

Worcester Regional Transit Authority



Request for Proposals (RFP) # 2027-01

FOR

Paratransit Scheduling and Dispatching Software (PSDS)

PROPOSALS DUE:

September 02, 2026

2:00 p.m., EST

Joshua Rickman, Administrator
Worcester Regional Transit Authority
60 Foster Street
Worcester, MA 01608

CONTACT:

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(508) 453-3442
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TABLE OF CONTENTS

<u>Section</u>	<u>Section Title</u>	<u>Page(s)</u>
1.	Introduction	4
2.	Instructions to Proposers	4
	2.1 RFP Schedule	4
	2.2 Proposal Preparation & Submission	4
	2.3 Proposer-Prepared Documents	5
	2.4 Submittal Contents, Location, & Deadline	6
	2.5 Withdrawal of Submittal	7
	2.6 Submittal Stipulations	7
	2.7 Failure to Perform	9
	2.8 Pre-Proposal Meeting	9
	2.9 Questions / Clarifications	9
	2.10 Bid Bond	10
	2.11 Performance Bond	10
	2.12 Multiple Proposals	10
	2.13 Updates and Addenda	10
	2.14 Point of Contact	10
	2.15 Interpretation	10
	2.16 Proprietary Information	10
	2.17 Exceptions and/or Deviations	10
3.	Evaluation	11
	3.1 Responsiveness	11
	3.2 Evaluation Criteria	11
	3.3 Interviews	12
	3.4 Final Evaluation	12
	3.5 Pre-Award Deliverables	12
4.	Contract Award	12
5.	Scope of Work	12
	5.1 Introduction	12
	5.2 Project Overview	12
	5.3 Information Technology Requirements	13
	5.4 Wireless Data Communication Requirements	13
	5.5 GIS and Mapping	13
	5.6 Paratransit Scheduling and Dispatching Software	13
	5.7 Customer / Rider System Requirements	13
	5.8 CAD/AVL Integration, MTD/Tablet, Manifest	

TABLE OF CONTENTS

Section	Section Title	Page(s)
	Management, and iCabbi Integration Functional Specifications	13
5.9	Other Requirements	13
6.	Standard Terms and Conditions	13
6.1	Invoicing	13
6.2	Controlling Law	15
6.3	Taxes, Charges, and Extras	15
6.4	Alterations or Variations of Terms	15
6.5	Assignability	16
6.6	Compliance with Statute	16
6.7	Insurance Requirements	16
6.8	Warranty	17
6.9	Federal Contract Clauses	17
6.10	Davis-Bacon	17
6.11	Rights and Remedies of WRTA for Default	17
6.12	Severability	17
6.13	Limitation on Funding	18
6.14	Evaluation Results	18
6.15	Disadvantaged Business Enterprise	18
6.16	Bid Protest Procedures	19
	Exhibits	
EXHIBIT A	Prospective Proposer Fact Sheet	20
EXHIBIT B	Non-Collusion Declaration	21
EXHIBIT C	Certification as to Payment of State Taxes	22
EXHIBIT D	Customer References	23
EXHIBIT E	Government-Wide Debarment / Suspension	24
EXHIBIT F	Lobbying Certification	26
EXHIBIT G	Buy America Certification	28
EXHIBIT H	Federal Contract Clauses	30
EXHIBIT I	Protest Procedures	42
EXHIBIT J	Functional Specifications	45

SECTION 1. INTRODUCTION

The Worcester Regional Transit Authority, herein referred to as “WRTA” is a political subdivision of the Commonwealth of Massachusetts. It is responsible for public transit services in thirty-seven (37) communities within the Central Massachusetts region. The WRTA was created pursuant to Massachusetts General Laws, Chapter 161B. The WRTA is required to comply with the mandates of the Americans with Disabilities Act (ADA) of 1990, as are the entities with which it contracts for transit services. In addition, the performance of this contract is subject to the requirements of Title VI of the Civil Rights Act of 1964 and all equal opportunity requirements.

The WRTA is issuing this *Request for Proposal (RFP)* to engage a qualified firm to provide, install and integrate a new **Paratransit Scheduling and Dispatching Software (PSDS)**.

The contract awarded under this RFP may be funded in whole or in part by the Federal Transit Administration (FTA). The successful proposer shall cooperate with WRTA to ensure the full conformance with its funding agreements with FTA. The successful Proposer shall comply with all terms and conditions prescribed for third party contracts by the FTA, if applicable.

SECTION 2. INSTRUCTIONS TO PROPOSERS

2.1 RFP Schedule

The following is an anticipated RFP engagement schedule. The WRTA may change the estimated dates and process as deemed necessary.

The proposed schedule for submittal, reviews, and notification is as follows:

Activity	Date
Release & Advertise RFP	July 15, 2026
Pre-Proposal Meeting	July 23, 2026
Deadline for Questions/Clarifications	July 29, 2026
Response to Questions/Clarifications	August 12, 2026
Deadline for Issuance of Updates and Addenda	August 12, 2026
Proposals Due	September 02, 2026
Short-listed Vendor Interviews (if necessary)	September 16, 2026
Issue Best and Final Offer (BAFO) request(s)	September 23, 2026
BAFO Responses Received	September 30, 2026
Approximate Conditional Award Date	October 07, 2026
Fully Operational System	January 02, 2027

2.2 Proposal Preparation & Submission

- Offeror Information – Proposal shall include the fully completed *Prospective Proposer Fact Sheet* form included in Exhibit A of this RFP.

- Non-Collusion Declaration – Proposal shall include the fully completed and signed *Non-Collusion Declaration* included in Exhibit B of this RFP.
- Certification as to Payment of State Taxes – Proposal shall include the fully completed and signed *Certification as to Payment of State Taxes* included in Exhibit C of this RFP.
- Customer References – Proposal shall include the *Customer References* form included in Exhibit D of this RFP. **Please be certain to list contact names and phone numbers that are accurate and current.**
- Government-Wide Debarment and Suspension Certification – Proposal shall include the fully completed and signed *Government-Wide Debarment and Suspension Certification* form included in Exhibit E of this RFP.
- Lobbying Certification – Proposal shall include the fully completed and signed *Lobbying Certification* included in Exhibit F of this RFP.
- Buy America Certification – Proposal shall include the fully completed and signed *Buy America Certification* included in Exhibit G of this RFP.
- Compliance Matrix – Proposer shall include a fully completed *Compliance Matrix* form included as Exhibit J, Appendix B of this RFP.
- Cost Proposal – Proposal shall include the fully completed *Cost Proposal* form included as Exhibit J, Appendix A of this RFP.

2.3 Proposer-Prepared Documents

To facilitate the WRTA's objective review of the proposals from different Firms, the Firms are requested to organize the document using a standardized format. Each RFP response should contain the following:

Statement of Qualifications – A submittal indicating the capability of the offeror to perform the attached *Scope of Work* is required. It shall include the information and be formatted as follows:

- Cover Letter. Letter on company letterhead shall be signed by an officer authorized to bind the offeror contractually and shall address the below matters.
 - Proposer's interest and willingness to enter into a contract with WRTA to perform the work as described in the *Scope of Work*; and proposer's commitment to the effect that it would exert its "best efforts" in fulfilling its responsibilities therein.
 - Proposer's ability and willingness to obtain insurance meeting the requirements indicated in section 6.7 of this document.
 - Statement indicating that proposals shall be valid for a 90-day period, commencing from the RFP due date and shall include the name, title, address,

email, and telephone number of the individual to whom correspondence and other contact should be directed to during the selection process.

- Firm Background. Proposer shall provide, at a minimum, the following information about the prime consultant or any subcontract firm or individuals on the team:
 - Firm name and business addresses, contact(s), including phone number and e-mail address;
 - Subconsultant firm(s) name and business addresses, contact(s), including phone number, and e-mail address;
 - Individual consultant name and business address, phone number, and e-mail address;
 - Year firm(s) was established (including former names and year established, if applicable); and
 - Firm type/ownership and parent company, if applicable;
 - Location of office from which work will be provided.
- Executive Summary. Proposer shall include a description of the hardware, software, system capabilities, and experience and capabilities of Firm.
- Proposer Experience. Proposer shall discuss its experience record including a list of transit properties where similar systems that is being proposed has been installed by the proposer within the past **three (3) years**. The list must include the name, address, phone number, and email of the contract officer of the awarding entity.
- Technical information including a description of system capabilities and detailed specifications for the equipment being proposed.
- Any exceptions or deviations from the project requirements or specifications must be clearly indicated. A completed Compliance Matrix form must be included as part of the submission (located in Exhibit J, Appendix B)
- A proposed project work plan including proposed schedule from notice to proceed for delivery, installation, system training, and testing.
- The required certifications and Federal Contract Clauses

Cost Proposal – Proposers must complete and submit the Cost Proposal Form, attached to this RFP as Exhibit J, Appendix A. A Proposer's failure to submit a Cost Proposal form may result in rejection of the proposal as non-responsive.

2.4 Submittal Contents, Location, & Deadline

Contents: One (1) original, and five (5) physical copies of the proposal must be submitted in hard copy, and one (1) version of the proposal must be submitted in electronic format (Google Drive or Dropbox) in Adobe PDF to:

Worcester Regional Transit Authority
60 Foster Street
Worcester, MA 01608
Attention: John Bianchi, Manager of Grants and Procurements
Electronic Submission: email to: jbianchi@therta.com

Proposal must be sealed and clearly marked on the outside as follows: **“Paratransit Scheduling and Dispatching Software – RFP #2027-01.”**

Deadline - Proposals shall be submitted no later than 2:00 PM Eastern Standard Time (EST) on September 2, 2026. Proposals received after the date and time specified above will not be considered and will be returned to the submitter unopened. There will no public opening of submittals at the deadline or otherwise.

2.5 Withdrawal of Submittal

A proposer may withdraw a submittal any time prior to the submittal deadline by a submitting written request executed by the proposer’s authorized representative. Any such withdrawal does no prejudice the right to resubmit a submittal by the deadline.

2.6 Submittal Stipulations

Submittals submitted as a result of this solicitation become property of WRTA. WRTA will not pay any costs incurred by an offeror resulting from preparation or delivery of its submittal. Submittals will remain valid for 90 calendar days following submittal due date. WRTA reserves the following rights and will exercise such rights if it is in WRTA’s best interest to do so:

- The WRTA reserves the unqualified right, in its sole and absolute discretion, to undertake discussions with one or more Proposers or any third party, to waive any irregularities, to waive defects or noncompliance in the filing or contents of any Submission, and to proceed with that Submission, or elements of one or more Submissions, if any, which in its sole judgment will, under the circumstances, best serve the WRTA’s interest.
- The WRTA reserves the unqualified right to amend the terms of this RFP at any time, and to solicit and accept modifications to any Submission at any time when it is in the best interest of the WRTA to do so.
- The WRTA reserves the unqualified right, in its sole and absolute discretion, to choose or reject any Submission received in response to this RFP, either on the basis of an evaluation of the factors listed in this RFP or for other reasons, whether or not any Submission offers the highest monetary compensation to the WRTA or any other public entity.
- The WRTA reserves the unqualified right, in its sole and absolute discretion, to reject any and all Submissions or to suspend or abandon this RFP process at any time, with no recourse for any Proposer.

- The information contained in this RFP and in any subsequent addenda or related documents is provided as general information only. The WRTA makes no representations, warranties, or guarantees that the information contained herein is accurate or complete. The furnishing of such information by the WRTA shall not create or be deemed to create any obligation or liability upon it for any reasons whatsoever, and each recipient of the RFP, by presenting a submission to the WRTA, expressly agrees that it has not relied upon the foregoing information, and that it shall not hold the WRTA, or any third party who advised or prepared a report for the WRTA, liable or responsible therefore in any manner whatsoever.
- The WRTA may, at any time, request further information from any Proposer, interview any Proposers to more fully understand their responses to this RFP, and require any Proposer to arrange a site visit for its Evaluation Committee.
- The WRTA reserves the right, in its sole discretion, to develop the project on any schedule and use any chosen approach.
- Neither the expression of any Proposer's interest, nor the submission of any Proposer's qualifications and any documents or other information, nor the acceptance thereof by the WRTA, nor any correspondence, discussions, meetings or other communications between an Proposer and the WRTA, nor a determination by the WRTA that the Proposer is qualified hereunder, shall: (i) impose any obligation on the WRTA to include the Proposer in any such further procedures which the WRTA may utilize prior to the final selection of a Proposer, (ii) be deemed to impose any obligation whatsoever on the WRTA to select the Proposer, or to enter into negotiations with the Proposer, or (iii) entitle the Proposer's to any compensation or reimbursement for any costs or expenses incurred by the Proposer in connection with the Proposer's submission hereunder. No costs of responding to the RFP or any addenda thereto, nor of the attending any subsequent interviews or meetings in connection with this development opportunity, shall be reimbursed by the WRTA.
- The WRTA may consult with individuals familiar with each Proposer regarding the Proposer's prior operations and development or management projects, financial plan, past performance, experience and qualifications, or other matters, whether or not the specific individuals are identified in the RFP response. Submission of a Proposal in response to this RFP shall constitute permission for the WRTA to make such inquiries, and authorization to third parties to respond thereto.
- The individual responses to this RFP, including all drawings, plans, photos and narrative material shall become the property of the WRTA upon their receipt thereof. The WRTA will maintain the confidentiality of any material that is provided in response to this RFP and clearly marked "Confidential", to the maximum extent possible, in a manner consistent with applicable law. Given the liberal nature of the Commonwealth's public records law, Proposers should nevertheless be aware that any information given to the WRTA in response to this RFP or any correspondence, discussion, meeting, or other communication between the Proposer and the WRTA

before, with, or after the submission of the response, either orally or in writing, may not be, or may not be deemed to have been, proprietary or confidential.

- Neither the members of the WRTA nor any individual member, nor any officer, agent, or employee thereof shall be charged personally by a Proposer or any third party with any liability or held liable to it under neither any term or provision of this RFP nor any statement made herein.
- The WRTA reserves the unqualified right, in its sole and absolute discretion, to disqualify any team, firm, or individual from any phase or component of the selection process for this development opportunity, due to: (1) felonious or other criminal record in any jurisdiction (domestic or foreign); (2) a determination by the WRTA that the Proposer has failed to disclose any matter that materially relates to the fitness or ability of the Proposer to perform the work and services associated with this development opportunity, or a conflict of interest; or (3) a determination that such disqualification would serve the public interest.
- The WRTA reserves the unqualified right to: (1) disqualify any prospective Proposer or reject any response at any time solely on the grounds that a real or perceived legal or policy conflict of interest is presented; (2) require any prospective Proposer to take any action or supply any information necessary to remove the conflict, including without limitation, obtaining an opinion from the State Ethics Commission; or (3) terminate any contract arising out of this RFP if, in the opinion of the WRTA, any such relationship would constitute or have the potential to create a real or perceived conflict of interest.
- The WRTA reserves the unqualified right, in its sole and absolute discretion, to reject any subcontractor or individual working on a consultant team and to replace the subcontractor or individual with a mutually acceptable replacement.
- The WRTA reserves the unqualified right, in its sole and absolute discretion, to retain more than one firm and assign work based on needs of a particular project and the experience and qualifications of the firm.

2.7 Failure to Perform

WRTA may remove from mailing lists for future IFB's/RFQ's/RFP's, for an undetermined period of time, the name of any offeror for failure to accept a contract and/or unsatisfactory performance.

2.8 Pre-Proposal Meeting

A pre-proposal meeting will be held at the WRTA Maintenance and Operations Facility, 42 Quinsigamond Ave, Worcester, MA 01610 on July 23, 2026 at 2:00 PM. All potential respondents to this RFP are encouraged to attend.

2.9 Questions / Clarifications

Questions or clarifications must be received by the WRTA in writing no later than July 29, 2026 at 5:00 PM. Email to John Bianchi jbianchi@therta.com is the preferred method.

- 2.10 Bid Bond
A Bid Bond is not required for this RFP.
- 2.11 Performance Bond
A Performance Bond is not required for this RFP.
- 2.12 Multiple Proposals
Only one proposal will be accepted from any one person, partnership, corporation or other entity.
- 2.13 Updates and Addenda
No one is authorized to amend any of these documents in any respect by an oral statement or to make any representation or interpretation in conflict with their provisions. Any changes to these documents will be issued in writing via Addendum by John Bianchi or his designee.
- Proposers shall be responsible for continually checking the WRTA's website at www.therta.com for the most current information regarding this RFP. Current information may be in the form of an update or formal addendum. Updates and/or addenda will be posted on the above-mentioned website by August 12, 2026 at 5:00 p.m. EST.
- 2.14 Point of Contact
All questions regarding this RFP shall be directed in writing to John Bianchi who may be reached by email at jbianchi@therta.com. No other individual has the authority to respond to any questions submitted unless specifically authorized by John Bianchi. Failure to adhere to this process may disqualify the proposer.
- 2.15 Interpretation
Should any discrepancies or omissions be found in the RFP specifications / requirements, or doubt as to their meaning, the proposer shall notify the WRTA in writing at once (email is acceptable). The WRTA will post updates or addenda on its website (www.therta.com). The WRTA shall not be responsible for oral interpretations. All addenda issued shall be incorporated in the Contract.
- 2.16 Proprietary Information
All information appearing within the bid is subject to public inspection. Any proprietary information must be clearly marked as such and submitted in a separate sealed envelope. Reference sealed envelope within the body of the bid.
- 2.17 Exceptions and / or Deviations
No exceptions to or deviations from this specification will be considered, unless each exception or deviation is specifically stated by the proposer as an exception on the request form and accompanied by a detailed statement completely defining the exception and / or deviation. The manufacturer's name, product name or trade name, and catalog or part number must be shown on the RFP in the designated places; however, that information is not sufficient evidence that the proposer is making an exception. If no exception or deviation is shown, the offeror will be required to furnish the equipment exactly as specified herein. The burden of proof of

compliance with this specification will be the responsibility of the offeror. The WRTA reserves the right to reject, as unresponsive, any bid not containing all information requested by the WRTA.

SECTION 3. EVALUATION

3.1 Responsiveness

WRTA shall examine the submittals for the purpose of ascertaining its completeness and responsiveness to the requirements of this solicitation. Such process may involve requesting additional or clarifying information from the proposer. Submittals that do not contain all required material, information, or forms; or where such materials, information, or forms are substantially incomplete, may be determined as non-responsive and rejected by WRTA. In such cases, WRTA shall notify the proposer in writing of its rejection and the basis thereof.

3.2 Evaluation Criteria

The evaluation of proposals will be based on the technical, management and cost evaluation criteria (listed in their order of importance) shown in the table below.

Evaluation Criteria	Factors Considered	Suggested Weight
Project understanding and ability to meet business and technical requirements	- Overall comprehension of project objectives - Understanding and compliance with business and functional requirements - System usability, expandability, maintainability and sustainability (life cycle) - Minimization of system customization - Minimization of risk by use of the most current, proven and available state-of-the-art technologies	30%
Ability and approach to meet schedule and quality of training plan	- Proposed project management plan and project schedule; - Timeliness to complete installation - Overall quality of the proposed training program	20%
Past performance, reputation and at least three (3) client references	- Stability of ownership and history of providing comparable software to comparable agencies - Experience and reputation of management and other key project staff - Breadth and depth of project experience with and past performance on similar projects - Overall installation and deployment experience - Results of client references related to similar projects	20%
Key personnel qualifications and staff/technical support capacity	- Project management team - Personnel experience - Availability of key personnel	15%
Price	Comparative to similar systems/proposals for each element in the Price Proposal Form	15%

	• Unit prices comparable to similar unit prices in the industry • Recurring/on-going costs • Maintenance and software upgrade fees • Life cycle costs	
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3.3 Interviews

As part of the evaluation process, WRTA may conduct interviews with the highest ranked proposer(s) within a competitive range (whichever is applicable). Such interviews are for information gathering and clarification for the Evaluation Committee. WRTA may conduct interviews in person or by Zoom. Any proposer requested to be interviewed shall make its best effort to be available during the interview dates listed in this solicitation. WRTA reserves the right to award a contract without interviews and/or negotiations if deemed unnecessary to determine the most qualified, responsible proposer.

3.4 Final Evaluation

If WRTA chooses to conduct interviews, the Evaluation Committee will conduct a final round of scoring that takes into consideration information gleaned from interviews. Based upon the final scores, WRTA will determine the highest ranked proposer.

3.5 Pre-Award Deliverables

Upon determination of the highest ranked proposer and prior to consideration of contract award, WRTA will request the following from the proposer:

- Insurance Certificate – A certificate of insurance showing the coverage types and dollar limits stipulated in Section 6.7 – Insurance Requirement of this RFP
- System for Award Management – A .pdf copy showing the proposer is registered and active from the U.S. government's System for Award Management (SAM).

SECTION 4 CONTRACT AWARD

Upon prompt receipt of the Pre-Award Deliverables listed above, WRTA staff will prepare a recommendation for contract award to be considered by the WRTA Administrator.

If the award recommendation is approved, it is the intent of WRTA to execute the documents as soon as practical after such award. The contract will be composed of the *Agreement for Services*, the *Federal Transit Administration Contract Clauses*, the *Scope of Work*, any *Addenda* and the proposers' submission(s).

SECTION 5 SCOPE OF WORK

5.1 Introduction

Please refer to Exhibit J, Paratransit Scheduling and Dispatching Software Specifications – V3.1 for a general introduction of this project

5.2 Project Overview

Please refer to Exhibit J, Paratransit Scheduling and Dispatching Software Specifications – V3.1 for the project overview

5.3 Information Technology Requirements

Please refer to Exhibit J, Paratransit Scheduling and Dispatching Software Specifications – V3.1 for the information technology requirements of this project

5.4 Wireless Data Communication Requirements

Please refer to Exhibit J, Paratransit Scheduling and Dispatching Software Specifications – V3.1 for the Wireless Data Communication Requirements.

5.5 GIS and Mapping

Please refer to Exhibit J, Paratransit Scheduling and Dispatching Software Specifications – V3.1 for the GIS and Mapping Specifications

5.6 Paratransit Scheduling and Dispatching Software (PSDS)

Please refer to Exhibit J, Paratransit Scheduling and Dispatching Software Specifications – V3.1 for the Paratransit Scheduling and Dispatching Software (PSDS) Specifications

5.7 Customer / Rider System Requirements

Please refer to Exhibit J, Paratransit Scheduling and Dispatching Software Specifications – V3.1 for the Customer / Rider System Requirements

5.8 CAD/AVL Integration, MDT/Tablet, Manifest Management and iCabbi Integration Functional Specifications

Please refer to Exhibit J, Paratransit Scheduling and Dispatching Software Specifications – V3.1 for the CAD/AVL Integration, MDT/Tablet, Manifest Management, and iCabbi Integration Functional Specifications

5.9 Other Requirements

Please refer to Exhibit J, Paratransit Scheduling and Dispatching Software Specifications – V3.1 for Reports, Future Capabilities, Project Implementation, and Warranty requirements.

SECTION 6. STANDARD TERMS AND CONDITIONS

6.1 Invoicing

The WRTA will only pay by original invoice. The WRTA will not authorize and does not participate in funding payments to a contractor prior to the incurrence of costs. Progress payments may be authorized provided the following requirements are followed:

- Progress payments are only made to the contractor for costs incurred in the performance of the contract
- When progress payments are used, the WRTA must obtain title to property (materials, equipment, etc.) for which progress payments are made

The WRTA will consent to the following progress payment milestones for this project:

No	Milestone	Deliverable	Percent of Contract Payment
1	Requirements Review Approval	Agreed-to final baseline Requirements Matrix (documented and provided by the WRTA or WRTA's Consultant)	10%
2	Design Reviews Approval	• Preliminary Design Document (PDD) • Draft Final Design Document (FDD) (after PDR meeting) • Critical Design Review (CDR) meeting • FDD after CDR meeting	15%
3	Training Plan (TP), and Implementation Plan, and Factory Acceptance Test (FAT) Procedures and Approval, and FAT Completion and Approval	• Training Plan (TP) • Implementation Plan • Acceptance Test Plan • FAT Test Procedures • FAT Test Results Documentation (TRD) • FAT Punchlist	20%
4	Pilot / Installation Test Procedures and Approval, and Pilot / Installation Test Completion and Approval	• Pilot / Installation Test Procedures • Pilot / Installation Test Results Documentation (TRD) • Pilot / Installation Punchlist	20%
5	System / User Acceptance Test Procedures and Approval, and System / User Test Completion and Approval	• System / User Acceptance Test Procedures • System / User Acceptance Test Results Documentation (TRD) • System / User Acceptance Punchlist	25%

No	Milestone	Deliverable	Percent of Contract Payment
6	30-Day Burn-In Test Completion and Approval, and Manuals	• 30-day Burn-In Test Punchlist (with plan for resolving punch list items) • Maintenance Manuals • User Manuals • Vehicle Operator Manuals • Systems Manuals	10%
10	Final System Acceptance	Final Requirements Matrix (provided by WRTA) showing all requirements met	Release of Retainage (10%)

All milestones require the approval or involvement of the WRTA, so the Contractor shall only issue an invoice for the relevant milestone after the WRTA actively undergoes the applicable testing and implementation process and approves the milestone. All invoices must be preceded by execution of a milestone Acceptance Certificate. The milestone Acceptance Certificate must be signed by the authorized transit provider staff member at the WRTA, the Contractor Project Manager and the third-party consultant overseeing the implementation for the WRTA, if utilized. Payment will not be made without an invoice and a fully executed milestone Acceptance Certificate. The WRTA will make payment to the Contractor within thirty (30) days from the date of the invoice received from the Contractor for each milestone payment **minus 10% retainage. Each invoice shall be accompanied by a Progress Report updated as of the date of the invoice, the current System Implementation Plan and the current AIL.**

6.2 Controlling Law

The Contract shall be governed and construed in accordance with the laws of the Commonwealth of Massachusetts and proper venue for legal action regarding the Contract shall be a court of competent jurisdiction within the State in which the WRTA is located.

6.3 Taxes, Charges and Extras

The WRTA is exempt from all federal excise taxes, including tax on transportation and Massachusetts's sales tax. Price(s) quoted to the WRTA shall not include said taxes. Upon request the WRTA will furnish the Contractor with a tax exemption certificate.

No charge for delivery, drayage, express, parcel post, packing, cartage, insurance, license fees, permits, cost of bonds, or for any other purpose will be paid by the WRTA unless expressly included and itemized in the bid.

6.4 Alteration or Variation of Terms

It is mutually understood and agreed that no alteration or variation of the terms of this RFP or subsequent task order shall be valid unless made or confirmed in writing and signed by the parties hereto, and that no oral understanding or agreements not incorporated herein, and no alterations or variations of the terms hereof unless made or confirmed in writing between the parties hereto shall be binding on any of the parties hereto.

6.5 Assignability

A contract is not assignable by Proposer either in whole or in part.

6.6 Compliance with Statute

Proposer hereby warrants that all applicable Federal and State statutes and regulations or local ordinances will be complied with in connection with the sale and delivery of the property furnished.

