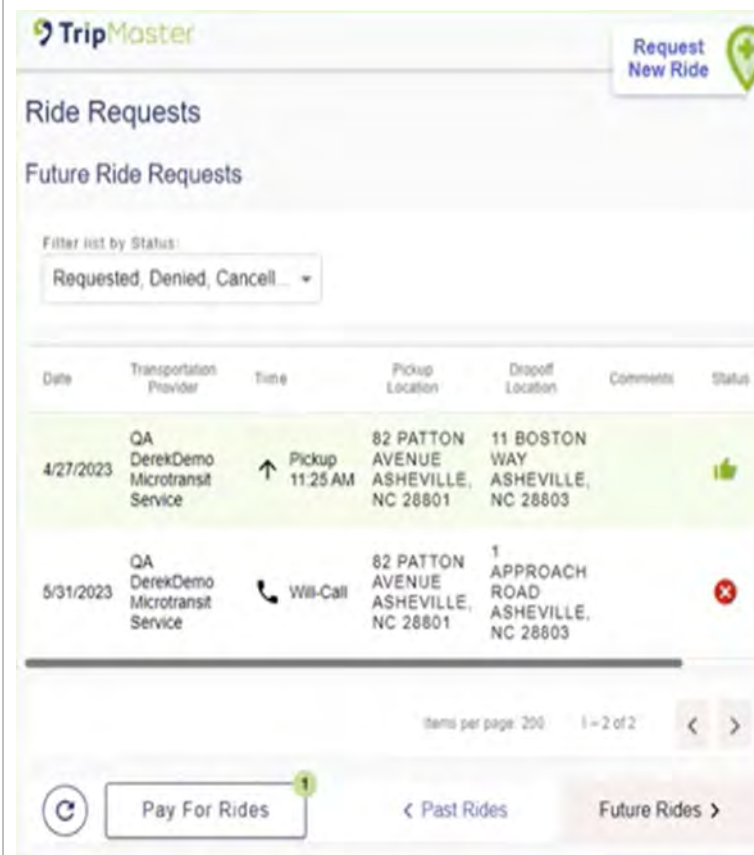
When booking a trip, the end-user will select the appropriate billing code for that particular reservation. The billing codes the passenger is eligible to be transported under will be displayed from a drop-down window. If there is a new eligible code that has not been applied to this passenger, the end-user may update that passenger's record directly from the reservation screen without the need to navigate to another screen.

c.	Onboard Hardware, Data Communications, and Installation (Option)		
8.c-1	The Vendor provides driver displays (tablets) and all associated mounting hardware, cables, and communications components. All Vendorprovided equipment is consistent across the fleet, allows staff to easily swap equipment (including mounting hardware and devices), and includes adequate data communications.	Option	TripMaster recommends the use of commercial grade tablets (Andriod or IOS) protected by ruggedized cases purchased through the DRO's local cellular provider of choice.
8.c-2	Vendor installs all onboard equipment through close collaboration with the DROs.	Option	TripMaster recommends the use of commercial grade tablets (Andriod or IOS) protected by ruggedized cases purchased through the DRO's local cellular provider of choice.
8.c-3	The driver display mount complies with US heavy duty vehicle Society of Automotive Engineers (SAE) J1455 standard.	Option	TripMaster recommends the use of heavy duty display mounts of the DRO's choice.

8.c-4	The driver display is a ruggedized device suitable for operations in a transit environment.	Option	TripMaster recommends the use of commercial grade tablets (Andriod or IOS) protected by ruggedized cases purchased through the DRO's local cellular provider of choice.
d.	On-Demand Trips (option)		
8.d-1	The system supports on-demand scheduling, where trips can be requested the same day. Ondemand scheduling does not require advance reservation.	Option	TripMaster meets and/or exceeds this specification.
8.d-2	The system permits trip booking while transit personnel are on the phone with the customer. The System processes both subscription trips (standing-order) and demand response trips	Option	Booking trips in the software is one of the most critical aspects of the system, and because of that we have gone to great lengths to make this process quick and easy for the end users. Scheduling both subscription and demand response paratransit door-to-door trips is a primary functionality of the software and can be completed while personnel are on the phone. The user-friendly system assists schedulers/call takers with the ability to process a reservation without closing their current working screen. The system allows the Agency to create same day trip orders and future trip orders up to and including an infinite future date. Trip Master trip booking screen allows the end user to document any notes related to the reservation which will be displayed on the drivers' manifest.
8.d-3	The system processes, schedules, and dispatches same day trip orders without the need for manual	Option	TripMaster will automatically run our quick-seat feature for requested rides. Rides will either be requested, scheduled, or denied based on driver availability,

	intervention from dispatch staff.		autoscheduling parameters, service area, and more. When possible TripMaster will schedule the ride directly to a driver manifest, alerting the driver if they're already out on the road for a same-day booking, and keeping the rider in the loop with any scheduling changes. 
8.d-4	The system supports on-demand or scheduled trip orders through the mobile application and customer website.	Option	TripMaster offers the TripPortal rider application. This online tool cuts down on the need to take reservations over the phone. TripPortal allows riders to easily self-serve by managing their ride requests from a computer or smartphone. The TripPortal app is compatible with both iOS and Android platforms. Riders can download this app from the Google play store or the Apple App store, which gives

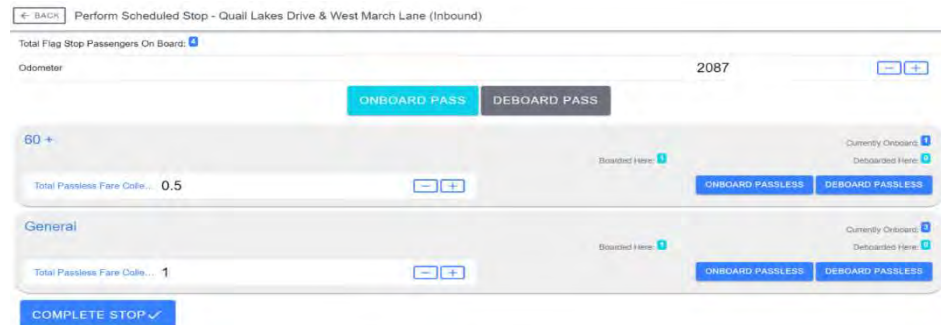
riders access to use an intuitive, one-page wizard to enter the date, time, and places they want to go. Riders can also check their reservation status to see if it is pending, accepted, or rejected and a rejection reason. They can also review the scheduled status of their ride and pay for trips through this app. Additionally this app is available as an online tool for those without a smart phone.



8.d-5	The system differentiates between ADA and ondemand trips for reporting purposes.	Option	TripMaster meets and/or exceed this specification.
e.	Fixed Route Scheduling (option)		
8.d-1	Describe in detail any fixed route and deviated fixed-route scheduling solutions supported by the solution, including: 1. Features and functions of the system 2. Customer facing tools such as real-time arrivals or trip planning 3. Integration with demand-response trip scheduling 4. Integration with other solutions	Option	TripMaster's fixed route/deviated fixed route functionality has been developed in-house and is embedded within one program. This is a very unique setup with transit software but we discovered the need and have been able to incorporate everything together across both TripMaster and the driver application ParaScope. One software to manage all your current needs and future business objectives. Once a driver logs into ParaScope, their schedule for the day appears. Whether they are assigned to a route that has GTFS Blocks or a route that is doing demand response reservations, the option to "Perform Flag Stop" can be available and is customizable per route. The image below demonstrates the view for a driver with the GTFS Block selected. You will notice Scheduled Stop times with their on-time performance displayed in real-time. You will also see the ability for the driver to perform a flag stop at any time.



Below you will notice that there are different passenger types (60+ and General) that have different fares. Passenger types are customized by your agency and different rates are applied based on your rate structure. Also showing are the total passengers on board as well as how many the driver has selected for this stop.



Additionally, our sister company, Passio Technologies is brought in for a much more sophisticated, integrated, and hardware component for Fixed Route. The scheduler can then review the schedule, make any manual adjustments, change

			preference parameters, and run the optimization again to produce additional scenarios. These can then be compared with previously saved scenarios by reviewing our predefined KPIs such as the total cost of the schedule, vehicle efficiency, crew efficiency etc. Passio supplies: • Passio GO – Fixed Route Passenger Facing Application • Automated Passenger Counters • Automatic Voice Announcements • Mobile Wi-Fi • Fixed Route NTD Reporting • Fixed Route Passenger Facing LED Signs SmartSense • Fixed Route Text ETA • Headway Sign TSignX • LEDx Sign Integration
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f.	CCTV (Option)		
8.f-1	Describe if the solution provides enhanced integrations with CCTV solutions. This includes the ability to trigger events from the driver display or dispatchers to either tag video recordings or allow dispatchers to view video directly from the dispatch screen.	Option	TripView is an event-based video solution using cameras and video recorders in the vehicle and the LTE network to upload video clips to a cloud-based platform in real-time. TripView uses artificial intelligence for collision avoidance and driver monitoring. Video is stored in local memory and is overwritten as new video is recorded. GPS tracking is also integrated in the solution. TripView includes the cloud-based DMP Portal which provides access to automatically uploaded video, live video streaming, video search, driver tagged and trigger-based alerts for events as well as GPS tracking.
8.f-2	Describe CCTV systems that are included or offered from the scheduling software provider.	Option	TripView Features • Integrated DVR/Camera/LTE/GPS module with 2 integrated camera views (forward road and driver/compartament facing) with Artificial Intelligence-based Driver Events and Real-Time Collision Avoidance functions. - o Transportation grade system designed and tested for use in commercial/government vehicles. - o Expandable to 4 total cameras. o Night Vision for internal cameras. o Resolution up to 1080P. - o Integrated Audio Recording.

			- o 512GB Memory with loop recording. DVR automatically overwrites the previous video on a first-in/firstout basis. - o Driver “panic button” for initiating video uploads and events. - o Events upload 10-second clips. o Ability to configure Artificial Intelligence (AI) events including: ▪ AI Driver Cell Phone use. ▪ AI Driver Fatigue/Yawning. ▪ AI Seat Belt Use. ▪ AI Other Distracted Activity. o Collision Avoidance (CA) Events with audible real-time “coaching” driver. ▪ CA Unsafe Following Distance. ▪ CA Collision Warning. - o Video Clips include displayed Date, Time, Speed & Location. • Cloud-Based TripView DMP Monitoring Platform Functions. - o Full GPS tracking. ▪ Current Location and Status. ▪ Vehicle Location History. ▪ Events Tab for accessing events in platform.
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			▪ Group Management & Permissions. ▪ Fleet Safety Scorecard. - o Send Alerts by Text and Email for device-generated events (Panic button, AI, CA). - o Platform Based Events (video not uploaded but can be requested) including: ▪ Posted Speed Limit Violations. ▪ Excessive Idling. ▪ Geofence-based events. - o Full reporting features with multiple report templates and subscriptions for auto-delivery of reports by email. - o Media Functions ▪ Live Stream capability to see current video from online vehicles. ▪ Uploaded video clips are retained on platform for 90 days. ▪ Video downloads as MP4 files for local storage. ▪ Search for automatically uploaded videos by date recorded or requested. ▪ Request Video from DVR Memory. • By Date/Time. • From Vehicle History.
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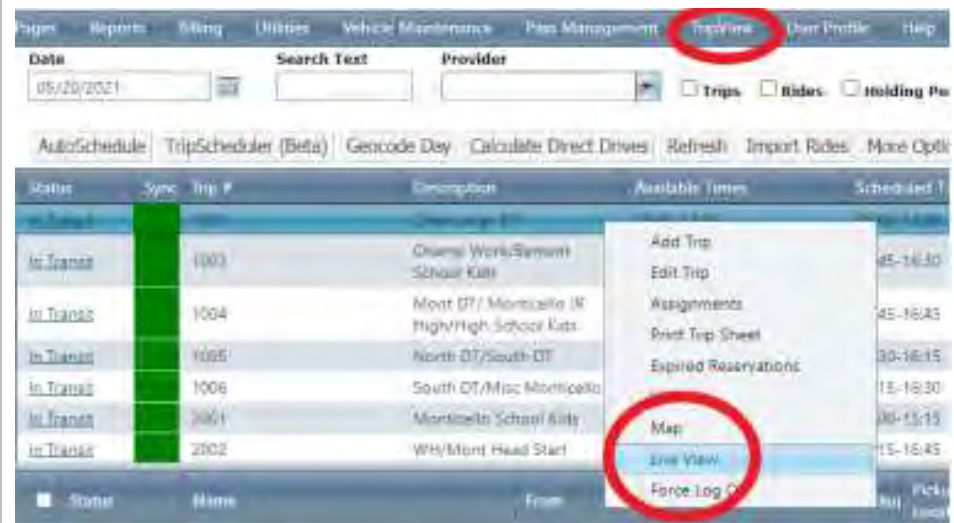
- Offline video retrieval & review.

o Ability to pull memory from DVR.

o Desktop viewing and analysis software for reviewing all video on DVR with functions including:

- Search by date.
- Fast Forward at various speeds.
- Redaction.

- Integration with CTS/TripMaster



CTS is proposing our integrated Bus Video System, TripView. We have taken safety to new heights when it comes to dispatching software. The interface

			between TripMaster and the TripView camera solution is one of a kind by embedding access to each vehicle's live camera view right within TripMaster's daily schedule. Right-click on a vehicle, select "live view" and the live camera feed for the vehicle appears. The presence of a driver panic button connected to the cameras gave us the opportunity to innovate with added safety. Once the driver pushes the panic button, a notification/critical message appears on the daily schedule within TripMaster, alerting staff that the driver has pushed the panic button. A hyperlink to view the video to get involved to make sure proper measures are taken and taken quickly.
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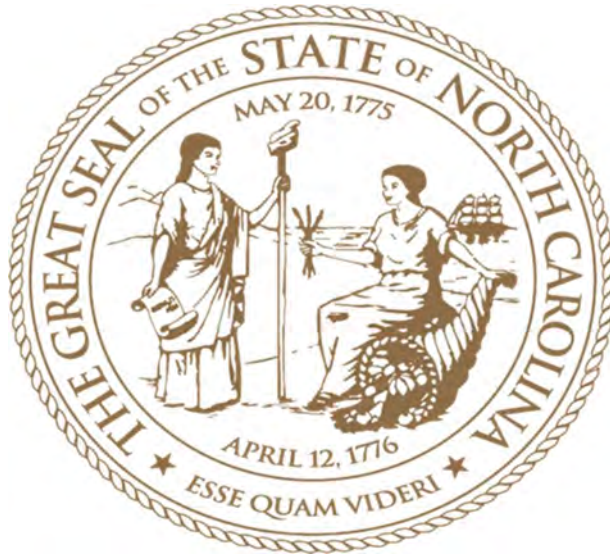
9. Project Management Specifications		
a.	Project Deliverables Specifications	
PM 1	Project Management Documentation A. Project Schedule and Approach B. Change Management Plan C. Engineering Change Requests D. QA/QC Plan E. Master Issues List (MIL) F. Transition Plan G. Design Review Plan H. Testing Plan I. Training Plan	Please refer to the Project Management Section on pages 221-222.
PM 2	A. Design - Representative Examples System overview and architecture design document B. System design documents including all applications and integrations included as part of this Contract	Please refer to the Architecture Diagrams section on pages 208-209.
PM 3	Testing A. Comprehensive testing use-cases and scripts	Please refer to the Quality Assurance and Testing section on pages 309-311.
PM 4	Training and Manuals A. Comprehensive training materials for all solutions provided as part of this Contract B. Back-office system manual for all DRO and Vendor controlled	Please refer to the Implementation and Training section on pages 214-220.

	configurations C. Mobile Application and Customer Website Design and Configuration Management Manual D. IVR phone tree and Design and Configuration Manual E. Driver Display Manual F. Reporting Manual G. Customer Service Guide	
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VENDOR READINESS ASSESSMENT REPORT

ENTERPRISE SECURITY & RISK MANAGEMENT OFFICE (ESRMO)



Vendor Readiness Assessment Report (VRAR) for Solutions Not Hosted on State Infrastructure

Executive Summary

The State of NC requires that all systems connected to the State Network or process State data, meet an acceptable level of security compliance. This includes those systems that operate outside of the States' direct control such as Cloud Services defined as Software as a Service (SaaS), Infrastructure as a Service (IaaS) or Platform as a Service (PaaS).

The State of NC has adopted the National Institute of Standards and Technology (NIST) Special Publication (SP) 800-53 as the foundation for identifying and implementing information technology security controls. These controls are described in the State of NC Statewide Information Security Manual (SISM).

The following is a high-level view of specific security requirements that are needed to meet compliance. The control references (e.g., AC-2) refer to the specific NIST 800-53 control as listed in the SISM, which may be found at the following link: <https://it.nc.gov/statewide-information-security-policies>.

Note: There may be additional requirements depending on the sensitivity of the data and other Federal and State mandates, or agency specific requirements.

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1. Introduction

1.1. Purpose

This report and its underlying assessment are intended to enable State agencies to reach a state-ready decision for a specific system **not hosted** on the State of NC's infrastructure that is based on organizational processes and the security capabilities of the Moderate/Low-impact information system.

1.2. Outcomes

Submission of this report by the Vendor **does not guarantee** a state-ready designation, nor does it guarantee that the State will procure services from the vendor.

1.3. State Approach and Use of This Document

The VRAR identifies clear and objective security capability requirements, where possible, while also allowing for the presentation of more subjective information. The clear and objective requirements enable the vendor to concisely identify whether an application or vendor is achieving the most important State Moderate or Low baseline requirements. The combination of objective requirements and subjective information enables State to render a readiness decision based on a more complete understanding of the vendor's security capabilities.

Section 4, Capability Readiness, is organized into three sections:

- **Section 3.1, State Mandates**, identifies a small set of the state mandates a vendor must satisfy. State **will not** waive any of these requirements.
- **Section 3.2, State Requirements**, identifies an excerpt of the most compelling requirements from the National Institute of Science and Technology (NIST) Special Publication (SP) 800 document series and State guidance. A VENDOR is unlikely to achieve approval if any of these requirements are not met.
- **Section 3.3, Additional Capability Information**, identifies additional information that is not tied to specific requirements, yet has typically reflected strongly on a VENDOR's ability to achieve approval.

2. VENDOR System Information

Provide and validate the information below. For example, if the deployment model is Government only, ensure there are no non-Government customers. The VRAR template is intended for systems categorized at the Moderate or Low security impact level, in accordance with the FIPS Publication 199 Security Categorization.

Table 2-1. System Information

VENDOR Name: Foxster Opco, LLC DBA CTS Software
Solution/System Name: TripMaster
Service Model: SaaS
FIPS PUB 199 System Security Level: Low
Fully Operational as of: 6/1993
Number of Customers (State/Others): 98/624
Deployment Model: Public cloud (Microsoft Azure)
System Functionality: TripMaster is a complete dispatching and scheduling software program for public transportation. TripMaster is hosted in the Microsoft Azure Cloud supported by CTS Software which does not require the licensee to maintain servers nor host locally.

2.1. Relationship to Other Vendors or CSPs

If this system resides in another VENDOR's environment or inherits security capabilities, please provide the relevant details in Tables 2-2 and 2-3 below. **Please note**, the leveraged system itself must be State Authorized. For example, a large VENDOR may have a commercial service offering and a separate service offering with a State Authorization. Only the service offering with the State Authorization may be leveraged.

IMPORTANT: If there is a leveraged system, be sure to note below every capability that partially or fully leverages the underlying system. When doing so, indicate the capability is fully inherited or describe both the inherited and non-inherited aspects of the capability.

Table 2-2. Leveraged Systems

#	Question	Yes	No	N/A	If Yes, please describe.
1	Is this system leveraging an underlying provider?	X			MS Azure

List all **services** leveraged. The system from which the service is leveraged must be listed in Table 2-2 above.

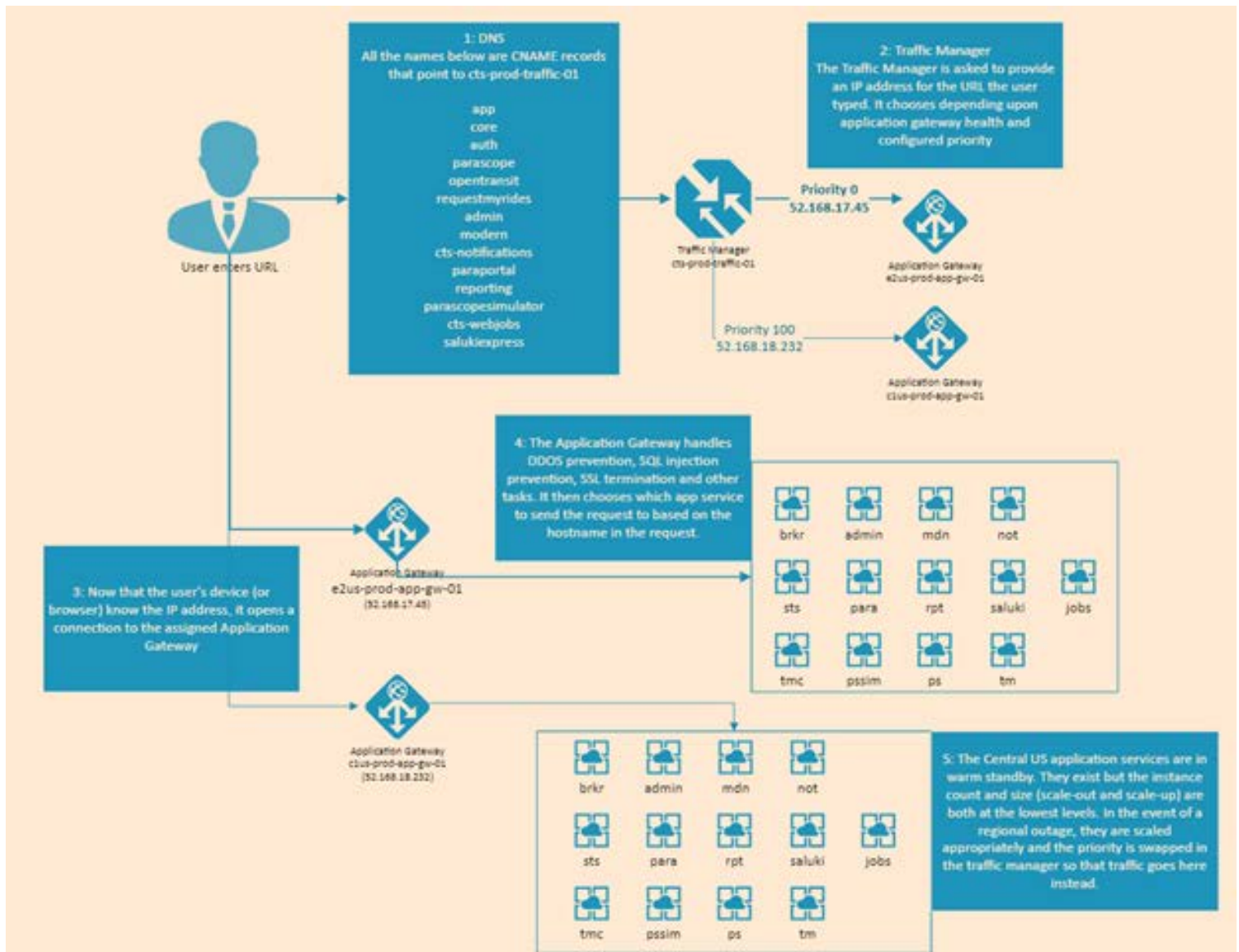
Table 2-3. Leveraged Services

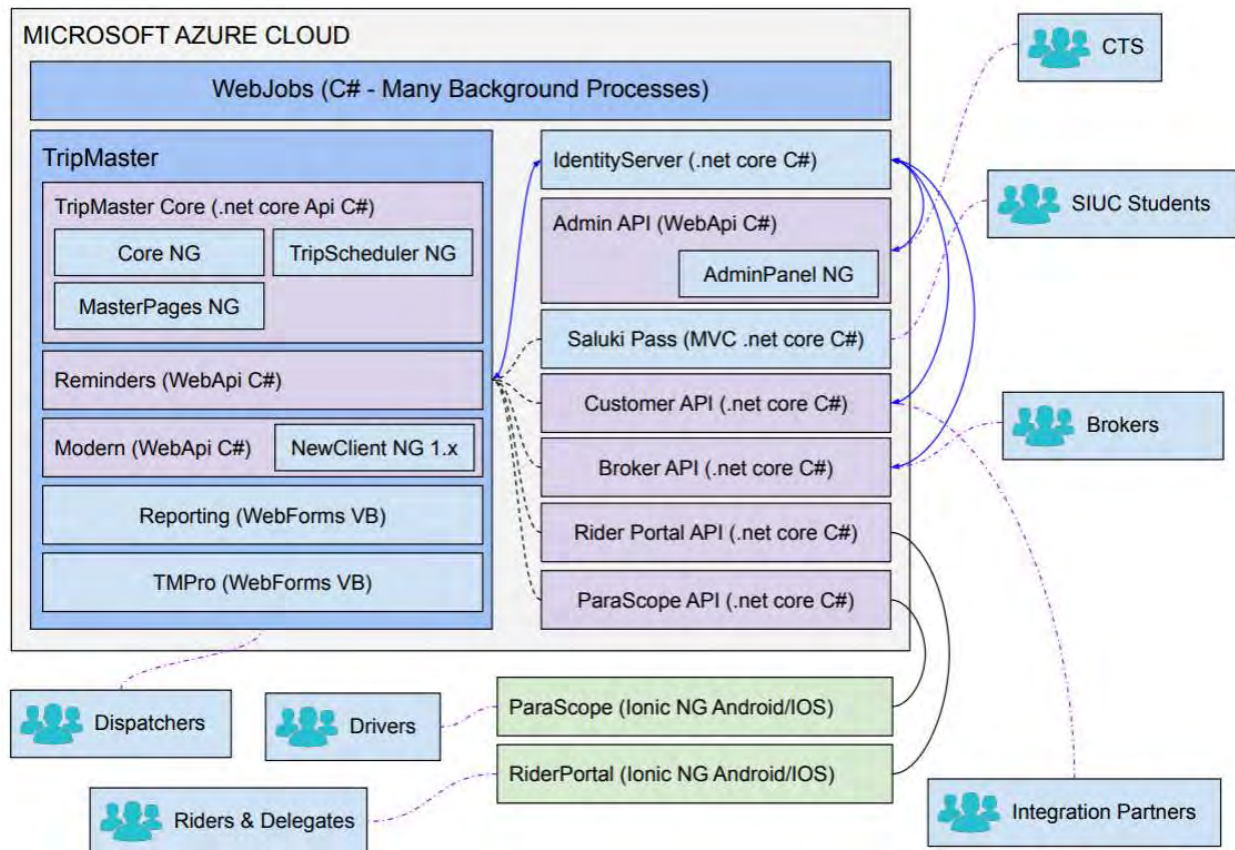
#	Service	Service Capability	System
1	Vendor is responsible for the whole stack	Traffic Manager Application Gateway Virtual Machines Service Bus Redis Cache Application Services SQL Server/Databases	MS Azure

Data Flow Diagrams

Insert Vendor-validated data flow diagram(s) and provide a written description of the data flows. The diagram(s) must:

- clearly identify anywhere State data is to be processed, stored, or transmitted;
- clearly delineate how data comes into and out of the system boundary;
- clearly identify data flows for privileged, non-privileged and customer access; and
- depict how **all ports, protocols, and services** of all inbound and outbound traffic are represented and managed.





Sites that need to be allowed/unblocked by firewall etc., in order for TMEE to work correctly

port 80 and 443 for tripmasterenterprise.com

port 80 and 443 for *.tripmastersoftware.com

port 80 and 443 for arcgisonline.com - javascript resources for maps

port 80 and 443 for arcgis.com - javascript resources for maps

port 80 and 6443 for uscomputinginc.com - uscomputing route service for maps

port 80 and 443 for google.com

port 80 and 443 for *.mapbox.com

port 80 and 443 for *.zoom.us – for support

port 443 for <https://d2i2wahzwrn1n5.cloudfront.net> - JavaScript resources for TripMaster UI

port 443 for <https://d35islomi5rx1v.cloudfront.net> - JavaScript resources for TripMaster UI

2.2. Separation Measures [AC-4, SC-2, SC-7]

Assess and describe the strength of the physical and/or logical separation measures in place to provide segmentation and isolation of tenants, administration, and operations; addressing user-to-system; admin-to-system; and system-to-system relationships.

The Vendor must base the assessment of separation measures on very strong evidence, such as the review of any existing penetration testing results, or an expert review of the products, architecture, and configurations involved. The Vendor must describe how the methods used to verify the strength of separation measures.

TripMaster is hosted on the MS Azure SaaS platform. In a multi-tenant SaaS environment, where multiple customers (tenants) share the same infrastructure, strong isolation mechanisms are essential. This is typically achieved through **logical separation**, where each tenant's data and resources are segregated and isolated from other tenants. This includes the use of virtualization technologies, containerization, or other isolation mechanisms to ensure that the data and operations of one tenant are not accessible or visible to other tenants.

Azure enforces strong **user-to-system isolation** to ensure that each user can only access their own data and resources. This is achieved through robust authentication and access control mechanisms, such as user authentication protocols (e.g., OAuth, SAML) and role-based access controls (RBAC). These measures ensure that users can only access the data and functionality that they are authorized to, preventing unauthorized access to other users' data.

Azure offers different levels of **administrative access for system administrators**. To maintain segregation and prevent unauthorized access, access controls and segregation of duties are implemented. This typically involves role-based access controls for administrators, where different levels of access are granted based on job responsibilities. Additionally, audit trails and monitoring mechanisms are in place to track administrative activities and identify any potential misuse or unauthorized access.

Azure may **interact with other systems or services**, such as integration with third-party APIs or data transfers to external systems. To ensure the security and integrity of these interactions, secure communication protocols (e.g., HTTPS, SSL/TLS) are employed to encrypt data in transit. Authentication mechanisms, such as API keys or tokens, are used to establish trust between systems and prevent unauthorized access.

2.3. System Interconnections

A System Interconnection is a dedicated connection between information systems, such as between a SaaS/PaaS and underlying IaaS.

The Vendor must complete the table below. If the answer to any question is "yes," please briefly describe the connection. Also, if the answer to the last question is "yes," please complete Table 2-5 below.

Table 2-4. System Interconnections

#	Question	Yes	No	If Yes, please describe.
1	Does the system connect to the Internet?	X		The system is hosted on Azure cloud platform requiring internet access. The system makes secure API calls to retrieve address and location data in addition to updating data in the customer's SQL database.
2	Does the system connect to a corporate or state infrastructure/network?		X	
3	Does the system connect to external systems?	X		<i>If "yes," complete Table 2-5 below.</i>

If there are connections to external systems, please list each in the table below, using one row per interconnection. If there are no external system connections, please type "None" in the first row.

Table 2-5. Interconnection Security Agreements (ISAs)

#	External System Connection	Does an ISA Exist?		Interconnection Description. If no ISA, please justify below.
		Yes	No	
1	Google Maps		X	Mapping routes, ETA, geocoding
2	MapBox Maps		X	Mapping routes, ETA
3	ESRI Maps		X	Mapping routes, ETA
4	PubNub		X	Real-time communication
5	InterCom		X	Customer experience service
6	ArcGIS		X	Trip scheduling, VRP solver, geocoding
7	SendGrid		X	Email service
8	Twilio		X	Reminder calls and text service
9	Auth0		X	Identity access management

3. Capability Readiness

3.1. State Mandates

This section identifies State requirements applicable to all State approved systems. All requirements in this section must be met. Some of these topics are also covered in greater detail in Section 3.2, *State Requirements*, below.

Only answer “Yes” if the requirement is fully and strictly met. The Vendor must answer “No” if an alternative implementation is in place.

Table 3-1. State Mandates

#	Compliance Topic	Fully Compliant?	
		Yes	No
1	Data at Rest, Authentication: Are FIPS 140-2/-3 Validated or National Security Agency (NSA)-Approved cryptographic modules only used where cryptography is required?	X	
2	Transmission, Remote Access: Are FIPS 140-2/-3 Validated or National Security Agency (NSA)-Approved cryptographic modules consistently used where cryptography is required?	X	
3	Can the VENDOR’S solution integrate with the State’s NCID solution?		X
4	Does the VENDOR utilize security boundary/threat protection devices to protect the network, system, application...e.g., firewalls intrusion detection/prevention systems, end point protection etc.? [SC-7] [SI-3/SI-4]	X	
5	Does the VENDOR have the ability to consistently remediate High risk vulnerabilities within 30 days and Medium risk vulnerabilities within 60 days? [SI-2]	X	
6	Does the VENDOR and system meet Federal Records Management Requirements, including the ability to support record holds, National Archives and Records Administration (NARA) requirements, and Freedom of Information Act (FOIA) requirements?	X	
7	Does the VENDOR store, process or transmit State data only in the continental US and is that data backed up in only US locations?	X	
8	Does the VENDOR have a process to securely dispose of State data from its systems upon request that is in accordance with the National Institute for Standards and Technology (NIST) Special Publication 800-88 revision 1 and will provide to the State a certificate of data destruction? [MP-6]	X	
9	All operating systems (OS) AND major application software components (e.g., Microsoft SQL, Apache Tomcat, Oracle Weblogic, etc.), must NOT be past N-1. Applications which are not operating on the most recent platform MUST have a roadmap to upgrade with a State approved timeline. Does the application support the N-1 requirement?	X	
10	Does the vendor have a current 3 rd party attestation certification and is it regularly renewed? The State requires an independent 3 rd party attestation (e.g., FedRAMP, SOC 2 Type 2, ISO 27001, or HITRUST) prior to contract award for systems containing Restricted/Highly Restricted data. Note: SaaS vendors cannot use IaaS/PaaS certification unless the application is explicitly covered as part of the IaaS/PaaS assessments. [CA-7, RA-3, SA-9]	X	

11	Does the VENDOR's staff have appropriate background checks for unprivileged and privileged access and accounts according to Federal and/or State designation procedures for those systems that require it? [AC-2, PS-3]	X	
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3.2. State Requirements

This section identifies additional State Readiness requirements. All requirements in this section must be met; however, alternative implementations and non-applicability justifications may be considered on a limited basis.

3.2.1. Data at Rest and Authentication [SC-13]

The Vendor must ensure FIPS 140-2, or 140-3 where available, Validated or NSA-Approved algorithms are used for all encryption modules. FIPS 140-2 Compliant is not sufficient. The Vendor may add rows to the table if appropriate but must not remove the original rows. The Vendor must identify all non-compliant cryptographic modules in use.

Table 3-2a. Data at Rest & Authentication

	Cryptographic Module Type	FIPS 140-2 Validated?		NSA Approved?		Describe Any Alternative Implementations (if applicable)	Describe Missing Elements or N/A Justification
		Yes	No	Yes	No		
1	Data at Rest [SC-28]	X			X		Could not find Azure proof of NSA approval
2	Authentication [IA-5, IA-7]	X			X		Could not find Azure proof of NSA approval

3.2.2. Transport Layer Security [NIST SP 800-52, Revision 2]

The Vendor must ensure FIPS 140-2, or 140-3 where available, Validated or NSA-Approved algorithms are used for all encryption modules relating to block ciphers, digital signatures and hash functions. Full FIPS mode is not required unless other regulatory requirements must be met. The Vendor may add rows to the table if appropriate but must not remove the original rows. The Vendor must identify all non-compliant cryptographic modules in use.

Table 3-2b. Transport Encryption

	Cryptographic Module Type	FIPS 140-2 Validated?		NSA Approved?		Describe Any Alternative Implementations (if applicable)	Describe Missing Elements or N/A Justification
		Yes	No	Yes	No		
1	Transmission [SC-8 (1), SC-12, SC-12 (2, 3)]	X			X		Could not find Azure proof of NSA approval
2	Remote Access [AC-17 (2)]	X			X		Could not find Azure proof of NSA approval

The Vendor must identify all protocols in use. The Vendor may add rows to the table if appropriate, but must not remove the original rows.

Table 3-3. Transport Protocol

#	The Cryptographic Module Type	Protocol In Use?		If “yes,” please describe use for both internal and external communications
		Yes	No	
1	SSL (Non-Compliant)		X	
2	TLS 1.0 (Non-Compliant)		X	
3	TLS 1.1 (Non-Compliant)		X	
4	TLS 1.2 (Compliant)	X		Both internal and external communication
5	TLS 1.3 (Compliant)	X		Both internal and external communication

3.2.3. Identification and Authentication, Authorization, and Access Control

Only answer “yes” if the answer is consistently “yes.” For partially implemented areas, answer “no” and describe what is missing to achieve a “yes” answer. If inherited, please indicate partial or full inheritance in the “Describe Capability” column. Any non-inherited capabilities must be described.

Table 3-4. Identification and Authentication, Authorization, and Access Control

#	Question	Yes	No	Describe capability, supporting evidence, and any missing elements
1	Does the system uniquely identify and authorize organizational users (or processes acting on behalf of organizational users) in a manner that cannot be repudiated, and which sufficiently reduces the risk of impersonation? [IA-2, IA-4]	X		User credentials SSO
2	Does the system require multi-factor authentication (MFA) for administrative accounts and functions? [IA-2, IA-2 (1), IA-2 (2)]		X	We are working on this feature
3	Is role-based access used, managed, and monitored? [IA-4, IA-5]	X		Quarterly audits
4	Does the system restrict non-authorized personnel’s access to resources? [AC-6, AC-6 (1), AC-6 (2)]	X		Yes including logging failed login attempts
5	Does the system restrict non-privileged users from performing privileged function? [AC-6, AC-6 (1), AC-6 (2), AC-6 (10)]	X		Yes via RBAC
6	Does the system ensure secure separation of customer data? [SC-4]	X		
7	Does the system ensure secure separation of customer processing environments? [SC-2]	X		
8	Does the system restrict access of administrative personnel in a way that limits the capability of individuals to compromise the security of the information system? [AC-2]	X		We use Azure’s Privileged Identity Management (PIM) to manage individuals access to secure systems

#	Question	Yes	No	Describe capability, supporting evidence, and any missing elements
9	Does the remote access capability include VENDOR-defined and implemented usage restrictions, configuration guidance, and authorization procedure? [AC-17]		X	No remote access
10	How will the State's password policy be enforced? State requires minimum 14-character complex passwords (Upper, Lower, Special Character & Numerical) [IA-5]	X		TripMaster password requirements meet the State's password policy

3.2.4. Audit, Alerting, Malware, and Incident Response

Only answer "yes" if the answer is consistently "yes." For partially implemented areas, answer "no" and describe what is missing to achieve a "yes" answer. If inherited, please indicate partial or full inheritance in the "Describe Capability" column. Any non-inherited capabilities must be described.

Table 3-5. Audit, Alerting, Malware, and Incident Response

#	Question	Yes	No	Describe capability, supporting evidence, and any missing elements
1	Does the system have the capability to detect, contain, and eradicate malicious software? [SI-3]	X		Vulnerability testing monthly using OWASP Zap
2	Does the system store audit data in a tamper-resistant manner which meets chain of custody and any e-discovery requirements? [AU-4, AU-9]	X		Audit data is stored in SharePoint lists controlled by RBAC
3	Does the VENDOR have the capability to detect unauthorized or malicious use of the system, including insider threat and external intrusions? [SI-4, SI-4 (4), SI-4 (5), SI-7, SI-7 (7)]	X		Via Azure Portal
4	Does the VENDOR log and monitor access to the system? [SI-4]	X		Monthly audits Notifications from Azure
5	Does the VENDOR have an Incident Response Plan and a fully developed Incident Response test plan? [IR-3, IR-8]	X		Refer to the attached Policy and Procedure Manual, section 14, Incident Response Plan
6	Does the VENDOR have a plan and capability to perform security code analysis and assess code for security flaws, as well as identify, track, and remediate security flaws? [SA-11]	X		Monthly vulnerability and penetration testing using OWASP Zap Developers take extra security training and implement security in all aspects of the software development lifecycle
7	Does the VENDOR implement automated mechanisms for incident handling and reporting? [IR-4, IR-4 (1), IR-6]		X	Work in progress (ready in 6 months)

#	Question	Yes	No	Describe capability, supporting evidence, and any missing elements
8	Does the VENDOR retain online audit records for at least 90 days to provide support for after-the-fact investigations of security incidents and offline for at least one year to meet regulatory and organizational information retention requirements? [AU-11]	X		CTS maintains audit records for 6 years
9	Does the VENDOR have the capability to notify customers and regulators of confirmed incidents in a timeframe consistent with all legal, regulatory, or contractual obligations? The State of NC's requirement for security breach reporting is 24 hrs. of incident confirmation. [IR-6]	X		Refer to the attached Policy and Procedure Manual, section 14, Incident Response Plan
10	If the VENDOR's solution provides email "send as" capabilities, does it support DMARC and DKIM for email protection?		X	Not Applicable We utilize SendGrid for email purposes

3.2.5. Contingency Planning and Disaster Recovery

Only answer "yes" if the answer is consistently "yes." For partially implemented areas, answer "no" and describe what is missing to achieve a "yes" answer. If inherited, please indicate partial or full inheritance in the "Describe Capability" column. Any non-inherited capabilities must be described.

Table 3-6. Contingency Planning and Disaster Recovery

#	Question	Yes	No	Describe capability, supporting evidence, and any missing elements
1	Does the VENDOR have the capability to recover the system to a known and functional state following an outage, breach, DoS attack, or disaster? [CP-2, CP-9, CP-10]	X		Refer to the attached Policy and Procedure Manual, sections 14, Incident Response Plan and 7, Contingency Operation, Backup and Disaster Recovery Plan
2	Does the VENDOR have a Contingency Plan and a fully developed Contingency Plan test plan in accordance with Statewide Information Security Manual? [CP-2, CP-4]	X		Refer to the attached Policy and Procedure Manual, section 7, Contingency Operation, Backup and Disaster Recovery Plan
3	Does the system have alternate storage and processing facilities? [CP-6, CP-7]	X		Azure has data centers spread out geographically to allow for redundancy or recovery from a data center outage
4	Does the system have or use alternate telecommunications providers? [CP-8]	X		Managed by Azure data centers
5	Does the system have backup power generation or other redundancy? [PE-11]	X		Managed by Azure data centers
6	Does the VENDOR have service level agreements (SLAs) in place with all telecommunications providers? [CP-8]		X	Not applicable

3.2.6. Configuration and Risk Management

Only answer “yes” if the answer is consistently “yes.” For partially implemented areas, answer “no” and describe what is missing to achieve a “yes” answer. If inherited, please indicate partial or full inheritance in the “Describe Capability” column. Any non-inherited capabilities must be described.

Table 3-7. Configuration and Risk Management

#	Question	Yes	No	Describe capability, supporting evidence, and any missing elements
1	Does the VENDOR maintain a current, complete, and accurate baseline configuration of the information system? [CM-2]	X		We utilize Terraform to manage the state of our Azure resources allowing for quick re-configuration and deployment
2	Does the VENDOR maintain a current, complete, and accurate inventory of the information system software, hardware, and network components? [CM-8]	X		Via Terraform
3	Does the VENDOR have a Configuration Management Plan? [CM-9]		X	Work in progress
4	Does the VENDOR follow a formal change control process that includes a security impact assessment? [CM-3, CM-4, CM-4 (2)]		X	Work in progress
5	Does the VENDOR employ automated mechanisms to detect inventory and configuration changes? [CM-2, CM-2 (2), CM-6, CM-8]	X		Via Azure Portal
6	Does the VENDOR prevent unauthorized changes to the system? [CM-5]	X		Via RBAC and PIM
7	Does the VENDOR establish configuration settings for products employed that reflect the most restrictive mode consistent with operational requirements? [CM-6, CM-7]	X		Center for Internet Security (CIS) Benchmarks
8	Does the VENDOR ensure that checklists for configuration settings are Security Content Automation Protocol (SCAP)-validated or SCAP-compatible (if validated checklists are not available)? [CM-6]		X	Work in progress

For the following questions, Vendors may use Table 3-18 “Continuous Monitoring Capabilities – Additional Details” to enter the capability descriptions, supporting evidence, and missing elements.

9	Does the VENDOR perform authenticated operating system/ infrastructure, web, and database vulnerability scans at least monthly, as applicable? [RA-5, RA-5 (5)]	X		We utilize the latest version of OWASP Zap and perform monthly penetration and vulnerability scans. Access to the system is protected by login access and OWASP Zap offers tools to input credentials prior to the scan
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10	Does the VENDOR demonstrate the capability to remediate High risk vulnerabilities within 30 days and Moderate risk vulnerabilities within 60 days? [RA-5, SI-2]	X		CTS attempts to remediate High risk vulnerabilities immediately in the current 2 week sprint. Moderate risk vulnerabilities are handled within 30 days. We track the progress of each risk in Azure DevOps as work items which are then added to the appropriate sprint and given the highest backlog priority
11	When a High risk vulnerability is identified as part of continuous monitoring activities, does the VENDOR consistently check audit logs for evidence of exploitation? [RA-5]		X	Work in progress
12	Does the VENDOR have a Supply Chain Risk Management (SCRM) plan and processes to identify and address weaknesses or deficiencies in the supply chain elements and processes of information systems?		X	Work in progress

3.2.7. Data Center Security

Only answer “yes” if the answer is consistently “yes.” For partially implemented areas, answer “no” and describe what is missing to achieve a “yes” answer. If inherited, please indicate partial or full inheritance in the “Describe Capability” column. Any non-inherited capabilities must be described.

Table 3-8. Data Center Security

#	Question	Yes	No	Describe capability, supporting evidence, and any missing elements
1	Does the VENDOR restrict physical system access to only authorized personnel? [PE-2 through PE-6, PE-8]		X	Not applicable as CTS is a 100% remote company with no central office
2	Does the VENDOR monitor and log physical access to the information system, and maintain access records? [PE-6, PE-8]		X	Not applicable as CTS is a 100% remote company with no central office
3	Does the VENDOR monitor and respond to physical intrusion alarms and surveillance equipment? [PE-6, PE-6 (1)]		X	Not applicable as CTS is a 100% remote company with no central office

3.2.8. Policies, Procedures, and Training

The Vendor must indicate the status of policy and procedure coverage for the NIST 800-53 Rev 5 families listed in Table 3-9 below.

To answer “yes” to a policy, it must be fully developed, documented, and disseminated; and it must address purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance. A single policy document may address more than one family provided the NIST requirements of each “-1” are fully addressed.

To answer “yes” to a procedure, it must be fully developed and consistently followed by the appropriate staff. List all applicable procedure documents for each family.

VENDORS must establish their own set of Policies and Procedures (P&Ps). They cannot be inherited from a leveraged system, nor can they be provided by the customer. Any exceptions and/or missing policy and procedure elements must be explained in Table 3-10 below.

Table 3-9. Policies and Procedures

#	Family	Policy		Procedure		Title Version and Date
		Yes	No	Yes	No	
1	Access Control [AC-1]	X		X		Policy: 13: Facility Security Plan, Access Control, and Validation, March 2023 Procedure(s): 13: Facility Security Plan, Access Control, and Validation, March 2023
2	Awareness & Training [AT-1]	X		X		Policy: 22: Security Awareness Training, March 2023 36: Secure Coding Training Policy, March 2023 37: Training Policy, March 2023 Procedure(s): 22: Security Awareness Training, March 2023 36: Secure Coding Training Policy, March 2023 37: Training Policy, March 2023
3	Audit & Accountability [AU-1]	X		X		Policy: 32: PHI Audit Policy and Procedure, March 2023 Procedure(s): 32: PHI Audit Policy and Procedure, March 2023
4	Security Assessment & Authorization [CA-1]	X		X		Policy: 29: Vulnerability Scanning Policy and Procedure, March 2023 Procedure(s): 29: Vulnerability Scanning Policy and Procedure, March 2023
5	Configuration Management [CM-1]		X		X	
6	Contingency Planning [CP-1]	X		X		Policy: 7: Contingency Operation, Backup and Disaster Recovery Plan, March 2023 Procedure(s): 7: Contingency Operation, Backup and Disaster Recovery Plan, March 2023

#	Family	Policy		Procedure		Title Version and Date
		Yes	No	Yes	No	
7	Identification & Authentication [IA-1]	X		X		Policy: • 3: Access Management, Establishment, and Modification, March 2023 Procedure(s): • 3: Access Management, Establishment, and Modification, March 2023
8	Incident Response [IR-1]	X		X		Policy: • 14: Incident Response Plan, March 2023 Procedure(s): • 14: Incident Response Plan, March 2023
9	Maintenance [MA-1]	X		X		Policy: • 12: Evaluation, March 2023 Procedure(s): • 12: Evaluation, March 2023
10	Media Protection [MP-1]	X		X		Policy: • 8: Device and Media Controls, March 2023 Procedure(s): • 8: Device and Media Controls, March 2023
11	Physical & Environmental Protection [PE-1]		X		X	
12	Personnel Security [PS-1]		X		X	
13	Risk Assessment [RA-1]	X		X		Policy: • 20: Risk Analysis and Management, March 2023 Procedure(s): • 20: Risk Analysis and Management, March 2023
14	System & Services Acquisition [SA-1]	X		X		Policy: • 20: Risk Analysis and Management, March 2023 Procedure(s): • 20: Risk Analysis and Management, March 2023
15	System & Communications Protection [SC-1]	X		X		Policy: • 25: Transmission Security, March 2023 Procedure(s): • 25: Transmission Security, March 2023
16	System & Information Integrity [SI-1]	X		X		Policy: • 16: Integrity Controls, March 2023 Procedure(s): • 16: Integrity Controls, March 2023
17	Planning [PL-1]		X		X	

#	Family	Policy		Procedure		Title Version and Date
		Yes	No	Yes	No	
18	Supply Chain Risk Management [SR-1]		X		X	

For any family with a policy or procedure gap, please describe the gap below.

Table 3-10. Missing Policy and Procedure Elements

Missing Policy and Procedure Elements
Any gaps above indicate that our parent company (Transit Technologies) is in the process of preparing policies and procedures for CTS to achieve SOC II compliance by EOY 2023

The Vendor must answer the questions below.

Table 3-11. Security Awareness Training

Question	Yes	No	Describe capability, supporting evidence, and any missing elements
Does the VENDOR train personnel on security awareness and role-based security responsibilities? [AT-2]	X		Refer to the attached Policy and Procedure Manual, for the following sections: 22: Security Awareness Training, March 2023 36: Secure Coding Training Policy, March 2023 37: Training Policy, March 2023

3.3. Additional Capability Information

State will evaluate the responses in this section on a case-by-case basis relative to a State-Ready designation decision.

3.3.1. Staffing Levels

In the table below, the Vendor must describe the VENDOR's organizational structure, staffing levels currently dedicated to the security of the system, as well as any planned changes to these staffing levels. This description must clearly indicate role and number of individuals as well as identify which staff is full-time dedicated, and which are performing their role as a collateral duty. **Note: It is not necessary to include specific names of individuals, but rather their roles/titles.**

Table 3-12. Staffing Levels

Staffing Levels	
Director of Software Development/Security Officer (1) - Senior Developer (3) - Junior Developer (1) - DevOps Engineer/Privacy Officer (1)	
All full-time employees above perform their security roles as collateral duty.	

3.3.2. Change Management Maturity

While the following change management capabilities are not required, they indicate a more mature change management capability and may influence a State Readiness decision, especially for larger systems.

The Vendor must answer the questions below.

Table 3-13. Change Management

#	Question	Yes	No	If "no", please describe how this is accomplished.
1	Does the VENDOR's change management capability include a fully functioning Change Control Board (CCB)?		X	Work in progress by our parent company
2	Does the VENDOR have and use development and/or test environments to verify changes before implementing them in the production environment?	X		

3.3.3. Vendor Dependencies and Agreements

The Vendor must answer the questions below.

Table 3-14. Vendor Dependencies and Agreements

#	Question	Yes	No	Instructions
1	Does the system have any dependencies on other vendors such as a leveraged service offering, hypervisor and operating system patches, physical security and/or software and hardware support?		X	
2	Within the system, are all products still actively supported by their respective vendors?		X	Not applicable

#	Question	Yes	No	Instructions
3	Does the VENDOR have a formal agreement with a vendor, such as for maintenance of a leveraged service offering?		X	Not applicable

If there are vendor dependencies, please list each in the table below, using one row per dependency. For example, if using another vendor's operating system, list the operating system, version, and vendor name in the first column, briefly indicate the VENDOR's reliance on that vendor for patches, and indicate whether the vendor still develops and issues patches for that product. If there are no vendor dependencies, please type "None" in the first row.

Table 3-15. Vendor Dependency Details

#	Product and Vendor Name	Nature of Dependency	Still Supported?	
			Yes	No
1	None			
2				

If there are formal vendor agreements in place, please list each in the table below, using one row per agreement. If there are no formal agreements, please type "None" in the first row.

Table 3-16. Formal Agreements Details

#	Organization Name	Nature of Agreement
1	None	
2		

3.3.4. Continuous Monitoring Capabilities

In the tables below, please describe the current state of the VENDOR's Continuous Monitoring capabilities, as well as the length of time the VENDOR has been performing Continuous Monitoring for this system.

Table 3-17. Continuous Monitoring Capabilities

#	Question	Yes	No	Describe capability, supporting evidence, and any missing elements
1	Does the VENDOR have a lifecycle management plan that ensures products are updated before they reach the end of their vendor support period?	X		Refer to the attached Policy and Procedure Manual, section 12, Evaluation
2	Does the VENDOR have the ability to scan all hosts in the inventory?	X		Managed and performed by our parent company (Transit Technologies)
3	Does the VENDOR have the ability to provide scan files in a structure data format, such as CSV, XML files?	X		Managed and performed by our parent company
4	Is the VENDOR properly maintaining their Plan of Actions and Milestones (POA&M), including timely, accurate, and complete information entries for new scan findings, vendor check-ins, and closure of POA&M items?		X	Work in progress by our parent company

In the table below, provide any additional details the Vendor believes to be relevant to State's understanding of the VENDOR's Continuous Monitoring Capabilities. If the Vendor has no additional details, please state, "None."

Table 3-18. Continuous Monitoring Capabilities – Additional Details

Continuous Monitoring Capabilities – Additional Details
None

3.3.5. Status of System Security Plan (SSP)

In the table below, explicitly state whether the SSP is fully developed, partially developed, or non-existent. Identify any sections that the VENDOR has not yet developed.

Table 3-19. Maturity of the System Security Plan

Maturity of the System Security Plan
Partially developed and in progress by our parent company

In the table below, state the number of controls identified as "Not applicable" in the SSP. List the Control Identifier for each, and indicate whether a justification for each has been provided in the SSP control statement.

Table 3-20. Controls Designated "Not Applicable"

<x> Controls are Designated "Not Applicable"
Not applicable

In the table below, state the number of controls with an alternative implementation. List the Control Identifier for each.

Table 3-21. Controls with an Alternative Implementation

<x> Controls have an Alternative Implementation
Not applicable

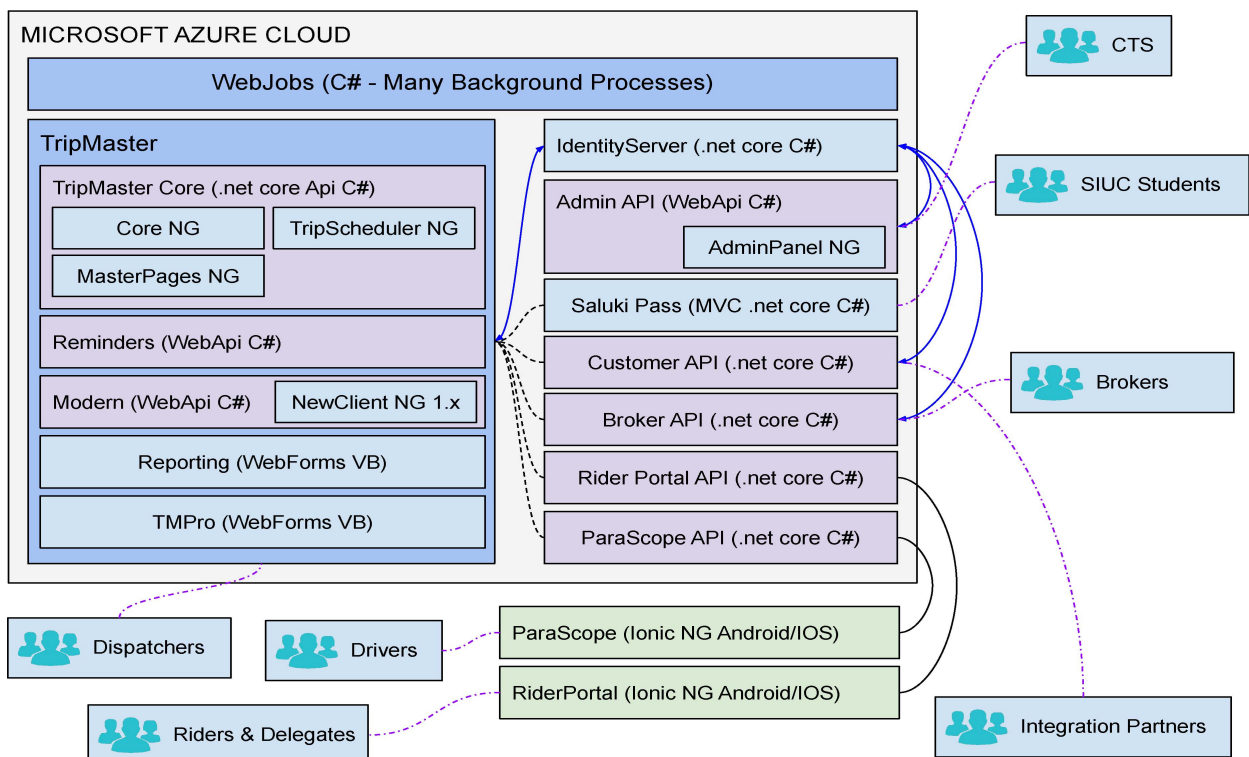
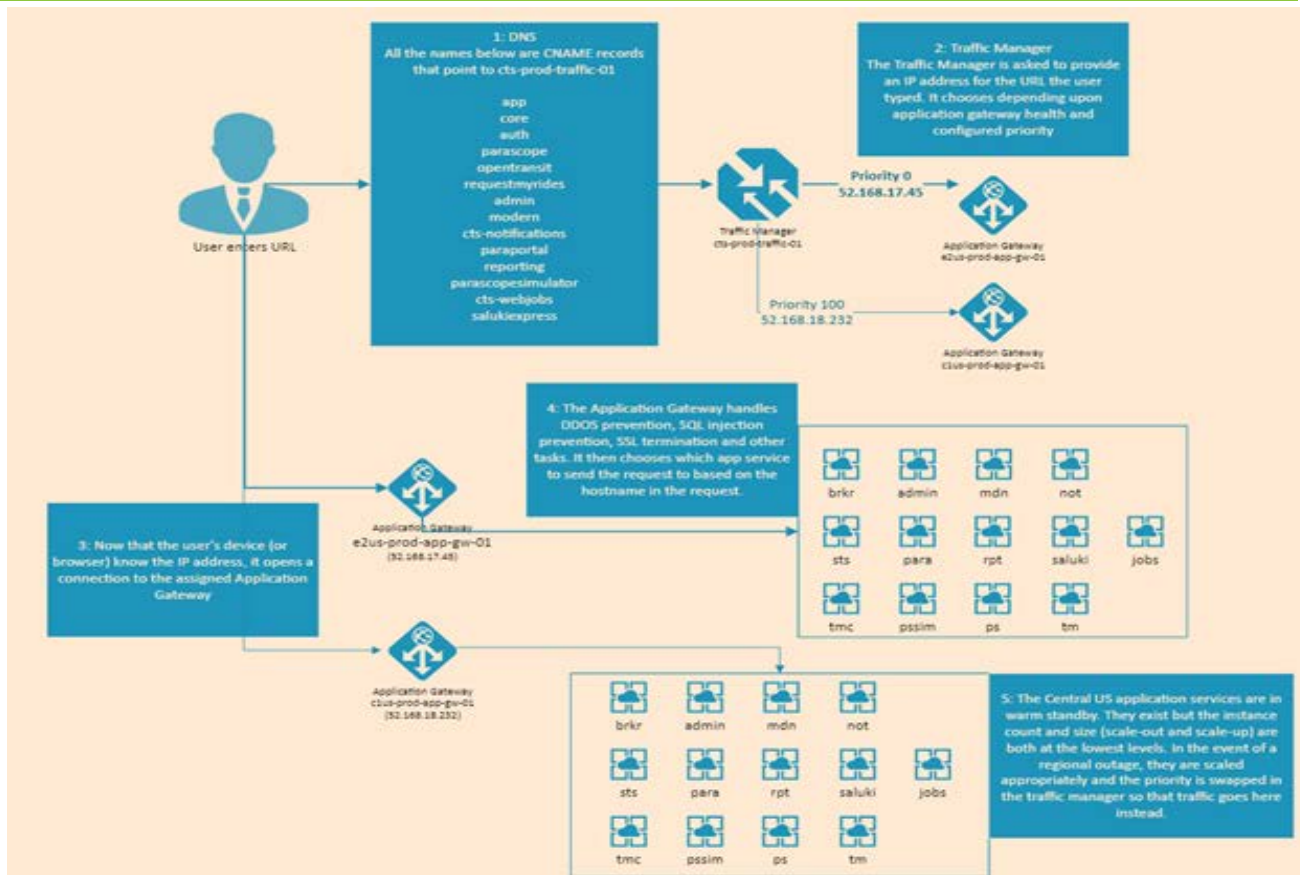
Organization's Security Representative or designee

 Brian M. Beaudet
 PLEASE PRINT NAME

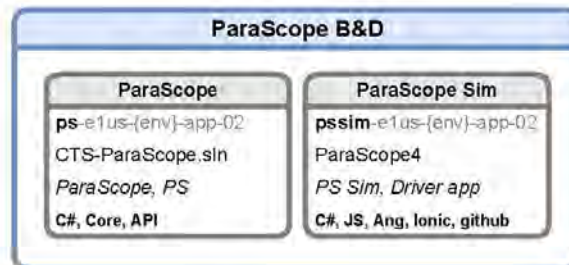
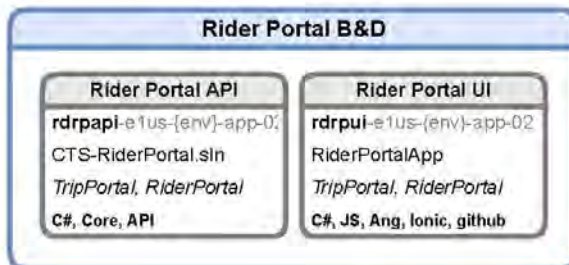
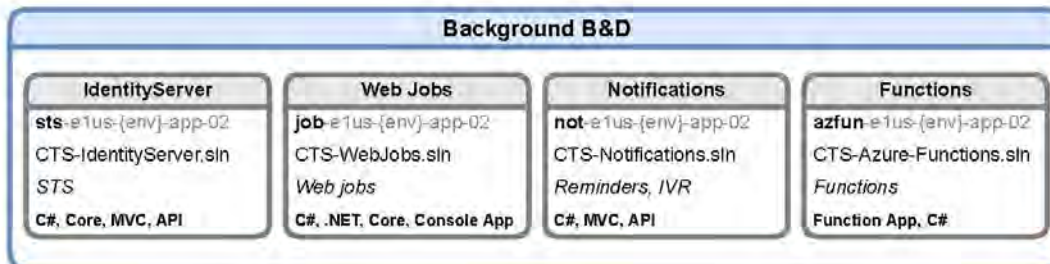

 SIGNATURE

 6/16/2023
 Date

ARCHITECTURE DIAGRAMS



CTS Build and Deploy Pipelines





COST PROPOSAL (ATTACHMENT E)

Description of Product and Services		One-Time Cost On-going Cost				
			Quantity	Unit	Price per Unit	Extension
Core Demand Response Software Initial Costs						
	TripMaster Software	One-Time Cost	1	Vehicle	900	\$ 900
	TripScheduler Module	One-Time Cost	1	Vehicle	500	\$ 500
	ParaScope (Driver Application of MDT)	One-Time Cost	1	Vehicle	750	\$ 750
	Electronic Pre- and Post-Trip Inspection	One-Time Cost	1	Vehicle	Included	\$ -
	Licensing	One-Time Cost	1	User	400	\$ 400
TOTAL COST INITIAL PRODUCT & SOFTWARE LICENSING COSTS						\$ 2,550
Annual Core Demand Response Software Costs						
	TripMaster Software	On-going Cost	1	Lot	350	\$ 350
	TripScheduler Module	On-going Cost	1	Vehicle	120	\$ 120
	ParaScope (Driver Application)	On-going Cost	1	Vehicle	144	\$ 144
	Electronic Pre- and Post-Trip Inspections	On-going Cost	1	Vehicle	Included	\$ -
	Licensing	On-going Cost	1	User	240	\$ 240
TOTAL ONGOING COSTS						\$ 854
Implementation and Training Costs						
	Project Kick Off Meeting	One-Time Cost	1	Lot	Included	\$ -
	Planning	One-Time Cost	1	Lot	1500	\$ 1,500
	Application Configuration	One-Time Cost	1	Lot	Included	\$ -
	Reports	One-Time Cost	1	Lot	Included	\$ -
	Data Conversion	One-Time Cost	1	Lot	1000	\$ 1,000
	Data Migration (If applicable)	One-Time Cost	1	Lot	Included	\$ -
	Interfaces	One-Time Cost	1	Lot	Included	\$ -
	Installation (remote)	One-Time Cost	1	Lot	750	\$ 750
	System Setup/Configuration	One-Time Cost	1	Lot	Included	\$ -
	Testing	One-Time Cost	1	Lot	Included	\$ -
	Training Travel (in-person/onsite)	One-Time Cost	1	Trip	3000	\$ 3,000
	Training Representation (in-person/onsite)	One-Time Cost	5	Day	700	\$ 3,500
	System Documentation	One-Time Cost	1	Lot	Included	\$ -
	Implementation	One-Time Cost	1	Lot	Included	\$ -
	Final Acceptance	One-Time Cost	1	Lot	Included	\$ -
TOTAL DELIVERABLES COSTS						\$ 9,750
Advanced and Optional Demand Response Software Costs						
	TripReminder (IVR) Module	One-Time Cost	1	Vehicle	400	\$ 400
	TripReminder (IVR) Module Annual M&S (12,000 Calls/Texts Per Year)	On-going Cost	1	Lot	396	\$ 396
	Where's My Ride Module (TripReminder Required) Annual M&S	On-going Cost	1	Vehicle	60	\$ 60
	TripPortal Passenger Information Mobile Application	One-Time Cost	1	Vehicle	400	\$ 400
	TripPortal Passenger Information Mobile Application Annual M&S	On-going Cost	1	Vehicle	240	\$ 240
	TripPortal Auto Seat Fee	On-going Cost	1	Vehicle	60	\$ 60
	TripPortal Credit Card Processing Annual M&S	On-going Cost	1	Lot	3000	\$ 3,000
	TripMaintenance (Preventative Vehicle Maintenance) Module	One-Time Cost	1	Vehicle	150	\$ 150
	TripMaintenance (Preventative Vehicle Maintenance) Annual M&S	On-going Cost	1	Vehicle	36	\$ 36
	Partner API Module Annual M&S	On-going Cost	1	Lot	1200	\$ 1,200
	TripPass (Contactless Ticketing and Diminishing Balance) Module	One-Time Cost	1	Vehicle	300	\$ 300
	TripPass (Contactless Ticketing and Diminishing Balance) Annual M&S	On-going Cost	1	Vehicle	240	\$ 240
	Map Overlay / Shapefile Management	On-going Cost	1	Lot	600	\$ 600
	Bus Buzz (Passenger Complaint Tracking)	On-going Cost	1	Vehicle	60	\$ 60
	Microtransit Silver Marketing Package	One-Time Cost	1	Lot	10000	\$ 10,000
	Microtransit Gold Marketing Package	One-Time Cost	1	Lot	20000	\$ 20,000
	Microtransit Platinum Marketing Package	One-Time Cost	1	Lot	35000	\$ 35,000
	TripView In-Vehicle Camera & Installation (2-Camera Setup) Module	One-Time Cost	1	Vehicle	975	\$ 975
	TripView In-Vehicle Camera Warranty, Software (2-Camera Setup) Annual M&S	On-going Cost	1	Vehicle	480	\$ 480
	TripView In-Vehicle Camera & Installation (3-Camera Setup) Module	One-Time Cost	1	Vehicle	1225	\$ 1,225
	TripView In-Vehicle Camera Warranty, Software (3-Camera Setup) Annual M&S	On-going Cost	1	Vehicle	540	\$ 540
	TripView In-Vehicle Camera & Installation (4-Camera Setup) Module	One-Time Cost	1	Vehicle	1525	\$ 1,525
	TripView In-Vehicle Camera Warranty, Software (4-Camera Setup) Annual M&S	On-going Cost	1	Vehicle	600	\$ 600
	TripView In-Vehicle Camera & Installation (5-Camera Setup) Module	One-Time Cost	1	Vehicle	2450	\$ 2,450
	TripView In-Vehicle Camera Warranty, Software (5-Camera Setup) Annual M&S	On-going Cost	1	Vehicle	720	\$ 720
	TripView In-Vehicle Camera & Installation (6-Camera Setup) Module	One-Time Cost	1	Vehicle	2625	\$ 2,625
	TripView In-Vehicle Camera Warranty, Software (6-Camera Setup) Annual M&S	On-going Cost	1	Vehicle	780	\$ 780
	TripView In-Vehicle Camera & Installation (7-Camera Setup) Module	One-Time Cost	1	Vehicle	2675	\$ 2,675

	TripView In-Vehicle Camera Warranty, Software (7-Camera Setup) Annual M&S	On-going Cost	1	Vehicle	840	\$ 840
	TripView In-Vehicle Camera & Installation (8-Camera Setup) Module	One-Time Cost	1	Vehicle	3250	\$ 3,250
	TripView In-Vehicle Camera Warranty, Software (8-Camera Setup) Annual M&S	On-going Cost	1	Vehicle	840	\$ 840
Advanced and Optional Fixed Route Software and Hardware Costs						
	TripRoute GTFS Feed (Fixed Route)	One-Time Cost	1	Lot	1550	\$ 1,550
	TripRoute (Fixed Route within TripMaster)	On-going Cost	1	Vehicle	300	\$ 300
	Passenger Facing App with NTD Reporting	One-Time Cost	1	Vehicle	150	\$ 150
	Passenger Facing App with NTD Reporting Annual Recurring	On-going Cost	1	Vehicle	783	\$ 783
	Required Third Party software, applications, libraries or drivers	One-Time Cost	1	Lot	Included	\$ -
	Hosting Setup/Initialization (if applicable)	One-Time Cost	1	Lot	4363	\$ 4,363
	Installation	One-Time Cost	1	Vehicle	1000	\$ 1,000
	CAD/AVL in vehicle hardware	One-Time Cost	1	Vehicle	473	\$ 473
	Mobile Data Terminals (cost per for each vehicle)	One-Time Cost	1	Vehicle	948	\$ 948
	In Vehicle Cellular Data Modem/Router (i.e. Cradlepoint)	One-Time Cost	1	Vehicle	1020	\$ 1,020
	Web Services	One-Time/On-Going Costs	1	Included	0	\$ -
	Passenger Information Mobile Application	One-Time/On-Going Costs	1	Included	0	\$ -
	Automatic Voice Announcements	One-Time Cost	1	Vehicle	2341	\$ 2,341
	Automatic Voice Announcements Annual Recurring	On-going Cost	1	Vehicle	524	\$ 524
	Automatic Passenger Counters	One-Time Cost	1	Vehicle	5357	\$ 5,357
	Automatic Passenger Counters Annual Recurring	On-going Cost	1	Vehicle	798	\$ 798
	Farebox Integration	One-Time Cost	1	Lot	7800	\$ 7,800
	Farebox Integration	On-going Cost	1	Lot	3600	\$ 3,600
	Headsign Integration	One-Time Cost	1	Vehicle	2389	\$ 2,389
	Headsign Integration Annual Recurring	On-going Cost	1	Vehicle	138	\$ 138
	Traffic Signal Priority	One-Time Cost	1	Lot	50000	\$ 50,000
	Traffic Signal Priority Annual Recurring	On-going Cost	1	Lot	10000	\$ 10,000
	GTFS Real Time Feed	One-Time/On-Going Costs	1	Included	0	\$ -
	Route Monitors	One-Time Cost	1	Sign	5841	\$ 5,841
	Route Monitors Annual Recurring	On-going Cost	1	Sign	599	\$ 599
	Interior next stop bus signs	One-Time Cost	1	Vehicle	3235	\$ 3,235
	Interior next stop bus signs Annual Recurring	On-going Cost	1	Vehicle	199	\$ 199
	Infotainment System	One-Time Cost	1	Vehicle	13025	\$ 13,025
	Infotainment System Annual Recurring	On-going Cost	1	Vehicle	879	\$ 879
	Public WiFi - Setup	One-Time Cost	1	Lot	1315	\$ 1,315
	Public WiFi - License	One-Time Cost	1	Vehicle	299	\$ 299
	Public WiFi Annual Recurring - 5GB Data per Vehicle Pooled	On-going Cost	1	Vehicle	944	\$ 944



SCHEDULE OF OFFERED SOLUTION



IMPLEMENTATION AND TRAINING

CTS' approach to implementation is 100% dependent on each individual installation. For over 30 years we have dialed in on a proven method to provide a successful, stress-free timeline that is tailored to your specific needs, desires, and future.