6.7 Insurance Requirements

By signing its proposal, Proposer acknowledges that upon contract award Proposer shall obtain and maintain in full force and effect during the term of the Agreement the insurance coverage in companies licensed to do business in the Commonwealth of Massachusetts, and acceptable to WRTA, as set forth below:

General Liability

Bodily Injury Liability	\$1,000,000 per occurrence
Property Damage Liability	\$500,000 per occurrence
(or combined single limit)	\$1,000,000 per occurrence

Automobile Liability

Bodily Injury Liability	\$1,000,000 per occurrence
Property Damage Liability	\$500,000 per occurrence
(or combined single limit)	\$1,000,000 per occurrence

Workers' Compensation Insurance

Coverage for all employees in accordance with Massachusetts General Laws

Professional Liability Insurance

Minimum Coverage	\$1,000,000 per occurrence
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Cyber Liability Insurance

Minimum Coverage	\$1,000,000 per occurrence
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Umbrella Liability Insurance

\$1,000,000 per occurrence

All policies shall identify the WRTA as an additional insured (except Workers' Compensation) and shall provide that the WRTA shall receive written notification at least 30 days prior to the effective date of any amendment or cancellation. Certificates shall include a Waiver of Subrogation on behalf of the WRTA on all lines of coverage. Insured's coverage shall be primary and noncontributory. Certificates evidencing all such coverages shall be provided to

the WRTA upon the execution of the Agreement. Each such certificate shall specifically refer to the Agreement and shall state that such insurance is as required by the Agreement. Failure to provide or to continue in force such insurance shall be deemed a material breach of the Agreement and shall be grounds for immediate termination.

6.8 Warranty

Proposer warrants to WRTA that the goods and / or services covered by this order will conform to the drawings, specifications, samples, descriptions and time provisions furnished by WRTA and will be of first-class material and workmanship and free from defects; and WRTA reserves the right to cancel the unfilled portion of this order without liability to Proposer for breach of this warranty. Goods will be received subject to inspection and acceptance at destination by WRTA; risk of loss before acceptance shall be on Proposer. Defective goods rejected by WRTA may without prejudice to any other legal remedy be held at Proposer's risk and returned to Proposer at Proposer's expense. Defects are not waived by acceptance of goods or by failure to notify Proposer thereof.

6.9 Federal Contract Clauses

The goods and / or services covered by this RFP are being funded in part with funds from the U.S. Department of Transportation, Federal Transit Administration, and the Commonwealth of Massachusetts Department of Transportation. By submitting a proposal, the proposer agrees to comply with the clauses found in EXHIBIT H – Federal Contract Clauses.

6.10 Davis-Bacon

The goods and / or services covered by this RFP are not subject to Davis-Bacon and related acts compliance.

6.11 Rights and Remedies of WRTA for Default

In the event any item furnished by the Proposer in the performance of the contract should fail to conform to specifications therefore, or to the sample submitted by the Proposer with his bid, the WRTA may reject the same, and it shall thereupon become the duty of the Proposer to reclaim and remove the same, without expense to the WRTA, and immediately to replace all such rejected items with others conforming to such specifications or samples; providing that should the Proposer fail, neglect or refuse so to do the WRTA shall have the right to purchase on the open market, in lieu thereof, a corresponding quantity of any such items and to deduct from any moneys due or that may thereafter become due to the Proposer the difference between the prices named in the contract or Task order and make the actual cost thereof to the WRTA. In the event the Proposer shall fail to make prompt delivery as specified of any item, the same conditions as to the rights of the WRTA to purchase in the open market and to reimbursement set forth above shall apply, except when delivery is delayed by fire, strike, freight embargo, or Act of God or the government. Cost of delivery of an item which does not meet specifications, will be the responsibility of the Proposer. The rights and remedies of the WRTA provided above shall not be exclusive and are in addition to any other rights and remedies provided by the law or under the contract.

6.12 Severability

Should any part of the Contract be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect the validity of the remainder of the Contract which shall continue in full force and effect; provided that the remainder of the Contract can, absent the excised portion, be reasonably interpreted to give the effect to the intentions of the parties.

6.13 Limitation on Funding

The Contract for services resulting from this RFP will be subject to the contract between the WRTA and the availability of on-going funds from the WRTA's funding sources. The Contract for this service is contingent upon receipt of these funds by the WRTA. In the event that funding from these sources is eliminated or decreased, the WRTA reserves the right to terminate the Contract or modify it accordingly.

6.14 Evaluation Results

Evaluation results are available for inspection at the office of the WRTA located at:
60 Foster Street
Worcester, MA 01608

6.15 DBE Objective / Policy Statement

The Worcester Regional Transit Authority (WRTA) has established a Disadvantaged Business Enterprise (DBE) Program in accordance with regulations of the U.S. Department of Transportation (DOT), 49 CFR § 26. The WRTA has received Federal financial assistance from the DOT and as a condition of receiving this assistance, the WRTA has signed an assurance that it will comply with 49 CFR § 26.

It is the policy of the WRTA to ensure that all contracts and procurements will be administered without discrimination on the basis of race, color, national origin, or sex. The WRTA ensures that Disadvantaged Business Enterprises (DBEs) shall have an equal opportunity to compete for and participate in DOT-assisted contracts. It is also our policy to:

1. To create a level playing field on which DBEs can compete fairly for DOT-assisted contracts;
2. To ensure that the DBE program is narrowly tailored in accordance with applicable law;
3. To ensure that only firms that fully meet 49 CFR § 26 eligibility standards are permitted to participate as DBEs;
4. To help remove barriers to the participation of DBEs in DOT-assisted contracts;
5. To assist the development of firms that can compete successfully in the marketplace outside the DBE program.

The Grants and Procurement Manager has been designated as the DBE Liaison Officer (DBELO). The DBELO has direct, independent access to the Chief Executive Officer (Administrator) concerning DBE program matters. The DBELO is responsible for implementing all aspects of the WRTA DBE Program. The WRTA has adequate staff, (including procurement, finance, etc.), to administer the program in compliance with 49 CFR § 26.

WRTA has circulated this Policy Statement to its Advisory Board, throughout our organization, and to the DBE and non-DBE business communities that perform work on our DOT-assisted contracts. Distribution has been accomplished via our website www.therta.com, inclusion with procurement documents, and through outreach to community organizations.

6.16 Bid Protest Procedures

WRTA has established procurement protest procedures to ensure uniform, timely, and fair consideration of complaints received by WRTA concerning its procurement activities. Such procedures are found in EXHIBIT I - Protest Procedures.

EXHIBIT A
PROSPECTIVE PROPOSER FACT SHEET

Name of Contractor: _____

Contractor Tax ID#: ____ - ____ - ____ - ____ - ____

Contractor's License #: _____ Type: _____ (as applicable)

Contractor Does Business As: ☐ Individual ☐ Partnership ☐ Corporation
 ☐ Government ☐ Fiduciary ☐ Other _____

Contractor is a: ☐ Resident ☐ Non-Resident of Massachusetts

- 1) Are you or your firm authorized to business in Massachusetts? ☐ Yes ☐ No
- 2) Are you or your firm a certified DBE? ☐ Yes ☐ No
- 3) Is this a local business? ☐ Yes ☐ No
- 4) This firm has been in continuous business under the present name for ____ years.

- End Exhibit A -

EXHIBIT B

NON-COLLUSION DECLARATION

TO BE EXECUTED BY PROPOSER AND SUBMITTED WITH RFP

I, _____, am the

(Position / Title) of _____,
(Company)

the party making the foregoing RFP that the RFP is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the RFP is genuine and not collusive or sham; that the Proposer has not directly or indirectly induced or solicited any other Proposer to put in a false or sham RFP; and has not directly or indirectly colluded, conspired, connived, or agreed with any Proposer or anyone else to put in a sham RFP, or that anyone shall refrain from bidding; that the Proposer has not in any manner directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the Proposer or any other Proposer, or to fix any overhead, profit, or cost element of the bid price, or of that of any other Proposer, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the RFP are true; and, further, that the Proposer has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

I declare under penalty of perjury under the laws of the Commonwealth of Massachusetts that the foregoing is true and correct:

(Date)

(Signature)

- End Exhibit B -

EXHIBIT C

CERTIFICATION AS TO PAYMENT OF STATE TAXES

Pursuant to Chapter 62C of the Massachusetts General Laws, Section 49A(b), I,

_____, authorized signatory for the CONTRACTOR does hereby certify under the pains and penalties of perjury that said CONTRACTOR has complied with all laws of the Commonwealth of Massachusetts relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

Social Security Number or
Federal Identification Number

Signature of Individual or
Corporate Name

By:
Corporate Officer
(if applicable)

- End Exhibit C -

EXHIBIT D

CUSTOMER REFERENCES

List and submit with this RFP three (3) customer references, preferably within the Commonwealth of Massachusetts, for whom the Proposer has furnished a similar service.

1. COMPANY NAME: _____
CONTACT PERSON: _____
TELEPHONE NUMBER: _____
EMAIL ADDRESS: _____
COMPANY ADDRESS: _____

2. COMPANY NAME: _____
CONTACT PERSON: _____
TELEPHONE NUMBER: _____
EMAIL ADDRESS: _____
COMPANY ADDRESS: _____

3. COMPANY NAME: _____
CONTACT PERSON: _____
TELEPHONE NUMBER: _____
EMAIL ADDRESS: _____
COMPANY ADDRESS: _____

- End Exhibit D -

EXHIBIT E

WORCESTER REGIONAL TRANSIT AUTHORITY

60 Foster Street, Worcester, MA 01608
Phone: (508) 791-2389 Fax: (508) 752-1676

GOVERNMENT-WIDE DEBARMENT AND SUSPENSION

Applies to All Contracts >\$25,000

2 C.F.R. part 180

2 C.F.R. part 1200

2 C.F.R. § 200.213

2 C.F.R. part 200 Appendix II (I)

Executive Order 12549

Executive Order 12689

Debarment, Suspension, Ineligibility and Voluntary Exclusion

The Contractor shall comply and facilitate compliance with U.S. DOT regulations, "Nonprocurement Suspension and Debarment," 2 C.F.R. part 1200, which adopts and supplements the U.S. Office of Management and Budget (U.S. OMB) "Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)," 2 C.F.R. part 180. These provisions apply to each contract at any tier of \$25,000 or more, and to each contract at any tier for a federally required audit (irrespective of the contract amount), and to each contract at any tier that must be approved by an FTA official irrespective of the contract amount. As such, the Contractor shall verify that its principals, affiliates, and subcontractors are eligible to participate in this federally funded contract and are not presently declared by any Federal department or agency to be:

- a) Debarred from participation in any federally assisted Award;
- b) Suspended from participation in any federally assisted Award;
- c) Proposed for debarment from participation in any federally assisted Award;
- d) Declared ineligible to participate in any federally assisted Award;
- e) Voluntarily excluded from participation in any federally assisted Award; or
- f) Disqualified from participation in any federally assisted Award.

By signing and submitting its bid or proposal, the bidder or proposer certifies as follows:

The certification in this clause is a material representation of fact relied upon by the WRTA. If it is later determined by the WRTA that the bidder or proposer knowingly rendered an erroneous certification, in addition to remedies available to the WRTA, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The bidder or proposer agrees to comply with the requirements of 2 C.F.R. part 180, subpart C, as supplemented by 2 C.F.R. part 1200, while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

_____ Signature of Contractor's Authorized Official

_____ Name and Title of Contractor's Authorized Official

_____ Date

- End Exhibit E -

EXHIBIT F

WORCESTER REGIONAL TRANSIT AUTHORITY

60 Foster Street, Worcester, MA 01608
Phone: (508) 791-2389 Fax: (508) 752-1676

LOBBYING RESTRICTIONS

Applies to All Contracts >\$100,000

31 U.S.C. § 1352

2 C.F.R. § 200.450

2 C.F.R. part 200 appendix II (J)

49 C.F.R. part 20

Lobbying Restrictions

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of WRTA, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all subcontractors shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

_____ Signature of Contractor's Authorized Official

_____ Name and Title of Contractor's Authorized Official

_____ Date

- End Exhibit F -

EXHIBIT G

WORCESTER REGIONAL TRANSIT AUTHORITY

60 Foster Street, Worcester, MA 01608
Phone: (508) 791-2389 Fax: (508) 752-1676

BUY AMERICA REQUIREMENTS

Applies to Contracts >\$150,000

49 U.S.C. 5323(j)

49 C.F.R. part 661

Buy America

The contractor agrees to comply with 49 U.S.C. 5323(j) and 49 C.F.R. part 661, which provide that Federal funds may not be obligated unless all steel, iron, and manufactured products used in FTA funded projects are produced in the United States, unless a waiver has been granted by FTA or the product is subject to a general waiver. General waivers are listed in 49 C.F.R. § 661.7. Separate requirements for rolling stock are set out at 49 U.S.C. 5323(j)(2)(C) and 49 C.F.R. § 661.11.

The [bidder or offeror] must submit to [WRTA] the appropriate Buy America certification below with its [bid or offer]. Bids or offers that are not accompanied by a completed Buy America certification will be rejected as nonresponsive.

In accordance with 49 C.F.R. § 661.6, for the procurement of steel, iron or manufactured products, use the certifications below.

Certificate of Compliance with Buy America Requirements

The bidder or offeror hereby certifies that it will comply with the requirements of 49 U.S.C. 5323(j)(1), and the applicable regulations in 49 C.F.R. part 661.

_____ Date

_____ Signature

_____ Company

_____ Name

_____ Title

Certificate of Non-Compliance with Buy America Requirements

The bidder or offeror hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323(j), but it may qualify for an exception to the requirement pursuant to 49 U.S.C. 5323(j)(2), as amended, and the applicable regulations in 49 C.F.R. § 661.7.

_____ Date

_____ Signature

Company
Name
Title

In accordance with 49 C.F.R. § 661.12, for the procurement of rolling stock (including train control, communication, and traction power equipment) use the following certifications :

Certificate of Compliance with Buy America Rolling Stock Requirements

The bidder or offeror hereby certifies that it will comply with the requirements of 49 U.S.C. 5323(j), and the applicable regulations of 49 C.F.R. § 661.11.

Date
Signature
Company
Name
Title

Certificate of Non-Compliance with Buy America Rolling Stock Requirements

The bidder or offeror hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323(j), but may qualify for an exception to the requirement consistent with 49 U.S.C. 5323(j)(2)(C), and the applicable regulations in 49 C.F.R. § 661.7.

Date
Signature
Company
Name
Title

- End Exhibit G -

EXHIBIT H

FEDERAL CONTRACT CLAUSES

Federally Required and Other Model Contract Clauses Applicability of Third Party Contract Clauses – Materials & Supplies > \$100,000 (Excluding micro-purchases, and exceptions as noted within each clause)

1. NO GOVERNMENT OBLIGATIONS TO THIRD PARTIES
2. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS AND RELATED ACTS
3. ACCESS TO RECORDS AND REPORTS
4. CHANGES TO FEDERAL REQUIREMENTS
5. CIVIL RIGHTS LAWS AND REGULATIONS
6. INCORPORATION OF FTA TERMS
7. ENERGY CONSERVATION
8. TERMINATION
9. GOVERNMENT-WIDE DEBARMENT AND SUSPENSION
10. BUY AMERICA REQUIREMENTS
11. VIOLATION AND BREACH OF CONTRACT
12. LOBBYING RESTRICTIONS
13. CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT
14. CARGO PREFERENCE REQUIREMENTS
15. FLY AMERICA
16. DISADVANTAGED BUSINESS ENTERPRISE (DBE)
- 16d. PROMPT PAYMENT
17. RECYCLED PRODUCTS
18. PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT
19. NOTICE TO FTA AND U.S. DOT INSPECTOR GENERAL OF INFORMATION RELATED TO FRAUD, WASTE, ABUSE, OR OTHER LEGAL MATTERS
20. SAFE OPERATION OF MOTOR VEHICLES
21. AMERICANS WITH DISABILITIES ACT (ADA) ACCESS
22. CONFORMANCE WITH ITS NATIONAL INFRASTRUCTURE

1. NO GOVERNMENT OBLIGATION TO THIRD PARTIES - *Applies to All Contracts*

The WRTA and Contractor acknowledge and agree that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of the underlying Contract, absent the express written consent by the Federal Government, the Federal Government is not a party to this Contract and shall not be subject to any obligations or liabilities to the WRTA, Contractor or any other party (whether or not a party to that contract) pertaining to any matter resulting from the underlying Contract. The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by the FTA. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.

2. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS AND RELATED ACTS

Applies to All Procurements

49 U.S.C. § 5323(l) (1)

31 U.S.C. §§ 3801-3812

18 U.S.C. § 1001

49 C.F.R. part 31

The Contractor acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. § 3801 et seq. and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 C.F.R. part 31, apply to its actions pertaining to this Project. Upon execution of the underlying contract, the Contractor certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to the underlying contract or the FTA assisted project for which this contract work is being performed. In addition to other penalties that

may be applicable, the Contractor further acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on the Contractor to the extent the Federal Government deems appropriate.

The Contractor also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under a contract connected with a project that is financed in whole or in part with Federal assistance originally awarded by FTA under the authority of 49 U.S.C. chapter 53, the Government reserves the right to impose the penalties of 18 U.S.C. § 1001 and 49 U.S.C. § 5323(l) on the Contractor, to the extent the Federal Government deems appropriate.

The Contractor agrees to include the above two clauses in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clauses shall not be modified, except to identify the subcontractor who will be subject to the provisions.

3. ACCESS TO RECORDS AND REPORTS - *Applies to All Procurement Types*

49 U.S.C. § 5325(g)

2 C.F.R. § 200.333

49 C.F.R. part 633

a. Record Retention. The Contractor will retain, and will require its subcontractors of all tiers to retain, complete and readily accessible records related in whole or in part to the contract, including, but not limited to, data, documents, reports, statistics, sub-agreements, leases, subcontracts, arrangements, other third party agreements of any type, and supporting materials related to those records.

b. Retention Period. The Contractor agrees to comply with the record retention requirements in accordance with 2 C.F.R. § 200.333. The Contractor shall maintain all books, records, accounts and reports required under this Contract for a period of at not less than three (3) years after the date of termination or expiration of this Contract, except in the event of litigation or settlement of claims arising from the performance of this Contract, in which case records shall be maintained until the disposition of all such litigation, appeals, claims or exceptions related thereto.

c. Access to Records. The Contractor agrees to provide sufficient access to FTA and its contractors to inspect and audit records and information related to performance of this contract as reasonably may be required.

d. Access to the Sites of Performance. The Contractor agrees to permit FTA and its contractors' access to the sites of performance under this contract as reasonably may be required.

4. FEDERAL CHANGES – *Applies to all Contracts*

49 CFR Part 18

Federal Changes - Contractor shall at all times comply with all applicable FTA regulations, policies, procedures and directives, including without limitation those listed directly or by reference in the Master Agreement between Purchaser and FTA, as they may be amended or promulgated from time to time during the term of this contract. Contractor's failure to so comply shall constitute a material breach of this contract.

5. CIVIL RIGHTS LAWS AND REGULATIONS – *Applies to All Procurement Types*

Civil Rights and Equal Opportunity – The WRTA is an Equal Opportunity Employer. As such, the WRTA agrees to comply with all applicable Federal civil rights laws and implementing regulations. Apart from inconsistent requirements imposed by Federal laws or regulations, the WRTA agrees to comply with the requirements of 49 U.S.C. § 5323(h) (3) by not using any Federal assistance awarded by FTA to support procurements using exclusionary or discriminatory specifications.

Under this Agreement, the Contractor shall at all times comply with the following requirements and shall include these requirements in each subcontract entered into as part thereof.

1. Nondiscrimination. In accordance with Federal transit law at 49 U.S.C. § 5332, the Contractor agrees that it will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, sex, disability, or age. In addition, the Contractor agrees to comply with applicable Federal implementing regulations and other implementing requirements FTA may issue.

2. Race, Color, Religion, National Origin, Sex. In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. § 2000e et seq., and Federal transit laws at 49 U.S.C. § 5332, the Contractor agrees to comply with all applicable

equal employment opportunity requirements of U.S. Department of Labor (U.S. DOL) regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor," 41 C.F.R. chapter 60, and Executive Order No. 11246, "Equal Employment Opportunity in Federal Employment," September 24, 1965, 42 U.S.C. § 2000e note, as amended by any later Executive Order that amends or supersedes it, referenced in 42 U.S.C. § 2000e note. The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, national origin, or sex (including sexual orientation and gender identity). Such action shall include, but not be limited to, the following: employment, promotion, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

3. **Age.** In accordance with the Age Discrimination in Employment Act, 29 U.S.C. §§ 621- 634, U.S. Equal Employment Opportunity Commission (U.S. EEOC) regulations, "Age Discrimination in Employment Act," 29 C.F.R. part 1625, the Age Discrimination Act of 1975, as amended, 42 U.S.C. § 6101 et seq., U.S. Health and Human Services regulations, "Nondiscrimination on the Basis of Age in Programs or Activities Receiving Federal Financial Assistance," 45 C.F.R. part 90, and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees to refrain from discrimination against present and prospective employees for reason of age. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

4. **Disabilities.** In accordance with section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. § 794, the Americans with Disabilities Act of 1990, as amended, 42 U.S.C. § 12101 et seq., the Architectural Barriers Act of 1968, as amended, 42 U.S.C. § 4151 et seq., and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees that it will not discriminate against individuals on the basis of disability. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

6. INCORPORATION OF FEDERAL TRANSIT ADMINISTRATION (FTA) TERMS – *Applies to all Contracts*

The preceding provisions include, in part, certain Standard Terms and Conditions required by DOT, whether or not expressly set forth in the preceding contract provisions. All contractual provisions required by DOT, as set forth in FTA Circular 4220.1F are hereby incorporated by reference. Anything to the contrary herein notwithstanding, all FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Agreement. The Contractor shall not perform any act, fail to perform any act, or refuse to comply with any the WRTA requests which would cause the WRTA to be in violation of the FTA terms and conditions.

7. ENERGY CONSERVATION – *Applies to All Procurements*

42 U.S.C. 6321 et seq.

49 C.F.R. part 622, subpart C

The contractor agrees to comply with mandatory standards and policies relating to energy efficiency, which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.

8. TERMINATION – *Applies to all contracts >\$10,000 if 49 CFR part 18 applies*

2 C.F.R. § 200.339

2 C.F.R. part 200, Appendix II (B)

Termination for Convenience (General Provision)

The WRTA may terminate this contract, in whole or in part, at any time by written notice to the Contractor when it is in the WRTA's best interest. The Contractor shall be paid its costs, including contract close-out costs, and profit on work performed up to the time of termination. The Contractor shall promptly submit its termination claim to WRTA to be paid the Contractor. If the Contractor has any property in its possession belonging to WRTA, the Contractor will account for the same, and dispose of it in the manner WRTA directs.

Termination for Default [Breach or Cause] (General Provision)

If the Contractor does not deliver supplies in accordance with the contract delivery schedule, or if the contract is for services, the Contractor fails to perform in the manner called for in the contract, or if the Contractor fails to comply with any other provisions of the contract, the WRTA may terminate this contract for default. Termination shall be effected by serving a Notice of Termination on the Contractor setting forth the manner in which the Contractor is in default. The

Contractor will be paid only the contract price for supplies delivered and accepted, or services performed in accordance with the manner of performance set forth in the contract.

If it is later determined by the WRTA that the Contractor had an excusable reason for not performing, such as a strike, fire, or flood, events which are not the fault of or are beyond the control of the Contractor, the WRTA, after setting up a new delivery of performance schedule, may allow the Contractor to continue work, or treat the termination as a Termination for Convenience.

Opportunity to Cure (General Provision)

The WRTA, in its sole discretion may, in the case of a termination for breach or default, allow the Contractor [an appropriately short period of time] in which to cure the defect. In such case, the Notice of Termination will state the time period in which cure is permitted and other appropriate conditions

If Contractor fails to remedy to WRTA's satisfaction the breach or default of any of the terms, covenants, or conditions of this Contract within [10 days] after receipt by Contractor of written notice from WRTA setting forth the nature of said breach or default, WRTA shall have the right to terminate the contract without any further obligation to Contractor. Any such termination for default shall not in any way operate to preclude WRTA from also pursuing all available remedies against Contractor and its sureties for said breach or default.

Waiver of Remedies for any Breach

In the event that WRTA elects to waive its remedies for any breach by Contractor of any covenant, term or condition of this contract, such waiver by WRTA shall not limit WRTA's remedies for any succeeding breach of that or of any other covenant, term, or condition of this contract.

Termination for Convenience (Professional or Transit Service Contracts)

The WRTA, by written notice, may terminate this contract, in whole or in part, when it is in the WRTA's interest. If this contract is terminated, the WRTA shall be liable only for payment under the payment provisions of this contract for services rendered before the effective date of termination.

Termination for Default (Supplies and Service)

If the Contractor fails to deliver supplies or to perform the services within the time specified in this contract or any extension, or if the Contractor fails to comply with any other provisions of this contract, the WRTA may terminate this contract for default. The WRTA shall terminate by delivering to the Contractor a Notice of Termination specifying the nature of the default. The Contractor will only be paid the contract price for supplies delivered and accepted, or services performed in accordance with the manner or performance set forth in this contract.

If, after termination for failure to fulfill contract obligations, it is determined that the Contractor was not in default, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of the WRTA.

Termination for Default (Transportation Services)

If the Contractor fails to pick up the commodities or to perform the services, including delivery services, within the time specified in this contract or any extension, or if the Contractor fails to comply with any other provisions of this contract, the WRTA may terminate this contract for default. The WRTA shall terminate by delivering to the Contractor a Notice of Termination specifying the nature of default. The Contractor will only be paid the contract price for services performed in accordance with the manner of performance set forth in this contract.

If this contract is terminated while the Contractor has possession of WRTA goods, the Contractor shall, upon direction of the WRTA, protect and preserve the goods until surrendered to the WRTA or its agent. The Contractor and WRTA shall agree on payment for the preservation and protection of goods. Failure to agree on an amount will be resolved under the Dispute clause.

If, after termination for failure to fulfill contract obligations, it is determined that the Contractor was not in default, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of the WRTA.

Termination for Default (Construction)

If the Contractor refuses or fails to prosecute the work or any separable part, with the diligence that will ensure its completion within the time specified in this contract or any extension or fails to complete the work within this time, or if the Contractor fails to comply with any other provision of this contract, WRTA may terminate this contract for default. The WRTA shall terminate by delivering to the Contractor a Notice of Termination specifying the nature of the default. In this event, the WRTA may take over the work and compete it by contract or otherwise, and may take possession of and use any materials, appliances, and plant on the work site necessary for completing the work. The Contractor and its sureties shall be liable for any damage to the WRTA resulting from the Contractor's refusal or failure to complete the work within specified time, whether or not the Contractor's right to proceed with the work is terminated. This liability includes any increased costs incurred by the WRTA in completing the work.

The Contractor's right to proceed shall not be terminated nor shall the Contractor be charged with damages under this clause if:

1. The delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include: acts of God, acts of WRTA, acts of another contractor in the performance of a contract with WRTA, epidemics, quarantine restrictions, strikes, freight embargoes; and
2. The Contractor, within [10] days from the beginning of any delay, notifies WRTA in writing of the causes of delay. If, in the judgment of WRTA, the delay is excusable, the time for completing the work shall be extended. The judgment of WRTA shall be final and conclusive for the parties, but subject to appeal under the Disputes clause(s) of this contract. If, after termination of the Contractor's right to proceed, it is determined that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the termination had been issued for the convenience of WRTA.

Termination for Convenience or Default (Architect and Engineering)

The WRTA may terminate this contract in whole or in part, for the WRTA's convenience or because of the failure of the Contractor to fulfill the contract obligations. The WRTA shall terminate by delivering to the Contractor a Notice of Termination specifying the nature, extent, and effective date of the termination. Upon receipt of the notice, the Contractor shall (1) immediately discontinue all services affected (unless the notice directs otherwise), and (2) deliver to the WRTA's Contracting Officer all data, drawings, specifications, reports, estimates, summaries, and other information and materials accumulated in performing this contract, whether completed or in process. WRTA has a royalty-free, nonexclusive, and irrevocable license to reproduce, publish or otherwise use, all such data, drawings, specifications, reports, estimates, summaries, and other information and materials.

If the termination is for the convenience of the WRTA, the WRTA's Contracting Officer shall make an equitable adjustment in the contract price but shall allow no anticipated profit on unperformed services.

If the termination is for failure of the Contractor to fulfill the contract obligations, the WRTA may complete the work by contract or otherwise and the Contractor shall be liable for any additional cost incurred by the WRTA.

If, after termination for failure to fulfill contract obligations, it is determined that the Contractor was not in default, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of WRTA.

Termination for Convenience or Default (Cost-Type Contracts)

The WRTA may terminate this contract, or any portion of it, by serving a Notice of Termination on the Contractor. The notice shall state whether the termination is for convenience of WRTA or for the default of the Contractor. If the termination is for default, the notice shall state the manner in which the Contractor has failed to perform the requirements of the contract. The Contractor shall account for any property in its possession paid for from funds received from the WRTA, or property supplied to the Contractor by the WRTA. If the termination is for default, the WRTA may fix the fee, if the contract provides for a fee, to be paid the Contractor in proportion to the value, if any, of work performed up to the time of termination. The Contractor shall promptly submit its termination claim to the WRTA and the parties shall negotiate the termination settlement to be paid the Contractor.

If the termination is for the convenience of WRTA, the Contractor shall be paid its contract close-out costs, and a fee, if the contract provided for payment of a fee, in proportion to the work performed up to the time of termination.

If, after serving a Notice of Termination for Default, the WRTA determines that the Contractor has an excusable reason for not performing, the WRTA, after setting up a new work schedule, may allow the Contractor to continue work, or treat the termination as a Termination for Convenience.

9. GOVERNMENT-WIDE DEBARMENT AND SUSPENSION – Applies to All Contracts >\$25,000

2 C.F.R. part 180

2 C.F.R. part 1200

2 C.F.R. § 200.213

2 C.F.R. part 200 Appendix II (I)

Executive Order 12549

Executive Order 12689

Debarment, Suspension, Ineligibility and Voluntary Exclusion

The Contractor shall comply and facilitate compliance with U.S. DOT regulations, "Nonprocurement Suspension and Debarment," 2 C.F.R. part 1200, which adopts and supplements the U.S. Office of Management and Budget (U.S. OMB) "Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)," 2 C.F.R. part 180. These provisions apply to each contract at any tier of \$25,000 or more, and to each contract at any tier for a federally required audit (irrespective of the contract amount), and to each contract at any tier that must be approved by an FTA official

irrespective of the contract amount. As such, the Contractor shall verify that its principals, affiliates, and subcontractors are eligible to participate in this federally funded contract and are not presently declared by any Federal department or WRTA to be:

- a) Debarred from participation in any federally assisted Award;
- b) Suspended from participation in any federally assisted Award;
- c) Proposed for debarment from participation in any federally assisted Award;
- d) Declared ineligible to participate in any federally assisted Award;
- e) Voluntarily excluded from participation in any federally assisted Award; or
- f) Disqualified from participation in any federally assisted Award.

By signing and submitting its bid or proposal, the bidder or proposer certifies as follows:

The certification in this clause is a material representation of fact relied upon by the WRTA. If it is later determined by the WRTA that the bidder or proposer knowingly rendered an erroneous certification, in addition to remedies available to the WRTA, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The bidder or proposer agrees to comply with the requirements of 2 C.F.R. part 180, subpart C, as supplemented by 2 C.F.R. part 1200, while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

SEE EXHIBIT E FOR DEBARMENT AND SUSPENSION CERTIFICATION

10. BUY AMERICA REQUIREMENTS – *Applies to Rolling Stock, Construction, Materials & Supplies Contracts >\$150,000*
49 U.S.C. 5323(j)
49 C.F.R. part 661

The contractor agrees to comply with 49 U.S.C. 5323(j) and 49 C.F.R. part 661, which provide that Federal funds may not be obligated unless all steel, iron, and manufactured products used in FTA funded projects are produced in the United States, unless a waiver has been granted by FTA or the product is subject to a general waiver. General waivers are listed in 49 C.F.R. § 661.7. Separate requirements for rolling stock are set out at 49 U.S.C. 5323(j)(2)(C) and 49 C.F.R. § 661.11. The [bidder or offeror] must submit to WRTA the appropriate Buy America certification below with its [bid or offer]. Bids or offers that are not accompanied by a completed Buy America certification will be rejected as nonresponsive.

In accordance with 49 C.F.R. § 661.6, for the procurement of steel, iron or manufactured products, use the certifications below.

SEE EXHIBIT G FOR BUY AMERICA CERTIFICATIONS:

Certificate of Compliance with Buy America Requirements
Certificate of Non-Compliance with Buy America Requirements
Certificate of Compliance with Buy America Rolling Stock Requirements
Certificate of Non-Compliance with Buy America Rolling Stock Requirements

11. VIOLATION AND BREACH OF CONTRACT – *Applies to all Contracts >\$250,000*
2 C.F.R. § 200.326
2 C.F.R. part 200, Appendix II (A)

Rights and Remedies of the WRTA The WRTA shall have the following rights in the event that the WRTA deems the Contractor guilty of a breach of any term under the Contract.

1. The right to take over and complete the work or any part thereof as WRTA for and at the expense of the Contractor, either directly or through other contractors;
2. The right to cancel this Contract as to any or all of the work yet to be performed;
3. The right to specific performance, an injunction or any other appropriate equitable remedy; and
4. The right to money damages.

Rights and Remedies of Contractor Inasmuch as the Contractor can be adequately compensated by money damages for any breach of this Contract, which may be committed by the WRTA, the Contractor expressly agrees that no default, act or omission of the WRTA shall constitute a material breach of this Contract, entitling Contractor to cancel or rescind the Contract (unless the WRTA directs Contractor to do so) or to suspend or abandon performance.

Remedies Substantial failure of the Contractor to complete the Project in accordance with the terms of this Agreement will be a default of this Agreement. In the event of a default, the WRTA will have all remedies in law and equity, including the right to specific performance, without further assistance, and the rights to termination or suspension as provided

herein. The Contractor recognizes that in the event of a breach of this Agreement by the Contractor before the WRTA takes action contemplated herein, the WRTA will provide the Contractor with sixty (60) days written notice that the WRTA considers that such a breach has occurred and will provide the Contractor a reasonable period of time to respond and to take necessary corrective action.

Disputes Disputes arising in the performance of this Contract that are not resolved by agreement of the parties shall be decided in writing by the authorized representative of WRTA's Administrator. This decision shall be final and conclusive unless within [10] days from the date of receipt of its copy, the Contractor mails or otherwise furnishes a written appeal to the Administrator. In connection with any such appeal, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of its position. The decision of the Administrator shall be binding upon the Contractor and the Contractor shall abide by the decision.

In the event that a resolution of the dispute is not mutually agreed upon, the parties can agree to mediate the dispute or proceed with litigation. Notwithstanding any provision of this section, or any other provision of this Contract, it is expressly agreed and understood that any court proceeding arising out of a dispute under the Contract shall be heard by a Court de novo and the court shall not be limited in such proceeding to the issue of whether the Authority acted in an arbitrary, capricious or grossly erroneous manner.

Pending final settlement of any dispute, the parties shall proceed diligently with the performance of the Contract, and in accordance with the WRTA's direction or decisions made thereof.

Performance during Dispute Unless otherwise directed by WRTA, Contractor shall continue performance under this Contract while matters in dispute are being resolved.

Claims for Damages Should either party to the Contract suffer injury or damage to person or property because of any act or omission of the party or of any of its employees, agents or others for whose acts it is legally liable, a claim for damages therefor shall be made in writing to such other party within a reasonable time after the first observance of such injury or damage.

Remedies Unless this Contract provides otherwise, all claims, counterclaims, disputes and other matters in question between the WRTA and the Contractor arising out of or relating to this agreement or its breach will be decided by arbitration if the parties mutually agree, or in a court of competent jurisdiction within the State in which the WRTA is located.

Rights and Remedies The duties and obligations imposed by the Contract documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law. No action or failure to act by the WRTA or Contractor shall constitute a waiver of any right or duty afforded any of them under the Contract, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

12. LOBBYING RESTRICTIONS – *Applies to All Contracts >\$100,000*

31 U.S.C. § 1352

2 C.F.R. § 200.450

2 C.F.R. part 200 appendix II (J)

49 C.F.R. part 20

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an WRTA, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any WRTA, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all subcontractors shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

SEE EXHIBIT F FOR LOBBYING RESTRICTIONS CERTIFICATION

13. CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT – *Applies to All Procurement*

Types >\$150,000

42 U.S.C. §§ 7401 – 7671q
33 U.S.C. §§ 1251-1387
2 C.F.R. part 200, Appendix II (G)

The Contractor agrees:

- 1) It will not use any violating facilities;
- 2) It will report the use of facilities placed on or likely to be placed on the U.S. EPA “List of Violating Facilities;”
- 3) It will report violations of use of prohibited facilities to FTA; and
- 4) It will comply with the inspection and other requirements of the Clean Air Act, as amended, (42 U.S.C. §§ 7401 – 7671q); and the Federal Water Pollution Control Act as amended, (33 U.S.C. §§ 1251-1387).

14. CARGO PREFERENCE REQUIREMENTS – *Applies to Rolling Stock, Construction, Material & Supplies that may be transported by ocean vessel.*

46 U.S.C. § 55305
46 C.F.R. part 381

Cargo Preference - Use of United States-Flag Vessels

The contractor agrees:

- a. to use privately owned United States-Flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to the underlying contract to the extent such vessels are available at fair and reasonable rates for United States-Flag commercial vessels;
- b. to furnish within 20 working days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, "on-board" commercial ocean bill-of-lading in English for each shipment of cargo described in the preceding paragraph to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590 and to the WRTA (through the contractor in the case of a subcontractor's bill-of-lading); and
- c. to include these requirements in all subcontracts issued pursuant to this contract when the subcontract may involve the transport of equipment, material, or commodities by ocean vessel.

15. FLY AMERICA – *Applies to All Procurements involving foreign transport or travel by air*

49 U.S.C. § 40118
41 C.F.R. part 301-10
48 C.F.R. part 47.4

Fly America Requirements

a) Definitions. As used in this clause—

“International air transportation” means transportation by air between a place in the United States and a place outside the United States or between two places both of which are outside the United States.

“United States” means the 50 States, the District of Columbia, and outlying areas.

“U.S.-flag air carrier” means an air carrier holding a certificate under 49 U.S.C. Chapter 411.

b) When Federal funds are used to fund travel, Section 5 of the International Air Transportation Fair Competitive Practices Act of 1974 (49 U.S.C. 40118) (Fly America Act) requires contractors, WRTAs, and others use U.S.-flag air carriers for U.S. Government-financed international air transportation of personnel (and their personal effects) or property, to the extent that service by those carriers is available. It requires the Comptroller General of the United States, in the absence of satisfactory proof of the necessity for foreign-flag air transportation, to disallow expenditures from funds, appropriated or otherwise established for the account of the United States, for international air transportation secured aboard a foreign-flag air carrier if a U.S.-flag air carrier is available to provide such services.

- c) If available, the Contractor, in performing work under this contract, shall use U.S.-flag carriers for international air transportation of personnel (and their personal effects) or property.
- d) In the event that the Contractor selects a carrier other than a U.S.-flag air carrier for international air transportation, the Contractor shall include a statement on vouchers involving such transportation essentially as follows:

Statement of Unavailability of U.S.-Flag Air Carriers

International air transportation of persons (and their personal effects) or property by U.S.-flag air carrier was not available or it was necessary to use foreign-flag air carrier service for the following reasons. See FAR § 47.403. [State reasons]:
(End of statement)

- e) The Contractor shall include the substance of this clause, including this paragraph (e), in each subcontract or purchase under this contract that may involve international air transportation. (End of Clause)

16. DISADVANTAGED BUSINESS ENTERPRISE (DBE) – *Applies to All Procurement Types*
49 C.F.R. part 26

The following contract clause is required in all DOT-assisted prime and subcontracts:

- a. This contract is subject to the requirements of Title 49, Code of Federal Regulations, Part 26, *Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs*. The national goal for participation of Disadvantaged Business Enterprises (DBE) is 10%. The WRTA's overall goal for DBE participation is 1.22%.
- b. The contractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of this DOT-assisted contract. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the WRTA deems appropriate, which may include, but is not limited to:
- (1) Withholding monthly progress payments;
 - (2) Assessing sanctions;
 - (3) Liquidated damages; and/or
 - (4) Disqualifying the contractor from future bidding as non-responsible. 49 C.F.R. § 26.13(b).

Each subcontract the contractor signs with a subcontractor must include the assurance in this paragraph (see 49 CFR 26.13(b)).

- c. The successful bidder/offeror will be required to report its DBE participation obtained through race-neutral means throughout the period of performance.
- d. **PROMPT PAYMENT** - The contractor is required to pay its subcontractors performing work related to this contract for satisfactory performance of that work no later than 30 days after the contractor's receipt of payment for that work from the WRTA. In addition, the contractor is required to return any retainage payments to those subcontractors within 30 days after the subcontractor's work related to this contract is satisfactorily completed.
- e. The contractor must promptly notify the WRTA, whenever a DBE subcontractor performing work related to this contract is terminated or fails to complete its work, and must make good faith efforts to engage another DBE subcontractor to perform at least the same amount of work. The contractor may not terminate any DBE subcontractor and perform that work through its own forces or those of an affiliate without prior written consent of the WRTA.

17. RECYCLED PRODUCTS – *Applies to Operations/Management/Subrecipients; Rolling Stock; Construction Procurements - EPA Selected Items >\$10,000 Annually*

42 U.S.C. § 6962
40 C.F.R. part 247

2 C.F.R. part § 200.322

Recovered Materials The Contractor agrees to provide a preference for those products and services that conserve natural resources, protect the environment, and are energy efficient by complying with and facilitating compliance with Section 6002 of the Resource Conservation and Recovery Act, as amended, 42 U.S.C. § 6962, and U.S. Environmental Protection WRTA (U.S. EPA), “Comprehensive Procurement Guideline for Products Containing Recovered Materials,” 40 C.F.R. part 247.

18. PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT – *Applies to All Procurements*

2 CFR 200.216

The contractor is prohibited from obligating or expending Federal funds to:

1. Procure or obtain
2. Extend or renew a contract to procure or obtain; or
3. Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that use covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, “covered telecommunications equipment or services” is:
 - a. Telecommunications equipment provided by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities)
 - b. For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).
 - c. Telecommunications or video surveillance services provided by such entities or using such equipment.
 - d. Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

The contractor shall not provide covered telecommunications equipment or services in the performance of this contract.

19. NOTICE TO FTA AND U.S. DOT INSPECTOR GENERAL OF INFORMATION RELATED TO FRAUD, WASTE, ABUSE, OR OTHER LEGAL MATTERS – *Applies to All Contracts in excess of \$25,000*
FTA Master Agreement §39(b)

If a current or prospective legal matter that may affect the Federal Government emerges, the Contractor must promptly notify the Worcester Regional Transit Authority (WRTA), which will promptly notify the FTA Chief Counsel and FTA Regional Counsel for the Region in which the WRTA is located. The Contractor must include an equivalent provision in its sub-agreements at every tier, for any agreement that is a “covered transaction” according to 2 C.F.R. §§ 180.220 and 1200.220.

- The types of legal matters that require notification include, but are not limited to, a major dispute, breach, default, litigation, or naming the Federal Government as a party to litigation or a legal disagreement in any forum for any reason.

- Matters that may affect the Federal Government include, but are not limited to, the Federal Government's interests in the Award, the accompanying Underlying Agreement between the FTA and the WRTA, and any Amendments thereto, or the Federal Government's administration or enforcement of federal laws, regulations, and requirements.

Additional Notice to U.S. DOT Inspector General. The Contractor must promptly notify the WRTA, which will promptly notify the U.S. DOT Inspector General in addition to the FTA Chief Counsel or Regional Counsel for the Region in which the WRTA is located, if the Contractor has knowledge of potential fraud, waste, or abuse occurring on a Project receiving assistance from FTA. The notification provision applies if a person has or may have submitted a false claim under the False Claims Act, 31 U.S.C. § 3729, et seq., or has or may have committed a criminal or civil violation of law pertaining to such matters as fraud, conflict of interest, bid rigging, misappropriation or embezzlement, bribery, gratuity, or similar misconduct involving federal assistance. This responsibility occurs whether the Project is subject to this Agreement or another agreement with the WRTA involving a principal, officer, employee, agent, or Third Party Participant of the Contractor. It also applies to subcontractors at any tier. Knowledge, as used in this paragraph, includes, but is not limited to, knowledge of a criminal or civil investigation by a Federal, state, or local law enforcement or other investigative agency, a criminal indictment or civil complaint, or probable cause that could support a criminal indictment, or any other credible information in the possession of the Contractor. In this paragraph, "promptly" means to refer information without delay and without change. This notification provision applies to all divisions of the Contractor, including divisions tasked with law enforcement or investigatory functions.

20. SAFE OPERATION OF MOTOR VEHICLES – *Applies to All Procurement Types*

23 U.S.C. part 402
Executive Order No. 13043
Executive Order No. 13513
U.S. DOT Order No. 3902.10
Seat Belt Use

Seat Belt Use: The Contractor is encouraged to adopt and promote on-the-job seat belt use policies and programs for its employees and other personnel that operate company-owned vehicles, company- A-60 rented vehicles, or personally operated vehicles. The terms "company-owned" and "company-leased" refer to vehicles owned or leased either by the Contractor or WRTA.

Distractions Driving: The Contractor agrees to adopt and enforce workplace safety policies to decrease crashes caused by distracted drivers, including policies to ban text messaging while using an electronic device supplied by an employer, and driving a vehicle the driver owns or rents, a vehicle Contractor owns, leases, or rents, or a privately-owned vehicle when on official business in connection with the work performed under this agreement.

21. AMERICANS WITH DISABILITIES ACT (ADA) - *Applies to All Procurement Types*

ADA Access - This requirement applies to contracts for Architectural and Engineering Services. The contractor agrees to comply with the requirements of 49 U.S.C. § 5301 (d), which states the Federal policy that the elderly and persons with disabilities have the same right as other persons to use mass transportation service and facilities, and that special efforts shall be made in planning and designing those services and facilities to implement that policy. The contractor also agrees to comply with all applicable requirements of section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. § 794, which prohibits discrimination on the basis of handicaps, with the Americans with Disabilities Act of 1990 (ADA), as amended, 42 U.S.C. §§ 12101 et seq., which requires that accessible facilities and services be made available to persons with disabilities, including any subsequent amendments to that Act, and with the Architectural Barriers act of 1968, as amended, 42 U.S.C. §§ 4151 et seq., which requires that buildings and public accommodations be accessible to persons with disabilities, including any subsequent amendments to that Act. In addition, the contractor agrees to comply with any and all applicable requirements issued by the FTA, DOT, DOJ, U.S. GSA, U.S. EEOC, U.S. FCC, any subsequent amendments thereto and any other nondiscrimination statute(s) that may apply to the Project.

22. CONFORMANCE WITH ITS NATIONAL ARCHITECTURE - *Applies to All Procurement Types*

ITS projects shall conform to the National ITS Architecture and standards. Conformance with the National ITS Architecture is interpreted to mean the use of the National ITS Architecture to develop a regional ITS architecture in support of integration and the subsequent adherence of all ITS projects to that regional ITS architecture. Development of the regional ITS architecture should be consistent with the transportation planning process for Statewide and Metropolitan Transportation Planning (49 CFR Part 613 and 621).

- End Exhibit H -

EXHIBIT I

PROTEST PROCEDURES

The following Bid Protest Procedures apply to Federal Transit Administration (FTA) assisted procurements that are competitively solicited. Interested parties must adhere to the following procedures. A protest will be processed in the time frames and structure specified below.

A. PRIOR TO OFFER OPENING

1. Protests concerning a procurement (by a prime contractor or an adversely affected subcontractor) must be in writing and received by WRTA not less than five (5) working days before offer opening unless a different deadline is established in the procurement documents.
2. Upon receipt of that protest, the Administrator will determine if the offer opening should be postponed. If offer opening is postponed, WRTA will notify all prime contractors and subcontractors who have been furnished a copy of the specifications that a protest has been filed and that offer opening is postponed until WRTA has issued its decision. Appropriate addenda will be issued rescheduling offer opening.
3. Any protest to WRTA may be withdrawn at any time before WRTA has issued its decision.
4. WRTA will respond within three (3) working days of receiving the protest, at least generally, to each material issue raised in the Protest. If the matter requires further evaluation, the Administrator will notify the protesting party in writing (by facsimile and U.S. Mail) of the extended review period. The Administrator's decision on any protest will be in writing and is final.

B. AFTER OFFER OPENING

1. Protests received after an offer opening will be considered only if it concerns an issue, procedure, or other matter that could not have been protested by an offeror prior to the opening. The protest must be in writing and be received by WRTA at least three (3) working days before the conditional award of a contract by the WRTA.
2. Upon receipt of the protest, the Administrator will immediately determine if the award of the contract should be postponed. If it is postponed, WRTA will notify all offerors that a protest has been filed and that award of the contract is postponed until WRTA has issued its decision.
3. A protest to WRTA may be withdrawn at any time before WRTA has issued its decision.
4. WRTA will respond within three (3) working days of receiving the protest, at least generally, to each material issue raised in the Protest. If the matter requires further

evaluation, the Administrator will notify the protesting party in writing (by facsimile and U.S. Mail) of the extended review period. The Administrator's decision on any protest will be in writing and is final.

C. AFTER AWARD

1. Protests received after an award has been made will be considered only if it concerns an issue, procedure or other matter that could not have been protested by an offeror after the opening. The protest must be in writing and received by the WRTA three (3) working days before the execution of the resulting contract.
2. Upon receipt of the protest, the Administrator will immediately determine if the execution of the contract should be postponed. If it is postponed, WRTA will notify all offerors that a protest has been filed and that execution of the contract is postponed until WRTA has issued its decision.
3. A protest to WRTA may be withdrawn at any time before WRTA has issued its decision.
4. WRTA will respond within three (3) working days of receiving the protest, at least generally, to each material issue raised in the Protest. If the matter requires further evaluation, the Administrator will notify the protesting party in writing (by facsimile and U.S. Mail) of the extended review period. The Administrator's decision on any protest will be in writing and is final.

D. APPEALS

1. Except as provided above, there are no further administrative appeals available. In certain circumstances judicial remedies may be available to aggrieved parties.

The WRTA will consider all written protests made within the timelines stated in this policy. Protest submissions should be concise, logically arranged, clearly state the grounds for the protest, and must include at least the following information:

- Name, address, and telephone number of protester.
- Solicitation or contract name and/or number.
- A detailed statement of the legal and factual grounds for the protest, including copies of all relevant documents or information.
- A statement of relief requested.

Protests are to be filed by certified mail, return receipt requested or by personal deliver by 4:30 pm on or before the due date at:

Administrator
Worcester Regional Transit Authority
60 Foster Street
Worcester, MA 01608

If protests are filed by personal delivery, the protestor must obtain a time-stamped copy of the protest from the WRTA's Administration Office as proof of the date and time of the filing of the protest. It is the Protester's sole responsibility to provide said copy at the time of filing.