It is very important that the installation, start-up and ongoing operation of the software goes smoothly in order for you to optimize the value realized by using the software. As a result, CTS focuses on making sure the pre go-live and post go-live experiences are as seamless and successful as possible. We accomplish this by hiring high quality, customer focused team members who take pride in their work as well as investing in technology tools for tracking and communication.

An account executive will schedule a time to conduct an initial project management visit to help determine your training needs. Once the account executive identifies the best approach for training, we will assign trainers to work with you through the training process, which will include a combination of on-site and remote trainings.

CTS follows a detailed technical implementation roadmap, which is shown in the Implementation portion of this proposal and invested in project management software to ensure we are closing monitoring and meeting training timelines and deliverables associated with the roadmap. Based on training needs, we utilize a communication platform to provide reminders to those in training of activities needed to be completed in order to smoothly progress through training.

CTS internal communication is equally as important as communication with customers. At the end of every day of training, the assigned trainer emails the CTS training team a detailed review of what was covered and any noteworthy information. This practice ensures another trainer can easily step in in the unlikely event the assigned trainer becomes unexpectedly unavailable, such as in the case of illness. Additionally, the trainers participate in a daily, brief stand-up to apprise their teammates of progress, discuss potential roadblocks and identify solutions. In addition to the progress tracking on a Gantt chart and daily training communication, CTS also has a weekly call with the trainer, account executive and Director of Finance to discuss the status of individual customers' training and any potential issues. In the event of a concern, the account executive will get involved if appropriate or escalate to the executive team to address. The executive team is apprised of training progress every Friday and will contact the customer if necessary. Note that if an urgent concern were to arise, the team would not wait until a standing touchpoint to bring it to the attention of executive leadership.

While getting you up and running is crucial, your experience after go-live is just as important. Your account executive checks in after training is complete and periodically post go-live. They and your trainer are only a phone call or email away once you're live with the system. Typically customers' progress is monitored for 30 days post go-live, with the trainer being the primary point of contact during that time, at which point, customers transition to the CTS support team if the assigned trainer feels the customer is ready. The support team is second to none in customer service and issue resolution and is available 24/7/365 to help you.



Training continues after go-live with a customer-wide free monthly training webinar as well as on-line training resources that are available at any time. We also have a communication platform that provides in-app and emails for important announcements such as the release of new features. A comprehensive implementation plan will be developed to deliver the proposed ITS system. The implementation plan will include a seven-point plan that will encompass the following:

-  Management and Control and Program/Project Management
-  Governance and Accountability
-  Planning
-  Resource Management
-  Risk Management
-  Stakeholder Engagement
-  Review, Monitoring, and Evaluation

The actual delivery is highly dependent on the options you select in any agreement, the functionality you require from your ITS hardware and software services, and the availability and accuracy of any existing data you have.

Following the contract award and with your approval, a comprehensive Gantt chart will be provided, outlining detailed project goals and timeframes for your review and approval. The chart below can be used as an example.

IMPLEMENTATION PLAN		
Tasks	Day	Duration
Signed Agreement	1	1
Kickoff Call	3	1
Data Conversion and Access to TripMaster	3	3
Access Provided to Online Training Portal	3	3
Testing of Access	4	2



Complete Getting Started & Master Pages	6	3
Master Pages Training Session 1	9	1
Complete Subscription & Daily Schedule	10	3
Subscription & Daily Schedule Training Session 2	13	1
Tablets Ordered Online	13	1
Install ParaScope on Tablets	13	3
Complete Remaining Online Training Portal	14	7
One-on-One Training Session 3	16	1
One-on-One Training Session 4	19	1
All Drivers Watched Training Video	19	6
Testing Period	19	10
Errors, Corrections, and Fixes	19	10
Final Testing	23	6
One-on-One Training Session 5	24	1
Onsite Training / Go Live / Week 1	25	5
Acceptance	30	2
Onsite Training / Go Live / Week 2	32	5
Acceptance	37	2

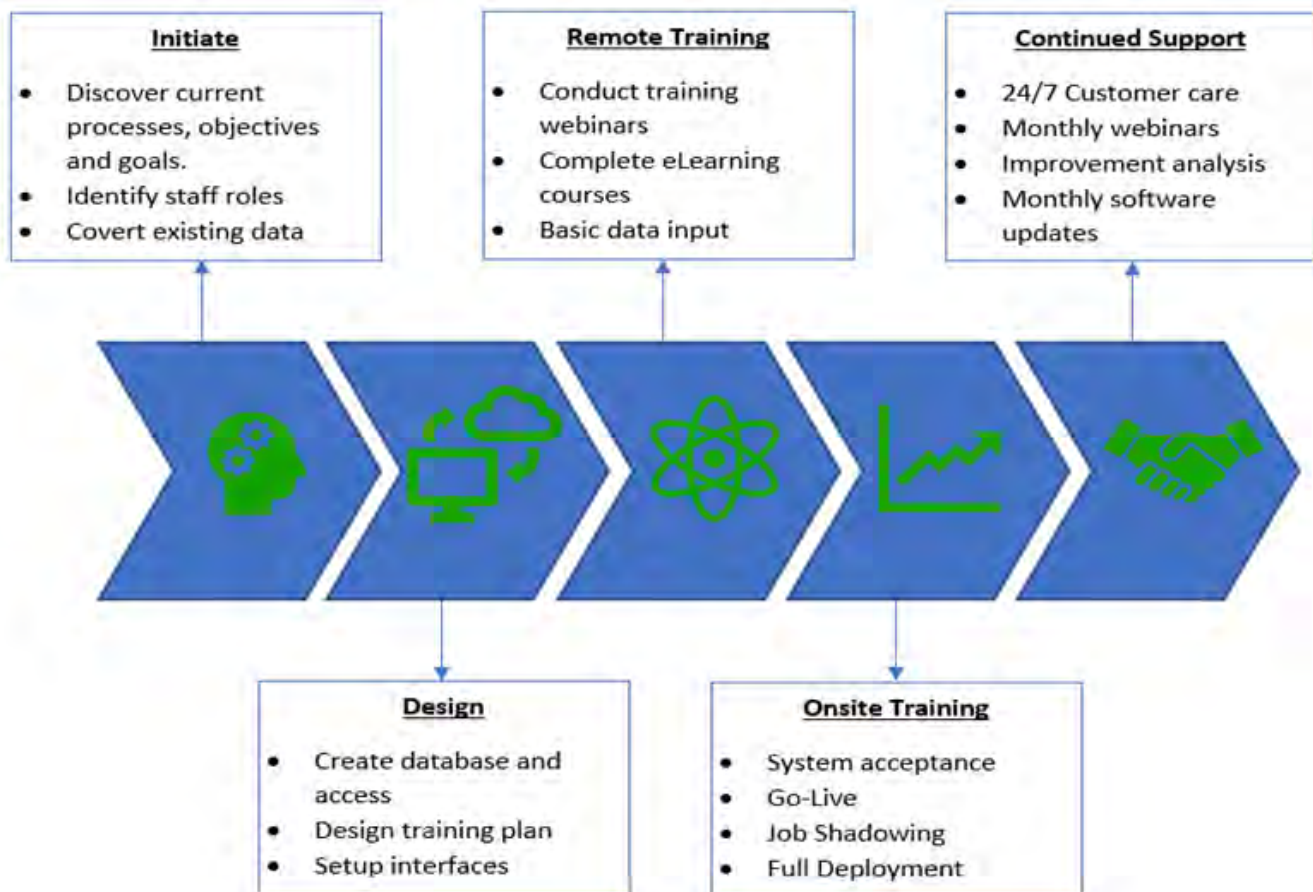


TRAINING METHODOLOGY

CTS Software will provide both onsite training and remote, online training for this proposal. We will conduct a series of five (5) online webinars using Go To Meeting during the initial system setup phases. This process allows for the TripMaster users to become familiar with basic data input, navigation and overall feel of the software prior to onsite training and go-live. Once onsite, your technical trainer(s) will work directly with the licensee's project manager and all other staff by what is known as "job shadowing". We believe in understanding your operation and fitting the software in to your world rather than you having to fit in to the software.

TRAINING GUIDE

This guide sets expectations for the upcoming steps of implementation. Each step gives you a general idea of both the "when" and the "who" in the contracting, setup, and go-live processes. Please use this as a reference as you begin your journey with TripMaster.



I. INITIATION

TASK We want to get you trained as quickly as possible, so you can quickly benefit from TripMaster. When you sign a contract, CTS Software will schedule a comprehensive kickoff session with your account executive, technical trainers, and other key stakeholders. During this on-site meeting we will discover your current challenges, goals and objectives.

ACTION STEP Review the completed orientation document and organize an implementation plan that best fits the licensee's timeline and expectations.

TASK Identify any data that may need to be converted from your existing software or data sheets.

ACTION STEP CTS Software will convert your existing data from an existing software or if your data is stored in a data sheet such as excel. This will save you and your staff countless hours of data entry.

II. DESIGN

TASK Your account executive will introduce you to your technical trainers and work with you to develop an implementation plan to accomplish your goals and help guarantee success.

ACTION STEP Schedule your personalized implementation plan and first training session. At this time assigning project roles and understanding staff positions will be discovered.

TASK Create your TripMaster database and licensing with permissions.

ACTION STEP The licensee will provide CTS with their licensing information including staff first name, last name, email and access permissions. CTS will then create user accounts with IDs for the designated staff.

TASK Address any third-party interface needs.

ACTION STEP In the situation there are interfaces needed with your organization, these would have been addressed earlier. At this time, CTS will diligently work with your third party to accommodate any particular needs or requirements.

TASK Hardware Installation

ACTION STEP CTS Software will coordinate the installation of all related hardware, specifically the installation of the MDT hardware in the designated vehicles.

III. REMOTE TRAINING

TASK Start training your staff and end users with CTS Software's 360 Online Training.

ACTION STEP Watch and learn from role-based documentation, help videos, short quizzes, and follow-up meetings with your technical trainer to train your end users and staff. The online training also consists of five (5) remote training sessions through a webinar of choice that are roughly an hour each as a one-on-one training with your staff.



III. REMOTE TRAINING (CONTINUED)

TASK Once you complete classes in CTS Software's 360 Online Training you will begin setting up your database by entering your company's administrative, rider, and trip data.

ACTION STEP To make the most of your database, you need to keep up with your data entry and database setup as you progress through the training. We provide a checklist to ensure entry of all data in the necessary order.

IV. ONSITE TRAINING

TASK It's time to roll out TripMaster! Your technical trainer(s) will schedule a week of onsite, in-person training.

ACTION STEP This week, your technical trainer(s) are expected to work in your environment. At CTS Software, our proven methodology is to not conduct "classroom" style training but rather job shadowing so we can apply TripMaster to your day-to-day operation.

TASK "Go Live"

ACTION STEP A day determined and agreed upon by both you and your technical trainer will be established to "go live" with TripMaster. This day will include TripMaster scheduling, dispatching and drivers live with ParaScope (driver mobile application).

TASK Continue full deployment for the rest of the week.

ACTION STEP Your technical trainer will continue to identify areas of TripMaster that need additional training all while continuing the full deployment including billing and reporting and creating specific custom reports.

V. CONTINUED SUPPORT

TASK Let TripMaster work for YOU! Send us details on special requests and suggestions, and we will prioritize them to get your items on our development plan for future software updates and releases. If you need it, we can build it.

ACTION STEP If you need a little extra help, sign up for our free monthly training sessions, log back in to CTS Software 360 Online, or contact us directly.

TASK Our technical trainer(s) will eventually introduce you to the CTS Software technical support team.

ACTION STEP It is our top priority that TripMaster customers have 24/7/365 availability to our customer care. The relationship you build between your project manager and your technical trainer(s) will not be replaced but these CTS Software staff members will be working to on-board other valued customers. So a handoff to our technical support team is in order to in sure you have someone to talk to 24/7/365 with a same day resolution guarantee.





PROJECT MANAGEMENT

Our project management team for this proposal includes veterans of both the transit industry and information technology development. CTS' organizational structure is divided into three categories: Business Development, Software Development and Services.

We've selected to identify only the most prevalent personnel for the purpose of this proposal. Their knowledge, experience and dedication have and continue to lead CTS and our customers to growth and success. This team of transit professionals will position your agency with a true understanding of TripMaster by identifying your current challenges, desires and vision of the future to streamline your day-to-day operations for efficiency and give you the solution you are looking for.



ATTACHMENT F: VENDOR CERTIFICATION FORM

1) ELIGIBLE VENDOR

The Vendor certifies that in accordance with N.C.G.S. §143-59.1(b), Vendor is not an ineligible vendor as set forth in N.C.G.S. §143-59.1 (a).

The Vendor acknowledges that, to the extent the awarded contract involves the creation, research, investigation or generation of a future RFP or other solicitation; the Vendor will be precluded from bidding on the subsequent RFP or other solicitation and from serving as a subcontractor to an awarded vendor.

The State reserves the right to disqualify any bidder if the State determines that the bidder has used its position (whether as an incumbent Vendor, or as a subcontractor hired to assist with the RFP development, or as a Vendor offering free assistance) to gain a competitive advantage on the RFP or other solicitation.

2) CONFLICT OF INTEREST

Applicable standards may include: N.C.G.S. §§143B-1352 and 143B-1353, 14-234, and 133-32. The Vendor shall not knowingly employ, during the period of the Agreement, nor in the preparation of any response to this solicitation, any personnel who are, or have been, employed by a Vendor also in the employ of the State and who are providing Services involving, or similar to, the scope and nature of this solicitation or the resulting contract.

3) E-VERIFY

Pursuant to N.C.G.S. § 143B-1350(k), the State shall not enter into a contract unless the awarded Vendor and each of its subcontractors comply with the E-Verify requirements of N.C.G.S. Chapter 64, Article 2. Vendors are directed to review the foregoing laws. Vendors claiming exceptions or exclusions under Chapter 64 must identify the legal basis for such claims and certify compliance with federal law regarding registration of aliens including 8 USC 1373 and 8 USC 1324a. Any awarded Vendor must submit a certification of compliance with E-Verify to the awarding agency, and on a periodic basis thereafter as may be required by the State.

4) CERTIFICATE TO TRANSACT BUSINESS IN NORTH CAROLINA

As a condition of contract award, awarded Vendor shall have registered its business with the North Carolina Secretary of State and shall maintain such registration throughout the term of the Contract.

Signature: Derek Platow Date: May 24th, 2023

Printed Name: Derek Platow Title: Director of Business Development

ATTACHMENT G: LOCATION OF WORKERS UTILIZED BY VENDOR

In accordance with N.C.G.S. §143B-1361(b), Vendor must identify how it intends to utilize resources or workers located outside the U.S., and the countries or cities where such are located. The State will evaluate additional risks, costs, and other factors associated with the Vendor's utilization of resources or workers prior to making an award for any such Vendor's offer. The Vendor shall provide the following:

- a) The location of work to be performed by the Vendor's employees, subcontractors, or other persons, and whether any work will be performed outside the United States. The Vendor shall provide notice of any changes in such work locations if the changes result in performing work outside of the United States.
- b) Any Vendor or subcontractor providing support or maintenance Services for software, call or contact center Services shall disclose the location from which the call or contact center Services are being provided upon request.

Will Vendor perform any work outside of the United States?

☐ YES ☒ NO



REFERENCES

CTS Software is the most reputable software in the state of North Carolina for public transportation of all types. We believe that with our existing customer base, our personal investment in this project as a North Carolina-based company, and the intelligent transportation software being proposed, we are the most experienced and most cost-effective solution available.





Transportation
Administration of
Cleveland County

TRANSPORTATION ADMIN OF CLEVELAND COUNTY

Agency Transportation Admin of Cleveland County

Location Shelby, NC

Contact Stephanie Costner

Phone (704) 482-6705

Email shcostner@yahoo.com

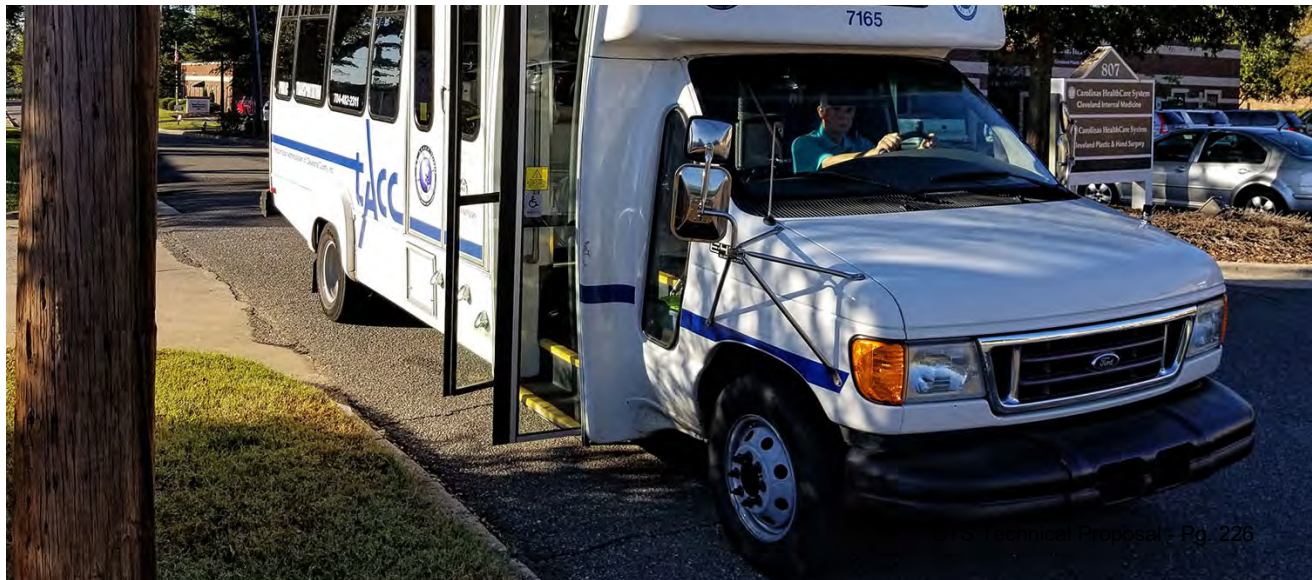
Project Details:

Software Installed TripMaster with Automated Scheduling, ParaScope, NC Med, and Fixed Route

Service Dates January 2022 to Present

Vendor Staff 7

End Users 6



JOHNSTON COUNTY AREA TRANSIT SYSTEM



Agency Johnston County Area Transit System

Location Selma, NC

Contact Neal Davis

Phone (919) 934-6066 x226

Email neal@jcats.org

Project Details:

Software Installed TripMaster with Automated Scheduling, ParaScope, NC Med, Reminders, TripPortal, and Microtransit

Service Dates July 2014 to Present

Vendor Staff 9

End Users 5



INTER-COUNTY PUBLIC TRANSPORTATION AUTHORITY



Agency Inter-County Public Transportation Authority

Location Elizabeth City, NC

Contact Herb Mullen

Phone (252) 338-4480

Email hmullen@arhs-nc.org

Project Details:

Software Installed TripMaster with Automated Scheduling, ParaScope, NC Med, Reminders, and TripPortal

Service Dates April 2023 to Present

Vendor Staff 7

End Users 8





FINANCIAL STATEMENTS (ATTACHMENT I)

ATTACHMENT I: FINANCIAL REVIEW FORM

Vendor shall review the Financial Review Form, provide responses in the gray-shaded boxes, and submit the completed Form as an Excel file with its offer. Vendor shall not add or delete rows or columns in the Form, or change the order of the rows or column in the file.

1. Vendor Name: Transit Technologies LLC and Subsidiaries
2. Company structure for tax purposes (C Corp, S Corp, LLC, LLP, etc.): LLC
3. Have you been in business for more than three years? ☒ Yes ☐ No
4. Have you filed for bankruptcy in the past three years? ☐ Yes ☒ No
5. In the past three years, has your auditor issued any notification letters addressing significant issues? If yes, please explain and provide a copy of the notification letters. ☐ Yes ☒ No
6. Are the financial figures below based on audited financial statements? ☒ Yes ☐ No
7. Start Date of financial statements: 2020, 2021
End Date of financial statements: 2022
8. Provide a link to annual reports with financial statements and management discussion for the past three complete fiscal years:
9. Provide the following information for the past three complete fiscal years:

	Latest complete fiscal year minus two years	Latest complete fiscal year minus one year	Latest complete fiscal year
BALANCE SHEET DATA			
a. Cash and Temporary Investments	7,527,000	5,782,000	7,281,000
b. Accounts Receivable (beginning of year)	11,704,203	12,226,000	15,430,000
c. Accounts Receivable (end of year)	12,226,000	15,430,000	14,245,000
d. Average Account Receivable for the Year (calculated)	11,965,102	13,828,000	14,837,500
e. Inventory (beginning of year)	419,352	564,000	696,000
f. Inventory (end of year)	564,000	696,000	2,782,000
g. Average Inventory for the Year (calculated)	491,676	630,000	1,739,000
h. Current Assets	21,156,000	23,755,000	28,961,000
i. Current Liabilities	20,397,000	27,734,000	26,692,000
j. Total Liabilities	90,016,000	100,386,000	99,023,000
k. Total Stockholders' Equity (beginning of year)	146,805,636	86,980,000	62,774,000
l. Total Stockholders' Equity (end of year)	86,980,000	62,774.00	52,637,000
m. Average Stockholders' Equity during the year (calculated)	116,892,818	43,521,387	57,705,500
INCOME STATEMENT DATA			
a. Net Sales	38,105,000	44,092,000	54,288,000
b. Cost of Goods Sold (COGS)	6,512,000	9,682,000	11,805,000
c. Gross Profit (Net Sales minus COGS) (calculated)	31,593,000	34,410,000	42,483,000
d. Interest Expense for the Year	4,452,000	4,659,000	5,084,000
e. Net Income after Tax	(20,794,000)	(24,379,000)	(15,623,000)
f. Earnings for the Year before Interest & Income Tax Expense	(16,395,000)	(19,404,000)	(10,293,000)
STATEMENT OF CASH FLOWS			
a. Cash Flow provided by Operating Activities	(706,000)	(82,000)	3,159,000
b. Capital Expenditures (property, plant, equipment)	(227,000)	(127,000)	(340,000)



FINANCIAL STRENGTH

CTS Software is not a publicly held corporation. Financial statements have not been included in this proposal. CTS Software has been in business for over 30 years and have experienced year over year growth of over 50% in the last 4 years. If there are still concerns over our financial health please let us know and we can provide financial statements separately upon your confirmation they will be kept confidential and not made public or shared with anyone outside the evaluation committee.

Size of Company	20 - 50 Employees
Client Base	600 - 700 Customers Across the United States
Expertise	Software for small and medium, rural, and urban transit systems
Banking Reference	Jeanine Barco Receptionist/Administrative Assistant for Commercial Banking Admin
	WebsterBank 185 Asylum St., City Place II, 5th Floor Hartford, CT 06103
	Office: 860-692-1651 Fax: 860-692-1669 Email: jbarco@websterbank.com





TRIPMASTER BY CTS SOFTWARE SAMPLE MSA



MASTER SERVICES AGREEMENT

CUSTOMER INFORMATION	
Customer Legal Name	
Notice Contact Information	Attn: _____ Address: _____ City, State Zip: _____ Phone: _____ Email: _____
Accounts Payable Contact Information	Attn: _____ Phone: _____ Email: _____

This Master Hosted Services Agreement ("**Agreement**"), effective as of the last date it is signed by a party below (the "**Effective Date**"), is entered into by and between the entity identified as customer above ("**Customer**") and Foxster Opco, LLC, d/b/a CTS Software ("**CTS Software**"), a North Carolina corporation, located at Post Office Box 57, Swansboro, North Carolina 28584. The parties agree as follows:

1. DEFINITIONS. Capitalized terms used but not defined elsewhere in this Agreement have the meanings set forth below.

1.1 "**Customer Data**" means data and information submitted by or for Customer into the Hosted Services.

1.2 "**Documentation**" means the user guides, technical literature, and functional specifications for the Services, as provided and updated by CTS Software from time to time.

1.3 "**Hosted Services**" means the applicable software services to be provided by CTS Software to Customer over the internet through a web browser or other CTS Software authorized application, as further described and set forth in an Order and this Agreement.

1.4 "**Order**" means an order form specifying the Service(s) and/or Devices to be provided hereunder that is executed by the parties, including any addenda and supplements thereto.

1.5 "**Professional Services**" means any consulting, development, implementation, configuration, training, support, or other professional services that are described in an Order. Hosted Services are not Professional Services.

1.6 "**Services**" means the Hosted Services and Professional Services. "Services" excludes Customer Data.

2. SERVICES.

2.1 Orders for Services. CTS Software will make the Services available to Customer in accordance with the terms and conditions of this Agreement and any applicable Order. In the event of a conflict between the terms of this Agreement and the terms of an Order, the terms of this Agreement will govern to the extent of the conflict unless the Order expressly states that it is intended to modify the conflicting terms of this Agreement, in which case the terms of the Order will govern to the extent of the conflict.

2.2 Orders for Devices. Customer may purchase Devices (as defined in Schedule 2) pursuant to the



execution of an Order between the parties. The additional terms set forth on Schedule 2 will apply to such purchases.

2.3 Hosted Services. CTS Software will provide to Customer the Hosted Services specified in an Order. Customer will identify to CTS Software, in the manner specified by CTS Software from time to time, its employees that require access to the Hosted Services. CTS Software will provide standard support for the Hosted Services to Customer at no additional charge (including new releases, upgrades, updates, patches, and bug fixes as they may, from time to time, be developed and made generally available as part of the Services). CTS Software will provide the Hosted Services in accordance with the service level agreement set forth in Schedule 1.

2.4 Professional Services. If specified in an Order, CTS Software will provide Professional Services to Customer in accordance with the applicable Order. For example, upgrades to the Hosted Services that are requested and made available for the benefit of the Customer will not be offered at no additional charge. Such upgrades will be quoted by CTS Software upon written request from the Customer and memorialized in a signed Order for Professional Services. CTS Software will own any improvements, enhancements, configurations, or other derivative works to the Hosted Services made by CTS Software in connection with the Professional Services.

2.5 Service Delivery. CTS Software may provide the Services from any facility and may from time to time transfer any or all of the Services being provided hereunder to any new facility(ies) or relocate the personnel, equipment and other resources used in providing those Services. CTS Software may, in its sole discretion, make any changes to any Service that it deems necessary or useful to (i) maintain or enhance (a) the quality or delivery of CTS Software's products or services to its customers, (b) the competitive strength of, or market for, CTS Software's products or services, (c) such Services' cost efficiency or performance, or (ii) to comply with applicable law.

2.6 Protection and Use of Customer Data. CTS Software will maintain administrative, physical, and technical safeguards designed to protect the security, confidentiality, and integrity of Customer Data, as described in the Documentation. Those safeguards will include measures for preventing access, use, modification, or disclosure of Customer Data by CTS Software personnel except: (a) to provide the Services, prevent or address service or technical problems, or as described herein; (b) as compelled by law in accordance with Section 6.3 (Compelled Disclosure) below; or (c) as Customer expressly permits in writing. Customer

shall protect and maintain the confidentiality of any logins, passwords or other access credential supplied by CTS Software for use with the Services. Customer is liable for all authorized and unauthorized uses of such account credentials.

3. **USE OF SERVICES AND CONTENT.**

3.1 Customer Responsibilities. Customer will: (a) be responsible for its and its contractors' compliance with this Agreement and for all their acts and omissions of as if they were Customer's acts or omissions; (b) be responsible for the accuracy, quality, and legality of Customer Data and the means by which Customer acquired Customer Data; (c) use commercially reasonable efforts to prevent unauthorized access to or use of the Services and notify CTS Software promptly of any unauthorized access or use of which Customer becomes aware; (d) use Services only in accordance with this Agreement, any applicable Order, and the Documentation; (e) comply with all laws applicable to Customer's use of the Services; and (f) promptly and fully cooperate with CTS Software and make the necessary personnel and resources available to CTS Software for CTS Software to deliver the Services, as reasonably requested by CTS Software.

3.2 Usage Restrictions. Customer will not: (a) use the Hosted Services outside the licensing metrics set out in the applicable Order (e.g., per user limitations), if any; (b) make any Service available to, or use any Service for the benefit of, anyone other than Customer; (c) lease, license, sell, sublicense or otherwise transfer its access to or use of the Services, or include any Service in a service bureau or outsourcing offering; (d) use or permit use of any Service in contravention of Section 3.4 (Prohibited Uses); (e) interfere with or disrupt the integrity or performance of any Service; (f) attempt to gain unauthorized access to any Service; (g) permit direct or indirect access to or use of any Service in a way that circumvents a usage limit; (h) copy a Service or any part, feature, function, or user interface thereof; (i) copy any Service except as permitted herein or in an Order or the Documentation; (j) frame or mirror any part of any Service; (k) access any Service in order to build a competitive product or service; or (l) reverse engineer any Service (to the extent this restriction is permitted by law).

3.3 Technical Requirements. Customer will need certain equipment, software, and Internet access to be able to access the Hosted Services. Acquiring, installing, maintaining and operating equipment and Internet access is solely Customer's responsibility. Customer is responsible for ensuring that such equipment is compatible with the Services and complies with all configurations and specifications



provided by CTS Software, which may be amended from time to time. CTS Software neither represents nor warrants that the Hosted Services will be accessible through all web browser releases or used with all operating systems.

3.4 Prohibited Uses. Customer will not and will not permit others in using the Services to: (a) defame, abuse, harass, stalk, threaten any individual or infringe or otherwise violate the legal rights (such as rights of privacy, publicity and intellectual property) of others or CTS Software; (b) distribute any harmful, inappropriate, profane, vulgar, infringing, obscene, false, fraudulent, tortuous, indecent, unlawful, or otherwise objectionable material or information (including any unsolicited commercial communications); (c) engage in or encourage any conduct that could constitute a criminal offense or give rise to civil liability for CTS Software; (d) misrepresent or in any other way falsely identify Customer's identity or affiliation, including through impersonation or altering any technical information in communications using the Services; (e) transmit or upload any material through the Services that contains viruses, trojan horses, worms, time bombs, cancelbots, or any other programs with the intent or effect of damaging, destroying, disrupting or otherwise impairing CTS Software's, or any other person's or entity's, network, computer system, or other equipment; (f) interfere with or disrupt the Services, networks or servers connected to the CTS Software systems or violate the regulations, policies or procedures of such networks or servers, including unlawful or unauthorized altering any of the information submitted through the Services; (g) attempt to gain unauthorized access to the Services, other CTS Software customers' computer systems or networks using the Services through any means; or (h) interfere with another person's use of the Services. CTS Software has no obligation to monitor Customer's use of the Services. However, CTS Software reserves the right (but has no obligation) at all times to monitor, review, retain and disclose any information as necessary to satisfy or cooperate with any applicable law, regulation, legal process or governmental request.

3.5 Removal of Content. If CTS Software is required by any third-party rights holder to remove any content or information, or receives information that any content or information provided to Customer may violate applicable law or third-party rights, CTS Software may remove such content or information and/or notify Customer that it must discontinue all use of such content or information, and to the extent not prohibited by law, Customer will do so and promptly remove such content or information from its systems.

4. PROPRIETARY RIGHTS AND LICENSES.

4.1 Reservation. CTS Software and its licensors reserve all of their rights, title, and interest in and to the Hosted Services and the Documentation, including all updated, upgrades, or derivative works from the foregoing, and all intellectual property rights therein. No rights are granted to Customer hereunder other than as expressly set forth in this Agreement.

4.2 Access to Hosted Services. Subject to Customer's compliance with this Agreement and any Orders, CTS Software grants to Customer a non-exclusive, personal, non-transferable, limited license for its employees to access and use the Hosted Services and Documentation solely for Customer's internal business purposes.

4.3 Customer Data. As between CTS Software and Customer, Customer owns the Customer Data. Customer grants to CTS Software and its subcontractors a non-exclusive license to copy, reproduce, store, distribute, publish, export, adapt, edit, translate, and otherwise use, disclose and process Customer Data for any lawful purpose, including but not limited to as reasonably necessary or useful to perform and improve the Services and for the exercise of CTS Software's rights under this Agreement and for scenarios including but not limited to data sharing to brokers and clearinghouses on behalf of the Customer. Customer warrants to CTS Software that Customer has the right to grant the foregoing license and provide Customer Data to CTS Software in accordance with this Agreement. CTS may anonymize and de-identify Customer Data so that it does not identify Customer or any individual, and cannot be used to identify Customer or any individual, for analytical and benchmarking purposes, for the development of new products and services, and to improve CTS Software's products and services.

5. FEES AND PAYMENT TERMS

5.1 Services Fees. For the Services provided under this Agreement, Customer will pay CTS Software the fees in the amounts set forth in the applicable Order. Unless otherwise set forth in the applicable Order, applicable fees will be invoiced to Customer monthly in advance. Fees are non-cancelable and non-refundable. Unless otherwise agreed in an Order, Customer will pay all invoices net 15 days from the date of the CTS Software's invoice. All fees paid and expenses reimbursed under this Agreement will be in United States currency. All standard fees will automatically increase by 3% per year after the completion of the Initial Term.

5.2 Late Fees. If any invoiced amount is not received by CTS Software by the due date, then, without



limiting CTS Software's rights or remedies, those amounts will accrue interest at a rate of 1.5% per month or the maximum allowed under state law (whichever is lower). CTS Software, at its option, may suspend the Services, in whole or in part, if CTS Software does not receive all undisputed amounts due and owing under this Agreement within thirty (30) days after delivery of notice to Customer of the failure to pay such overdue balances. CTS Software shall be entitled to an award of its reasonable attorney's fees and collection costs in connection with Customer's breach of its payment obligations.

5.3 Taxes. CTS Software's fees will include any taxes, levies, duties or similar governmental assessments of any nature, including, for example, value-added, sales, use or withholding taxes, assessable by any jurisdiction (collectively, "**Taxes**") unless official proof of tax-exempt status is provided.

5.4 No Offset. Fees and expenses due from Customer under this Agreement may not be withheld or offset by Customer against other amounts for any reason.

6. NON-DISCLOSURE AND CONFIDENTIALITY.

6.1 Definition of Confidential Information. "**Confidential Information**" means information disclosed by a party to the other party that is designated as confidential or that reasonably should be considered confidential given the nature of the information and the circumstances of disclosure. Confidential Information of Customer includes Customer Data; Confidential Information of CTS Software includes the Services and Documentation; and Confidential Information of each party includes the terms and conditions of this Agreement and all Orders (including pricing), as well as information pertaining to business operations and strategies, and information pertaining to customers, pricing, and marketing; "**Disclosing Party**" refers to the party disclosing Confidential Information hereunder, whether such disclosure is directly from Disclosing Party or through Disclosing Party's employees or agents; and "**Recipient**" refers to the party receiving any Confidential Information hereunder, whether such disclosure is received directly or through Recipient's employees or agents. Confidential Information does not include information that: (a) is already known to the Recipient without restriction on use or disclosure prior to receipt of such information from the Disclosing Party; (b) is or becomes generally known by the public other than by breach of this Agreement by, or other wrongful act of, the Recipient; (c) is developed by the Recipient independently of, and without reference to, any Confidential Information of the Disclosing Party; or (d) is received by the Recipient from a third party who is not under

any obligation to the Disclosing Party to maintain the confidentiality of such information.

6.2 Requirement of Confidentiality. The Recipient agrees that it will use the same degree of care it uses to protect the confidentiality of its own confidential information of like kind (but not less than reasonable care) to: (a) not disclose or otherwise make available Confidential Information of the Disclosing Party to any third party without the prior written consent of the Disclosing Party, provided that the Recipient may disclose the Confidential Information of the Disclosing Party to its, and its affiliates', officers, employees, consultants and legal advisors who have a "need to know," who have been apprised of this restriction and who are themselves bound by nondisclosure obligations at least as restrictive as those set forth in this Section 6; and (b) use the Confidential Information of the Disclosing Party only for the purposes of performing its obligations or as otherwise authorized under this Agreement. The Recipient will promptly notify the Disclosing Party in the event it becomes aware of any loss or disclosure of any of the Confidential Information of Disclosing Party. The obligations in this Section 6 will survive termination and continue for so long as the applicable information constitutes Confidential Information.

6.3 Compelled Disclosure. The Recipient may disclose Confidential Information of the Disclosing Party to the extent compelled by law to do so, provided the Recipient gives the Disclosing Party prior notice of the compelled disclosure (to the extent legally permitted) and reasonable assistance, at the Disclosing Party's cost, if the Disclosing Party wishes to contest the disclosure. If the Recipient is compelled by law to disclose the Disclosing Party's Confidential Information as part of a civil proceeding to which the Disclosing Party is a party, and the Disclosing Party is not contesting the disclosure, the Disclosing Party will reimburse the Recipient for its reasonable cost of compiling and providing secure access to that Confidential Information.

6.4 Feedback. Any feedback, comments, suggestions or proposed modifications to the Services provided by Customer to CTS Software may be freely used by CTS Software without limitation, notice, or duty of accounting.

7. THIRD PARTY SERVICES

7.1 Integration with Third Party Services. The Hosted Services may contain features designed to interoperate with products, applications, or services not provided by CTS Software (collectively, each a "Third Party Service"). To use such features, Customer may be required to obtain access to such Third Party Service from its



provider, and may be required to grant CTS Software access to Customer's account(s) on such Third Party Service. Customer shall provide, and shall cause the provider of the Third Party Service to provide, CTS Software with any reasonably requested information and materials needed to integrate the Third Party Service with the Services.

7.2 Permissions; Disclaimer. CTS Software does not warrant or support Third Party Service or other third-party products or services. If Customer chooses to use a Third Party Service with the Services, Customer grants CTS Software permission to allow the Third Party Service and its provider to access any data (including, without limitation, data that may constitute Confidential Information) provided to CTS Software in connection with the Services as required for the interoperation of that Third Party Service with the Services. CTS Software is not responsible for any disclosure, modification or deletion of such data resulting from access by any Third Party Service or its provider. Any acquisition by Customer of a Third Party Service, and any exchange of data between Customer and any Third Party Service or its provider, is solely between Customer and the applicable third-party provider. Further, CTS Software cannot guarantee the continued availability of any Service features that interoperate with Third Party Service, and may cease providing them without being in breach of this Agreement or entitling Customer to any refund, credit, or other compensation, if for example and without limitation, the provider of a Third Party Service ceases to make the Third Party Service available for interoperation with the corresponding Service features in a manner acceptable to CTS Software.

8. REPRESENTATIONS, WARRANTIES, AND DISCLAIMERS.

8.1 Mutual Representations. Each party represents and warrants that it has the legal power and authority to enter into this Agreement.

8.2 Services Warranties. CTS Software represents and warrants that it will provide the Professional Services in a manner consistent with general industry standards reasonably applicable to the provision thereof and that the Hosted Services will conform substantially in accordance with the Documentation under normal use and circumstances. Customer's sole remedy for breach of a warranty in this Section shall be to have CTS Software use commercially reasonable efforts to promptly correct, replace or provide a work around for such breach, at no charge to Customer.

8.3 Customer Warranties. Customer represents and warrants that (a) Customer will use, and will ensure that all users use, each Service in full compliance with this Agreement, CTS Software's end-user terms of use and all applicable laws and regulations; (b) Customer owns or has a license to use and has obtained all consents and approvals necessary for the provision and use of all of the Customer Data that is placed on, transmitted via or recorded by any Service; (c) the provision and use of Customer Data as contemplated by this Agreement and any Service do not and shall not violate any Customer's privacy policy, terms- of-use or other agreement to which Customer is a party or any law or regulation to which Customer is subject to; and (d) no Customer Data will include social security numbers or other government-issued identification numbers, financial account numbers, credit card or debit card numbers, credit report information or other personal financial information, health or medical information or other information that is subject to international, federal, state, or local laws or ordinances now or hereafter enacted regarding data protection or privacy, including, but not limited to, the Health Insurance Portability and Accountability Act, the Health Information Technology for Economic and Clinical Health Act, the Fair Credit Reporting Act, the Children's Online Privacy Protection Act and the Gramm-Leach-Bliley Act.

8.4 Disclaimer.

(a) OTHER THAN AS EXPRESSLY SET FORTH IN THIS SECTION 7, CTS SOFTWARE DISCLAIMS ALL WARRANTIES, CONDITIONS, OR REPRESENTATIONS TO CUSTOMER REGARDING THIS AGREEMENT AND THE SERVICES, WHETHER ORAL OR WRITTEN, EXPRESS, IMPLIED, OR STATUTORY. WITHOUT LIMITING THE FOREGOING, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, THE IMPLIED WARRANTY AGAINST INFRINGEMENT, THE IMPLIED WARRANTY OR CONDITION OF FITNESS FOR A PARTICULAR PURPOSE, AND THOSE ARISING FROM A COURSE OF DEALING OR USAGE OF TRADE ARE EXPRESSLY EXCLUDED AND DISCLAIMED BY CTS SOFTWARE. NO WARRANTY IS MADE THAT USE OF THE SERVICES WILL BE ERROR FREE OR UNINTERRUPTED, THAT ANY ERRORS OR DEFECTS IN THE SERVICES WILL BE CORRECTED, OR THAT THE SERVICES FUNCTIONALITY WILL MEET CUSTOMER'S REQUIREMENTS. CTS SOFTWARE DISCLAIMS ALL LIABILITY AND INDEMNIFICATION OBLIGATIONS FOR ANY HARM OR DAMAGES CAUSED BY ANY THIRD-PARTY HOSTING CTS SOFTWARE.

(b) Customer acknowledges and agrees that (i) it is solely responsible for providing and ensuring the proper



training of its drivers, owners or operators in the operation of the motor vehicle or motor vehicles (i.e. any automotive machinery utilized for the transport of persons or goods), (ii) CTS Software shall not be liable to Customer or any other entity or individual for any claim or action including costs arising out of the use or misuse of any motor vehicle operated by or on behalf of the Customer or any such entity or individual in connection with this Agreement, including any personal injury or property damage claim or action, and (iii) Customer shall include this paragraph, or the substance thereof, in any agreements between Customer and any third party involving the Hosted Services or other CTS Software property.

9. LIMITATION OF LIABILITY.

9.1 Exclusion of Damages. EXCEPT AS OTHERWISE PROVIDED IN SECTION 9.3, IN NO EVENT WILL EITHER PARTY BE LIABLE TO THE OTHER OR TO ANY THIRD PARTY FOR ANY CONSEQUENTIAL, INCIDENTAL, INDIRECT, EXEMPLARY, SPECIAL OR PUNITIVE DAMAGES, INCLUDING LOSS OF USE, REVENUE, PROFIT, OR DATA, WHETHER ARISING OUT OF BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE) OR OTHERWISE, REGARDLESS OF WHETHER SUCH DAMAGE WAS FORESEEABLE AND WHETHER OR NOT SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

9.2 Liability Cap. EXCEPT AS OTHERWISE PROVIDED IN SECTION 9.3, IN NO EVENT WILL EITHER PARTY'S LIABILITY ARISING OUT OF OR RELATED TO THIS AGREEMENT, WHETHER ARISING OUT OF OR RELATED TO BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE) OR OTHERWISE, EXCEED THE AGGREGATE AMOUNTS PAID TO CTS SOFTWARE PURSUANT TO THIS AGREEMENT DURING THE TWELVE (12) MONTH PERIOD PRECEDING THE EVENT GIVING RISE TO THE CLAIM.

9.3 Exceptions. The exclusions and limitations in Section 9.1 and Section 9.2 will not apply to: (a) damages or other liabilities arising out of or relating to a party's failure to comply with its obligations under Section 6 (Non-Disclosure and Confidentiality); or (b) a party's obligations under Section 10 (Indemnification).

10. INDEMNIFICATION.

10.1 CTS Software Indemnification. CTS Software will defend Customer and its officers, directors, employees, agents, successors and permitted assigns against any claim, suit, action or proceeding brought by a

third party alleging that Customer's receipt or use of the Services in accordance with this Agreement infringes any intellectual property right or misappropriates any trade secret of that third party (each, a "**Claim Against Customer**"), and will pay all settlements entered into and damages awarded against Customer as a result of a Claim Against Customer; provided, however, that CTS Software will have no obligations under this Section 10.1 with respect to claims to the extent arising out of: (a) any instruction, information, designs, specifications or other materials provided by Customer to CTS Software; (b) use of the Services in combination with any materials or equipment not supplied to Customer or specified by CTS Software in writing; (c) any modifications or changes made to the Services by or on behalf of any person or entity other than CTS Software; (d) the use of any version of the Hosted Services other than the most current release made available by CTS Software; (e) Customer Data; or (f) Customer's breach of this Agreement, the Documentation, or the applicable Order(s). If a Service, or any part thereof, becomes, or in the opinion of CTS Software may become, the subject of a claim of infringement or misappropriation, CTS Software may, at its option: (x) obtain a license for Customer's continued use of that Service in accordance with this Agreement; (y) replace or modify the Services so that they are no longer claimed to infringe or misappropriate; or (z) terminate this Agreement and refund to Customer any portion of the fees prepaid by Customer for the infringing Service.

10.2 Customer Indemnification. Customer will defend CTS Software and its officers, directors, employees, agents, affiliates, successors and permitted assigns against any claim, suit, action or proceeding brought by a third party: (a) alleging that any information or materials provided by Customer (including Customer Data), or CTS Software's receipt or use thereof, infringes any intellectual property right or misappropriates any trade secret of that third party; (b) arising from Customer's breach of Section 3.2; (c) arising from Customer's failure to comply with applicable law; or (d) arising in connection with any event described in Section 8.4(b) or any from a dispute between Customer and any customer of Customer (each of (a) – (d), a "**Claim Against CTS Software**") and will pay all settlements entered into and damages awarded against CTS Software as a result of a Claim Against CTS Software.

10.3 Indemnification Procedures. The party seeking indemnification hereunder will promptly notify the indemnifying party in writing of a claim for which it seeks indemnification hereunder and cooperate with the indemnifying party at the indemnifying party's sole cost and expense. The indemnifying party will immediately take control of the defense and investigation of the claim and will



employ counsel of its choice to handle and defend the same, at the indemnifying party's sole cost and expense. The indemnifying party will not settle any claim hereunder in a manner that adversely affects the rights of the indemnified party without the indemnified party's prior written consent, which will not be unreasonably withheld or delayed. The indemnified party's failure to perform any obligations under this Section 10.3 will not relieve the indemnifying party of its obligations under this Section 10 except to the extent that the indemnifying party can demonstrate that it has been materially prejudiced as a result of such failure. The indemnified party may participate in and observe the proceedings at its own cost and expense.

11. TERM AND TERMINATION.

11.1 Term. This Agreement will commence on the Effective Date and will continue until the time which the last active Order has terminated or expired. The term of each Order will be specified in the applicable Order.

(a) Termination. Without prejudice to any other remedies and in addition to any other termination rights herein, this Agreement may be terminated by either party if the other party commits a material breach of this Agreement and such breach remains uncured 30 days after written notice of such breach is delivered to such other party, with a material breach including Customer's failure to pay, when due, any fees due to CTS Software.

11.2 Effect of Termination or Expiration. The expiration (as distinct from the termination) of this Agreement will not terminate any Order that is then in effect and not otherwise terminated and, notwithstanding anything in this Section 11.2, the terms and conditions of this Agreement will continue in effect with respect to any such Order until its expiration or termination. Subject to the preceding sentence, upon expiration or termination of this Agreement for any reason: (a) all Orders hereunder will terminate, and all rights and licenses granted by CTS Software hereunder to Customer will immediately cease; and (b) Customer will immediately cease use of any Services and, within thirty (30) days after termination or expiration of this Agreement, return to CTS Software or, at CTS Software's written request destroy, all CTS Software Confidential Information in Customer's possession or control. The following sections of this Agreement will survive its termination or expiration: Section 1 (Definitions); Section 3.5 (Removal of Content); Section 4.1 (Reservation); Section 4.3 (Customer Data); Section 5 (Fees and Payment Terms); Section 6 (Non-Disclosure and Confidentiality); Section 8.3 (Disclaimer); Section 9 (Limitation of Liability); Section 11.2 (Effect of

Termination); Section 11.3 (Portability and Deletion); and Section 12 (General).

11.3 Portability and Deletion. If Customer requests in writing within 30 days after the effective date of termination or expiration of this Agreement: (a) CTS Software will make Customer Data available to Customer for export or download and (b) CTS Software will return to Customer all Customer Confidential Information other than Customer Data in CTS Software's possession or control. After that 30-day period, CTS Software will have no obligation to maintain or provide any Customer Confidential Information, and will thereafter delete or destroy all copies of Customer Confidential Information in its systems or otherwise in its possession or control, unless legally prohibited.

12. GENERAL.

12.1 Governing Law. This Agreement will be governed by and construed in accordance with the internal laws of the State of North Carolina without giving effect to any choice or conflict of law provision or rule. The United Nations Convention on Contracts for the International Sale of Goods shall not apply in any respect to this Agreement or the parties. In the event any litigation or other action to enforce the terms and conditions hereof is commenced by either party to enforce this Agreement, such litigation or action will be filed and litigated only in a court of competent jurisdiction located in the State of North Carolina. Each party waives any and all rights to have this action brought in any place other than the State of North Carolina.

12.2 Delay in Performance. If CTS Software's performance of its obligations under this Agreement is prevented or delayed by any act or omission of Customer or its agents, subcontractors, consultants or employees, CTS Software shall not be deemed in breach of its obligations under this Agreement or otherwise liable for any costs, charges or losses sustained or incurred by Customer, in each case, to the extent arising directly or indirectly from such prevention or delay, and CTS Software's obligation to perform will be extended by the same number of days as Customer's contingent action is delayed.

12.3 Conflicting Terms in Customer Purchase Orders. Notwithstanding the content of any Customer purchase order or any other document or record generated by Customer (other than an executed Order), whether in writing or electronic, relating to the subject matter of this Agreement, the terms of this Agreement will govern and any conflicting, inconsistent, or additional terms contained in such documents will be null and void.



12.4 Notice. All communications required or otherwise provided under this Agreement will be in writing and will be deemed given when delivered (a) by hand, (b) by registered or certified mail, postage prepaid, return receipt requested; or (c) by a nationally recognized overnight courier service; to the address set forth for the applicable party on the first page of this Agreement, as may be amended by the party by written notice to the other party in accordance with this Section 12.4.

12.5 Assignment. Neither party may assign, transfer or delegate any or all of its rights or obligations under this Agreement without the prior written consent of the other party, which consent will not be unreasonably withheld or delayed; provided that upon prior written notice to the other party, either party may assign this Agreement, in whole, to a successor of all or substantially all of the assets of that party through merger, reorganization, consolidation or acquisition. If a party makes any attempted assignment, transfer or other conveyance in violation of the foregoing, the attempted assignment, transfer, or other conveyance will be null and void.

12.6 Interpretation. For purposes of this Agreement, (a) the words "include," "includes" and "including" will be deemed to be followed by the words "without limitation"; (b) the word "or" is not exclusive; and (c) the words "herein," "hereof," "hereby," "hereto" and "hereunder" refer to this Agreement as a whole. Should any provision of this Agreement require judicial interpretation, the parties agree that the court interpreting or construing the same may not apply a presumption that the terms of this Agreement will be more strictly construed against one party than against another.

12.7 Severability. In case any one or more of the provisions of this Agreement is held by a court of competent jurisdiction to be invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein will not in any way be affected or impaired thereby.

12.8 Entire Agreement. This Agreement, including the schedules and exhibits hereto and Orders entered hereunder, constitutes the entire agreement between the parties concerning the subject matter hereof and supersedes all written or oral prior agreements or understandings with respect thereto.

12.9 Publicity. Customer agrees to serve as a customer reference for CTS Software. Additionally, Customer shall permit CTS Software to feature Customer in a press release upon execution of this Agreement and shall

permit CTS Software to feature Customer in marketing materials following the implementation of the Hosted Services. CTS Software and Customer agree to collaborate on public announcements and marketing materials, and shall refrain from issuance or distribution of marketing materials without first obtaining the prior written consent of the other party, which shall not be unreasonably withheld.

12.10 Amendment; Waiver. This Agreement may only be amended, modified or supplemented by an agreement in writing signed by each party hereto. No waiver by any party of any of the provisions hereof will be effective unless explicitly set forth in writing and signed by the party so waiving.

12.11 Export. Customer shall not itself, or permit any third party, to, export, re-export or release, directly or indirectly, the Services to any country, jurisdiction or individual person to which the export, re-export or release of the Service (a) is prohibited by applicable law and associated regulations or (b) without first completing all required undertakings, including obtaining any necessary export license or other governmental approval. Customer indemnify and hold CTS Software harmless from any breach of this section.

12.12 Force Majeure. Neither party will be liable for delay or failure in performing any of its obligations (other than payment obligations) hereunder due to causes beyond its reasonable control, including an act of God, war, natural disaster, governmental regulations or orders, epidemics or pandemics, terrorism, communication or utility failures or casualties or the failures or acts of third parties.

12.13 Equitable Relief. Each party acknowledges that a breach by a party of Section 3.2 (Usage Restrictions) or Section 6 (Non-Disclosure and Confidentiality) may cause the non-breaching party irreparable damages, for which an award of damages would not be adequate compensation and agrees that, in the event of such breach or threatened breach, the non-breaching party will be entitled to seek equitable relief, including a restraining order, injunctive relief, specific performance and any other relief that may be available from any court, in addition to any other remedy to which the non-breaching party may be entitled at law or in equity. Such remedies will not be deemed to be exclusive but will be in addition to all other remedies available at law or in equity, subject to any express exclusions or limitations in this Agreement to the contrary.

12.14 No Third-Party Beneficiaries. This Agreement is for the sole benefit of the parties hereto and their respective successors and permitted assigns and,



except as expressly set forth in Section 10 (Indemnification), nothing herein, express or implied, is intended to or will confer upon any other person or entity any legal or equitable right, benefit or remedy of any nature whatsoever, under or by reason of this Agreement.

12.15 Relationship of Parties. Nothing in this Agreement will constitute or be deemed to constitute a partnership between the parties hereto or constitute or be deemed to constitute one party as agent of the other, for any purpose whatsoever, and neither party will have the authority

or power to bind the other, or to contract in the name of or create a liability against the other, in any way or for any purpose.

12.16 Counterparts. This Agreement may be executed in counterparts, each of which will be deemed an original, but all of which together will be deemed to be one and the same agreement. A signed copy of this Agreement delivered by facsimile, e-mail or other means of electronic transmission will be deemed to have the same legal effect as delivery of an original signed copy of this Agreement.

[Remainder of Page Intentionally Blank; Signature Page Follows]

WITH THE INTENT TO BE BOUND, the parties have executed this Agreement as of the Effective Date.

Foxster Opco, LLC dba CTS Software

By: _____

By: _____

Name: Amie L Green

Name: _____

Title: Finance Director

Title: _____

Date: _____

Date: _____

Schedule 1

Service Level Agreement

Service Levels. Subject to the terms and conditions of this Agreement, CTS Software will use commercially reasonable efforts to make the Hosted Services Available (as defined below) at least ninety-nine percent (99.0%) of the time as measured over the course of each calendar month during the Term (each such calendar month, a “**Service Period**”), excluding unavailability as a result of any of the Exceptions described below in this Section 0 (the “**Availability Requirement**”). “**Service Level Failure**” means a material failure of the Hosted Services to meet the Availability Requirement. “**Available**” and “**Availability**” mean the Hosted Services are available for access and use by Customer. For purposes of calculating the Availability Requirement, the following are “**Exceptions**” to the Availability Requirement, and neither will the Hosted Services be considered un-Available nor any Service Level Failure be deemed to occur in connection with any failure to meet the Availability Requirement or impaired ability of Customer to access or use the Hosted Services that is due, in whole or in part, to any: (a) access to or use of the Hosted Services by Customer, or using Customer’s access credentials, that does not strictly comply with this Agreement; (b) Customer’s delay in performing, or failure to perform, any of its obligations under this Agreement; (c) Customer’s Internet connectivity; (d) force majeure event; (e) failure, interruption, outage or other problem with any software, hardware, system, network, facility or other matter not supplied by CTS Software pursuant to this Agreement; (f) scheduled downtime for routine maintenance of which CTS Software has provided Customer at least 72 hours’ prior notice via email or through the Hosted Services; or (g) disabling, suspension or termination of the Services pursuant to the Agreement.



TRIPMASTER SOLUTIONS

INTRODUCTION

TripMaster is fully hosted, 100% web-cloud based and is optimized for Chrome, Edge, and Internet Explorer. System data is stored in a Microsoft SQL 2016 relational database, hosted in the Microsoft Azure Cloud for HIPAA compliance as well as ePHI and FIPS encryption. Users are guaranteed a minimum 99.9% uptime with multiple fail-safes; our server architecture incorporates redundant instances, Always-On configuration, and other technologies to ensure you always have access to your software. CTS Software performs a database backup every 30 minutes, and a full system backup nightly.

CORE SOLUTIONS & FEATURES:

- Mapping/AVL
- Operator Generated Messages
- Mobile Data Computer (MDC)
- Electronic Pre and Post-Trip Inspections
- Intelligent Automated Scheduling
- Reporting
- Passenger Notifications for Demand
- Response Where's My Ride?
- Electronic Bus Pass / Ticketing Module
- Online/Mobile App Demand Response
- TripView - Camera Module
- Customer Complaints Tracking
- Fixed/Deviated Fixed/Commuter

ADVANCED SOLUTIONS:

- Advanced Solutions
- Passenger Notifications for Demand Response
- Where's My Ride?
- Electronic Bus Pass / Ticketing Module (TripPass)
- Online/Mobile App Demand Response

OPTIONAL SOLUTIONS:

- Optional Solutions
- TripView - Camera Module
- Fixed/Deviated Fixed/Commuter
- Vehicle Maintenance Module
- Customer Complaints Tracking
- Passio GO – Fixed Route Passenger Facing Application
- Passio Automated Passenger Counters
- Passio Automatic Voice Announcements
- Passio Mobile Wi-Fi
- Passio Intelligent Displays
- Passio Fixed Route NTD Reporting
- Passio Sign Integrations



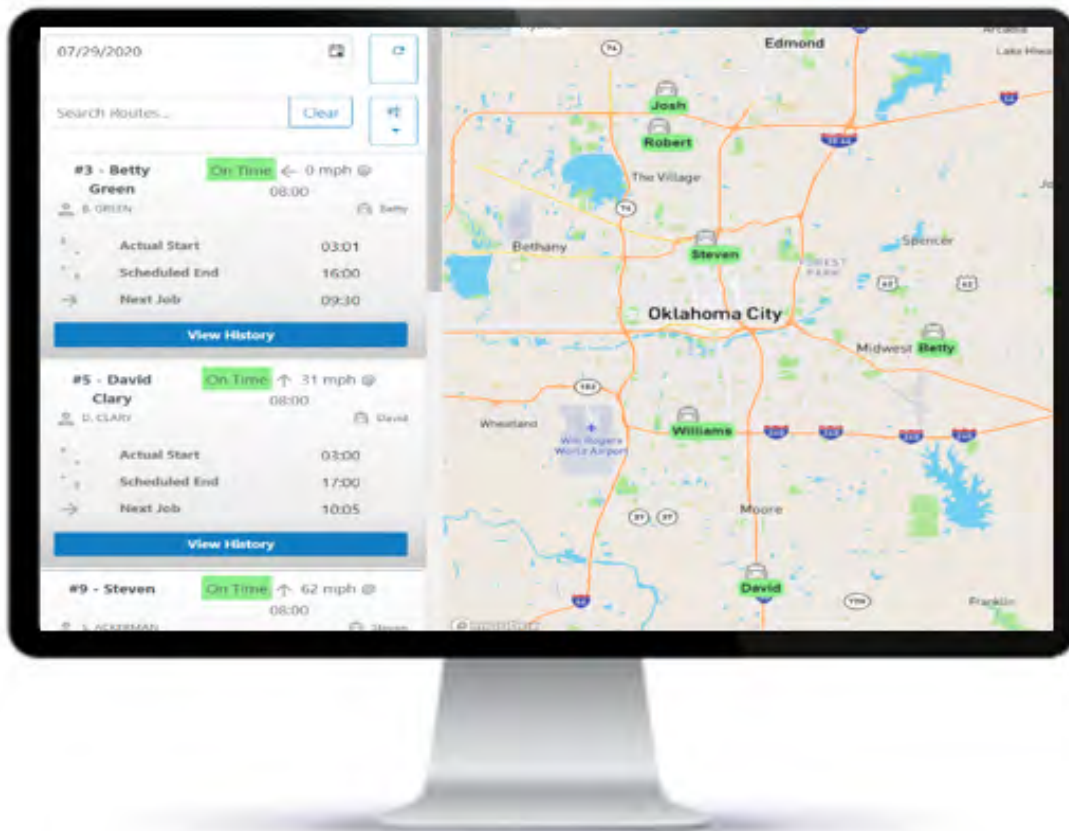


CORE SOLUTIONS

TripMaster uses MapBox professional series GIS data to power our geolocation-based applications. MapBox updates its dataset at least once a quarter and is considered the leading professional toolset for all serious geo-location and fleet management applications. TripMaster can import a selection of GIS and SHAPE files from third-party GIS systems. In the example below, a route is selected on the menu tree on the left, and all related services running on that route are displayed in the center list. The green bars are the progress bars for individual buses with the color indicating that the buses are tracking. Trip details for the highlighted bus are displayed in the box beneath the center list.

Our breadcrumb style vehicle location maps are a great help in assessing service deficiencies. Below is a map view of the same performance information as above. Each green circle represents the point where bus GPS coordinates were reported.

As with all map views, the window can be zoomed in and out using a scrolling wheel mouse or the tool bar in the lower right hand of the map window. Determining the current position of all vehicles – either in real time (i.e. now) or a specific period (i.e. between 0600 and 0610) is also done in the context map.



OPERATOR GENERATED MESSAGES

Operator generated messages can be managed from any authorized internet-enabled device, such as a desktop PC, tablet PC or internet-enabled smartphone.

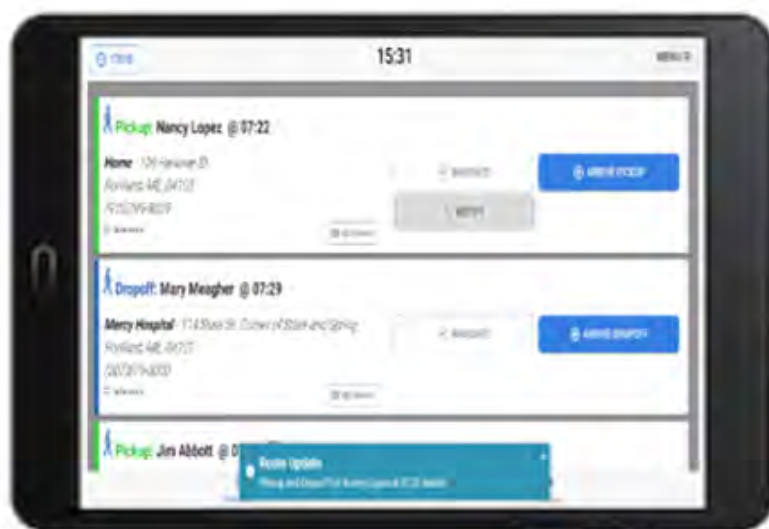
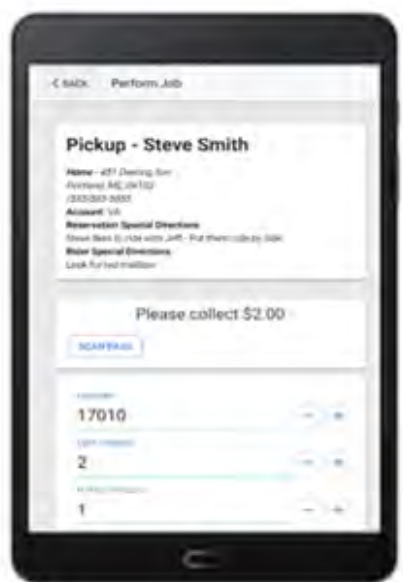
Authorized personnel can select free text messages or a predefined message for transmission to any bus drivers. Text messages will be received by the operator on the MDT or road supervisor with mobile internet-enabled device. We generally limit the text-based messages from the MDT to the dispatch operator to the use of canned messages for safety and operational reasons.

Authorized operators will be able to manage informational messages displayed on wayside electronic signage and the public website from the same proposed application. Individual signs can be selected to provide localized information to the public, such as route detours or upcoming road closures.



Upon review of the specifications contained within the RFP and question and answer documentation, we are confident in stating the Intelligent Transportation System suite of hardware and software is highly compliant with the requirements as detailed.

MDTs allow drivers and dispatchers to communicate efficiently in real time, collect information about vehicles, passenger loads, and driver behavior, and GPS information that gets sent back to the office so that dispatchers know these pertinent details about the vehicle. ParaScope acts in part as an electronic manifest, updatable in real time based on changes to trips and rides. Dispatchers can re-assign trips and rides and add and change details of rides and routes that will be updated automatically for the driver.



Drivers can view onscreen maps and receive turn-by-turn navigational prompts, eliminating the reliance on paper maps. Drivers and dispatchers can communicate in real-time via canned or customized text messages so drivers can keep their eyes on the road. Managers can use data collected by this technology to accurately analyze on-time performance and make improvements.

“
great
satisfaction
with
ParaScope

With drivers using tablets, they are more efficient with their schedules and ability to do more trips in a day. Our drivers range from age 25 to 85, and each one has expressed great satisfaction with ParaScope

– BPART, IL.



As your agency moves in a digital direction, electronic inspections just make sense. When your drivers use ParaScope for inspections, information about vehicle issues is immediately communicated to TripMaster, letting you respond quickly. You can customize your pre and post-trip inspections as well as acceptable results and hard stops for failed inspection items. The electronic inspection feature is included with ParaScope. There is NO additional charge.

Vehicle Inspection Checklist			
Body			
Brake Lights	☒ OK	☐ SERVICE NEEDED	☐ SERVICE CRITICAL
Visible Damage	☐ OK	☒ SERVICE NEEDED	☐ SERVICE CRITICAL
Wheelchair Lift Oper...	☒ OK	☐ SERVICE NEEDED	☐ SERVICE CRITICAL
Fluids			
Oil Level	☒ OK	☐ SERVICE NEEDED	☐ SERVICE CRITICAL
Transmission Fluid	☒ OK	☐ SERVICE NEEDED	☐ SERVICE CRITICAL
Inside Vehicle			
Tablet Mount is Sec...	☒ OK	☐ SERVICE NEEDED	☐ SERVICE CRITICAL
Tires			
Tire Pressure	☒ OK	☐ SERVICE NEEDED	☐ SERVICE CRITICAL
SUBMIT			



TripMaster includes our Auto Scheduler module, allowing users to dynamically batch-schedule all riders for a day at once and/or one at a time for same-day, on-demand trips. This tool optimizes routes for efficiency given your available resources, while following rules/standards for pickup and drop-off windows and ride times created by the licensee.

“
**customer
service
has been
stellar**

We are extremely pleased that we choose CTS Software. The transition from manual scheduling to automated has gone smoothly. The drivers have transitioned quickly, and the customer service has been stellar

– Winchester Transit, VA.

”

In all phases of trip optimization, TripMaster’s intelligent automated scheduling identifies the best possible solution to improve ridesharing possibilities, decrease deadhead time and miles, increase on-time performance, and provide a positive passenger experience. CTS algorithms coupled with the most up to date map data, street routing, traffic patterns and user controllable settings, TripMaster’s intelligent automated scheduling makes highly accurate drive time estimates.

Although a complete automation process is in place, we feel it is extremely important that our customers are always in control of their schedules. For this reason, when running the scheduling wizard, TripMaster will produce three different methods for the end user to review the results with a detailed explanation and make changes that will not be reverted if the scheduling process is ran again.



A successful ITS platform does not start and end with any one piece. It is important your deployed system relies on extremely strong and powerful hardware, reliable and proven software applications, and road-tested real-time prediction algorithms. However, the true return on investment does not come until all those pieces work successfully together and produce good data.

CTS' TripMaster software is equipped with one of the most detailed, powerful reporting engines in the industry, including customizable pre-designed system reports. The custom reporting module does not require knowledge of Crystal or Ad-Hoc report queries or other reporting methodologies.

Each custom report created can be saved for future use, and there is no limit to the number of custom reports that can be created. All reports are created by queries run, on the back end, through SQL and displayed in Active Reports Web Viewer. All reports and other documents are exportable to formats including Excel, PDF and Word. Our detailed training sessions cover all reports thoroughly.

“

we are

very

satisfied

with TripMaster

Before CTS, I would say 'give me a couple of days.' Not anymore! Choose a report, select your date range, and print. We are very satisfied with TripMaster.

- Transportation Plus of Lincoln, NE

”



All state or federally required reports will be added to your TripMaster database at no additional charge. Additionally, we will make an effort during the project management phase to better understand and design reports which might support your agency needs specifically.

Standard reports Include

- Reservation history
- On-time Performance/Live Performance
- Daily Validation
- Revenue data
- Ride data
- Ride status
- No Show
- Ride details
- Ride demand
- Trip data
- Employee payroll
- Vehicle utilization
- Units of service
- National Transit Database (NTD)

“
approximately
\$600 reduction
in
expenses
a week.
”

Since implementing TripMaster at Transit, there has been a reduction in total miles by approximately 300 miles/week and a reduction of 18 hours/week in payroll. That is approximately a \$600 reduction in expenses a week.

- Rutherford County Transit, NC.





ADVANCED SOLUTIONS

TRIPREMINDER (IVR)

With an industrywide annual average of 3.5 percent rider no-shows, we have developed our TripReminder module to help decrease wasted drive time, fuel, and vehicle wear and tear by minimizing this percentage. Your riders can receive a call the night before or shortly beforehand on the day of their pickup, minimizing no-shows and your staff's frustration.

The IVR system requires no effort from your staff—everything is performed seamlessly through TripMaster and remote servers, and because the entire process is web-based, your phone lines remain free the entire time.

“
from
13%
no-shows to
1%
With CTS' Passenger Reminder option,
we went from 13 percent no-shows to 1
percent
- Big Bend Transit, FL.
”

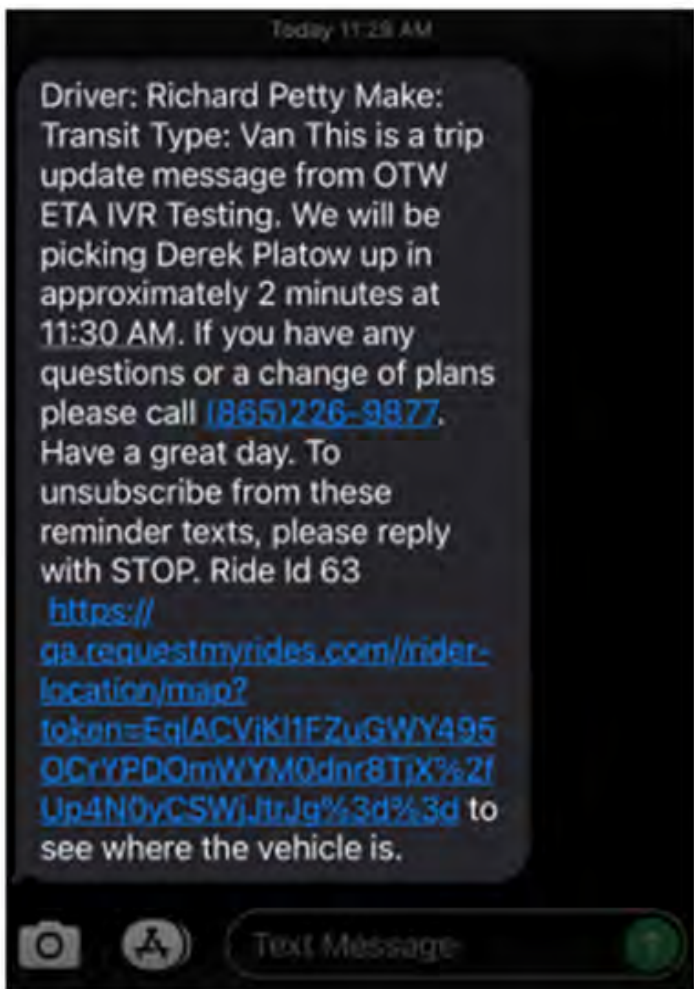
REMINDER PROFILE		
Profile Name	Playback Name	Call Back Phone Number
Call Reminder	KI BOIS	(910)512-0624 ✓
On The Way Lead Minutes (minimum 15)	Night Before Call Start Time	
30	19:00 ⌚	
Night before reminder won't be sent after 10pm local time		
Night Before Configuration On The Way Configuration		
Use Multiple Templates:		
Call Configuration		



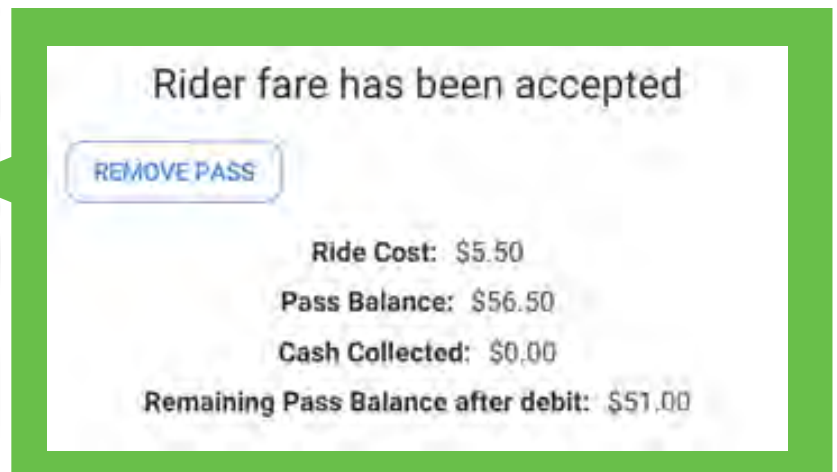
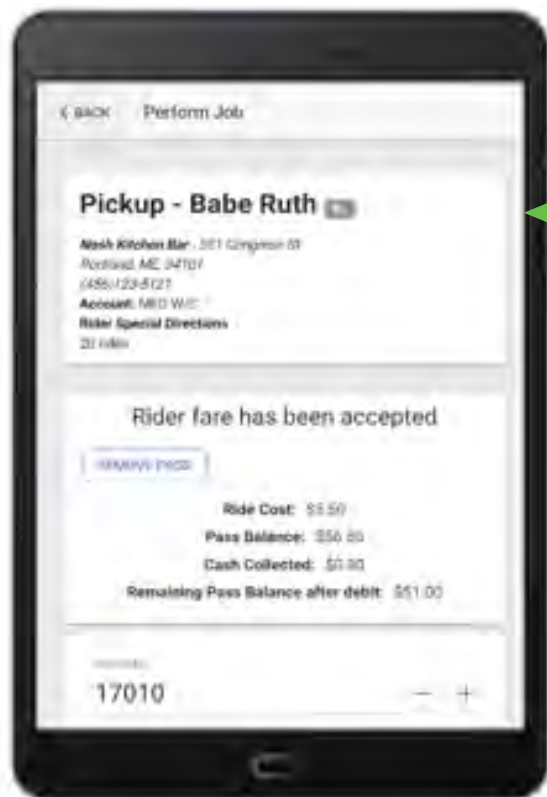
WHERE'S MY RIDE

The Where's My Ride feature is an enhancement to the TripReminder module. When the driver clicks the On The Way button within ParaScope, that will trigger a text message to that rider with a hyperlink they can click on. That hyperlink pulls up a snapshot of where the vehicle is on a map, visually, and also provides the rider with a real-time ETA. Additionally, if the rider has a return ride marked as a "Will Call" in the holding pen, there will be a button the rider can select to notify dispatch (TripMaster) that they are ready to be picked up.

After our research and numerous customer polls centered around downloadable app adoption, the team here at TripMaster determined a text message for vehicle location and real-time ETA would serve as a better tool and more receptive to passengers.



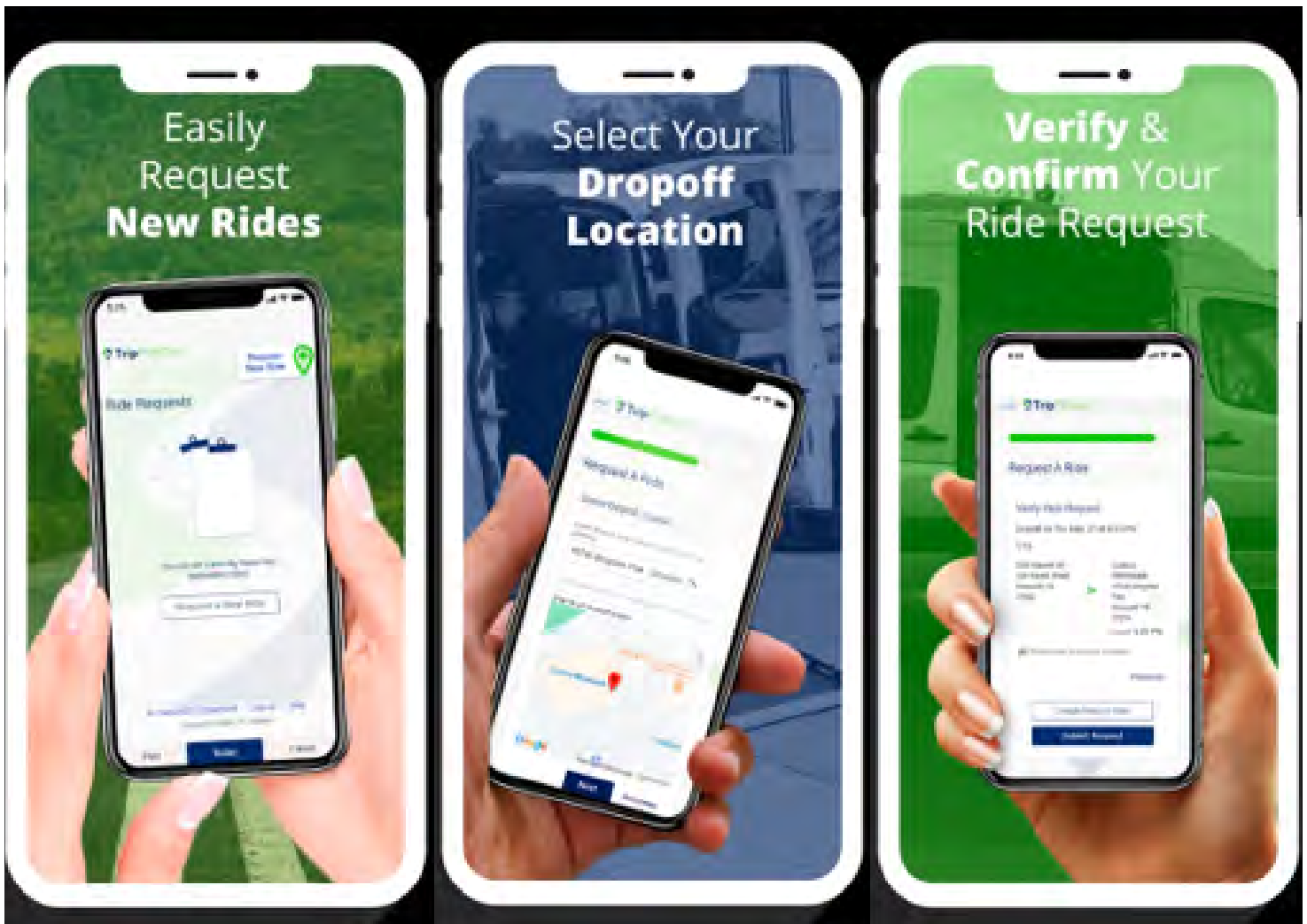
Collecting cash fares is time-consuming for drivers and office staff, and a liability to transport and store on vehicles. Eliminate these issues with TripPass from CTS, an optional module to complement ParaScope, our mobile application. Keep better track of fare payments in a way that's safe for your drivers and easy for your riders—they just load a pass at the office or over the phone, your driver scans it when they board, and off they go.



- Save time and stress associated with onboarding case handling
- Reduce the liability of handling and transporting cash in vehicles and in the office
- Increase on-time performance by streamlining driver tasks
- Increase accountability in fare handling
- Track use of passes
- Advertise your agency with professional, custom-designed passes



TripMaster's TripPortal module has been built in-house and is directly embedded and integrated with TripMaster. Convenience and time saving are also attributes of TripPortal, CTS's rider portal. This online tool cuts down on the need to take reservations over the phone. TripPortal allows riders to easily self-serve by managing their ride requests from a computer or smartphone. The TripPortal app is compatible with both iOS and Android platforms. Simply enter an email address and click "Invite to Portal" to give riders access to use an intuitive, one-page wizard to enter the date, time, and places they want to go. Riders can also check their reservation status to see if it is pending, accepted, or rejected and a rejection reason. The TripPortal allows interagency communication, letting each agency assign delegates at a coordinating agency who can submit ride requests for certain passengers. The requests are approved or denied by the agency being asked to transport the client. Agency delegates are notified when rides are accepted or denied and given denial reasons. Upon accepting a ride request, a reservation screen appears with all information filled in for final review by the coordinating agency. TripPortal is also designed for online/app-based individual passenger booking of trips as well.





OPTIONAL SOLUTIONS

Liability and poor driving behaviors are unfortunately a source of stress for all transit providers. The use of onboard cameras and accompanying software can drastically reduce this headache. Cameras can help you fight fraudulent or inflated claims and identify driving behaviors that need to be modified. TripView is a complete multi-camera solution that combines quality hardware with the most advanced data monitoring platform to date. In the event of a road incident, you will immediately be alerted and gain access to the event media.

The hardware features include:

- Multi-camera design
- In-demand technology
- 120 degree wide-angle lens
- Various camera options
- Ability to mount an additional camera anywhere
- Video and audio recording
- Tamper-resistant locking cover
- Automated power-up and shutdown
- Compact size



We partner the following software features to complete this camera module:

- Automatic video uploads
- Shock, accident, and driver panic button alerts
- Customizable alerting formulas
- Camera history access
- Live driver feed available 24/7
- Geo-fencing
- Cloud-based video storage

We have taken safety to new heights when it comes to dispatching software. The interface between TripMaster and the TripView camera solution has been significantly enhanced by embedding access to each vehicle's live camera view right within TripMaster's daily schedule. Right-click on a vehicle, select "live view" and the live camera feed for the vehicle appears. The presence of a driver panic button connected to the cameras gave us the opportunity to innovate with added safety. Once the driver pushes the panic button, a notification/critical message appears on the daily schedule within TripMaster, alerting staff that the driver has pushed the panic button. A hyperlink to view the video to get involved to make sure proper measures are taken and taken quickly.



CTS is proposing the fixed/deviated fixed/flag stop module for this project based on the requirements and specifications being requested.

TripMaster combined with ParaScope and TripPass allows agencies the ability to manage their fixed/deviated fixed/shuttle/flag stop services as well as their demand response/paratransit services all in one place...all from one application in the office and the vehicle.

CTS will import your GTFS data and TripMaster automatically creates a GTFS Block (See figure 1). Once a GTFS Block is selected, the stops on that Block are automatically created on your schedule for the timeframe that vehicle/driver is available (See figure 2). For deviated fixed route scenarios, demand response reservations may be scheduled into the Block to maximize efficiency and utilization.

Figure 1

Figure 2

Not Validated 500 Shuttle 13:00-20:00 14:09-17:29 Martin, Mark - 4 500				
Status	Name	From	Pickup	
☐ Pending	Stop at: Quail Lakes Drive & Nth Pershing Avenue	Outbound	14:19	
☐ Pending	Stop at: Mall Transfer Metro Hopper Dep	Outbound	14:27	
☐ Pending	Stop at: Mall Transfer Metro Hopper Dep	Outbound	14:35	
☐ Pending	Stop at: West March Lane & Nth Pershing Avenue	Outbound	14:43	
☐ Pending	Stop at: Brookside Road & Shadowbrook Drive	Outbound	14:55	
☐ Pending	Stop at: Quail Lakes Drive & West March Lane	Outbound	15:08	
☐ Pending	Stop at: Quail Lakes Drive & Nth Pershing Avenue	Outbound	15:19	



Once a driver logs into ParaScope, their schedule for the day appears. Whether they are assigned to a route that has GTFS Blocks or a route that is doing demand response reservations, the option to "Perform Flag Stop" can be available and is customizable per route. Figure 3 below demonstrates the view for a driver with the GTFS Block selected in Figures 1 and 2. You will notice Scheduled Stop times with their on-time performance displayed in real-time. You will also see the ability for the driver to perform a flag stop at any time.

Driver view of scheduled fixed stops with the "Perform Flag Stop" option.

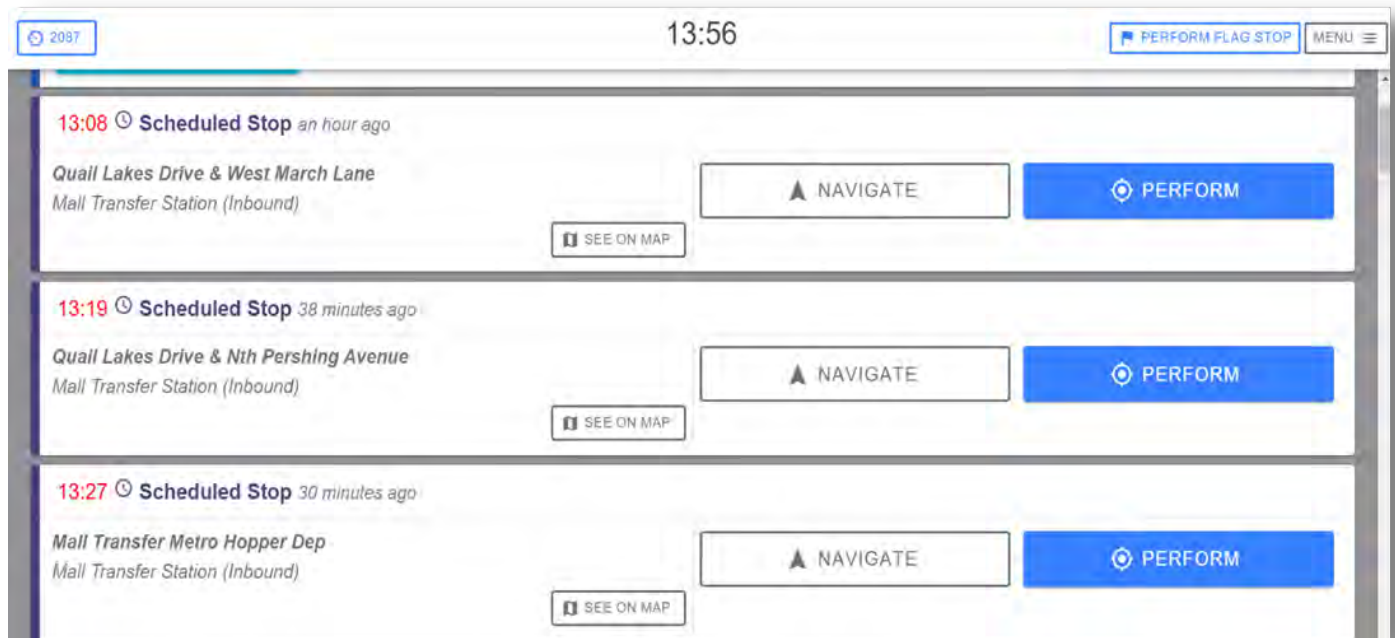


Figure 3

When a driver chooses to perform a scheduled stop or selects the "perform flag stop" option, they will then either select "onboard pass less" or scan passenger passes which keeps a perfect log of the passenger's information that board and deboard the vehicle for superior data analysis. In figure 4, you will notice that there are different passenger types (60+ and General) that have different fares. Passenger types are customized by your agency and different rates are applied based on your rate structure. Also showing are the total passengers on board as well as how many the driver has selected for this stop.



← BACK
Perform Scheduled Stop - Quail Lakes Drive & West March Lane (Inbound)

Total Flag Stop Passengers On Board: 4

Odometer
2087

−

+

ONBOARD PASS

DEBOARD PASS

60 *

Total Passless Fare Colle... 0.5

−

+

Boarded Here: 1

ONBOARD PASSLESS

DEBOARD PASSLESS

Currently Onboard: 1

Deboarded Here: 0

General

Total Passless Fare Colle... 1

−

+

Boarded Here: 1

ONBOARD PASSLESS

DEBOARD PASSLESS

Currently Onboard: 1

Deboarded Here: 0

COMPLETE STOP ✓

Figure 4

Users can also scan a pass to populate a screen for the driver in ParaScope allowing the passenger to acknowledge. By scanning the pass, ParaScope identifies the passengers, their balance, and their remaining balance. This information is then tracked in TripMaster from within Pass Management.



Increased customer satisfaction With BusBuzz, most agencies see an increase in their overall satisfaction ratings within only 3 months. This increase in scores usually jumps from anywhere between 40-70%, a huge increase that would normally take years to accomplish. It's easy to know about customer issues before they escalate into a serious complaint. Rider Experience No extra equipment is needed with BusBuzz. We can set up a 10-digit long code (10DLC) phone number, that riders simply text to offer their feedback, ask questions, and receive bus maps and schedules via text (SMS). No downloading an additional app or going to a specific link is needed. Riders can even offer their feedback after off-boarding the vehicle. The 10-digit long code just needs to be posted somewhere inside the vehicle, or somewhere customer-facing, like a social media account or sign at a bus stop.

HIGHLIGHTS

Text Connect Dashboard™

Follow the history of the conversation, see responses, and view reports

No Apps or Special Software

Passengers use text messaging on their cell phone, while supervisors and managers view information via the web

Send Alerts

Send messages to all registered passengers or specific groups of passengers

Open Communication

BusBuzz™ changes the way transit systems interact with their passengers. Passengers can suggest improvements, report issues, offer compliments, and even register for alerts so they are completely in touch with the transit system. Most important, authorized system users can respond directly to a passenger from the dashboard. All responses can then be tracked for quality and timeliness.

Improved Passenger Satisfaction

BusBuzz Text Connect™ customers typically experience an average increase of 40 to 70 percent in passenger satisfaction within the first three months of using the system.

How it Works

BusBuzz™ requires no additional equipment. It provides a tool that will send and gather information from passengers while onboard vehicles. Feedback is captured in a dashboard that is accessible to all authorized operations users. Using the dashboard, responses can be categorized, assigned, and reported.



VEHICLE MAINTENANCE MODULE (OPTIONAL)

The Vehicle Maintenance Module includes keeping track of an unlimited number of tasks to help you stay on schedule with your vehicle warranties and other maintenance needs. Set mileage parameters or a duration of time, create vehicle service requests, and add approved vendors for services. From increasing passenger safety, organization and meeting emissions requirements, the seamless interface with TripMaster will streamline your vehicle maintenance.

CTS donates 10% of the monthly maintenance and support fees for every vehicle maintenance purchase to Easterseals, helping support community-based transit and other services for elderly and disabled people across the United States.



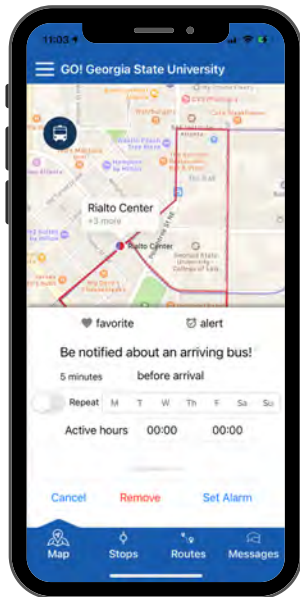
Name		Category	
Air Filters		Engine	
Default Interval Days (0 for not scheduled)		Default Interval Miles (0 for not scheduled)	
30		9000	
Add Approved Vendor			
Approved Vendors	Quoted Cost	Default	
Big J's	\$ 25 .00	default	Remove
In House Maintenance Shop	\$ 35 .00	make default	Remove
Jiffy	\$ 25 .00	make default	Remove



Real-Time Data on Arrival and Departure of Transit Vehicles

Our app, Passio GO, can provide real-time data app alerts when vehicles arrive or depart a stop.

App users must set up their alerts within the Passio GO App.

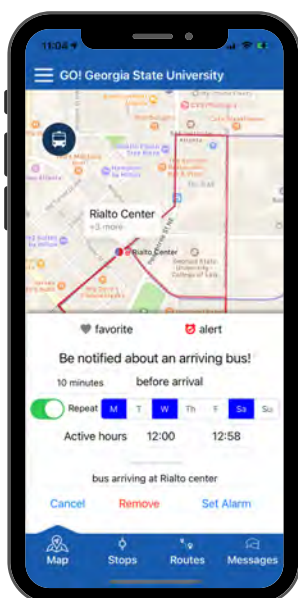
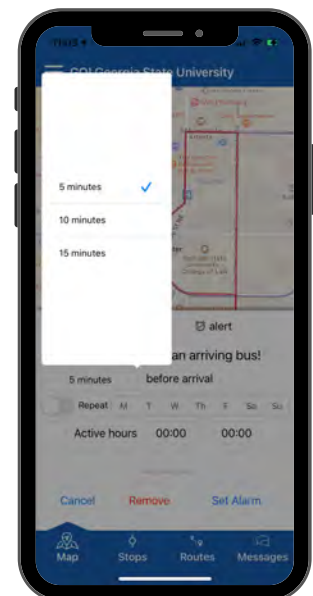


Start in the Live Map

App users start in the Passio GO live map. They can choose a stop then press the "Alert" setting to begin configuring the alert. They can also "Favorite" the stop.

Set Time Based Alerts

Riders are able to choose if they want an alert 5, 10, or 15 minutes before the vehicle arrives at their stop.



Turning Your Alert On

Next, riders choose dates they need alerts, and a time frame they would like alerts. They can even nick-name the alert or add comments.

Optional: Passio can also provide a direct SMS service to your passengers to get bus ETAs. This is useful for passengers who wouldn't like to download the app, or who do not have a smartphone.



Passio GO™

Our App represents the next generation of real time vehicle location tools for passengers and CAD/AVL management and reporting tools for system operators. Fully integrating the best visual tools, public viewers, and smartphone applications into the Passio Transit platform provides our customers with unparalleled access to real time updates for routes and stops, while instantaneously evaluating the system's performance from any computer, tablet, or cellphone. Hundreds of hours of testing and consistent customer feedback have produced a tool that is intuitive for passengers, invaluable for daily operators, and indispensable for management and leadership teams.

Passio GO™ Mobile App

The Passio GO mobile application is designed to be intuitive and user friendly. No specific training is required for the end users. Once the application is downloaded to their smartphone, the application leads them to naturally understand how to use the key features such as viewing specific routes, tracking buses in real time, and identifying where they need to go simply by tapping on the home screen.

For users wishing to take advantage of enhanced features such as 'follow my bus' or destination planning, the application has straightforward embedded hints and guidance tools that make the app easy for everyone to use. GPS data is updated in real time, typically every second or less, on board the vehicle. Movement, change in heading/direction and speed is reported in real time and immediately uploaded via data connection to network servers for representation on public views, website maps, and smartphone applications.

Smartphone applications are available, at no cost, for both Apple (iOS) and Android (Google Play) users. In addition to smartphone applications, an interactive mobile web view is available for use on personal computers, tablets, and is optimized for mobile viewing on any cell phone or mobile device.



Real Time Passenger Load

Passio Transit customers using either Automated Passenger Counting or Electronic Passenger Counting (touch screen counting on the MDT) have the option to view real time passenger load data on both the Passio Navigator Operational Live Map for management as well as the publicly available web viewer, kiosk, and smartphone apps.

Maps and Customized Layers

All public views utilize externally validated map applications for accurate representation of locations, buildings, and streets. Additional layers may be added for tailored information such as alternate building names, key points of interest, and external information.



Automatic Passenger Counting (APC)

Main Features

MDT Involvement

The APC system directly links to our Mobile Data Terminal (if required) to allow operators to view the number of passengers on board, record passenger type, and view route and stop information.

Hella Sensors

Using Hella devices, we are able to take advantage of 3D sensors with 98% accuracy to count passengers as they board and alight vehicles, even in low light or extreme transit conditions.

Alternatives & Integrations

We also provide mixing and matching passenger counting options. While customers may want APC on some vehicles, Electronic Passenger Counting (EPC) is readily available for others. Passio can also use card readers to count and identify individual passengers and passenger type.

Navigator

Our cloud based solution, Passio Navigator, automatically uploads APC information for data analysis. Navigator also has the ability to create advanced ridership reports and dashboards.

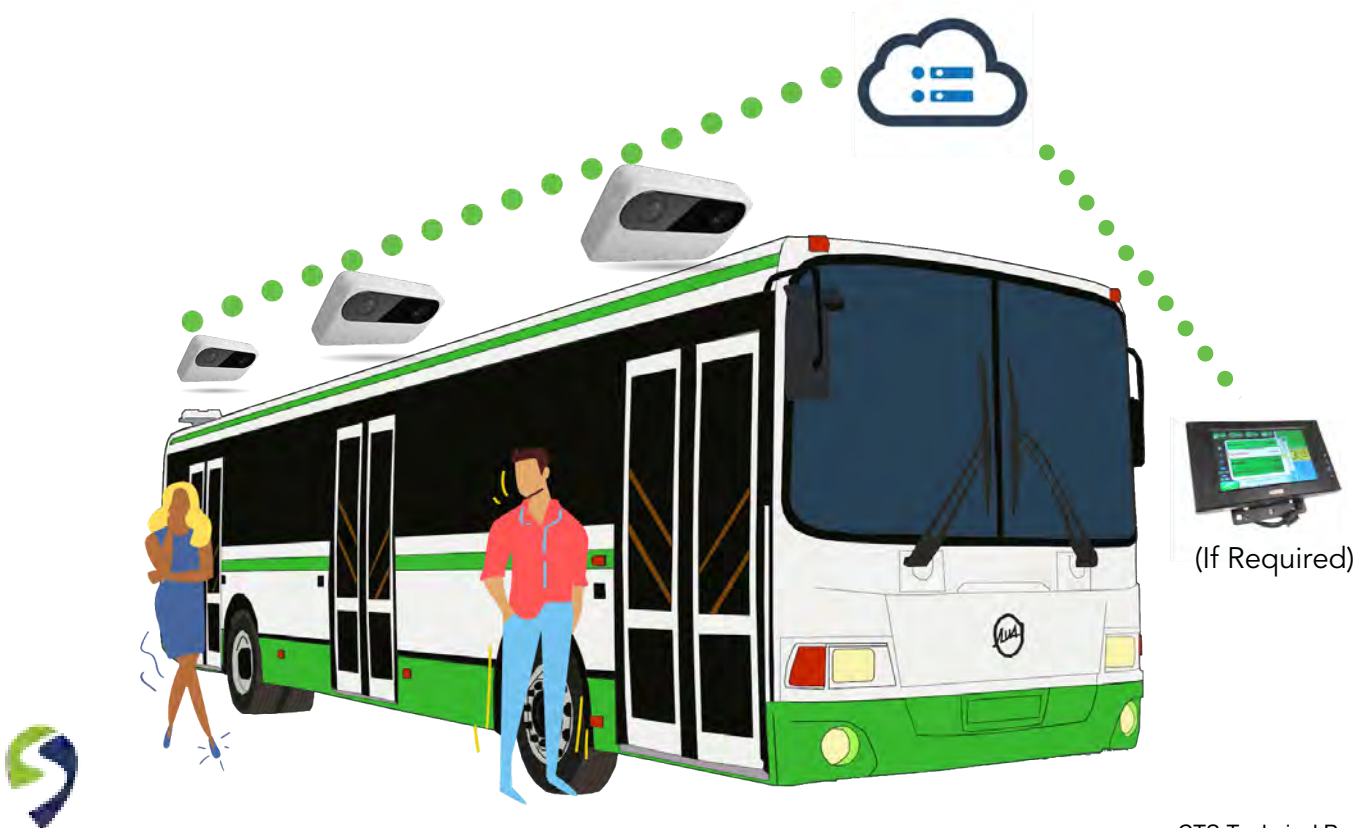


Customers have the option to integrate APC (Automated Passenger Counting) into their solution. Passio Technologies has adopted the innovative approach of modular technology solutions for our customers. Passio offers three options for entering passenger count data, automatically using APC sensors, Electronically using the Mobile Data Terminal touch screen, or through the Gateway Tap & Swipe system. For example, if you wanted APC's on 30 transit buses, driver managed electronic passenger counting units on 15 buses, and card swipe validation on four special-use vehicles, we can provide the solution. All the data will be reported centrally, and then we are able to deliver high quality passenger data and analytics for the entire system.

APC counting is fully automated, conducted without any operator interaction. Additional features and capabilities include an interactive, touch screen program that enables operators to track special passenger types, track field incidents, and receive communications from supervisors and dispatch. The tracking tools record in-service start and end times, deadhead time and miles, and, if added, the ability to track driver hours.

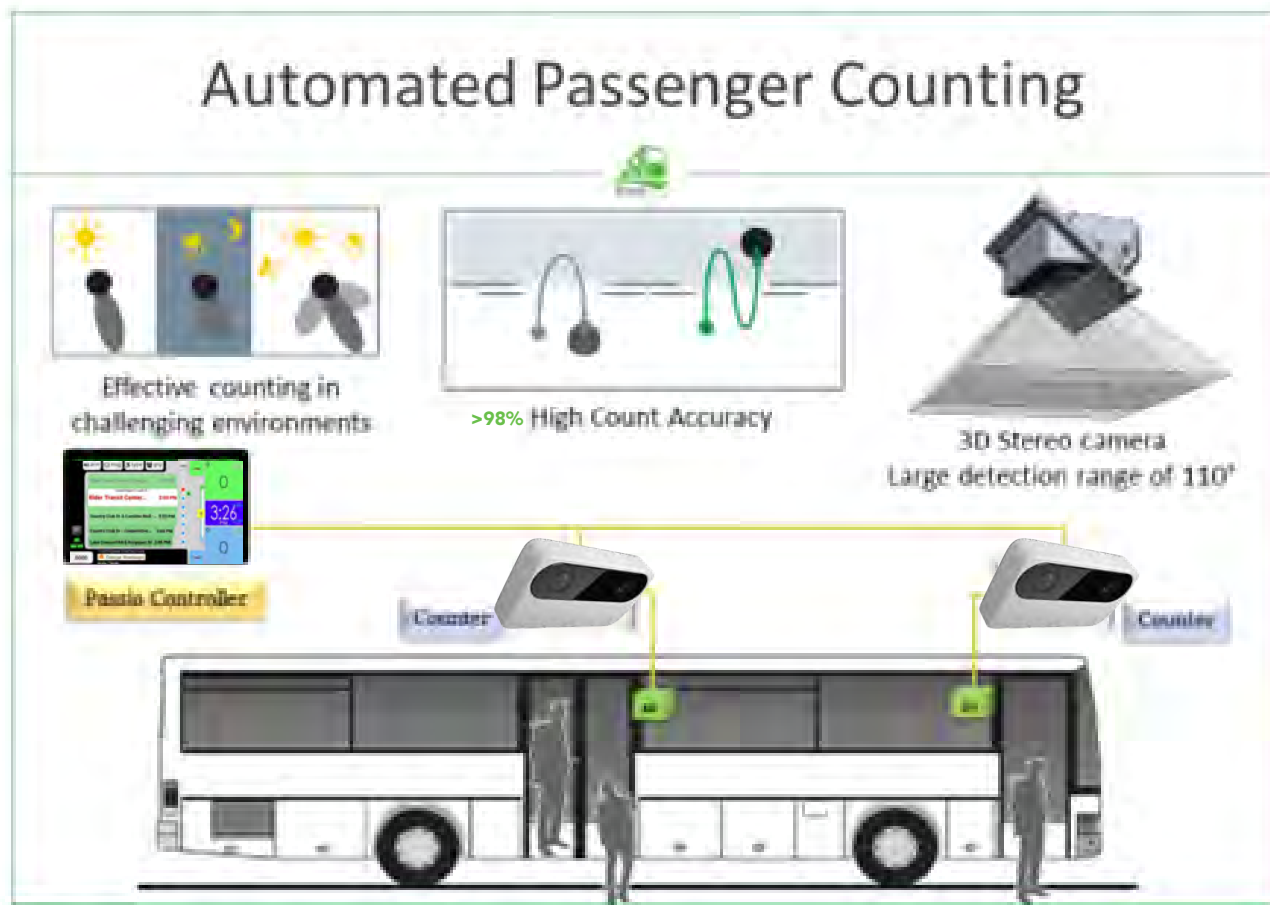
Passio has partnered with Hella to integrate their three-dimensional bi-directional electronic imaging people counting system. With more than 25,000 employees in 30 countries, Hella has been developing and manufacturing automobile technology, chiefly in the areas of lighting and electronics, for more than 100 years. The unit has been designed to work in challenging environments such as variable or low light, multi-level counting fields of vision, and where a large detection range (up to 110°) is needed. The unit is designed to operate from -25° C (-13° F) to +70°C (+158° F) and only draws about 4W of power. The software is specially designed to compensate for passenger movement up and down stairways or on ramps in low floor buses.

The Passio Transit hardware senses passengers from an overhead sensor.



Additional sensors are available to trigger passenger counts when door status (open/closed) is transmitted. The system proposed will cover all entry and exit points of the vehicle. The APC system will create passenger counts without administrator or driver input. The startup will happen with vehicle ignition and does not require any manual input to begin. The system will accurately count passengers as they board and alight and register stops, routes, and runs. The APC system has the capability to distinguish passengers and non-passenger objects and can detect double backs and re-crossings.

The system utilizes 3D camera technology manufactured in Germany by HELLA, which will reliably distinguish passengers and non-passenger objects and can detect double backs and re-crossings.



It will detect how many people enter or leave a vehicle, typically achieving a system counting accuracy of >98%, even under unfavorable conditions such as variable lighting or shadows.

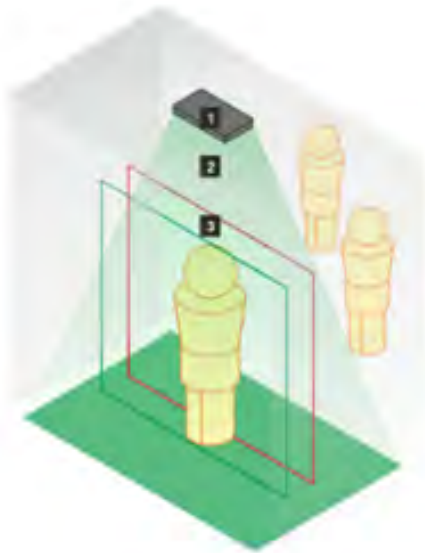


Fig. 4: People counting (schematic illustration)

- 1 Automatic People Counter (APC)
- 2 Calibrated visual range
- 3 Counting gate

The APC continually acquires stereoscopic video images in its visual range.

The integrated software evaluates the stereoscopic images. Persons within the monitored area are recognized automatically and their movements are tracked across the subsequent images.

The APC, therefore, can count the number of persons that enter or leave a vehicle.

The software provides the following functions:

- Bidirectional counting on a defined line
- Tracking persons within a given area
- Video streaming and video recording (optional)

The counting data are transferred via interfaces to the external processing system.

The counting gates represent the thresholds in the visual range which must be crossed by a person in order to trigger an entry or exit count event.

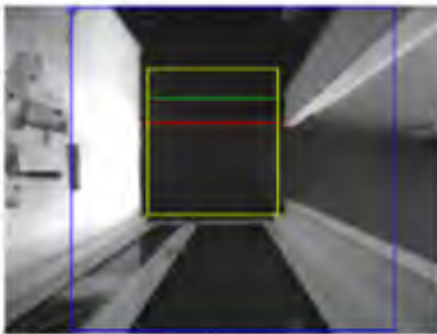


Fig. 5: Straight counting lines/counting gates (example)

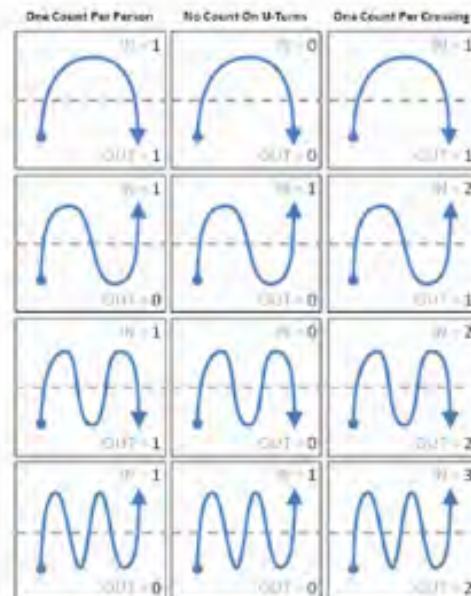
Simple, straight counting lines/counting gates, (Fig. 5) are provided for the simple and fast installation at doors and passage-ways.

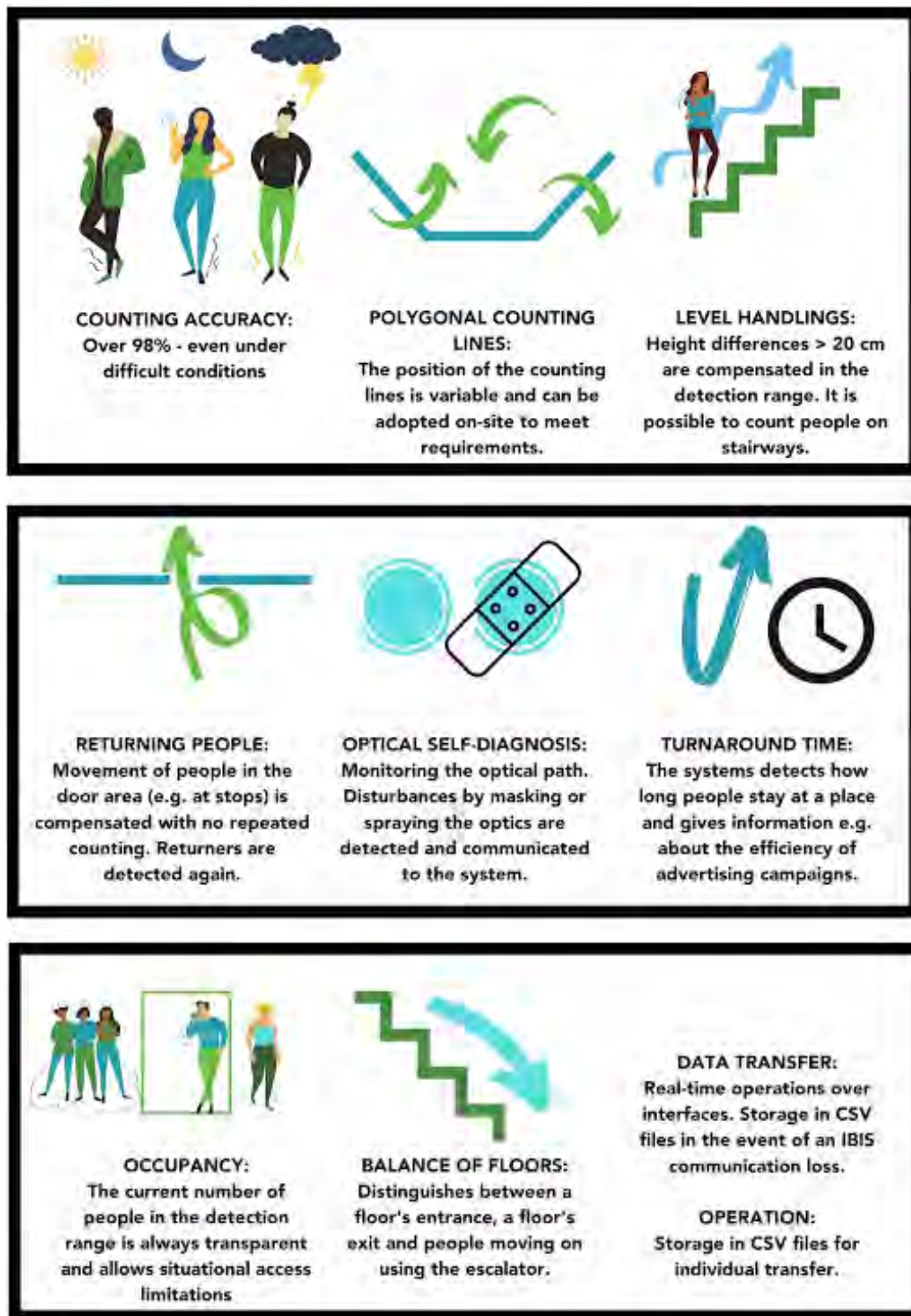
Fig. 10: Three modes for counting those who turn around

There are three modes (Fig. 10) for counting people who turn around in the monitored area:

- one count for persons who turn around ('one count per person')
- no count for persons who turn around ('no count on U-turns')
- counting every time counting lines are crossed ('one count per crossing')

Only the counting mode 'one count per crossing' counts immediately by crossing counting lines. Other modes provide the counting data at the time of leaving of the detection area.





APC record-level detail is stored for a minimum of 36 (thirty-six) months and provides count information at the base level which allows for time and individual bus and driver reporting at the stop level. After 36 (thirty-six) months data will be summarized at the route, day, and passenger type level. This data will be available in the dynamic reporting system for a minimum of 5 (five) years. All data archived after 5 (five) years will be made available electronically prior to removal from the dynamic reporting system.



Solution: Automatic Voice Announcements

Main Features

Announcement Abilities

Announcements can be in up to 3 languages at each stop, chosen from 130 different options. Customers can use songs, pre-recorded messages, and a number of different triggers. Use geofence triggers, timed announcements, doors opening sensors, and more.

Geo-Fences

Setting up geofences is easy. Simply edit the geofences using Passio Navigator on the live digital map.

Navigator

Our cloud based solution, Passio Navigator, can be used to manage all AVA announcements. Upload pre-recorded information, or reprogram announcements completely with text-to-speech.

Audio Interrupt

We can also allow for audio to be interrupted on vehicles if there is already existing sound playing, such as a radio.

Hardware Setup

Hardware setup is simple and handled by the Passio Install team. Customers also have the option to add external announcement speakers.



We experience the world through our five senses and the two that we most heavily rely upon are vision and hearing. Passio's AVA solution provides passengers with all necessary information to make their ride as smooth as possible. It is simple to set-up, robust in functionality, and easy for operators to use in the field. AVA announcements are set, maintained, and changed by using the stop profile within Passio Navigator™. There are several customizable options including: announcing current stop, next stop, and next stop on exit of a geo-fence. Our system will also allow customers to include both a route announcement and an additional custom announcement. A good example would be if there is a football game, the system could announce the stop name as well as a shout-out to their team.

Our system meets two specifications for all transit systems: complying with ADA (American's with Disabilities Act) requirements, and providing passengers with an amazing "journey experience." We recognize that passengers need different information depending on purpose and ridership. Therefore, our AVA system has eleven (11) settings which can be customized at each stop on each route. Our standard solution contains this level of custom configuration:

- Ability to announce in over 130 languages
- Announcements in up to three different languages at each stop
- Announcing stop and route name
- Announcing next stop upon entering geofence
- Announcing next stop on existing geofence
- Announcing upon door open on interior speaker
- Announcing upon door open on exterior speaker
- Announcing upon door open in three different languages
- Announcing at a specified radius point
- Playing pre-recorded messages or music at any stop

Customers have full access to make all updates and adjustments to routes, stops, and announcements, but if it's preferred, Passio will manage all edits, updates and adds for our customers at no additional charge. There is no limit to how many stops, routes, or messages can be added, stored, or played using the Passio AVA system and each device has 4GB of data storage on board the bus.



AVA Configuration & Set-up

The entire AVA system is fully managed within Passio Navigator™. Customers have access to stops, trigger points, routes, and vehicles. The interface is flexible and straightforward, and is designed to grow with system needs. Training is simple and support for updates and remote assistance is unlimited and can be requested well in advance for testing and confirmation. The number of stops and announcements that the system can support is unlimited. All stop announcements are triggered by GPS location, route, and time criteria. Trigger points (not at specific stops) may be added to include key connection points and business centers, as well as public service announcements. They can be triggered by route, direction, and GPS location.

Features and Functionality

Variable Stop Radius – each stop radius can be set by the map or simply typing in the radius field. This feature allows the user to control entrance and exit triggers for each stop.

Exact Pronunciation – the on-board voice synthesizer provides the highest level of sound quality and volume control. The system allows for phonetic spelling of any word to ensure correct pronunciation.

Announcement Event Control – announcement behavior can be controlled for each route stop and/or each trigger stop on each route independently of all others. This allows the user to control the information announced to ensure that enough information is provided, while avoiding passenger annoyance and confusion by creating noise overload. Any authorized user can change the stop announcement simply by entering it in Passio Navigator.™

- Announce Current Stop Name (Yes/No)
- Announce Next Stop Name (Yes/No)
- Announce Route Name (Yes/No)
- Announce Next Stop Name on Route Exit (Yes/No)
- Delay Voice Announcement (# Seconds)
- Trigger Stop Only (Yes/No)



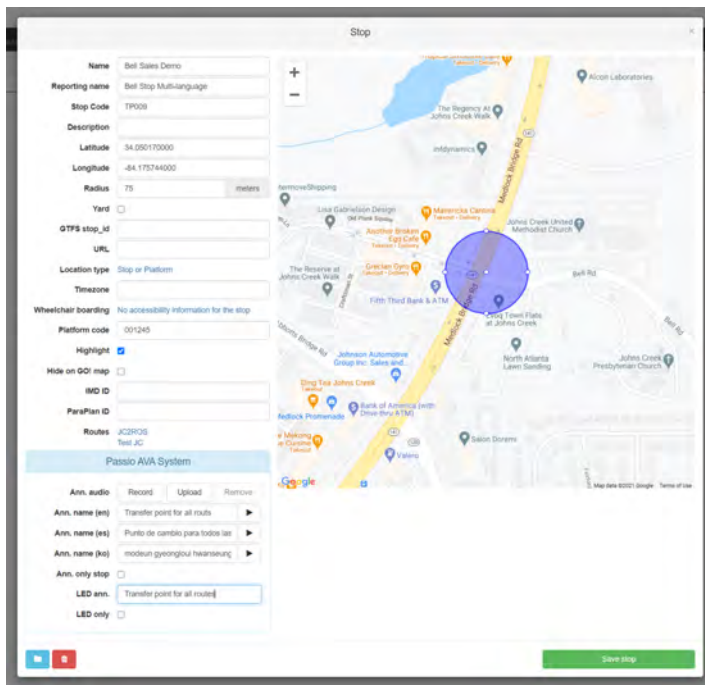
Announcement Scheduling

Each announcement can be scheduled to play on a specific date, day of the week, or during a date and/or time interval. Scheduling control can be applied to a specific stop on a specific route.

Audio Hardware Integration Options

The Passio AVA solution has the capability to integrate and provide audio hardware that enhances the capabilities of your system. For customers requiring these enhanced deliverables, our solution has the following integrated features:

External Speaker Announcements – the system has the capability to detect if a stop is noted as an external announcement stop. It will electronically detect the door open status and send an electronic relay signal to the correct speakers to make an announcement as internal only, external only, or both internal and external.



The screenshot displays the Passio AVA System configuration interface. On the left, a form for creating a stop is visible. The form includes fields for Name (Bell Sales Demo), Reporting name (Bell Stop Multi-language), Stop Code (79008), Description, Latitude (34.050170000), Longitude (-84.175744000), Radius (75 meters), and a checkbox for Yard. Below these are fields for GTFS stop_id, URL, Location type (Stop or Platform), Timezone, and Wheelchair boarding (No accessibility information for the stop). A Platform code (001245) and a Highlight checkbox are also present. The interface includes a map on the right showing the location of the stop in Atlanta, Georgia, with a blue circle indicating the stop area. At the bottom, there is a section for the Passio AVA System with options for Ann. audio (Record, Upload, Remove), Ann. name (en) (Transfer point for all routes), Ann. name (es) (Punto de cambio para todos los), Ann. name (ko) (모든버스정류장 환승점), Ann. only stop (checkbox), LED ann. (Transfer point for all routes), and LED only (checkbox). A green 'Save Stop' button is at the bottom right.

Audio Interrupt

The Passio AVA system is typically configured to be the primary audio source on the vehicle. The system can be configured to enable an additional audio source such as a radio head unit (AM/FM/CD/DVD player) to be the primary audio source and for the automated voice announcement system to interrupt when making an announcement. This option often requires a replacement of both the existing on-board head unit and the addition of audio control equipment.

Multi-Language Support

Announcements may be made in any available second language using the on-device voice synthesizer.

Sound Files

The Passio AVA system supports the ability for users to upload a sound file to play at a particular route stop or trigger stop. The sound file can be played independently or in addition to the generated stop announcement. Authorized users have the option to record files directly within Passio Navigator™ or to upload independently created files.

Stop Level Settings - are configurable for each route

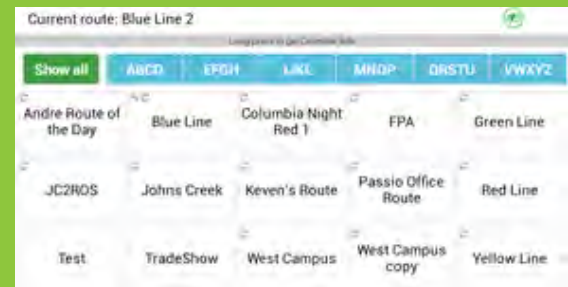


On-Board Operation

All announcements are automatically triggered by the GPS location of the bus and require no interaction from the operator. Logic is built into the configuration profile to prevent overlapping stop announcements by using stop order/directional algorithms.

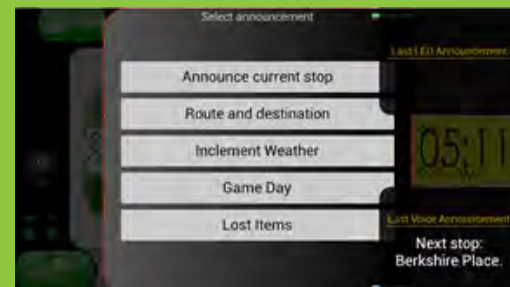
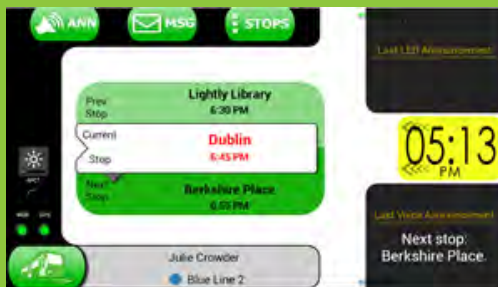
Getting Started: Operator selects their name, no complicated codes or mysterious procedures.