- End Exhibit I -

EXHIBIT J
FUNCTIONAL SPECIFICATIONS
(Next Page)

EXHIBIT J

Paratransit Scheduling and Dispatching Software Specifications V3.1

Prepared for:



Prepared by:

Schweiger Consulting LLC

July 13, 2026

Table of Contents

1	INTRODUCTION	1
2	OVERVIEW	3
2.1	DESCRIPTION OF WRTA DEMAND-RESPONSE SERVICES	3
2.1.1	Service Operated by Central Massachusetts Transit Management (CMTM)	3
2.1.2	Service Operated by SCM Elderbus.....	5
2.1.3	Service Operated by Councils on Aging (COAs).....	5
2.1.4	Service Operated by Yellow Cab and Bethel Group	5
2.1.5	Service Operated by Via.....	5
2.2	PSDS PROJECT SCOPE.....	6
3	INFORMATION TECHNOLOGY (IT) REQUIREMENTS	9
3.1	GENERAL	9
3.2	REQUIRED INFRASTRUCTURE.....	9
3.2.1	Hardware	9
3.2.2	Software	10
3.3	INFORMATION SECURITY.....	11
3.4	DATABASE	12
3.4.1	General.....	13
3.4.2	Data Management.....	14
3.4.3	Data Logging and Retrieval.....	15
3.5	DATA ACCESS	15
3.6	CUSTOMER SUPPORT	15
3.6.1	Hosting Requirements.....	17
3.6.2	Follow-up Analysis.....	17
3.6.3	Post-Implementation Support and Maintenance Program.....	18
3.7	SOFTWARE UPDATES AND UPGRADES	18
4	WIRELESS DATA COMMUNICATION REQUIREMENTS	19
4.1	GENERAL	19
4.2	WIRELESS DATA COMMUNICATIONS	19
4.2.1	Wireless Data Communications Network	19
4.2.2	Central Wireless Communication Gateway Software.....	19
4.3	WIRELESS LOCAL AREA NETWORK (WLAN) DATA EXCHANGE (OPTIONAL)	20

4.3.1	General	20
4.3.2	Access Point Hardware	20
4.3.3	WLAN Data Transfer Support Software	20
5	GIS AND MAPPING	23
5.1	MAP SOURCE	23
5.2	BUILT-IN GIS SUPPORT	23
5.3	SPATIAL LAYER MANAGEMENT	23
5.3.1	Map Overlay	23
5.3.2	Definition and Management of Geographic Boundaries	23
5.3.3	Definition of Physical Barriers	23
5.3.4	Definition of Point of Interest (POI) Locations	24
5.3.5	Import/Export of Map Layers	24
5.4	MANAGEMENT OF SPATIAL ATTRIBUTES	24
5.5	GEOCODING	24
5.6	MISCELLANEOUS GIS FEATURES	25
5.6.1	Distance Computation	25
5.6.2	Zoom/Pan	25
5.6.3	Save and Reload Map View	25
5.6.4	Spatial Search	25
5.6.5	Legend	26
5.6.6	Printing	26
5.7	VISUALIZATION	26
5.8	MAP UPDATE PROCESS	26
5.9	INTEGRATION OF REAL-TIME TRAFFIC INFORMATION	27
5.10	THIRD-PARTY MAPPING (OPENSTREETMAP, GOOGLE MAPS, GOOGLE EARTH, BING MAPS, MAPQUEST) OVERLAY/INTEGRATION [OPTIONAL]	27
6	PARATRANSIT SCHEDULING AND DISPATCHING SOFTWARE (PSDS)	29
6.1	EXISTING TRIP AND CLIENT DATABASE CONVERSION	29
6.2	CLIENT REGISTRATION	29
6.3	CLIENT DATA MANAGEMENT	33
6.3.1	Edit Personal Details/Preferences	33
6.3.2	Tracking of ADA Eligibility by Client	33
6.4	AGENCY RESOURCE MANAGEMENT	33
6.4.1	Driver Management	33
6.4.2	Vehicle Management	34

6.5	RESERVATIONS	35
6.5.1	Trip Booking	35
6.5.2	Management of Standing Order (Subscription) Trips for Clients	38
6.5.3	Trip Modification/Cancellation	39
6.6	SCHEDULING	39
6.7	DISPATCHING	41
6.7.1	Trip Management	41
6.7.2	Incident Management	42
6.8	BILLING.....	42
6.8.1	Funding Sources	43
6.8.2	Billing Rates.....	43
6.8.3	Fiscal Years.....	43
6.8.4	Trip Mode Categories	43
6.8.5	Trip Purpose Categories.....	44
6.8.6	Driver Details Tracking	44
6.8.7	Trip Status Categories.....	44
6.8.8	Billing Status Categories	44
6.8.9	HIPAA Transportation and Other Codes	44
6.8.10	Trip Details by Client	44
6.8.11	Other Contracts	45
6.8.12	Fares	45
6.9	CUSTOMER SERVICE.....	45
6.10	MOBILE DATA TERMINAL (MDT) INTERFACE.....	46
6.10.1	Data Messaging.....	46
6.10.2	Manifest Transmission and Changes	47
6.10.3	Trip Events Logging.....	47
7	CUSTOMER/RIDER SYSTEM REQUIREMENTS	49
7.1	GENERAL	49
7.2	SELF-SERVICE COMMUNICATION CHANNELS	49
7.3	ELIGIBILITY-RELATED COMMUNICATIONS	49
7.4	NIGHT PRIOR RESERVATION CONFIRMATION	50
7.5	DAY-OF TRIP UPDATE.....	50
7.6	TRIP STATUS.....	50
7.7	CANCELLATIONS	51
7.8	RIDER AND ACCOUNT INFORMATION	51

7.9	REAL-TIME CUSTOMER INFORMATION	51
7.9.1	<i>Predicted Arrival Time</i>	52
7.9.2	<i>Web-based Trip Status</i>	52
7.9.3	<i>Email/Text Alerts</i>	52
7.9.4	<i>Interactive Voice Response (IVR) Alerts and Reservation Access</i>	52
7.9.5	<i>Mobile Application</i>	55
8	REPORTS	57
9	CAD/AVL INTEGRATION, MDT/TABLET, MANIFEST MANAGEMENT AND ICABBI INTEGRATION FUNCTIONAL SPECIFICATIONS	59
9.1	PSDS INTEGRATION WITH SYSTRANS CAD/AVL SYSTEM.....	59
9.2	MDT/TABLET SPECIFICATIONS	59
9.2.1	<i>“Safe Driving” Mode</i>	59
9.2.2	<i>Navigation Assistance</i>	59
9.2.3	<i>Vehicle Operator Logon</i>	60
9.3	MANIFEST MANAGEMENT.....	60
9.3.1	<i>General</i>	60
9.3.2	<i>Trip Events</i>	61
9.4	POTENTIAL INTERFACE WITH ICABBI	62
10	FUTURE CAPABILITIES	63
11	PROJECT IMPLEMENTATION	65
11.1	GENERAL	65
11.2	REQUIRED PROJECT SCHEDULE.....	65
11.3	PROJECT MANAGEMENT	66
11.3.1	<i>Project Status Tracking</i>	66
11.3.2	<i>Bi-Weekly Conference Calls</i>	67
11.3.3	<i>Minimum Required Onsite Work</i>	67
11.3.4	<i>Invoicing</i>	68
11.4	DESIGN REVIEWS	68
11.4.1	<i>Requirements Review (RR)</i>	68
11.4.2	<i>Preliminary Design Review</i>	68
11.4.3	<i>Final Design Review</i>	69
11.5	TESTING	69
11.6	DOCUMENTATION.....	71
11.7	TRAINING	71
12	WARRANTY	75

APPENDIX A: PRICE PROPOSAL FORM	77
APPENDIX B: COMPLIANCE MATRIX	79
APPENDIX C: SPECIFICATIONS OF WRTA'S OPERATIONS AND MAINTENANCE FACILITY WI-FI HOTSPOTS	81

List of Figures

Figure 1. WRTA Service Area 4

Figure 2. Via-WRTA Microtransit Service Area..... 6

List of Tables

Table 1. Required Client Data Fields 29

Table 2. Required Timeline of Activities and Deliverables 65

List of Abbreviations and Acronyms

ADA	Americans with Disabilities Act
AIL	Action Items List
ATP	Acceptance Test Procedures
AVL	Automatic Vehicle Location
BT	Burn-In Testing
CDL	Commercial Driver's License
CDR	Critical Design Review
CIO	Chief Information Officer
CMTM	Central Massachusetts Transit Management
COTS	Commercial off-the-shelf
CSV	Comma Separated Value
DAR	Dial-a-ride
ED	Elderly and Disabled
ESRI	Environmental Systems Research Institute
FCC	Federal Communications Commission
FDD	Final Design Document
FDR	Final Design Review
FTP	File Transfer Protocol
GIS	Geographic Information System
GPS	Global Positioning System
HIPAA	Health Insurance Portability and Accountability Act
HTTPS	Hypertext Transport Protocol Secure
ICA	Independent Computing Architecture
IDD	Installation Design Document
IAT	Installation Acceptance Test
IEEE	Institute of Electrical and Electronics Engineers
IT	Information Technology
ITS	Intelligent Transportation Systems
IVR	Interactive Voice Response
JRE	Java Run-time Environment
KML	Keyhole Markup Language
LAN	Local Area Network
MassDOT	Massachusetts Department of Transportation
MDT	Mobile Data Terminal
MMM	Mobility Management Model
NEMA	National Electrical Manufacturers Association
NEMT	Non-emergency Medical Transportation
NTD	National Transit Database

NTP	Notice To Proceed
ODBC	Open Database Connectivity
OMRG	Onboard Mobile Router Gateway
OSI	Open System Interconnection
PBSTM	Paratransit Brokerage Services Transit Management, Inc.
PCA	Personal Care Attendant
PDD	Preliminary Design Document
PDR	Preliminary Design Review
POI	Point of Interest
PSDS	Paratransit Scheduling and Dispatching Software
RAM	Random Access Memory
RAPS	Risk Adjustment Processing System
RDP	Remote Desktop Protocol
RFP	Request for Proposal
RM	Requirements Matrix
RR	Requirements Review
SA	System Acceptance
SAE	Society of Automotive Engineers
SCCP	Skinny Call Control Protocol
SHP	Shapefile
SIP	System Implementation Plan
SMs	Systems Manuals
SQL	Structured Query Language
SSID	Service Set Identifier
SSN	Social Security Number
TCP/IP	Transmission Control Protocol/Internet Protocol
TRD	Test Results Documentation
UAT	User Acceptance Testing
UMs	User Manuals
USB	Universal Serial Bus
VLU	Vehicle Logic Unit
VoIP	Voice over Internet Protocol
VPN	Virtual Private Network
WLAN	Wireless Local Area Network
WRTA	Worcester Regional Transit Authority
XML	eXtensible Markup Language
XMPP	Extensible Messaging and Presence Protocol

1 Introduction

These specifications define the functional, performance, installation, integration and project implementation requirements for the deployment of paratransit scheduling and dispatching software (PSDS) for demand-response services that are managed and/or operated by the Worcester Regional Transit Authority (WRTA). The WRTA provides transit service within its service area consisting of 37 member communities. The WRTA provides complementary Americans with Disabilities Act (ADA) paratransit service within a $\frac{3}{4}$ mile area surrounding each fixed route, in compliance with Federal Transit Administration (FTA) regulations, as well as non-ADA paratransit service for older adults and people with disabilities in each of the member communities. The WRTA partners with the Towns of Auburn, Clinton, Grafton, Holden, Leicester, Millbury, Northborough, Oxford, Shrewsbury, West Boylston, and Westborough to provide demand response services for older adult and/or disabled residents of these communities. Eight of these communities opted into WRTA's Mobility Management Model (MMM) Program¹. The WRTA also contracts with SCM Elderbus, a private non-profit 501(c)3 organization, to provide ADA and non-ADA demand response services to older adult and disabled residents of 22 WRTA communities south, west, and northwest of Worcester. Yellow Cab and the Bethel Group are demand response providers only in overflow conditions. Finally, the WRTA offers Via-WRTA, an on-demand microtransit service that is operated by Via Transportation, Inc. and is available in parts of Northborough, Shrewsbury, and Westborough, complete with a dedicated rider app to book rides.²

This document includes the following sections:

- Section 2 provides an overview of the WRTA and the technical scope of this project, including a description of the user needs that resulted in these specifications;
- Section 3 defines the information technology (IT) requirements;
- Section 4 defines wireless data communication system requirements;
- Section 5 defines the geographic information system (GIS) and mapping requirements for the PSDS;
- Section 6 defines the PSDS system requirements;
- Section 7 defines the customer facing system requirements;
- Section 8 defines reporting requirements;
- Section 9 defines the functional and performance requirements for integrating with the existing computer-sided dispatch (CAD) / automatic vehicle location (AVL) system;

¹ The MMM Program is a demand response transportation service for seniors and individuals with disabilities that is cooperatively supported by WRTA and WRTA member communities.

² <https://city.ridewithvia.com/via-wrta>

- Section 10 defines optional and future needs;
- Section 11 defines the project implementation requirements;
- Section 12 defines warranty and spares requirements;
- Appendix A contains the Price Proposal Form;
- Appendix B contains the Compliance Matrix;
- Appendix C contains the Specifications of the WRTA's Maintenance and Operations Facility Wi-Fi Hotspots.

2 Overview

The purpose of this procurement is to deploy one PSDS that will replace the existing PSDS software packages managed and/or operated by the WRTA and the other demand response service providers in the Worcester area. For the purposes of this Request for Proposal (RFP), the WRTA is the lead agency that will be contracting with the selected vendor. As described in this document, the WRTA seeks a PSDS that can support the commingling of demand-response services. (Commingling is an operational model that integrates multiple different transit services, such as ADA paratransit, microtransit, and dial-a-ride, into a single, unified PSDS system.

2.1 *Description of WRTA Demand-Response Services*

The WRTA provides a mix of fixed route, demand response, and microtransit services in the City of Worcester and 37 other member communities in central Massachusetts (see Figure 1). WRTA operates 23 city fixed routes, 3 community shuttle fixed routes, and 1 special fixed route providing shopping trips from various housing complexes twice a week. The 23 city fixed routes share a common terminus of the WRTA Central Hub in Worcester. Fixed route service is offered in 16 of the 37 member communities: Auburn, Brookfield, Charlton, Dudley, East Brookfield, Grafton, Leicester, Millbury, Northbridge, Oxford, Shrewsbury, Southbridge, Spencer, Webster, West Boylston, and Worcester.

All fixed routes, demand response, and on-demand services operate every weekday, except for demand response services in Boylston, which only run on Tuesdays and Thursdays. On Saturdays, WRTA operates a reduced schedule on most fixed routes and ADA service, and further reduced schedules are provided on Sundays on 13 fixed routes.

In 2025, WRTA provided 5,107,431 unlinked passenger trips. Of those trips, 227,971 were served by WRTA's demand response or taxi services.

WRTA operates 88 revenue vehicles in maximum service — 45 for fixed route and 43 for demand response. Vehicles operating in maximum service for demand response do not include the 40 automobiles used for the demand taxi service, as WRTA does not own or have any capital responsibility for those vehicles.

2.1.1 **Service Operated by Central Massachusetts Transit Management (CMTM)**

As required by the ADA and by Federal Transit Administration (FTA) regulations, WRTA operates complementary paratransit service within $\frac{3}{4}$ mile of each fixed route. The shared ride service is available whenever the regular WRTA fixed route bus is on the road (generally Monday through Sunday, with service hours varying by day of the week and by route). The entire city of Worcester falls within the ADA service area. ADA operations — including the application process, trip reservations, and customer service — are managed by Paratransit Brokerage Service Transit Management (PBSTM), and operations are provided by Central MA Transit Management, Inc. (CMTM).

The WRTA determines eligibility for ADA paratransit service based on functional considerations and helps determine which individuals can most benefit from ADA paratransit service and which individuals can be best served by the regular accessible WRTA fixed route bus. Individuals must apply for ADA

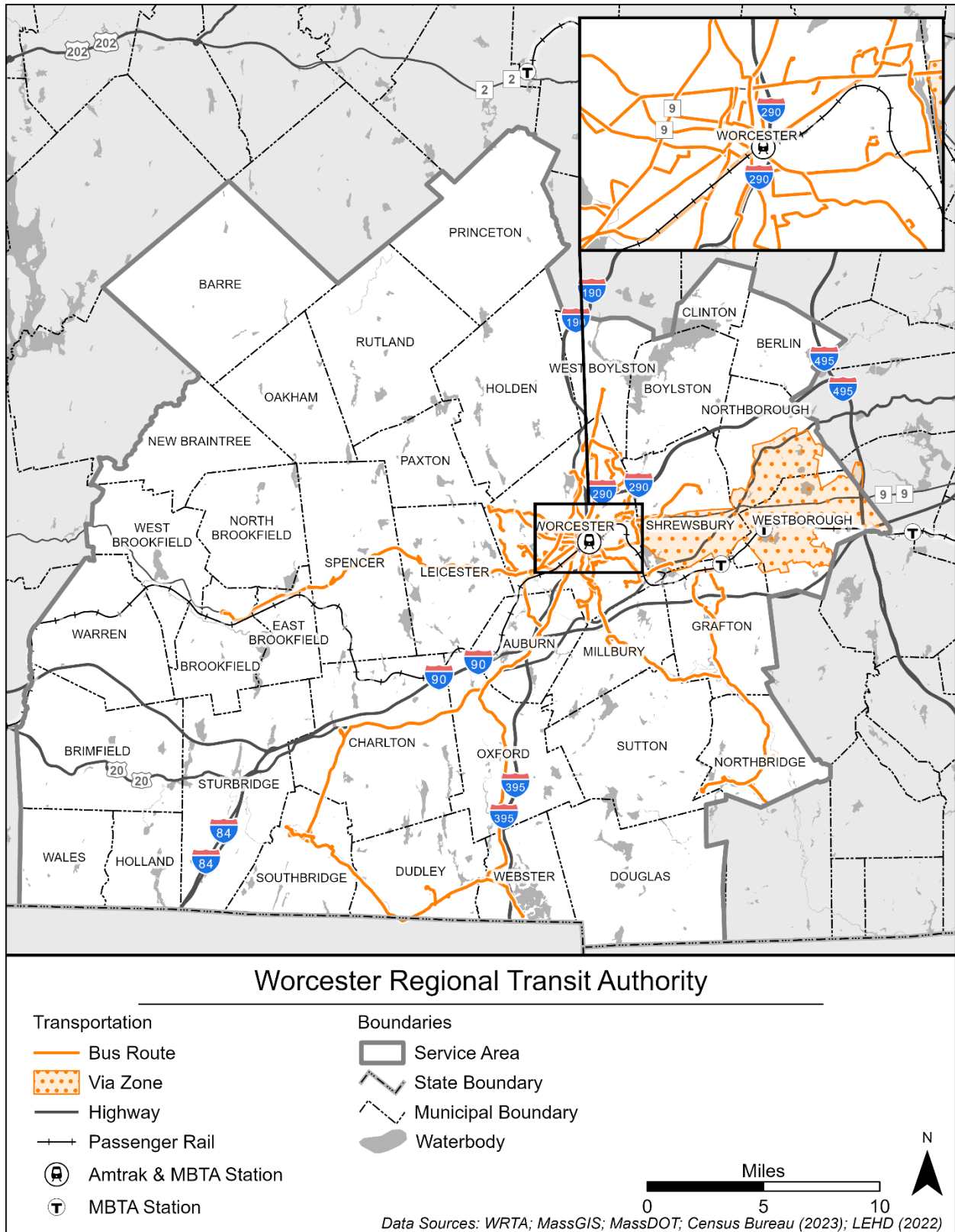


Figure 1. WRTA Service Area

Complementary Paratransit service and determined eligible under the guidelines of the ADA prior to using the service.

ADA Paratransit riders in Worcester, Auburn, Boylston, Leicester, Northborough, Oxford, and West Boylston currently have the option to schedule trips through an Online Reservation System.

2.1.2 Service Operated by SCM Elderbus

WRTA contracts with SCM Elderbus, a private non-profit 501(c)3 organization, to provide non-ADA demand response services to seniors and individuals with disabilities residing in 22 of WRTA's member communities south, west, and northwest of Worcester. SCM Elderbus communities include Barre, Brimfield, Brookfield, Charlton, Douglas, Dudley, East Brookfield, Holland, New Braintree, North Brookfield, Oakham, Paxton, Princeton, Rutland, Southbridge, Spencer, Sturbridge, Sutton, Wales, Warren, Webster, and West Brookfield. There is limited or no fixed route service in these communities, and the demand response service exceeds the ADA requirement.

2.1.3 Service Operated by Councils on Aging (COAs)

WRTA partners with the COAs in the towns of Auburn, Clinton, Grafton, Holden, Leicester, Millbury, Northborough, Oxford, Shrewsbury, West Boylston, and Westborough to provide demand response services for older adult and/or disabled residents of these communities. This is a shared-ride service provided with either a lift-equipped van or a taxi.

Eight of these communities opted into WRTA's Mobility Management Model (MMM) Program. The MMM Program is a demand response transportation service for seniors and individuals with disabilities that is cooperatively supported by WRTA and WRTA member communities. The intent of the MMM Program is to increase transportation options for vulnerable populations within the WRTA service area that have limited or lack access to other public transit options. The program also mitigates the responsibility and challenges that municipalities experience when providing transportation directly, by centralizing passenger scheduling and vehicle dispatch and by increasing operating efficiencies through the grouping of passenger trips that are optimized by scheduling and routing software to save time.

2.1.4 Service Operated by Yellow Cab and Bethel Group

The WRTA contracts with Worcester Yellow Cab and the Bethel Group to provide trips for ambulatory passengers when demand response service trip demand exceeds system capacity. These companies operate predominantly in the city of Worcester. Please note that the new PSDS shall be integrated into the overflow providers' systems (including iCabbi) to provide a seamless customer experience. This requirement is described in Section 9.3.

2.1.5 Service Operated by Via

In select areas of Northborough, Shrewsbury, and Westborough, the WRTA offers Via-WRTA on-demand microtransit service. This service includes two key origins/destinations: Solomon Pond Mall and the Southborough MBTA Commuter Rail station which allows a direct connection to MetroWest Regional Transit Authority (MWRTA) fixed route service. Trips can be reserved via a smartphone app or by calling 508.388.6620. The service area is shown in Figure 2.

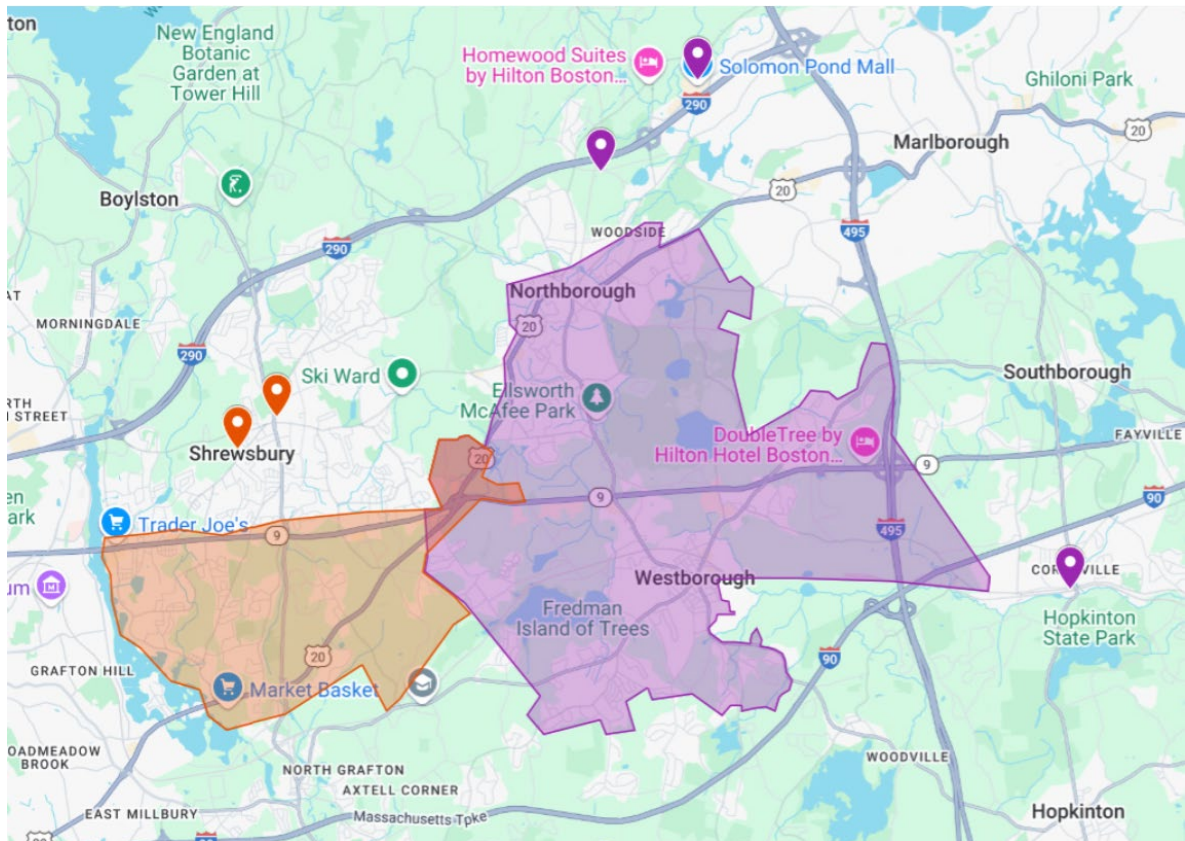


Figure 2. Via-WRTA Microtransit Service Area

2.2 PSDS Project Scope

The overall goal of replacing the current technology associated with the WRTA's demand response services is to procure and deploy a single technology system that can be used by all demand response service providers/contractors. For example, currently, CMTM/ PBSTM uses StrataGen for demand response scheduling, SCM Elderbus uses RouteMatch (which is no longer supported), Via and Bethel Group use their own scheduling software for the microtransit service, and Yellow Cab uses iCabbi.

With the WRTA using multiple contractors to provide demand response transit service and the lack of and age of the current technology, the WRTA will be upgrading the current technology associated with demand response services. New technology will facilitate overcoming the following challenges:

- Currently the contractors providing demand response services include CMTM, Yellow Cab, Bethel Group, SCM Elderbus and COAs, and Via. All are using different technology systems, and in the case of SCM Elderbus, the scheduling software they use is no longer supported.
- Currently, the WRTA is unable to offer customer-facing tools such as vehicle tracking, automated call-outs/trip notifications the night before a demand response trip and when a vehicle is on its way to the customer, and trip planning for demand response service.

- A significant number of trips occur on Yellow Cab. The WRTA wishes to provide the same customer-facing tools to Yellow Cab trips, which will require integration between the new WRTA demand response technology and software used by Yellow Cab trips (iCabbi).
- The WRTA would like the new system to support the possibility of consolidating all demand response trip requests using a single call center.
- The WRTA wishes to commingle demand-response services. Commingling demand-response transit services means using a single, shared fleet of vehicles and drivers to simultaneously operate different types of on-demand or flexible transportation programs such as general public microtransit and ADA paratransit.
- The new WRTA demand response technology should allow and facilitate the WRTA to implement microtransit in the future. Ideally, the new technology should have the ability to support replacing the current turnkey microtransit services if the WRTA decides to bring microtransit operations in-house.
- Ideally, the WRTA would like to have a group of demand response riders provide input throughout the process to help inform the procurement and rollout of the new technology.

Given these wishes and challenges, the WRTA conducted a needs assessment that identified the requirements of a new PSDS. The results of that assessment is reflected in the specifications and requirements in this document. Overall, all demand-response services will utilize the new PSDS, and the PSDS must interface with the new Systrans computer-aided dispatch (CAD)/automatic vehicle location (AVL) system and utilize the on-board tablets that will be provided by Systrans. More detail regarding the required interface with Systrans is included in Section 9.1 in this document.

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3 Information Technology (IT) Requirements

3.1 General

The selected vendor is referred to as the “Contractor” in the rest of this document.

The data center selected for installation of the PSDS must be approved by the WRTA.

The software applications shall include context sensitive help capability.

The software applications must run fully in the user context and shall not require elevated permissions or administrative permissions on the desktop.

Unless the new PSDS is a web Uniform Resource Locator (URL)-based system, all software applications must utilize the Microsoft Operating System consistent with WRTA upgrades, patches and service packs on the servers and desktops. The following Microsoft products must be used:

- Microsoft Office Suite: 2021 or above.
- Microsoft Windows Desktop Operating System (OS): Windows 11.
- Microsoft Windows Server 2022 or above.
- Microsoft Structured Query Language (SQL) Server: SQL Server 2019 (15.x) or above.

All software applications must support role-based security.

The Contractor is required to notify WRTA when new releases of software applications become available, and when current releases and related systems are no longer supported.

The Contractor must comply with WRTA’s change management process when making any changes to supported systems; these changes must be reported to WRTA project manager.

The Contractor shall implement a test environment, with all software components installed on parallel hardware in a hosted environment, where software updates and configuration changes can be tested prior to being implemented in the production system. Any future updates or upgrades must be tested in the test environment before being implemented on production servers.

All software upgrades or changes required by the Contractor must be made in an WRTA test environment and certified prior to moving into a production environment. Any on-board firmware changes must be tested first in a “bus-in-box” type test bench before installing them on vehicles.