Routes are preset and automatically updated on the device. A simple tap on the screen starts the AVA.



Standard operations screen provides the operator with all of the information required to fully use the AVA system.

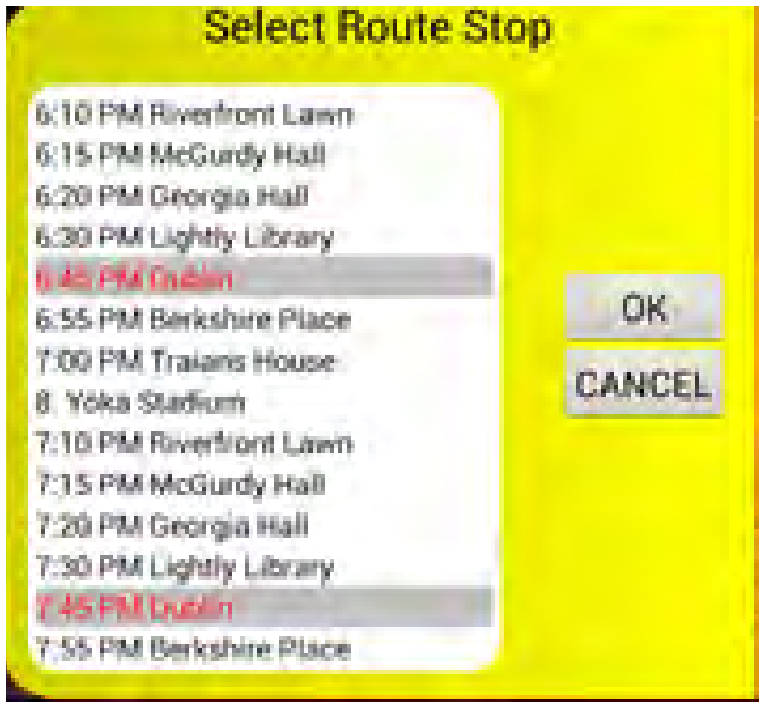
Operators can trigger preset special announcements from the MDT and repeat a stop location for ADA compliance.



Driver Managed Stop Jumps

Situations occur where a driver must skip a stop for reasons such as construction, congestion, or blocked routes while on route. Dispatch can adjust routes using the Detour function within Passio's Navigator when this information is known. If the driver must make the correction on route, Passio's AVA system offers operators a simple and intuitive method to move around the skipped stops without confusing announcements when driving past skipped stops.

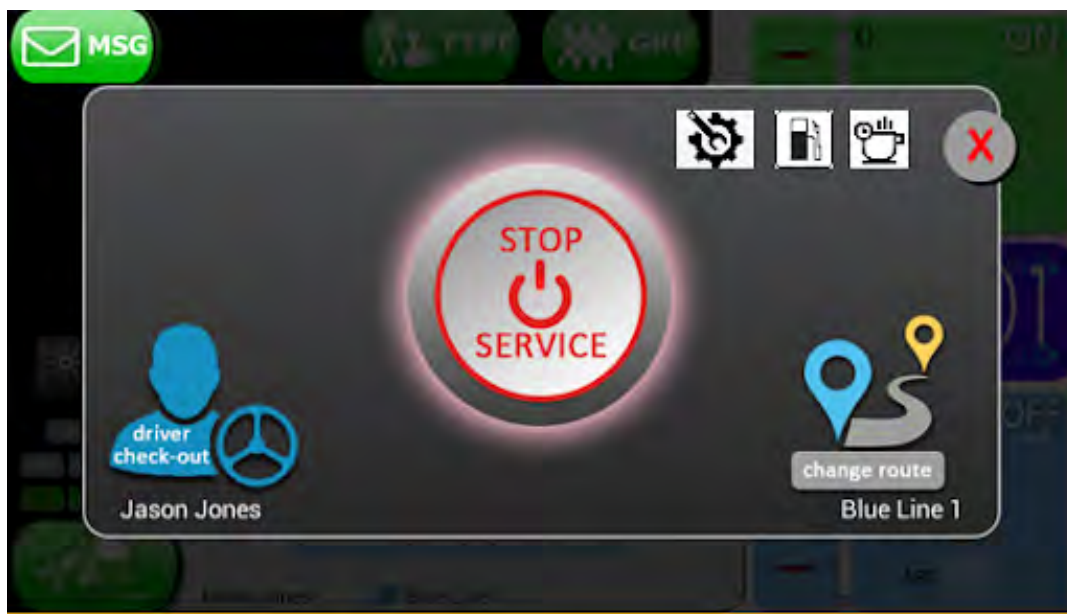




The Passio system provides the mobile data terminal, software, logic, and connectivity to on-board existing audio equipment. Each Mobile Data Terminal (MDT) is outfitted with a cellular data connection that automatically checks for configuration profile updates (or they can be manually downloaded by the operator). These profile updates provide all of the information to trigger automated voice announcement messages.

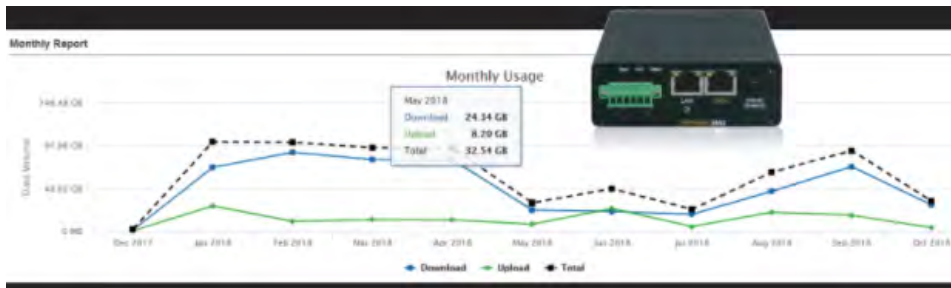
Out of Service

When the vehicle operator or dispatch places a vehicle out of service, all voice announcement functionality immediately ceases. The action is recorded in the Passio Navigatore Incident log, where time, date, latitude, longitude, driver, route, and vehicle number are tagged to the log. For integrated systems, LED signs will change messages to 'Not In Service' and the vehicle will no longer be viewable on Smartphone applications and public viewers.



MOBILE WI-FI (OPTIONAL)

Passio's Mobile Wi-Fi solution is certified for rugged environments and transit deployments. Provide your passengers with reliable high-speed Wi-Fi using the 802.11ac wireless networking standard.



Passio OnBoard Wi-Fi Reporting

Passio's Wi-Fi solution is certified for rugged environments and transit deployments. Provide your passengers with reliable high-speed Wi-Fi using the 802.11ac wireless networking standard. The routers are managed and configured remotely by Passio's support team. Using the Customizable Captive Portal bandwidth allowance, terms & conditions and access duration per user can be set for all devices.



Highlights

- Cloud-based device management & monitoring
- VPN configuration for remote management and bandwidth monitoring
- Firmware management
- Enterprise-ready
- Configurable backups
- Comprehensive reporting interface
- Intelligent notifications

Security

- Stateful firewall
- DoS prevention
- Web blocking





MessagePoint Media designs digital signage solutions with a 21st century model of mass customization combined with a managed services model that incorporates hardware and content management platform support to meet any requirement. They make custom designed solutions, tailored, and scaled to the customer's needs at a disruptive price-point when compared with competitors. MessagePoint makes this possible by leveraging Commercially Available, Off-The-Shelf modular technology, sub-components, software, and integrating them within an open development framework.

MessagePoint Media applies the hacker/maker ethos to the concept of digital signage to create a highly extensible and customizable fully managed IT service.

This solution is built upon 3 pillars, Modular and Expandable Purpose Designed Hardware, Cutting-Edge Content Management Software, and most importantly, a Managed Services & Support Model that gives customers access to extended support uncommon in the industry. The MessagePoint Media model stems from the philosophy that the solution to most problems is found in the spaces between disciplines.

The MessagePoint.TV (MP.TV) platform is the heart of their service. MP.TV is built on top of a powerful next-generation HTML5 based general-purpose cloud based digital signage platform that drives thousands of screens all over the world. The MessagePoint.TV platform is entirely cloud based and requires zero server infrastructure or maintenance from the agency. The platform is hosted in multiple tier 1 datacenters and boasts a greater than 99.9% uptime. The administrative interface is web based, fully responsive, and can be accessed from a desktop, laptop, tablet, or mobile phone anywhere in the world with an Internet Connection. All communications take place over encrypted HTTPS connections and require no special firewall or network configuration to function properly.

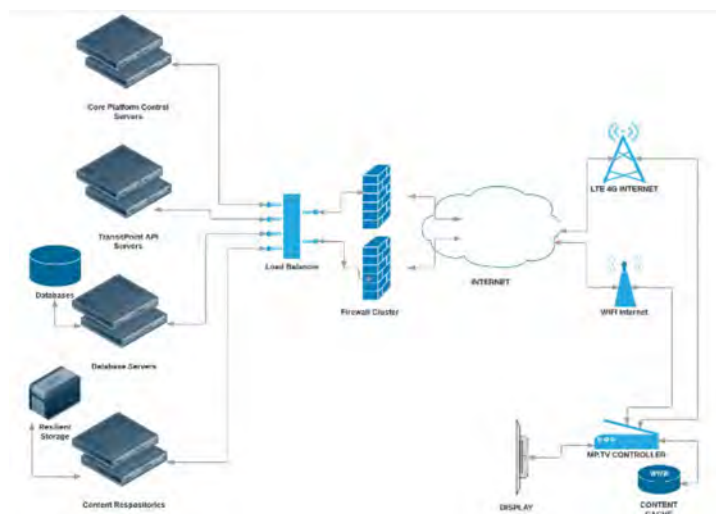


One CMS, Universal Compatibility

This solution is designed from the ground up for cross-compatibility. The solution runs on any screen, any size, any manufacturer. This solution works with LCD, LED, oLED, and E-ink, all from the same content management user interface. The content platform works with any operating system including Windows, Android, Linux, MacOS, or Google Chrome.

Access from Any Device, Anywhere

There is no functionality or capability of the MP.TV platform that requires anything more than a web browser to access. Administration, Management, Content Creation, and Scheduling are all fully enabled in a modern HTML5 Web-Based Console that is accessible from anywhere. Not only that but the platform is also built fully responsive with nearly identical functionality regardless of the size or type of device from Smartphones to tablets to desktops. No matter where you are, and what device you have with you; you can fully operate and manage the platform.



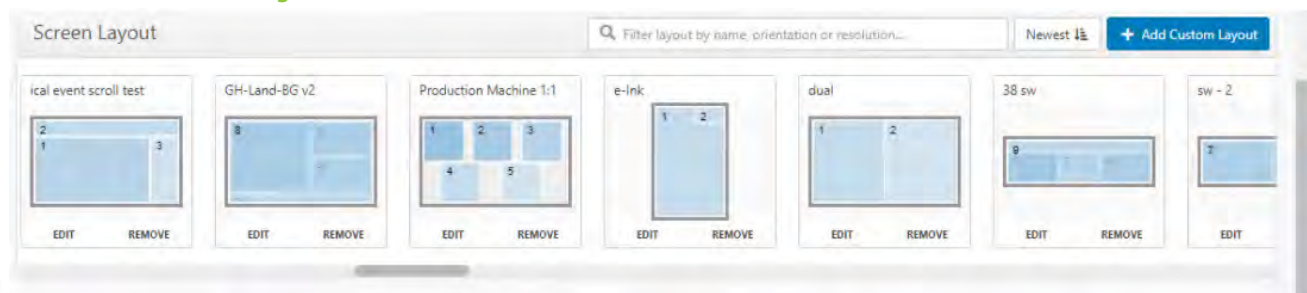
Service Architecture

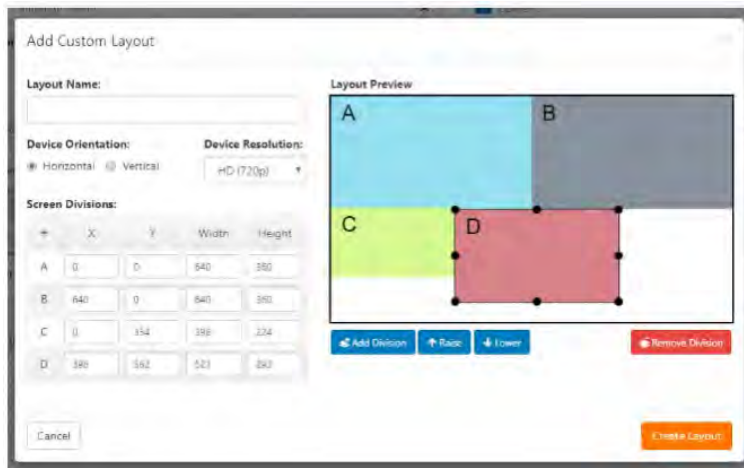
MP.TV is a cloud-based service that leverages the power of the MP.TV controller's local content cache to provide resilient operation even during extended periods of lack of internet connectivity. This also allows MessagePoint Media to be extremely efficient with bandwidth since all content items are downloaded to the local content cache in the background and only have to be sent once.

The MessagePoint.TV architecture and it is supporting Visual Apps are implemented using an "Offline First" design paradigm wherever possible. In its simplest form this means that any request for data is first served by locally cached data wherever possible. If the data is dynamic the application will opportunistically attempt to update the data in cache in the background and then trigger the foreground app to update its display based on the new data after it is received.

CONTENT PUBLISHING AND CAMPAIGNS

Customizable Layouts



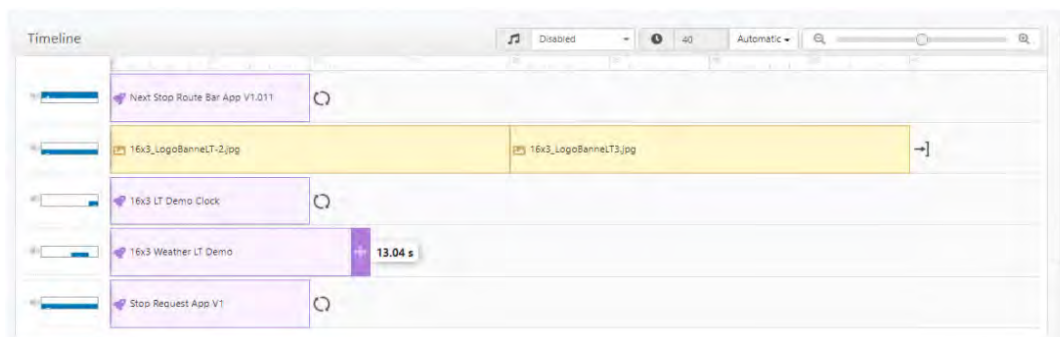


Most digital signage solutions offer very little functionality when it comes to screens. For an expensive software licensing fee, you get very little in return. In contrast, this platform provides the ability to create custom screen layouts with up to 11 content zones per screen. Each content zone is 100% compatible with any content, visual application, or interactive touch ability currently supported by the CMS. Even if the agency decides to pursue non-standard screen sizes in future designs, the

platform is flexible enough to dynamically integrate with any display resolution or aspect ratio natively, without the need for additional development. New content layouts are created via the intuitive, easy to use drag and drop tool. This functionality is in-built because the CMS is not a proprietary solution for a proprietary screen, but a custom developed solution built on top of a powerful existing platform that powers tens of thousands of screens worldwide.

Simplified, Dynamic Campaigns

Once a user has finalized a content layout, they can begin populating each of the content zones with a host of media options (images, videos, HTML, Social Media, RSS Feeds and much more) from the platform's embedded file management interface. Simply drag & drop cloud stored media assets (or upload new files) directly onto the campaign timeline. The timeline module provides an at-a-glance view of content in the campaign rotation, divided by each content zone.



Each artifact in the content feed is intuitively adjustable via a sliding bar. By default, content will automatically loop when it reaches the end of its timeline but can be configured for single rotations. This feature is useful for dynamically triggering content real time content such as announcing next-stop, arrivals/departure alerts, and other time-limited-service alerting.

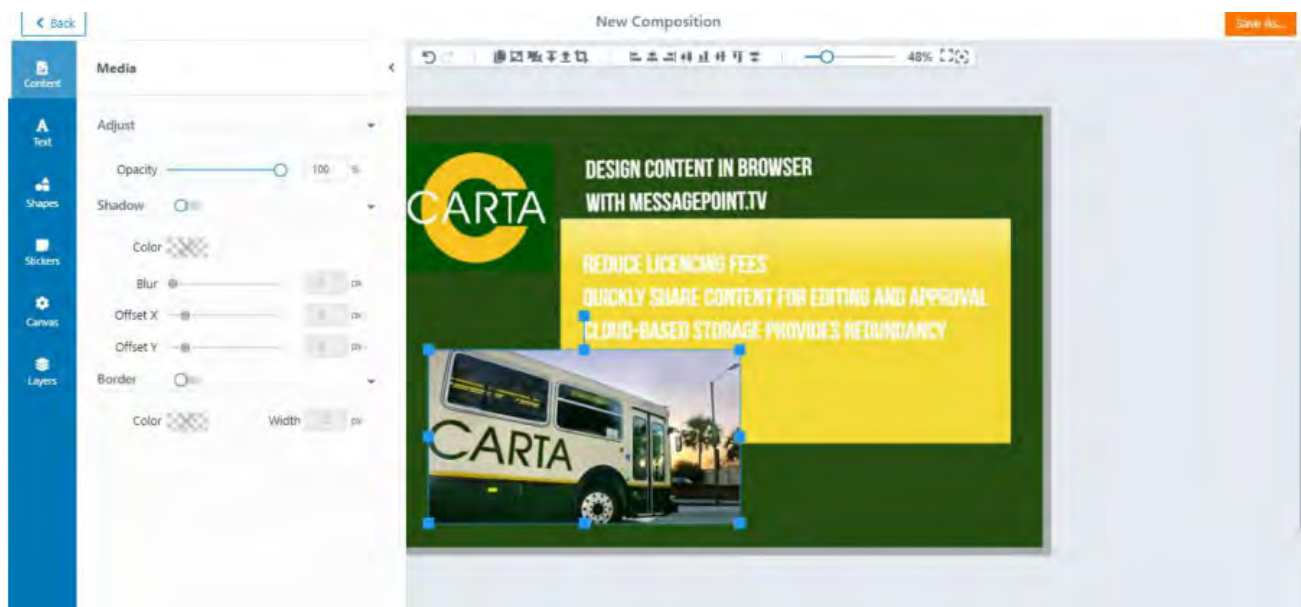


Content Scheduling and Publishing

MessagePoint's solution provides content scheduling capacity which fulfills the basic requirement for time and date. Campaigns also have the capacity for auto-expiration at setup to ensure seasonal or timely information does not persist after the relevant time-period. In addition, the solution features advanced content scheduling according to dynamic conditions, such as weather, the outcome of a local sporting event, or localized triggers. This dynamic content scheduling is especially useful if an agency intends to use any screen space for advertising, as your advertisers can create campaigns that respond to real-time information. All content campaigns are published remotely from the web interface to the screens in near-real time. Simply click publish and the integrated controller of your screen will incorporate the new content.

Cloud-Based Content Design Tools

Every modern CMS should support the upload, hosting, and a display of a large variety of customer created files. However, one unique feature that sets MessagePoint.TV apart is the platform's browser-based visual content composition tool.



Using this tool, the agency can leverage the power of the platform to quickly collaborate and design content for campaigns without ever leaving the content management ecosystem. The interface is easy enough for even the most design-averse office professional, with the ability to drag/drop existing content, adjust backgrounds/canvas size, incorporate text, group artifacts, and create layered compositions. While the tool may lack the power of an industry-leading graphic design software, it provides a stable, easy-to-use interface that is robust enough to support branded service announcements and other typical use-cases for transit agencies. The composition tool provides the agency with the ability to reclaim the costs associated with licensing commercial design software.



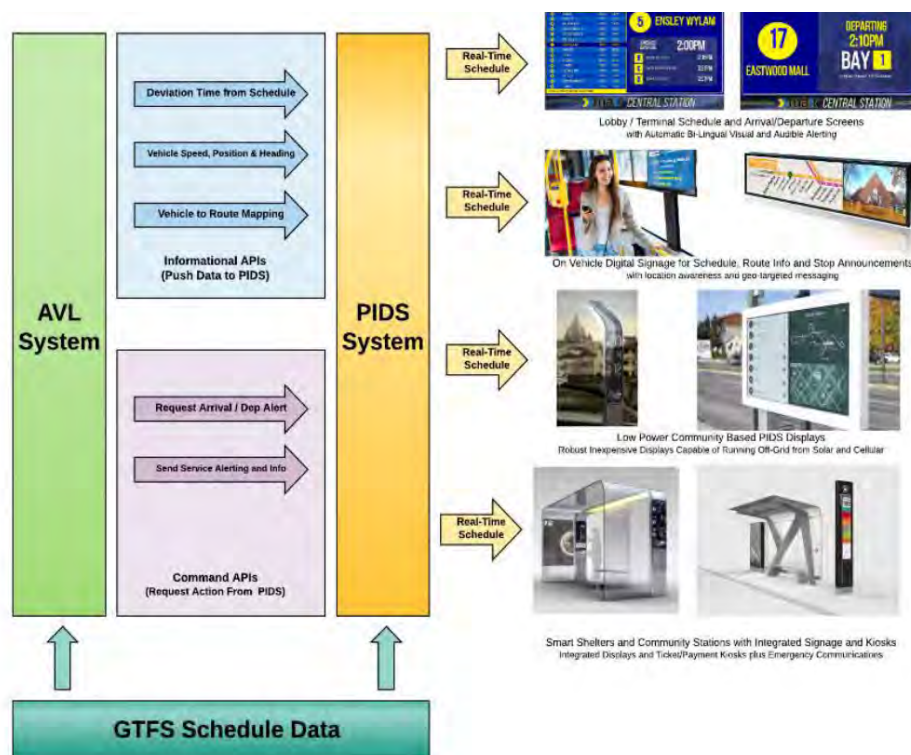
Industry Leading Visual Applications

The Content Management System comes with a continuously growing selection of powerful visual applications. These applications are fully customizable, with the ability to integrate and display information from internal data feeds, 3rd party data, and IoT sensor information using REST APIs. MessagePoint does not hide TransitPoint applications behind a paywall, every TransitPoint application is included with the service. MP.TV's integrated set of visual display apps is one of the most robust in the industry offering a broad set of built-in applications including:

- | | | |
|---|---|---|
| <ul style="list-style-type: none"> • Weather • Stocks • Trivia • Multiple Calendars • Multiple RSS Feed Viewers • Content Rotators • URL Display • Streaming Video • Webcams | <ul style="list-style-type: none"> • Countdowns • Detail and Banner Event Calendars • Social Media Displays • Airport Flight Info • Bike Share Availability (Supported Services) • Image of the Day / Week / Month / Hour | <ul style="list-style-type: none"> • Local (USB) Camera Display • Wi-Fi Info Display App with QR Auto-Configure • Animated Slideshow Apps • Emergency Alerting System • Welcome Visitors App |
|---|---|---|

Real Time Information Integration

The Content Management System uses powerful visual applications to embed any type of Real-time content that is required, including transit specific and more general real-time information-driven applications. It also comes with dozens of existing visual applications going far beyond the normal clocks, RSS feeds, and weather apps, along with the ability to coordinate with the agency for the creation of Custom Visual Apps that can be embedded into the platform using simple familiar HTML5 tools. In addition to support for GTFS/GTFS-RT, MessagePoint Media's signage solution supports the Passio Native APIs.



3rd party Data Integration

The CMS platform has the ability to dynamically ingest information from the web. If it has a publicly listed URL, RSS feed or an accessible API, MPTV is able to display it. In addition, these data sources can be used to dynamically trigger content based on environmental conditions. This capability allows the broadest flexibility in triggering public service announcements and tailor them to your agency, including interfacing with other public services and even other private organizations in the agency.

Emergency Alerting

Emergency Alerting is implemented through a dedicated Mobile Web App that supports 4 unique alert campaigns or can be integrated with any external alerting system that can use Webhooks. The alerting system supports custom emergency text entered on the mobile app at the time the alert is triggered. These alerts can immediately preempt content, both globally and in a pre-defined subset of the screens in the network. In addition, the Emergency Alerting app provides an Open API to integrate with other Alerting systems such as CAP.



GTFS Route Map

The visual app catalog includes a robust live map feature which can incorporate information for any CAD/AVL provider or use public information. For this offering, MessagePoint will deliver this solution using Passio's API to deliver highly accurate, granular route information and incorporate their arrival time predictions. This app is also capable of integrating information from APC data and vehicle API feeds to provide information for passengers about available passenger capacity or vehicle specific amenities such as bike racks or Wi-Fi for a given departure.



Advertising Plus Add-On

With the Advertising Plus Add-On (<http://mpm.to/adplus>), MessagePoint Media is providing a complete sub-system designed to support a robust advertising and sponsorship model. They don't stop with supporting advertising content, or even geo-fencing advertising. They provide a robust model that will let agencies successfully compete for advertising dollars and/or attract the best ad sales partners. Some of the features include:

- **Proof of Play**
- **Split-Placement**
- **Flash-Ads**
- **Automatic Scheduled Content Rotation**
- **Dynamic Triggers**
- **Location Based Ads**
- **Dynamic Response System**
- **Co-Managed Support Level for Advertising Content**

The granular permissions and access control inherent in the web platform allows agencies the ability to give limited access to its advertising partners to individual content zones within campaigns, which will allow third party advertisers to update their content while leaving your passenger information undisturbed.

Software Based Remote Monitoring

As stated in section 1.1, remote monitoring requires multiple redundancies to avoid "silent failures," and the Content Management System plays a key role in that endeavor.

MessagePoint's content management platform and their onboard hardware both provide several remote monitoring capabilities for internet connectivity, remote screen viewing, and hardware monitoring. In the event a screen experiences a service outage, a service email is immediately generated for both the customer and MessagePoint's internal support team. The content management system provides the health and connectivity information of your network at a glance in browser and allows the user to remotely control the on-board controller unit for troubleshooting.



Player Events		01/02/2019 8:58 PM
Played campaign:	GH - CHI Dep Single	01/02/2019 8:04 PM
Played campaign:	GH - CHI Dep Single	01/02/2019 8:05 PM
Played campaign:	GH - CHI Dep Single	01/02/2019 8:02 PM
Played campaign:	GH - CHI Dep Single	01/02/2019 8:01 PM
Played campaign:	GH - CHI Dep Single	01/02/2019 8:01 PM
Played campaign:	GH - CHI Dep Single	01/02/2019 8:00 PM
Played on-demand campaign:	SJCTA PIDS Audio Dep Test	01/02/2019 8:00 PM
Played on-demand campaign:	SJCTA Lobby Arr or Dep Dep Server	01/02/2019 8:00 PM
Interrupted campaign before end:	GH - CHI Dep Single	01/02/2019 8:00 PM
Played campaign:	GH - CHI Dep Single	01/02/2019 8:00 PM
Played on-demand campaign:	SJCTA Lobby Arr or Dep Dep Server	01/02/2019 8:00 PM
Played on-demand campaign:	SJCTA PIDS Audio Dep Test	01/02/2019 8:00 PM
Interrupted campaign before end:	GH - CHI Dep Single	01/02/2019 8:00 PM
Played campaign:	GH - CHI Dep Single	01/02/2019 8:00 PM

Controllers (Players) establish an outgoing HTTPS tunnel to the Management Server at startup. This is referred to as the "Fast Channel". The Controller sends regular heartbeat updates, playback log information, and performance metrics to the server via this channel on a regular basis that can be adjusted, on a per player basis, on the player settings screen. If the player fails to check in on schedule the console will mark the player as offline, and an email message will be sent to the defined admin users after the configured offline time threshold value on the player settings is reached. In addition, the player will report errors playing content to the management UI which will generate immediate email notifications. Error logging, online/offline status, and performance metrics can all be accessed via the MP.TV Management Web UI.



On-Board Infotainment - MP.TV Mobile Intelligent Displays

MP.TV Mobile Intelligent (MPTV-M Series) displays are designed from the ground up to provide outstanding performance in a compact, reliable, self-contained package. Instead of building on top of a complex design based on a central Intel PC Architecture computer, a general-purpose operating system, and a network of dumb monitors, the MP.TV mobile display is built on top of the same proven solid-state RISC (Reduced instruction set computer) based technology that powers today's most advanced tablets and smartphones. This allows for more flexible installation options and easier service.

The MPTV-M displays are easily installed on any bus, only requiring access to 8V-36V DC power and onboard Ethernet or Wi-Fi from the Cellular Gateway. For vehicles without a cellular gateway, the M series display can be outfitted with its own LTE Modem internally.

Advertising with Infotainment Displays

Agencies commonly have stated that they intend to pursue advertising as part of their Mobile Infotainment solution. Any on-screen solution has the potential to support this endeavor, but MessagePoint's CMS allows the agency to enhance revenue while avoiding the pitfalls that create a system that riders tune out, or worse begin to resent. MessagePoint's platform allows agencies to adhere to the following best practices:

- 1) NEVER remove the transit-related information from the screen. The CMS allows screen allocations to be compartmentalized and prioritized in infinite combinations.
- 2) Geo-Fencing content is a revenue maximizer. Advertisers will gladly pay less to be displayed only at relevant times along a route. While each individual advertiser may pay less, the volume can be expanded, increasing overall revenue. A solution without geo-fencing is leaving money on the table.
- 3) Dynamically Trigger Content based on external conditions. If it's cold outside, the local coffee shop might like a spot, if it's hot, the ice cream parlor.

MPTV-M24 24-Inch Intelligent Mobile Display

The low-cost option for onboard infotainment is the level 21.5-inch (Diagonal) display is a full HD display packed with over 2 Million pixels and 700 NITS of high-brightness display. This translates into a razor-sharp display that makes even complex animations and data crystal clear, even on the brightest days. A mirror port allows the master display to drive an additional mirrored display at full HD resolution. The integrated controller sports a Quad Core CPU and a Quad Core GPU, supported by 8Gb of onboard storage, expandable to 256Gb for caching display content and data. This means MessagePoint can download content once and play it whenever it is needed, even if Internet is unavailable. This little powerhouse is also packed with connectivity with built in support for Gigabit Ethernet, 802.11n Wi-Fi, Bluetooth 4.0 and Low Energy, as well as optional 4G LTE, GPS, and IoT interfaces. It even supports being mounted in a portrait / Digital Poster orientation for narrow spaces.





MPTV-M27v 27-Inch Intelligent Mobile Portrait Display

When it comes to Stanchion mounting, it is hard to beat this 27-inch vertical display. This display provides native 4k 16:9 resolution at 700 NITS of brightness with the utmost clarity. The Portrait form factor functionally allows you to have around 2.5 FHD monitors worth of content, giving you plenty of space to display route ladders, service announcements, infotainment, and advertising.

MPTV-M37w 37 Inch Super Wide Intelligent Mobile/Indoor Signage Display

The 37" (Diagonal) display is an HD marvel that packs a 35 Inch Wide display into a package only 12 inches in height, less than the M22. With 700 NITS of brightness and a 4000:1 contrast ratio, this screen is typically mounted in the center aisle, typically replacing the standard LED destination sign. This display is a real problem solver, as it provides a wider form factor that allows for convenient and versatile content layouts. Its thin form factor means it can be mounted in locations where a normal display just won't fit.



SUPPORT OVERVIEW - Providing Managed Customer Service, Not Just Product Support

Support offerings are at the core of MessagePoint's service, and what sets them apart from every other provider of digital signage type service in the market. MessagePoint brings the proven Managed Services model from the Information Technology space to your digital signage network. At whatever level your agency requires, they are available to act as an extension of your team over the life of the network. Their developers are continuously improving and extending the platform with enhancements that are available to all clients. Depending on your Support plan, MessagePoint provides day-to-day content management and creation support as well.

Proactive Update Support and Monitoring

This includes enhancements and reactive support for the MP.TV visual apps, the MP.TV platform, and hardware. MPM provides proactive monitoring and management of your system including the MP.TV visual apps, and the MP.TV platform itself. MessagePoint will watch the availability of your controllers and act when controllers fail to check in. They also perform updating and patching of the MP.TV Client. MessagePoint will review the underlying O/S for vulnerability patches. It gives you access to the MP.TV content and development teams on a preferred basis for on-demand services. In addition, they provide first level support from a US and Global team that allows them to provide 24x7x365 support coverage. They also provide full support and maintenance on the MP.TV controllers for the life of the contract, including replacement and upgrade protection, as needed.

Content Management

This is where MP.TV really begins to stand apart from other offerings and is one of the key benefits that clients enjoy. With only some basic restrictions to prevent abuse, you have unlimited ability to submit content. As part of your subscription the MessagePoint Help Desk will perform unlimited Adds, Moves, and Changes of Agency content for your signage channels. This means that rather than having to train dozens of staff on updating content, you can simply let them email the updated content to the MessagePoint support team and include instructions, like where to put it, when to show it, and when to remove it. MessagePoint takes it from there and fulfill the requirements of adding, scheduling, managing, and removing the content. In other words, you create the content, and they do the rest. Of course, if you want to be trained and do your own updates, MessagePoint is happy to do that, but with this service you never have to do so.

Content Creation

As part of the co-managed support subscription, MessagePoint will build instances of the standard and MP.TV produced display apps for you, as needed for an application. They can build and publish channels for you. They even include a set of content credits with each screen on their fully managed support level. You can use these to have their team do content production, including images, video, and animation, from their library of content templates. That way, you can just send a general concept and let designers take it from there. This is truly hassle free hands-off Digital Signage. You can simply concentrate on your messaging and let MessagePoint do the rest.



SUPPORT TIERS - Self-Managed (Base) Support

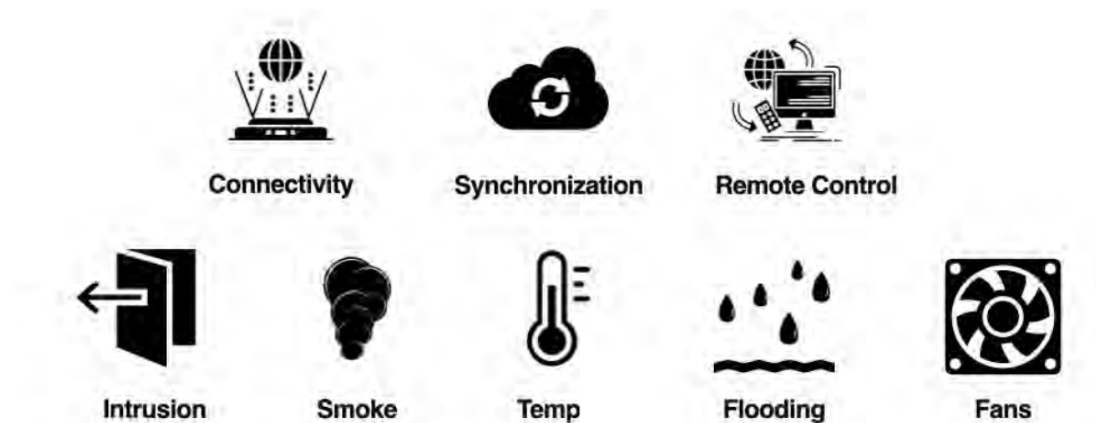
At this level, once you are trained on the system, the MessagePoint team steps back into a support role. You still can leverage their support team for both functionality and usability support questions. They provide regular webinars for your staff and a once a year no-cost design and usability review meeting with your staff to make sure you are getting the most out of the system. Finally, because MessagePoint knows life happens, they provide Two Weeks per year of their Co-Managed level support on-demand. If your operations staff is out sick, on vacation, or turns over, your network won't suffer. They can step in and temporarily manage the network for you, so you will not miss a beat. At this support level Message Point delivers the following elements of the signage operations stack.

Co-Managed Support

This level is for organizations who have a good creative team to create content or don't anticipate needing a lot of content creation, but don't want to have to dedicate the time and I.T. resources to manage their signage network. Co-Managed customers can simply submit content via e-mail to the MessagePoint help desk and they take care of the rest, handling all the programming, scheduling, and content management. They also take responsibility for monitoring, updating, and managing all the controllers and interfaces to ensure that your network stays up and running. At this level MPM takes on responsibility for these additional elements.

Fully Managed Support

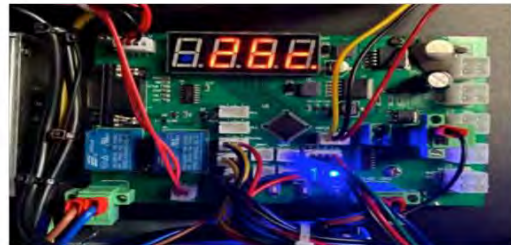
Fully Managed Support is truly hassle-free concierge digital signage service. Not only does MessagePoint provide all the support outlined, but they provide a monthly budget for content production that can be used to create images, animations, or video to run on your network from their design team. You can even use the same content on your website or social media as well. At this level MPM adds these additional elements to their support.



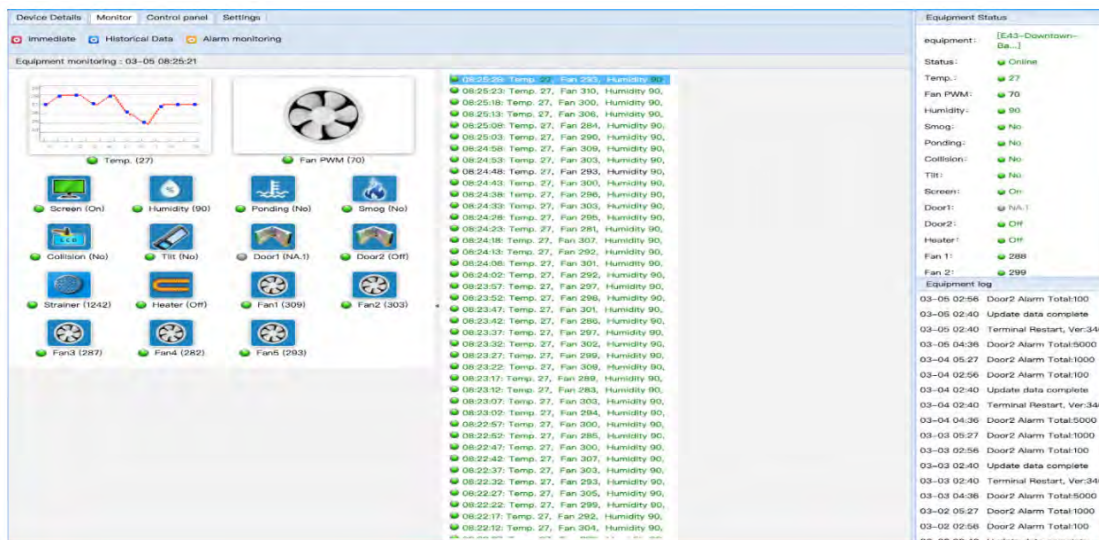
The OMC (Outdoor Management Console) environmental monitoring and management subsystem is a full-spectrum platform for maximizing resilience and up-time for Outdoor LCD displays in harsh environments. The system consists of three main elements. The first is a dedicated OMC (Onboard Management Controller) board installed inside each display. This board provides a dedicated sensor management and measurement platform with connections for all the onboard sensors and inputs in the display enclosure.



The OMC connects to the hardware controller via USB and interfaces to a dedicated supplemental background application called the ODM (Outdoor Display Manager). This application receives all the inputs from the OMC and can take proactive action to protect the display. This can include things as simple as activating the heater module based on the ambient temperature to switching off the LCD panel to prevent damage if the temperature inside the enclosure exceeds the max safe operating temperature. It is also able to take more complex multi-step actions such as the Active Anti-Vandalism Service Component. The third component of the system is the OMC Cloud Management Console. This system operates in a bi-directional mode with the ODM application (and by association the OMC Controllers on each display).



This system can provide aggregated health data on a sensor-by-sensor basis for all your displays in the system from a single interface. It can send e-mail alerts to agency personnel if alert conditions are met. However, the system also can remotely control the displays via the ODM and OMC. It can turn off the LCD Panel to save power outside of operating hours. It can take screenshots or pictures with the camera. It can perform remote reboots, and much more.



The OMC Console is a Web Based application hosted in Message Point's Server infrastructure. It aggregates an intuitive bird's eye dashboard of information from all OMC enabled EX displays and provides alerting, remote monitoring, and remote management functionality across the entire deployed network of displays.



Active Anti-Vandalism

Many of the MessagePoint displays feature a unique Active Anti-Vandalism System (AAVS) which discourages vandalism. Integrated vibration and tilt sensors detect dangerous thresholds that indicate possible vandalism. This triggers a configurable Text to Speech auditory warning to the individual and then uses the integrated onboard cameras to upload an alert, complete with photos of the environment, to the OMC Cloud Management console. The system also includes an integrated camera for displaying real-time video to potential vandals to let them know the area is under surveillance without requiring any other external systems.

Lifecycle Management

MessagePoint will provide procurement and maintenance services for the duration of the contract lifecycle, including delivering design requirements to their network of contract manufacturers, providing integrated logistics support, and providing field service for routine and emergency maintenance. MessagePoint will retain all procurement documentation including invoices, shipping, and warranty information and provide to the city upon request.

Hardware Updates

MessagePoint's team frequently innovates new functionalities for their customers. Their service model and signage platform provide an avenue for all customers to share in the benefit of these solutions often without additional software or subscription purchases. This can be new services to leverage existing sensors and equipment or new styles and functions for existing applications. Because MessagePoint employs the design principles of mass customization and modularity in their hardware, the agency can quickly and affordably roll out new functionality even in use cases that may require new elements/sensors.

MPTV-EX37sw & EX28sw Superwide HD Intelligent Outdoor Signage Display

The EX37sw is a superwide 37" Extreme Outdoor Ruggedized Intelligent Display. This model provides a 2000NIT sunlight-readable display. The model is equipped with a powerful integrated MP.TV controller that provides a wealth of connectivity and content triggering options. Connectivity to the cloud is provided via High Sensitivity 802.11n Dual Band Wi-Fi or Gigabit Ethernet and can be equipped with an integrated multi-band LTE 4G module,

Its little brother, the EX28sw provides the same features and functionality in a smaller footprint and lower cost, making it a great option for budget conscious agencies or for environments that have architectural constraints.

MPTV-E13lp Low Power E-Ink Display

The MPTV-E13lp is built around a 13.3" Flag design E-ink screen with an extremely high resolution, 207 dot per inch pixel pitch, 2200x1650 resolution. The display also uses a plastic substrate versus a glass substrate which provides some level of flexibility, which helps improve the reliability and resistance to breakage. The display is then covered with a sixmillimeter anti-reflective tempered safety glass cover for reliability.



MPTV-E43 Intelligent Outdoor Signage Displays

These vertically mounted 43" Intelligent Displays provide a 2000NIT sunlight-readable display. The model is equipped with a powerful integrated MP.TV controller that provides a wealth of connectivity and content triggering options. Connectivity to the cloud is provided via High Sensitivity 802.11n Dual Band Wi-Fi or Gigabit Ethernet and can be equipped with an integrated multi-band LTE 4G module.

MPTV-EX39swkv Dual 39inch Vertical Outdoor Interactive Kiosk

For more crowded platforms, MessagePoint recommends a different approach. The triangular shaped dual screen vertical kiosk provides a vertical form factor that can provide information for two separate bays simultaneously. In addition, this unit can substitute any combination of LED panels and LCD, including 4k, giving a wide range of options for the displays. This kiosk's dynamic triangle shape and height allows users to gain information from a distance, while its angle provides a 300- degree field of view. LCD screens can also be converted to touchscreen to allow interactive wayfinding for riders.



ON-BOARD SIGNAGE



MPTV-M24 24-Inch Intelligent Mobile Display



MPTV-M37w 37 Inch Super Wide Intelligent Mobile/Indoor Signage Display

OUTDOOR SIGNAGE



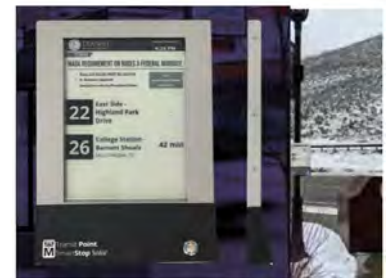
MPTV-EX39swkv Dual 39inch Vertical Outdoor Interactive Kiosk



MPTV-EX37sw & EX28sw Superwide HD Intelligent Outdoor Signage Display



MPTV-E43 Intelligent Outdoor Signage Displays



MPTV-E13lp Low Power E-Ink Display



Passio NTD Reporting Samples

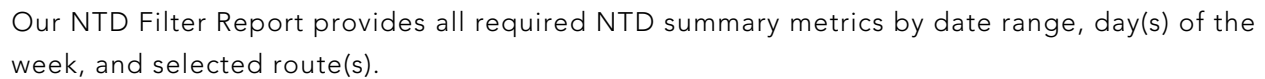
Our robust Passio NTD reporting module provides VRM (Vehicle Revenue Miles), Deadhead miles, AVM (Actual Vehicle Miles), VRH (Vehicle Revenue Hours), Deadhead hours, AVH (Actual Vehicle Hours), UPT (Unlinked Passenger Trips), PMT (Passenger Miles Travelled) by time period and by weekday/weekend, etc. Passio offers customized NTD reporting that will calculate and extract the metrics required for compliance. The Passio APC solution will provide all 'Actual' data (passenger miles and stop counts) required for NTD reporting. Your account manager will work with you to set up your personalized NTD sampling schedule and Passio will support your certification process. Our integrated Hella 3D APC has been granted NTD Certification Approval.

Passio NTD Summary Report:



Our NTD Summary Report provides all required NTD summary metrics (both Revenue and Actual summaries are included). These results can be filtered by date range and route(s).





EPTA Eastern Panhandle Transit Authority (EPTA)

Overview Business intelligence Ridership reports **NTD reports**

NTD Report

Last year Current year **Last month** Current month 7 days Range

Weekday Weekend Peak Weekday Holidays

Routes

Ram Express	Route 10 PM	Route 12 End	Route 14 PM 4-24-15	Route 16 AM 1	Route 36	Shaphard AM
Ram Express	Route 10 PM 4-24-15	Route 12 JRT	Route 14 Start	Route 16 AM 2	Route 38 4-24-15	Shaphard AM 4-24-15
Ram Force One AM	Route 10 PM copy	Route 12 JRT 4-24-	Route 16 AM	Route 18 AM Start	Route 38 4-24-15	Shaphard PM
Ram Force One PM	Route 10 Start	Route 12 PM	Route 16 AM Loop	Route 18 PM	Route 38 Start	Shaphard Start
Ram Force One PM	Route 11	Route 12 PM 4-24-15	Route 16 End	Route 20 End	Route 40	Sept 10
Ram Force One Start	Route 11 4-24-15	Route 14 AM	Route 16 End 4-24-15	Route 20 End	Route 40 End	Unassigned
Route 10 AM	Route 11 Start	Route 14 AM 4-24-15	Route 16 PM	Route 20 Loop	Route 40 Start	
Route 10 AM	Route 11 copy	Route 14 End	Route 18 Start	Route 20 Start	Shaphard 2 End	
Route 10 AM copy	Route 12 AM	Route 14 End 4-24-15	Route 18	Route 25	Shaphard 2 Loop	
Route 10 PM	Route 12 AM 4-24-15	Route 16 PM	Route 18 4-24-15	Route 30	Shaphard 2 Start	

Summary **Details**

	Average			Total
	Weekday	Saturday	Sunday	
Total annual miles	959.33	0.00	0.00	20,008.57
NTD calendar miles	747.54	0.00	0.00	18,449.58
In service miles	882.31	0.00	0.00	16,412.00
Out of service miles	27.01	0.00	0.00	584.31
Total actual hours	89	0	0	1,491
NTD calendar hours	93	0	0	1,197
Rest/Lock hours	-51	0	0	1,260
Deadhead hours	0	0	0	83
Unmanned passenger trip	234.05	0.00	0.00	8,149
Passenger miles traveled	929.42	0.00	0.00	20,447.34
Passenger trip length	3.97	0.00	0.00	3.97
	Total			
	Weekday	Saturday	Sunday	Total
Days schedule served	22	4	9	35

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Passio NTD Certification Process:

Passio Automatic Passenger Counters (APCs) automatically count passengers as they board and alight using sensors (3D bi-directional electronic imaging) without any interaction from vehicle operators. These counts are tagged with time, date, vehicle, route, latitude, longitude, and stop information for reporting and tracking purposes.

Transit agencies must submit both a benchmarking plan and a maintenance plan to certify the accuracy of their APCs. To certify APCs, manual counts must be made on a cross-section of relevant trips, routes, and vehicles. The manually counted data is compared to the recorded APC counts found in Passio Navigator's reporting tool for accuracy within acceptable thresholds.

Once the initial APC data has been confirmed and submitted, agencies must conduct an annual maintenance study to calibrate the APCs after the benchmark year. Passio has developed a comprehensive certification support process to fully aid and assist our customers with all the steps necessary to support them as they work to certify APC counts under the FTA requirements.

To be certified, the APC system must meet the FTA's 95% confidence and 10% precision levels for count accuracy. The Benchmarking Plan includes the following procedures for the first year an agency uses APC data for NTD reporting purposes.

- A sample of one-way vehicle trips that covers a representative time period, within one year.
- A sample of different vehicle types and, if applicable, different automated passenger counters.
- Comparison of parallel APC data and manual data tested for statistical equivalence.
- Adjustments, if necessary, of UPT (Unlinked Passenger Trips), APTL (Average Passenger Trip Length) and PMT (Passenger Miles Traveled) to replicate the data produced by the manual check.

The maintenance plan includes procedures to calibrate APCs every year after the initial benchmark year using a modified validation plan to ensure the upkeep of the agency's certification. Ride checkers are assigned to specific routes to collect UPT and PMT data. This data is compared to the APC collected data for comparison of statistical variance between the data sets. The maintenance study is conducted annually following the initial year. Documentation of results of the study are submitted to the FTA annually.



Passio will work with your agency to gather vehicle information such as make, model, year, and number of doors. Passio will document peak versus off peak ridership times and types and quantity of each APC model in use. This information will be analyzed by Passio to create a sampling plan that meets FTA data requirements.

Next, we will provide you with a sampling template that your ride checkers will use to fill out during the sampling trips. This template will include basic information such as route, stop, vehicle, start and end times, number of passengers boarded/alighted, and the odometer readings at each stop. Finally, Passio will provide your agency with an Automatic Passenger Count Certification Checklist.

The checklist includes information such as APC vendor/installation date, process of selecting trips to sample, internal agency procedures, FTA required confirmations, and sample collection methodology descriptions. Once these three steps have been completed your the agency will have all the documentation necessary to submit the APC certification plan to the FTA for review and final approval.



Passio Technologies - NTD Support



Solution: LED Signage

Main Features

Message Triggers

LED sign integrations can be set up to constantly rotate, or be set off when entering and exiting a geofence. Both settings can also overlap one another.

Field Capabilities

Use fixed and/or dynamic field options to populate information about routes, stops, and points of interest, etc.

Calendar/Schedule

LED Messages can be set according to a calendar schedule. For example, weekend and weekday routes can be completely different.

Programing and Set Up

Customers have full access to edit and customize LED messaging through Passio Navigator.





As important as audio is, visual cues are just as crucial to riders. LED signage may be integrated with Passio AVA via serial connection protocols, sending unique command line instructions to each sign within the vehicle's network when using TranSign signs. Other manufacturer signage that accepts J1708/J1939 commands may be triggered by the Passio MDT as well. All commands are generated by the Mobile Data Terminal. The instructions are entered in the customer configuration profile using web-based Passio Navigator™. The information is published and then automatically downloaded via wireless data connection to each MDT on-board the vehicle.



The GPS-based message progression helps to eliminate driver distraction and to encourage safer driving habits.

Communication with your riders is integral to your rider experience and when your destination information is clear, accurate, and timely, you are fulfilling your promise to deliver excellence to your passengers. Our system is easy to use and simple to set-up, so even those who are not tech-savvy can schedule announcements in a few clicks.



Route led signs

Led sign	Stop arm	Address	Now approaching text	Text
- Advertising	☐			
- Front	☐			
- Passenger	☐			
- Route number	☐			
+				

Multiple LED signs may be configured and controlled within the configuration profile. The screen shot above illustrates how physical signs are added and accessed by the Passio platform and the Mobile Data Terminal.

The sign messaging details are programmed within the 'Text' field in the profile. Data from the Mobile Data Terminal can be passed to the LED sign, as can custom messaging. The message can be fixed or scrolled, and the time the message displays can be set as well. The calendar function allows the system user to schedule specific dates and times for the message to display.

Route led sign texts

	Left column text	Text	Scrolling	Time	Calendar
-		[time]	☐	sec	No calendar
-		Your Driver Today	☐	sec	No calendar
-		[driverName]	☐	sec	No calendar
-		Welcome to CTAA EXPO 20	☒	9 sec	No calendar
-		Lot open 6AM	☐	sec	No calendar
-		Driver of the Year	☒	6 sec	No calendar
-		Otis Reed Jr	☐	5 sec	No calendar
-		Experience Innovation in Act	☒	9 sec	No calendar
-		Wade Hancock CARTS	☐	sec	No calendar
-		Innovate Disrupt Lead Keyne	☒	9 sec	No calendar



The customer has full access to enter public service announcements and advertisements into the configuration profile for both the LED signs and the AVA system. These messages can be programmed in advance or in near real-time. The LED announcements can also be scheduled using the calendar function within the LED announcement screen.

The screenshot shows a web-based configuration interface titled "Route led sign texts". It contains several input fields and controls:

- Left column text:** An empty text input field.
- Text:** A text input field containing the message "Football Game this Friday!".
- Scrolling:** A checkbox that is currently unchecked.
- Time:** A numeric input field set to "8" followed by a "sec" unit selector.
- Calendar:** A dropdown menu currently set to "No calendar".



A visual message is triggered in Passio’s integrated solution in one of two ways:

Vehicle enters the geo-fence. The stop name is displayed, along with a fully customizable preceding message, i.e. “Now Approaching” or “Next Stop Is”.

Constantly rotating messages. These messages are set at the route level and rotate as long as the vehicle is assigned to the route via the MDT.

Rotating messages can be configured to either interrupt or not to interrupt geo-fence triggered stop announcements.

Any fixed message can be displayed and the amount of time it will be displayed can be set by the message. Whether or not the message scrolls can be independently set.

Have all of the same capabilities as fixed fields, but can dynamically populate the following information: driver name, time, date, next stop, current stop, route, bus number, and the last stop on the route.

Can be calendar controlled as well, meaning they can be scheduled by day, date, or time as to when they will display.



Rear LED Destination Signs (optional)





APPENDIX A





DATA INTEGRITY

DATA INTEGRITY

Maintaining the integrity of customers' data is critical. All databases are single tenant, meaning they are specific to each transportation provider. Incremental backups are taken every 15 minutes, full backups are taken hourly and all backups are stored for several months. Referential integrity and column indexes are maintained by SQL Azure and nightly index optimization processes.

We undergo a third-party HIPAA assessment annually to ensure our security and privacy measures meet or exceed those required by HIPAA. This year's assessment concluded in July and we again received our HIPAA certification and scored in the top 5% of all customers evaluated by Avertium, an award-winning and nationally recognized leader in the security space. We would be happy to share a copy of our HIPAA policies and/or audit results should you wish to read them.





QUALITY ASSURANCE AND TESTING

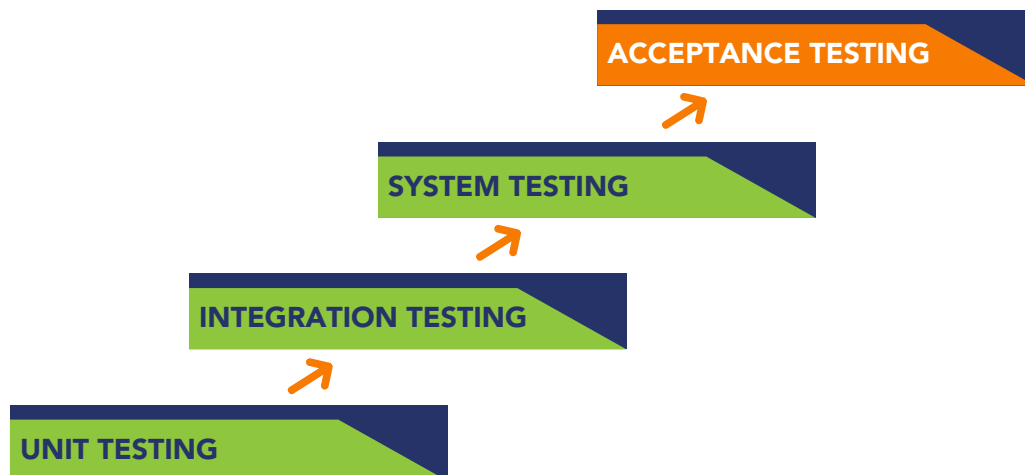
User Acceptance Testing (UAT), also known as beta or end-user testing, is defined as testing TripMaster by the user or client to determine whether it can be accepted or not.

This is the final testing performed once the functional, system, and regression testing are completed. The main purpose of this testing is to validate TripMaster against the business requirements. This validation is carried out by the end-users who are familiar with the business requirements.

Who Performs UAT?

Users or client – The team can be comprised of beta testers or the customer should select UAT members internally from every group of the organization so that every user role can be tested accordingly.

Software Testing Levels



Acceptance Testing Process

1. Gather the key acceptance criteria.

All the key business functionality should get validated, but due to various reasons, including time, it is not practical to do it all. Therefore, a meeting or two with the client or the users who are going to be involved in this testing can give us an idea of how much testing is going to be involved and what aspects are going to be tested. These items will be documented in a way of a checklist as seen on the following page for example.

2. General

- Import and map existing data
- Paper-based data collection
- Local service environment with remote support
- Web-based, completely hosted environment
- Off-shelf MDC option
- Onsite training, quantity TBD
- Printed and online user support manuals
- Fully integrated industry-standard GIS



3. Back Office Interface

- Point & click geocoding of addresses
- Batch scheduling
- Trip importing
- Audit Trail
- Communications log/archive
- Printed manifests
- Browser-based
- Interactive AVL
- Fleet messaging
- "On-the-fly" scheduling
- Third party trip brokering
- Data auditing tool

4. Driver Interface

- Real-time turn-by-turn directions
- Store & forward capability for signal loss
- Call passenger request
- Real-time schedule update notifications

5. Passenger Interface

- Web/app trip requests
- IVR, TXT/Call alerts
- Agency account management
- Vehicle Maintenance

6. Reporting

- Canned reports
- Canned NTD form reports
- Custom report building tool

7. Define the Scope of Involvement

Our involvement would be training the UAT users on how to use TripMaster and be on standby during this testing to make sure that we can help the users in case of any difficulty. Or in some cases, in addition to being on standby and assisting, we might share their responses and record the results or log bugs, etc., while the users perform the actual testing.

The primary objectives are to confirm that TripMaster:

- ✓ Performs business functions as intended per the business requirements or specifications.
- ✓ Is usable from an end-user perspective (operational ease-of-use).
- ✓ Is compliant with regulatory and/or legal requirements.





SOFTWARE MAINTENANCE UPDATES/ UPGRADES

SOFTWARE MAINTENANCE UPDATES/UPGRADES

All product upgrades, new releases, patches, etc. will be granted to the licensee throughout the entire contract period. CTS Software performs monthly updates to TripMaster, which are published to all customers after thorough testing. These updates include performance enhancements, technology advancements, customer requests, new features and much more. They are always provided at no additional cost.



A "Recent Updates" menu option within TripMaster links to a web page with detailed information about changes made in each release. In addition, CTS emails all customers before and after each release with general information about the update.

Allowing CTS to host your database in the Microsoft Azure Cloud guarantees a minimum 99.9% uptime with multiple fail-safes, including a server architecture that incorporates redundant instances of each server, to ensure you always have access to your system. CTS Software also performs a database backup every 30 minutes, and a full-system backup nightly.

For as long as you have any form of maintenance contract with us, all the software applications and services we are proposing will be continuously updated. CTS Software is continuously updated to the latest and current version, and we will continuously introduce new and enhanced features with every new software release.

All Passio software can be updated in the field over the air. Additionally, the ITS Hardware itself may be recalibrated in the field. Each configuration is extensively monitored and tested during the initial rollout period, and account managers periodically confirm the configuration and make updates through the life of the contract. Software updates will be provided at no additional charge for the life of the agreement. Passio's approach to the equipment warranty and ongoing maintenance has been realigned to change the way the industry approaches this challenge. Their goal is to maximize your independence, eliminate downtime, and avoid extra costs that are not necessary when the equipment and service are designed with the end-user in mind.

The Passio solution is designed to be self-managed. Their design reduces scheduling time delays and empowers you to resolve modest issues quickly, efficiently, and at a lower cost while enjoying full remote support. When situations arise that demand a hands-on approach, company-trained technicians can be dispatched to handle repair or replacement on an hourly or daily basis.

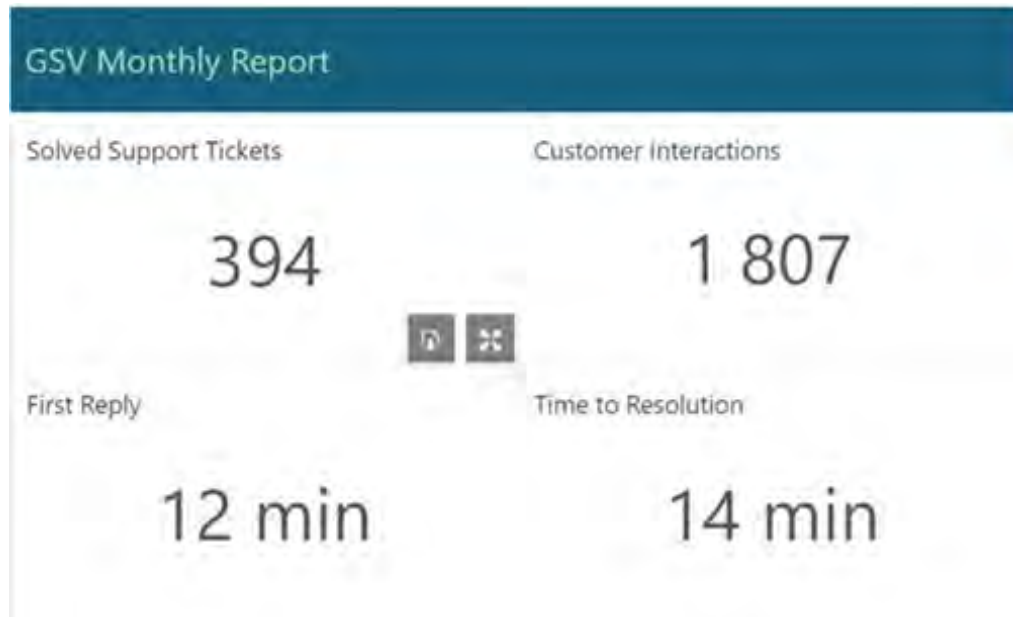




WARRANTY AND MAINTENANCE

MAINTENANCE, SUPPORT, AND UPGRADES

To best serve CTS customer's needs, there are multiple ways CTS customers to contact Technical Support to help resolve issues, provide feature requests or simply to ask questions. Our support staff are available 24/7/365 days a year via a toll-free number and you can also log issues with our support team by emailing the "Support Helpdesk". All assets, tickets raised, issues, and communication with staff can be tracked through a web accessible customer service portal. You will be sent frequent updates on ticket issues you have opened within our portal. Additionally, we can guarantee a very rapid response to any initial request.



CTS's technical support specialists have remote control access to TripMaster and its databases for quick, interactive visual provisions of diagnostics and repairs. All product upgrades, new releases, patches, etc. will be granted to the Agency throughout the entire contract period between CTS Software and the Agency. CTS Software performs monthly updates to TripMaster, which are published to all customers after thorough testing. These updates include performance enhancements, technology advancements and new features, bug fixes, and much more. They are always provided at no additional cost.

Allowing CTS to host your database in the Microsoft Azure Cloud guarantees a minimum 99.9% uptime with multiple fail-safes, including a server architecture that incorporates redundant instances of each server, to ensure you always have access to your system. CTS Software also performs a database backup every 30 minutes, and a full-system backup nightly.



“

CTS

provides

an

invaluable

service”

I would still be pulling my hair out if I didn't have such great support from the CTS Team. CTS provides an invaluable service.

– Onslow United Transit System, NC

”

SEVERITY	TARGET RESPONSE	TARGET RESOLUTION	CRITERIA
Critical	15 minutes	1 hour	Customer's production system is down. Product is unusable with no workaround
High	1 hour	24 hours	Major feature/function failure. Restricted operations with available workaround.
Medium	1 hour	14 business days	Minor feature/function failure. Product does not operate as designed, minor impact on usage, available workaround.
Low	1 hour	25 days	Minor issue. Documentation, general information, enhancement request.



All product upgrades, new releases, patches, etc. will be granted to the licensee throughout the entire contract period. CTS performs at least monthly updates to TripMaster, which are published to all customers after thorough testing. These updates include performance enhancements, technology advancements, customer requests, new features, and much more. They are always provided at no additional cost.