3.2 Required Infrastructure

3.2.1 Hardware

The Proposer shall utilize the tablets that will be supplied by Systrans. The tablet is described in Section 4.1.

3.2.2 Software

Ownership of the source code³ will be subject to the following requirements:

- The Contractor shall either (1) provide the WRTA (the licensee) with source code for the software, (2) place the source code in a third-party escrow arrangement with a designated escrow agent, which shall be identified to WRTA, and which shall be directed to release the deposited source code in accordance with a standard escrow agreement acceptable to WRTA, or (3) certify to WRTA that the software manufacturer/developer has named WRTA (the licensee), as the named beneficiary of an established escrow arrangement with its designated escrow agent, which shall be identified to WRTA (the licensee), and which shall be directed to release the deposited source code in accordance with the terms of escrow;
- Source code will be subject to code review. While WRTA will try to be reasonable, the Contractor must be willing to make necessary changes if WRTA finds the code to be unacceptable:
 - There should be a separation of layers;
 - Coding conventions and best practices should be followed;
 - Business logic code should be reasonably commented; and
 - Functioning unit tests should be provided; and
- Source code should follow Open Web Application Security Project® (OWASP) best practices related to security and vulnerabilities (i.e., https://www.owasp.org/index.php/OWASP_Guide_Project).

The Contractor cannot charge WRTA for copies of the source code or backups of the data after it is located in the Contractor's cloud.

The Proposer shall clearly define the approach for software hosting and access (e.g., Citrix's independent computing architecture [ICA] protocol, Microsoft's remote desktop protocol [RDP] over secure virtual private network (VPN) connection, completely web-based application accessible via hypertext transport protocol secure [HTTPS]) on standard web browsers (e.g., Microsoft Internet Explorer, Mozilla Firefox, Google Chrome and Apple Safari).

The Proposer must identify the cloud platform that will be used (e.g., Amazon Cloud Services, Microsoft Azure Cloud Services or other).

At least two parallel data centers in two different geographic locations shall be utilized.

The Central system shall be set up in redundant configuration by default. So, if the primary application fails, the secondary application that is configured to run in hot-standby mode shall automatically start running as the primary application to ensure fail-safe operation. The Proposer shall provide a clear description of their approach for enabling redundant server configuration.

³ "Source Code" means the source code, design and associated preliminary materials, object code, file formats and specifications, build and compilation scripts and instructions, databases, configuration data, audio, video, literal and other media and materials, including accompanying documentation relating to or comprising the software built by a WRTA contractor and is owned by the WRTA.

The Contractor shall setup a “sandbox” environment for the WRTA, PBSTM, and other service providers to view the software platform, use it to demonstrate the software features, and use it for user (e.g., test group of selected riders and WRTA staff).

3.3 Information Security

The Contractor shall be asked to comply with best practices with all areas of IT Security as outlined by Health Insurance Portability and Accountability Act (HIPAA) rules. The WRTA may have specific policies in the following areas. The proposer should describe their software’s security in these areas:

- Acceptable Use
- Automatic Log-Off
- Data Backup
- Emergency Access to EHR
- Encryption and Decryption
- IT Risk Management Program
- Malware Protection
- Password Management
- Portable Computing Device Privacy and Security
- Privacy and Security of Protected Health Information
- Termination of Access
- Transmission Security
- Unique User ID
- Workstation Use and Security

All software applications must support role-based security.

The WRTA requires the Contractor to perform regular periodic (every six months or every year) Penetration (Pen Tests) tests and report the results.

The Contractor shall follow the WRTA’s IT Security Policies, which are under development and will be provided at a later date.

The Proposer shall describe the administrative needs to add users to the system.

The methods used for encrypting stored passwords must be disclosed. Industry standard encryption methods utilizing at least 256-bit encryption techniques are required.

The Proposer must disclose provisions to secure the database in its proposal. At a minimum, the Contractor must comply with all applicable statutes and regulations regarding the privacy and security of Confidential Information, and must in all other respects maintain the privacy and security of Personal Information (PI) and Protected Health Information (PHI) at a level and scope that is not less than the level and scope of requirements applicable to federal agencies, including, but not limited to, provisions of the Privacy Act of 1974 (5 U.S.C. § 552a), DHHS Privacy Act Regulations (45 C.F.R. §5b), HIPAA Privacy and Security Rules (45 C.F.R. Parts 160 and 164) that govern protections for individually identifiable health information and as applicable under State law.

Any vulnerabilities or exploits discovered by the Contractor or others for the proposed application must be reported to WRTA immediately with a proposed mitigation strategy.

The Contractor must encrypt PSDS data in two primary states: at rest (while stored) and in transit (while moving across networks).

Multi Factor Authentication (MFA) is required for PSDS administrators.

The Contractor must comply with Commonwealth of Massachusetts Regulation 201 CMR 17.00: Standards for the protection of personal information of residents of the Commonwealth.

<https://www.mass.gov/regulations/201-CMR-1700-standards-for-the-protection-of-personal-information-of-residents-of-the-commonwealth>. Out-of-state companies must comply with 201 CMR 17.00 if they own, license, or process the personal information of Massachusetts residents.

Unless the new PSDS is a web URL-based system, the Contractor shall support Microsoft security patches and updates within seven (7) calendar days of release.

The system must track all activities performed by software users for auditing purposes (e.g., system configuration changes, geocoding addresses, trip booking, modifications and client data editing).

The methods used for encrypting stored passwords must be disclosed. Industry standard encryption methods utilizing at least 256-bit encryption techniques are required. Applications may not store or transmit passwords in clear text.

Any software which stores personally identifying information (PII), including but not limited to, “unique identifier number,” driver’s license numbers, etc., or any financial information, such as credit card numbers, bank routing information, etc., must fully protect the information for the entire duration of WRTA’s use of the software, as defined in the eventual contract with the successful Contractor, and disclose the methods of data collection, storage, usage, transmission and disposal, data protection used, access protection methods, and life cycle handling of this data. Industry standard encryption methods utilizing at least 256-bit encryption techniques are required.

Compliance with HIPAA, Public Law 104-191, the Standards for Privacy and Security of Individually Identifiable Health Information, 45 CFR Parts 160, 162, and 164 (HIPAA), provisions of the HITECH Act, Title XIII, Subtitle D, Parts 1&2 of the American Recovery and Reinvestment Act of 2009, 42 USC 17934, et sec., applicable to business associates, and as applicable, to be bound by the provisions of the Confidentiality of Substance Use Disorder Patient Records, 42 USC s. 290 dd-2, 42 CFR Part 2, (Part 2), as any of these laws and regulations may be amended from time to time. Please note that agencies may record some health information as part of a customer record in order to determine eligibility for specific services.

Any HIPAA-related information must be protected in the database and application according to the law (e.g., display only last four digits of the Social Security Number (SSN)). The Contractor shall supply the WRTA with current HIPAA test results or be willing to be tested with regards to compliance with HIPAA policies on a yearly basis.

3.4 Database

All database-related components of the solution (e.g., tables, stored procedures, scripts, extensible markup language [XML] schema, and related information) shall be fully accessible and available for support and use by WRTA, as authorized, by the WRTA software administrator.

The Proposer's solutions should be developed and configured using prescribed standards for SQL Server and be flexible enough to run in consolidated database environments with other applications using different schemas and virtualization.

Data shall be retained in a read-only historical database for use by management and other WRTA staff to plan and assess system performance, and to address inquiries, conflicts and other related issues.

The system shall allow all such data to be retrieved, even if it has been archived.

All queries made to the database shall be logged for audit purposes. The WRTA shall have the ability to view these logs when required.

The online data storage system shall ensure data integrity in the event of a disk-drive failure.

In addition, the system shall include a means of archiving transaction data, or restoring data from an archive, while the system is in operation. It shall not be necessary to shut down the database to perform a successful backup operation.

The Proposer shall determine and describe the need and procedure for an incremental, daily or other time frame-based backup of data. Other needs related to the archiving of data, such hardware and software, shall also be determined and described by the Proposer.

Data kept for archive purposes must be in a location that is still subject to all HIPAA testing and be tested for compliance on a yearly basis.

The system administrator account shall not be used with SQL server applications. If it is, the solution must allow WRTA staff to change the system administrator password on a periodic basis without limitations.

3.4.1 General

The system shall allow PSDS system data to be retrieved, even if it has been archived.

In addition, the system shall include a means of archiving transaction data, or restoring data from an archive, while the system is in operation. It shall not be necessary to shut down the database to perform a successful backup operation.

The Proposer shall determine and describe the need and procedures for an incremental, daily or other time frame-based backup of the data (but not less than daily). Other needs related to the archiving of the data shall also be determined and described by the Proposer.

The Contractor must provide the following:

- Scripts in order to create and recreate database schemas, stored procedures;
- Entity relationship diagrams;
- Database schema with a data dictionary detailing all database entities (e.g., tables, columns, and attributes); and
- Documentation of recommended practices for support and maintenance of the database.

3.4.2 Data Management

Data shall be retained in a database for use by WRTA staff to plan and assess operational, financial and system performance, and to address inquiries, conflicts and related issues. Storage capacity must be large enough to retain operational history data online for at least two fiscal years. Data older than two fiscal years must be archived but still available for use by the WRTA.

After two fiscal years, the operational and financial data will be archived in a “non-live”⁴ database and will remain readily accessible when needed.

The Contractor may require the use of Commonwealth of Massachusetts data for development, maintenance, and testing work at an offsite location. WRTA restricts the use of the WRTA network for transmittal of data. However, data may be transferred using WRTA approved methods, with written approval from the WRTA Information Technology contractor. This approval will only be granted upon receipt of a letter certifying the following: the data will be maintained in a secure manner; the data will not be used for any purposes other than those required to fulfill the contract; and upon completion of the project the data will be destroyed. The letter must also disclose the location of the data while under the control of the Contractor. All external cloud-based services and hosted solutions must meet operational and security requirements to protect the confidentiality, integrity and availability of WRTA and Commonwealth of Massachusetts information.

Data backup for both live and non-live databases must be archived at redundant offsite locations.

The Proposer must describe the time it would take to restore the data into the database from the backed-up files in the event of a database crash.

The Contractor shall develop a long-term archival plan to store information in coordination with the WRTA. This data should be stored in such a way that it is searchable, and arranged by year so, as it moves beyond the number of years mandated in WRTA’s document retention policy, it can be permanently destroyed.

The Proposer shall determine and describe in their proposal the need and procedures for an incremental, daily backup of the data. Other needs related to the archiving of the data, such hardware and software, shall also be identified and described by the Proposer.

The Contractor is required to provide a data dictionary. At a minimum, the following must be provided:

- All fields and associated attributes;
- A function within the Admin module to view the data dictionary; and
- Could be used for interface configurations to other applications or Application Programming Interface (API) setup.

⁴ “Non-Live” database refers to a “read-only” database that is not being accessed by any application. This database may not be up and running all the time and can be shut down or restarted, as needed.

3.4.3 Data Logging and Retrieval

All incoming and outgoing data shall be stored in a read-only historical database for retrieval, analysis, display and printing.

This historical information shall include all data exchanged between vehicles and dispatch (e.g., location data, vehicle logon/logoff data, device alarms, and canned data messages); and all central software user logons and logoffs.

The stored data shall be time and date stamped and shall contain sufficient information to enable selective sorting and retrieval based on user-specified selection criteria. At a minimum, the following sorting and selection criteria shall be supported for accessing the historical data from both the online and archived storage: date and time, global positioning system (GPS) latitude/longitude, name of service provider, vehicle number, vehicle operator number, dispatcher number, trip/run number, funding source(s)/eligibility, trip purpose, and incident type (where needed).

3.5 Data Access

The database structures and any proprietary interfaces shall be documented in the proposal.

The proposed system shall follow an open architecture model, providing the capability for the WRTA to independently develop system interfaces or enable integration with other internal or third-party systems. The use of standard network communication protocols (e.g., Transmission Control Protocol/Internet Protocol [TCP/IP] and system interfaces (e.g., Open Database Connectivity [ODBC] for databases) is required.

The WRTA shall allow royalty-free access to the database tables, and royalty-free use of the data and interfaces. If necessary, the WRTA shall be allowed to extend such access and use to third party vendors for integration purposes.

All system data shall be the property of the WRTA and shall be immediately available to the WRTA. The Contractor shall acknowledge in writing that WRTA will own any and all data and the database where the data resides.

3.6 Customer Support

Customer support shall be available 24 hours a day, 365 days a year. All technical requests from the WRTA must be addressed within one hour of the notification of a problem. If an issue requires a longer timeframe for resolution, the WRTA must be advised accordingly and an expected reasonable timeframe for resolution must be provided.

The Contractor's customer support activities must include the following:

- Responding to support tickets and questions agencies are unable to resolve;
- Verifying the existence of any software defect and determining the scope of its impact;
- Submitting feature requests and other feedback on behalf of agencies;
- Escalating incidents and other issues;
- Helping to maintain quality standards throughout the support process;

- Notifying agencies of planned system maintenance, expected outages, or alerts from third-party services;
- Providing agencies with copies of Incident Tracking and Monitoring logs and other relevant information from the Incident Management module;
- Collaborating with the Contractor's engineers/systems analysts/programmers to develop resolutions or workarounds;
- Contributing to outage reports that detail the root cause, impact, and actions taken to prevent recurrence; and
- Attending incident review meetings.

At a minimum, the Contractor shall provide four (4) levels of support:

- **Severity Level 1 (Critical Defect):** A Severity Level 1 issue is a condition where the source code, or a critical component thereof, is non-functional, inaccessible, or so severely impaired that the software is rendered unusable for its intended purpose, resulting in a complete system failure or an inability to perform essential functions necessary for project development, deployment, or security compliance, with no viable workaround available. Service Guideline: Upon notification, the Contractor will acknowledge the issue and initiate corrective action within one (1) hour, applying continuous, commercially reasonable efforts to resolve the defect as quickly as possible, targeting resolution within four (4) to twenty-four (24) hours and no later than one (1) business day, while maintaining continuous, direct communication with the WRTA until full resolution is achieved.
- **Severity Level 2 (Major Defect):** A Severity Level 2 issue is defined as a defect in which the source code, or a critical functional component thereof, is significantly impaired, resulting in substantial degradation of software functionality or security during normal operation, but not rendering the software completely unusable. Service Guidelines: Upon notification, the Contractor shall initiate analysis and corrective efforts to identify a workaround within five (5) business days or resolve the issue within this period if feasible. The Contractor shall target full resolution within twenty-one (21) business days from initial notification, delivering a remedy in the form of a software patch or minor release. The WRTA shall receive a status update on the issue's progress within the first five (5) business days following notification and will continue to be informed until the issue is resolved.
- **Severity Level 3 (Minor Defect):** A Severity Level 3 issue is a defect that does not impede functional use of the source code and has no material impact on project development or security, with effective workarounds available. Service Guideline: Upon notification, the Contractor will analyze the issue, recommend interim workarounds as needed, and target resolution within thirty (30) business days. Final resolution timing will be set at the discretion of the Contractor's technical lead. The WRTA will receive a status update within thirty (30) business days, and the resolution will be delivered via a patch, minor release, or major software release.
- **Severity Level 4 (Enhancement Request):** A Severity Level 4 issue refers to a request for new functionality or improvement that does not address a defect and does not impact current software operation. Service guideline: Such requests will be logged and reviewed by the Contractor for potential inclusion in a future release. Implementation of any requested enhancement, including timing, scope, and priority, will be determined solely at the Contractor's discretion, and the Contractor makes no commitment to deliver such enhancements within a specific timeframe.

The Contractor shall allow agencies to submit a support request via email, phone, and the Contractor's support website or other online location.

The priority and severity of a support request (critical, standard or general support) are assigned during an initial triage by the Contractor in conjunction with the WRTA.

At a minimum, the following table identifies the required response times to support requests.

Critical Defect	Major Defect/Urgent	Minor Defect/Normal	Enhancement Request/Low
Resolution: 4 hours Guaranteed Response: <60 mins	Resolution: 16 hours Guaranteed Response: <8 hrs	Resolution: As defined Guaranteed Response: <12 hrs	Resolution: As planned Guaranteed Response: <24hrs

The WRTA must be able to view the status of their support request(s) at any time through an online tracking system to be provided by the Contractor.

The Contractor shall arrange for support from one or more qualified firms to be available on-site on a four-hour response basis when needed by the WRTA to assist with fault diagnosis or component replacement.

If a support firm does not respond within the agreed-to response timeframe, or when a support firm is not able to provide the needed support, the Contractor shall provide, during the warranty period, supplementary support in accordance with an agreed-to escalation procedure. The escalation procedure can initially involve telephone support, but must culminate in the Contractor providing on-site support, if needed. The proposal must define the proposed support escalation procedures.

3.6.1 Hosting Requirements

All servers, routers, switches, data center security and facility power shall be monitored electronically 24 hours a day, 365 days a year. In the event there are any out of tolerance conditions with any server components, technical support shall be automatically notified. Technical support must respond to these issues within one hour of notification.

The data centers to be used for hosting must have existing scheduled routine maintenance and emergency situation management plans. The Proposer must submit maintenance schedules and emergency plans with the proposal.

The data centers must comply with all HIPAA requirements as it pertains to security and verification of credentials as well as any access to physical systems containing WRTA data.

3.6.2 Follow-up Analysis

The Contractor shall provide a follow-up analysis, including a written report on the findings of this analysis, on how the system is being used and provide training to address the issues. This follow-up analysis shall be conducted every six months under the warranty period and the first visit shall be conducted six months after the system acceptance. The follow-up analysis report shall categorize discovered issues under the following categories:

- Issues due to lack of training;
- Issues that require configuration changes;

- Issues that require system enhancements and can be addressed by upgrading to a more recent version of the system;
- Issues that have been identified at the WRTA and require system enhancement(s); and
- Issues that require system enhancements and will be fresh development for the Contractor.

3.6.3 Post-Implementation Support and Maintenance Program

The WRTA is in the process of developing a Service Level Agreement (SLA) for post-implementation support and maintenance. The Proposer shall provide a sample SLA that addresses these needs.

3.7 Software Updates and Upgrades

The Proposer must describe their maintenance update and upgrade approaches in their proposal.

The Proposer shall describe the difference in processes and costs associated with updates and upgrades.

The Contractor is required to notify WRTA at least one month in advance of the installation when new software releases become available.

The Contractor is required to notify WRTA at least six months in advance when it is expected that the current releases and related systems will no longer be supported.

The Contractor shall ensure that all existing software configurations are protected after the system has been upgraded or updated for the entire duration of the time when the WRTA use the product.

The Contractor must comply with WRTA's change management process when making any changes to supported systems. These changes must be reported to the WRTA Project Manager.

4 Wireless Data Communication Requirements

4.1 General

The Systrans CAD/AVL system will be providing the data communication infrastructure required to satisfy the communication needs for this project, which includes wireless data communication between demand-response vehicles and the central PSDS system.

The Contractor shall interface the PSDS with the Systrans-provided on-board hardware and CAD/AVL software. The on-board tablet being provided by Systrans is the Samsung Galaxy Active5, Model # SM-X308U. The specifications of this tablet can be found at <https://www.samsung.com/ca/support/model/SM-X308UZGAXAC/>.

The PSDS must use the tablet in the vehicle via a driver application provided by the Contractor installed on the tablet. The PSDS must use the vehicle's location provided by the CAD/AVL system, and use the existing data and VoIP communication system controlled/resident in the vehicle. Once the Contractor and the driver application name are confirmed, Systrans shall implement an update on the tablet startup interface.

It is envisioned that at vehicle startup, the driver will be prompted to select the operating mode of the vehicle (fixed route or paratransit). If "fixed route" is selected, the current Systrans app will be launched; and if "paratransit" is selected, the new PSDS driver app will be launched.

4.2 Wireless Data Communications

The Proposer shall provide estimates of the bandwidth required for data exchange between the PSDS central system and vehicles (in terms of megabytes [MB] per month per unit).

The Contractor shall provide a canned report to monitor data usage by vehicle on a monthly basis.

4.2.1 Wireless Data Communications Network

The PSDS shall ensure the transfer of data between the PSDS central system and each demand-response vehicle in the WRTA service area.

4.2.2 Central Wireless Communication Gateway Software

4.2.2.1 General

The Proposer shall provide the following information in the proposal in terms of megabytes (MB) per month per unit based on their experience: bandwidth required for data exchange between the PSDS central system and vehicles.

The PSDS software shall process data messages in the order they are received or based on their associated priorities to be defined by the WRTA.

4.2.2.2 Data Message Processing

The PSDS software shall process data messages received from the vehicles and pass these to the PSDS central software.

The software shall process data messages received from the PSDS central software and pass these to an individual vehicle or a group of vehicles.

The system shall log relevant details about a data message including but not limited to the following:

- Sender and receiver of a message;
- Type of the message; and
- Follow-up action to a message, if applicable (e.g., acknowledgement).

4.3 Wireless Local Area Network (WLAN) Data Exchange (Optional)

4.3.1 General

Wireless communication between demand-response vehicles and the PSDS central system will be provided at WRTA's Operations and Maintenance Facility using the existing Institute of Electrical and Electronics Engineers (IEEE) 802.11x Wi-Fi hotspots. The specifications of these hotspots (Meraki wireless access point model "MR76") are shown in Appendix C.

Please note that because there are no wireless access points (WAPs) or additional connections for vehicles that DO NOT come to the WRTA Maintenance and Operations (M&O) Facility, data exchanged between the vehicles and central system shall be transferred via cellular or over-the-air connections. For example, SCM Elderbus vans are garaged at their facility each night and the data will transferred via the Systrans hardware and cellular connection – there is NO NEED for any additional modem/WAP equipment at their facility.

The Contractor must coordinate with WRTA's IT contractor for approval to the existing access points in the M&O.

4.3.2 Access Point Hardware

The existing WLAN access points support the Wireless Protected Access 2 (WPA2) security standard. The WRTA has the ability to independently change the encryption keys as often as desired. The WRTA shall communicate any change in encryption keys to the Contractor.

The WRTA has the ability to independently adjust the signal strength of each WLAN access point.

4.3.3 WLAN Data Transfer Support Software

The Contractor is required to provide WLAN data transfer support software to manages the WLAN data transfers between demand-response vehicles and the PSDS central software using the existing WLAN at the WRTA Maintenance and Operations facility. Wi-Fi hotspots are located at WRTA's Maintenance and

Operations facility to upload/download the following information to/from WRTA's demand-response vehicles:

- Schedule/manifest data to vehicles; and
- Configurations, firmware upgrades, and patches to vehicles.

Once a demand-response vehicle has successfully associated with a WLAN access point, the WLAN data transfer software shall receive the file uploads initiated by the on-board mobile data terminal (MDT)/tablet.

When the PSDS WLAN data transfer software has a download available for a demand-response vehicle that has successfully associated with a WLAN access point, the WLAN data transfer software shall check with that MDT/tablet whether it has already received that download and if not initiate and complete that download.

Any new download file shall be downloaded as soon as possible when each vehicle returns to WLAN coverage each night and is configured to remain on for a set time configurable by the WRTA (e.g., at least 15 minutes after the ignition is turned off).

The PSDS system shall report on the status of the current status of downloads (e.g., download in progress, downloaded or download failed) for the WRTA's fleet.

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5 GIS and Mapping

5.1 Map Source

The Proposer shall identify the source of GIS map data to be used for the proposed PSDS system. It is assumed that the Contractor will supply the base map, unless the WRTA specifies otherwise. If the base map is supplied by the Contractor, the Contractor is required to provide updates to the map within two weeks from the date when the updates are available. Third-party mapping systems (e.g., OpenStreetMap, Google Maps, Bing Maps) may be used as long as they meet the requirements described in this specification.

5.2 Built-in GIS Support

The software shall incorporate GIS capabilities that allow users to view maps of the service area and individual trip patterns, each at various specified user-defined zoom levels. GIS features shall be closely integrated with the individual modules of the PSDS system and access to maps shall be seamless within the PSDS system modules.

In addition to supporting the primary demand-response service functions, the GIS functionality of the proposed software shall support other GIS analyses and be capable of converting geographic files from other sources (e.g., Tele Atlas) to the format used by the Contractor's GIS (e.g., MapInfo or ESRI).

5.3 Spatial Layer Management

5.3.1 Map Overlay

GIS functionality shall include the ability to develop overlays for the coverage of municipal, township, census tracts or block groups, and zip code boundaries.

The system shall allow overlay of terrain, aerial or satellite layers on base maps when such layers are available.

5.3.2 Definition and Management of Geographic Boundaries

The system shall allow definition of polygon layers when such layers are not readily available for overlay. The system shall allow the user to assign a specific service characteristic to a polygon layer. These characteristics shall include but are not limited to the following:

- Agency service area for demand response and other services;
- Americans with Disabilities Act (ADA) complementary paratransit service area;
- Town boundaries; and
- Fare zones.

5.3.3 Definition of Physical Barriers

The system shall allow the definition or import of physical features that act as barriers to routing (e.g., rivers and lakes, road closures).

The system shall recognize these barriers when routing vehicles.

5.3.4 Definition of Point of Interest (POI) Locations

The system shall be capable of defining and displaying point files that may represent landmarks, public transit stops, major transfer points, major destinations of travel, or other POI locations (e.g., hospitals/medical centers, assisted living facilities, shopping centers, tourist attractions).

5.3.5 Import/Export of Map Layers

The system shall have the ability to import and export map layers in standard geographic file formats (e.g., Environmental Systems Research Institute's [ESRI's] SHP file format or Keyhole Markup Language [KML] format).

The system shall have the ability to import location data (customer address or POI database) if available in standard "point" file format (SHP or KML) that consist of latitude and longitude data.

5.4 Management of Spatial Attributes

The system shall allow authorized users to edit the base map layers (e.g., to add new streets, change municipal boundaries, define any incomplete address ranges).

A service area map shall include current data for all street segments to ensure, in part, that every segment is appropriately connected in the network and contains the necessary data for scheduling. For each street segment, this data shall include at a minimum a defined street name and address range, and segment speeds by time of day and day of week. The street network definition shall include segment characteristics (e.g., speed limits, one-way direction).

5.5 Geocoding

The system shall have full geocoding capability, allowing the system to locate the address on the map for an address input. The geocoding capability shall be seamlessly integrated with relevant features in the rest of the PSDS system (e.g., address input in the Reservations module, discussed later in Section 6.5). Please note that the geographic area within which addresses are geocoded shall be unlimited.

The street segments database shall be sufficiently complete to assure a geocoding success rate of 95 percent or better based on a sample of addresses developed by WRTA. The system shall be capable of handling various abbreviations of names (e.g., St. for Street and Av. or Ave for Avenue) in the geocoding process.

5.6 Miscellaneous GIS Features

5.6.1 Distance Computation

The system shall allow the user to calculate the distance between points or along a specified portion of the street or road network. The system must be capable of calculating two distances: the least path distance and the actual distance.⁵

The system must store both distances so that reports can be run on actual and least-path trip distances.

The system shall allow the software user to select the unit of measurement (e.g., feet, mile) when computing distance.

5.6.2 Zoom/Pan

The system shall allow software users to zoom in, zoom out and pan map views.

The system shall allow software users to zoom in to a street-level view.

The system shall allow software users to select custom zoom level (e.g., 400% or 50%).

The system shall provide an “inset” view that can be turned on or off by users. The inset view shall display an overview map within the detailed map view and shall allow “pan” capability.

5.6.3 Save and Reload Map View

The system shall allow users to bookmark or save a particular view on the screen.

The system shall allow users to reload saved map views.

5.6.4 Spatial Search

The system shall allow geographic search within PSDS modules and shall support search based on at least the following data:

- Customer address;
- Trip origin or destination location;
- Current vehicle location; and
- POI location.

⁵ Please review the Complexities Created by CCAM Cost Sharing Principles section in the Cost Allocation Technology for Non-Emergency Medical Transportation Final Report (located at <https://www.transit.dot.gov/sites/fta.dot.gov/files/2020-09/Cost-Allocation-Technology-for-Non-Emergency-Medical-Transportation-Final-Report.pdf>) which discusses the difference between least path distance miles and revenue miles.

The system shall be able to identify whether or not a customer address is located within a buffer zone (e.g., ¼ mile) around a fixed public transit route or within a general public demand response service area. The parameter for the buffer zone shall be configurable.

The PSDS shall allow a user to view a list of all trips to a location or town within a specific time frame. This allows users to see which drivers are already in the area to do non-scheduled trips. This shall be displayed in a map view including real-time vehicle locations and in a table.

5.6.5 Legend

The system shall have the ability to display legend of the layers included in the GIS subsystem. The user shall have the ability to turn this feature on or off, as needed.

5.6.6 Printing

The system shall be capable of printing maps to peripheral devices (e.g., printers, plotters) directly attached to a workstation or available over a Local Area Network (LAN) or wireless LAN.

The system shall allow users to print and save a PDF version of the map view.

The system shall provide users the ability to format the layout of maps before printing. As a minimum the following capabilities shall be available: adjusting margins, adding title, adding legend.

5.7 Visualization

The system shall display vehicle locations on the map when such data is available from vehicles and/or the existing CAD/AVL system.

The vehicle icon on the map view shall display additional information (e.g., operator id, vehicle id) upon user request if such information is available in the system (please see Section 6.10 for MDT interface).

The map view shall support context sensitive menus and shall allow users to communicate with vehicles directly from the map view when such capabilities are implemented by WRTA (please see data communication requirements in Section 4).

5.8 Map Update Process

The system shall provide the WRTA with the capability to update the base map, if it is supplied by the Contractor.

Map updates, when available, must be made to the mapping data hosted system. Map updates should not be performed while a user is accessing the map.

For Contractor-provided maps, the WRTA shall be notified in advance of the map update schedule.

5.9 Integration of Real-time Traffic Information

Integrating real-time traffic information with the mapping/GIS as well as utilizing this information in scheduling and dispatching is required.

The software shall respond automatically to road conditions such as traffic congestion, weather, and vehicle breakdowns by using real-time traffic and mapping information to predict estimated time of arrival (ETA) and estimated time of completion (ETC) for trips within a customer-defined pickup window. The system shall automatically alert dispatchers to any deviations from the schedule and include a method of providing updates to riders via mobile app notifications or automated voice or text messages.

The system shall provide map views to visualize individual, multiple, or all vehicle routes, as selected by the user, that include real-time vehicle location and underlying street map, traffic information, and trip information.

5.10 Third-party Mapping (OpenStreetMap, Google Maps, Google Earth, Bing Maps, MapQuest) Overlay/Integration [Optional]

The system shall have the ability to utilize a third-party GIS subsystem for geographic information display when built-in GIS capabilities are not available. When both capabilities are available in the proposed solution, the Proposer shall provide a comparison of features available in both GIS subsystems in their proposal.

The Proposer must describe the user-licensing terms and conditions associated with using third-party mapping products.

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6 Paratransit Scheduling and Dispatching Software (PSDS)

6.1 Existing Trip and Client Database Conversion

The Contractor shall be responsible for converting the following databases from the existing software at the WRTA:

- Existing client databases; and
- At a minimum, the most recent year client trip histories, including standing orders.

The Contractor will work with the WRTA Project Manager to develop a list of fields that will be converted from the existing databases to the new database. This development shall include the logic required to populate fields in the new database that have no match in the old databases.

In the event that certain fields within the existing client and trip history databases, and associated business logic to derive those fields are not supported in the selected system, the Contractor shall notify WRTA, and negotiations shall be held to determine the importance of the field and whether WRTA will require customization of the system client database structure to incorporate new fields.

The Proposer must explain how the conversion shall be accomplished.

The proposal shall identify specific quality control procedures to ensure that data is accurately converted and to ensure its integrity.

Prior to performing any data conversion, the Contractor must prepare and deliver a data conversion plan to the WRTA for review and approval.

6.2 Client Registration

The client database shall include at least the fields shown in Table 1. Specific characteristics associated with the entry of data elements are described after the name of the data field.

Table 1. Required Client Data Fields

Data Type	Data Field Name and Requirement
Demographics / Eligibility Determination	Client name. The system shall require entry of first name, last name, middle initial and suffix (e.g., Sr., Jr., III). When entering data, the system shall detect and alert the user if there may already be a client database entry under this name. Different clients with the same name shall be allowed.
Demographics / Eligibility Determination	Client's date of birth. The system shall require entry of the client's date of birth using an interactive calendar interface or drop-down menu, or by entering the date manually. The system shall automatically calculate the client age, expressed in years, based on the current date and the date of birth information.
Demographics / Eligibility Determination	Client's gender. The system shall allow for manual entry or for the field to remain blank.

Data Type	Data Field Name and Requirement
Demographics / Eligibility Determination	Client's eligibility status. The system shall allow user selection from a pre-defined list of eligibility definitions that include physical and mental disabilities as well as DHHS categories such as protective custody. An "other" category shall be provided to allow manual entry of explanatory notes.
Demographics / Eligibility Determination	Income data to determine eligibility for low-income programs. Income data is not required. If not provided, the client will not be eligible for certain trips available to low-income individuals.
Address / Phone	Client's home address. This text field becomes the default pickup address in the absence of another address that is identified as the default pickup address (see below in Client's common locations). The system shall allow entry of an address that contains a "½" or "c/o" and an apartment number. The system shall ensure that the full address is printed on the manifest (e.g., 123 ½ West Market St., Apt. 15).
Address / Phone	Client's mailing address if different than the home address. This text field is used in case the client uses a non-street mailing address. The system shall allow entry of an address that contains a "½" or "c/o" and apartment number. The system shall ensure that the full address is printed on the manifest (e.g., 123 ½ West Market St., Apt. 15).
Address / Phone	Client's common locations. The system shall allow multiple address entries for common client pickup locations. If none are entered, the client's home address shall become the default pickup address. The locations shall be text fields and allow all characters necessary to accurately store and print on the manifest (e.g., 123 ½ West Market St., Apt. 15, 123 Main St., Suite 501).
Address / Phone	Directions to assist in locating pickup address. The system shall allow entry of a text field for special instructions for subsequent printing on manifests to assist in locating the client address. For example, where it is known that the actual address is different from the geocoded address, this would be noted in this text field for the manifest.
Address / Phone	Client phone numbers. Multiple fields for home phone, work phone including phone extension, mobile phone and phone number where messages can be left (if different from other phone numbers). The system shall require that one of these numbers is identified as the default client contact phone number. All fields that contain phone numbers shall contain the standard 10 digits for a phone number (xxx-xxx-xxxx).

Data Type	Data Field Name and Requirement
Address / Phone	Backup client contact. The system shall allow entry of a backup client contact phone number.
Contacts	Caregiver/emergency contact name, address and phone number to be used in the event of an emergency. The system shall allow entry of the name, address and phone number of a client's caregiver/emergency contact.
Contacts	Caseworker/social worker contact name, address and phone number. The system shall allow entry of the name, address and phone number of a client's caseworker/social worker.
Vehicle Tier	The vehicle tier required by the client. See a definition of vehicle tiers in Section 6.4.2.
Comments / Notes / Special Needs	Client's mobility aid(s). The system shall allow entry in a field indicating whether the client uses a mobility aid. The system shall allow selection from among a list of pre-defined mobility aids that includes an "other" category and allows manual entry of explanatory notes. The system shall allow entry of more than one type of mobility-aid.
Comments / Notes / Special Needs	Disability status. The system shall require entry in a field specifying disability status. The system shall allow user selection from a pre-defined list of disability definitions that includes an "other" category and allows manual entry of explanatory notes.
Comments / Notes / Special Needs	Client car seat. The system shall allow entry in a field indicating whether the client requires a car seat. The system shall allow entry of the type of car seat in a drop-down box, with the following options listed: 5-point, High back, Flat and None.
Comments / Notes / Special Needs	Client mode restriction. The system shall allow entry in a field indicating if the client is restricted to a particular mode of transportation.
Comments / Notes / Special Needs	Manifest comments. This system shall allow entry of comments or information that will appear on all manifest trip entries for that client. The system shall allow a scheduler to view these comments and notes when taking a reservation.
Comments / Notes / Special Needs	Additional information. This system shall allow entry of additional information about the client in a text field. Information in this field shall not appear on any manifest trip entry for that client since it may contain HIPAA-sensitive information.
Funding / Billing	Authorization date. The system shall allow entry of a date defining when the client is authorized to begin receiving service. If this field is left blank the client is authorized to receive service. Since some clients have temporary eligibility, the system shall also allow entry of a certification expiration date. Automatic notifications will be sent to the reservationist or scheduler when authorization will expire within the next week 30 days or has expired.

Data Type	Data Field Name and Requirement
Funding / Billing	Service suspension date range. This system shall allow entry of the start and end date for the time period when a client's ridership privileges are suspended. The system must allow an override of these dates in order to schedule a ride for the client (see Section 6.5.1).
Funding / Billing	Funding sources/Billing codes. The system shall allow entry of one or more billing codes for each client, indicating a third party to be billed for certain trip purposes. The system shall allow user selection from a pre-defined list of trip purposes and selection of a billing code for each selected trip purpose. Effective and expiration dates must be capable of being specified separately for specific funding sources. This defines the time period the client is authorized to receive service from a specific funding source. The system shall allow the expiration date to be left blank to indicate the service is ongoing until further notice. Dates shall be entered using an interactive calendar interface or drop-down menu or entered manually. Also, the system shall allow entry of the limit of the number of units of service allowed per time period (e.g., week, month or year).

The Contractor must provide a portal for funding/purchasing agencies to enter or update client eligibility online. Clients may have multiple eligibilities for various trip purposes. For example, a client may be eligible for Non-Emergency Medical Transportation for some medical trips, while also being eligible for Senior Services transportation for some other types of trips.

The system shall identify and automatically geocode the location associated with each entered address. If the automatic geocoding fails, the system shall provide alternative methods of establishing x- and y- map coordinates for the address. One of the alternative methods supported shall be clicking on a map location with the mouse.

The system shall track the number of trips taken by customers by funding source/billing code and alert the scheduler when the allowed number of trips for a customer for a given timeframe for a specific funding source/billing code has been met (e.g., only ten (10)) trips per customer in a month may be allowed).

The system shall allow agency software users to attach files to a customer profile in order to store any relevant information. The Proposer shall describe the file formats that can be supported in their proposed solution. At a minimum, the following formats must be supported: DOC, JPG, PDF, and WAV. The system shall allow the reservationist or scheduler to view these files when taking a reservation.

The system shall allow WRTA to select specific client information that should be included in the driver manifest.

If necessary, the client record shall be stored with incomplete data. All fields other than last name may be left blank. An alert shall warn the user that there is missing information.

If the proposed system contains additional fields to be considered in client registration, the Proposer must include a description of these fields in their proposal.

The system shall use the existing client identification number when data is migrated from the current system to the new system. If the client is not in the existing client database, the system shall assign a unique client identification number for each new client entry in the database. The unique client identification number shall be used to link to other tables in the database (scheduled trips, trip history, etc.). The system shall allow a client record to be retrieved by the client identification number.

6.3 Client Data Management

6.3.1 Edit Personal Details/Preferences

The system shall allow authorized users to edit customer details in the database at any time.

The system shall keep track of client demographics and maintain a history each time the client details are changed. WRTA shall rely on this history for audit purposes.

6.3.2 Tracking of ADA Eligibility by Client

The system shall be able to track ADA Eligible clients which shall be billed to ADA, based on start and ending eligibility dates and eligibility type.

The system shall automatically suspend standing orders on holidays when WRTA services are not in operation. The system shall provide a function to allow the reservationist to enter or adjust such holidays. The system shall notify the reservationist upon accessing a client profile within one month of a scheduled trip that a recurring trip will fall on a holiday.

The system shall track at least the following attributes for each client:

- ADA eligibility start date;
- ADA eligibility end date; and
- Eligibility type such as “Conditional,” “Pending,” “Ineligible,” and “Temporary.”

The system must alert the scheduler regarding any upcoming expiration dates for client eligibilities.

6.4 Agency Resource Management

Detailed requirements for managing driver and vehicle information are contained in the following two subsections.

6.4.1 Driver Management

The system shall provide the ability to manage a list of drivers for WRTA that includes both agency and volunteer drivers. Because some data, such as driver's license information, needs to be stored securely, only authorized users shall have access to this part of the system.

The system shall allow WRTA to specify at least the following attributes for each driver:

- Employment status: whether a driver is employed full time or part time
- Driver association: which service provider the driver is an employee of
- Date of birth (DOB)
- Driver's License Number
- Date of hire (hire date for WRTA drivers)
- Employment status: whether a driver is active or inactive
- License information: current status of driver license and type of license (Commercial Driver's License [CDL] or non-CDL), issuing state and license number
- Medical certifications/licenses (e.g., CPR)
- Status of background checks: date that background checks were performed and due date for the next check
- Date that driver is due for medical exam
- Whether driver has employer-issued cell phone, and if so, the cell phone number
- Whether driver has employer-issued keys
- Status of driver training: date that driver received specific training and due date for the next scheduled training
- Whether a safety seat has been issued to the volunteer driver
- Address: contact address for the driver
- Phone number: primary and alternate contact numbers for the driver

The system shall have the ability to alert WRTA when a driver's license renewal, medical exam, or training re-certification is due. The thresholds for alerts shall be configurable.

The system shall allow software users to attach files to a driver profile in order to store any relevant information. The Proposer shall describe the file formats that can be supported in their proposed solution. At a minimum, the following formats must be supported: DOC, JPG, PDF, and WAV.

6.4.2 Vehicle Management

The system shall provide the ability to manage lists of WRTA-owned vehicles.

The system shall provide the ability to maintain at least the following data about vehicles:

- Agency that owns or operates the vehicle, if not WRTA
- Vehicle type: agency
- Vehicle Identification Number (VIN)
- Make
- Model
- Model year
- Date when vehicle was purchased for WRTA-owned vehicles
- Vehicle size
- Number of seats
- Wheelchair capacity
- Wheelchair access: lift or ramp
- Low floor vehicle (Y/N)
- Fuel type

- Vehicle tier (see below for vehicle tier definitions)
- Registration status and tag number
- Vehicle insurance information
- Maintenance schedule
- Insurance cards
- Availability status (available, in-service or in-maintenance)
- Date or odometer reading when next service is due for WRTA-owned vehicles
- Restricted uses
- Other information (e.g., funded by a particular grant or organization, such as identifying vehicles acquired through the Mobility Assistance Program (MAP) which is managed by the Massachusetts Department of Transportation (MassDOT); cost broken out by Federal/state/local, location of third-party maintenance facility)

Vehicle tiers are defined as follows:

- **Standard Passenger Vehicle.** A vehicle that is not designed to be handicapped accessible or require a commercial motor vehicle driver license to operate. The vehicle type is similar to those used as a personal or family vehicle and includes: cars, trucks, SUVs or minivans. Tier 1, Tier 2, and Tier 3 drivers can operate a standard passenger vehicle.
- **Accessible Vehicle.** A vehicle that has been designed to be accessible for passengers with mobility impairments and is equipped with a ramp or lift but does not require a commercial motor vehicle driver license to operate. An accessible vehicle may be considered an enhanced passenger vehicle when equipped with additional specialized equipment and/or features. Examples of an accessible vehicle are: accessibility equipped mini-vans, accessibility equipped standard vans, and accessible small light transit vehicles designed to seat 15 or fewer passengers. Tier 2 and Tier 3 drivers can operate accessible vehicles with proper licensing as required by state law for operating an ambulette.

The system shall have the ability to alert appropriate WRTA staff regarding vehicles for which the insurance or registration is about to expire. The thresholds for alerts shall be configurable.

The system shall have the ability to generate a report about WRTA vehicles for which the registration, safety inspection or insurance will expire in a given time period.

The system shall be able to generate reports on a daily basis, listing vehicles which are due for a state inspection and scheduled preventive maintenance based on mileage and intervals set by WRTA.

The system shall be able to generate reports on a monthly basis, listing vehicles which are due for inspections or preventive maintenance.

6.5 *Reservations*

Trip reservations can be requested by an individual (the person traveling or a caregiver) or facility (e.g., hospital, sheltered workshop) via a Client Portal or Facility Portal, respectively. Alternatively, an individual or facility can call WRTA to request a trip.

6.5.1 **Trip Booking**

The system shall permit WRTA call takers and schedulers to retrieve client records by entering the client ID number, client last name, or other data field such as telephone number. All fields that contain phone numbers shall contain the standard 10 digits for a phone number (xxx-xxx-xxxx). Once a client is selected, a trip booking data entry screen shall be displayed to the call taker or scheduler pre-populated with all data for that client which remains constant (e.g., ID numbers, mobility limitations). Along with the client data, the system shall display to the reservationist or scheduler all trips booked for a specific client. Also, the system shall allow the reservationist and scheduler to modify and/or cancel any future trips booked for a specific client.

The system shall display an alert if a client has already met the quota of trips allotted to them for a given funding source for a given time period, is suspended for traveling during a given time period, or has an excess of no-show trips. The number of no-show trips and time periods shall be defined by WRTA.

The system shall also record the name of the person making the reservation; the date and time the caller requested the trip; the number of attendants/escorts; scheduled date of service; requested pickup time; required arrival time at destination; specifics/comments; same information for return trip, if applicable; day(s) of service (if subscription trip); agency billing codes; and required vehicle type, if applicable.

The system shall allow for multiple funding sources to be assigned to a trip. However, the system shall automatically determine funding eligibility and allow the scheduler to change the selected funding source(s) for which the client is eligible.

The system shall automatically present in the trip booking screen the address configured as the default pickup address. The system shall allow entry of an alternative pickup address using keystroke entry or from a list of common locations.

The system shall allow selection of the dropoff address from a list of common locations, including frequently and/or recently used dropoff addresses for that client. The system shall allow entry of an alternative dropoff address using keystroke entry or from a list of common locations.

The system shall provide the ability to book a return trip for a client trip. The system shall include a default pick-up time (configurable by WRTA) for the return trip and shall allow the return pickup time to be left blank if the client will contact WRTA when they are ready to be picked up.

The system shall provide the ability to book multi-legged trips by allowing entry of the pickup and dropoff addresses for each leg.

The trip date shall be entered using an interactive calendar interface. The system shall be capable of accepting trip bookings up to 180 days in advance of the requested trip date for subscription trips and 14 days from the requested trip date for regular trips. These thresholds shall be configurable by WRTA.

The system shall allow entry of a start and end date for the time period when a client's ridership privileges are suspended. If the selected trip date is within a time period that the client's services are suspended, the system shall alert the scheduler that the trip booking cannot be completed for this reason. The system must allow a supervisor to override the suspension.

During the trip booking process, the system shall allow entry of the names of any Personal Care Attendants (PCAs) or other companions (e.g., children, service animals) that will accompany the client on the trip.

The system shall permit trip booking while the client is on the phone. The system shall be capable of booking both subscription (standing order) and demand response trips in this manner.

Pick-up time negotiation requirement, if utilized, is no more than a configurable number of minutes before or after the client's desired departure time. WRTA shall be able to determine the configurable number of minutes. The system shall require entry of a requested pickup time and allow entry of a negotiated pickup time within the limits of this window.

The system shall allow the WRTA scheduler to link trips together for a group of two or more individuals traveling to a common destination that will be scheduled, as a matter of system policy, to the same run. The system shall allow the scheduler to remove the link and/or delete the trips.

The system shall allow the WRTA scheduler to designate any completed trip booking as a group booking (e.g., a trip for a group of two or more individuals traveling to a common destination that will be scheduled, as a matter of system policy, to the same run), and then add or delete individual clients from the group booking.

The system shall allow for the identification of service types that are customizable and can be applied at the client level and the trip level. Service types shall include at least door-to-door and curb-to-curb.

The system shall show whether trips that were requested during the previous 48 hours were actually assigned to a driver or vehicle. Further, the system shall show whether trips that were scheduled were scheduled and taken; scheduled and not taken (e.g., cancelled or failure to board); or never scheduled and never taken, with a field for the scheduler to indicate the reason (e.g., no provider available or trip ineligible).

Once all other trip booking information has been entered, the system shall indicate to the WRTA scheduler any applicable fare(s) to be paid by the client and any companions.

Once data has been entered, the system shall determine the most appropriate trip options for WRTA dedicated vehicles based on client preferences and eligibilities, as stored in the client profile, and the following parameters: vehicle tier, hours in service and service area/zone. The trip options shall be presented to the WRTA scheduler. The WRTA scheduler shall select one of the options to conclude the trip booking process.

The system shall, at the conclusion of the trip booking process, confirm to the WRTA reservationist or scheduler that the booking was successfully entered into the system. Also, the system shall present a summary of the booked or offered trip to the WRTA reservationist or scheduler.

During each trip booking, the system shall display, using the GIS software capabilities described in Section 5, the map locations for the pickup and dropoff locations.

The system shall alert WRTA call taker or scheduler if the client has previously booked a trip with a trip time period that is in conflict with the selected booking pickup time. The system shall allow all users, particularly the call taker or scheduler, to book the trip nonetheless by overriding this feature. The system shall flag all trip bookings for which this override was applied.

The system shall monitor the percentage of standing order (subscription) trips out of all trips, by hour and day, for ADA-eligible clients, to ensure compliance with ADA regulations (40 CFR Part 37.133(b)).

The system shall be capable of booking same day trips. On the service day, the system shall allow for last-minute changes that modify runs based on last-minute passengers. These changes must be communicated immediately to dispatcher(s) and drivers.

6.5.2 Management of Standing Order (Subscription) Trips for Clients

The system shall allow the entry of standing order (subscription) trip bookings, with flexible options to specify recurring travel dates. At minimum, the system shall support selection of a recurring daily trip; recurring weekly day or days (e.g., every Tuesday or every Monday through Friday), a recurring monthly day (e.g., every 2nd Wednesday) or a recurring monthly date (e.g., the 4th of every month).

The system shall allow for subscription trips and shall allow the following data to be entered: number of passengers; names of passengers (if necessary); date and time of reservation request; requested days of pickup (by date or day of week); pickup location; destination location; required arrival time at destination; requested pickup time for return trip; specifics/comments; agency billing code; same information for return trip: contact person (making reservation); service type (e.g., door-to-door, curb-to-curb); ability to lock trip out from future reservations; reservationist or scheduler code; required vehicle tier (agency-specific; ambulatory; lift equipped; car seat).

The system shall allow the scheduler to temporarily suspend a particular subscription, with entry of both start and end dates of the suspension time period. These dates shall be entered using an interactive calendar interface or drop-down or entered manually.

The system shall automatically suspend subscriptions on holidays when provider or agency services are not in operation. The system shall provide a function to allow the entry or adjustment of such holidays. The system shall notify the scheduler upon accessing a client profile within one month of a scheduled recurring trip that will fall on a holiday.

Once all other trip booking information has been entered, the system shall display any applicable fare(s) to be paid by the client and any companions.

Once data has been entered, the system shall display the most appropriate trip options for WRTA-dedicated vehicles based on client eligibilities and restrictions and the following parameters: vehicle tier, driver tier, hours in service and service area/zone. The trip options shall be presented to the WRTA scheduler. The WRTA scheduler shall select one of the options to conclude the trip booking process. The system shall confirm that the booking was successfully entered into the system and present a summary of the booked trip.

The system shall alert the user when a client's subscription's end date is approaching. The alert shall be made within a configurable number of days prior to the end date.

The system shall alert the user if the client has previously booked a trip with a trip time period that is in conflict with the selected booking pickup time. The system shall allow the user to book the trip nonetheless by overriding this feature. The system shall flag all trip bookings for which this override was applied.

6.5.3 Trip Modification/Cancellation

The system shall allow the WRTA reservationist or scheduler to access existing trip bookings to edit the pickup address, dropoff address, trip date, and/or pickup time upon client request. The Proposer must indicate whether or not a trip modification can be made to add or subtract the number of people traveling on this reservation and if a PCA can be added or subtracted from the reservation. The system shall assign a unique identification number to each trip booking record to facilitate trip editing. The unique identification number shall not be automatically reset at any time and must remain unique for a period of at least one year.

The system shall permit cancellation of any trip booking, when consistent with WRTA policies. The system shall retain the trip booking and flag it with the date and time when it was cancelled to facilitate WRTA's management of its cancellation policies. The system shall track late cancellations and no-shows.

The system shall provide the capability to enter a reason for trip cancellations (e.g., cancellation initiated by client/doctor/caregiver/WRTA or caused by weather or some other reason).

If the cancellation is received after a certain time-window, as defined by WRTA, it shall be identified as a late cancellation. The system shall allow for recording of whether the ride was taken or if the client failed to board without cancelling the ride.

Any trip modification or cancellation shall generate an audit record – one in which the WRTA reservationist's or scheduler's name is noted along with the date and time the change was made, the type of modification that was made, and the reason for the modification (if one is noted).

6.6 Scheduling

At this point, WRTA will be scheduling trips using the correct vehicle tier with WRTA-dedicated vehicles. Please note that the schedules developed using the process described below shall be optimized in real-time so that the desire to keep WRTA-dedicated vehicles full is fulfilled.

After trips are accepted, WRTA shall be able to view vehicles on the daily schedule.

The system shall allow trips to be scheduled with WRTA or volunteer drivers.

The system shall be capable of scheduling, in batch mode, all bookings for a future range of dates. The Proposer must describe the parameters used in scheduling customer trips. For example, scheduling may be based on the actual street network in the service area, using parameters associated with street network segments as established in the GIS system (e.g., physical barriers, running speed by time of day, and appropriate dwell times for the boarding and alighting of passengers). At least the following parameters shall be included:

- Dwell time;
- On-board capacity;
- Average vehicle speed profile for street segments;
- Grouping based on geographic location of origin and destination of trips;
- Avoidance of street segments with detours/road closures;
- Driver and vehicle tiers; and

- Accessibility needs/mobility aids.