“
we are
grateful
and
thank you
”

It goes to show how your team is dedicated to customizing the software to meet our agency's needs. From all of us on behalf of EPI, we are grateful and thank you.

– Exceptional Persons, Inc. IA.

A “Recent Updates” menu option within TripMaster links to a web page with detailed information about changes made in each release. In addition, CTS emails all customers before and after each release with general information about the update.

Allowing CTS to host your database in the Microsoft Azure Cloud guarantees a minimum 99.9% uptime with multiple fail-safes, including a server architecture that incorporates redundant instances of each server, to ensure you always have access to your system. CTS also performs a database backup every 15 minutes, and full-system backups hourly. All backups are stored for several months.

For as long as you have any form of a maintenance contract with us, regardless of whether basic maintenance or extended warranty plan, all the software applications and services we are proposing will be continuously updated. CTS is continuously updating TripMaster to the latest and current version, and we will continuously introduce new and enhanced features with every new software release.





APPENDIX B



HISTORICALLY UNDERUTILIZED BUSINESSES

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) of the categories. Also included as HUBs are disabled business enterprises and non-profit work centers for the blind and severely disabled.”

Pursuant to N.C.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, disabled, disabled business enterprises and non-profit work centers for the blind and severely disabled. This includes utilizing subcontractors to perform the required functions in this RFP. Contact the North Carolina Office of historically Underutilized Businesses at 919-807-2330 with questions concerning NC HUB certification. <http://ncadmin.nc.gov/businesses/hub>

Respond to the questions below.

1. Is Vendor a Historically Underutilized Business? ☐ Yes ☒ No
2. Is Vendor Certified with North Carolina as a Historically Underutilized Business? ☐ Yes ☒ No

If so, state HUB classification: _____



**NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

Solicitation Addendum

Solicitation Number: 54-12008772-CM

Solicitation Description: Transit Software Solution

Solicitation Opening Date and Time: June 19, 2023, at 2:00PM EST

Addendum Number: 2

Addendum Date: June 19, 2023

Purchasing Agent: Christie Murphy, clmurphy1@ncdot.gov, (919) 707-4848

-
1. Return one properly executed copy of this addendum with bid response or prior to the Bid Opening Date/Time listed above.
 2. The solicitation is hereby modified as follows:

1) RFP 54-12008772-CM Opening Date and Time is extended to July 5, 2023 at 2:00PM EST.

2) Section 6.3.3 Offer Submittal, Item C (Page 48)

Remove:

c) File contents SHALL NOT be password protected, the file formats must be in PDF, jpeg, or png, xlsx or doc, docx or docm format, and shall be capable of being copied to other sources. The Disaster Recovery Assessment (DRA) spreadsheet and Security Evaluation Form must be returned in native format. However, embedded document responses may be in pdf form in the Security Evaluation Form. See all DRA documentation in the DOT Connect SMS Reference Library at SMS RFP Reference Library for OSA - All Documents (ncdot.gov)

Replace with:

c) Copies of proposal files must be provided on separate read-only flash drives. File contents **SHALL NOT** be password protected the file formats shall be in .DOC, .PDF or .XLS format, and shall be capable of being copied to other sources.

3) Remove Attachment J Security Evaluation Form (Page 101)

4) Remove Attachment K Application/Service Resiliency Signoff (Page 102)

Failure to acknowledge receipt of this addendum may result in rejection of the response.

Check ONE of the following options:

- ☒ Bid has not been mailed. Any changes resulting from this addendum are included in our bid response.
- ☐ Bid has been mailed. No changes resulted from this addendum.
- ☐ Bid has been mailed. Changes resulting from this addendum are as follows:

Execute Addendum:

Offeror: Foxter Opco, LLC dba CTS Software

Authorized Signature: *Derek Platow*

Name and Titled (Typed): Derek Platow, Director of Business Development

Date: June 23rd, 2023



**NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

Solicitation Addendum

Solicitation Number: 54-12008772-CM

Solicitation Description: Transit Software Solution

Solicitation Opening Date and Time: June 19, 2023, at 2:00PM EST

Addendum Number: 3

Addendum Date: June 19, 2023

Purchasing Agent: Christie Murphy, clmurphy1@ncdot.gov, (919) 707-4848

1. This addendum is to provide clarification to Addendum Number 2.

1) Copies of proposal are only to be submitted via eBids (NC BIDS).

Correction to Section 6.3.3 Offer Submittal, Item C (Page 48)

c) File contents **SHALL NOT** be password protected the file formats shall be in .DOC, .PDF or .XLS format, and shall be capable of being copied to other sources.

2) Proposals no longer require the submission of Attachment J Security Evaluation Form (Page 101) and Attachment K Application/Service Resiliency Signoff (Page 102).

Failure to acknowledge receipt of this addendum will not result in rejection of the response.

Check ONE of the following options:

☒ Bid has not been mailed. Any changes resulting from this addendum are included in our bid response.

☐ Bid has been mailed. No changes resulted from this addendum.

☐ Bid has been mailed. Changes resulting from this addendum are as follows:

Execute Addendum:

Offeror: Foxster Opco, LLC dba CTS Software

Authorized Signature: Derek Platow

Name and Titled (Typed): Derek Platow - Director of Business Development

Date: 06/28/2023



APPENDIX C



STATE OF NORTH CAROLINA Department of Transportation	REQUEST FOR PROPOSAL NO. 54-12008772-CM	
	Offers will be publicly opened: June 19, 2023	
	Issue Date: April 4, 2023	
Refer <u>ALL</u> inquiries regarding this RFP to: Christie Murphy clmurphy1@ncdot.gov 919-707-4848	Commodity Number: 81162000	
	Description: Transit Software Solution	
	Purchasing Agency: Department of Transportation	
	Requisition No.: 12008772	

OFFER

The Purchasing Agency solicits offers for Services and/or goods described in this solicitation. All offers and responses received shall be treated as Offers to contract as defined in 9 NCAC 06A.0102(12).

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.

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

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

Offer valid for ninety (90) days from date of offer opening unless otherwise stated here: ____ days

ACCEPTANCE OF OFFER

If any or all parts of this offer are accepted, an authorized representative of Department of Transportation shall affix its signature hereto and any subsequent Request for Best and Final Offer, if issued. Acceptance shall create a contract having an order of precedence as follows: Best and Final Offers, if any, Special terms and conditions specific to this RFP, Specifications of the RFP, the Department of Information Technology Terms and Conditions (Attachment B), the NCDOT Agency Terms and Conditions (Attachment C), and the agreed portion of the awarded Vendor's Offer. A copy of this acceptance will be forwarded to the awarded Vendor(s).

<u>FOR PURCHASING AGENCY USE ONLY</u> Offer accepted and contract awarded this date _____, as indicated on attached certification, by _____ (Authorized representative of Department of Transportation).

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1.0 ANTICIPATED PROCUREMENT SCHEDULE

The Agency Procurement Agent will make every effort to adhere to the following schedule:

Action	Responsibility	Date
RFP Issued	Agency	04/04/2023
Written Questions Deadline	Potential Vendors	05/01/2023
Agency's Response to Written Questions/ RFP Addendum Issued	Agency	05/15/2023
Offer Opening Deadline	Vendor(s)	06/19/2023
Offer Evaluation	Agency	07/10/2023
Selection of Finalists	Agency	07/17/2023
Oral Presentations and/or Product Demonstrations by Finalists	Selected Vendors	07/31/2023
Negotiations with Finalists	Agency designees and selected Vendor(s)	08/14/2023
Best and Final Offers Deadline from Finalists	Selected Vendors	08/28/2023
Contract Award	Agency	09/25/2023
Protest Deadline	Responding Vendors	15 days after award

2.0 PURPOSE OF RFP

2.1 INTRODUCTION

The purpose of this RFP is to solicit Offers for and select one or more Vendor(s) to provide Transit Demand Response Scheduling software and related systems, hardware, services, and support to Demand Response Operators (“DROs”) within the State of North Carolina (“the State”). Approximately 98 DROs of varying sizes and complexity provide Demand Response transportation services throughout the State. These include Non-Emergency Medical Transportation (NEMT), elderly and disabled transportation assistance, limited services for the rural general public, and employment transportation assistance.

2.2 ON BEHALF OF THE DROS, THE STATE SEEKS DEMAND RESPONSE SCHEDULING SOLUTIONS THAT PROVIDE CONSISTENT STANDARDS OF SERVICE, STANDARDIZED DATA INTEGRITY AND REPORTING THROUGHOUT THE STATE, AND ARE FLEXIBLE TO FULFILL THE REQUIREMENTS OF EACH OF THE INDIVIDUAL DROS. DROS WILL ELECT TO PROCURE FROM A SELECTED VENDOR A PRODUCT THAT BEST MEETS THEIR NEEDS. CONTRACT TERM

A contract awarded pursuant to this RFP shall have an effective date as provided in the Notice of Award. The term shall be two (2) year(s), and will expire upon the anniversary date of the effective date unless otherwise stated in the Notice of Award, or unless terminated earlier. The State retains the option to extend the Agreement for three (1) one-year renewal periods at its sole discretion.

2.2.1 EFFECTIVE DATE

This solicitation, including any Exhibits, or any resulting contract or amendment shall not become effective nor bind the State until the appropriate State purchasing authority/official or Agency official has signed the document(s), contract or amendment; the effective award date has been completed on the document(s), by the State purchasing official, and that date has arrived or passed. The State shall not be responsible for reimbursing the Vendor for goods provided nor Services rendered prior to the appropriate signatures and the arrival of the effective date of the Agreement. No contract shall be binding on the State until an encumbrance of funds has been made for payment of the sums due under the Agreement.

2.3 CONTRACT TYPE

The purpose of this Request for Proposal is to solicit offers and select multiple vendors to provide Demand Response Scheduling software and related systems, services, and support to DROs within the State of North Carolina.

Indefinite Quantity Agency Specific Contract – Pursuant to 9 NCAC 6B.0701, this solicitation will establish an indefinite quantity agency specific contract between a Vendor and the State for use by DROs. The quantity of Goods or Services that may be used by the DROs is undetermined. No minimum or maximum purchase quantity is guaranteed.

The State reserves the right to make partial, progressive or multiple awards: where it is advantageous to award separately by items; or where more than one supplier is needed to provide the contemplated specifications as to quantity, quality, delivery, service, geographical areas; and where other factors are deemed to be necessary or proper to the purchase in question.

2.4 AGENCY BACKGROUND

In North Carolina (NC), 98 Public Transportation Systems provide Demand Response services serving all 100 counties. Of these systems, 18 are categorized as Urban, 17 as Small Urban, and 63 as community or rural systems. NC DROs provide approximately 6 million hours of service annually. Around six million demand response/demand taxi passenger trips are provided each year. Approximately 1,440 demand response vehicles and 310 demand taxi transit vehicles were in operation around the state.

Appendix A provides more detail from the National Transit Database (NTD) on the fleet sizes and passengers served for each public transportation agency in the State of North Carolina. The data shown in the table is

from 2019 and includes all 101 public transportation service providers, three of which do not provide Demand Response services.

Appendix B represents the number of DROs by service area represented as square miles. This information was gathered from the National Transit Database (NTD) for the year 2019.

2.5 PROBLEM STATEMENT

North Carolina transit systems have historically utilized a variety of vendors and procurement methods in order to procure operating agreements for use of transit scheduling software. This has resulted in variable terms and conditions in their agreements as well as lapses in customer service and scheduling software performance. NCDOT-Integrated Mobility Division has compiled survey results from our transit DROs showing the need for updated transit software to help provide innovative and up-to-date transit solutions. This RFP will help the state consolidate terms and conditions in order to alleviate discrepancies in performance by transit scheduling software vendors.

As the State works to enhance Demand Response services, key objectives include: 1) Better cross-agency coordination, 2) simplified scheduling and new payment options, 3) improved integration across services and providers, 4) new on-demand scheduling capabilities, 5) new mobility services, and 6) turnkey transportation services.

As a result, the specifications outlined in this RFP are grouped into three categories: Core, Advanced and Optional. Core specifications are specifications common to all DROs across the State. For the purposes of this RFP, vendors will need to substantially comply with all core specifications to be awarded a contract by the DROs.

Advanced functionalities and technical specifications reflect the varying needs of the individual DROs and the State's roadmap for innovation. Advanced specifications are above or in addition to the Core and are not required to be offered by a Vendor .

Optional functionalities and technical specifications represent functionality that the state is exploring that may help to supplement core and/or advanced functionalities. For these options, the State is interested to learn more about what services and products exist in the industry to address a software as a service (SaaS) solution.

The successful Vendor will deliver a demand response scheduling solution that is a vendor-hosted SaaS solution. Such functionality includes:

- Client Management
- Reservations and Scheduling
- Dispatching and Routing
- Fare Payment Integration
- Reporting and Data Analytics
- Customer Self-Service Applications for Reservations
- Profile Management
- Trip History

Vendor(s) may offer CCTVs, driver displays, integrated payment systems and associated peripherals for purchase or lease by DROs as specified herein.

3.0 RFP REQUIREMENTS AND SPECIFICATIONS

3.1 GENERAL REQUIREMENTS AND SPECIFICATIONS

3.1.1 REQUIREMENTS

Means, as used herein, a function, feature, or performance that the system must provide.

3.1.2 SPECIFICATIONS

Means, as used herein, a specification that documents the function and performance of a system or system component.

The apparent silence of the specifications as to any detail, or the apparent omission of detailed description concerning any point, shall be regarded as meaning that only the best commercial practice is to prevail and that only processes, configurations, materials and workmanship of the first quality may be used. Upon any notice of noncompliance provided by the State, Vendor shall supply proof of compliance with the specifications. Vendor must provide written notice of its intent to deliver alternate or substitute Services, products, goods or other Deliverables. Alternate or substitute Services, products, goods or Deliverables may be accepted or rejected in the sole discretion of the State; and any such alternates or substitutes must be accompanied by Vendor's certification and evidence satisfactory to the State that the function, characteristics, performance and endurance will be equal or superior to the original Deliverables specified.

3.1.3 SITE AND SYSTEM PREPARATION

Vendors shall provide the Purchasing DRO complete site requirement specifications for the Deliverables, if any. These specifications shall ensure that the Deliverables to be installed or implemented shall operate properly and efficiently within the site and system environment. Any alterations or modification in site preparation, which are directly attributable to incomplete or erroneous specifications provided by the Vendor and which would involve additional expenses to the State, shall be made at the expense of the Vendor.

3.1.4 EQUIVALENT ITEMS

Whenever a material, article or piece of equipment is identified in the specification(s) by reference to a manufacturer's or Vendor's name, trade name, catalog number or similar identifier, it is intended to establish a standard for determining substantial conformity during evaluation, unless otherwise specifically stated as a brand specific requirement (no substitute items will be allowed). Any material, article or piece of equipment of other manufacturers or Vendors shall perform to the standard of the item named. Equivalent offers must be accompanied by sufficient descriptive literature and/or specifications to provide for detailed comparison.

3.1.5 ENTERPRISE LICENSING - RESERVED

3.2 SECURITY SPECIFICATIONS

3.2.1 SOLUTIONS HOSTED ON STATE INFRASTRUCTURE - RESERVED

3.2.2 SOLUTIONS NOT HOSTED ON STATE INFRASTRUCTURE

The Transit Software Solution will be required to receive and securely manage data that is classified as highly restricted. Refer to the North Carolina Statewide Data Classification and Handling policy for more information regarding data classification. The policy is located at the following website: <https://it.nc.gov/document/statewide-data-classification-and-handling-policy>.

To comply with the State's Security Standards and Policies, State agencies are required to perform annual security/risk assessments on their information systems using NIST 800-53 controls. This requirement additionally applies to all Vendor-provided, agency-managed Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS) solutions which will handle data classified as Medium Risk (Restricted) or High Risk (Highly Restricted) data.

(a) Vendors shall provide a completed Vendor Readiness Assessment Report Non-State Hosted Solutions ("VRAR") at offer submission. This report is located at the following website: <https://it.nc.gov/documents/vendor-readiness-assessment-report>

(b) Vendors shall provide a current independent 3rd party assessment report in accordance with the following subparagraphs (i)-(iii) at the time of offer submission.

- (i) Federal Risk and Authorization Management Program (FedRAMP) certification, SOC 2 Type 2, ISO 27001, or HITRUST are the preferred assessment reports for any Vendor solutions which will handle data classified as Medium Risk (Restricted) or High Risk (Highly Restricted).
- (ii) A Vendor that cannot provide a preferred independent 3rd party assessment report as described above may submit an alternative assessment, such as a SOC 2 Type 1 assessment report. The Vendor shall provide an explanation for submitting the alternative assessment report. If awarded this contract, a Vendor who submits an alternative assessment report shall submit one of the preferred assessment reports no later than 365 days of the Effective Date of the contract. Timely submission of this preferred assessment report shall be a material requirement of the contract.
- (iii) An IaaS vendor cannot provide a certification or assessment report for a SaaS provider UNLESS permitted by the terms of a written agreement between the two vendors and the scope of the IaaS certification or assessment report clearly includes the SaaS solution.

(c) Additional Security Documentation. Prior to contract award, the State may in its discretion require the Vendor to provide additional security documentation, including but not limited to vulnerability assessment reports and penetration test reports. The awarded Vendor shall provide such additional security documentation upon request by the State during the term of the contract.

3.3 ENTERPRISE SPECIFICATIONS

3.3.1 ENTERPRISE STRATEGIES, SERVICES, AND STANDARDS

Agencies and vendors should refer to the Vendor Resources Page for information on North Carolina Information Technology enterprise services, security policies and practices, architectural requirements, and enterprise contracts. The Vendor Resources Page can be found at the following link: <https://it.nc.gov/vendor-engagement-resources>. This site provides vendors with statewide information and links referenced throughout the RFP document. Agencies may request additional information.

3.3.2 ARCHITECTURE DIAGRAMS DEFINED

The State utilizes architectural diagrams to better understand the design and technologies of a proposed solution. These diagrams, required at offer submission, can be found at the following link: <https://it.nc.gov/architectural-artifacts>.

There may be additional architectural diagrams requested of the vendor after contract award. This will be communicated to the vendor by the agency as needed during the project.

3.3.3 VIRTUALIZATION - RESERVED

3.3.4 IDENTITY AND ACCESS MANAGEMENT (IAM)

The proposed solution must externalize identity and access management. The protocols describing the State's Identity and Access Management can be found at the following link:

<https://it.nc.gov/services/vendor-engagement-resources#identity-access-management>

Describe how your solution supports the above protocols as well as making them available for application integration/consumption.

3.4 BUSINESS AND TECHNICAL SPECIFICATIONS

3.4.1 STATEWIDE INFORMATION SECURITY MANUAL

With its Offer, offer offeror shall include the following statement as part of vendor's proposal; "We affirm and explicitly acknowledge that the offeror's proposed solution at time of award and for the duration of the contract will comply with all applicable State policies, guidelines, standards, practices, procedures, and safeguards as defined in the North Carolina Department of Information Technology Statewide Information Security Manual (SISM)."

SISM introduction and individual SISM control family policy locations:

<https://it.nc.gov/documents/statewide-information-security-manual>

<https://it.nc.gov/resources/cybersecurity-risk-management/initiatives/information-security-policies>

1 Project Management

The Project Management specifications intend to develop a consistent framework for all implementations throughout the state. The specifications below outline a high-level approach for project management at the State level and each DRO implementation.

Describe the Vendor's proposed solution for each of the following specifications. If a specification is not applicable, please explain.

a. Project Manager and Key Staff

ID	Project Manager and Key Staff	Feature	Response
1.a-1	The Vendor works closely with the State, the DROs, and the NCDOT Lead Representative for the initial implementations. This provides a project implementation framework for all subsequent implementations throughout North Carolina.	Core	
1.a-2	The Vendor assigns responsible and experienced individuals to serve as the Project Manager and Key Project Staff for each implementation.	Core	
1.a-3	At a minimum, the Vendor provides a qualified Project Manager who shall oversee and coordinate all the DROs implementations throughout the State. The Project Manager will be the single point of contact for the NCDOT Lead Representative.	Core	
1.a-4	The Vendor's Project Manager possesses experience managing demand response scheduling software implementation projects.	Core	

ID	Project Manager and Key Staff	Feature	Response
1.a-5	The Vendor recommends one or more Deputy Project Manager(s) and other Key Staff to facilitate and manage the day-to-day implementation and onboarding of individual DROs within the State as needed.	Core	
1.a-6	All identified Key Project Staff will be subject to review by the DROs. Key Project Staff includes: 1. Project Manager 2. Deputy Project Manager(s) 3. Lead developer/engineer(s) 4. Implementation lead(s) 5. QA/QC lead(s) 6. Training lead(s) 7. Support lead(s)	Core	

b. Project Meetings

ID	Project Meetings	Feature	Response
1.b-1	The Vendor facilitates progress review meetings and shares an agenda at least five (5) business days prior with the Agency Project Manager(s) for all implementations.	Core	
1.b-2	The topics to be discussed and reviewed during progress meetings include, but are not limited to: 1. Minutes of the prior progress meeting and progress since the last meeting and action item log 2. Project schedule including sequencing of critical work 3. Project deliverables, with a focus on deliverables due before the next progress meeting 4. Master Issues list and Issues arising since the last meeting 5. Engineering, manufacturing, and quality control summary (if necessary) 6. Any needed corrective measures to maintain the project schedule 7. Any other issues related to the project 8. Other topics as required by the DROs The discussion topics may vary depending on project needs and priorities.	Core	
1.b-3	The Vendor documents minutes for all monthly progress review meetings and submitting those minutes for review by the DRO within three (3) business days following each meeting.	Core	
1.b-4	All Key Project Staff relevant to the agenda topics are present during progress meetings or as required by the DRO.	Core	

c. Project Management Deliverables

ID	Project Management Deliverables	Feature	Response
1.c-1	The Vendor develops and maintains a Master Program Schedule (MPS). The MPS identifies all program activities, deliverables, and key milestones (including those owned by the DROs) with expected and actual completion dates.	Core	
1.c-2	The Vendor works with the DROs and the NCDOT Lead Representative to determine acceptable delivery/review timeframes for all DRO-owned deliverables/activities within the MPS. All proposed times are subject to review and approval by the DROs.	Core	
1.c-3	The Vendor provides a Change Management Plan (CMP) for review and approval by the DROs and the NCDOT Lead Representative.	Core	
1.c-4	The CMP documents critical changes to program stakeholders and change management and risk mitigation procedures. In addition, the CMP details the Vendors change control process and procedures.	Core	
1.c-5	Engineering Change Requests (ECRs) control software changes and updates to approved documents and data.	Core	
1.c-6	ECRs include documentation describing the reasons for, effects of, and rollback plans for the change. The Vendor submits ECRs to the DROs for review and approval at least two (2) weeks before releasing the changes to allow for DRO-led testing (as needed).	Core	
1.c-7	The Purchasing DROs directly coordinate and approve exceptions for emergency changes or fixes by. Vendor provides comprehensive documentation describing the issue and resolution, and the plan to deploy the change or fix.	Core	

ID	Project Management Deliverables	Feature	Response
1.c-8	The Vendor provides their standard Quality Assurance and Quality Control (QA/QC) policies and procedures. The QA/QC program defines methods for designing for, achieving, and maintaining quality. At a minimum the QA/QC program includes: 1. Surveillance overall work, including by Sub-Contractors, to ensure compliance with all contract requirements 2. Verification of compliance, including audit; discrepancy identification, notification, and control; and corrective action 3. Evaluation and assessment of Sub-Contractors QA programs 4. Provision of technical documentation, drawings, specifications, handbooks, manuals, data flow diagrams, and other technical publications for the new application 5. Design control and version management for changes to documents, drawings, data, and specifications 6. System software development (consistent with IEEE Standard 730 or equivalent ISO 9001 standards for software quality assurance) 7. System integration testing 8. Defect management, including explanations, on how defects will be identified, categorized, reported on, tracked, approved/rejected, and closed out 9. System configuration management 10. Qualification and certification for all personnel performing work under this Contract	Core	
1.c-9	If damage, defect, error, or inaccuracy is found in any provided work, the DROs have the right to reject or require corrective action to bring the work into compliance with the contract requirements. The Vendor bears all costs incurred in correcting rejected work.	Core	
1.c-10	The Vendor maintains an electronic Master Issues List (MIL) to track and manage project issues and action items.	Core	
1.c-11	The Vendor identifies and updates MIL items at design review meetings, weekly project coordination meetings, monthly progress review meetings, and on an ad-hoc basis.	Core	

ID	Project Management Deliverables	Feature	Response
1.c-12	The MIL tracks the following attributes for each entry at a minimum: 1. Item number 2. Date opened 3. Requesting party 4. Description 5. Required action 6. Assigned party 7. Status (open/closed/in progress/deferred/etc.) 8. Date closed Other attributes may be required by the DROs. The Vendor assigns no action items to the DROs without the knowledge and consent of the DROs.	Core	
1.c-13	The Vendor develops and submits a System Implementation Plan (SIP) to be approved by the DROs that purchase systems. The SIP includes detailed implementation activities as it relates to the master program schedule. The SIP includes roles and responsibilities of parties (DROs, Vendor, or other parties) in the proposed project team, progress milestones and status, and assigned Vendor staff.	Core	
1.c-14	The Vendor retains responsibility for accurately migrating existing customer records to the new customer database. Vendor provides a recommended Customer Data Migration (CDM) plan based on industry best practices and relevant experience migrating customer records.	Core	

2 Common Design Specifications

Common design specifications provide overall guidance on the design of the system. The DROs need a service-proven design that is secure, follows industry best practices, and supports openness with third parties using APIs for potential future integrations.

Describe the Vendor's proposed solution for each of the following specifications. If a specification is not applicable, please explain..

a. Application Programing Interface (APIs)

ID	Application Programing Interface (APIs)	Feature	Response
2.a-1	The system uses APIs to share data and connect with third-party applications as required by the DROs. The Vendor provides documentation describing all API calls, data formats, and communication and security protocols used to support the system interfaces.	Core	
2.a-2	A system integrates with system applications such as Interactive Voice Response (IVR) system, mobile applications, customer websites, and other such applications using APIs.	Core	

ID	Application Programing Interface (APIs)	Feature	Response
2.a-3	The Vendor develops and exposes APIs that are managed using a commercial off the shelf (COTS) API management solution that supports functionality provided in the demand-response system, including: 1. Client management 2. Reservations 3. Dispatching and Scheduling 4. Customer service 5. Fare payment 6. Reporting Include in the proposal examples of APIs and a description of the features and functions supported by existing APIs.	Core	

3 Demand Response Software

The scheduling solution will include standard features and functions necessary to operate demand response operations, including:

- Client management
- Reservations and Scheduling
- Dispatching and Routing
- Fare Payment integration
- Reporting and data analytics
- Customer self-service applications for reservations, profile management, and trip history

Due to the varying sizes and operational needs of the DROs throughout the State, specifications are identified as Core or Advanced to allow DROs to select (if possible) the system features and modules that best fit their needs.

Describe the Vendor's proposed solution for each of the following specifications. If a specification is not applicable, please explain..

a. Demand Response General Specifications.

ID	Demand Response General Specifications	Feature	Response
3.a-1	A secure, cloud-hosted, SaaS solution that includes administrative software to support demand response operations.	Core	
3.a-2	A system that reduces the need for manual data entry and duplicative data entry.	Core	
3.a-3	A system with multi-user capability, allowing simultaneous users working at different workstations to access and effectively use the software for all associated activities.	Core	
3.a-4	System security features limiting access to major functions based on assigned roles.	Core	
3.a-5	A fully automated system providing real-time and batch order taking, scheduling, and dispatching for demand response transportation trips.	Core	

ID	Demand Response General Specifications	Feature	Response
3.a-6	A system providing accurate transaction history that includes: 1. Date/Timestamp for all actions taken in the software 2. Associated (and unique) user ID for all actions taken in the system 3. Record of all automated system actions to address system failures or issues 4. Any software malfunction resulting in failures or impacts normal operations	Core	
3.a-7	A system with online "Help" that provides support for end users.	Core	
3.a-8	A system with a scalable architecture that handles expansion in use as the need arises without adversely impacting systems management and operations.	Core	
3.a-10	A system that utilizes a recognized relational database management system that allows for mission critical database management capabilities.	Advanced	
3.a-11	A system that follows an open architecture design model, allowing the DROs to independently develop interfaces and/or enable integration with other internal or third-party systems, including but not limited to the following state programs: 1. Medicaid Brokers (currently ModivCare and OneCall) 2. North Carolina Cares 360 (NCCares360NCCARE360) 3. North Carolina Tracks (NCTracks)	Advanced	
3.a-12	A system that supports the migration of existing manually geo-coded locations from the existing scheduling software to the new scheduling software. The DROs may have created manually coded locations to supplement existing mapping gaps for existing addresses.	Advanced	
3.a-13	A system shall that provides address verification for all addresses entered and supports the ability to editing of mapping coordinates, or manually verifies the address if the system is unable to provide an accurate verification. Any changes or manual verification will be clearly noted as such, be available to all dispatchers, and be used for scheduling and routing.	Advanced	
3.a-14	A System that provides an integrated mapping solution that supports frequent mapping updates and is consistent with the map used for routing in the driver display and with scheduling and dispatch staff.	Advanced	
3.a-15	A System that displays the approximate route of demand responsive vehicles in service based on their scheduled stops (either straight line or expected turn-by-turn route, with stops highlighted).	Advanced	

b. Client Management

ID	Client Management Specifications	Feature	Response
3.b-1	A system that allows for real-time customer record updates allowing authorized staff to: 1. Add, remove, and modify client data 2. Suspend and activate clients	Core	
3.b-2	A system that includes the option to display, add, delete, and modify the following data for each client: 1. Client name(s) 2. Gender 3. Birth date 4. Fare type 5. Registration, expiration date, and current status 6. Complementary ADA eligibility, status, and renewal date 7. Mobility aides 8. Unique client identification number 9. Medicaid ID number 10. Ability to include multiple addresses including building name and number, unit name or number, city, state, zip code for pickup, and/or billing/mailling 11. Telephone number (at least two (2) telephone numbers) 12. Emergency contact name and telephone numbers (at least two (2)) 13. Additional passengers (e.g., personal care aid, companions, etc.) 14. Email 15. Comments field	Core	
3.b-3	A system that allows authorized staff to look up clients by data attached to the profile or client record (e.g., name, date of birth, address, etc.).	Core	
3.b-4	A system that allows authorized users to query tables of riders, reservations, and trips based on user-defined search parameters.	Core	
3.b-5	A system that displays the client's most recent trips, scheduled trips, reservations, canceled trips and no-shows.	Core	
3.b-6	A system that includes trip details and history specific to each client such as trip origins/destinations and dates, time spent onboard the vehicle, and any other relevant information.	Core	

ID	Client Management Specifications	Feature	Response
3.b-7	A system that tracks customer eligibility status and automatically notify the DROs and clients of upcoming eligibility expirations.	Advanced	
3.b-8	A system that allows for the assignment of different eligibility levels with different expirations.	Advanced	
3.b-9	A system that supports online comprehensive rider registration for both complementary ADA	Advanced	

ID	Client Management Specifications	Feature	Response
	paratransit and non-ADA paratransit riders and clearly delineates between them.		
3.b-10	System allows the DROs to include additional client data such as: 1. Primary language spoken (with the system automatically defaulting to English) 2. Sponsor/Eligible funding 3. Fare type and preferred fare payment method 4. Contact information formats (i.e. large print, Braille, etc.) 5. Client home GPS coordinates 6. Passenger-specific load time allowance, in minutes, in addition to the default or standard load time allowance 7. Certification/Denials/Appeals history	Advanced	
3.b-1	A System that includes a customer-facing application module that allows clients, caregivers, or care facilities to apply for demand response eligibility through any web browser. 1. The application module is be easy to navigate and meets ADA accessibility standards. 2. To reduce the need for manual data entry, the application module is be linked to the customer database and new client records are automatically created upon application approval.	Advanced	
3.b-2	A System that automates correspondence with clients through text messages, emails, or pre-recorded phone calls regarding eligibility approvals, expirations, denials, or appeals.	Advanced	
3.b-3	A System provides tools or features to support adding clients (e.g., partners living at the same address, group homes, etc.) to facilitate rapid entry of client data.	Advanced	

c. Reservations

ID	Reservations Specifications	Feature	Response
3.c-1	A system that allows clients, caregivers, and DRO staff to easily view, create, modify, or cancel trips.	Core	
3.c-2	A System that: 1. books same-day trips, 2. schedules standing-order (subscription) trips, 3. accepts advanced reservations	Core	
3.c-3	A system that allows standing-order trips to be scheduled on a weekly (e.g., every Monday) or monthly (e.g. first and third Monday) basis. A system that allows the DROs to temporarily suspend standing-order trips without needing to modify trips outside of the suspension period.	Core	
3.c-4	A system that books trips based on pickup time or arrival time. When scheduling by arrival time, the	Core	

ID	Reservations Specifications	Feature	Response
	system automatically factors in travel time from origin to destination.		
3.c-5	A system that generates a confirmation number for each reservation, revised reservation, and trip cancellation. The system allows users to query the system by confirmation numbers to display transactions.	Core	
3.c-6	A system that provides safeguards that prevent errors such as past date booking, duplicate trips, and booking clients with expired applications, and booking outside the service area.	Core	
3.c-7	A system that automatically removes an associated drop-off from the manifest if a pickup is canceled due to a no-show.	Core	
3.c-8	A system that automatically finds an earlier or later time for scheduling when a requested time is unavailable based on capacity constraints.	Core	
3.c-9	A system that sends automatic text or phone notifications to clients as a vehicle approaches a location for a pickup.	Core	
3.c-10	Vendor provides explanations of any limitations for scheduling rides including limitations for the number of vehicles and/or passenger trips that can be scheduled.	Core	
3.c-11	A system that alerts the user when the origin or destination of a trip is not within the specified boundary during service hours and prevents the trip from being booked unless overridden by approved DRO staff.	Core	
3.c-12	A system that provides an option to select locations without a street address (e.g., can identify a street corner or XY coordinates).	Core	
3.c-13	A system that prevents a user from booking a trip if the eligibility of the rider is suspended, except when suspension is because of an expired funding source. If a suspended rider has booked subscription trips or reservations before the suspension, the system will not schedule these trips while the rider is suspended.	Core	
3.c-14	When a subscription standing order trip is canceled, the system checks ahead and displays other trips for this rider that will be canceled. The system permits the user to cancel one, multiple or all future trips.	Core	
3.c-15	The system allows users to schedule one-way, round-trip, and multi-leg trips with minimal data entry, by auto-populating data.	Core	
3.c-16	The system allows a user to book disconnected legs of a trip.	Core	
3.c-17	The system allows reservations to be made for groups traveling together who have an identical origin and destination. These group reservations shall be assigned to the same vehicle to the maximum extent possible.	Core	

ID	Reservations Specifications	Feature	Response
3.c-18	The system displays all reservations by a rider or address to facilitate individual and/or group cancellations.	Core	
3.c-19	The system shall shows estimated trip lengths for all trips created.	Core	
3.c-20	The system supports lists of vehicles, vehicle run numbers, run times (shifts), and drivers that the user can configure or edit.	Core	
3.c-21	The system provides multiple user-defined seating/wheelchair arrangements for each type of vehicle. This must include a minimum of five (5) different arrangements to incorporate zero (0) to four (4) wheelchairs with corresponding seats.	Core	

ID	Client Management Specifications	Feature	Response
3.c-22	The system automatically generates trip reversals or return trips from destination to origin when trips are booked.	Advanced	
3.c-23	The system provides quick access for a customer's most frequent trip origins and destinations for quick selection during booking.	Advanced	
3.c-24	The system supports multiple service providers. The parameters for each provider are configurable such that the service allocation may be based on predetermined factors including but not limited to the following: 1. Vehicle type 2. Geographic area 3. Day of the week 4. Time of day 5. Origin and/or destination 6. Nature of rider disabilities and/or physical aids	Advanced	

d. Scheduling

ID	Scheduling Specifications	Feature	Response
3.d-1	The system groups trips based on location to maximize service efficiency and provide the ability to lock recurring trip(s) to specific schedules, drivers, or vehicles to provide stability and consistency for customers with regular/recurring appointments.	Core	
3.d-2	The system allows for trips to or from same origins, or to same destinations, to be combined to eliminate duplicate trips.	Core	
3.d-3	Vehicle assignments are automatically updated if a vehicle needs to be pulled from service or if a vehicle is running late.	Core	
3.d-4	The system considers capacity constraints of each vehicle or route. These constraints are adjustable and easily altered on a day-to-day basis.	Core	
3.d-5	The system takes into account different travel times during specific peak hour traffic periods, in congested areas, and at places where physical barriers affect travel load and unload time.	Core	

ID	Scheduling Specifications	Feature	Response
3.d-6	The system calculates actual non-revenue hours and mileage as well as actual revenue hours and miles for all vehicles on a daily basis.	Core	
3.d-7	The system prints vehicle manifests on a daily basis. The system formats printed manifests in a manner that minimizes paper waste, in a legible font size suitable for drivers to reference while enroute, and only includes minimal information (e.g., client name, pick up/drop off address, scheduled window, etc.). Printed manifest details and layout will be defined during design review.	Core	
3.d-8	The system allows users to view maps that illustrate fixed route bus routes and bus stops relative to trip origins and destinations.	Core	
3.d-9	The system provides for manual mapping of addresses if the system map does not recognize an address.	Core	
3.d-10	The mapping system is fully compatible with the mapping system used by tablets and based on an open architecture and integrated with Automatic Vehicle Locator (AVL) and tablet technology.	Core	
3.d-11	The system supports real-time and batch rescheduling.	Core	
3.d-12	All trip time changes are within the original promised time window and permit the rider to meet a stated appointment time.	Core	
3.d-13	The system maintains an open return list (e.g., will calls) for passengers with an uncertain pickup time for the return leg of a trip (e.g., after a medical appointment of uncertain duration).	Core	
3.d-14	When vehicles are removed from a service, the system converts any previously assigned trips for that vehicle to the status "unassigned" for reassignment. The system supports reassignment of all trips to a new vehicle/driver.	Core	
3.d-15	For cancellations, or changes to the pick-up time on a route, the system recalculates the remaining pick-up and drop-off times.	Core	
3.d-16	The system allows the user to mark specific trips as "critical" or exempt from automated modification. If a critical trip must be modified manually, the system provides sufficient controls or notifications to the dispatcher.	Core	
3.d-17	The system avoids sending a vehicle that does not meet the needs of the passenger's disability.	Core	

ID	Client Management Specifications	Feature	Response
3.d-18	The system features automatic trip optimization. The system continuously updates and adjusts trips based on vehicle position, trip cancellations, and no-shows. Automatic trip optimization maximizes service efficiency while reducing the need for manual schedule adjustments.	Advanced	
3.d-19	The system integrates with mapping and vehicle location services to perform route optimization functions and scheduling based on updated street	Advanced	

ID	Client Management Specifications	Feature	Response
	network data. Route and turn-by-turn driving directions are highly desirable.		
3.d-20	The system allows the DRO to easily add, remove, and modify service boundaries based on service type and driver.	Advanced	
3.d-21	The system routes and schedules trips according to configurable parameters including: 1. Shared rides 2. Pick up time window 3. Drop-off time 4. Mobility aids or mobility restrictions 5. Number of passengers/space available in vehicle 6. Assignment of runs to specified geographical zones The system allows DROs to modify all parameters.	Advanced	

e. Dispatching

ID	Dispatching Specifications	Feature	Response
3.e-1	The system displays the following minimum information for dispatchers for all pick up/drop off: a. Vehicle number b. Passenger name, last name first c. Number of passengers, including attendants and companions. d. Pickup and drop-off address e. Promised arrival time window f. Estimated time of arrival g. Any special needs or problem address h. Notes	Core	
3.e-2	The system provides necessary dispatching tools for making service day operational decisions. At a minimum, this includes tools for same day and standby trips, canceled trips, no-shows, late riders, vehicle breakdowns, and open returns. The system allows the dispatcher to move trips, change drivers and vehicles, and adjust the schedules.	Core	
3.e-3	The system allows for a specific driver to be assigned to a route and allows the dispatcher to change a vehicle number.	Core	
3.e-4	The system allows dispatchers to override routing due to road construction and traffic pattern changes on a one-day or permanent basis.	Core	
3.e-5	The system allows dispatchers to schedule driver breaks.	Core	
3.e-6	The dispatching module displays: 1. Selected route and associated trip details 2. Vehicle ID numbers and locations updated at least every 30 seconds 3. Scheduled arrival times 4. Real-time arrival predictions and on-time performance 5. Client names and the number of passengers per trip	Core	

ID	Dispatching Specifications	Feature	Response
3.e-7	The dispatching module displays one route at a time or multiple routes.	Core	
3.e-8	The system allows the user to display a list of all of the day's scheduled trips for a client.	Core	
3.e-7	The system allows the dispatcher to manually override each trip's assigned route and pickup or drop-off time.	Core	
3.e-8	The system allows the dispatcher to override batched trips and manually move them to an alternate route.	Core	
3.e-9	The system allows users to easily transfer passenger trips from a selected route(s) based on least incremental mileage.	Core	
3.e-12	The system provides the number of trips for each route and track driving speed history.	Core	
3.e-13	The system displays all dispatch activity for any route and allow the dispatcher to add dispatch activity notes.	Core	
3.e-14	The system allows the dispatcher to transfer single trips or a block of trips between vehicles/drivers.	Core	
3.e-10	The system logs all dispatcher actions and attributes them to the logged in user.	Core	

ID	Client Management Specifications	Feature	Response
3.e-16	The system allows dispatchers to see: 1. Cancellations and insertions occurring within a configurable timeframe 2. Runs not covered by a driver 3. Unassigned trips	Advanced	
3.e-17	The system has dispatching tools that are simple to use and efficient to enter and retrieve information. The dispatching solution that is flexible and configurable for each dispatcher allowing dispatchers to create custom dispatch data views based on the type of dispatching methods performed.	Advanced	
3.e-18	The system allows the DROs to manage unexpected enroute origin and destination changes.	Advanced	
3.e-19	The system provides the DROs with two-way text messaging from dispatch to DRO. Messages shall be saved or archived in the system for future reference.	Advanced	
3.e-20	Incoming messages from drivers are grouped by vehicle/driver and sorted by prioritization (e.g., high priority messages on top). All messages include an audible tone or notification to alert the dispatcher when messages are received from the driver display solution.	Advanced	
3.e-21	The system notifies dispatchers when a vehicle is running late by a configurable amount of time. These parameters are configurable based on the parameters set by the individual DROs (e.g., Client type, ADA status, etc.).	Advanced	

f. Driver Display Functionality

ID	Driver Display Functionality Specifications	Feature	Response
3.f-1	The driver display provides drivers with an overview of their complete schedule/manifest and allows them to view details for any pickup/drop off. Details include: 1. Client name(s) and companions/PCA 2. Mobility aids used by clients 3. Dispatch and scheduling comments 4. Fare/sponsor 5. Pickup and drop-off address and any applicable notes 6. Pickup and drop off window/appointment time 7. Business name/building name for each pickup or drop-off	Core	
3.f-2	The driver display or tablet requires the Driver to logon using the DRO assigned credential. When applicable, the driver display allows the driver to enter (or confirm) the current odometer reading for the vehicle.	Core	
3.f-3	The driver display includes demand response-specific functionality to display electronic manifests and receive updates in real-time from the Vendor provided dispatching system. Updates include changes to the schedule, trip specific detailed updates, cancellations, and additions to the manifest.	Core	
3.f-4	The driver display allows the driver to easily scroll through the entire manifest.	Core	
3.f-5	The driver display allows the driver to: Arrive, perform, cancel, and no-show trips as required by the DROs.	Core	
3.f-2	The driver display displays mapping using the same mapping software used to schedule the route.	Core	

ID	Driver Display Functionality Specifications	Feature	Response
3.f-7	Additional trip information includes: 1. Map view 2. Trip ID 3. Client type (e.g., Attended) 4. Estimated time to arrival at destination	Advanced	
3.f-8	Where applicable, the driver display includes a pullout and pull in checklist for Drivers at the start and end of service. Items included on the checklist are configurable by the DROs.	Advanced	
3.f-9	The system allows drivers to provide pickup and drop-off comments for each trip. The system synchronizes with the client record and is available for future passenger trips.	Advanced	
3.f-10	The driver display shows the vehicle's current odometer reading as calculated by the previous odometer entry and allows the DRO to manually correct the calculated vehicle odometer value.	Advanced	

ID	Driver Display Functionality Specifications	Feature	Response
3.f-3	The driver display provides integrated canned messages that drivers may send to dispatch. Integrated canned messaging includes DRO-customizable messages that can be sent directly from the driver display to dispatch.	Advanced	

g. Billing and Invoicing

ID	Billing and Invoicing Specifications	Feature	Response
3.g-1	The system supports trip pricing through a billing and payment feature. The system supports any combination required by the DROs: 1. Zone 2. Vehicle miles and/hours (service & revenue) 3. Passenger (rider) mile 4. Direct mile (Taxi) 5. Flat rate 6. Hourly 7. Fixed route fares	Core	
3.g-2	The system includes tariff management tools to administer all fare price and fare structure. The Agencies will establish the price of fares.	Core	
3.g-3	The system handles billing and invoicing functions for riders/trips.	Core	
3.g-4	The system allows the Agencies to generate and print monthly billing invoices for payment. The system generates and prints reports in a CSV or equivalent spreadsheet format.	Core	
3.g-5	The system automatically generates mailing labels for client billing and invoicing.	Core	
3.g-6	The Vendor supports Payment Integration with State programs as a funding source for billing and payment. Vendor payment solutions provide Payment Card Industry Data Security Standard (PCI-DSS) compliance and Vendor provides evidence of PCI compliance upon request by the DROs.	Core	
3.g-7	The Vendor works with the DROs to confirm reporting level of detail for billing and invoicing purposes. Billing reports shall include, at a minimum: 1. Trip date(s) 2. Passenger name and number of passengers 3. Pickup/drop off location(s) 4. Total number of trips by passenger 5. Total amount owed for each trip	Core	
3.g-8	The Vendor provides customer service support to the DROs during system and financial audits.	Advanced	

4 Customer Applications

Customer-facing applications provide end-users with tools needed to schedule and manage rides, manage their Client profile, facilitate customer self-service, and alert riders when their vehicle is approaching.

Describe the Vendor's proposed solution for each of the following specifications. If a specification is not applicable, please explain.

a. Mobile Applications

ID	Mobile Applications Specifications	Feature	Response
4.a-1	The Vendor provides Mobile Applications and website user interface and user experience accessibility testing using a qualified accessibility expert with relevant experience utilizing assistive technologies.	Core	
4.a-2	The Mobile Applications are designed and tested for cross-platform compatibility, including Android and iOS mobile application platforms.	Core	
4.a-3	The Mobile Applications support the most recent version of Google Android and Apple iOS mobile platforms at launch. Mobile Applications will be backwards compatible with a minimum of two (2) previous versions.	Core	
4.a-4	The Mobile Applications are free to download from Apple App Store or Google Play Store.	Core	
4.a-5	The Mobile Applications support the following functions: 1. Create an account 2. Link Client ID 3. Manage account (payment, contact information, personal care attendant, emergency contact and frequent address of travel) 4. View scheduled trips 5. Book a trip 6. Modify a trip 7. Cancel one or many trip reservations	Core	
4.a-6	The Mobile Applications support shared permissions allowing personal care attendants or caregivers to manage customer profile, book a trip, modify a trip or cancel a trip.	Core	
4.a-7	The Mobile Applications send a notification to the user when the ride is approaching/on the way.	Core	
4.a-8	The Mobile Applications adhere to branding guidelines of the DROs and will be approved during Final Design Review (FDR).	Core	
4.a-9	The Mobile Applications display text in alternate languages including, but not limited to, Spanish.	Core	
4.a-8	The Mobile Applications are intuitive, easy to use, and meet relevant accessibility standards of the ADA, World Wide Web Consortium.	Core	
4.a-9	The system's Mobile Applications are integrated with the DROs' fare structures and reservations systems to allow the customer to indicate their payment preference when making a reservation (e.g., cash, payment card, etc.).	Core	
4.a-12	The system's Mobile Applications allows customers to view the vehicle's location and estimated pickup (arrival) time on a map-based interface.	Advanced	

b. Customer Website

ID	Customer Website Specifications	Feature	Response
4.b-1	The self-service Customer Website supports the following functions: 1. Apply for demand response eligibility 2. Create an account 3. Link Client ID 4. Manage account (payment, contact information, personal care attendant, emergency contact and frequent address of travel) 5. View scheduled trips 6. Book a trip 7. Modify a trip 8. Cancel one or many trip reservations	Core	
4.b-2	The Customer Website is compatible with Windows and Apple operating systems and support the current browser version in addition to the previous three (3) versions. The Customer Website Portal functions on a desktop device (such as a PC), tablet, and wireless smartphone using popular browsers, including but not limited to: Chrome, Edge, Internet Explorer, Firefox, and Safari.	Core	
4.b-3	The Customer Website supports shared permissions allowing personal care attendants or caregivers to manage customer profile, book a trip, modify a trip, and/or cancel a trip.	Core	
4.b-4	The Customer Website adheres to the branding guidelines of the DROs and will be approved during FDR.	Core	
4.b-5	The Customer Website displays text in alternate languages including, but not limited to, Spanish.	Core	
4.b-6	The Customer Website is intuitive, easy to use, and meet ADA accessibility standards.	Core	
4.b-7	The Customer Website allows customers to view the vehicle's location and estimated pickup (arrival) time on a map-based interface.	Advanced	

c. Phone Notification

ID	Phone Notification Specifications	Feature	Response
4.c-1	The system interfaces with an interactive voice response (IVR) system to provide customer alerts related to trip reminder and real-time arrival information.	Core	
4.c-2	The system provides the name of the DRO and welcome message as its first response when the IVR is initialized. The system allows additional messages to be spoken after the welcome message as part of the IVR-decision flow.	Core	
4.c-3	The system allows users to interact with the system using their voice or telephone keypad.	Core	
4.c-4	The system supports a skip-ahead feature that allows the customer to choose their option at any point.	Core	

ID	Phone Notification Specifications	Feature	Response
4.c-5	The system supports a time-out parameter when no voice or no-keypad tone is identified, the customer is transferred to a Customer Service Representative. The time-out parameter will be approved by the DROs.	Core	
4.c-6	The system supports languages including, but not limited to, English and Spanish.	Core	
4.c-7	The system supports incoming calls through an automated menu where customers are encouraged to use an automated menu as a first choice before being transferred to a Customer Service Representative.	Core	
4.c-8	The Vendor provides a list of IVR recordings and prompts to the DRO for review and approval prior to implementation. The system permits DROs to customize system prompts and customer information messages at no charge.	Core	
4.c-9	In addition to customer alerts, the system supports messages related to eligibility requirements, usage policies and important contact information specific to the DROs.	Core	
4.c-10	The system allows prompts to the customer to identify a trip reservation, cancel one or many reservations, and confirm the cancellation.	Core	
4.c-11	The system is configurable and allows the DROs to configure the reminder and arrival parameters. The DROs will define these parameters during initial implementation.	Core	
4.c-12	The system contacts the customer with a reminder call about their trip the day before their scheduled service.	Core	
4.c-12	The system contacts the customer the day of their service trip with a service reminder when the vehicle is fifteen (15) minutes away from arrival.	Core	

5 Reporting. Describe the Vendor's proposed solution for each of the following specifications. If a specification is not applicable, please explain.

a. General Reporting

ID	General Reporting Specifications	Feature	Response
5.a-1	The system includes a reporting module that meets all National Transit Database and Federal Transit Administration reporting requirements and allows for the quick analysis of performance and service metrics such as: 1. Overall system report 2. Service hours and miles (revenue and non-revenue) 3. Deadhead hours and miles 4. No-Shows/Cancellations 5. Ridership and passenger hours 6. Client Management (e.g., new clients, suspended clients, etc.) 7. On-time performance 8. Trips and Trip origins and destinations 9. Billing and Invoicing 10. Taxi and Brokered services report 11. System Performance Monitoring 12. National Transit Database (NTD) 13. The standard North Carolina reporting package, including operating statistics, origin destination data, and vehicle utilization.	Core	
5.a-2	The system supports reporting analyses through ad hoc report generation. The system includes at least the following: 1. A display of the number of passengers per vehicle for a user-specified time interval 2. The number of cancellations, no-shows and late pick ups for a given rider for a user-specified data range 3. A query of trips by vehicle ID, rider ID, rider name, location name, zone, city, type of trip (e.g., ambulatory, subscription, canceled), travel duration, travel time interval, etc.	Core	
5.a-3	The system runs reports based on service type (e.g. Demand response or Shuttle Van) and service days (weekday, Saturday, or Sunday) is required.	Core	
5.a-4	The Reporting System first presents data in a summary format and then allows the DRO staff to drill-down and drill-through the tables for further details. Any graphical illustrations are provided as necessary.	Core	
5.a-5	The system runs custom reports using any of the data elements included in the database. Custom reports are intuitive and require minimal user configuration.	Core	
5.a-6	The system provides the DROs and the State with access to both aggregated and non-aggregated raw data for research and reporting.	Core	
5.a-7	The system allows users to generate and save ad hoc reports easily.	Core	

ID	General Reporting Specifications	Feature	Response
5.a-8	The system allows reports to be viewed on screen, sent to a printer or saved to a file.	Core	
5.a-9	The Reporting System allows report files to be exportable as pdf, Word, Excel, and GIS data formats. Origin and destination reports shall export location addresses as well as geocoded coordinates.	Core	
5.a-10	The Vendor provides the DROs with a list of available reports, sample of detail reports and degree to which the reports can be customized.	Core	
5.a-11	The Reporting System provides standard reports based on stored data. The DROs prefer the standard reports provide at least the following features: 1. Log on/ Log off Summary 2. Trips Provided 3. Non-Revenue vehicle hours 4. Passenger travel time by run, trip and user group 5. Cancellations 6. No-shows 7. Vehicle hours/miles 8. Driver??? attributes (DL endorsement, expiration, certification)	Core	
5.a-12	The Reporting System accesses the database to allow technical staff to generate, create and save ad hoc reports.	Core	

b. Performance Monitoring and Analytics

Performance monitoring, reporting, and data analytics are part of the ongoing operations and maintenance for Vendor's proposed solution. Describe the Vendor's proposed solution for each of the following specifications. If a specification is not applicable, please explain.

ID	Performance Monitoring and Analytics Specifications	Feature	Response
5.b-1	The Vendor creates canned reports that can be run, viewed, and downloaded by the DROs using a Vendor-provided Reporting System.	Core	
5.b-2	The system generates reports without manual data entry by the Vendor wherever possible.	Core	
5.b-3	The reports include tables and graphical charts showing the current and historical performance of each device or feature of the system under measurement where applicable.	Core	
5.b-4	The reports include a calculation of any credits to be assessed in the current month based on current and prior performance.	Core	
5.b-5	The Vendor commences performance reporting during Pilot Testing and continues to perform this activity throughout the operations agreements.	Core	
5.b-6	The system provides data and reports in a consistent format (e.g., CSV or equivalent spreadsheet format) and structure to support status reporting for active projects/contracts across participating DROs.	Core	

6. Implementation

Describe the Vendor's proposed solution for each of the following specifications. If a specification is not applicable, please explain.

a. System Design Reviews

ID	System Design Reviews Specifications	Feature	Response
6.a-1	The Vendor prepares a comprehensive System Design/Configuration set of documents (SDD) describing the functionality, user interfaces, network and system interfaces, and other elements to fully describe the system.	Core	
6.a-2	The SDD includes at a minimum: 1. System overview, architecture, and configuration information 2. All onboard and system software and functionality 3. All system interfaces, including data communications and interfaces with other systems 4. All system configurations for all of the participating DROs 5. Performance measures and overall testing and acceptance process	Core	
6.a-3	The Vendor presents the design documents and related information in initial implementation meetings. The Vendor facilitates a general demonstration of the system identifying each application or module provided under this Contract. The Vendor clearly articulates to the DROs the decisions required to configure the system or design elements of the system.	Core	
6.a-4	Design review meetings will be held at DRO offices or using approved video conferencing tools and will include an overall System Design Review meeting, followed by detailed reviews for each application or module provided by the Vendor. This includes: 1. Client Management 2. Reservations and Scheduling 3. Dispatching and operations 4. Fare payment 5. Customer applications (e.g., mobile app, phone, website) 6. On-demand services 7. Reporting 8. Integrations 9. Hardware (e.g., mobile data terminal (MDT) or tablets) 10. System support and maintenance	Core	
6.a-5	The Vendor conducts interactive workshops using demonstration equipment to "walk through" system operation and develop the screens for all user interfaces.	Core	

ID	System Design Reviews Specifications	Feature	Response
6.a-6	The Vendor conducts interactive workshops to demonstrate the system operation's final design, including final screens for user interfaces and customer facing applications.	Core	
6.a-7	If preferred by the DRO, the Vendor conducts a series of design meetings with the DROs throughout the project implementation rather than conduct the initial implementation meetings. If this is the preferred method, the Vendor must clearly describe the alternative process in the proposal.	Core	

b. Testing

ID	Testing Specifications	Feature	Response
6.b-1	The Vendor provides all labor and materials required for system testing, including but not limited to multiple phone types and sizes across iOS and Android platforms, funding sources, and all support services and facilities required to test the system.	Core	
6.b-2	The Vendor prepares and submits a comprehensive testing plan for review and approval by the DROs.	Core	
6.b-3	The Vendor documents all tests. The DOR and the Vendor will monitor and sign off to indicate completion of the tests.	Core	
6.b-4	The Vendor provides a comprehensive set of test use cases and testing scripts for the DROs to use to test the system. Testing includes: 1. All features and functions provided under this Contract, configured for the Agencies as determined during design review 2. Testing setup/pre-conditions, step by step instructions to complete the test and expected results for each test 3. Test success/acceptance criteria The Vendor generates sufficient data to thoroughly test the reports provided under this Contract for reporting testing.	Core	
6.b-5	The Vendor provides the testing use cases to the DROs no later than two (2) weeks prior to the start of testing for review and approval.	Core	
6.b-6	The Vendor corrects any and all software not passing inspection or testing and retests it at no additional cost to the DRO.	Core	
6.b-7	The DRO may, at its discretion, assign a DRO representative to witness and or/audit all testing.	Core	
6.b-8	Prior to the start of any formal testing, the Vendor conducts a "dry-run" review and testing of software components to identify and resolve any issues that arise.	Core	
6.b-9	The Vendor provides a test environment for the system to fully test all features and functions provided under this Contract. The testing environment will be separate from the development and production environments.	Core	

ID	Testing Specifications	Feature	Response
6.b-10	The Vendor facilitates and leads three (3) stages of testing: 1. Functional Testing 2. Pilot Testing or Public Beta Testing 3. System Acceptance Testing (SAT)	Core	
6.b-11	Successful completion of each of the three (3) testing stages will be subject to the approval of the DROs based on the test criteria mentioned in specification 6.2-10.	Core	
6.b-12	Functional Testing includes comprehensive testing of the system as configured for the DROs. Testing is conducted on all components provided under this Contract. The Vendor completes functional tests for the application which demonstrate and verify all functions provided as part of this Contract, including the review and usability testing of all user-accessible screens and commands.	Core	
6.b-13	After Functional Testing is successfully completed, Vendor provides a Functional Testing report to the DROs for review and approval before the Vendor proceeds to the next stage of testing.	Core	
6.b-14	For DROs conducting optional Public Beta Testing, the Vendor facilitates Public Beta Testing of the Mobile App and supports all public beta testers including, but not limited to: 1. Recruiting public beta testers 2. Support beta testers through the testing phase 3. Summary of issues identified by beta testers 4. Readiness report for Go-Live	Core	
6.b-15	The Vendor provides a minimum of one (1) week onsite support during public launch.	Core	
6.b-16	SAT begins after full public launch of the complete solution for all system components and will continue for 45 days.	Core	
6.b-17	SAT is performed in the production environment with all features and functions provided under this Contract.	Core	
6.b-18	The Vendor supports all elements of SAT, including, but not limited to, system maintenance, reporting, and customer support.	Core	
6.b-19	If the applicable performance requirements defined in agreed SLA are not attained during the 45-day period, the SAT is extended a minimum of 90-days to allow for three consecutive 30-day periods in which the requirements are met.	Core	
6.b-20	The Vendor identifies and implements remedial action at no cost to the DRO if an applicable system component fails to conform to specifications or performance requirements during SAT.	Core	
6.b-21	During SAT, the DRO and the Vendor meet no less than two (2) times per week to discuss progress, issues, and results. The Vendor provides formal reports on system performance at the end of the 45-day period.	Core	

ID	Testing Specifications	Feature	Response
6.b-22	The Vendor provides all testing data, reports, and other testing information to the DROs for review and approval within 10 days following the Completion of SAT.	Core	
6.b-23	The Vendor is responsible for all system operation and maintenance until the DROs issue approval of SAT.	Core	

c. Training and Manuals

ID	Training and Manuals Specifications	Feature	Response
6.c-1	The Vendor offers comprehensive onsite training to the DROs' staff on all provided hardware and software. Digital copies of user manuals, training materials, and all other system documentation will be made available to the DROs.	Core	
6.c-2	The Vendor provides all training materials in either Microsoft Office or Adobe PDF and shall provide permission to the DROs to reproduce copies as needed.	Core	
6.c-3	The Vendor keeps all training materials current based on current modifications and releases. The date and version shall be tracked on all training materials.	Core	
6.c-3	The Vendor provides training courses for at least the following positions: 1. Scheduler 2. Dispatcher 3. Administrative Staff 4. DRO Training Instructors (Train the Trainer) 5. DROs 6. Customer Service Representatives 7. Transportation Supervisors and Managers 8. System Administrator/System Engineer (IT Staff) 9. Database Administrator (IT Staff)	Core	
6.c-4	The DROs will provide employee list and number of staff attending above training sessions during Training Plan review.	Core	
6.c-5	The Vendor conducts training prior to Pilot Testing for the selected employees participating in Pilot Testing. All DROs must be trained before SAT.	Core	
6.c-6	The Vendor provides additional training and updated training materials to the DROs prior to SAT at no additional cost under the following circumstances: 1. If major modifications are made to the system after the initial training due to system upgrades or changes made under warranty or 2. If SAT occurs at least six (6) months after the completion of training, due to delays for which the Vendor is responsible.	Core	

ID	Training and Manuals Specifications	Feature	Response
6.c-7	During the System Maintenance Agreement (SMA) period, the Vendor provides additional training to DRO staff at no additional cost. Additional training may include pre-recorded sessions, however, live support from the Vendor is provided to answer any follow up questions from trainees.	Core	
6.c-8	The Vendor provides an online-based training module (on-demand version) that is built into the base system and allows for future training of the DROs.	Core	
6.c-9	The Vendor provides a Training Plan, including objectives, schedule, and course outline to the DROs for review at least four (4) weeks in advance of the start of training. The Training Plan shall include: 1. Total number of onsite training session(s) proposed 2. Total number of web-based training session(s) proposed 3. List of training course(s) 4. Number of classes per course 5. Maximum number of attendees per class 6. Preferred day and duration of sessions	Core	
6.c-10	The Training Plan shall be approved by the DROs prior to the start of any trainings.	Core	
6.c-11	The Vendor furnishes all tools, equipment, and training aids to conduct training courses during the training course.	Core	
6.c-12	The Vendor provides an instructor with a thorough knowledge and understanding of the system. In addition, the instructor has a familiarity within transit and will effectively leads students in a classroom setting.	Core	

7. Ongoing System Operations and Maintenance

Describe the Vendor's proposed solution for each of the following specifications. If a specification is not applicable, please explain.

a. System Maintenance Agreement (SMA)

ID	System Maintenance Agreement (SMA) Specifications	Feature	Response
7.a-1	Provide a SMA that covers the operations and maintenance of the system for a period of two (2) years plus three (3) one- (1-) year options for a total of five (5) years.	Core	
7.a-2	During the SMA, the Vendor retains responsibility for the operations and maintenance of the services, applications and any hardware provided .	Core	
7.a-3	The Vendor provides comprehensive testing during the SMA for any significant changes to the system. The determination of the significance of the change will be collaboratively determined between the Vendor and the DROs' representatives.	Core	

ID	System Maintenance Agreement (SMA) Specifications	Feature	Response
7.a-4	The Vendor provides at least five (5) business days' notice to the DROs before deploying system updates to Production, except when critical updates require immediate action.	Core	
7.a-5	The Vendor ensures the system is up to date with OS level security updates and patches.	Core	
7.a-6	The Vendor implements Change Management Processes for software and application releases.	Core	
7.a-7	The Vendor provides maintenance support when new OS versions are released and deployed to the system.	Core	
7.a-8	The Vendor releases new versions of the Mobile Apps, including obtaining approval through app store deployment processes.	Core	
7.a-9	The Vendor maintains the app store pages and metadata for the Mobile Apps and configuring the application for free downloadable.	Core	
7.a-10	The Vendor monitors the System for security threats and vulnerabilities and notifies the DROs immediately in the event of a suspected breach of the System for DROs, rider(s), or identified fraudulent use.	Core	
7.a-11	The Vendor provides a phone number and e-mail account for the reporting of software defects or malfunctions, and system outages, 24-hours a day, 7-days a week.	Core	
7.a-12	During the SMA, the Vendor responds to reports of system outages within 15-minutes of notification, 24-hours a day, 7-days a week. A fully qualified service representative arrives onsite within 24-hours after being contacted by the DROs if it is determined that a physical presence is needed to resolve the identified issue.	Core	
7.a-13	During the SMA, the Vendor responds to a report of any software defect or malfunction within two (2) hours of notification. A fully qualified service representative arrives onsite within 24-hours after being contacted by the DROs if it is determined that a physical presence is needed to resolve the identified issue.	Core	
7.a-14	The Vendor attempts to fix software problems impacting revenue collection within three (3) hours of being reported.	Core	
7.a-15	If the software problem impacts revenue collection, and the repair will take longer than three (3) hours, the Vendor reports the cause of the problem as soon as it becomes evident and provides status reports at least every four (4) hours thereafter, until the problem is corrected, or a workaround is established.	Core	
7.a-16	The Vendor submits to the DROs, no less than monthly, a notification of planned modifications and updates to the system, upgrade schedules, and a calendar of key dates for system changes for the coming three (3) months and beyond.	Core	

b. Service Level Agreement (SLA) and Key Performance Indicators (KPIs)

ID	Service Level Agreement (SLA) and Key Performance Indicators (KPIs) Specifications	Feature	Response
7.b-1	The system completes reports within five (5) minutes of initiating the generation or creation of a standard or ad-hoc report.	Core	
7.b-2	The maximum average response time for all dispatch functions averages less than twenty (20) seconds for up to twenty (20) active workstations using the hardware and software in the Specification.	Core	
7.b-3	The system supports each DRO's rider base within the service area without any appreciable degradation of overall system performance.	Core	
7.b-4	The system schedules a full day's trips in less than thirty (30) minutes.	Core	
7.b.5	System accuracy is determined based on any incident where a device or backoffice-generated transaction is recorded incorrectly within the associated system. See below:	Core	

c. Issue Resolution and Remedies

ID	Issue Resolution Team (IRT) Specifications	Feature	Response
7.c-1	The Vendor and the DRO will establish an Issue Resolution Team (IRT) for each participating DRO as part of the ongoing operations and maintenance. The IRT will be established prior to Pilot Testing/Public Beta Testing and evaluates the system and back-office issues throughout the term of the Contract.	Core	
7.c-2	The intent of the IRT is to create a clear and consistent process to settle disputes based on the requirements and facilitate resolution for issues related to the Vendor-provided system. The IRT will use best judgment to collaboratively address scenarios where the requirements are silent or unclear. If the IRT cannot resolve a decision or dispute collaboratively, the DRO representative will make the final and binding decisions for any dispute that remains open by the IRT after a period of 10 business days.	Core	
7.c-3	The IRT shall evaluate failures and determine the severity and remedies assessed against the monthly SMA payment.	Core	

ID	Issue Resolution Team (IRT) Specifications	Feature	Response
7.c-4	At a minimum, critical failures shall include incidents that produce a major or substantial business impact or impact to normal operations, such as: 1. Non-trivial loss of revenue or expense 2. Significant negative customer experience 3. Limited or loss of access to a production application 4. System operation at a degraded level, such that normal business operations cannot be conducted. 5. Application or system experiencing continual or repeated issues	Core	
7.c-5	A credit to the DRO's monthly subscription service payment will be assessed for a failure to meet any KPIs identified as having an associated credit.	Core	
7.c-6	A failure will result in the percentage in the "Credit Assessed" column being applied to the full amount of the operations payment identified in the "Payment Impacted" column for the month of measurement.	Core	
7.c-7	A failure to meet the same KPI for two (2) or more months in a row will constitute a persistent failure and result in a multiplier being applied to the credit percentage.	Core	
7.c-8	The credit multiplier will increase by a factor of one for each month that a KPI is not met (e.g., if a KPI is not met two (2) months in a row, the credit will be doubled in the second month; if a KPI is not met three (3) months in a row, the credit will be tripled in the third month).	Core	
7.c-9	Successfully meeting a KPI will end a persistent failure and reset the credit multiplier.	Core	
7.c-10	The total credit applied to an SMA payment will be capped at 25% of the full amount of that payment in a calendar month. Credits will not be carried over from month to month.	Core	
7.c-11	The Vendor reports on credits in the system performance reports and deducts credits directly from any invoices submitted to the DROs.	Core	
7.c-12	System accuracy is determined based on any incident where a device or back office-generated transaction is recorded incorrectly within the associated system. See below the chart below for requirements and remedies for the devices.	Core	

ID	Issue Resolution Team (IRT) Specifications	Feature	Response	
	Device	Requirement	Measurement Period	Base Credit Assessed
	Client Database	< 2 incidents	Calendar Month	10%
	Reservations	< 2 incidents	Calendar Month	10%
	Dispatching	< 2 incidents	Calendar Month	10%
	Scheduling	< 2 incidents	Calendar Month	10%
	Driver display	< 2 incidents	Calendar Month	10%
	Billing, Invoicing and integrated payment	< 2 incidents	Calendar Month	10%
	Customer applications (Mobile application and websites)	< 2 incidents	Calendar Month	10%

8. Priced Options

Please respond to the following specifications by describing the Vendor's solution, service and/or products for each specification. If a specification is not applicable, please explain. .

a. Hardware (Option)

Vendor may only offer for purchase or lease to DORs the items listed in the table below under this contract. The NCDOT Contract Administrator reserves the right to remove Vendor from this contract if Vendor offers to DROs, under this contract, items that are not listed in the table.