The system shall permit WRTA to set all ADA complementary paratransit trips as priorities since the ADA requires higher service standards (i.e., the six service criteria). The Proposer shall describe how the system processes trip priorities during scheduling by the WRTA.

The system shall produce a daily manifest for each run, indicating pull-in and pull-out times, the projected arrival time of a vehicle at each pickup and dropoff location, and listing the trip events in chronological order.

When creating a daily manifest, the system must take into account any vehicle assignment restrictions. For example, certain vehicles can provide only a specific type of trip (e.g., buses with wheelchair ramps).

Once generated, the system shall be able to display all manifests with all driver instructions for a given day. The system shall provide the capability to print one or more manifests as a backup to being displayed on the in-vehicle tablet. The system shall provide tools to allow and track manual adjustments to the daily manifests, including manually adding notes and moving trips between manifests. The system shall allow manifests to be viewed on a map using GIS coordinates to display pickup and destination points.

The system shall have internal validation checks to ensure that manifests do not violate work and labor rules (e.g., driver work hours and breaks). The system shall also perform validation checks to ensure that policies limiting travel times for individual passengers are not violated. Validation shall also occur to ensure clients are assigned to the appropriate vehicle tier.

The system shall allow easy dispatcher entry of trip event completion times (i.e., as written on the manifest by the driver, reported by radio or entered on a tablet).

The system shall allow subscription run templates to be developed, based on standing orders (subscriptions). The system shall optimize the templates for least distance and/or travel time, based on the street network segment parameters stored in the system.

The system shall schedule each run based on an assigned vehicle, recognizing the accessibility needs of the scheduled clients, client tiers, and vehicle capacity constraints.

The system shall allow trips to be added to an existing run on the same day as the run. The system shall identify and display a range of alternatives for assigning the trip to existing runs for that day so as to best satisfy the requirements of the reservation while minimizing any impact on existing reservations. The system shall present these alternatives in rank order with a numerical "score" to indicate the degree of difference between choices presented to the reservationist or scheduler.

The system shall allow trips to be assigned to an overflow provider if no vehicle is available to provide a mandatory trip (such as court ordered visitations or dialysis). The system shall allow for entry of the taxi fare in a trip cost field.

The system shall present a list of available drivers for a trip, based on their stored schedules. The system shall allow certain trips to be marked priority to indicate a trip where a driver must be found.

The system shall show whether trips that were requested during the previous 48 hours were actually assigned to a driver. Further, the system shall show whether trips that were scheduled were scheduled and taken; scheduled and not taken [e.g., cancelled or failure to board]; or never scheduled and never taken. The scheduler will enter the date and time of the request, and the system shall be capable of producing a report that shows the trip request was then scheduled and assigned to a driver.

6.7 Dispatching

6.7.1 Trip Management

The system shall allow dispatchers to access run manifests using the run number, vehicle number, client number, or client name. The system shall display the run number, the list of passengers, the scheduled pick up and drop off times for each passenger, funding source for each trip, the scheduled arrival time for each pickup and dropoff, and any special circumstances. The run manifest display shall list trip events in chronological order, beginning with the next upcoming trip event.

The system shall automatically display any same day manifest changes to the dispatcher and to the affected drivers via the mobile data terminal. The system shall allow the dispatcher to enter road closure or detour information with respect to a road segment.

The system shall allow the dispatcher to use sorting functions to make changes that improve productivity using manual override, computer assisted, and fully automated modes of trip scheduling. After modifying runs, the system will allow the dispatcher to print each run's stops and routes in order to have fully updated schedules.

The system shall allow the dispatcher to define a region and display a region's runs on the computer screen with maps.

The system shall allow dispatchers to process no-shows when reported by drivers. The system shall track any such events.

If a vehicle must be removed from service, the system shall allow the dispatcher to associate a newly assigned vehicle with the run. If no alternative vehicle is available and the run must be cancelled, the system shall attempt to dynamically reschedule all the affected trips onto existing runs, with priority to any trips that were already underway on the affected vehicle.

The system shall allow easy transfer of trip event completion data from a printed manifest (that the driver has used to report trip event data), mobile data terminal or reported by radio/phone. This data must include the trip status (taken, no-show, cancelled), actual arrival time at pickup point, actual time passenger boarded, actual dropoff time, pickup odometer reading, dropoff odometer reading and any notes made by the driver (such as complications with mobility devices or violation of policies [i.e., too many bags]).

The system shall allow dispatchers to add any vehicle event information associated with a trip. The system shall log the information in trip history with corresponding date and timestamp. The dispatcher shall be able to select from a list of pre-configured events or manually enter information.

The following trip data is needed for management information reports: actual arrival time at pickup point; actual time passenger boarded; actual dropoff time; actual odometer reading at beginning of trip (typically

at pickup); actual odometer reading at end of trip (typically at dropoff); trip status (taken, no show or cancelled); was trip a subscription trip; trip number assigned; total vehicle and revenue miles for each vehicle; total vehicle and revenue hours for each vehicle; and any additional information required (manual entry).

6.7.2 Incident Management

The system shall allow the dispatcher to initiate a new incident report. The new incident report form shall appear in a separate window, including an automatically generated date/time and a list of incident types.

The dispatcher shall be able to select an event to form the basis for an incident report, with the incident report form auto-populated with all information already known in the system about the event.

There shall be one central incident/accident report accessible from a server so everyone sees the same current report information, but only one instance of the report can be open at a time for editing.

The system shall allow authorized users to append to an existing open incident report, with other system users limited to read-only access.

The system shall allow authorized users to view and append to an existing open incident report, with other system users limited to read-only access. The user shall be able to select from a list of currently open incident reports that can be sorted by date/time, incident type or initiating dispatcher. The selected incident report shall appear in a separate window and shall be available for editing.

The open incident report shall be repeatedly accessed and modified, until it is marked closed after which further modifications shall not be possible, unless by authorized personnel with specific authorization to do so.

The system shall allow authorized users to close an existing open incident report. The user shall be able to select from a list of currently open incident reports, which can be sorted by date/time, incident type or initiating dispatcher. The user shall be asked to confirm the selected incident report before the incident is closed.

The incident report database shall indicate for each incident report the date/time of opening the report, the incident type, the initial incident text, the initiating user, the date/time of each subsequent modification, each modified version of the text, the modifying user(s), the date/time the incident was closed and the closing user.

Authorized users shall have the ability to attach files (e.g., an image file) to the incident report.

The system shall track the user and date/time when the incident report is opened, modified or closed.

6.8 Billing

In order to enable the system to bill funding agencies, the system must be able to track the number of trips, number of miles, tolls paid by drivers and trip status (trip taken, no-show, cancelled) by client for each funding source.

The Billing module shall allow the WRTA to define and customize the following information to implement and track multiple billing rules based on the terms of negotiated contractual agreements, and/or grant agreements. The system shall allow the WRTA the option of tracking this data by contract year, WRTA's fiscal year or other date range (e.g., year-to-date, quarterly).

6.8.1 Funding Sources

The system shall be able to track as many funding sources as necessary.

The system shall allow definition of at least the following attributes related to funding sources:

- Unique system-generated identifier by funding source;
- Funding source name;
- Funding source address;
- Contract effective and expiration dates;
- Maximum contract dollar amount for the contract time period; and
- Funding source status to indicate whether funding source is currently active or whether it is used for historical or future trips.

6.8.2 Billing Rates

The system shall be able to track multiple billing rates for each funding source. Per trip, per passenger-mile, per least path distance passenger-mile, per-revenue mile, per-total mile, per-revenue hour, and per-total hour rates shall be entered. Rates may be able to be left blank. The system shall allow rate changes any time a new rate is put into effect. The old rate's expiration date should be updated, and the new rate added with a new effective date. Billing charges shall be calculated for each trip date using the billing rates applicable for that date.

Trip status must be taken into account when determining which trips to bill. For example, not all funding sources will pay for no-show trips.

Trips are charged at different rates based on trip mode category and include trip charge, mileage, tolls and taxi fares. The system shall allow and track the collection of donations (not fares) for trips billed to other funding sources.

Please note that for shared rides, WRTA should be able to allocate shared ride trip data so that it is possible to bill the proportionate costs of shared rides to the appropriate funding agencies based on all possible rate structures (e.g., per-mile or per-trip).

6.8.3 Fiscal Years

The system shall account for and manage each funding source's fiscal year date range.

6.8.4 Trip Mode Categories

The system shall be able to track multiple trip mode categories. Trip mode is a mandatory field in all billing and reporting options.

The system shall be able to track multiple trip mode descriptions such as “Van,” “Bus,” and “Taxi.”

The system shall be able to track and implement rules which require specific codes for modes of transportation and HIPAA related codes, as well as reimbursement rates.

6.8.5 Trip Purpose Categories

The system shall allow WRTA to track multiple trip purpose categories based on specific billing source contractual agreements and billing rules. Some funding programs may define specific trip purpose categories which are correlated to eligibility, billing and reporting options.

6.8.6 Driver Details Tracking

The system shall allow tracking of pre-and post-inspection times for agency drivers.

6.8.7 Trip Status Categories

The system shall allow WRTA to customize and track as many trips statuses as necessary. Based on contractual agreements, only certain trip statuses may be billed. For example, No-Shows may have different billing rules under different funding programs. All reporting options shall use the trip status field in the criteria selection and sorting.

The system shall allow WRTA to update status of a trip such as “scheduled taken,” “denied,” “cancelled by client,” “cancelled by office,” “late cancel,” “no-show,” “driver no-show” or “inability to find driver.”

6.8.8 Billing Status Categories

The system shall allow WRTA to customize and track as many billing status categories as necessary.

6.8.9 HIPAA Transportation and Other Codes

The system shall be able to track HIPAA compliant transportation and other service-related codes by WRTA.

6.8.10 Trip Details by Client

The system shall be able to track multiple rides per client, using the unique client identification number as described in Section 6.2. This assumption is being used when defining specifications for tracking individual client trip details and billing options.

The system shall allow entry of the following information for billing with respect to the client trip data entered in the system as part of trip booking process (see Section 6.5.1)

- Funding Source Identification: to track the trip Funding Source ID
- Vendor ID: to track the Vendor ID
- Mileage: used in all billing, management and operations processes and reports to track mileage statistics.

- Trip Charge: used in all billing, management, operations and associated processes to track trip charges per trip.
- Other charges: to track other charges when clients incur expenses for other services that are related to transportation needs, such as hotels, meals, tolls, parking fees. Rules need to identify and process such charges differently. These charges are not included in reporting and analysis options which summarize regular trip charges.
- Fare Amount: to track and look up fare amounts per trip. Cross Reference to Fare Amounts by Billing Source specifications. The Contractor shall be given the fare matrix that will be necessary to look up fare amounts per trip.
- Invoice Date: to track when Invoices are balanced and generated.
- Billing Status: to track multiple billing statuses.
- Resubmit Flag: A “Resubmit” is a trip record which was denied and needs to be billed again, after errors in processing are fixed. Resubmitted trips cannot be double counted, while reconciling and generating statistical agency wide reports.

6.8.11 Other Contracts

The system must be able to generate billing reports/invoices for local partners, state agencies and third parties (e.g., other contracts).

The system shall be able to generate billing reports for internal accounting and specific contract required billing procedures that list clients, trips, time, mileage, and other parameters for a given time period.

6.8.12 Fares

The system shall be able to generate a report of daily fares, co-pays and donations broken down by run.

6.9 Customer Service

The new PSDS shall be fully integrated into WRTA’s existing Salesforce platform **as an option**. The new PSDS platform shall be able to make application programming interface (API) calls to Salesforce to integrate information mainly for customer feedback. This integration shall provide future opportunities to use customer relationship management (CRM) tools in other WRTA areas.

The system shall allow customers to fill out a brief survey after their trip (on paper, online or via an app) to indicate satisfaction with their ride/the service. This feedback shall be logged along with any responses made as a result of the customer feedback. The survey shall include the opportunity for the customer to input an open-ended comment and a rating for the trip, in addition to yes/no or multiple-choice questions.

The system shall have the ability to log and track the status of customer complaints and commendations.

The system shall automatically assign an identification number or a case number once the complaint or commendation is saved.

The system shall automatically notify the appropriate WRTA staff once a complaint is assigned an identification or case number.

The system shall allow the input of at least the following information with respect to a complaint or commendation:

- Client identification number (when the customer is not registered, allow for information to be ignored or for passenger name to be entered instead);
- Reason for complaint (e.g., later arrival of vehicle) or commendation;
- Type of complaint: ADA, Title VI, Reasonable Modification, etc.
- Billing source;
- Date and time of complaint or commendation;
- Current status of a complaint or commendation;
- Current owner of the case (who is handling the complaint or commendation currently); and
- Ability to generate a report showing complaints and commendations for the month by program/billing source.

The complaints/commendation module shall support workflow management which shall allow agency staff members to assign a case to a specific agency employee's queue (currently only one person handles complaints/commendations) depending on the nature of the complaint or commendation.

The system shall have the ability to alert the authorized management staff automatically about any complaints or commendations that have not been addressed for a defined period of time and closed out.

All data shall be stored in the PSDS database and WRTA shall have the ability to run reports that require access to this data.

6.10 Mobile Data Terminal (MDT) Interface

Requirements in this section assume that WRTA vehicles shall be equipped already with existing MDTs/tablets, and data communication hardware and software. The on-board MDTs/tablets are described in Section 4.1. Data communication can be accomplished with the Contractor's own server, provided that the Contractor shares their network requirements with the WRTA. This is necessary so that communication can be allowed through the existing on-board Cradlepoint since the Subscriber Identity Module (SIM) card uses a private Access Point Name (APN) and the Contractor firewall must allow the data communication.

6.10.1 Data Messaging

The system shall allow the dispatcher to view received text messages in a tabular display that also indicates the vehicle ID and the time of the message.

The system shall allow the dispatcher to send a text message to a single MDT, a predefined group of MDTs or all MDTs within an area selected on the map display.

The system shall allow the dispatcher to select one of a set of predefined text messages or enter a free text message.

The system shall allow any message sent by dispatch to be flagged as requiring operator acknowledgement and shall allow the dispatcher to view a list of such messages that have not yet been acknowledged.

6.10.2 Manifest Transmission and Changes

The system shall produce a daily manifest for each run, indicating pull-in and pull-out times, the projected arrival time of the vehicle at each pickup and dropoff location, listing the trip events in chronological order.

The system shall be able to generate and display all manifests for a given day. The system shall provide tools to allow manual adjustments to the run manifests, including manually moving trips between manifests.

The system shall send manifest trip pickup and dropoff data to the MDT in the vehicle assigned to that manifest.

The system shall send the manifest for the next day to each driver via e-mail.

The dispatcher shall be able to configure which portions of the upcoming manifest entries shall be sent to the MDT.

Additional portions of the manifest shall be automatically sent to the MDT on an ongoing basis as trip events are completed, in accordance with WRTA-configured manifest transmission parameters.

The system shall automatically display any same day manifest changes, such as trip additions, no shows or cancellations, to the dispatcher and transmit these manifest changes to the MDT in the vehicle assigned to that manifest, displayed in a different color text or highlighted.

6.10.3 Trip Events Logging

The system shall receive trip pull-in, pull-out, pickup, no-show approval requests and dropoff event reports from MDTs, and use this data to update the time and reported location for each trip event.

The system shall acknowledge the receipt of trip event messages to the MDT.

The system shall store trip event messages sent to the MDT and acknowledged by the vehicle operator.

Based on the logged trip events, the system shall update the estimated time of arrival for the remaining manifest trips and display this information to the dispatcher. This does not change the actual manifest – this updated information informs the scheduler/dispatcher so that they can inform clients if their pickups are expected to be delayed.

The system shall receive no-show approval requests from MDTs, allow dispatchers to decide whether to authorize the no-show, record the time when the no-show was authorized, mark the pickup and dropoff in the manifest as a no show, and transmit the cancellation of the pickup and dropoff as manifest changes to the MDT in the vehicle assigned to that manifest.

7 Customer/Rider System Requirements

7.1 General

The system shall allow riders to select and update primary and secondary preferred communication channels and shall automatically distribute all communications via both preferred channels.

7.2 Self-Service Communication Channels

The system shall provide at least the following self-service options and communication channels to riders or integrate with currently available customer technologies to provide such self-service options and communication channels:

- WRTA phone system;
- IVR system as described in Section 7.9.4;
- Short message service (SMS) text message as described in Section 7.9.3;
- Email, as described in Section 7.9.3;
- Web Portal provided by the successful Proposer as described in Section 6.5; and
- Mobile application provided by the successful Proposer as described in Section 7.9.5.

The system shall allow customers/clients or their designated caregivers or service providers to access their trip history (including ability to define a history over a user-defined date range), scheduled trip information, customer/client profile, and account balance via all self-service channels.

The system shall allow riders to access all information about a trip's status during the day of service via all self-service channels.

The system shall allow customers/clients to schedule, modify, cancel, and track trips within customer policy and procedure limitations set by WRTA, via all self-service channels.

The system shall allow customers/clients or their designated caregivers or service providers to update their rider account profile via all self-service channels.

The system shall send customers/clients or their designated caregivers or service providers a trip rating message via the rider's preferred communication channels at the end of each trip and record the rider response as a part of the trip's record (as described in Section 6.9).

The system shall provide the ability to solicit feedback through surveys at the completion of each trip for a randomly selected rider sample and record the feedback as a part of the trip's record.

7.3 Eligibility-Related Communications

The system shall communicate key eligibility information with customers/clients or their designated caregivers or service providers, including appointments and eligibility changes (e.g., eligibility appointments, reevaluation assessment, suspensions, expiration) according to customer policies and procedures.

7.4 Night Prior Reservation Confirmation

The system shall send out reservation confirmations based on the customer/client's preferred method of communication to inform riders of the next day's scheduled trips.

The system shall communicate with customers/clients or their designated caregivers or service providers the details for each trip including date, pick-up window or the actual pickup time, origin and destination, and fare. The number of communications sent to each customer/client will be based on the number of trip reservations (i.e., a round-trip made as a single reservation will receive one (1) message).

The system shall attempt to contact with customers/clients or their designated caregivers or service providers through alternate communication channels if the initial communication attempt is unsuccessful (i.e., message undeliverable; call not answered and voicemail left) through the rider's preferred channel. Customer/client shall define the number of unsuccessful attempts prior to trying a different channel.

The system shall complete all reservation confirmations by a customer-defined time on the night prior to the scheduled trips.

7.5 Day-Of Trip Update

The system shall message the customer when the vehicle is on its way to pick up the customer (e.g., 15 minutes before pickup or when the vehicle is a mile from the pick up).

The system shall automatically send trip alerts to customers/clients related to any changes that may impact the scheduled pick-up window (e.g., vehicle break-down).

The system shall communicate to customers/clients or their designated caregivers or service providers the details for each trip, including the origin and destination of the trip, the actual pickup time, and the estimated time of arrival (ETA) in real-time based on actual conditions in any instance where the scheduled trip details have changed.

7.6 Trip Status

The system shall automatically push trip status updates to customers/clients or their designated caregivers or service providers based on pre-determined parameters (e.g., arrival time, vehicle location). The system shall also allow customers/clients to customize trip status preferences and access trip status and information on-demand. Trip status updates shall include the following information:

- Date;
- Pick-up window or actual pick-up time;
- Origin and destination;
- Fare or co-pay if required;
- ETA in real-time based on actual conditions; and
- Actual vehicle location for trips within thirty (30) minutes of the pick-up window or actual pick-up time.

Within a customer-defined actual pick-up window, the system shall provide customers/clients with access to real-time vehicle location information and estimated time of arrival with the ability to monitor vehicle location through actual pick-up.

7.7 Cancellations

The system shall communicate to customers/clients the details for the trips that they request to be cancelled prior to cancellation to ensure the proper trip is cancelled. Trip details to be communicated prior to effectuating any cancellation request include: date, pick-up window or the actual pickup time, and the origin and destination.

The system shall notify customers/clients if cancellation is in violation of customer policy and/or carries a penalty.

The system shall request, but not require, riders indicate the main reason for cancellation based on customer-defined fields.

The system shall provide the customers/clients confirmation that the trip has been cancelled via the customer/client's preferred communication channel.

7.8 Rider and Account Information

The system shall allow customers/clients or their designated caregivers or service providers to modify the following account information as needed:

- Favorite physical addresses (e.g., home, work);
- Phone number;
- Primary contact;
- Secondary contact;
- Password;
- Security questions;
- Language preference;
- Preferred communication channel;
- Emergency contact;
- E-mail address; and
- Payment Information if applicable (via connection to customer's payment system; no payment data will be stored in the rider database within the system or otherwise accessed or stored by vendor).

The system shall allow riders to view, but not modify, eligibility end date and will automatically notify riders via the rider's preferred communication method when the rider must have eligibility reviewed.

7.9 Real-time Customer Information

The Proposer shall describe their proposed system's ability to independently provide or export through a standard protocol, appointment reminders to WRTA staff and clients. The time period (e.g., X hours before a scheduled appointment) and format (e.g., Text Message, Automated Phone Call, etc.) in which reminders are provided shall be configurable by WRTA or client.

7.9.1 Predicted Arrival Time

The system shall have the ability to dynamically generate and update the predicted arrival times for in-service WRTA vehicles.

The system shall be able to account for at least the following operational anomalies in making corrections in the predicted arrival times:

- Travel time variability by day and time of day;
- Service disruption (e.g., vehicle breakdown or weather-related disruption) and detours; and
- Driver logon/logoff error.

7.9.2 Web-based Trip Status

The system shall allow customers/relatives to view the status of their trip on the WRTA website, web-enabled personal devices or on a smartphone application. Registered customers shall be able to view the status of their trips by logging onto their profile.

The system shall allow customers to view the location of their vehicles on a map-based interface.

7.9.3 Email/Text Alerts

The system shall be able to send emails to customers based on their trip preferences.

The system shall be able to send text messages to customers based on their trip preferences.

The system shall have the ability to respond to customer requests for real-time status of a prescheduled trip.

7.9.4 Interactive Voice Response (IVR) Alerts and Reservation Access

The PSDS system shall have the ability to interface with an IVR system to provide customer alerts regarding ride reminders and real-time arrival information via IVR system.

The IVR shall allow customers to cancel their trips using a series of prompts to identify their trip reservation, cancel the reservations and confirm the cancellation.

7.9.4.1 General

The IVR system shall provide the capability for customers to access and be contacted with information about WRTA services and reservations via telephone. The Contractor shall be responsible for supplying hardware and software, technical support, and warranty coverage on implemented hardware and software.

The IVR system shall be interfaced with the PSDS and predicted arrival time (described above) to provide current predicted arrival time for customers 30 minutes prior to the predicted arrival time.

The IVR shall contact customers with a reminder call about their trip the day before service.

If a customer's trip is predicted to be delayed by more than a configurable number of minutes, the IVR shall contact the customer with an updated arrival time.

The Proposer shall indicate how the IVR system will be compliant with FCC Section 255 of the Communications Act and Limited English Proficiency requirements.

The system shall provide both a web- and phone-based customer interface for registering with the IVR system.

7.9.4.2 Phone System Integration

The IVR shall be integrated with the existing telephone system at the WRTA. The Proposer shall describe and provide cost of any needed upgrades in the existing phone system to meet the IVR functionality.

7.9.4.3 Customer Interface

The customer interface shall consist of voice prompts to which the customer may respond by either voice commands or by touch-tone key selection.

The IVR system shall provide a welcoming message as its first response to incoming callers or call recipients. The system shall allow for an additional optional message to be spoken after the welcome message.

The IVR system shall be designed such that incoming calls with no touch-tone or voice response within a short period of time by the customer are acted upon automatically (time-out). The Proposer shall specify proposed options for calls that time-out or for which there is no touch-tone service.

The voice prompts shall encourage incoming callers to use the automated menu-based interface as a first choice over communication with a live Customer Service Representative.

The voice system structure shall provide key-ahead of touch-tone inputs such that experienced users do not have to wait for voice messages or prompts to complete prior to making a touch-tone or voice selection.

At any time during the call, the customer may request a transfer to WRTA Customer Service via touch-tone key or voice command. The touch-tone key used for this particular selection shall remain consistent throughout the customer interface.

7.9.4.4 Call Transfers

The proposed system shall handle at least 2,500 calls per day. Please note that this call volume may have to be increased once there is an understanding of the actual average daily number of calls.

The proposed IVR system shall be capable of transferring calls to WRTA Customer Service.

When a transfer request to Customer Service is initiated by a caller after business hours, the IVR system shall provide an informational message to the caller and then return the caller to the first level of the IVR system voice menu.

When a transfer request to Customer Service is initiated by the caller during regular business hours, the IVR system shall transfer the caller to Customer Service if a call taker or queue space is available.

When a transfer request to Customer Service is initiated by the caller during regular business hours but when call takers are busy and the queue is full, the IVR system shall detect the queue-busy condition, hold the call, announce the approximate amount of time the caller may be on hold and provide IVR menu options for automated assistance.

7.9.4.5 Usage Data Collection and Reporting

The IVR system shall collect customer call data and provide reports for administrative purposes.

The Contractor shall describe the level to which data may be collected for incoming customer calls and for the touch-tone responses to menu options.

The proposed system shall allow a system administrator to generate reports for specific time periods, including the following types of reports:

- Number of total incoming calls;
- Number of calls that transfer to Customer Service; and
- Call duration for each call.

The proposed IVR shall allow the system administrator the capability to generate the above reports by the following selectable periods: hourly, daily, range of days, weekly, monthly and yearly.

7.9.4.6 Vocabulary Management

The proposed IVR system shall provide the capability for the system administrator to record and edit vocabulary words and construct the phrases that will be used by the IVR system.

The Contractor shall specify the method(s) for recording and editing vocabulary words and constructing phrases.

The proposed IVR system shall provide speech editing features. The Contractor shall specify features supported by the vocabulary management environment, including but not limited to:

- Individual vocabulary edits;
- Pause deletions and insertion; and
- Undo/redo individual vocabulary edits.

The IVR system shall provide the capability to store and manage all vocabulary words and phrases used by the system. The Contractor shall describe how the vocabulary words and phrases are to be stored and managed.

7.9.5 Mobile Application

The PSDS software shall include a mobile application for demand response customers that provides a modern, user-friendly, and accessible interface for managing transportation services. The application shall be available for both iOS and Android devices, and shall comply with applicable accessibility requirements.

At a minimum, the mobile application shall provide the ability to:

- Request, schedule, modify, and cancel trips:
 - Cancellation must be at least one (1) hour before pick-up time. If cancellation is made within one (1) hour of pick-up, it would be considered a 'No-Show.'
 - Only same-day trips can be cancelled.
 - Same day trips cannot be modified;
- View upcoming, active, and completed and verified trips;
- Receive real-time trip status updates and service notifications;
- Track the assigned vehicle in real-time on an interactive map;
- View vehicle identification information; including vehicle number, vehicle description, and estimated arrival time;
- Receive notifications when the vehicle is approaching, has arrived, or when service disruptions occur;
- Manage recurring/standing order trip requests, where authorized (an end date restriction must be put in place so that a customer should not be able to update more than one month out);
- Update customer profile and contact information within specific restrictions such as not being able to change eligibility (which is determined by WRTA/PBSTM), physical address, etc.;
- View fare information and payment options (when applicable);
- Communicate trip-specific instructions or special accommodation needs to the WRTA and the vehicle operator;
- Access trip history and account information;
- Manage companion, personal care attendant (PCA), and guest rider information, where applicable.