Hardware	Description
Ruggedized Tablets	Extremely portable solid state computing devices engineered from inception to work in extreme temperatures and other harsh conditions. Ruggedized tablets have a rugged shell and can withstand drops, jolts, etc. Tablets are characterized by a single touch screen input mechanism and may or may not include an attachable keyboard.
Integrated Payment Systems	Automates payment acceptance to accept credit card payments directly with the DROs existing software.
Closed-circuit Television (CCTV)	The use of video cameras to transmit a signal to a specific place on a limited set of monitors for surveillance and security purposes.
Peripheral Components	Must be able to attach to, work with, and be supported by, the Ruggedized Tablet Units, the Integrated Payment Systems, and the CCTV systems described elsewhere herein. Peripherals must be present with the general offerings of the manufacturer, and as such, normally available from the manufacturer represented. Peripherals considered within the scope of this contract are monitors, input devices (keyboards, mice), docking stations, memory, cases, etc.

b. Payment Hardware (Option)

Describe how the solution handles transaction, billing, invoicing, and payment processing functions.

ID	Integrated Payment Specifications	Feature	Response
8.b-1	The Vendor is responsible for settlement of funds, reconciliation accounting, and the DROs' apportionment.	Option	
8.b-2	The Vendor reconciles refunds, chargebacks, and adjustments.	Option	

ID	Integrated Payment Specifications	Feature	Response
8.b-3	The system secures transmission and storage of Personal Identifiable Information (PII) acquired and used by the system for payment integration and processing.	Option	
8.b-4	Confidential and sensitive data is encrypted and transmitted securely throughout the system.	Option	
8.b-5	Customers may add, modify, and delete payment methods to their customer account.	Option	
8.b-6	Customers may utilize all major payment card brands (i.e., Visa, Mastercard, American Express, and Discover) to purchase fare. This includes the use of Transit Benefit credit/debit cards, pre-paid transit credit/debit cards, and payment cards issued for government-funded or sponsored funds for low-income riders to purchase fare.	Option	
8.b-7	The Vendor prepares financial reports that include daily, weekly, monthly, quarterly, and annual sales and revenue for the DROs.	Option	
8.b-8	The system allows for multiple funding sources per rider and at least one funding source per rider per trip. Describe how funding data are stored and how funding sources are selected or automatically applied to trips.	Option	

c. Onboard Hardware, Data Communications, and Installation (Option)

ID	Onboard Hardware, Data Communications, and Installation Specifications	Feature	Response
8.c-1	The Vendor provides driver displays (tablets) and all associated mounting hardware, cables, and communications components. All Vendor-provided equipment is consistent across the fleet, allows staff to easily swap equipment (including mounting hardware and devices), and includes adequate data communications.	Option	
8.c-2	Vendor installs all onboard equipment through close collaboration with the DROs.	Option	
8.c-3	The driver display mount complies with US heavy duty vehicle Society of Automotive Engineers (SAE) J1455 standard.	Option	
8.c-4	The driver display is a ruggedized device suitable for operations in a transit environment.	Option	

d. On-Demand Trips (Option)

ID	On-Demand Specifications	Feature	Response
8.d-1	The system supports on-demand scheduling, where trips can be requested the same day. On-demand scheduling does not require advance reservation.	Option	
8.d-2	The system permits trip booking while transit personnel are on the phone with the customer. The System processes both subscription trips (standing- order) and demand response trips.	Option	

ID	On-Demand Specifications	Feature	Response
8.d-3	The system processes, schedules, and dispatches same day trip orders without the need for manual intervention from dispatch staff.	Option	
8.d-4	The system supports on-demand or scheduled trip orders through the mobile application and customer website.	Option	
8.d-5	The system differentiates between ADA and on-demand trips for reporting purposes.	Option	

e. Fixed Route Scheduling (Option)

ID	Fixed Route Scheduling Specifications	Feature	Response
8.d-1	Describe in detail any fixed route and deviated fixed-route scheduling solutions supported by the solution, including: 1. Features and functions of the system 2. Customer facing tools such as real-time arrivals or trip planning 3. Integration with demand-response trip scheduling 4. Integration with other solutions	Option	

f. CCTV (Option)

ID	CCTV Specifications	Feature	Response
8.f-1	Describe if the solution provides enhanced integrations with CCTV solutions. This includes the ability to trigger events from the driver display or dispatchers to either tag video recordings or allow dispatchers to view video directly from the dispatch screen.	Option	
8.f-2	Describe CCTV systems that are included or offered from the scheduling software provider.	Option	

9 Project Management Specifications

a. Project Deliverables Specifications

The following Table is an overview of the documentation Vendor will provide during this project. Please provide representative examples and supporting narratives for the various deliverables that will be produced during this project. These representative examples will be evaluated and also used as a baseline for ensuring that the content associated with the Vendor deliverables are in line with the State's expectations for this RFP. These representative examples should correspond one-to-one with the items noted in the deliverables table below. . If a deliverable item is not applicable to the Vendor's proposed Solution, please explain.

Reference	Deliverable Title
PM 1	Project Management Documentation A. Project Schedule and Approach B. Change Management Plan C. Engineering Change Requests D. QA/QC Plan E. Master Issues List (MIL) F. Transition Plan G. Design Review Plan H. Testing Plan I. Training Plan
PM 2	A. Design - Representative Examples System overview and architecture design document B. System design documents including all applications and integrations included as part of this Contract
PM 3	Testing A. Comprehensive testing use-cases and scripts
PM 4	Training and Manuals A. Comprehensive training materials for all solutions provided as part of this Contract B. Back-office system manual for all DRO and Vendor controlled configurations C. Mobile Application and Customer Website Design and Configuration Management Manual D. IVR phone tree and Design and Configuration Manual E. Driver Display Manual F. Reporting Manual G. Customer Service Guide

4.0 COST OF VENDOR'S OFFER

4.1 OFFER COSTS

The Vendor must list, itemize, and describe any applicable offer costs which may include the following:

Hosting Service Fees
 Development or First Time Engineering Fees
 Implementation Costs
 Transition Costs
 Service Costs
 Technical Support
 Training (Technical and/or Customer)
 License Fees
 Maintenance
 Equipment Costs (purchase and lease)

4.3 PAYMENT SCHEDULE

The Vendor shall propose its itemized payment schedule based on the content of its offer. All payments must be based upon acceptance of one or more Deliverables.

5.0 EVALUATION

5.1 SOURCE SELECTION

A trade-off/ranking method of source selection will be utilized in this procurement to allow the State to award this RFP to the Vendor providing the Best Value, and recognizing that Best Value may result in award other than the lowest price or highest technically qualified offer. By using this method, the overall ranking may be adjusted up or down when considered with, or traded-off against other non-price factors.

- a) Evaluation Process Explanation. State Agency employees will review all offers. All offers will be initially classified as being responsive or non-responsive. If an offer is found non-responsive, it will not be considered further. All responsive offers will be evaluated based on stated evaluation criteria. Any references in an answer to another location in the RFP materials or Offer shall have specific page numbers and sections stated in the reference.
- b) To be eligible for consideration, Vendor's offer must substantially conform to the intent of all specifications. Compliance with the intent of all specifications will be determined by the State. Offers that do not meet the full intent of all specifications listed in this RFP may be deemed deficient. Further, a serious deficiency in the offer to any one (1) factor may be grounds for rejection regardless of overall score.
- c) The evaluation committee may request clarifications, an interview with or presentation from any or all Vendors as allowed by 9 NCAC 06B.0307. However, the State may refuse to accept, in full or partially, the response to a clarification request given by any Vendor. Vendors are cautioned that the evaluators are not required to request clarifications; therefore, all offers should be complete and reflect the most favorable terms. Vendors should be prepared to send qualified personnel to Raleigh, North Carolina, to discuss technical and contractual aspects of the offer.
- d) Vendors are advised that the State is not obligated to ask for or accept after the closing date for receipt of offer, data that is essential for a complete and thorough evaluation of the offer.

5.2 EVALUATION CRITERIA

Evaluation shall include best value, as the term is defined in N.C.G.S. § 143-135.9(a)(1), compliance with information technology project management policies as defined by N.C.G.S. §143B-1340, compliance with information technology security standards and policies, substantial conformity with the specifications, and other conditions set forth in the solicitation. The following Evaluation Criteria are listed in Order of Importance.

- 1. How well the Vendor's offer conforms with the solicitation.
- 2. How each Vendor's offer compares with other Vendors' offers.
- 3. Proposed Approach and Schedule for Completing Work
- 4. Strength of references relevant or material to technology area(s) or Specifications
- 5. Vendor Past Experience - The Vendor may be disqualified from any evaluation or award if the Vendor or any key personnel proposed, has previously failed to perform satisfactorily during the performance of any contract with the State, or violated rules or statutes applicable to public bidding in the State.
- 6. Illustration(s) and/or explanations to Section 3.3 Enterprise Specifications
- 7. Adherence to Section 3.2 Security Specifications
- 8. Total Cost of Ownership
- 9. Risks associated with Vendor's offer

5.3 BEST AND FINAL OFFERS (BAFO)

The State may establish a competitive range based upon evaluations of offers, and request BAFOs from the Vendor(s) within this range; e.g. "Finalist Vendor(s)". If negotiations or subsequent offers are solicited, the Vendor(s) shall provide BAFO(s) in response. Failure to deliver a BAFO when requested shall disqualify the non-responsive Vendor from further consideration. The State will evaluate BAFO(s), oral presentations, and product demonstrations as part of the Vendors' respective offers to determine the final rankings.

6.0 VENDOR INFORMATION AND INSTRUCTIONS

6.1 GENERAL CONDITIONS OF OFFER

6.1.1 VENDOR RESPONSIBILITY

It shall be the Vendor's responsibility to read this entire document, review all enclosures and attachments, and comply with all specifications, requirements and the State's intent as specified herein. If a Vendor discovers an inconsistency, error or omission in this solicitation, the Vendor should request a clarification from the State's contact person.

The Vendor will be responsible for investigating and recommending the most effective and efficient solution. Consideration shall be given to the stability of the proposed configuration and the future direction of technology, confirming to the best of their ability that the recommended approach is not short lived. Several approaches may exist for hardware configurations, other products and any software. The Vendor must provide a justification for their proposed hardware, product and software solution(s) along with costs thereof. Vendors are encouraged to present explanations of benefits and merits of their proposed solutions together with any accompanying Services, maintenance, warranties, value added Services or other criteria identified herein.

6.1.2 RIGHTS RESERVED

While the State has every intention to award a contract as a result of this RFP, issuance of the RFP in no way constitutes a commitment by the State of North Carolina, or the procuring Agency, to award a contract. Upon determining that any of the following would be in its best interests, the State may:

- a) waive any formality;
- b) amend the solicitation;
- c) cancel or terminate this RFP;
- d) reject any or all offers received in response to this RFP;
- e) waive any undesirable, inconsequential, or inconsistent provisions of this RFP;
- f) if the response to this solicitation demonstrate a lack of competition, negotiate directly with one or more Vendors;
- g) not award, or if awarded, terminate any contract if the State determines adequate State funds are not available; or
- h) if all offers are found non-responsive, determine whether Waiver of Competition criteria may be satisfied, and if so, negotiate with one or more known sources of supply.

6.1.3 SOLICITATION AMENDMENTS OR REVISIONS

Any and all amendments or revisions to this document shall be made by written addendum from the Agency Procurement Office. If either a unit price or extended price is obviously in error and the other is obviously correct, the incorrect price will be disregarded.

6.1.4 ORAL EXPLANATIONS

The State will not be bound by oral explanations or instructions given at any time during the bidding process or after award. Vendor contact regarding this RFP with anyone other than the State's contact person may be grounds for rejection of said Vendor's offer. Agency contact regarding this RFP with any Vendor may be grounds for cancellation of this RFP.

6.1.5 E-PROCUREMENT

This is an E-Procurement solicitation. See Attachment B, paragraph #38 of the attached North Carolina Department of Information Technology Terms and Conditions.

The Terms and Conditions made part of this solicitation contain language necessary for the implementation of North Carolina's statewide E-Procurement initiative. It is the Vendor's responsibility to read these terms and conditions carefully and to consider them in preparing the offer. By signature, the Vendor acknowledges acceptance of all terms and conditions including those related to E-Procurement.

- a) General information on the E-Procurement service can be found at <http://eprocurement.nc.gov/>
- b) Within two days after notification of award of a contract, the Vendor must register in NC E-Procurement @ Your Service at the following website: <http://eprocurement.nc.gov/Vendor.html>
- c) As of the RFP submittal date, the Vendor must be current on all E-Procurement fees. If the Vendor is not current on all E-Procurement fees, the State may disqualify the Vendor from participation in this RFP.

6.1.6 INTERACTIVE PURCHASING SYSTEM (IPS)

The State has implemented links to the Interactive Purchasing System (IPS) that allow the public to retrieve offer award information electronically from our Internet website: <https://www.ips.state.nc.us/ips/>. Click on the IPS BIDS icon, click on Search for BID, enter the Agency bid number (54-12008772-CM), and then search. This information may not be available for several weeks dependent upon the complexity of the acquisition and the length of time to complete the evaluation process.

6.1.7 PROTEST PROCEDURES

Protests of awards exceeding \$25,000 in value must be submitted to the issuing Agency at the address given on the first page of this document. Protests must be received in the purchasing agency's office within fifteen (15) calendar days from the date of this RFP award and provide specific reasons and any supporting documentation for the protest. **All protests are governed by Title 9, Department of Information Technology (formerly Office of Information Technology Services), Subchapter 06B Sections .1101 - .1121.**

6.2 GENERAL INSTRUCTIONS FOR VENDOR

6.2.1 SITE VISIT OR PRE-OFFER CONFERENCE – RESERVED

6.2.2 QUESTIONS CONCERNING THE RFP

All inquiries regarding the RFP specifications or requirements are to be addressed to the contact person listed on Page One of the RFP. Vendor contact regarding this RFP with anyone other than the individual listed on Page One of this RFP may be grounds for rejection of said Vendor's offer.

Written questions concerning this RFP will be received until May 1, 2023 at 10:00 am Eastern Standard Time. They must be sent via e-mail to clmurphy1@ncdot.gov. Please enter "Questions RFP 54-12008772-CM" as the subject for the email. Questions should be submitted in the following format:

REFERENCE	VENDOR QUESTION
RFP Section, Page Number	

6.2.3 ADDENDUM TO RFP

If a pre-offer conference is held or written questions are received prior to the submission date, an addendum comprising questions submitted and responses to such questions, or any additional terms deemed necessary by the State will be posted to the Interactive Purchasing System (IPS), <https://www.ips.state.nc.us/ips/>, and shall become an Addendum to this RFP. Vendors' questions

posed orally at any pre-offer conference must be reduced to writing by the Vendor and provided to the Purchasing Officer as directed by said Officer. Oral answers are not binding on the State.

Critical updated information may be included in these Addenda. It is important that all Vendors bidding on this RFP periodically check the State website for any and all Addenda that may be issued prior to the offer opening date.

6.2.4 COSTS RELATED TO OFFER SUBMISSION

Costs for developing and delivering responses to this RFP and any subsequent presentations of the offer as requested by the State are entirely the responsibility of the Vendor. The State is not liable for any expense incurred by the Vendors in the preparation and presentation of their offers.

All materials submitted in response to this RFP become the property of the State and are to be appended to any formal documentation, which would further define or expand any contractual relationship between the State and the Vendor resulting from this RFP process.

6.2.5 VENDOR ERRATA AND EXCEPTIONS

Any errata or exceptions to the State's requirements and specifications may be presented on a separate page labeled "Exceptions to Requirements and Specifications". Include references to the corresponding requirements and specifications of the Solicitation. Any deviations shall be explained in detail. **The Vendor shall not construe this paragraph as inviting deviation or implying that any deviation will be acceptable. Offers of alternative or non-equivalent goods or services may be rejected if not found substantially conforming; and if offered, must be supported by independent documentary verification that the offer substantially conforms to the specified goods or services specification.** If a vendor materially deviates from RFP requirements or specifications, its offer may be determined to be non-responsive by the State.

Offers conditioned upon acceptance of Vendor Errata or Exceptions may be determined to be non-responsive by the State.

6.2.6 ALTERNATE OFFERS

The Vendor may submit alternate offers for various levels of service(s) or products meeting specifications. Alternate offers must specifically identify the RFP specifications and advantage(s) addressed by the alternate offer. Any alternate offers must be clearly marked with the legend as shown herein. Each offer must be for a specific set of Services or products and offer at specific pricing. If a Vendor chooses to respond with various service or product offerings, each must be an offer with a different price and a separate RFP offer. Vendors may also provide multiple offers for software or systems coupled with support and maintenance options, provided, however, all offers must satisfy the specifications.

Alternate offers must be submitted in a separate document and clearly marked "Alternate Offer for 'name of Vendor'" and numbered sequentially with the first offer if separate offers are submitted.

6.2.7 MODIFICATIONS TO OFFER

An offer may not be unilaterally modified by the Vendor.

6.2.8 BASIS FOR REJECTION

Pursuant to 9 NCAC 06B.0401, the State reserves the right to reject any and all offers, in whole or in part; by deeming the offer unsatisfactory as to quality or quantity, delivery, price or service offered; non-compliance with the specifications or intent of this solicitation; lack of competitiveness; error(s) in specifications or indications that revision would be advantageous to the State; cancellation or other changes in the intended project, or other determination that the proposed specification is no longer needed; limitation or lack of available funds; circumstances that prevent determination of the best offer; or any other determination that rejection would be in the best interest of the State.

6.2.9 NON-RESPONSIVE OFFERS

Vendor offers will be deemed non-responsive by the State and will be rejected without further consideration or evaluation if statements such as the following are included:

- “This offer does not constitute a binding offer”,
- “This offer will be valid only if this offer is selected as a finalist or in the competitive range”,
- “The Vendor does not commit or bind itself to any terms and conditions by this submission”,
- “This document and all associated documents are non-binding and shall be used for discussion purposes only”,
- “This offer will not be binding on either party until incorporated in a definitive agreement signed by authorized representatives of both parties”, or
- A statement of similar intent

6.2.10 VENDOR REGISTRATION WITH THE SECRETARY OF STATE

Vendors do not have to be registered with the NC Secretary of State to submit an offer; however, in order to receive an award/contract with the State, they must be registered. Registration can be completed at the following website: https://www.sosnc.gov/Guides/launching_a_business

6.2.11 VENDOR REGISTRATION AND SOLICITATION NOTIFICATION SYSTEM

The NC electronic Vendor Portal (eVP) allows Vendors to electronically register with the State to receive electronic notification of current procurement opportunities for goods and Services available on the Interactive Purchasing System at the following website: <https://www.ips.state.nc.us/ips/>.

This RFP is available electronically on the Interactive Purchasing System at <https://www.ips.state.nc.us/ips/>.

6.2.12 VENDOR POINTS OF CONTACT

CONTACTS AFTER CONTRACT AWARD:

Below are the Vendor Points of Contact to be used after award of the contract.

VENDOR CONTRACTUAL POINT OF CONTACT	VENDOR TECHNICAL POINT OF CONTACT
[NAME OF VENDOR] [STREET ADDRESS] [CITY, STATE, ZIP] Attn: Assigned Contract Manager	[NAME OF VENDOR] [STREET ADDRESS] [CITY, STATE, ZIP] Attn: Assigned Technical Lead

6.3 INSTRUCTIONS FOR OFFER SUBMISSION

6.3.1 GENERAL INSTRUCTIONS FOR OFFER

Vendors are strongly encouraged to adhere to the following general instructions in order to bring clarity and order to the offer and subsequent evaluation process:

- a) Organize the offer in the exact order in which the specifications are presented in the RFP. The Execution page of this RFP must be placed at the front of the Proposal. Each page should be numbered. The offer should contain a table of contents, which cross-references the RFP specification and the specific page of the response in the Vendor's offer.
- b) Provide complete and comprehensive responses with a corresponding emphasis on being concise and clear. Elaborate offers in the form of brochures or other presentations beyond that necessary to present a complete and effective offer are not desired.

- c) Clearly state your understanding of the problem(s) presented by this RFP including your proposed solution's ability to meet the specifications, including capabilities, features, and limitations, as described herein, and provide a cost offer.
- d) Supply all relevant and material information relating to the Vendor's organization, personnel, and experience that substantiates its qualifications and capabilities to perform the Services and/or provide the goods described in this RFP. If relevant and material information is not provided, the offer may be rejected from consideration and evaluation.
- e) Furnish all information requested; and if response spaces are provided in this document, the Vendor shall furnish said information in the spaces provided. Further, if required elsewhere in this RFP, each Vendor must submit with its offer sketches, descriptive literature and/or complete specifications covering the products offered. References to literature submitted with a previous offer will not satisfy this provision. Proposals that do not comply with these instructions may be rejected.
- f) Any offer that does not adhere to these instructions may be deemed non-responsive and rejected on that basis.
- g) **Only information that is received in response to this RFP will be evaluated.** Reference to information previously submitted or Internet Website Addresses (URLs) will not suffice as a response to this solicitation.

6.3.2 OFFER ORGANIZATION

Within each section of its offer, Vendor should address the items in the order in which they appear in this RFP. Forms, or attachments or exhibits, if any provided in the RFP, must be completed and included in the appropriate section of the offer. All discussion of offered costs, rates, or expenses must be presented in Section 4.0. Cost of Vendor's Offer.

The offer should be organized and indexed in the following format and should contain, at a minimum, all listed items below.

- a) Signed Execution Page
- b) Table of Contents
- c) Description of Offeror (Attachment D)
- d) Vendor Response to Specifications and Requirements
- e) Security Vendor Readiness Assessment Report (VRAR)
- f) Architecture Diagrams
- g) Cost of Vendor's Offer (Attachment E)
- h) Schedule of Offered Solution
- i) Signed Vendor Certification Form (Attachment F)
- j) Location of Workers Utilized by Vendor Form (Attachment G)
- k) References (Attachment H)
- l) Financial Statements (Attachment I)
- m) Errata and Exceptions, if any
- n) Vendor's License, Maintenance, and Service Level Agreements, if any
- o) Supporting material such as technical system documentation, training examples, etc.
- p) Vendor may attach other supporting materials that it feels may improve the quality of its response. These materials should be included as items in a separate appendix.

- q) Description of Vendor Submitting Offer Form
- r) All pages of this solicitation document (including Attachments A, B, and C)

6.3.3 OFFER SUBMITTAL

IMPORTANT NOTE: Vendor shall bear the risk for late submission due to unintended or unanticipated delay—whether submitted electronically, delivered by hand, U.S. Postal Service, courier or other delivery service. **Vendor must include all the pages of this solicitation in their response.** It is the Vendor's sole responsibility to ensure its offer has been delivered to this Office by the specified time and date of opening. Any proposal-delivered after the proposal deadline will be rejected.

Sealed offers, subject to the conditions made a part hereof, will be received until 2:00pm Eastern Time on the day of opening and then opened, for furnishing and delivering the commodity as described herein. **Offers must be submitted via eBids (NC BIDS) with the Execution page signed and dated by an official authorized to bind the Vendor's firm. Failure to return a signed offer shall result in disqualification.**

Attempts to submit a proposal via facsimile (FAX) machine, telephone or email in response to this RFP shall NOT be accepted.

- a) Submit **one (1) signed, original electronic offer** through eBids on the Interactive Purchasing System (IPS) by June 19, 2023 at 2:00 PM Eastern Standard Time.
- b) All File names should start with the vendor name first, in order to easily determine all the files to be included as part of the Offer. For example, files should be named as follows: Vendor Name-Your File Name.
- c) File contents SHALL NOT be password protected, the file formats must be in PDF, jpeg, or png, xlsx or doc, docx or docm format, and shall be capable of being copied to other sources. The Disaster Recovery Assessment (DRA) spreadsheet and Security Evaluation Form must be returned in native format. However, embedded document responses may be in pdf form in the Security Evaluation Form. See all DRA documentation in the DOT Connect SMS Reference Library at SMS RFP Reference Library for OSA - All Documents (ncdot.gov)
- d) If the Offer contains any confidential information (as defined in Attachment B, Paragraph 18), then the vendor must provide one (1) signed, original electronic Offer and one (1) redacted electronic copy.

7.0 OTHER REQUIREMENTS AND SPECIAL TERMS

7.1 VENDOR UTILIZATION OF WORKERS OUTSIDE OF U.S.

In accordance with N.C.G.S. §143B-1361(b), the Vendor must detail the manner in which it intends to utilize resources or workers in the RFP response. The State of North Carolina will evaluate the additional risks, costs, and other factors associated with such utilization prior to making an award for any such Vendor's offer.

Complete ATTACHMENT G - Location of Workers Utilized by Vendor and submit with your offer.

7.2 FINANCIAL STATEMENTS

The Vendor shall provide evidence of financial stability by returning with its offer 1) completed Financial Review Form (Attachment I), and 2) copies of Financial Statements as further described hereinbelow. As used herein, Financial Statements shall exclude tax returns and compiled statements.

- a) For a publicly traded company, Financial Statements for the past three (3) fiscal years, including at a minimum, income statements, balance sheets, and statement of changes in financial position or cash flows. If three (3) years of financial statements are not available, this information shall be provided to the fullest extent possible, but not less than one year. If less than 3 years, the Vendor must explain the reason why they are not available.
- b) For a privately held company, when certified audited financial statements are not prepared: a written statement from the company's certified public accountant stating the financial condition, debt-to-asset ratio for the past three (3) years and any pending actions that may affect the company's financial condition.
- c) The State may, in its sole discretion, accept evidence of financial stability other than Financial Statements for the purpose of evaluating Vendors' responses to this RFP. The State reserves the right to determine whether the substitute information meets the requirements for Financial Information sufficiently to allow the State to evaluate the sufficiency of financial resources and the ability of the business to sustain performance of this RFP award. Scope Statements issued may require the submission of Financial Statements and specify the number of years to be provided, the information to be provided, and the most recent date required.

7.3 FINANCIAL RESOURCES ASSESSMENT, QUALITY ASSURANCE, PERFORMANCE AND RELIABILITY - RESERVED.

7.4 VENDOR'S LICENSE OR SUPPORT AGREEMENTS

Vendor should present its license or support agreements for review and evaluation. Terms offered for licensing and support of Vendors' proprietary assets will be considered.

The terms and conditions of the Vendor's standard services, license, maintenance or other agreement(s) applicable to Services, Software and other Products acquired under this RFP may apply to the extent such terms and conditions do not materially change the terms and conditions of this RFP. In the event of any conflict between the terms and conditions of this RFP and the Vendor's standard agreement(s), the terms and conditions of this RFP relating to audit and records, jurisdiction, choice of law, the State's electronic procurement application of law or administrative rules, the remedy for intellectual property infringement and the exclusive remedies and limitation of liability in the DIT Terms and Conditions herein shall apply in all cases and supersede any provisions contained in the Vendor's relevant standard agreement or any other agreement. The State shall not be obligated under any standard license and/or maintenance or other Vendor agreement(s) to indemnify or hold harmless the Vendor, its licensors, successors or assigns, nor arbitrate any dispute, nor pay late fees, penalties, interest, legal fees or other similar costs.

7.5 RESELLERS

If the Offer is made by a Reseller that purchased the offered items for resale or license to the Agency, or offered based upon an agreement between the Offeror and a third party, and that the proprietary and intellectual property rights associated with the items are owned by parties other than the Reseller ("Third Parties"). The Agency further acknowledges that except for the payment to the Reseller for the Third Party items, all of its rights and obligations with respect thereto flow from and to the Third Parties. The Reseller shall provide the Agency with copies of all documentation and warranties for the Third Party items which are provided to the Reseller. The Reseller shall assign all applicable third party warranties for Deliverables to the Agency. The State reserves all rights to utilize existing agreements with such Third Parties or to negotiate agreements with such Third Parties as the State deems necessary or proper to achieve the intent of this RFP.

7.6 DISCLOSURE OF LITIGATION

The Vendor's failure to fully and timely comply with the terms of this section, including providing reasonable assurances satisfactory to the State, may constitute a material breach of the Agreement.

- a) The Vendor shall notify the State in its offer, if it, or any of its subcontractors, or their officers, directors, or key personnel who may provide Services under any contract awarded pursuant to this solicitation, have ever been convicted of a felony, or any crime involving moral turpitude, including, but not limited to fraud, misappropriation or deception. The Vendor shall promptly notify the State of any criminal litigation, investigations or proceeding involving the Vendor or any subcontractor, or any of the foregoing entities' then current officers or directors during the term of the Agreement or any Scope Statement awarded to the Vendor.
- b) The Vendor shall notify the State in its offer, and promptly thereafter as otherwise applicable, of any civil litigation, arbitration, proceeding, or judgments against it or its subcontractors during the three (3) years preceding its offer, or which may occur during the term of any awarded to the Vendor pursuant to this solicitation, that involve (1) Services or related goods similar to those provided pursuant to any contract and that involve a claim that may affect the viability or financial stability of the Vendor, or (2) a claim or written allegation of fraud by the Vendor or any subcontractor hereunder, arising out of their business activities, or (3) a claim or written allegation that the Vendor or any subcontractor hereunder violated any federal, state or local statute, regulation or ordinance. Multiple lawsuits and or judgments against the Vendor or subcontractor shall be disclosed to the State to the extent they affect the financial solvency and integrity of the Vendor or subcontractor.
- c) All notices under subsection A and B herein shall be provided in writing to the State within thirty (30) calendar days after the Vendor learns about any such criminal or civil matters; unless such matters are governed by the DIT Terms and Conditions annexed to the solicitation. Details of settlements which are prevented from disclosure by the terms of the settlement shall be annotated as such. Vendor may rely on good faith certifications of its subcontractors addressing the foregoing, which certifications shall be available for inspection at the option of the State.

7.7 CRIMINAL CONVICTION

In the event the Vendor, an officer of the Vendor, or an owner of a 25% or greater share of the Vendor, is convicted of a criminal offense incident to the application for or performance of a State, public or private Contract or subcontract; or convicted of a criminal offense including but not limited to any of the following: embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property, attempting to influence a public employee to breach the ethical conduct standards for State of North Carolina employees; convicted under State or federal antitrust statutes; or convicted of any other criminal offense which in the sole discretion of the State, reflects upon the Vendor's business integrity and such vendor shall be prohibited from entering into a contract for goods or Services with any department, institution or agency of the State.

7.8 SECURITY AND BACKGROUND CHECKS

The Agency reserves the right to conduct a security background check or otherwise approve any employee or agent provided by the Vendor, and to refuse access to or require replacement of any such personnel for cause, including, but not limited to, technical or training qualifications, quality of work or change in security status or non-compliance with the Agency's security or other similar requirements.

All State and Vendor personnel that have access to data restricted by the State Security Manual and Policies must have a security background check performed. The Vendors are responsible for performing all background checks of their workforce and subcontractors. The State reserves the right to check for non-compliance.

7.9 ASSURANCES - RESERVED

7.10 CONFIDENTIALITY OF OFFERS

All offers and any other RFP responses shall be made public as required by the NC Public Records Act and GS 143B-1350. Vendors may mark portions of offers as confidential or proprietary, after determining that such information is excepted from the NC Public Records Act, provided that such marking is clear and unambiguous and preferably at the top and bottom of each page containing confidential information. Standard restrictive legends appearing on every page of an offer are not sufficient and shall not be binding upon the State.

Certain State information is not public under the NC Public Records Act and other laws. Any such information which the State designates as confidential and makes available to the Vendor in order to respond to the RFP or carry out the Agreement, or which becomes available to the Vendor in carrying out the Agreement, shall be protected by the Vendor from unauthorized use and disclosure. The Vendor shall not be required under the provisions of this section to keep confidential, (1) information generally available to the public, (2) information released by the State generally, or to the Vendor without restriction, (3) information independently developed or acquired by the Vendor or its personnel without reliance in any way on otherwise protected information of the State. Notwithstanding the foregoing restrictions, the Vendor and its personnel may use and disclose any information which it is otherwise required by law to disclose, but in each case only after the State has been so notified, and has had the opportunity, if possible, to obtain reasonable protection for such information in connection with such disclosure.

7.11 PROJECT MANAGEMENT

All project management and coordination on behalf of the Agency shall be through a single point of contact designated as the Agency Project Manager. The Vendor shall designate a Vendor Project Manager who will provide a single point of contact for management and coordination of the Vendor's work. All work performed pursuant to the Agreement shall be coordinated between the Agency Project Manager and the Vendor Project Manager.

7.12 MEETINGS

The Vendor is required to meet with Agency personnel, or designated representatives, to resolve technical or contractual problems that may occur during the term of the Agreement. Meetings will occur as problems arise and will be coordinated by Agency. The Vendor will be given reasonable and sufficient notice of meeting dates, times, and locations. Face to face meetings are desired. However, at the Vendor's option and expense, a conference call meeting may be substituted.

7.13 RECYCLING AND SOURCE REDUCTION

It is the policy of this State to encourage and promote the purchase of products with recycled content to the extent economically practicable, and to purchase items which are reusable, refillable, repairable, more durable, and less toxic to the extent that the purchase or use is practicable and cost-effective. We also encourage and promote using minimal packaging and the use of recycled/recyclable products in the packaging of goods purchased. However, no sacrifice in quality of packaging will be acceptable. The Vendor remains responsible for providing packaging that will protect the commodity and contain it for its

intended use. Vendors are strongly urged to bring to the attention of the purchasers at the NCDIT Statewide IT Procurement Office those products or packaging they offer which have recycled content and that are recyclable.

7.14 SPECIAL TERMS AND CONDITIONS RESERVED

ATTACHMENT A: DEFINITIONS

- 1) **24x7:** A statement of availability of systems, communications, and/or supporting resources every hour (24) of each day (7 days weekly) throughout every year for periods specified herein. Where reasonable downtime is accepted, it will be stated herein. Otherwise, 24x7 implies NO loss of availability of systems, communications, and/or supporting resources.
- 2) **API integration** – When integrating, all applications and systems will utilize APIs to standardize integration and improve communication across applications and devices.**Cybersecurity Incident (GS 143B-1320):** An occurrence that:
 - Actually or imminently jeopardizes, without lawful authority, the integrity, confidentiality, or availability of information or an information system; or
 - Constitutes a violation or imminent threat of violation of law, security policies, privacy policies, security procedures, or acceptable use policies.
- 3) **Deliverables:** Deliverables, as used herein, shall comprise all Hardware, Vendor Services, professional Services, Software and provided modifications to any Software, and incidental materials, including any goods, Software or Services access license, data, reports and documentation provided or created during the performance or provision of Services hereunder. Deliverables include “Work Product” and means any expression of Licensor’s findings, analyses, conclusions, opinions, recommendations, ideas, techniques, know-how, designs, programs, enhancements, and other technical information; but not source and object code or software.
- 4) **Demand Response (DR):** A transit mode comprised of passenger cars, vans or small buses operating in response to calls from passengers or their agents to the DRO, who then dispatches a vehicle to pick up the passengers and transport them to their destinations. A demand response (DR) operation is characterized by the following:
 - a) The vehicles do not operate over a fixed route or on a fixed schedule except, perhaps, on a temporary basis to satisfy a special need, and
 - b) Typically, the vehicle may be dispatched to pick up several passengers at different pick-up points before taking them to their respective destinations and may even be interrupted en route to these destinations to pick up other passengers. The following types of operations fall under the above definitions provided they are not on a scheduled fixed route basis:
 - Many origins - many destinations
 - Many origins - one destination
 - One origin - many destinations, and
 - One origin - one destination.
- 5) **Demand Response Taxi (DT):** A special type of service operated through taxicab providers with a system in place to facilitate ride sharing. Taxi services are provided on demand, rather than with predetermined fixed time points, i.e., a schedule.
- 6) **Goods:** Includes intangibles such as computer software; provided, however that this definition does not modify the definition of “goods” in the context of N.C.G.S. §25-2-105 (UCC definition of goods).
- 7) **Minimize Transition-only Software:** Try to avoid the need to develop or purchase software that will ultimately be discarded once the transition is complete.
- 8) **Modular design:** Lower upgrade and improvement costs by increasing the use of state-of the-art technology and easily upgradeable modular design.
- 9) **NCDIT or DIT:** The NC Department of Information Technology.
- 10) **NCDOT:** The NC Department of Transportation.

- 11) Open architecture:** A technology infrastructure in which additional software modules can be added to the basic framework provided by the architecture.
- 12) Open Market Contract:** A contract for the purchase of goods or Services not covered by a term, technical, or convenience contract.
- 13) Personally Identifiable Information (PII):** is classified as highly restricted and defined as information that can be used to distinguish or trace an individual's identity, alone or when combined with other personal or identifying information which is linked or linkable to a specific individual, such as name, date and place of birth, employer, home and work addresses, email address, phone number, mother's maiden name, etc.
- 14) Real-time Communications:** Wherever possible, field transactions will be processed within milliseconds so that data is available almost immediately; this is referred to within the project as "real-time."
- The communications infrastructure will be built to support real-time transactions.
 - Alternative methods of processing (store and forward, local approvals) will be used to support times and locations that real-time may not be available for a short period of time.
- 15) Reasonable, Necessary or Proper:** as used herein shall be interpreted solely by the State of North Carolina.
- 16) Request for Proposal (RFP):** The RFP is a formal, written solicitation document typically used for seeking competition and obtaining offers for more complex services or a combination of goods and services. The RFP is used when the value is over \$10,000. This document contains specifications of the RFP, instructions to bidders and the standard IT Terms and Conditions for Goods and Related Services. User should add Supplemental Terms and Conditions for Software and Services, when applicable.
- 17) Security Breach:** As defined in N.C.G.S. §75-61.
- 18) Significant Security Incident (GS 143B-1320):** A cybersecurity incident that is likely to result in demonstrable harm to the State's security interests, economy, critical infrastructure, or to the public confidence, civil liberties, or public health and safety of the residents of North Carolina. A significant cybersecurity incident is determined by the following factors:
- Incidents that meet thresholds identified by the Department jointly with the Department of Public Safety that involve information:
 - i. That is not releasable to the public and that is restricted or highly restricted according to Statewide Data Classification and Handling Policy; or
 - ii. That involves the exfiltration, modification, deletion, or unauthorized access, or lack of availability to information or systems within certain parameters to include (i) a specific threshold of number of records or users affected as defined in G.S. 75-65 or (ii) any additional data types with required security controls.
 - Incidents that involve information that is not recoverable or cannot be recovered within defined time lines required to meet operational commitments defined jointly by the State agency and the Department or can be recovered only through additional measures and has a high or medium functional impact to the mission of an agency.
- 19) Vendor:** Company, firm, corporation, partnership, individual, etc., submitting an offer in response to a solicitation.

ATTACHMENT B: DEPARTMENT OF INFORMATION TECHNOLOGY TERMS AND CONDITIONS

Section 1. General Terms and Conditions Applicable to All Purchases

1) **DEFINITIONS:** As used herein;

Agreement means the contract awarded pursuant to this RFP.

Deliverable/Product Warranties shall mean and include the warranties provided for products or deliverables licensed to the State in Section 2, Paragraph 2 of these Terms and Conditions unless superseded by a Vendor's Warranties pursuant to Vendor's License or Support Agreements.

Services shall mean the duties and obligations undertaken by the Vendor under, and to fulfill, the specifications, requirements, terms and conditions of the Agreement and, for a Software as a Service ("SaaS") Solution, shall further include, without limitation, providing web browser access by authorized users to certain Vendor online software applications identified herein, and to related services, such as Vendor hosted Computer storage, databases, Support, documentation, and other functionalities.

State shall mean the State of North Carolina, the Department of Information Technology (DIT), or the Purchasing State Agency, the North Carolina Department of Transportation, in its capacity as the Contracting Agency, as appropriate.

- 2) **STANDARDS:** Any Deliverables shall meet all applicable State and federal requirements, such as State or Federal Regulation, and NC State Chief Information Officer's (CIO) policy or regulation. Vendor will provide and maintain a quality assurance system or program that includes any Deliverables and will tender or provide to the State only those Deliverables that have been inspected and found to conform to the RFP specifications. All Deliverables are subject to operation, certification, testing and inspection, and any accessibility specifications.
- 3) **WARRANTIES:** Unless otherwise expressly provided, any goods Deliverables provided by the Vendor shall be warranted for a period of 90 days after acceptance.
- 4) **SUBCONTRACTING:** The Vendor may subcontract the performance of required Services with Resources under the Agreement only with the prior written consent of the State contracting authority. Vendor shall provide the State with complete copies of any agreements made by and between Vendor and all subcontractors. The selected Vendor remains solely responsible for the performance of its subcontractors. Subcontractors, if any, shall adhere to the same standards required of the selected Vendor and the Agreement. Any contracts made by the Vendor with a subcontractor shall include an affirmative statement that the State is an intended third party beneficiary of the Agreement; that the subcontractor has no agreement with the State; and that the State shall be indemnified by the Vendor for any claim presented by the subcontractor. Notwithstanding any other term herein, Vendor shall timely exercise its contractual remedies against any non-performing subcontractor and, when appropriate, substitute another subcontractor.
- 5) **TRAVEL EXPENSES:** **All travel expenses should be included in the Vendor's proposed costs. Separately stated travel expenses will not be reimbursed.** In the event that the Vendor, upon specific request in writing by the State, is deemed eligible to be reimbursed for travel expenses arising under the performance of the Agreement, reimbursement will be at the out-of-state rates set forth in N.C.G.S. §138-6; as amended from time to time. Vendor agrees to use the lowest available airfare not requiring a weekend stay and to use the lowest available rate for rental vehicles. All Vendor incurred travel expenses shall be billed on a monthly basis, shall be supported by receipt and shall be paid by the State within thirty (30) days after invoice approval. Travel expenses exceeding the foregoing rates shall not be paid by the State. The State will reimburse travel allowances only for days on which the Vendor is required to be in North Carolina performing Services under the Agreement.
- 6) **GOVERNMENTAL RESTRICTIONS:** In the event any restrictions are imposed by governmental requirements that necessitate alteration of the material, quality, workmanship, or performance of the Deliverables offered prior to delivery thereof, the Vendor shall provide written notification of the necessary alteration(s) to the NCDOT Agency Contract Administrator. The State reserves the right to accept any

such alterations, including any price adjustments occasioned thereby, or to cancel the Agreement. The State may advise Vendor of any restrictions or changes in specifications required by North Carolina legislation, rule or regulatory authority that require compliance by the State. In such event, Vendor shall use its best efforts to comply with the required restrictions or changes. If compliance cannot be achieved by the date specified by the State, the State may terminate the Agreement and compensate Vendor for sums then due under the Agreement.

- 7) **PROHIBITION AGAINST CONTINGENT FEES AND GRATUITIES:** Vendor warrants that it has not paid, and agrees not to pay, any bonus, commission, fee, or gratuity to any employee or official of the State for the purpose of obtaining any Contract or award issued by the State. Vendor further warrants that no commission or other payment has been or will be received from or paid to any third party contingent on the award of any Contract by the State, except as shall have been expressly communicated to the State Purchasing Agent in writing prior to acceptance of the Agreement or award in question. Each individual signing below warrants that he or she is duly authorized by their respective Party to sign the Agreement and bind the Party to the terms and conditions of this RFP. Vendor and their authorized signatory further warrant that no officer or employee of the State has any direct or indirect financial or personal beneficial interest, in the subject matter of the Agreement; obligation or Contract for future award of compensation as an inducement or consideration for making the Agreement. Subsequent discovery by the State of non-compliance with these provisions shall constitute sufficient cause for immediate termination of all outstanding contracts. Violations of this provision may result in debarment of the Vendor(s) as permitted by 9 NCAC 06B..1206, or other provision of law.
- 8) **AVAILABILITY OF FUNDS:** Any and all payments to Vendor are expressly contingent upon and subject to the appropriation, allocation and availability of funds to the Agency for the purposes set forth in the Agreement. If the Agreement or any Purchase Order issued hereunder is funded in whole or in part by federal funds, the Agency's performance and payment shall be subject to and contingent upon the continuing availability of said federal funds for the purposes of the Agreement or Purchase Order. If the term of the Agreement extends into fiscal years subsequent to that in which it is approved, such continuation of the Agreement is expressly contingent upon the appropriation, allocation and availability of funds by the N.C. Legislature for the purposes set forth in this RFP. If funds to effect payment are not available, the Agency will provide written notification to Vendor. If the Agreement is terminated under this paragraph, Vendor agrees to take back any affected Deliverables and software not yet delivered under the Agreement, terminate any Services supplied to the Agency under the Agreement, and relieve the Agency of any further obligation thereof. The State shall remit payment for Deliverables and Services accepted prior to the date of the aforesaid notice in conformance with the payment terms.
- 9) **ACCEPTANCE PROCESS:**
- a) The State shall have the obligation to notify Vendor, in writing ten calendar days following provision, performance (under a provided milestone or otherwise as agreed) or delivery of any Services or other Deliverables described in the Agreement that are not acceptable. The notice shall specify in reasonable detail the reason(s) a given Deliverable is unacceptable. Acceptance by the State shall not be unreasonably withheld; but may be conditioned or delayed as required for installation and/or testing of Deliverables. Final acceptance is expressly conditioned upon completion of any applicable inspection and testing procedures. Should a Deliverable fail to meet any specifications or acceptance criteria, the State may exercise any and all rights hereunder. Deliverables discovered to be defective or failing to conform to the specifications may be rejected upon initial inspection or at any later time if the defects or errors contained in the Deliverables or non-compliance with the specifications were not reasonably ascertainable upon initial inspection. If the Vendor fails to promptly cure or correct the defect or replace or re-perform the Deliverables, the State reserves the right to cancel the Purchase Order, contract with a different Vendor, and to invoice the original Vendor for any differential in price over the original Contract price.
 - b) Acceptance testing is required for all Vendor supplied software and software or platform services unless provided otherwise in the solicitation documents or a Statement of Work. The State may define such processes and procedures as may be necessary or proper, in its opinion and discretion, to ensure compliance with the State's specifications, and Vendor's Product Warranties and technical

representations. The State shall have the obligation to notify Vendor, in writing and within thirty (30) days following installation of any software deliverable if it is not acceptable.

- c) Acceptance of Services or other Deliverables including software or platform services may be controlled by an amendment hereto, or additional terms as agreed by the Parties consistent with IT Project management under GS §143B-1340.
- d) The notice of non-acceptance shall specify in reasonable detail the reason(s) a Service or given Deliverable is unacceptable. Acceptance by the State shall not be unreasonably withheld; but may be conditioned or delayed as required for installation and/or testing of Deliverables. Final acceptance is expressly conditioned upon completion of any applicable inspection and testing procedures. Should a Service or Deliverable fail to meet any specifications or acceptance criteria, the State may exercise any and all rights hereunder. Services or Deliverables discovered to be defective or failing to conform to the specifications may be rejected upon initial inspection or at any later time if the defects or errors contained in the Services or Deliverables or non-compliance with the specifications were not reasonably ascertainable upon initial inspection. If the Vendor fails to promptly cure or correct the defect or replace or re-perform the Services or Deliverables, the State reserves the right to cancel the Purchase Order, contract with a different Vendor, and to invoice the original Vendor for any differential in price over the original Contract price.

10) PAYMENT TERMS: Monthly Payment terms are Net 30 days after receipt of correct invoice (with completed timesheets for Vendor personnel) and acceptance of one or more of the Deliverables, under milestones or otherwise as may be provided in Paragraph 9 (Acceptance), or elsewhere in this solicitation, unless a period of more than thirty (30) days is required by the Agency. The Demand Response Operator (DRO) executing a Participating Addendum is the Agency responsible for all payments under the Agreement. No additional charges to the Agency will be permitted based upon, or arising from, the Agency's use of a Business Procurement Card. The State may exercise any and all rights of Set Off as permitted in Chapter 105A-1 *et. seq.* of the N.C. General Statutes and applicable Administrative Rules. Upon Vendor's written request of not less than thirty (30) days and approval by the State or Agency, the Agency may:

- a) Forward the Vendor's payment check(s) directly to any person or entity designated by the Vendor, or
- b) Include any person or entity designated in writing by Vendor as a joint payee on the Vendor's payment check(s), however
- c) In no event shall such approval and action obligate the State to anyone other than the Vendor and the Vendor shall remain responsible for fulfillment of all Contract obligations.

11) EQUAL EMPLOYMENT OPPORTUNITY: Vendor shall comply with all Federal and State requirements concerning fair employment and employment of the disabled, and concerning the treatment of all employees without regard to discrimination by reason of race, color, religion, sex, national origin or physical disability.

12) ADVERTISING/PRESS RELEASE: The Vendor absolutely shall not publicly disseminate any information concerning the Agreement without prior written approval from the State or its Agent. For the purpose of this provision of the Agreement, the Agent is the NCDOT Contract Administrator unless otherwise named in the solicitation documents.

13) LATE DELIVERY: Vendor shall advise the Agency contact person or office immediately upon determining that any Deliverable will not, or may not, be delivered or performed at the time or place specified. Together with such notice, Vendor shall state the projected delivery time and date. In the event the delay projected by Vendor is unsatisfactory, the Agency shall so advise Vendor and may proceed to procure the particular substitute Services or other Deliverables.

14) ACCESS TO PERSONS AND RECORDS: Pursuant to N.C.G.S. §147-64.7, the Agency, the State Auditor, appropriate federal officials, and their respective authorized employees or agents are authorized to examine all books, records, and accounts of the Vendor insofar as they relate to transactions with any DRO, department, board, officer, commission, institution, or other agency of the State of North Carolina pursuant to the performance of the Agreement or to costs charged to the Agreement. The Vendor shall retain any such books, records, and accounts for a minimum of three (3) years after the completion of the Agreement. Additional audit or reporting requirements may be required by any Agency, if in the Agency's opinion, such requirement is imposed by federal or state law or regulation.

15) ASSIGNMENT: Vendor may not assign the Agreement or its obligations hereunder except as permitted by 09 NCAC 06B.1003 and this Paragraph. Vendor shall provide reasonable notice of not less than thirty (30) days prior to any consolidation, acquisition, or merger. Any assignee shall affirm the Agreement attorning and agreeing to the terms and conditions agreed, and that Vendor shall affirm that the assignee is fully capable of performing all obligations of Vendor under the Agreement. An assignment may be made, if at all, in writing by the Vendor, Assignee and the State setting forth the foregoing obligation of Vendor and Assignee.

16) INSURANCE COVERAGE: During the term of the Agreement, the Vendor at its sole cost and expense shall provide commercial insurance of such type and with such terms and limits as may be reasonably associated with the Agreement. As a minimum, the Vendor shall provide and maintain the following coverage and limits:

- a) **Worker's Compensation** - The Vendor shall provide and maintain Worker's Compensation Insurance, as required by the laws of North Carolina, as well as employer's liability coverage with minimum limits of \$100,000.00, covering all of Vendor's employees who are engaged in any work under the Agreement. If any work is sublet, the Vendor shall require the subcontractor to provide the same coverage for any of his employees engaged in any work under the Agreement; and
- b) **Commercial General Liability** - General Liability Coverage on a Comprehensive Broad Form on an occurrence basis in the minimum amount of \$2,000,000.00 Combined Single Limit (Defense cost shall be in excess of the limit of liability); and
- c) **Automobile** - Automobile Liability Insurance, to include liability coverage, covering all owned, hired and non-owned vehicles, used in connection with the Agreement. The minimum combined single limit shall be \$500,000.00 bodily injury and property damage; \$500,000.00 uninsured/under insured motorist; and \$5,000.00 medical payment; and
- d) Providing and maintaining adequate insurance coverage described herein is a material obligation of the Vendor and is of the essence of the Agreement. All such insurance shall meet all laws of the State of North Carolina. Such insurance coverage shall be obtained from companies that are authorized to provide such coverage and that are authorized by the Commissioner of Insurance to do business in North Carolina. The Vendor shall at all times comply with the terms of such insurance policies, and all requirements of the insurer under any such insurance policies, except as they may conflict with existing North Carolina laws or the Agreement. The limits of coverage under each insurance policy maintained by the Vendor shall not be interpreted as limiting the Vendor's liability and obligations under the Agreement.

17) DISPUTE RESOLUTION: The parties agree that it is in their mutual interest to resolve disputes informally. A claim by the Vendor shall be submitted in writing to the NCDOT Agency Contract Administrator for decision. A claim by the State shall be submitted in writing to the Vendor's Contract Administrator for decision. The Parties shall negotiate in good faith and use all reasonable efforts to resolve such dispute(s). During the time the Parties are attempting to resolve any dispute, each shall proceed diligently to perform their respective duties and responsibilities under the Agreement. If a dispute cannot be resolved between the Parties within thirty (30) days after delivery of notice, either Party may elect to exercise any other remedies available under the Agreement, or at law. This term shall not constitute an agreement by either party to mediate or arbitrate any dispute.

18) CONFIDENTIALITY: In accordance with N.C.G.S. §143B-1350(e) and 143B-1375, and 09 NCAC 06B.0103 and 06B.1001, the State may maintain the confidentiality of certain types of information described in N.C.G.S. §132-1 *et seq.* Such information may include trade secrets defined by N.C.G.S. §66-152 and other information exempted from the Public Records Act pursuant to N.C.G.S. §132-1.2. Vendor may designate appropriate portions of its response as confidential, consistent with and to the extent permitted under the Statutes and Rules set forth above, by marking the top and bottom of pages containing confidential information with a legend in boldface type "**CONFIDENTIAL**". By so marking any page, the Vendor warrants that it has formed a good faith opinion, having received such necessary or proper review by counsel and other knowledgeable advisors that the portions marked confidential meet the requirements of the Rules and Statutes set forth above. ***However, under no circumstances shall price information be designated as confidential.*** The State may serve as custodian of Vendor's confidential information and not as an arbiter of claims against Vendor's assertion of confidentiality. If an

action is brought pursuant to N.C.G.S. §132-9 to compel the State to disclose information marked confidential, the Vendor agrees that it will intervene in the action through its counsel and participate in defending the State, including any public official(s) or public employee(s). The Vendor agrees that it shall hold the State and any official(s) and individual(s) harmless from any and all damages, costs, and attorneys' fees awarded against the State in the action. The State agrees to promptly notify the Vendor in writing of any action seeking to compel the disclosure of Vendor's confidential information. The State shall have the right, at its option and expense, to participate in the defense of the action through its counsel. The State shall have no liability to Vendor with respect to the disclosure of Vendor's confidential information ordered by a court of competent jurisdiction pursuant to N.C.G.S. §132-9 or other applicable law.

- a) Care of Information: Vendor agrees to use commercial best efforts to safeguard and protect any data, documents, files, and other materials received from the State or the Agency during performance of any contractual obligation from loss, destruction or erasure. Vendor agrees to abide by all facilities and security requirements and policies of the agency where work is to be performed. Any Vendor personnel shall abide by such facilities and security requirements and shall agree to be bound by the terms and conditions of the Agreement.
- b) Vendor warrants that all its employees and any approved third party Vendors or subcontractors are subject to a non-disclosure and confidentiality agreement enforceable in North Carolina. Vendor will, upon request of the State, verify and produce true copies of any such agreements. Production of such agreements by Vendor may be made subject to applicable confidentiality, non-disclosure or privacy laws; provided that Vendor produces satisfactory evidence supporting exclusion of such agreements from disclosure under the N.C. Public Records laws in N.C.G.S. §132-1 *et seq.* The State may, in its sole discretion, provide a non-disclosure and confidentiality agreement satisfactory to the State for Vendor's execution. The State may exercise its rights under this subparagraph as necessary or proper, in its discretion, to comply with applicable security regulations or statutes including, but not limited to 26 USC 6103 and IRS Publication 1075, (Tax Information Security Guidelines for Federal, State, and Local Agencies), HIPAA, 42 USC 1320(d) (Health Insurance Portability and Accountability Act), any implementing regulations in the Code of Federal Regulations, and any future regulations imposed upon the Department of Information Technology or the N.C. Department of Revenue pursuant to future statutory or regulatory requirements.
- c) Nondisclosure: Vendor agrees and specifically warrants that it, its officers, directors, principals and employees, and any subcontractors, shall hold all information received during performance of the Agreement in the strictest confidence and shall not disclose the same to any third party without the express written approval of the State.
- d) The Vendor shall protect the confidentiality of all information, data, instruments, studies, reports, records and other materials provided to it by the State or the Agency or maintained or created in accordance with this Agreement. No such information, data, instruments, studies, reports, records and other materials in the possession of Vendor shall be disclosed in any form without the prior written consent of the State or the Agency. The Vendor will have written policies governing access to and duplication and dissemination of all such information, data, instruments, studies, reports, records and other materials.
- e) All project materials, including software, data, and documentation created during the performance or provision of Services hereunder that are not licensed to the State or are not proprietary to the Vendor are the property of the State of North Carolina and must be kept confidential or returned to the State, or destroyed. Proprietary Vendor materials shall be identified to the State by Vendor prior to use or provision of Services hereunder and shall remain the property of the Vendor. Derivative works of any Vendor proprietary materials prepared or created during the performance of provision of Services hereunder shall be subject to a perpetual, royalty free, nonexclusive license to the State.

19) DEFAULT: In the event Services or other Deliverable furnished or performed by the Vendor during performance of any Contract term fail to conform to any material requirement(s) of the Contract specifications, notice of the failure is provided by the State and if the failure is not cured within ten (10) days, or Vendor fails to meet the requirements of Paragraph 9) herein, the State may cancel the contract. Default may be cause for debarment as provided in 09 NCAC 06B.1206. The rights and

remedies of the State provided above shall not be exclusive and are in addition to any other rights and remedies provided by law or under the Contract.

- a) If Vendor fails to deliver or provide correct Services or other Deliverables within the time required by the Agreement, the State shall provide written notice of said failure to Vendor, and by such notice require performance assurance measures pursuant to N.C.G.S. 143B-1340(f). Vendor is responsible for the delays resulting from its failure to deliver or provide services or other Deliverables.
- b) Should the State fail to perform any of its obligations upon which Vendor's performance is conditioned, Vendor shall not be in default for any delay, cost increase or other consequences resulting from the State's failure. Vendor will use reasonable efforts to mitigate delays, costs or expenses arising from assumptions in the Vendor's offer documents that prove erroneous or are otherwise invalid. Any deadline that is affected by any such failure in assumptions or performance by the State shall be extended by an amount of time reasonably necessary to compensate for the effect of such failure.
- c) Vendor shall provide a plan to cure any delay or default if requested by the State. The plan shall state the nature of the delay or default, the time required for cure, any mitigating factors causing or tending to cause the delay or default, and such other information as the Vendor may deem necessary or proper to provide.
- d) If the prescribed acceptance testing stated in the Solicitation Documents or performed pursuant to Paragraph 9) of the DIT Terms and Conditions is not completed successfully, the State may request substitute Software, cancel the portion of the Contract that relates to the unaccepted Software, or continue the acceptance testing with or without the assistance of Vendor. These options shall remain in effect until such time as the testing is successful or the expiration of any time specified for completion of the testing. If the testing is not completed after exercise of any of the State's options, the State may cancel any portion of the contract related to the failed Software and take action to procure substitute software. If the failed software (or the substituted software) is an integral and critical part of the proper completion of the work for which the Deliverables identified in the solicitation documents or statement of work were acquired, the State may terminate the entire contract.

20) WAIVER OF DEFAULT: Waiver by either party of any default or breach by the other Party shall not be deemed a waiver of any subsequent default or breach and shall not be construed to be a modification or novation of the terms of the Agreement, unless so stated in writing and signed by authorized representatives of the Agency and the Vendor, and made as an amendment to the Agreement pursuant to Paragraph 40) herein below.

21) TERMINATION: Any notice or termination made under the Agreement shall be transmitted via US Mail, Certified Return Receipt Requested. The period of notice for termination shall begin on the day the return receipt is signed and dated.

- a) The parties may mutually terminate the Agreement by written agreement at any time.
- b) The State may terminate the Agreement, in whole or in part, pursuant to Paragraph 19), or pursuant to the Special Terms and Conditions in the Solicitation Documents, if any, or for any of the following:
 - i) Termination for Cause: In the event any goods, software, or service furnished by the Vendor during performance of any Contract term fails to conform to any material requirement of the Contract, and the failure is not cured within the specified time after providing written notice thereof to Vendor, the State may cancel and procure the articles or Services from other sources; holding Vendor liable for any excess costs occasioned thereby, subject only to the limitations provided in Paragraphs 22) and 23) herein. The rights and remedies of the State provided above shall not be exclusive and are in addition to any other rights and remedies provided by law or under the Contract. Vendor shall not be relieved of liability to the State for damages sustained by the State arising from Vendor's breach of the Agreement; and the State may, in its discretion, withhold any payment due as a setoff until such time as the damages are finally determined or as agreed by the parties. Voluntary or involuntary Bankruptcy or receivership by Vendor shall be cause for termination.
 - ii) Termination For Convenience Without Cause: The State may terminate service and indefinite quantity contracts, in whole or in part by giving thirty (30) days prior notice in writing to the Vendor. Vendor shall be entitled to sums due as compensation for Deliverables provided and Services

performed in conformance with the Contract. In the event the Contract is terminated for the convenience of the State the Agency will pay for all work performed and products delivered in conformance with the Contract up to the date of termination.

- iii) Consistent failure to participate in problem resolution meetings, two (2) consecutive missed or rescheduled meetings, or failure to make a good faith effort to resolve problems, may result in termination of the Agreement.

22) LIMITATION OF VENDOR'S LIABILITY:

- a) Where Deliverables are under the State's exclusive management and control, the Vendor shall not be liable for direct damages caused by the State's failure to fulfill any State responsibilities of assuring the proper use, management and supervision of the Deliverables and programs, audit controls, operating methods, office procedures, or for establishing all proper checkpoints necessary for the State's intended use of the Deliverables. Vendor shall not be responsible for any damages that arise from (i) misuse or modification of Vendor's Software by or on behalf of the State, (ii) the State's failure to use corrections or enhancements made available by Vendor, (iii) the quality or integrity of data from other automated or manual systems with which the Vendor's Software interfaces, (iv) errors in or changes to third party software or hardware implemented by the State or a third party (including the vendors of such software or hardware) that is not a subcontractor of Vendor or that is not supported by the Deliverables, or (vi) the operation or use of the Vendor's Software not in accordance with the operating procedures developed for the Vendor's Software or otherwise in a manner not contemplated by this Agreement.
- b) The Vendor's liability for damages to the State arising under the contract shall be limited to two times the value of the Contract.
- c) The foregoing limitation of liability shall not apply to claims covered by other specific provisions including but not limited to Service Level Agreement or Deliverable/Product Warranties pursuant to Section II, 2) of these Terms and Conditions, or to claims for injury to persons or damage to tangible personal property, gross negligence or willful or wanton conduct. This limitation of liability does not apply to contributions among joint tortfeasors under N.C.G.S. 1B-1 *et seq.*, the receipt of court costs or attorney's fees that might be awarded by a court in addition to damages after litigation based on the Agreement. For avoidance of doubt, the Parties agree that the Service Level Agreement and Deliverable/Product Warranty Terms in the Contract are intended to provide the sole and exclusive remedies available to the State under the Contract for the Vendor's failure to comply with the requirements stated therein.

23) VENDOR'S LIABILITY FOR INJURY TO PERSONS OR DAMAGE TO PROPERTY:

- a) The Vendor shall be liable for damages arising out of personal injuries and/or damage to real or tangible personal property of the State, employees of the State, persons designated by the State for training, or person(s) other than agents or employees of the Vendor, designated by the State for any purpose, prior to, during, or subsequent to delivery, installation, acceptance, and use of the Deliverables either at the Vendor's site or at the State's place of business, provided that the injury or damage was caused by the fault or negligence of the Vendor.
- b) The Vendor agrees to indemnify, defend and hold the Agency and the State and its Officers, employees, agents and assigns harmless from any liability relating to personal injury or injury to real or personal property of any kind, accruing or resulting to any other person, firm or corporation furnishing or supplying work, Services, materials or supplies in connection with the performance of the Agreement, whether tangible or intangible, arising out of the ordinary negligence, wilful or wanton negligence, or intentional acts of the Vendor, its officers, employees, agents, assigns or subcontractors.
- c) Vendor shall not be liable for damages arising out of or caused by an alteration or an attachment not made or installed by the Vendor.

24) TIME IS OF THE ESSENCE: Time is of the essence in the performance of the Agreement.

25) DATE AND TIME WARRANTY: The Vendor warrants that any Deliverable, whether Services, hardware, firmware, middleware, custom or commercial software, or internal components, subroutines, and interface therein which performs, modifies or affects any date and/or time data recognition function,

calculation, or sequencing, will still enable the modified function to perform accurate date/time data and leap year calculations. This warranty shall survive termination or expiration of the Contract.

- 26) INDEPENDENT CONTRACTORS:** Vendor and its employees, officers and executives, and subcontractors, if any, shall be independent Vendors and not employees or agents of the State. The Agreement shall not operate as a joint venture, partnership, trust, agency or any other similar business relationship.
- 27) TRANSPORTATION:** Transportation of any tangible Deliverables shall be FOB Destination; unless otherwise specified in the solicitation document or purchase order. Freight, handling, hazardous material charges, and distribution and installation charges shall be included in the total price of each item. Any additional charges shall not be honored for payment unless authorized in writing by the Purchasing State Agency. In cases where parties, other than the Vendor ship materials against this order, the shipper must be instructed to show the purchase order number on all packages and shipping manifests to ensure proper identification and payment of invoices. A complete packing list must accompany each shipment.
- 28) NOTICES:** Any notices required under the Agreement should be delivered to the Contract Administrator for each party. Unless otherwise specified in the Solicitation Documents, any notices shall be delivered in writing by U.S. Mail, Commercial Courier or by hand.
- 29) TITLES AND HEADINGS:** Titles and Headings in the Agreement are used for convenience only and do not define, limit or proscribe the language of terms identified by such Titles and Headings.
- 30) AMENDMENT:** The Agreement may not be amended orally or by performance. Any amendment must be made in written form and signed by duly authorized representatives of the State and Vendor in conformance with Paragraph 36) herein.
- 31) TAXES:** The State of North Carolina is exempt from Federal excise taxes and no payment will be made for any personal property taxes levied on the Vendor or for any taxes levied on employee wages. Agencies of the State may have additional exemptions or exclusions for federal or state taxes. Evidence of such additional exemptions or exclusions may be provided to Vendor by Agencies, as applicable, during the term of the Agreement. Applicable State or local sales taxes shall be invoiced as a separate item.
- 32) GOVERNING LAWS, JURISDICTION, AND VENUE:**
- a) The Agreement is made under and shall be governed and construed in accordance with the laws of the State of North Carolina and applicable Administrative Rules. The place of the Agreement or purchase order, its situs and forum, shall be Wake County, North Carolina, where all matters, whether sounding in Contract or in tort, relating to its validity, construction, interpretation and enforcement shall be determined. Vendor agrees and submits, solely for matters relating to the Agreement, to the jurisdiction of the courts of the State of North Carolina, and stipulates that Wake County shall be the proper venue for all matters.
 - b) Except to the extent the provisions of the Contract are clearly inconsistent therewith, the applicable provisions of the Uniform Commercial Code as modified and adopted in North Carolina shall govern the Agreement. To the extent the Contract entails both the supply of "goods" and "Services," such shall be deemed "goods" within the meaning of the Uniform Commercial Code, except when deeming such Services as "goods" would result in a clearly unreasonable interpretation.
- 33) FORCE MAJEURE:** Neither party shall be deemed to be in default of its obligations hereunder if and so long as it is prevented from performing such obligations as a result of events beyond its reasonable control, including without limitation, fire, power failures, any act of war, hostile foreign action, nuclear explosion, riot, strikes or failures or refusals to perform under subcontracts, civil insurrection, earthquake, hurricane, tornado, or other catastrophic natural event or act of God.
- 34) COMPLIANCE WITH LAWS:** The Vendor shall comply with all laws, ordinances, codes, rules, regulations, and licensing requirements that are applicable to the conduct of its business, including those of federal, state, and local agencies having jurisdiction and/or authority.
- 35) SEVERABILITY:** In the event that a court of competent jurisdiction holds that a provision or requirement of the Agreement violates any applicable law, each such provision or requirement shall be enforced only to the extent it is not in violation of law or is not otherwise unenforceable and all other provisions and requirements of the Agreement shall remain in full force and effect. All promises, requirement, terms, conditions, provisions, representations, guarantees and warranties contained herein shall survive the

expiration or termination date unless specifically provided otherwise herein, or unless superseded by applicable federal or State statute, including statutes of repose or limitation.

36) CHANGES: The Agreement and subsequent purchase order(s) is awarded subject to the provision of the specified Services and the shipment or provision of other Deliverables as specified herein. Any changes made to the Agreement or purchase order proposed by the Vendor are hereby rejected unless accepted in writing by the Agency or State Award Authority. The State shall not be responsible for Services or other Deliverables delivered without a purchase order from the Agency or State Award Authority.

37) FEDERAL INTELLECTUAL PROPERTY BANKRUPTCY PROTECTION ACT: The Parties agree that the Agency shall be entitled to all rights and benefits of the Federal Intellectual Property Bankruptcy Protection Act, Public Law 100-506, codified at 11 U.S.C. 365(n), and any amendments thereto.

38) ELECTRONIC PROCUREMENT (Applies to all contracts that include E-Procurement and are identified as such in the body of the solicitation document): Purchasing shall be conducted through the Statewide E-Procurement Services. The State's third party agent shall serve as the Supplier Manager for this E-Procurement Services. The Vendor shall register for the Statewide E-Procurement Services within two (2) business days of notification of award in order to receive an electronic purchase order resulting from award of the Agreement.

a) Reserved.

b) Reserved.

c) The Supplier Manager will capture the order from the State approved user, including the shipping and payment information, and submit the order in accordance with the E-Procurement Services. Subsequently, the Supplier Manager will send those orders to the appropriate Vendor on State Contract. The State or State approved user, not the Supplier Manager, shall be responsible for the solicitation, offers received, evaluation of offers received, award of Contract, and the payment for goods delivered.

d) Vendor agrees at all times to maintain the confidentiality of its user name and password for the Statewide E-Procurement Services. If a Vendor is a corporation, partnership or other legal entity, then the Vendor may authorize its employees to use its password. Vendor shall be responsible for all activity and all charges for such employees. Vendor agrees not to permit a third party to use the Statewide E-Procurement Services through its account. If there is a breach of security through the Vendor's account, Vendor shall immediately change its password and notify the Supplier Manager of the security breach by e-mail. Vendor shall cooperate with the state and the Supplier Manager to mitigate and correct any security breach.

39) PATENT, COPYRIGHT, AND TRADE SECRET PROTECTION:

a) Vendor has created, acquired or otherwise has rights in, and may, in connection with the performance of Services for the State, employ, provide, create, acquire or otherwise obtain rights in various concepts, ideas, methods, methodologies, procedures, processes, know-how, techniques, models, templates and general purpose consulting and software tools, utilities and routines (collectively, the "Vendor technology"). To the extent that any Vendor technology is contained in any of the Services or Deliverables including any derivative works, the Vendor hereby grants the State a royalty-free, fully paid, worldwide, perpetual, non-exclusive license to use such Vendor technology in connection with the Services or Deliverables for the State's purposes.

b) Vendor shall not acquire any right, title and interest in and to the copyrights for goods, any and all software, technical information, specifications, drawings, records, documentation, data or derivative works thereof, or other work products provided by the State to Vendor. The State hereby grants Vendor a royalty-free, fully paid, worldwide, perpetual, non-exclusive license for Vendor's internal use to non-confidential deliverables first originated and prepared by the Vendor for delivery to the State.

c) The Vendor, at its own expense, shall defend any action brought against the State to the extent that such action is based upon a claim that the Services or other Deliverables supplied by the Vendor, or the operation of such pursuant to a current version of vendor-supplied software, infringes a patent, or copyright or violates a trade secret in the United States. The Vendor shall pay those costs and damages finally awarded against the State in any such action; damages shall

be limited as provided in N.C.G.S. 143B-1350(h1). Such defense and payment shall be conditioned on the following:

- i. That the Vendor shall be notified within a reasonable time in writing by the State of any such claim; and,
 - ii. That the Vendor shall have the sole control of the defense of any action on such claim and all negotiations for its settlement or compromise, provided, however, that the State shall have the option to participate in such action at its own expense.
- d) Should any Services or other Deliverables supplied by Vendor, or the operation thereof become, or in the Vendor's opinion are likely to become, the subject of a claim of infringement of a patent, copyright, or a trade secret in the United States, the State shall permit the Vendor, at its option and expense, either to procure for the State the right to continue using the Services or Deliverables, or to replace or modify the same to become noninfringing and continue to meet procurement specifications in all material respects. If neither of these options can reasonably be taken, or if the use of such Services or Deliverables by the State shall be prevented by injunction, the Vendor agrees to take back any goods/hardware or software, and refund any sums the State has paid Vendor less any reasonable amount for use or damage and make every reasonable effort to assist the state in procuring substitute Services or Deliverables. If, in the sole opinion of the State, the return of such infringing Services or Deliverables makes the retention of other Services or Deliverables acquired from the Vendor under the agreement impractical, the State shall then have the option of terminating the contract, or applicable portions thereof, without penalty or termination charge. The Vendor agrees to take back Services or Deliverables and refund any sums the State has paid Vendor less any reasonable amount for use or damage.
- e) Vendor will not be required to defend or indemnify the State if any claim by a third party against the State for infringement or misappropriation (i) results from the State's alteration of any Vendor-branded Service or Deliverable, or (ii) results from the continued use of the good(s) or services and other Services or Deliverables after receiving notice they infringe a trade secret of a third party.
- f) Nothing stated herein, however, shall affect Vendor's ownership in or rights to its preexisting intellectual property and proprietary rights.

40) UNANTICIPATED TASKS In the event that additional work must be performed that was wholly unanticipated, and that is not specified in the Agreement, but which in the opinion of both parties is necessary to the successful accomplishment of the contracted scope of work, the procedures outlined in this article will be followed. For each item of unanticipated work, the Vendor shall prepare a work authorization in accordance with the State's practices and procedures.

- a) It is understood and agreed by both parties that all of the terms and conditions of the Agreement shall remain in force with the inclusion of any work authorization. A work authorization shall not constitute a contract separate from the Agreement, nor in any manner amend or supersede any of the other terms or provisions of the Agreement or any amendment hereto.
- b) Each work authorization shall comprise a detailed statement of the purpose, objective, or goals to be undertaken by the Vendor, the job classification or approximate skill level or sets of the personnel required, an identification of all significant material then known to be developed by the Vendor's personnel as a Deliverable, an identification of all significant materials to be delivered by the State to the Vendor's personnel, an estimated time schedule for the provision of the Services by the Vendor, completion criteria for the work to be performed, the name or identification of Vendor's personnel to be assigned, the Vendor's estimated work hours required to accomplish the purpose, objective or goals, the Vendor's billing rates and units billed, and the Vendor's total estimated cost of the work authorization.
- c) All work authorizations must be submitted for review and approval by the procurement office that approved the original Contract and procurement. This submission and approval must be completed prior to execution of any work authorization documentation or performance thereunder. All work authorizations must be written and signed by the Vendor and the State prior to beginning work.

- d) The State has the right to require the Vendor to stop or suspend performance under the "Stop Work" provision of the North Carolina Department of Information Technology Terms and Conditions.
- e) The Vendor shall not expend Personnel resources at any cost to the State in excess of the estimated work hours unless this procedure is followed: If, during performance of the work, the Vendor determines that a work authorization to be performed under the Agreement cannot be accomplished within the estimated work hours, the Vendor will be required to complete the work authorization in full. Upon receipt of such notification, the State may:
 - i. Authorize the Vendor to expend the estimated additional work hours or service in excess of the original estimate necessary to accomplish the work authorization, or
 - ii. Terminate the work authorization, or
 - iii. Alter the scope of the work authorization in order to define tasks that can be accomplished within the remaining estimated work hours.
 - iv. The State will notify the Vendor in writing of its election within seven (7) calendar days after receipt of the Vendor's notification. If notice of the election is given to proceed, the Vendor may expend the estimated additional work hours or Services.

41) STOP WORK ORDER The State may issue a written Stop Work Order to Vendor for cause at any time requiring Vendor to suspend or stop all, or any part, of the performance due under the Agreement for a period up to ninety (90) days after the Stop Work Order is delivered to the Vendor. The ninety (90) day period may be extended for any further period for which the parties may agree.

- a) The Stop Work Order shall be specifically identified as such and shall indicate that it is issued under this term. Upon receipt of the Stop Work Order, the Vendor shall immediately comply with its terms and take all reasonable steps to minimize incurring costs allocable to the work covered by the Stop Work Order during the period of work suspension or stoppage. Within a period of ninety (90) days after a Stop Work Order is delivered to Vendor, or within any extension of that period to which the parties agree, the State shall either:
 - i) Cancel the Stop Work Order, or
 - ii) Terminate the work covered by the Stop Work Order as provided for in the termination for default or the termination for convenience clause of the Agreement.
- b) If a Stop Work Order issued under this clause is canceled or the period of the Stop Work Order or any extension thereof expires, the Vendor shall resume work. The State shall make an equitable adjustment in the delivery schedule, the Agreement price, or both, and the Agreement shall be modified, in writing, accordingly, if:
 - i) The Stop Work Order results in an increase in the time required for, or in the Vendor's cost properly allocable to the performance of any part of the Agreement, and
 - ii) The Vendor asserts its right to an equitable adjustment within thirty (30) days after the end of the period of work stoppage; provided that if the State decides the facts justify the action, the State may receive and act upon an offer submitted at any time before final payment under the Agreement.
- c) If a Stop Work Order is not canceled and the work covered by the Stop Work Order is terminated in accordance with the provision entitled Termination for Convenience of the State, the State shall allow reasonable direct costs resulting from the Stop Work Order in arriving at the termination settlement.
- d) The State shall not be liable to the Vendor for loss of profits because of a Stop Work Order issued under this term.

41) TRANSITION ASSISTANCE If the Agreement is not renewed at the end of the term, or is canceled prior to its expiration, for any reason, the Vendor must provide for up to six (6) months after the expiration or cancellation of the Agreement, all reasonable transition assistance requested by the State, to allow for the expired or canceled portion of the Services to continue without interruption or adverse effect, and to facilitate the orderly transfer of such Services to the State or its designees. Such transition assistance will be deemed by the parties to be governed by the terms and conditions of the Agreement, (notwithstanding this expiration or cancellation) except for those Contract terms or conditions that do not reasonably apply to such transition assistance. The State shall pay the Vendor for any resources utilized

in performing such transition assistance at the most current rates provided by the Agreement for Contract performance. If the State cancels the Agreement for cause, then the State will be entitled to off set the cost of paying the Vendor for the additional resources the Vendor utilized in providing transition assistance with any damages the State may have otherwise accrued as a result of said cancellation.

Section 2: Terms and Conditions Applicable to Information Technology Goods and Services

- 1) **SOFTWARE LICENSE FOR HARDWARE, EMBEDDED SOFTWARE AND FIRMWARE:** Deliverables comprising goods, equipment or products (hardware) may contain software for internal operation, or as embedded software or firmware that is generally not sold or licensed as a severable software product. Software may be provided on separate media, such as a CD-ROM or other media, or may be included within the hardware at or prior to delivery. Such software is proprietary, copyrighted, and may also contain valuable trade secrets and may be protected by patents. Vendor grants the State a license to use the Code (or any replacement provided) on, or in conjunction with, only the Deliverables purchased, or with any system identified in the solicitation documents. The State shall have a worldwide, nonexclusive, non-sublicensable license to use such software and/or documentation for its internal use. The State may make and install copies of the software to support the authorized level of use. Provided, however that if the hardware is inoperable, the software may be copied for temporary use on other hardware. The State shall promptly affix to any such copy the same proprietary and copyright notices affixed to the original. The State may make one copy of the software for archival, back-up or disaster recovery purposes. The license set forth in this Paragraph shall terminate immediately upon the State's discontinuance of the use of all equipment on which the software is installed. The software may be transferred to another party only with the transfer of the hardware. If the hardware is transferred, the State shall i) destroy all software copies made by the State, ii) deliver the original or any replacement copies of the software to the transferee, and iii) notify the transferee that title and ownership of the software and the applicable patent, trademark, copyright, and other intellectual property rights shall remain with Vendor, or Vendor's licensors. The State shall not disassemble, decompile, reverse engineer, modify, or prepare derivative works of the embedded software, unless permitted under the solicitation documents.
- 2) **LICENSE GRANT FOR APPLICATION SOFTWARE, (COTS):** Reserved.
- 3) **WARRANTY TERMS:** Notwithstanding anything in the Agreement or Exhibit hereto to the contrary, Vendor shall assign warranties for any Deliverable supplied by a third party to the State.
 - a) a) Vendor warrants that any Software or Deliverable will operate substantially in conformity with prevailing specifications as defined by the current standard documentation (except for minor defects or errors which are not material to the State) for a period of ninety (90) days from the date of acceptance ("Warranty Period"), unless otherwise specified in the Solicitation Documents. If the Software does not perform in accordance with such specifications during the Warranty Period, Vendor will use reasonable efforts to correct any deficiencies in the Software so that it will perform in accordance with or substantially in accordance with such specifications.
 - b) Vendor warrants to the best of its knowledge that:
 - i) The licensed Software and associated materials do not infringe any intellectual property rights of any third party;
 - ii) There are no actual or threatened actions arising from, or alleged under, any intellectual property rights of any third party;
 - iii) The licensed Software and associated materials do not contain any surreptitious programming codes, viruses, Trojan Horses, "back doors" or other means to facilitate or allow unauthorized access to the State's information systems.
 - iv) The licensed Software and associated materials do not contain any timer, counter, lock or similar device (other than security features specifically approved by Customer in the Specifications) that inhibits or in any way limits the Software's ability to operate.
 - c) UNLESS MODIFIED BY AMENDMENT OR THE SOLICITATION DOCUMENTS, THE WARRANTIES IN THIS PARAGRAPH ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR

IMPLIED, OR WHETHER ARISING BY COURSE OF DEALING OR PERFORMANCE, CUSTOM, USAGE IN THE TRADE OR PROFESSION OR OTHERWISE, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND NO OTHER REPRESENTATIONS OR WARRANTIES HAVE FORMED THE BASIS OF THE BARGAIN HEREUNDER.

4) RESTRICTIONS: State's use of the Software is restricted as follows:

- a) The license granted herein is granted to the State and to any political subdivision or other entity permitted or authorized to procure Information Technology through the Department of Information Technology. If the License Grant and License Fees are based upon the number of Users, the number of Users may be increased at any time, subject to the restrictions on the maximum number of Users specified in the solicitation documents.
- b) No right is granted hereunder to use the Software to perform Services for commercial third parties (so-called "service bureau" uses). Services provided to other State Departments, Agencies or political subdivisions of the State is permitted.
- c) The State may not copy, distribute, reproduce, use, lease, rent or allow access to the Software except as explicitly permitted under this Agreement, and State will not modify, adapt, translate, prepare derivative works (unless allowed by the solicitation documents or statements of work,) decompile, reverse engineer, disassemble or otherwise attempt to derive source code from the Software or any internal data files generated by the Software.
- d) State shall not remove, obscure or alter Vendor's copyright notice, trademarks, or other proprietary rights notices affixed to or contained within the Software.

5) SUPPORT OR MAINTENANCE SERVICES: This paragraph recites the scope of maintenance Services due under the license granted, if not superseded by a separate licensing and maintenance agreement or as may be stated in the solicitation documents. Subject to payment of a Support Service or Maintenance Fee stated in the solicitation documents for the first year and all subsequent years, if requested by the State, Vendor agrees to provide the following support Services ("Support Services") for the current version and one previous version of the Software commencing upon delivery of the Software:

- a) **Error Correction:** If the error conditions reported by the State pursuant to the General Terms and Conditions are not corrected in a timely manner, the State may request a replacement copy of the licensed Software from Vendor. In such event, Vendor shall then deliver a replacement copy, together with corrections and updates, of the licensed Software within 24 hours of the State's request at no added expense to the State.
- b) **Other Agreement:** This Paragraph 5 may be superseded by written mutual agreement provided that: Support and maintenance Services shall be fully described in such a separate agreement annexed hereto and incorporated herein
- c) **Temporary Extension of License:** If any licensed Software or CPU/computing system on which the Software is installed fails to operate or malfunctions, the term of the license granted shall be temporarily extended to another CPU selected by the State and continue until the earlier of:
 - i) Return of the inoperative CPU to full operation, or
 - ii) Termination of the license.
- d) **Encryption Code:** Vendor shall provide any temporary encryption code or authorization necessary or proper for operation of the licensed Software under the foregoing temporary license. The State will provide notice by expedient means, whether by telephone, e-mail or facsimile of any failure under this paragraph. On receipt of such notice, Vendor shall issue any temporary encryption code or authorization to the State within twenty-four (24) hours; unless otherwise agreed.
- e) **Updates:** Vendor shall provide to the State, at no additional charge, all new releases and bug fixes (collectively referred to as "Updates") for any Software Deliverable developed or published by Vendor and made generally available to its other customers at no additional charge. All such Updates shall be a part of the Program and Documentation and, as such, be governed by the provisions of the Agreement.
- f) **Telephone Assistance:** Vendor shall provide the State with telephone access to technical support engineers for assistance in the proper installation and use of the Software, and to report and resolve Software problems, during normal business hours, 7:00 AM - 6:00 PM Eastern Time, Monday-Friday.

Vendor shall respond to the telephone requests for Program maintenance service, within four (4) hours or eight (8) hours or next business day for calls made at any time, or as may be agreed upon and specified in a mutually agreed Service Level Agreement.

6) STATE PROPERTY AND INTANGIBLES RIGHTS: Reserved

Section 3: Terms and Conditions Applicable to Software as a Service (SaaS)

1) DEFINITIONS:

- a) "Data" includes and means information, formulae, algorithms, or other content that the State, the State's employees, agents and end users upload, create or modify using the Services pursuant to this Agreement. Data also includes user identification information and metadata which may contain Data or from which the State's Data may be ascertainable.
- b) Reserved.
- c) Reserved.
- d) Reserved.
- e) "Support" includes provision of ongoing updates and maintenance for the Vendor online software applications, and as may be specified herein, consulting, training and other support Services as provided by the Vendor for SaaS tenants receiving similar SaaS Services.

2) ACCESS AND USE OF SAAS SERVICES:

- a) The Vendor grants the State a personal non-transferable and non-exclusive right to use and access, all Services and other functionalities or services provided, furnished or accessible under this Agreement. The State may utilize the Services as agreed herein and in accordance with any mutually agreed Acceptable Use Policy. The State is authorized to access State Data and any Vendor-provided data as specified herein and to transmit revisions, updates, deletions, enhancements, or modifications to the State Data. This shall include the right of the State to, and access to, Support without the Vendor requiring a separate maintenance or support agreement. Subject to an agreed limitation on the number of users, the State may use the Services with any computer, computer system, server, or desktop workstation owned or utilized by the State or other authorized users. User access to the Services shall be routinely provided by the Vendor and may be subject to a more specific Service Level Agreement (SLA) agreed to in writing by the parties. The State shall notify the Vendor of any unauthorized use of any password or account, or any other known or suspected breach of security access. The State also agrees to refrain from taking any steps, such as reverse engineering, reverse assembly or reverse compilation to derive a source code equivalent to the Services or any portion thereof. Use of the Services to perform services for commercial third parties (so-called "service bureau" uses) is not permitted, but the State may utilize the Services to perform its governmental functions. If the Services fees are based upon the number of Users and/or hosted instances, the number of Users/hosted instances available may be adjusted at any time (subject to the restrictions on the maximum number of Users specified in the Furnish and Deliver Table herein above) by mutual agreement and State Procurement approval. All Services and information designated as "confidential" or "proprietary" shall be kept in confidence except as may be required by the North Carolina Public Records Act: N.C.G.S. § 132-1, *et. seq.*
- b) The State's access license for the Services and its associated services neither transfers, vests, nor infers any title or other ownership right in any intellectual property rights of the Vendor or any third party, nor does this license transfer, vest, or infer any title or other ownership right in any source code associated with the Services unless otherwise agreed to by the parties. The provisions of this paragraph will not be construed as a sale of any ownership rights in the Services. Any Services or technical and business information owned by Vendor or its suppliers or licensors made accessible or furnished to the State shall be and remain the property of the Vendor or such other party, respectively. Vendor has a limited, non-exclusive license to access and use the State Data as provided to Vendor, but solely for performing its obligations under this Agreement and in confidence as provided herein.
- c) The Vendor or its suppliers shall at minimum, and except as otherwise agreed, provide telephone assistance to the State for all Services procured hereunder during the State's normal business hours (unless different hours are specified herein). The Vendor warrants that its Support and customer service

and assistance will be performed in accordance with generally accepted industry standards. The State has the right to receive the benefit of upgrades, updates, maintenance releases or other enhancements or modifications made generally available to the Vendor's SaaS tenants for similar Services. The Vendor's right to a new use agreement for new version releases of the Services shall not be abridged by the foregoing. The Vendor may, at no additional charge, modify the Services to improve operation and reliability or to meet legal requirements.

- d) The Vendor will provide to the State the same Services for updating, maintaining and continuing optimal performance for the Services as provided to other similarly situated users or tenants of the Services, but minimally as provided for and specified herein. Unless otherwise agreed in writing, Support will also be provided for any other (e.g., third party) software provided by the Vendor in connection with the Vendor's solution herein. The technical and professional activities required for establishing, managing, and maintaining the Services environment are the responsibilities of the Vendor. Any training specified herein will be provided by the Vendor to certain State users for the fees or costs as set forth herein or in an SLA.
- e) Services provided pursuant to this Solicitation may, in some circumstances, be accompanied by a user clickwrap agreement. The term clickwrap agreement refers to an agreement that requires the end user to manifest his or her assent to terms and conditions by clicking an "ok" or "agree" button on a dialog box or pop-up window as part of the process of access to the Services. All terms and conditions of any clickwrap agreement provided with any Services solicited herein shall have no force and effect and shall be non-binding on the State, its employees, agents, and other authorized users of the Services.
- f) The Vendor may utilize partners and/or subcontractors to assist in the provision of the Services, so long as the State Data is not removed from the United States unless the terms of storage of the State Data are clearly disclosed, the security provisions referenced herein can still be complied with, and such removal is done with the prior express written permission of the State. The Vendor shall identify all of its strategic business partners related to Services provided under this contract including, but not limited to, all subcontractors or other entities or individuals who may be a party to a joint venture or similar agreement with the Vendor, who will be involved in any application development and/or operations.
- g) The Vendor warrants that all Services will be performed with professional care and skill, in a workmanlike manner and in accordance with the Services documentation and this Agreement.
- h) An SLA or other agreed writing shall contain provisions for scalability of Services and any variation in fees or costs as a result of any such scaling.
- i) Professional services provided by the Vendor at the request by the State in writing in addition to agreed Services shall be at the then-existing Vendor hourly rates when provided, unless otherwise agreed in writing by the parties.

3) **WARRANTY OF NON-INFRINGEMENT:**

- a) The Vendor warrants to the best of its knowledge that:
 - i) The Services do not infringe any intellectual property rights of any third party; and
 - ii) There are no actual or threatened actions arising from, or alleged under, any intellectual property rights of any third party.
- b) Reserved.
- c) Reserved.
- d) Reserved.

4) **ACCESS AVAILABILITY; REMEDIES:**

- a) The Vendor warrants that the Services will be in good working order, and operating in conformance with Vendor's standard specifications and functions as well as any other specifications agreed to by the parties in writing, and shall remain accessible 24/7, with the exception of scheduled outages for maintenance and of other service level provisions agreed in writing, e.g., in an SLA. The Vendor does not warrant that the operation of the Services will be completely uninterrupted or error free, or that the Services functions will meet all the State's requirements unless developed as Customized Services.
- b) The State shall notify the Vendor if the Services are not in good working order or inaccessible during the term of the Agreement. The Vendor shall, at its option, either repair, replace or reperform any Services reported or discovered as not being in good working order and accessible during the applicable contract term without cost to the State. If the Services' monthly availability averages less than 99.9% (excluding agreed-upon maintenance downtime), the State shall be entitled to receive automatic credits as indicated

immediately below, or the State may use other contractual remedies such as recovery of damages, as set forth herein in writing, e.g., in Specifications, Special Terms or in an SLA, and as such other contractual damages are limited by N.C.G.S. § 143B-1350(h1) and the Limitation of Liability paragraph below. If not otherwise provided, the automatic remedies for non-availability of the Subscription Services during a month are:

1. A 10% service credit applied against future fees if Vendor does not reach 99.9% availability.
2. A 25% service credit applied against future fees if Vendor does not reach 99% availability.
3. A 50% service credit applied against future fees or eligibility for early termination of the Agreement if Vendor does not reach 95% availability.

If, however, Services meet the 99.9% service availability level for a month but are not available for a consecutive 120 minutes during that month, the Vendor shall grant to the State a credit of a pro-rated one-day of the monthly subscription Services fee against future Services charges. Such credit(s) shall be applied to the bill immediately following the month in which the Vendor failed to meet the performance requirements or other service levels, and the credit will continue to be deducted from the monthly invoice for each prior month that Vendor fails to meet the support response times for the remainder of the duration of the Agreement. If Services monthly availability averages less than 99.9% (excluding agreed-upon maintenance downtime), for three (3) or more months in a rolling twelve-month period, the State may also terminate the contract for material breach in accordance with the Default provisions hereinbelow.

- c) Support Services. If the Vendor fails to meet Support Service response times as set forth herein or in an SLA for a period of three (3) consecutive months, a 10% service credit will be deducted from the invoice in the month immediately following the third month, and the 10% service credit will continue to be deducted from the monthly invoice for each month that the Vendor fails to meet the support response times for the remainder of the duration of the Agreement.

5) **EXCLUSIONS:**

- a) Except as stated above in Paragraphs 3 and 4, Vendor and its parent, subsidiaries and affiliates, subcontractors and suppliers make no warranties, express or implied, as to the Services.
- b) The warranties provided in Paragraphs 3 and 4 above do not cover repair for damages, malfunctions or service failures substantially caused by:
 - i) Actions of non-Vendor personnel;
 - ii) Failure to follow Vendor's written instructions relating to the Services provided to the State; or
 - iii) Force Majeure conditions set forth hereinbelow.
 - iv) The State's sole misuse of, or its own inability to use, the Services.

- 6) **PERFORMANCE REVIEW AND ACCOUNTABILITY:** N.C.G.S. § 143B-1340(f) and 09 NCAC 06B.1207 require provisions for performance review and accountability in State IT contracts. For this procurement, these shall include the holding a retainage of ten percent (10%) of the contract value and withholding the final payment contingent on final acceptance by the State as provided in 09 NCAC 06B.1207(3) and (4), unless waived or otherwise agreed, in writing. The Services herein will be provided consistent with and under these Services performance review and accountability guarantees.

- 7) **LIMITATION OF LIABILITY:** Limitation of Vendor's Contract Damages Liability: Reserved.

- 8) **VENDOR'S LIABILITY FOR INJURY TO PERSONS OR DAMAGE TO PROPERTY:** Reserved.

- 9) **MODIFICATION OF SERVICES:** If Vendor modifies or replaces the Services provided to the State and other tenants, and if the State has paid all applicable Subscription Fees, the State shall be entitled to receive, at no additional charge, access to a newer version of the Services that supports substantially the same functionality as the then accessible version of the Services. Newer versions of the Services containing substantially increased functionality may be made available to the State for an additional subscription fee. In the event of either of such modifications, the then accessible version of the Services shall remain fully available to the State until the newer version is provided to the State and accepted. If a modification materially affects the functionality of the Services as used by the State, the State, at its sole option, may defer such modification.

10) **TRANSITION PERIOD:**

- a) For ninety (90) days, either prior to the expiration date of this Agreement, or upon notice of termination of this Agreement, the Vendor shall assist the State, upon written request, in extracting and/or transitioning all Data in the format determined by the State ("Transition Period").

- b) The Transition Period may be modified in an SLA or as agreed upon in writing by the parties in a contract amendment.
 - c) During the Transition Period, Services access shall continue to be made available to the State without alteration.
 - d) The Vendor agrees to compensate the State for damages or losses the State incurs as a result of Vendor's failure to comply with this Transition Period section in accordance with the Limitation of Liability provisions above.
 - e) Upon termination, and unless otherwise stated in an SLA, and after providing the State Data to the State as indicated above in this section with acknowledged receipt by the State in writing, the Vendor shall permanently destroy or render inaccessible any portion of the State Data in the Vendor's and/or subcontractor's possession or control following the completion and expiration of all obligations in this section. Within thirty (30) days, the Vendor shall issue a written statement to the State confirming the destruction or inaccessibility of the State's Data.
 - f) The State at its option, may purchase additional Transition Services as may be agreed upon in a supplemental agreement.
- 11) **TRANSPORTATION:** Transportation charges for any Deliverable sent to the State other than electronically or by download shall be FOB Destination unless delivered by internet or file-transfer as agreed by the State, or otherwise specified in the solicitation document or purchase order.
- 12) **TRAVEL EXPENSES:** Reserved.
- 13) **PROHIBITION AGAINST CONTINGENT FEES AND GRATUITIES:** Reserved.
- 14) **AVAILABILITY OF FUNDS:** Reserved.
- 15) **PAYMENT TERMS (Applicable to SaaS):**
- a) Payment may be made by the State in advance of or in anticipation of subscription Services to be actually performed under the Agreement or upon proper invoice for other Services rendered. Payment terms are Net 30 days after receipt of correct invoice. Initial payments are to be made after final acceptance of the Services. Payments are subject to any retainage requirements herein. The DRO executing a Participating Addendum is the Agency responsible for all payments under the Agreement. Subscription fees for term years after the initial year shall be as quoted under State options herein but shall not increase more than five percent (5%) over the prior term, except as the parties may have agreed to an alternate formula to determine such increases in writing. No additional charges to the State will be permitted based upon, or arising from, the State's use of a Business Procurement Card. The State may exercise any and all rights of Set Off as permitted in Chapter 105A-1 *et seq.* of the N.C. General Statutes and applicable Administrative Rules.
 - b) Upon the Vendor's written request of not less than thirty (30) days and approval by the State, the State may:
 - i) Forward the Vendor's payment check(s) directly to any person or entity designated by the Vendor or
 - ii) Include any person or entity designated in writing by Vendor as a joint payee on the Vendor's payment check(s), however,
 - iii) In no event shall such approval and action obligate the State to anyone other than the Vendor and the Vendor shall remain responsible for fulfillment of all Agreement obligations.
 - c) For any third party software licensed by the Vendor or its subcontractors for use by the State, a copy of the software license including terms acceptable to the State, an assignment acceptable to the State, and documentation of license fees paid by the Vendor must be provided to the State before any related license fees or costs may be billed to the State.
 - d) An undisputed invoice is an invoice for which the Agency has not disputed in writing within thirty (30) days from the invoice date, unless the agency requests more time for review of the invoice. Upon the Vendor's receipt of a disputed invoice notice, the Vendor will work to correct the applicable invoice error, provided that such dispute notice shall not relieve the State or the applicable Purchasing State Agency from its payment obligations for the undisputed items on the invoice or for any disputed items that are ultimately corrected. The Agency is not required to pay the Vendor for any Software or Services provided without a written purchase order from the appropriate Agency. In addition, all such Services provided must meet all terms, conditions, and specifications of this Agreement and purchase order and be accepted as satisfactory by the Agency before payment will be issued.

- e) The Agency shall release any amounts held as retainages for Services completed within a reasonable period after the end of the period(s) or term(s) for which the retainage was withheld. Payment retainage shall apply to all invoiced items, excepting only such items as the Vendor obtains from Third Parties and for which costs are chargeable to the State by agreement of the Parties. The Agency, in its sole discretion, may release retainages withheld from any invoice upon acceptance of the Services identified or associated with such invoices.

16) **ACCEPTANCE CRITERIA:** Reserved.

17) **CONFIDENTIALITY:** Reserved.

18) **SECURITY OF STATE DATA:**

- a) All materials, including software, Data, information and documentation provided by the State to the Vendor (State Data) during the performance or provision of Services hereunder are the property of the State of North Carolina and must be kept secure and returned to the State. The Vendor will protect State Data in its hands from unauthorized disclosure, loss, damage, destruction by natural event, or other eventuality. Proprietary Vendor materials shall be identified to the State by the Vendor prior to use or provision of Services hereunder and shall remain the property of the Vendor. Derivative works of any Vendor proprietary materials prepared or created during the performance of provision of Services hereunder shall be provided to the State as part of the Services. The Vendor shall not access State User accounts, or State Data, except (i) during data center operations; (ii) in response to service or technical issues; (iii) as required by the express terms of this contract; or (iv) at the State's written request. The Vendor shall protect the confidentiality of all information, Data, instruments, studies, reports, records and other materials provided to it by the State or maintained or created in accordance with this Agreement. No such information, Data, instruments, studies, reports, records and other materials in the possession of Vendor shall be disclosed in any form without the prior written agreement with the State. The Vendor will have written policies governing access to and duplication and dissemination of all such information, Data, instruments, studies, reports, records and other materials.
- b) The Vendor shall not store or transfer non-public State data outside of the United States. This includes backup data and Disaster Recovery locations. The Service Provider will permit its personnel and contractors to access State of North Carolina data remotely only as required to provide technical support.
- c) Protection of personal privacy and sensitive data. The Vendor acknowledges its responsibility for securing any restricted or highly restricted data, as defined by the Statewide Data Classification and Handling Policy (<https://it.nc.gov/document/statewide-data-classification-and-handling-policy>) that is collected by the State and stored in any Vendor site or other Vendor housing systems including, but not limited to, computer systems, networks, servers, or databases, maintained by Vendor or its agents or subcontractors in connection with the provision of the Services. The Vendor warrants, at its sole cost and expense, that it shall implement processes and maintain the security of data classified as restricted or highly restricted; provide reasonable care and efforts to detect fraudulent activity involving the data; and promptly notify the State of any breaches of security within twenty-four (24) hours of confirmation as required by N.C.G.S. § 143B-1379.
- d) The Vendor will provide and maintain secure backup of the State Data. The Vendor shall implement and maintain secure passwords for its online system providing the Services, as well as all appropriate administrative, physical, technical and procedural safeguards at all times during the term of this Agreement to secure such Data from Data Breach, protect the Data and the Services from loss, corruption, unauthorized disclosure, and the introduction of viruses, disabling devices, malware and other forms of malicious or inadvertent acts that can disrupt the State's access to its Data and the Services. The Vendor will allow periodic back-up of State Data by the State to the State's infrastructure as the State requires or as may be provided by law.
- e) The Vendor shall certify to the State:
- i) The sufficiency of its security standards, tools, technologies and procedures in providing Services under this Agreement;
- ii) That the system used to provide the Subscription Services under this Contract has and will maintain a valid third party security certification not to exceed one (1) year and is consistent with the data classification level and a security controls appropriate for low or moderate information system(s) per

the National Institute of Standards and Technology NIST 800-53 revision 4. The State reserves the right to independently evaluate, audit, and verify such requirements.

iii) That the Services will comply with the following:

- (1) Any DIT security policy regarding Cloud Computing, and the DIT Statewide Information Security Policy Manual; to include encryption requirements as defined below:
 - (a) The Vendor shall encrypt all non-public data in transit regardless of the transit mechanism.
 - (b) For engagements where the Vendor stores sensitive personally identifiable or otherwise confidential information, this data shall be encrypted at rest. Examples are social security number, date of birth, driver's license number, financial data, federal/state tax information, and hashed passwords. The Vendor's encryption shall be consistent with validated cryptography standards as specified in National Institute of Standards and Technology FIPS140-2, Security Requirements. The key location and other key management details will be discussed and negotiated by both parties. When the Service Provider cannot offer encryption at rest, it must maintain, for the duration of the contract, cyber security liability insurance coverage for any loss resulting from a data breach. Additionally, where encryption of data at rest is not possible, the Vendor must describe existing security measures that provide a similar level of protection;
- (2) Privacy provisions of the Federal Privacy Act of 1974;
- (3) The North Carolina Identity Theft Protection Act, N.C.G.S. Chapter 75, Article 2A (e.g., N.C.G.S. § 75-65 and -66);
- (4) The North Carolina Public Records Act, N.C.G.S. Chapter 132;
- (5) Applicable Federal, State and industry standards and guidelines including, but not limited to, relevant security provisions of the Payment Card Industry (PCI) Data Security Standard (PCIDSS) including the PCIDSS Cloud Computing Guidelines, Criminal Justice Information, The Family Educational Rights and Privacy Act (FERPA), Health Insurance Portability and Accountability Act (HIPAA); and
- (6) Any requirements implemented by the State under N.C.G.S. §§ 143B-1376 and -1377.
- (7) Any requirements implemented by the State under N.C.G.S. §§ 20-309.2(d).

- f) Security Breach. "Security Breach" under the NC Identity Theft Protection Act (N.C.G.S. § 75-60ff) means (1) any circumstance pursuant to which applicable Law requires notification of such breach to be given to affected parties or other activity in response to such circumstance (e.g., N.C.G.S. § 75-65); or (2) any actual, attempted, suspected, threatened, or reasonably foreseeable circumstance that compromises, or could reasonably be expected to compromise, either Physical Security or Systems Security (as such terms are defined below) in a fashion that either does or could reasonably be expected to permit unauthorized Processing (as defined below), use, disclosure or acquisition of or access to any the State Data or state confidential information. "Physical Security" means physical security at any site or other location housing systems maintained by Vendor or its agents or subcontractors in connection with the Services. "Systems Security" means security of computer, electronic or telecommunications systems of any variety (including data bases, hardware, software, storage, switching and interconnection devices and mechanisms), and networks of which such systems are a part or communicate with, used directly or indirectly by Vendor or its agents or subcontractors in connection with the Services. "Processing" means any operation or set of operations performed upon the State Data or State confidential information, whether by automatic means, such as creating, collecting, procuring, obtaining, accessing, recording, organizing, storing, adapting, altering, retrieving, consulting, using, disclosing or destroying.
- g) Breach Notification. In the event the Vendor becomes aware of any Security Breach due to Vendor acts or omissions other than in accordance with the terms of the Agreement, the Vendor shall, at its own expense, (1) immediately notify the State's Agreement Administrator of such Security Breach and perform a root cause analysis thereon; (2) investigate such Security Breach; (3) provide a remediation plan, acceptable to the State, to address the Security Breach and prevent any further incidents; (4) conduct a forensic investigation to determine what systems, data and information have been affected by such event; and (5) cooperate with the State, and any law enforcement or regulatory officials, credit reporting companies, and credit card associations investigating such Security Breach. The State shall make the final decision on notifying the State's persons, entities, employees, service providers and/or the public of

such Security Breach, and the implementation of the remediation plan. If a notification to a customer is required under any Law or pursuant to any of the State's privacy or security policies, then notifications to all persons and entities who are affected by the same event (as reasonably determined by the State) shall be considered legally required.

- h) Notification Related Costs. The Vendor shall reimburse the State for all Notification Related Costs incurred by the State arising out of or in connection with any such Security Breach due to Vendor acts or omissions other than in accordance with the terms of the Agreement resulting in a requirement for legally required notifications. "Notification Related Costs" shall include the State's internal and external costs associated with addressing and responding to the Security Breach including, but not limited to, (1) preparation and mailing or other transmission of legally required notifications; (2) preparation and mailing or other transmission of such other communications to customers, agents or others as the State deems reasonably appropriate; (3) establishment of a call center or other communications procedures in response to such Security Breach (e.g., customer service FAQs, talking points and training); (4) public relations and other similar crisis management services; (5) legal and accounting fees and expenses associated with the State's investigation of and response to such event; and (6) costs for credit reporting services that are associated with legally required notifications or are advisable, in the State's opinion, under the circumstances. If the Vendor becomes aware of any Security Breach which is not due to Vendor acts or omissions other than in accordance with the terms of the Agreement, the Vendor shall immediately notify the State of such Security Breach, and the parties shall reasonably cooperate regarding which of the foregoing or other activities may be appropriate under the circumstances, including any applicable Charges for the same.
- i) The Vendor shall allow the State reasonable access to Services security logs, latency statistics, and other related Services security data that affect this Agreement and the State's Data, at no cost to the State.
- j) In the course of normal operations, it may become necessary for the Vendor to copy or move Data to another storage destination on its online system, and delete the Data found in the original location. In any such event, the Vendor shall preserve and maintain the content and integrity of the Data, except by prior written notice to, and prior written approval by, the State.
- k) Remote access to Data from outside the continental United States including, without limitation, remote access to Data by authorized Services support staff in identified support centers, is prohibited unless approved in advance by the State Chief Information Officer or the Using Agency.
- l) In the event of temporary loss of access to Services, the Vendor shall promptly restore continuity of Services, restore Data in accordance with this Agreement and as may be set forth in an SLA, restore accessibility of Data and the Services to meet the performance requirements stated herein or in an SLA. As a result, Service Level remedies will become available to the State as provided herein, in the SLA or other agreed and relevant documents. Failure to promptly remedy any such temporary loss of access may result in the State exercising its options for assessing damages under this Agreement.
- m) In the event of disaster or catastrophic failure that results in significant State Data loss or extended loss of access to Data or Services, the Vendor shall notify the State by the fastest means available and in writing, with additional notification provided to the State Chief Information Officer or designee of the contracting agency. Vendor shall provide such notification within twenty-four (24) hours after Vendor reasonably believes there has been such a disaster or catastrophic failure. In the notification, Vendor shall inform the State of:
 - (1) The scale and quantity of the State Data loss;
 - (2) What Vendor has done or will do to recover the State Data from backups and mitigate any deleterious effect of the State Data and Services loss; and
 - (3) What corrective action Vendor has taken or will take to prevent future State Data and Services loss.
 - (4) If Vendor fails to respond immediately and remedy the failure, the State may exercise its options for assessing damages or other remedies under this Agreement.

The Vendor shall investigate the disaster or catastrophic failure and shall share the report of the investigation with the State. The State and/or its authorized agents shall have the right to lead (if required by law) or participate in the investigation. The Vendor shall cooperate fully with the State, its agents and law enforcement.

- n) In the event of termination of this contract, cessation of business by the Vendor or other event preventing the Vendor from continuing to provide the Services, the Vendor shall not withhold the State Data or any other State confidential information or refuse, for any reason, to promptly return to the State the State Data and any other State confidential information (including copies thereof) if requested to do so on such media as reasonably requested by the State, even if the State is then or is alleged to be in breach of the Agreement. As a part of the Vendor's obligation to provide the State Data pursuant to this Paragraph 18) n), the Vendor will also provide the State any data maps, documentation, software, or other materials necessary, including, without limitation, handwritten notes, materials, working papers or documentation, for the State to use, translate, interpret, extract and convert the State Data.
- o) **Secure Data Disposal.** When requested by the State, the Vendor shall destroy all requested data in all of its forms (e.g., disk, CD/DVD, backup tape, and paper). Data shall be permanently deleted and shall not be recoverable, in accordance with National Institute of Standards and Technology (NIST) approved methods, and certificates of destruction shall be provided to the State.

Section 4: Terms and Conditions Applicable to Personnel and Personal Services

- 1) **VENDOR'S REPRESENTATION:** Vendor warrants that qualified personnel will provide Services in a professional manner. "Professional manner" means that the personnel performing the Services will possess the skill and competence consistent with the prevailing business standards in the information technology industry. Vendor agrees that it will not enter any agreement with a third party that might abridge any rights of the State under the Agreement. Vendor will serve as the prime Vendor under the Agreement. Should the State approve any subcontractor(s), the Vendor shall be legally responsible for the performance and payment of the subcontractor(s). Names of any third party Vendors or subcontractors of Vendor may appear for purposes of convenience in Contract documents; and shall not limit Vendor's obligations hereunder. Such third party subcontractors, if approved, may serve as subcontractors to Vendor. Vendor will retain executive representation for functional and technical expertise as needed in order to incorporate any work by third party subcontractor(s).
 - a) **Intellectual Property.** Vendor represents that it has the right to provide the Services and other Deliverables without violating or infringing any law, rule, regulation, copyright, patent, trade secret or other proprietary right of any third party. Vendor also represents that its Services and other Deliverables are not the subject of any actual or threatened actions arising from, or alleged under, any intellectual property rights of any third party.
 - b) **Inherent Services.** If any Services or other Deliverables, functions, or responsibilities not specifically described in the Agreement are required for Vendor's proper performance, provision and delivery of the Services and other Deliverables pursuant to the Agreement, or are an inherent part of or necessary sub-task included within the Services, they will be deemed to be implied by and included within the scope of the Contract to the same extent and in the same manner as if specifically described in the Contract.
 - c) Vendor warrants that it has the financial capacity to perform and to continue to perform its obligations under the Contract; that Vendor has no constructive or actual knowledge of an actual or potential legal proceeding being brought against Vendor that could materially adversely affect performance of the Agreement; and that entering into the Agreement is not prohibited by any Contract, or order by any court of competent jurisdiction.
- 2) **SERVICES PROVIDED BY VENDOR:** Vendor shall provide the State with implementation Services as specified in a Statement of Work ("SOW") executed by the parties. This Agreement in combination with each SOW individually comprises a separate and independent contractual obligation from any other SOW. A breach by Vendor under one SOW will not be considered a breach under any other SOW. The Services intended hereunder are related to the State's implementation and/or use of one or more Software Deliverables licensed hereunder or in a separate software license agreement between the parties ("License Agreement"). (Reserve if not needed)
- 3) **PERSONNEL:** Vendor shall not substitute key personnel assigned to the performance of the Agreement without prior written approval by the Agency. The individuals designated as key personnel for purposes of the Agreement are those specified in the Vendor's offer. Any desired substitution shall be noticed to

the Agency in writing accompanied by the names and references of Vendor's recommended substitute personnel. The Agency will approve or disapprove the requested substitution in a timely manner. The Agency may, in its sole discretion, terminate the Services of any person providing Services under the Agreement. Upon such termination, the Agency may request acceptable substitute personnel or terminate the Contract Services provided by such personnel.

- a) Unless otherwise expressly provided in the Contract, Vendor will furnish all of its own necessary management, supervision, labor, facilities, furniture, computer and telecommunications equipment, software, supplies and materials necessary for the Vendor to provide and deliver the Services and other Deliverables.
- b) Vendor personnel shall perform their duties on the premises of the State, during the State's regular work days and normal work hours, except as may be specifically agreed otherwise, established in the specification, or statement of work.
- c) The Agreement shall not prevent Vendor or any of its personnel supplied under the Agreement from performing similar Services elsewhere or restrict Vendor from using the personnel provided to the State, provided that:
 - i) Such use does not conflict with the terms, specifications or any amendments to the Agreement, or
 - ii) Such use does not conflict with any procurement law, regulation or policy, or
 - iii) Such use does not conflict with any non-disclosure agreement, or term thereof, by and between the State and Vendor or Vendor's personnel.
- d) Unless otherwise provided by the Agency, the Vendor shall furnish all necessary personnel, Services, and otherwise perform all acts, duties and responsibilities necessary or incidental to the accomplishment of the tasks specified in the Agreement. The Vendor shall be legally and financially responsible for its personnel including, but not limited to, any deductions for social security and other withholding taxes required by state or federal law. The Vendor shall be solely responsible for acquiring any equipment, furniture, and office space not furnished by the State necessary for the Vendor to comply with the Agreement. The Vendor personnel shall comply with any applicable State facilities or other security rules and regulations.

4) PERSONAL SERVICES: Reserved.

Section 5: Terms and Conditions Applicable to Lease of Hardware

The terms and conditions in this Section 5 shall supersede those Department of Information Technology Terms and Conditions provided hereinabove in the event of any direct conflict.

- 1) **LEASE PRICES:** Lease prices shall remain firm throughout the lease period selected by the Lessee. The Demand Response Operator (DRO) executing a Participating Addendum is the Lessee. Lease agreements shall be effective on the first day following the executed Certificate of Acceptance. No interim rent, lease payment or interim term may be charged under any circumstances. The date of acceptance is that date agreed to in writing by the parties after equipment has been installed, tested and designated Agency personnel trained. Leases shall only be executed under this Agreement if the Vendor is the Lessor.
 - a) The term of any lease shall be established as a consecutive twenty-four (24) months, consecutive thirty-six (36) months, or consecutive forty-eight (48) months.
 - b) Lease equipment's unit price shall include a full service maintenance agreement for the term of the lease. Maintenance shall include full service including preventive maintenance, all service calls, travel, loaner equipment and no charge replacement of all defective or worn parts and machines. Costs for maintenance agreement shall be included in the monthly lease price, but shown separately for informational purposes as maintenance agreement pricing is used when calculating a lease total cost analysis.
- 2) **EXPIRATION OF LEASE:** Lease agreements shall expire upon completion of the specified lease period and shall not be automatically renewed for a new lease period. No termination notice shall be required by either party at end of lease. All equipment leased under each lease agreement shall be removed

- from Agency's location within ten (10) business days after expiration of lease at Vendor's expense. All equipment removal shall be coordinated with Agency.
- 3) TERM OF LEASE CONTRACT: The Notice of Award will establish a lease with a term of 24, 36, or 48 months from the Acceptance Date (as defined herein), or a contract for purchase of equipment and maintenance of such equipment. The State may, at its sole option and discretion, renew a lease for not more than one (1) additional term upon written notice to Vendor, with any renewal beginning upon the anniversary date of the lease. Exercise of the renewal option shall be made, if at all, by the State not less than thirty (30) days prior to the end of the Contract term. The renewal period will be under the same terms and conditions as this Contract.
- 4) TERMINATION OF LEASE:
- a) Reserved.
 - b) This Contract may be terminated with thirty (30) days written notice to the Vendor if the organizational activity within the State Agency using the equipment is discontinued or disestablished.
 - c) Lease Cancellation Due to Non-Performance: The lease contract may be cancelled at any time during the lease period for Vendor or equipment non-performance or failure to meet Section 3.1.2 (Specifications) pursuant to Section 5, Paragraph 11) (Default and Remedies) or other termination terms herein. If the Lessee requests removal of leased equipment, Lessor will cancel the lease effective immediately with no additional payments due from Agency. Equipment will be removed from Lessee site within ten (10) days of such written notice at no cost to the Lessee.
 - d) Expiration of Lease Term: Any lease shall terminate upon expiration of the contract term unless earlier renewed as permitted herein.
- 5) TAXES: The Agency agrees to pay any taxes due for which the State is not exempt. Any applicable taxes shall be invoiced separately to the purchasing Agency.
- 6) AMOUNT AND TIME OF PAYMENT: All payments due under this Contract are solely the responsibility of the purchasing Agency. The Demand Response Operator (DRO) executing a Participating Addendum is the Agency responsible for payment. The Information Technology Procurement Office is responsible for soliciting the contract, but has no liability with respect to payments, breaches, or penalties. Lease Charges will be invoiced in advance as of the first of each month or quarter as agreed by the Agency. When a machine or model changes, or feature is installed for a part of a calendar month, the Lease Charges will be prorated on the basis of a 30-day month. Payment will be made within 30 days after the date of a correct invoice. All other charges due hereunder are payable as specified in the invoice.
- 7) PRICING: Bidders shall submit Pricing as provided in Section 4.1 (Offer Costs).
- 8) REFRESH REQUIREMENTS: Reserved.
- 9) PRICE PROTECTION PERIOD:
- a) The lease rates for leased machines or equipment shall not increase during the initial term; except as may be agreed pursuant to Section 1, Paragraph 36) (Changes).
 - b) Any rate reductions which might be generally available during the contract period on the part of the Vendor to other state and local government Agencies will be passed on to the Agency, when effective, at any time during the contract period.
- 10) ASSIGNMENT: Vendor may not assign this Contract or its obligations hereunder except as permitted by 09 NCAC 06B.1003 and this Paragraph. Vendor shall provide reasonable notice of not less than thirty (30) days of any consolidation, acquisition, or merger. Any assignee shall affirm this Contract attorning to the terms and conditions agreed, and that Vendor shall affirm that the assignee is fully capable of performing all obligations of Vendor under this Contract. An assignment may be made, if at all, in writing by the Vendor, Assignee and the Agency setting forth the foregoing obligation of Vendor and Assignee. Vendor may assign its right to receive payment under this Contract with written permission of the State. In no event does the recognition of assignment of the Vendor's right to receive payments obligate the Agency to anyone except the Vendor. The Agency merely recognizes financial assignment as a convenience to the Vendor and will hold the Vendor responsible for fulfillment of all contract obligations. Payments under an assignment of financial rights must be in accordance with the General Statutes of North Carolina as follows:
- a) Check made payable to the Vendor and Vendor endorses it over to the Assignee,
 - b) Check made payable to the Vendor and forwarded directly to Assignee, or

- c) Check made payable jointly to the Vendor and Assignee and forwarded directly to the Assignee.
- 11) **DEFAULT AND REMEDIES:**
- a) Any of the following events will constitute an Event of Default under this Contract:
 - i) The Agency fails to make any payment required when due and such failure continues after written notice by Vendor for a period of thirty (30) days after the written notice is delivered, and the Vendor is not in default.
 - ii) The Agency fails to observe or perform any other covenants, conditions or agreements of the Contract and such failure continues for thirty (30) days without cure after the Vendor delivers written notice of the failure to the Agency.
 - iii) The Vendor fails to apply any payment required to be paid under this Contract towards the Agency's obligation hereunder.
 - iv) The Vendor fails to comply with this Contract, or otherwise observe, keep or perform any provision of this Contract required to be observed, kept or performed by Vendor.
 - b) Remedies: In the event of default as specified above, failure by either the Vendor or Agency to remedy such default within a period of thirty (30) days from receipt of written notice of said default and demand for cure therefore by either party, may take any of the following actions:
 - i) The Vendor or the Agency may, at their respective option(s), and, as may be applicable, proceed by appropriate court action(s) to enforce performance of the applicable covenants of this Contract or to recover damages for breach.
 - ii) The Agency may terminate said Contract and direct the Vendor to remove all equipment at the Vendor's expense with no costs of termination or equipment removal to be incurred by the Agency.
 - iii) Further Remedies: All remedies of the Vendor and the Agency are cumulative and may be exercised concurrently or separately. The exercise of any other remedy shall not be deemed an election of such remedy or preclude the exercise of any other remedy.
 - c) Penalty Charges: The Agency and State shall not be obligated to pay charges of any type for termination or penalty.
- 12) **EQUIPMENT RETURN:** The Vendor shall be responsible for all standard delivery and removal charges. Equipment shall be in good repair, condition and working order, ordinary wear and tear alone excepted.
- 13) **NON-PERFORMANCE:** If the Agency determines the equipment is not rendering satisfactory service or is not performing in accordance with the specifications set forth in this RFP, the Vendor will review the service activity of such equipment with the Agency and determine corrective action for the Vendor. If no solution is reached the Agency may terminate this Contract for non-performance under Section 5, Paragraph 4) (Termination of Lease).
- 14) **INSTALLATION AND DELIVERY:** Pricing shall include delivery to the purchasing Agency, F.O.B. destination, freight prepaid, delivery, uncrating, assembly, installation, making ready for use, removal of debris and instruction of Agency personnel. No other fees or charges will be paid by the Agency. Equipment and supplies shall be delivered within twenty (20) days after receipt of order. Vendor shall notify the Agency at least seventy-two (72) hours in advance of delivery and/or installation so that necessary arrangements can be made. Vendor shall be responsible for any damages to vehicle or individuals as a result of delivery and installation.
- a) The Vendor shall be solely responsible for the delivery and installation of equipment. Installed equipment shall conform to Section 3.1.2 (Specifications), and equipment shall be ready for use by the installation date(s) specified.
 - b) Installation dates may be changed by mutual consent of the Agency and the Vendor.
 - c) The Agency will use its best efforts to have the installation site(s) prepared in accordance with the Vendor's written minimum site and environmental requirements by the facility readiness date.
 - d) If the equipment is certified to be ready for use prior to the installation date, the Agency, at its option, may elect to use the equipment and change the installation date accordingly.
 - e) The method of shipment shall be consistent with the nature of the machines and hazards of transportation.
 - f) Installation shall be performed in a professional and workmanlike manner and conform to all recommendations of the manufacturer, and good construction and engineering practices.

- g) During the period of installation, the facilities and/or vehicles may be in use by the user. The Vendor shall schedule and coordinate the work with the user to cause the least possible interference with or interruption of the user's activities in and around the facilities and/or vehicles. It is intended that work within the building or vehicles be performed during normal working hours of the user unless otherwise required by the Agency.
 - h) The Vendor shall be completely responsible for any damages caused solely by the Vendor or its agent(s) to the building or vehicle, its contents, or the surrounding grounds as a direct result of the installation of any equipment.
 - i) Upon completion of the work, the Vendor shall clean up and remove all debris etc., which was caused specifically by the Vendor or its agent(s) and shall maintain all exit ways free and clear at all times.
- 15) TITLE: Vendor shall retain all right, title and interest in the equipment and integrated or installed software during the term of the lease; provided, however, that Vendor shall not pledge said property as security for any third party, suffer any lien or attachment of said property, nor otherwise encumber the property in any manner that may compromise the Agency's use of said property. Title to the equipment will be conveyed to the State effective upon Agency's exercise of any available purchase option and payment therefor.
- 16) RISK OF LOSS OR DAMAGE: Risk of loss or damage shall remain with the vendor for the duration of this contract. The Lessee shall be relieved from property risks including: loss or damage to all Leased Item(s) during the periods of transportation, installation, and the Lease Term except when loss or damage is due to the negligent acts of the Lessee. It is the responsibility of the Vendor to insure all equipment.
- 17) PERSONAL PROPERTY: The equipment will remain personal property and shall not be attached to realty so as to change its character to that of a fixture. The Agency shall have no right, title or interest in the equipment outside of the leasehold covered by this Contract.
- 18) WARRANTIES AND REPRESENTATIONS OF THE AGENCY: The Agency represents and warrants to Vendor, and so long as this Contract is in effect or any part of Agency obligations to Vendor remain unfulfilled, the Agency shall continue to warrant at all times that:
- a) The Agency will not change or remove any insignia or lettering which Vendor may place on the equipment to indicate its ownership interest therein unless and until such equipment is acquired by the Agency at the end of the lease in accordance with the applicable provisions of this contract.
 - b) The Agency will keep the equipment free from any lien, encumbrance or legal process and the Agency will discharge such claims as it is responsible for creating or causing.
- 19) MAINTENANCE OF EQUIPMENT:
- a) The Vendor shall keep the equipment in good repair, condition and working order and shall always be responsive to the maintenance requirements of the Agency. For this purpose, the Vendor shall have full and free access to the equipment subject to the security policies and procedures of the Agency. Parts required for repair may be new, reprocessed or recovered. Maintenance of equipment shall be provided on an "on call" basis, Monday through Friday 8:00am to 5:00pm Eastern Time, unless otherwise agreed in a separate maintenance agreement.
 - b) Basic services shall cover repairs and adjustments required as a result of normal wear and tear or defects in materials or workmanship.
 - c) Reserved.
 - d) The Vendor shall specify the preventive maintenance schedule required for each system upon installation. The Agency will allow the Vendor time for preventive maintenance. Preventive maintenance will be performed at a time mutually agreed to by the Agency and the Vendor. Unless otherwise stated, services will be provided during Agency's standard working hours (8:00 a.m. to 5:00 p.m. ET) excluding State holidays.
 - e) All remedial maintenance will be performed promptly after notification of equipment becoming inoperative or otherwise not performing in accordance with published specifications. Vendor shall provide the Agency with a designated point of contact and shall make arrangements to enable its maintenance representative to receive such notification.
 - f) There will be no charge for travel expenses associated with maintenance service under this Contract.
 - g) The Agency agrees to pay, at Vendor's applicable time and material rates then in effect, all charges for maintenance and other service activities, or to pay for loss of or damage to a machine, caused by (1)

use of the machine for other than the purposes for which it was designed, or (2) alterations and attachments not authorized by Vendor or the equipment manufacturer.

- h) If Vendor is unable to maintain the equipment, Vendor will replace the equipment with an identical product or another product of equal or greater capabilities. If a replacement product is provided there will not be an additional charge during the current term.
- 20) **ALTERATIONS AND ATTACHMENTS:** An alteration is defined as any change to a machine which deviates from the manufacturer's physical, mechanical or electrical machine design whether or not additional devices or parts are required. An attachment is defined as the mechanical, electrical or electronic interconnection to a machine that is not supplied by Vendor. An alteration or attachment to a machine may be made only upon approval by the Vendor, which approval shall not be unreasonably withheld. The Agency agrees to pay all charges related to the alteration or attachment that it requires. Any alteration or attachment required by the manufacturer or Vendor shall be made at the Vendor's expense. The Agency further agrees to remove any alteration or attachment and to restore the machine to its normal, unaltered condition prior to its return to Vendor, or upon notice from Vendor that the alteration or attachment creates a safety hazard or renders maintenance of the machine impractical.
- 21) **PRODUCT SUBSTITUTION:** Vendors may submit product substitutions as defined in the Department of Information Technology Terms and Conditions.
- 22) **RELOCATION:** In the event Agency desires to relocate the equipment within its offices or in another vehicle, the Vendor will submit a price quotation not to exceed Vendor's cost for the move or will prepare equipment to be moved by other mutually acceptable means.
- 23) **INSURANCE:** The Agency is responsible for maintaining its insurance coverage..
- 24) **NOTICES:** All notices and other communications made or required to be given under this Contract shall be made in writing and mailed to the Vendor's designated representative and the Department of Transportation Contract Administrator.
- 25) **BUY-OUT:** Vendor shall provide the Agency, within six (6) months before the end of the lease term, costs for all equipment owned by the Vendor. If the Agency decides not to renew the lease, the Agency and Vendor will mutually agree to a schedule within four (4) weeks prior to the end of the lease for the removal of any of the Vendor's provided equipment unless a buyout agreement is executed. Vendor will be responsible for the costs associated with the removal of all Vendor-provided equipment.

ATTACHMENT C: NCDOT AGENCY TERMS AND CONDITIONS

1) Execution of “Participating Addendum” Required between Vendor and Demand Response Operators (“DROs”)

- a) The Agreement resulting from Request for Proposal RFP 54-12008772-CM, issued by the North Carolina Department of Transportation, will establish an agency specific contract for the benefit of the DROs which may elect to purchase Vendor’s Services and Deliverables pursuant to this Agreement. This Agreement does not establish any obligations to purchase Vendor’s Services or Deliverables and no minimum purchase is guaranteed.
 - b) The DROs shall have all the rights and obligations of the “State” and the “Agency”, as appropriate, which are terms used in the Agreement established by RFP 54-12008772-CM.
 - c) The Vendor shall be required to execute a contract with the DROs that elect to purchase Vendor’s Services and Deliverables. This purchase will take the form of a “Participating Addendum” executed between individual DROs and the Vendor. The Participating Addendum shall serve as the contractual ordering document for Service or Deliverables under the Agreement established by RFP 54-12008772-CM. The Participating Addendum supersedes any Vendor Ordering Document. To the extent that any Vendor Order documents are utilized in addition to a Participating Addendum, the terms and provisions of such Vendor Order documents shall have no force or effect, shall be subordinate to the Agreement established by RFP 54-12008772-CM and shall be utilized solely for administrative purposes.
 - d) Payment obligations for the Vendor’s Services are limited to those DROs executing a Participating Addendum with the Vendor. The North Carolina Department of Transportation shall not incur payment obligations on behalf of a DRO pursuant to a Participating Addendum, or otherwise.
 - e) The Vendor and participating DROs shall be responsible for drafting their own Participating Addendum, which shall include at a minimum, the following provisions:
 - i. **“Agreement”** as used herein means the Agreement between the Vendor and the North Carolina Department of Transportation established by Request for Proposal 54-12008772-CM. **“Demand Response Operators”** shall mean the “DROs” as referenced in the Agreement.
 - ii. The DROs executing this Participating Addendum shall have all the rights and obligations of the “State” and the “Agency” in the Agreement, as appropriate.
 - iii. Vendor shall perform, supply and provide Services and Deliverables to the DROs based upon the same requirements, specifications, conditions, and terms set forth in the Agreement, whose documents are comprised of, in order of precedence, as follows: the Best and Final Offers to RFP 54-12008772-CM, if any; Clarifications to RFP 54-12008772-CM, if any; Addenda to RFP 54-12008772-CM, if any; RFP 54-12008772-CM; and the agreed portions of the awarded Vendor’s offer. These documents are incorporated by reference into this “Participating Addendum.”
 - iv. If the Vendor and the North Carolina Department of Transportation execute Amendment(s) to the Agreement, then the Vendor shall supply and provide Services and Deliverables to the DROs in accordance with such Amendment. The order of precedence for such Amendment among the documents comprising the Agreement shall be as set forth in the Amendment and the Amendment shall be incorporated by reference into this Participating Addendum.
 - v. This Participating Addendum shall not be construed to amend the Agreement. No changes modifying or supplementing the requirements, specifications, conditions, terms, and pricing set forth in the Agreement are permitted in the Participating Addendum. Any such language is void and of no effect.
 - vi. The DROs will be responsible for acceptance of the Services or Deliverables and for payment for Services or Deliverables, including retainage of payment, in accordance with the applicable terms and conditions of the Agreement. *(The DROs should refer to RFP 54-12008772-CM Attachment B, North Carolina Department of Information Technology Terms and Conditions (“NCDIT T&Cs”) Section 3, Paragraphs 6 and 15.)*
 - vii. The DROs will be responsible for notifying the Vendor if Services fail to meet Service Level Availabilities or Support Service response times as set forth in the *NCDIT T&Cs Section 3, Paragraph 4*, or in a Service Level Agreement. The DROs will also be responsible for notifying the Vendor in the event that Services or Deliverables fail to conform to any material requirements of the Agreement. In addition to notifying the Vendor of the foregoing, the DROs will also notify the North Carolina Department of Transportation Contract Administrator. *(The DROs should refer to RFP 54-12008772-CM Attachment B, NCDIT T&Cs, including but not limited to Section 1, Paragraphs 9, 10, 19 and 21, and Section 3, Paragraphs 2, 4, 9, 10, and 18)*
- 2) **Performance of Services and Deliverables:** Vendor shall be responsible for providing all labor, materials, hardware, and software required for performance of Services pursuant to the Agreement.
- i. Deliverables: The Vendor shall work with the DROs and NCDOT to determine acceptable delivery/review timeframes for all DRO-owned deliverables/activities. The Vendor shall develop and maintain a Master Program

Schedule (MPS) identifying all program activities, deliverables, and key milestones with expected and actual completion dates. The Vendor shall provide a Change Management Plan for review and approval by the DROs and NCDOT. The Vendor shall provide their standard Quality Assurance and Quality Control policies and procedures which shall define methods for designing for, achieving, and maintaining quality. The Vendor shall maintain an electronic Master Issues List (MIL) to track and manage project issues and action items. The Vendor shall develop and submit a System Implementation Plan (SIP) to be approved by the DROs that purchase a system. The Vendor shall be responsible for accurately migrating existing customer records to the new customer database and provide a Customer Data Migration (CDM) plan.

- ii. Demand Response Software: The Vendor will provide scheduling solution Demand Response Software that includes standard features and functions necessary to operate demand response operations, including: Client management; reservations and scheduling; dispatching and routing; fare payment integration; reporting and data analytics; and customer self-service applications for reservations, profile management, and trip history.
- iii. Customer Applications: The Vendor shall provide customer-facing applications and tools needed to schedule and manage rides, manage their Client profile, facilitate customer self-service, and alert riders when their vehicle is approaching. Applications to be provided include, but are not limited to, mobile applications and website user interfaces, self-service Customer website, and a phone notification system with interactive voice response system.
- iv. Reporting: The system shall include a reporting module that meets all National Transit Database and Federal Transit Administration reporting requirements and allows for the quick analysis of performance and service metrics.
- v. Testing: The Vendor shall provide all labor, materials, hardware, and software required for system testing. The Vendor shall prepare and submit a comprehensive testing plan for review and approval by the Agencies. All tests shall be documented by the Vendor and monitored and signed off by the Agencies or their representatives and the Vendor. The Vendor shall prepare and submit a comprehensive report, testing data, and other testing information from any testing performed on the system and provide such reports to the Agencies within ten (10) business days following the completion of the testing. The Vendor shall identify and implement remedial action at no cost to the Agencies if an applicable system component does not meet the specified performance requirements during system testing.
- vi. Ongoing System Operations and Maintenance: The Vendor shall collaborate with the DROs on the operations and maintenance, warranty, financial services, and monitoring of the System.
- vii. The Services and Deliverables listed above are not exhaustive of all specifications to be performed by the Vendor. The Vendor shall perform Services and Deliverables, including but not limited to the above, in conformity with the specifications described in Sec. 3.4 of this RFP and in conformity with the specifications agreed upon with the contracting DROs.

3) Contract Administration.

- i. **Contract Administrator:** NCDOT Contract Administrator will monitor Vendor performance as necessary over the duration of the contract with respect to satisfactory fulfillment of all contractual obligations. Performance assessments may comprise: requirement and specification compliance of deliverables, adequate servicing of contract in any and all aspects which the contract has stipulated, maintaining current State pricing on the web site, and prompt, complete and satisfactory resolution of any contractual discrepancies. Vendor shall provide the NCDOT Contract Administrator with reports on contract administration activities, including but not limited to those specifications described under Section 3.4 of the RFP, and functions required by the DROs' contract(s).
- ii. **Purchase Activity Report:** Vendor shall provide to the NCDOT Contract Administrator reports of sales achieved under the contract. These reports shall be provided quarterly, within thirty (30) calendar days from the last day of the reporting quarter. Reports shall include the name of the DRO and the Core and Advanced features procured by the DRO, included but not limited to those listed under Section 3.4 of the RFP.
- iii. **Customer Support Report:** Vendor shall provide to the NCDOT Contract Administrator reports of customer support achieved under the contract, within thirty (30) calendar days from the last day of the reporting quarter. Reports shall include the following data elements at a minimum:
 - 1. DRO Name and Ticket Number
 - 2. Total number of tickets submitted per month
 - 3. Total number of tickets resolved per month
 - 4. Total number of open tickets per month
- iv. **Service Level Report:** Vendor shall provide to the NCDOT Contract Administrator a report of Service Level Agreements under the contract where Vendor's performance fell below the minimum threshold. These reports shall be provided quarterly, within thirty (30) calendar days from the last day of the reporting quarter. Reports shall include the following data elements at a minimum:
 - 1. DRO Name and Number

2. Service Level Agreement Actual Performance
3. Number of Instances Below Minimum Threshold During Reporting Period
4. Explanation for below Minimum Threshold Performance
5. Vendor's Plan to Address below Minimum Threshold Performance

ATTACHMENT D: DESCRIPTION OF OFFEROR

Provide the information about the offeror.

Offeror's full name	
Offeror's address	
Offeror's telephone number	
Ownership	☐ Public ☐ Partnership ☐ Subsidiary ☐ Other (specify)
Date established	
If incorporated, State of incorporation.	
North Carolina Secretary of State Registration Number, if currently registered	
Number of full-time employees on January 1 st for the last three years or for the duration that the Vendor has been in business, whichever is less.	
Offeror's Contact for Clarification of offer: Contact's name Title Email address and Telephone Number	
Offeror's Contact for Negotiation of offer: Contact's name Title Email address and Telephone Number	
If Contract is Awarded, Offeror's Contact for Contractual Issues: Contact's name Title Email address and Telephone Number	
If Contract is Awarded, Offeror's Contact for Technical Issues: Contact's name Title Email address and Telephone Number	

HISTORICALLY UNDERUTILIZED BUSINESSES

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) of the categories. Also included as HUBs are disabled business enterprises and non-profit work centers for the blind and severely disabled.”

Pursuant to N.C.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, disabled, disabled business enterprises and non-profit work centers for the blind and severely disabled. This includes utilizing subcontractors to perform the required functions in this RFP. Contact the North Carolina Office of historically Underutilized Businesses at 919-807-2330 with questions concerning NC HUB certification. <http://ncadmin.nc.gov/businesses/hub>

Respond to the questions below.

1. Is Vendor a Historically Underutilized Business? ☐ Yes ☐ No
2. Is Vendor Certified with North Carolina as a Historically Underutilized Business? ☐ Yes ☐ No

If so, state HUB classification: _____

ATTACHMENT E: COST FORM RESERVED

ATTACHMENT F: VENDOR CERTIFICATION FORM

1) ELIGIBLE VENDOR

The Vendor certifies that in accordance with N.C.G.S. §143-59.1(b), Vendor is not an ineligible vendor as set forth in N.C.G.S. §143-59.1 (a).

The Vendor acknowledges that, to the extent the awarded contract involves the creation, research, investigation or generation of a future RFP or other solicitation; the Vendor will be precluded from bidding on the subsequent RFP or other solicitation and from serving as a subcontractor to an awarded vendor.

The State reserves the right to disqualify any bidder if the State determines that the bidder has used its position (whether as an incumbent Vendor, or as a subcontractor hired to assist with the RFP development, or as a Vendor offering free assistance) to gain a competitive advantage on the RFP or other solicitation.

2) CONFLICT OF INTEREST

Applicable standards may include: N.C.G.S. §§143B-1352 and 143B-1353, 14-234, and 133-32. The Vendor shall not knowingly employ, during the period of the Agreement, nor in the preparation of any response to this solicitation, any personnel who are, or have been, employed by a Vendor also in the employ of the State and who are providing Services involving, or similar to, the scope and nature of this solicitation or the resulting contract.

3) E-VERIFY

Pursuant to N.C.G.S. § 143B-1350(k), the State shall not enter into a contract unless the awarded Vendor and each of its subcontractors comply with the E-Verify requirements of N.C.G.S. Chapter 64, Article 2. Vendors are directed to review the foregoing laws. Vendors claiming exceptions or exclusions under Chapter 64 must identify the legal basis for such claims and certify compliance with federal law regarding registration of aliens including 8 USC 1373 and 8 USC 1324a. Any awarded Vendor must submit a certification of compliance with E-Verify to the awarding agency, and on a periodic basis thereafter as may be required by the State.

4) CERTIFICATE TO TRANSACT BUSINESS IN NORTH CAROLINA

As a condition of contract award, awarded Vendor shall have registered its business with the North Carolina Secretary of State and shall maintain such registration throughout the term of the Contract.

Signature: _____ Date: _____

Printed Name: _____ Title: _____

ATTACHMENT G: LOCATION OF WORKERS UTILIZED BY VENDOR

In accordance with N.C.G.S. §143B-1361(b), Vendor must identify how it intends to utilize resources or workers located outside the U.S., and the countries or cities where such are located. The State will evaluate additional risks, costs, and other factors associated with the Vendor's utilization of resources or workers prior to making an award for any such Vendor's offer. The Vendor shall provide the following:

- a) The location of work to be performed by the Vendor's employees, subcontractors, or other persons, and whether any work will be performed outside the United States. The Vendor shall provide notice of any changes in such work locations if the changes result in performing work outside of the United States.
- b) Any Vendor or subcontractor providing support or maintenance Services for software, call or contact center Services shall disclose the location from which the call or contact center Services are being provided upon request.

Will Vendor perform any work outside of the United States?

☐ YES ☐ NO

ATTACHMENT H: REFERENCES

REFERENCES:

The Vendor shall provide three (3) references of customers utilizing the proposed solution fully implemented in a setting similar to this solicitation's scope of work. References within like North Carolina communities / industries are encouraged.

The Vendor should have implemented the respective proposed service within the last three (3) years. Customer references whose business processes and data needs are similar to those performed by the Agency needing this solution in terms of functionality, complexity, and transaction volume are encouraged.

For each reference, the Vendor shall provide the following information:

- a. Customer name.
- b. Customer address.
- c. Current telephone number of a customer employee most familiar with the offered solution implementation.
- d. Customer email address
- e. Time period over which each offered solution implementation was completed.
- f. Brief summary of the offered solution implementation.
- g. List of offered solution products installed and operational.
- h. Number of vendor or technical staff supporting, maintaining and managing the offered solution
- i. Number of end users supported by the offered solution.
- j. Number of sites supported by the offered solution.

ATTACHMENT I: FINANCIAL REVIEW FORM

Vendor shall review the Financial Review Form, provide responses in the gray-shaded boxes, and submit the completed Form as an Excel file with its offer. Vendor shall not add or delete rows or columns in the Form, or change the order of the rows or column in the file.

1. Vendor Name:
2. Company structure for tax purposes (C Corp, S Corp, LLC, LLP, etc.):
3. Have you been in business for more than three years? ☐ Yes ☐ No
4. Have you filed for bankruptcy in the past three years? ☐ Yes ☐ No
5. In the past three years, has your auditor issued any notification letters addressing significant issues? If yes, please explain and provide a copy of the notification letters. ☐ Yes ☐ No
6. Are the financial figures below based on audited financial statements? ☐ Yes ☐ No
7. Start Date of financial statements:
End Date of financial statements:
8. Provide a link to annual reports with financial statements and management discussion for the past three complete fiscal years:
9. Provide the following information for the past three complete fiscal years:

	Latest complete fiscal year minus two years	Latest complete fiscal year minus one year	Latest complete fiscal year
BALANCE SHEET DATA			
a. Cash and Temporary Investments			
b. Accounts Receivable (beginning of year)			
c. Accounts Receivable (end of year)			
d. Average Account Receivable for the Year (calculated)			
e. Inventory (beginning of year)			
f. Inventory (end of year)			
g. Average Inventory for the Year (calculated)			
h. Current Assets			
i. Current Liabilities			
j. Total Liabilities			
k. Total Stockholders' Equity (beginning of year)			
l. Total Stockholders' Equity (end of year)			
m. Average Stockholders' Equity during the year (calculated)			
INCOME STATEMENT DATA			
a. Net Sales			
b. Cost of Goods Sold (COGS)			
c. Gross Profit (Net Sales minus COGS) (calculated)			
d. Interest Expense for the Year			
e. Net Income after Tax			
f. Earnings for the Year before Interest & Income Tax Expense			
STATEMENT OF CASH FLOWS			
a. Cash Flow provided by Operating Activities			
b. Capital Expenditures (property, plant, equipment)			

Appendix A

The following table represents the Agencies offering demand response services within North Carolina. This information was gathered from the National Transit Database (NTD) for the year 2019.

Table 1 - State of North Carolina Fleet

NTD ID	Agency	City	Service Area (Square Miles)	Demand Response (DR) Vehicles 2019	Demand Transportation (DT) Vehicles 2019	All Vehicles 2019	DR/DT Unlinked Passenger Trips 2019	All Unlinked Passenger Trips 2019
40005	City of Asheville	Asheville	45			17	-	1,978,720
40006	Cape Fear Public Transportation Authority	Wilmington	200	17		44	59,594	1,258,731
40007	City of Raleigh	Raleigh	125		224	295	493,467	5,764,895
40008	City of Charlotte North Carolina	Charlotte	675	73		411	256,172	24,278,653
40009	City of Fayetteville	Fayetteville	95	15		37	63,423	1,452,842
40010	City of Gastonia	Gastonia	45	3		9	5,115	174,783
40011	City of High Point	High Point	95	7		19	19,882	997,088
40012	City of Winston-Salem	Winston-Salem	134	33		71	225,086	2,696,733
40051	Town of Chapel Hill	Chapel Hill	62	14		101	68,200	6,641,553
40087	City of Durham	Durham	93	44		91	202,538	6,765,036
40093	City of Greensboro	Greensboro	127	45		86	274,806	3,465,962
40095	Greenville Area Transit	Greenville	35	5		11	11,999	525,654
40096	City of Rocky Mount	Rocky Mount	52	19		26	133,738	406,074

NTD ID	Agency	City	Service Area (Square Miles)	Demand Response (DR) Vehicles 2019	Demand Transportat ion (DT) Vehicles 2019	All Vehicles 2019	DR/DT Unlinked Passenger Trips 2019	All Unlinked Passenger Trips 2019
40108	Research Triangle Regional Public Transportation Authority	Research Triangle Park	1,665	18		164	65,598	1,883,926
40131	Davidson County	Lexington	567	21		27	34,490	173,817
40132	Goldsboro-Wayne Transportation Authority	Goldsboro	35	16		21	66,748	273,475
40133	Guilford County	Greensboro	52	21		21	44,918	44,918
40143	Town of Cary	Cary	59	19		29	43,316	268,577
40147	North Carolina State University	Raleigh	9			34		3,362,828
40166	City of Jacksonville	Jacksonville	47	2		11	3,526	124,621
40167	City of Concord	Concord	78	4		12	11,723	439,928
40172	Western Piedmont Regional Transit Authority	Conover	1,665	43		53	103,773	244,326
40173	Piedmont Authority for Regional Transportation	Greensboro	2,500			84		686,982
40205	The County of Iredell	Statesville	576	23		27	76,696	132,434
40209	Hoke County	Raeford	392	11		11	55,795	55,795
40210	Craven County	New Bern	1,803	16		18	48,899	63,146

NTD ID	Agency	City	Service Area (Square Miles)	Demand Response (DR) Vehicles 2019	Demand Transportat ion (DT) Vehicles 2019	All Vehicles 2019	DR/DT Unlinked Passenger Trips 2019	All Unlinked Passenger Trips 2019
40214	Cabarrus County	Kannapolis	365	27		27	75,295	75,295
40215	Union County	Monroe	640	25		25	79,696	79,696
40217	Rowan County	Salisbury	524	20		22	71,679	85,430
40220	Pitt County	Greenville	652	12		12	49,448	49,448
40221	Gaston County	Gastonia	364	21		22	58,862	67,899
40222	Wake County	Raleigh	861	60		60	196,041	196,041
40223	Cumberland County	Fayetteville	658	12		12	32,036	32,036
40224	Buncombe County	Asheville	657	31		34	115,662	145,386
40225	Alamance County Transportation Authority	Burlington	435	27		27	72,220	72,220
40226	Mountain Projects, Inc.	Waynesville	546	20		20	30,577	30,577
40227	Onslow United Transit System	Jacksonville	795	17		17	82,381	82,381
40228	Mecklenburg County	Charlotte	31	22	85	107	410,864	410,864
40229	Henderson County	Hendersonville	39	1		4	3,125	74,895
40231	Orange County	Hillsborough	401	7		10	52,693	71,633
40233	City of Salisbury	Salisbury	23			3	-	141,514
40252	City Of Burlington	Burlington	26	2		7	5,091	103,433
44913	Eastern Band of Cherokee Indians	Cherokee	75	10		19	11,304	97,137

NTD ID	Agency	City	Service Area (Square Miles)	Demand Response (DR) Vehicles 2019	Demand Transportat ion (DT) Vehicles 2019	All Vehicles 2019	DR/DT Unlinked Passenger Trips 2019	All Unlinked Passenger Trips 2019
4R06	North Carolina Department of Transportation	Raleigh	-					
4R06-40913	Graham County	Robbinsville	-	8		8	20,377	20,377
4R06-40915	Duplin County	Kenansville	-	11		11	38,870	38,870
4R06-40918	Wilkes Transportation Authority	North Wilkesboro	-	17		19	54,013	62,508
4R06-40921	Randolph County Senior Adult Association Inc.	Asheboro	-	18	2	20	58,940	58,940
4R06-40929	Rockingham County Council on Aging	Reidsville	-	15		20	54,059	89,051
4R06-40933	Sampson County	Clinton	-	15		15	52,787	52,787
4R06-40934	Polk County Transportation Authority	Columbus	-	11		11	39,662	39,662
4R06-40938	Pender Adult Services, Inc.	Burgaw	-	8		8	21,664	21,664
4R06-40942	Lincoln County	Lincolnton	-	15		17	42,579	47,248
4R06-40943	Johnston Co. Council on Aging Inc.	Smithfield	-	25		25	93,489	93,489
4R06-40944	Carteret County	Morehead City	-	11		12	57,294	66,733
4R06-40947	Gates County	Gatesville	-	6		6	21,236	21,236

NTD ID	Agency	City	Service Area (Square Miles)	Demand Response (DR) Vehicles 2019	Demand Transportation (DT) Vehicles 2019	All Vehicles 2019	DR/DT Unlinked Passenger Trips 2019	All Unlinked Passenger Trips 2019
4R06-40959	Washington County	Plymouth	-	5		5	13,444	13,444
4R06-40976	Madison County Transportation Authority	Marshall	-	11		11	21,526	21,526
4R06-40983	Rutherford County	Spindale	-	17		19	43,467	56,955
4R06-40984	Western Carolina Community Action	Hendersonville	-	8		8	33,777	33,777
4R06-40990	Martin County	Williamston	-	8		8	26,507	26,507
4R06-40996	Caswell County	Yanceyville	-	9		9	22,935	22,935
4R06-41004	Chatham Transit Network	Pittsboro	-	21		24	88,832	105,393
4R06-41010	Person County	Roxboro	-	10		11	47,955	50,360
4R06-41025	Trolley's Inc	Charlotte	1,050			-		
4R06-41028	Scotland County	Laurinburg	-	3		5	18,260	23,626
4R06-41029	Ashe County Transportation Authority Inc	West Jefferson	-	17		19	48,697	69,999
4R06-41031	Greene County	Snow Hill	-	6		6	16,009	16,009
4R06-41034	Beaufort County Developmental Center, Inc.	Washington	-	11		11	31,010	31,010

NTD ID	Agency	City	Service Area (Square Miles)	Demand Response (DR) Vehicles 2019	Demand Transportation (DT) Vehicles 2019	All Vehicles 2019	DR/DT Unlinked Passenger Trips 2019	All Unlinked Passenger Trips 2019
4R06-41038	Hyde County Private Non-Profit Transp. Corp. Inc.	Swan Quarter	-	7		7	21,279	21,279
4R06-41043	Mitchell County Transportation Authority	Bakersville	-	12		12	53,196	53,196
4R06-41045	Dare County	Manteo	-	8		8	17,697	17,697
4R06-41048	Kerr Area Transportation Authority	Henderson	-	45		47	146,392	177,788
4R06-41058	Brunswick Transit System Inc.	Bolivia	-	13		13	48,216	48,216
4R06-41064	Moore County	Carthage	-	8		10	28,361	31,979
4R06-41066	Swain County Focal Point on Aging Inc	Bryson City	-	4		5	6,657	17,487
4R06-41069	Cherokee County	Murphy	-	7		8	25,220	35,976
4R06-41082	Transp. Administration of Cleveland County. Inc	Shelby	-	18		19	59,342	63,660
4R06-41111	Albemarle Regional Health Services	Elizabeth City	-	22		22	104,087	104,087
4R06-41113	Anson County	Wadesboro	-	11		11	29,649	29,649
4R06-41115	Transylvania County	Brevard	-	5	1	6	26,459	26,459

NTD ID	Agency	City	Service Area (Square Miles)	Demand Response (DR) Vehicles 2019	Demand Transportat ion (DT) Vehicles 2019	All Vehicles 2019	DR/DT Unlinked Passenger Trips 2019	All Unlinked Passenger Trips 2019
4R06-41119	Harnett County	Lillington	-	21		21	63,567	63,567
4R06-41124	Richmond Interagency Transportation Inc.	Rockingham	-	12		12	36,664	36,664
4R06-41127	AppalCart	Boone	-	11		33	50,010	1,820,412
4R06-41130	Avery County Transportation Authority	Newland	-	11		11	25,026	25,026
4R06-41131	Choanoke Public Transportation Authority	Rich Square	-	9		9	52,703	52,703
4R06-41134	Yadkin Valley Economic Development District, Inc.	Boonville	-	35		38	94,909	104,990
4R06-41137	Alleghany County	Sparta	-	7		7	17,884	17,884
4R06-41143	Yancey County Transportation Authority	Burnsville	-	7		7	24,079	24,079
4R06-41150	Lee County	Sanford	-	14		14	64,194	64,194
4R06-41160	Clay County	Hayesville	-	9		9	18,485	18,485
4R06-41162	Lenoir County	Kinston	-	15		15	75,251	75,251
4R06-41166	Bladen County	Elizabethtown	-	5		5	21,605	21,605

NTD ID	Agency	City	Service Area (Square Miles)	Demand Response (DR) Vehicles 2019	Demand Transportat ion (DT) Vehicles 2019	All Vehicles 2019	DR/DT Unlinked Passenger Trips 2019	All Unlinked Passenger Trips 2019
4R06-41167	Jackson County	Sylva	-	8		9	18,663	26,667
4R06-41172	Columbus County	Whiteville	-	12		12	31,031	31,031
4R06-41181	Stanly County	Albemarle	-	11		11	49,644	49,644
4R06-41187	Robeson County	Lumberton	-	11		11	58,839	58,839
4R06-41191	Macon County	Franklin	-	9		11	32,552	46,298
4R06-44931	City of Wilson, NC	Wilson	-	13		18	57,855	
4R06-44947	County of Hyde	Swans Quarter	-			2		
4R06-44958	North Carolina Department of Transportation - - Ferry Division	Havelock	-			1		

Source: National Transit Database (2019)

Appendix B

The following table represents the number of Agencies by service area represented as square miles. This information was gathered from the National Transit Database (NTD) for the year 2019.

Table 2 – Number of Agencies in North Carolina based on Service Area

Service Area (sq. miles)	Agencies
0 to 100	22
101 to 500	37
501 to 1,000	31
1001 to 3,000	11

Source: National Transit Database (2019)

ATTACHMENT J: SECURITY EVALUATION FORM (ATTACHED)

roles

Transit Software Solution
54-12008772-CM
[Add Date]

SECURITY EVALUATION FORM (SEF)
Version 1.6

Prepared for

North Carolina Department of Information Technology - Transportation



Executive Summary

The State of North Carolina Statewide Information Security Manual (SISM) was established by the State CIO under authority N.C.G.S § 143B-1375, 143B-1376, and 143B-1378 to identify and implement information technology security controls. The policies, guidelines, and standards established by the SISM apply to all [Information Environments](#) that store, process, transmit, and/or can impact the security of NCDOT/DMV data.

STATUTORY LAW

https://www.ncleg.gov/EnactedLegislation/Statutes/PDF/BySection/Chapter_143B/GS_143B-1375.pdf

https://www.ncleg.gov/EnactedLegislation/Statutes/PDF/BySection/Chapter_143B/GS_143B-1376.pdf

https://www.ncleg.gov/EnactedLegislation/Statutes/PDF/BySection/Chapter_143B/GS_143B-1378.pdf

POLICIES, GUIDELINES AND STANDARDS

<https://it.nc.gov/resources/cybersecurity-and-risk-management/esrmo-initiatives/statewide-information-security/>

<https://it.nc.gov/documents/statewide-data-classification-and-handling-policy>

<https://archives.ncdcr.gov/government/state-government-agencies/functional-schedule>

GLOSSARY OF INFORMATION TECHNOLOGY TERMS

<https://it.nc.gov/documents/statewide-glossary-information-technology-terms>

<https://csrc.nist.gov/glossary>

PURPOSE

The Security Evaluation Form (SEF) and its underlying assessment activities serve to provide NCDOT with an understanding of the third-party contractor's [security capabilities](#) relevant to the third-party contractor's access to NCDOT's [information resources](#). The SEF is unlike a full [security assessment](#) in that the SEF typically does not require third-parties to submit technical evidence (e.g., screenshots, logs, packet captures, security scans, configuration exports, test results, etc.) to validate their stated security capabilities. This is important to understand because the third-party's overall security capabilities are typically conceptual from NCDOT's perspective and cannot be fully assessed and verified in a manner consistent with the Statewide Information Security Manual (SISM). For this reason, the outcome of this security evaluation is largely dependent on the third-party contractor's ability to understand the security requirements established by NCDOT and provide meaningful and comprehensive responses to the questions in the SEF and throughout the assessment process.

SECURITY CONTROLS AND CAPABILITIES

The third-party contractor's responses throughout the security evaluation are used to assess the third-party contractor's overall security capabilities. Security capabilities are defined and evaluated by bringing together specific sets of security controls derived from the appropriately tailored baselines that together produce the required capabilities. The SISM establishes the security controls and capabilities that must be satisfied before [information systems](#) are permitted access to NCDOT's data.

APPROACH AND USE OF THIS DOCUMENT

The security evaluation begins when the third-party contractor returns their completed SEF and supporting documentation to NCDOT for review. In addition to the third-party contractor's responses to the security questions, they may be asked to provide copies of their applicable security program documents including policies, standards, procedures, plans, dataflows, network architecture diagrams, third-party risk assessment reports, etc.

OUTCOMES

Submission of this report by the third-party does not guarantee a state-ready designation, nor does it guarantee that the North Carolina Department of Transportation (NCDOT) will procure services from the third-party.

Third-Party's System Information

Third-Party Name:
System/Service Name:
Service Model: (e.g. IaaS, PaaS, SaaS)
FIPS PUB 199 System Security Level: (Moderate)
Fully Operational as of: Enter the date the system became fully operational.
Number of Customers (State/Others): Enter # of customers / # of other customers
Deployment Model: Is the service a Public Cloud, Government-Only Cloud, Federal Government-Only Cloud, or Other? If other, please describe.
System Functionality: Briefly describe the functionality of the system and service being provided.

Information Security Questionnaire

1. The [Statewide Information Security Manual \(SISM\)](#) was established by the State CIO under authority N.C.G.S § 143B-1375, 143B-1376, and 143B-1378. The policies and standards defined in the SISM apply to all systems and services that store, process, transmit, and/or could impact the security of NCDOT Data. It is important to understand a SOC 2 Type II (or equivalent) only indicates the third-party contractor's policies, standards, and procedures were assessed as being compliant with generic industry accepted practices. A SOC 2 Type II (or equivalent) does not certify the third-party contractor's services as being compliant with the NCDOT's information security policies, guidelines, and standards (e.g., account lockout thresholds, employment background checks (local/State/Federal), minimum password requirements, data classification, change management, etc.).

2. The term **Personally Identifiable Information (PII)** refers to information that can be used to distinguish or trace an individual's identity, alone or when combined with other personal or identifying information which is linked or linkable to a specific individual, such as name, date and place of birth, employer, home and work addresses, email address, phone number, mother's maiden name, etc.

The third-party contractor's services will process **Restricted** and/or **Highly Restricted** NCDOT data that could be used to distinguish or trace an individual's identity.

3. Describe the third-party contractor's methodology for acknowledging and maintaining compliance with NCDOT's information security policies, guidelines, and standards.
- i. Is the third-party contractor's methodology documented in a policy document?
 - ii. Does the methodology extend to all third parties supporting the third-party contractor's services? Please explain in detail.

Third-party provides a comprehensive response here. Please review and understand the SISM requirements before responding.

4. The **System Security Plan (SSP)** provides a summary of the security requirements of the [information system\(s\)](#) and describes the controls for meeting those requirements and defined responsibilities and expected behavior of all individuals who access the system. The SSP also contains or references other key security-related documents for the information system such as a risk assessment, Corrective Actions Plan (CAP), accreditation documentation, privacy threshold and impact assessment, contingency plan, configuration management plan, security configuration checklists and system interconnection agreements as appropriate.

- i. Provide a System Security Plan (SSP) that addresses all applicable aspects of the third-party contractor's proposed services and solution. Linked below is a copy of the State's SSP template.

<https://it.nc.gov/documents/system-security-plan-template>

If the third-party does not have an SSP, provides comprehensive response explaining how the third-party's activities support the intent of the SSP. Please review the SSP template and understand the SISM requirements before responding.

5. **Data Flow Diagrams:** The purpose of a data flow diagram is to graphically represent data in all forms as it traverses systems including what changes the data and where it is stored at any given time. Examples of what could be represented in this

Provide a data flow diagram(s) that include all information systems that store, process, and/or transmit NCDOT/DMV data.

diagram include data elements (name, address, phone, etc.), data format, encryption and compression, authentication, permissions, session, and registration (HTTP, SNMP, FTP, IRC, SSH, SSL, TLS, DES, 3-DES, AES, SSH, IMAP, RPC, SQL, NFS, API's, Sockets and WinSock). i. Provide data flow diagram(s) of the third-party contractor's services. Attached is an example high-level data flow diagram. NCDIT-T_High-Level _Data_Flow_Diagram	<i>Please review the attachment and understand the intent of a data flow diagram before responding.</i>
6. Network Architecture Diagrams: The purpose of network architecture diagrams is to graphically represent the structure of a network and shows the components that make up a network and how they interact, including routers, devices, hubs, firewalls, servers, workstations, printer, etc. i. Provide network architecture diagrams of the third-party contractor's services.	<i>Provide network architecture diagrams.</i>
7. Does the third-party contractor have an external risk assessment report that demonstrates the third-party's compliance to industry accepted guidelines (e.g., SOC 2 Type II, ISO 27001, FedRAMP, etc.) that addresses the scope of their proposed services? i. Provide a copy of the third-party contractor's external risk assessment report. ii. Describe in detail how the third-party contractor will ensure all external entities supporting the third-party's proposed services receive and maintain SOC 2 Type II (or equivalent) certifications for their roles in supporting the third-party contractor's proposed services and solution. iii. Does the third-party contractor have and maintain formal agreements with external entities, such as for maintenance and service support for the third-party contractor's service? NOTE: <i>It is important to understand a SOC 2 Type II (or equivalent) only indicates the third-party's policies, standards, and procedures were assessed as being compliant with generic industry accepted guidelines. A SOC 2 Type II (or equivalent) does not certify the third-party's services as being compliant with the State's information security policies, guidelines, and standards (e.g., account lockout thresholds, employment background checks (local/State/Federal), minimum password requirements, data classification, change management, etc.). Third-party contractor must periodically perform formal security crosswalks between the third-party contractor's policies/standards and the State's policies/standards to ensure the proper security controls are in place to protect State data.</i>	<i>Provide a copy of the third-party's risk assessment reports and provide responses to the questions in Section 7.</i> <i>Please respond to sections i – iii.</i>

(References: N.C.G.S § 143B-1375, § 143B-1378; SISM PS-7, CA-7, RA-3).	
8. Describe in detail how the third-party contractor's proposed services support NCDOT's Multi-factor authentication (MFA) policy, guidelines, and standards. Specifically speak to Remote Access (SISM AC-17), and Nonlocal Maintenance (SISM MA-4). i. Do the third-party contractor's services enforce MFA for all administrative functions? Explain in detail. ii. Do the third-party contractor's services enforce MFA for all remote access to information systems that process State data? Explain in detail.	<i>Third-party provides a comprehensive response here. Please review and understand the SISM requirements before responding.</i> <i>Please respond to sections i and ii.</i>
9. The North Carolina Identity Management Service (NCID) is the standard identity and access management platform provided by the Department of Information Technology. NCID is a web-based application that provides a secure environment for state agency, local government, business, and individual users to log in and gain access to real-time resources, such as customer-based applications and information retrieval. i. Are the third-party contractor's proposed services capable of integrating with the State's NCID solution? ii. Describe in detail how the third-party contractor's services integrate with the North Carolina Identity (NCID) Service. References: https://it.nc.gov/ncid/ https://it.nc.gov/ncid-frequently-asked-questions https://it.nc.gov/ncid-application-integration-requirements-airn-saml-based	<i>Third-party provides a comprehensive response here. Please review and understand the SISM requirements before responding.</i>
10. Provide a list of all entities that support the third-party contractor's services along with a detailed description of their roles and responsibilities.	<i>Third-party provides a comprehensive response here. Please review and understand the SISM requirements before responding.</i>
11. All operating systems (OS) AND major application software components (e.g., Microsoft SQL, Apache Tomcat, Oracle Weblogic, etc.), must NOT be past N-1. Applications which are not operating on the most recent platform MUST have a roadmap to upgrade with a State approved timeline. i. Do the third-party contractor's proposed services support the State's N-1 requirement?	<i>Third-party provides a comprehensive response here. Please review and understand the SISM requirements before responding.</i>

ii. Explain in detail how the third-party maintains the N-1 standard.	
12. Does the third-party contractor's proposed services meet Federal Records Management Requirements, including the ability to support record holds, National Archives and Records Administration (NARA) requirements, and Freedom of Information Act (FOIA) requirements?	<i>Third-party provides a comprehensive response here. Please review and understand the SISM requirements before responding.</i>
13. Does the third-party contractor's services handle, store, process and/or transmit State data outside the physical boundaries of the United States? If yes, explain in detail.	<i>Third-party provides a comprehensive response here. Please review and understand the SISM requirements before responding.</i>
14. Are FIPS 140-2 Validated or National Security Agency (NSA)-Approved cryptographic modules consistently used where cryptography is required? Explain in detail. The Statewide Data Classification and Handling Policy is located here: https://it.nc.gov/documents/statewide-policies/statewide-data-classification-handling-policy/open The Statewide Media Protection Policy is located here: https://files.nc.gov/ncdit/documents/Statewide_Policies/SCIO_Media_Protection.pdf	<i>Third-party provides a comprehensive response here. Please review and understand the SISM requirements before responding.</i>
15. Do the third-party contractor's services encrypt State data in-transit and at rest? Explain in detail.	<i>Third-party provides a comprehensive response here. Please review and understand the SISM requirements before responding.</i>
16. Do any information system components used by the third-party contractor to store, process, transmit, and/or can impact the security and privacy of NCDOT data use deprecated transport layer protocols (e.g., SSL, TLS 1.0, TLS 1.1)? 1.1)? Explain in detail.	<i>Third-party provides a comprehensive response here. Please review and understand the SISM requirements before responding.</i>
17. State requires minimum 8-character complex passwords (Upper, Lower, Special Character and Numerical)? i. Explain in detail how the third-party's services enforce the State's password policy and standards (SISM AC , IA , MA , SC , SI , SA).	<i>Third-party provides a comprehensive response here. Please review and understand the SISM requirements before responding.</i>
18. Explain in detail how the third-party contractor's services detect, contain, and eradicate malicious software? [SISM SI-3 , SISM SI-3 , SISM MA-3]	<i>Third-party provides a comprehensive response here. Please review and understand the SISM requirements before responding.</i>
19. Explain in detail how the third-party contractor's services store audit data in a tamper-resistant manner and meets chain of custody and e-discovery requirements? [SISM AU-7 , SISM AU-9]	<i>Third-party provides a comprehensive response here. Please review and understand the SISM requirements before responding.</i>

20. Explain in detail how the third-party contractor's services detect unauthorized or malicious use of the systems, including insider threat and external intrusions? [SISM SI-4, SISM SI-4 (4), SISM SI-7, SISM SI-7 (7)]	<i>Third-party provides a comprehensive response here. Please review and understand the SISM requirements before responding.</i>
21. Explain in detail how the third-party contractor performs security code analysis (static and dynamic) and evaluates code for security flaws, as well as identify, track, and remediate security flaws? [SISM SA-11]	<i>Third-party provides a comprehensive response here. Please review and understand the SISM requirements before responding.</i>
22. Explain in detail how the third-party contractor's records retention policy, standards, practices, and information systems adhere to the State's functional records schedule. [DNCR Functional Schedule, DNCR Information Technology, DNCR Risk Management, SISM AU-7, SISM AU-11]? A "Record" is defined as a set of data (logical and physical) treated as a unit. Examples include, but are not limited to, IT Security Program documents, data flow and architecture diagrams, system/application diagrams, change management activities, risk management activities, vulnerability scan results, system/application logs, etc. i. 911.3 Data Documentation Records Records concerning data in automated systems; includes data element dictionary, file layout, code book or table, Entity relationships tables, and other records related to the structure, management, and Entity of data RETAIN UNTIL: System is discontinued and/or replaced PLUS: 3 years THEN: Destroy ii. 914.< Digitization and Scanning Records Records concerning data entry and imaging operations; includes quality control records and paper records that are digitized. RETAIN UNTIL: Digitized PLUS: 10 days THEN: Destroy NOTE: The digital surrogate becomes the record copy and must be retained according to the disposition instructions for that record type. iii. 915.3 Electronic Records Policies Records documenting the policies and procedures employed by the agency to maintain authentic and accessible electronic records. RETAIN UNTIL: Superseded/Obsolete PLUS: 3 years THEN: Destroy iv. 924.1(1) Network and System Security Records Records documenting the security of networks and systems; includes records concerning firewalls, anti-virus programs, and other related records. RETAIN FROM: Creation PLUS: 1 year THEN: Destroy*	<i>Third-party provides a comprehensive response here. Please review and understand the SISM requirements before responding.</i> <i>Please explain in detail how the third-party's services and solution support the SISM/DNCR requirements outlined in sections i – ix.</i>

v. <u>924.1(2) Network and System Security Records</u> records documenting access requests and authorizations, system access logs, and other related records RETAIN FROM: Creation PLUS: 1 year THEN: Destroy vi. <u>924.2 Network and System Security Records</u> Records documenting incidents involving unauthorized attempted entry or probes on data processing systems, information technology systems, telecommunications networks, and electronic security systems, including associated software and hardware; includes logs, extracts, compilations of data, and other related records RETAIN FROM: Creation PLUS: 2 years THEN: Destroy* vii. <u>926.3 System Documentation</u> records documenting operating systems, application programs, structure and form of datasets, system structure, and system-to-system communication; includes system overviews, dataset inventories, server names, IP addresses, purpose of the systems, Entity-supplied documentation, installed software, and current source code. RETAIN UNTIL: Superseded/Obsolete PLUS: 3 years THEN: Destroy viii. <u>1623.3 Disaster Recovery Records</u> Records concerning minor or routine agency recovery operations that are managed with minimal disruption to normal operations RETAIN UNTIL: Complete PLUS: 3 years THEN: Destroy ix. <u>1314.2 Consultant, Contractor, Provider, and Entity Due Diligence Records</u> Records documenting the evaluation of consultants, contractors, providers, and entities with whom the agency conducts business; includes financial stability, information security risk assessments, and other related records RETAIN UNTIL: Contract expires PLUS: 2 years THEN: Destroy	
23. Does the third-party contractor have the capability to notify the State within 24 hours of suspected and/or confirmed incidents? Explain in detail.	<i>Third-party provides a comprehensive response here. Please review and understand the SISIM requirements before responding.</i>

24. If the third-party contractor's services provide email "send as" capabilities, does it support DMARC and DKIM for email protection? If not, explain in detail.	<i>If the system does not support this feature, do not answer Y or N. Instead, state "Not Applicable" here.</i>
25. Describe in detail how the third-party contractor's services support NCDOT's Data Protection and Classification policy, guidelines, and standards. Specifically speak to Security Impact Analysis (SISM CM-4), Media Protection Policy (SISM MP-1), Media Marking (SISM MP-3), Media Storage (SISM MP-4), Media Transport (SISM MP-5), Media Sanitization (SISM MP-6), Media Use (SISM MP-7), Prohibit Use Without Owner (SISM MP-7(1)), Security Categorization (SISM RA-2), and the Statewide Data Classification Policy.	<i>Describe in detail how the third-party's proposed services and solution supports NCDOT's Data Protection and Classification Policies, guidelines, and standards.</i> <i>Please address each of the SISM requirements listed in question #25 in your response. Please review and understand the SISM requirements before responding.</i>
26. Describe in detail how the third-party contractor's services support NCDOT's Incident Response policy, guidelines, and standards. Specifically speak to Incident Response Plan Testing (SISM IR-3), Incident Response Plan Testing (SISM IR-3(2)), Incident Handling (SISM IR-4), Incident Monitoring (SISM IR-5), Incident Reporting (SISM IR-6), and Incident Response Plan (SISM IR-8).	<i>Describe in detail how the third-party's proposed services and solution supports NCDOT's Incident Response policy, guidelines, and standards.</i> <i>Please address each of the SISM requirements listed in question #26 in your response. Please review and understand the SISM requirements before responding.</i>
27. Describe in detail how the third-party contractor's services support NCDOT's Contingency Planning policy, guidelines, and standards. Specifically speak to Contingency Planning Policy (SISM CP-1), Contingency Plan (SISM CP-2), Contingency Plan Training (SISM CP-3), Contingency Plan Testing and Exercises (SISM CP-4), Contingency Plan Alternate Storage Site (SISM CP-6), Contingency Plan Alternate Processing Site (SISM CP-7), Information System Backup (SISM CP-9), Testing for Reliability/Integrity (CP-9(1)), and Information System Recovery and Reconstitution (SISM CP-10). - Describe in detail how the third-party contractor's services recover the system(s) to a known and functional state following an outage, breach, DoS attack, or disaster? [SISM CP-2, SISM CP-9, SISM CP-10] - Do the third-party contractor's services have alternate storage and processing facilities? [SISM CP-6, SISM CP-7]. If yes, explain in detail. - Does the third-party contractor have service level agreements (SLAs) in place with all third-party service providers including telecommunications providers? [SISM CP-8] - Describe in detail the third-party contractor's information systems log recovery capabilities for each of the systems that handle, store, process, transmit, and/or can impact the security and privacy of NCDOT data? - Provide copies of the Business Impact Analysis (BIA) and Disaster Recovery Plan (DRP) for the third-party's proposed services. Attached are templates.	<i>Describe in detail how the third-party's proposed solution supports NCDOT's Contingency Planning policy, guidelines, and standards and provide copies of the third-party's PIA and BIA.</i> <i>Please address each of the SISM requirements listed in question #27 in your response. Please review and understand the SISM requirements before responding.</i> <i>Please respond to sections i – v.</i>



NCDIT-T_Business_I
mpact_Analysis_(BIA)



NCDIT-T_Disaster_R
ecovery_Plan_(DRP)_

28. Describe in detail how the third-party contractor's services support NCDOT's **Configuration Management** policy, guidelines, and standards. Specifically speak to Configuration Management Policy ([SISM CM-1](#)), Baseline Configuration ([SISM CM-2](#)), Configuration Change Control ([SISM CM-3](#)), Security Impact Analysis ([SISM CM-4](#)), Access Restrictions for Change ([SISM CM-5](#)), Configuration Settings ([SISM CM-6](#)), Least Functionality ([SISM CM-7](#)), Information System Component Inventory ([SISM CM-8](#)), Automated Unauthorized Component Detection ([SISM CM-8\(3\)](#)), Configuration Management Plan ([SISM CM-9](#)), Software Usage Restrictions ([SISM CM-10](#)), Separation of Duties ([SISM AC-5](#)), Remote Access ([SISM AC-17](#)), Timely Maintenance ([SISM MA-6](#)), Continuous Monitoring ([SISM CA-7](#)), Flaw Remediation ([SISM SI-2](#)), Malicious Code Protection ([SISM SI-3](#)), System Development Life Cycle ([SISM SA-3](#)), and Developer Configuration Management ([SISM SA-10](#)).

- i. Provide a copy of the third-party contractor's Change Management Policy, Standards and Procedures.
- ii. Provide a copy of the third-party contractor's Configuration Management Plan, Policy, Standards and Procedures.
- iii. Does the third-party contractor's change management capability include a fully functioning Change Advisory Boards (CAB)/ Technical Review Boards (TRB)?
- iv. Does the third-party contractor have and use development and/or test environments to verify changes before implementing them in the production environment?
- v. Within the third-party contractor's proposed solution, are all products and services still actively supported?
- vi. Does the third-party contractor have a lifecycle management plan that ensures products are updated before they reach the end of life?
- vii. Provide a copy of the third-party contractor's Security Impact Analysis (SIA) for the third-party's proposed solution. Below is a Security Impact Analysis template ([SISM CM-4](#)).



NCDIT-T_Security_I
mpact_Analysis_(SIA)_

*Describe in detail how the third-party's proposed services and solution supports NCDOT's **Configuration Management** policy, guidelines, and standards.*

Please address each of the SISM requirements listed in question #28 in your response. Please review and understand the SISM requirements before responding.

Please respond to sections i – vii.

29. Describe in detail how the third-party contractor's services support NCDOT's System and Communications Protection policy, guidelines, and standards. Specifically speak to Policy (SISM SC-1), Application Partitioning (SISM SC-2), Information in Shared Resources (SISM SC-4), Denial of Service Protection (SISM SC-5), Boundary Protection (SISM SC-7), Transmission Confidentiality and Integrity (SISM SC-8), Network Disconnect (SISM SC-10), Cryptographic Key Establishment and Management (SISM SC-12), Cryptographic Protection (SISM SC-13), Public Key Infrastructure Certificates (SISM SC-17), and Mobile Code (SISM SC-18).	<i>Describe in detail how the third-party's proposed services and solution supports NCDOT's System and Communications Protection policy, guidelines, and standards.</i> <i>Please address each of the SISM requirements listed in question #29 in your response. Please review and understand the SISM requirements before responding.</i>
30. Describe in detail how the third-party contractor's services support NCDOT's Identification & Authentication policy, guidelines, and standards. Specifically speak to Access Control (SISM AC-1), Account Management (SISM AC-2), Automated System Account Management (SISM AC-2(1)), Removal of Temporary / Emergency Accounts (SISM AC-2(2)), Disable Inactive Accounts (SISM AC-2(3)), Automated Audit Actions (SISM AC-2(4)), Access Enforcement (SISM AC-3), Information Flow Enforcement (SISM AC-4), Separation of Duties (SISM AC-5), Least Privilege (SISM AC-6), Unsuccessful Logon Attempts (SISM AC-7), System Use Notification (SISM AC-8), Session Lock (SISM AC-11), Pattern-Hiding Displays (SISM AC-11(1)), Session Termination (SISM AC-12), Remote Access (SISM AC-17), Remote Access Automated Monitoring / Control (SISM AC-17(1)), Remote Access – Protection of Confidentiality / Integrity Using Encryption (SISM AC-17(2)), Remote Access – Managed Access Control Points (SISM AC-17(3)), Remote Access – Privileged Commands / Access (SISM AC-17(4)), Access Control for Mobile Devices (SISM AC-19), Access Control for Mobile Devices – Full Device / Container- Based Encryption (SISM AC-19(5)), Use of External Information Systems (SISM AC-20), Use of External Information Systems – Limits on Authorized Use (SISM AC-20(1)), Information Sharing (SISM AC-21), and Publicly Accessible Content (SISM AC-22).	<i>Describe in detail how the third-party's proposed services and solution supports NCDOT's Identification & Authentication policy, guidelines, and standards.</i> <i>Please address each of the SISM requirements listed in question #30 in your response. Please review and understand the SISM requirements before responding.</i>
31. Describe in detail how the third-party's services support NCDOT's Media Protection policy, guidelines, and standards. Specifically speak to Policy (SISM MP-1), Media Access (SISM MP-2), Media Marking (SISM MP-3), Media Storage (SISM MP-4), Media Transport (SISM MP-5), Media Sanitization (SISM MP-6), Media Use (SISM MP-7), and Media Use – Prohibit Use Without Owner (SISM MP-7(1)).	<i>Describe in detail how the third-party's proposed services and solution supports NCDOT's Media Protection policy, guidelines, and standards.</i> <i>Please address each of the SISM requirements listed in question #31 in your response. Please review and understand the SISM requirements before responding.</i>
32. Describe in detail how the third-party contractor's services support NCDOT's Personnel Security policy, guidelines, and standards. Specifically speak to Policy (SISM PS-1), Position Risk Designation (SISM PS-2), Personnel Screening (SISM PS-3), Personnel Termination (SISM PS-4), Personnel Transfer (SISM PS-5), Access Agreements (SISM PS-6), and Third-Party Personnel Security (SISM PS-7).	<i>Describe in detail how the third-party's proposed services and solution supports NCDOT's Personnel Security policy, guidelines, and standards.</i> <i>Please address each of the SISM requirements listed in question #32 in your response. Please review and understand the SISM requirements before responding.</i>

33. Describe in detail how the third-party contractor's services support NCDOT's Risk Assessment policy, guidelines, and standards. Specifically speak to Policy (SISM RA-1), Security Categorization (SISM RA-2), Risk Assessment (SISM RA-3), Vulnerability Scanning (SISM RA-5), Vulnerability Scanning – Update Tool Capability (SISM RA-5(1)), Vulnerability Scanning – Frequency of Updates (SISM RA-5(2)), and Vulnerability Scanning – Privileged Access (SISM RA-5(5)).	<i>Describe in detail how the third-party's proposed services and solution supports NCDOT's Risk Assessment policy, guidelines, and standards.</i> <i>Please address each of the SISM requirements listed in question #33 in your response. Please review and understand the SISM requirements before responding.</i>
34. Describe in detail how the third-party contractor's services support NCDOT's Physical & Environmental Protection policy, guidelines, and standards. Specifically speak to Policy (SISM PE-1), Physical Access Authorizations (SISM PE-2), Physical Access Control (SISM PE-3), Access Control for Transmission Medium (SISM PE-4), Access Control for Output Devices (SISM PE-5), Monitoring Physical Access (SISM PE-6), Monitoring Physical Access – Intrusion Alarms (SISM PE-6(1)), Visitor Access Records (SISM PE-8), Power Equipment and Cabling (SISM PE-9), Emergency Power (SISM PE-11), Fire Protection (SISM PE-13), Fire Protection – Automatic Fire Suppression (SISM PE-13(3)), Delivery and Removal (SISM PE-16), Alternate Work Site (SISM PE-17), and Location of Information System Components (SISM PE-18).	<i>Describe in detail how the third-party's proposed services and solution supports NCDOT's Physical & Environmental Protection policy, guidelines, and standards.</i> <i>Please address each of the SISM requirements listed in question #34 in your response. Please review and understand the SISM requirements before responding.</i>
35. When Critical or High software vulnerability are identified and patching is not an option, what Continuous Monitoring activities does the third-party perform to maintain visibility and identify if the known vulnerabilities been exploited? - How does the third-party contractor track known vulnerabilities that cannot be remediated? - Submit a Corrective Actions Plan (CAP) that identifies all third-party contractor vulnerabilities and security controls that do not comply with or meet the intent of the security requirements established in the State of North Carolina Statewide Information Security Manual (SISM). The CAP template can be found here: https://it.nc.gov/documents/files/corrective-action-plan-template-v1/open The CAP instructions can be found here: https://it.nc.gov/documents/files/corrective-action-plan-instructions/open	<i>Third-party provides a comprehensive response here. Please review and understand the SISM requirements before responding.</i>
36. Policies, Procedures, and Training The third-party contractor must indicate the status of their policies, standards, and procedures coverage. To answer “Yes” to a policy, it must be fully developed, documented, and disseminated; and it must address purpose, scope, roles, responsibilities, management commitment, coordination among entities, and compliance. A single policy document may address more than one family provided the requirements of each “1” are fully addressed.	

Third-party contractors must establish their own set of policies, standards, and procedures. They cannot be inherited from a leveraged system or service provider. Any exceptions and/or missing policy and procedure elements must be explained in comments section.

Family	Policy		Standards		Procedures		Document Title, Version, and Last Review Date	Comments
	Yes	No	Yes	No	YES	No		
Access Control [SISM AC-1]							Policy: Standards: Procedures:	
Awareness & Training [SISM AT-1]							Policy: Standards: Procedures:	
Audit & Accountability [SISM AU-1]							Policy: Standards: Procedures:	
Security Assessment & Authorization [SISM CA-1]							Policy: Standards: Procedures:	
Configuration Management [SISM CM-1]							Policy: Standards: Procedures:	
Contingency Planning [SISM CP-1]							Policy: Standards: Procedures:	
Identification & Authentication [SISM IA-1]							Policy: Standards: Procedures:	
Incident Response [SISM IR-1]							Policy: Standards: Procedures:	
Maintenance [SISM MA-1]							Policy: Standards: Procedures:	
Media Protection [SISM MP-1]							Policy: Standards: Procedures:	

Family	Policy		Standards		Procedures		Document Title, Version, and Last Review Date	Comments
	Yes	No	Yes	No	YES	No		
Physical & Environmental Protection [SISM PE-1]							Policy: Standards: Procedures:	
Personnel Security [SISM PS-1]							Policy: Standards: Procedures:	
Risk Assessment [SISM RA-1]							Policy: Standards: Procedures:	
System & Services Acquisition [SISM SA-1]							Policy: Standards: Procedures:	
System & Communications Protection [SISM SC-1]							Policy: Standards: Procedures:	
System & Information Integrity [SISM SI-1]							Policy: Standards: Procedures:	
Planning [SISM PL-1]							Policy: Standards: Procedures:	

ATTACHMENT K: APPLICATION/SERVICE RESILIENCY SIGNOFF (ATTACHED)

NORTH CAROLINA DEPARTMENT OF INFORMATION TECHNOLOGY – TRANSPORTATION



Application / Service Resiliency Signoff (ARS)

This Demand Response Scheduling service has been determined to be **Statewide Critical**. Offerors are therefore required to provide the **Maximum Tolerable Downtime (MTD)**, and a **Recovery Point Objective (RPO)** with a bid submission. *Use hours. As one day may mean 8 hours & or 24 hours, etc.*

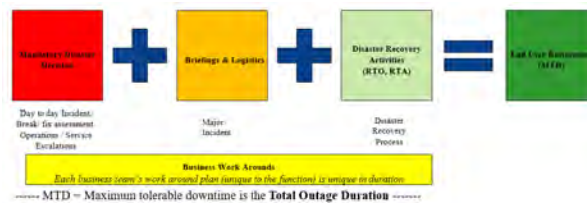
Disaster Recovery requirements are:	
Criticality level	Statewide
Maximum Tolerable Downtime (MTD)	xx hours
Recovery Point Objective (RPO)	xx hours
Offeror Signature:	

Definitions;

Statewide Critical: From an information technology perspective, in the agency's opinion, the loss of this application/ service will have a direct impact to statewide core functions, processes and/or activities. The loss may also impact a large portion of the State's population).

MTD: The maximum number of hours for which it is acceptable that a function can be interrupted following a continuity event. (FEMA See, Recovery Time Objective; Maximum Acceptable Outage)

MTD Clarification; Represents the total amount of time leadership are willing to accept for a mission/business process outage or disruption including all impact considerations. Further, while RTO - Recovery Time Objective is required to recover the IT Application / system, MTD includes RTO plus (if) business work arounds exist that would apply in the early stages of an outage prior to a disaster declaration.



MTD is made up of 2 components, RTO plus business work arounds.

RPO: Recovery Point Objective = The point in time to which systems and data must be recovered following an adverse event, e.g. the last completed transaction or the point immediately before the last backup commences. Also known as the Critical Data Point.

RPO Clarification: Age of the data to be restored to, once the application / system is recovered in the DR environment & made available to the business. For example, 8 hours, means the data is "8 hours older than the time the incident occurred.



THANK YOU

Thank you for taking the time to review our response to your request. CTS Software will provide the right team and technology to meet and exceed your expectations. Our solutions will maximize the efficiency of your operations now and into the future.

If you have any questions, please contact us.

Contact

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