The mobile application should provide an experience comparable to modern transportation network company (TNC) platforms while supporting the operational and accessibility requirements of public transit demand response services. Integration with the scheduling and dispatch system shall ensure that trip information, vehicle location, customer notifications, and reservation updates are synchronized in real-time.

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8 Reports

The reporting system must first present data in a summary format and then allow users to drill-down and drill-through the tables for further details. Any graphical illustrations shall be provided as necessary.

Reporting is required for both internal and external (e.g., MassDOT) use.

The system must allow sorting, grouping and filtering of information on-the-fly by relevant data fields.

The system must allow WRTA to export all trip data into a spreadsheet to perform analysis.

In addition to canned reports required in the system, the reporting tool must allow WRTA to generate and save ad-hoc reports easily.

The system shall allow reports to be viewed on screen, sent to a printer or saved to a file.

The system shall allow WRTA to access the database to create and execute stored procedures written by WRTA.

The software shall provide standard reports based on the stored data. The Proposer shall provide details in their proposal related to reports that are offered and degree to which they can be configured. The standard reports shall include at least reporting on:

- Logon/Logoff summary
- Trips provided
- Number of riders
- Unduplicated riders for a specified time period or specified funding source
- Non-revenue vehicle hours and miles (the time from when the vehicle leaves the garage to the vehicle's first pickup, driver's lunch time, time from the last drop-off to when the vehicle is fueled and brought back to the garage)
- Passenger travel time, by run or user group
- Revenue vehicle hours and miles (hours of vehicle operation in which there is the expectation to carry passengers)
- Passenger-miles, by run or user group
- Least path distance passenger-miles, by run or user group
- Number of cancellations
- Number of no-shows
- NTD S-10 reporting; functionality for a one-click NTD S-10 report, or quick flat-file export
- Data specific to shared rides depicting the proportionate time, mileage, and costs of shared rides distributed among appropriate funding agencies based on various possible rate structures (e.g., per-mile or per-trip).

It is critical that the software provides the WRTA the ability to access data to assist in the analysis of passenger trips, vehicle miles, and vehicle hours whose costs are shared by multiple funders. WRTA should be able to use the software to determine passenger-miles, vehicle miles, vehicle hours, and costs associated with each funder.

The software shall have the capability to generate reports based on exceptions as per thresholds set by WRTA.

If reporting shall be provided via a third-party application (e.g., Crystal, Jasper, Power BI), that application must be identified in the Proposer's response.

WRTA shall define the need and elements required for a dashboard for system users. The Proposer shall describe their capability to build a dashboard that can provide access to reporting as well as operational performance metrics.

9 CAD/AVL Integration, MDT/Tablet, Manifest Management and iCabbi Integration Functional Specifications

9.1 PSDS Integration with Systrans CAD/AVL System

See Section 4.1.

9.2 MDT/Tablet Specifications

9.2.1 “Safe Driving” Mode

For driver safety, the MDT has the “*safe driving*” mode enabled when the vehicle is moving above a configurable speed limit (e.g., 5 miles/hour).

The safe driving mode allows WRTA management to determine the criteria that will prevent vehicle operators from interacting with MDTs when driving. The MDT allows the WRTA to enable the following screen configurations under safe driving mode:

- Blank display on the screen;
- Disabled MDT buttons/keys to stop vehicle operators from performing any actions on the screen; and
- Display of information relevant to vehicle operators when of high priority (e.g., navigation, manifest, or missed messages or calls from dispatchers).

The WRTA shall have the ability to remotely change the configurations for the safe driving mode.

The WRTA shall be able to change the safe driving mode configurations by vehicle operator login. For example, the safe driving mode could be disabled for maintenance or training purposes.

9.2.2 Navigation Assistance

The MDT is equipped with a navigation assistance module to provide visual and audible turn-by-turn instructions with real-time traffic information to vehicle operators. The system must allow the ability to turn the navigation audio on and off.

The MDT displays a map showing the current location of the vehicle, the location of the next pickup or dropoff, and a continuously updated suggested routing between them, at the closest zoom level where this route fits on the display. As the vehicle travels, the map view automatically pans and zooms to continue to show this entire routing at the closest possible zoom level.

The MDT allows operators to override the map zoom level or pan the map display, and to select for the display to return to the default mode that automatically follows the routing.

The driving instructions shall include both the turn directions and the name of the street, and this information is provided in advance of the turn.

The navigation module allows the operator to activate and deactivate the navigation map display and/or the audible instructions as desired.

If the navigation application is active when a manifest change notification or text message is received, the audible alert tone shall be provided without interrupting the navigation application. This will allow the operator to acknowledge and review the manifest changes or text messages at the next appropriate opportunity without interrupting the navigation support.

The navigation assistance system shall not direct vehicles operators to streets that have restrictions for their vehicles (e.g., restrictions on bridge clearance for oversized vehicles).

9.2.3 Vehicle Operator Logon

The MDT shall allow vehicle operator logon using operator ID and run ID entry. The MDT shall check with the PSDS central system to validate that the operator ID and run ID are valid (and not already logged in on another MDT). In the event of a conflict, the system shall notify the vehicle operator of an “invalid” logon. If the operator ID and run ID received from the MDT are valid, a message shall be sent to the MDT indicating whether the logon attempt was successful or failed.

Once the operator and run IDs have been validated, the MDT shall complete the logon by selecting the schedule/manifest data stored in the MDT that corresponds with that run/trip.

After logon, the operator terminal shall display the current run, route, trip, next time point, and vehicle operator ID.

The MDT shall allow the vehicle operator to logoff by selecting the logoff key.

If the vehicle operator has not properly logged off at the end of their run (after a configurable amount of time), a dispatcher shall have the ability to remotely log off that specific MDT.

Alternatively, the system shall automatically log off an MDT after a configurable number of hours that the MDT has been inactive.

The MDT shall send a message to the dispatcher as a confirmation of the vehicle operator logoff.

The MDT shall periodically attempt to send a logon or logoff message until it receives an acknowledgement message from the central system, or if no response is received from the central system within a WRTA-configurable time, the MDT shall provide the operator with a “no logon response” message, and the system will continue to attempt to send the logon or logoff message.

9.3 Manifest Management

9.3.1 General

Manifests and manifest updates sent by the PSDS or a dispatcher shall be displayed on the MDT screen. The screen shall display upcoming pickup or dropoff trip events in summary format including at least event

type (e.g., pickup, dropoff), arranged pickup time, appointment time (if applicable), client name, gender, event location, fare or co-pay amount (if appropriate), mobility assistance requirements, image of the client, and other pertinent information, as determined by the WRTA.

The MDT shall allow the vehicle operator to select a trip event to get details identified by WRTA on the pickup or dropoff on a separate screen, which shall include, at a minimum, pickup/dropoff, first and last name, client id, gender, appointment time, pickup time, location, location comments, fare or co-pay amount, fare type, number of passengers and Personal Care Attendant (PCA).

The MDT shall request manifest data from the PSDS on a periodic, ongoing basis to display at least the next 10 trip events or trip events scheduled in the next 60 minutes, with these thresholds being configurable by WRTA.

The MDT shall not allow a request for no-show until a WRTA-configurable time interval has passed after the 'arrive' trip event or the start of the customer pickup time window, as determined by WRTA.

Once any of these trip events are selected on the MDT, the MDT shall send a message including the date, time, and location to the central software.

The MDT shall require that the vehicle operator acknowledge the receipt of an insertion, deletion or change to the current manifest (including no-show events). There shall be an audible tone from the MDT when any such manifest change notification is received. All changes in the manifest will be highlighted in distinct colors.

9.3.2 Trip Events

The MDT shall send a corresponding message to the PSDS when the vehicle operator selects a pull-out, pull-in, pickup, no-show requests, no-show event (after requesting a no-show from dispatch), or dropoff trip event.

The operator shall use the MDT to select an 'arrive' event by pressing a button when first arriving at the location, and then again use the MDT to select a 'perform' event when about to depart the location. The vehicle must not be in motion to select 'arrive' and 'perform' events.

In the case of grouped trip events, the vehicle operator shall register a single 'arrive' event.

The MDT will be configured to not allow the 'arrive' event unless the vehicle reaches within configured radius of the pickup location.

If the customer is not available at the location, the operator shall use an MDT button to request a 'no-show'.

Pickups with a pending no-show request or that have been cancelled due to a no-show shall be indicated to the dispatcher.

The MDT shall not allow a request for no-show until an agency configurable time interval has passed after the 'arrive' trip event or the start of the customer pickup time window, whichever is later.

Once any of these trip events are selected on the MDT, the MDT shall send a message including the date, time, location and odometer value to the central software.

The operator shall have the opportunity to update the fare type at the time of selecting the perform trip event and send the updated information to the PSDS.

The trip event message shall include the date/time, trip event type, location and odometer value. Prior to sending the trip information, the operator shall be allowed to verify and adjust the odometer value for that trip.

The MDT shall continue to periodically attempt to send a trip event report until it receives an acknowledgement from the central software that the report was received.

9.4 Potential Interface with iCabbi

No actual integration is planned between iCabbi (used by Yellow Cab) and the Systrans CAD/AVL system. If a tablet is used by other demand-response service providers, such as Yellow Cab and the Bethel Group, shall be able to install their own applications, such as iCabbi, without any technical integration with the CAD/AVL.

Any non-Systrans application installed on the tablet can communicate with its own server, provided the service provider shares their network requirements. This is necessary so communication can be allowed through the Cradlepoint router on-board each vehicle since the Subscriber Identity Module (SIM) card uses a private Access Point Name (APN) and their firewall must allow the traffic.

10 Future Capabilities

The WRTA has identified future or optional functionality of the PSDS, including the Contractor providing a Microtransit Module. This optional Microtransit Module shall be able to be activated by the WRTA during the contract term. The module should support the management and operation of flexible, on-demand transit services through dynamic scheduling, including commingling of demand-response services; dispatching; trip booking; and vehicle routing capabilities.

At a minimum, the Microtransit Module should provide:

- Real-time trip scheduling and dispatching;
- Dynamic route optimization and ride-pooling;
- Mobile, web-based, and call center booking options;
- Real-time vehicle tracking and customer notifications;
- Service zone and virtual stop management;
- Integration with fixed-route and demand-response operations;
- Operational reporting and performance analytics (dashboards)

The WRTA has not yet identified a specific service area, operating model, or implementation timeline for microtransit services. This module shall be available as an optional component that may be implemented at the WRTA's discretion during the term of the contract. The Proposer shall identify any additional licensing, implementation, support, or transaction-based costs associated with this module in addition to identifying their capabilities as they relate to providing this future functionality.

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11 Project Implementation

11.1 General

The Contractor shall prepare all deliverables in both Microsoft Office (Word, Excel or PowerPoint) and Adobe PDF formats, with WRTA granted full rights to reprint as needed.

11.2 Required Project Schedule

Table 2 shows the required schedule of activities and deliverables that will be described in subsequent subsections.

Table 2. Required Timeline of Activities and Deliverables

Item	Description	Time Since Last Item
1	Notice to Proceed	
2	Draft System Implementation Plan (SIP)	2 Weeks
3	Kickoff Meeting/Requirements Review Meeting	2 Weeks
4	Revised SIP	2 Weeks
5	Preliminary Design Document (PDD)	6 Weeks
6	Preliminary Design Review (PDR) Meeting	Within 1 week of completing the PDD
7	Final Design Document (FDD)	3 Weeks
8	Final Design Review (FDR) Meeting	Within 1 week of completing the FDD
9	FDD Approval	3 Weeks
10	Acceptance Test Procedures (ATP) for Factory Acceptance Test (FAT)	6 Weeks
11	FAT	3 Weeks
12	FAT Punch List, FAT Results Document	2 Weeks
13	Resolve FAT Punch List and FAT Approval	3 Weeks
14	Training Manuals and Training	3 Weeks
15	ATP for Pilot/Installation Testing	3 Weeks
16	Pilot/Installation Testing	3 Weeks
17	Pilot/Installation Testing Punch List and Pilot/Installation Testing Results Document	2 Weeks
18	Resolve Pilot/Installation Testing Punch List and Pilot/Installation Testing Approval	4 Weeks
19	ATP for System/User Acceptance Testing	4 Weeks
20	System/User Acceptance Testing	4 Weeks
21	System/User Acceptance Testing Punch List, System/User Acceptance Results Document	3 Weeks

Item	Description	Time Since Last Item
22	Resolve System/User Acceptance Testing Punch List and System/User Acceptance Testing Approval	3 Weeks
23	Burn-in/Rigorous Testing	4-6 Weeks
24	Burn-in/Rigorous Testing Results Document	2 Weeks
25	Resolve Burn-in/Rigorous Testing Punch List and Burn-in/Rigorous Testing Approval	4 Weeks
26	Final System Acceptance	2 Weeks

11.3 Project Management

11.3.1 Project Status Tracking

The Contractor shall prepare a System Implementation Plan (SIP), including detailed implementation activities and a schedule for these activities, the roles and responsibility of parties (Contractor, WRTA and other parties) in the proposed project team, progress milestones and status, and assigned Contractor staff.

The Proposer must submit their data conversion plan as part of the draft SIP provided in their proposal. Potential risk items and their resolution must be clearly identified per the Proposer's prior experience with similar implementations.

The initial draft of the SIP shall be provided to WRTA within two weeks from Notice to Proceed (NTP).

The Contractor shall participate in a kickoff meeting with WRTA Project Manager, other WRTA staff, and outside consultants as determined by WRTA Project Manager. The SIP shall be discussed at the kickoff meeting. After the kickoff meeting, the SIP must be revised by the Contractor based on comments made during the kickoff meeting and by WRTA. The revised document shall be provided to WRTA within two weeks after the kickoff meeting. Please refer to Table 2 for recommendations on high-level tasks that should be included in the SIP.

The SIP must be approved and accepted in writing by WRTA before it can become effective.

An updated SIP shall be submitted to WRTA at the beginning of each month, until project completion and system acceptance by WRTA.

The SIP shall include a rollout plan for all WRTA-dedicated vehicles.

The Contractor shall maintain and provide to WRTA an Action Items List (AIL), indicating for each item the following: (1) item number; (2) date generated; (3) item priority; (4) brief item descriptive title; (5) assigned person with lead resolution responsibility; (6) date resolved; and (7) ongoing dated notes on resolution status.

The AIL shall be sorted, primarily by unresolved vs. resolved items, priority, and by the date the item was generated. WRTA reserves the right to negotiate additional items for the AIL prior to formal acceptance.

11.3.2 Bi-Weekly Conference Calls

The Contractor shall participate in bi-weekly conference calls with the WRTA Project Manager, other WRTA staff, and outside consultants as determined by the WRTA Project Manager.

The agenda for these meetings will be to discuss the most current status of and plans related to all issues identified in the recent releases of the SIP and AIL.

The WRTA reserves the right to identify for discussion any additional issues beyond those in the SIP and AIL.

A status report shall be issued to WRTA at least two days prior to each conference call, including (1) an agenda for the upcoming conference call highlighting key discussion items; and (2) an updated AIL with the updates incorporating the discussions of the previous bi-weekly conference call as well as other subsequent developments since the previous AIL release.

The Contractor shall be represented in these conference calls by at minimum their Project Manager, as well as any additional Contractor staff necessary to properly address the current issues and project status.

The WRTA may be represented by their designated implementation management representatives. Outside consultants may attend or participate in all conference calls, as needed.

Conference call facilities will be arranged and paid for by the Contractor.

The Contractor shall submit minutes of the call within two days of each conference call. The minutes shall be included as a task on each AIL submitted following a conference call.

11.3.3 Minimum Required Onsite Work

At the first onsite meeting, which is the Kickoff Meeting/Requirements Review (see Table 3, Item 3), the Contractor shall be prepared to discuss WRTA's feedback on the draft SIP and conduct a Requirements Review (RR).

At the second meeting, which can either be online or onsite, is the Preliminary Design Review (PDR). At this meeting, the Contractor shall be prepared to discuss WRTA's feedback on draft Design Review documentation.

During the third meeting, which can either be online or onsite, is the Final Design Review. At this meeting, the Contractor shall present the Final Design Review documentation for review. Based on discussion at this meeting, the Contractor shall make final revisions to the FDD.

During subsequent onsite efforts, the Contractor may configure system access and conduct acceptance testing. These onsite system configuration and testing efforts will occur over an extended period and will likely involve several different onsite trips and a range of different Contractor staff.

11.3.4 Invoicing

The Contractor shall only submit an invoice once a fully signed Acceptance Certificate is generated by WRTA indicating that a progress payment milestone has been achieved.

11.4 Design Reviews

11.4.1 Requirements Review (RR)

The Contractor shall participate in the RR, as part of the first onsite meeting. The RR will initialize the Requirements Matrix (RM) and the Contractor will use this Matrix to produce the draft Design Document for conducting the Preliminary Design Review (PDR) at the second on-site meeting. The RR meeting shall discuss, for each contract requirement, the following: (1) WRTA design intent; (2) the intended Contractor design approach; and (3) the general Contractor approach to demonstration through the acceptance testing process.

Finalized contractual requirements will be prepared after the RR meeting and will be referred to as the Requirements Matrix hereafter.

11.4.2 Preliminary Design Review

There shall be two design reviews in which the Contractor must participate. For the design reviews, the Contractor will be required to prepare comprehensive documentation on the technical details of the system before proceeding with the installation. The design review materials to be prepared by the Contractor will include overall system documentation, details for installation with each vehicle type/site and fixed facility, and an itemization of how their design responds to each individual specification requirement. An important principle with the design review process is that WRTA acceptance of the design review documentation will not represent acceptance of the system, which can only result from successful system acceptance testing.

The beginning of the design review process is a Preliminary Design Review (PDR) meeting, which deals with the Contractor's initial version of the system design. This meeting is an important opportunity to identify any misunderstandings of the design intent and to adapt the design within the Contractor's constraints to best suit WRTA's needs.

The Contractor shall prepare the Preliminary Design Document (PDD), which shall include the following materials: (1) a conceptual diagram illustrating all elements in the system and data flow will be required; (2) an overview of the equipment, system and configuration proposed for implementation; (3) detailed technical documentation for each equipment item; (4) detailed technical documentation on all software, addressing the functions of each module, the format of all user interface screens, the format of all reports, the data fields to be included in all data exchange interfaces and any other software aspects warranting advance agreement with WRTA prior to system customization/configuration; and (5) a table providing cross-references for each section of the PDD to the appropriate element of the RM.

The WRTA shall review the PDD in advance of the PDR meeting and finalize their review and comments on the PDD after the PDR meeting is held.

11.4.3 Final Design Review

The second step in the design review process is a Final or Critical Design Review (FDR), which deals with the Contractor's final system design, based on the results of the PDR and updated RM. The FDR meeting involves consensus building in an onsite meeting or conference call once the design is finalized.

Based on comments made by WRTA on the PDD, the Contractor shall make revisions to prepare the final design document (FDD).

The FDD shall include the following materials: (1) updated PDD incorporating WRTA feedback and comments; (2) final list of equipment to be procured; (3) final design and configurations of the system to be built including all customizations to be made to the system; (4) an updated table providing cross-references between sections in the FDD and elements of the RM; and (5) updates to the Project Schedule.

The Contractor shall conduct the FDR onsite or via conference call three weeks after the FDD has been submitted.

The PDD and FDD are intended only to reduce the chance of any misunderstandings on the design intent or interpretation of the contract requirements. The PDR and FDR shall not alter the need for the successful formal demonstration of each requirement through the Acceptance Testing process.

Once the FDD is complete and accepted by WRTA, the Contractor shall provide a detailed list of equipment for the system.

The Contractor shall create a detailed list of system configurations. An example of these configurations is a list of canned messages, and list of incidents and accidents codes.

The Contractor shall document configurations of the computer hardware and networking infrastructure as part of the FDD.

11.5 Testing

As mentioned in Section 3.2.2, the Contractor shall setup a "sandbox" environment for the WRTA, PBSTM, and other service providers to view and become familiar with the software platform, use it to demonstrate the software's features, and to conduct user (e.g., test group of selected riders and WRTA staff) testing.

The Contractor shall submit an Acceptance Test Procedures document (ATP), for WRTA approval prior to undertaking any testing.

The ATP shall clearly address: (1) how each testable contract requirement (listed in the RM) will be demonstrated, including the method for performing the test; (2) the results that will constitute success for each test; (3) responsibilities of both Contractor and WRTA's representatives during each test; and (4) a cross-reference to which contract requirements from the RM are being addressed by each test procedure.

The ATP shall include an updated RM from the design review documents, to include the test stage at which each contract requirement will be demonstrated; and a cross-reference to the test procedure(s) that serves to address each contract requirement.

The ATP document shall be submitted to WRTA at least three weeks in advance of any intended testing.

The ATP shall reflect the following distinct testing stages for the proposed system: (1) Factory Acceptance Test (FAT); (2) Pilot Testing/Installation Testing; (3) System/User Acceptance Testing; and (4) Burn-in/Rigorous Testing.

FAT shall be completed as the PSDS software is being made available to the WRTA, and deficiencies shall be rectified before moving to the next testing phase.

FAT shall be witnessed by WRTA's representatives (WRTA staff and/or designated support consultants).

Pilot/Installation Testing shall be completed for at least one or more vehicles operated by all WRTA service providers. Pilot/Installation testing will include the Contractor, working with WRTA's IT staff, and operating the system in a test environment. Pilot/Installation testing will be conducted on-site at the WRTA. The Contractor will be required to submit proposed test procedures, which will need to include a cross-referencing to identify which procedure(s) demonstrate each requirement from the Requirements Matrix (RM). Any deficiencies observed in a four-week period following Pilot/Installation testing shall be rectified before the initiation of System Testing (ST). Vehicles used during Pilot Testing will be in operation for four weeks to observe issues that arise in daily operations.

Prior to commencement of Pilot/Installation Testing, the Contractor shall validate scheduling parameters and on-board data configurations to ensure that they are reasonable and accurate.

Pilot/Installation Testing shall be witnessed by WRTA representatives.

System/User Acceptance Testing shall be completed after the entire system has been installed, and deficiencies shall be rectified before the initiation of Burn-in/Rigorous Testing.

System/User Acceptance Testing will include operating the system using live data. This testing stage will be conducted on-site at WRTA. The Contractor will be required to submit proposed test procedures, which will need to include a cross-referencing to identify which procedure(s) demonstrate each requirement from the Requirements Matrix (RM).

System/User Acceptance Testing shall include the testing of all spare components.

System/User Acceptance Testing shall be witnessed by WRTA representatives.

Burn-in/Rigorous Testing shall involve revenue service use of the system over a 30-day period after the completion of System/User Acceptance Testing, and deficiencies shall be rectified before WRTA will grant Final System Acceptance (SA) for the system. This testing stage will be conducted on-site. The Contractor will be required to submit proposed test procedures, which will need to include a cross-referencing to identify which procedure(s) demonstrate each requirement from the Requirements Matrix (RM).

The WRTA may authorize the Contractor to proceed to the next testing stage with certain deficiencies not yet resolved.

The Contractor shall provide written notice to WRTA at least two weeks in advance of any testing, indicating the specific tests to be completed. The Contractor will coordinate the date, time and location of testing to minimize disruption of service.

The Contractor shall be required to reschedule testing if WRTA witnessing representatives cannot be present or if other circumstances prevent testing from taking place.

The Contractor shall provide written Test Results Documentation (TRD) after completing each stage of testing.

The TRD shall document the results of each ATP procedure and provide an updated RM that indicates which contract requirements have been demonstrated.

The TRD must be approved before WRTA grants System Acceptance.

System Acceptance will not be granted for the system until all contract requirements have been formally demonstrated through Burn-in/Rigorous Testing.

The RM shall be used as a “punch list” to track which requirements have not yet been demonstrated at each stage of testing.

A requirement classified as having been “demonstrated” during a certain testing stage can be subsequently redefined as having been “not demonstrated” if compliance issues emerge prior to System Acceptance.

11.6 Documentation

The Contractor shall provide User Manuals (UMs) for the users of the PSDS system, documenting use of all functions of the software.

The Contractor shall provide Vehicle Operator Manuals documenting use of the MDTs and on-board equipment.

The software application shall include context sensitive help capability.

The Contractor shall provide a Systems Manuals (SMs), documenting (1) the configuration of the PSDS system software; (2) PSDS system functions and operations; (3) scheduled maintenance required for the PSDS; and (4) database structure and data dictionary.

The Contractor must provide disaster recovery documentation highlighting how system can function and prevent any data loss in the event of a natural disaster or other unexpected events.

11.7 Training

The Contractor shall provide training courses for at least the following positions:

- Reservationist / Scheduler / Dispatcher
- Administrative Staff
- System administrator/IT staff
- Vehicle operators
- Customer service representative;
- Systems administrator;

- Database Managers
- Managers

WRTA will provide the actual number of staff for each of the above categories of trainees.

The Contractor will describe the necessary pre-requisite computer skills and knowledge expected for each of the training courses in order to develop training classes based on user skill level.

The Contractor shall provide all training materials in either Microsoft Office or Adobe PDF formats with permission to reproduce copies later on.

The Contractor shall provide additional training to the original trainees after Final System Acceptance for the system at no additional cost if major modifications are made to the system after the initial training due to system upgrades or changes made under warranty; and/or Final System Acceptance occurs at least three months after the completion of training, due to delays for which the Contractor is responsible.

The Training Plan, including the training schedule and course outlines, must be provided to WRTA for review at least three weeks in advance of the start of training. Training must be conducted prior to the User Acceptance Testing.

Each Proposer shall provide a sample Training Plan with the following details in their proposal:

- Total number of onsite training sessions proposed;
- Total number of web-based training sessions proposed;
- List of training courses;
- Number of classes per course;
- Maximum number of attendees per class; and
- Number of follow-up sessions (specify on-site or web-based) or itemize cost per session.

The Training Plan must be approved in writing by WRTA before the start of any training.

The Contractor shall furnish all special tools, equipment, training aids and any other materials required to train course participants, for use during training courses only.

The instructors shall demonstrate a thorough knowledge of the material covered in the courses, familiarity with the training materials used in the courses, and the ability to effectively lead students in a classroom setting.

If any instructor is considered unsuitable by WRTA, either before or during the training, the Contractor shall provide a suitable replacement within five business days of receiving such notice from WRTA.

The Contractor shall provide brief refresher versions of each training course to the original trainees between three to six months after System Acceptance of the system at no additional cost.

During the warranty period, the Contractor shall provide additional training to the original trainees after System Acceptance for the system at no additional cost if major modifications are made to the system after the initial training due to system upgrades or changes.

The Proposer shall provide the cost of additional training for staff after the System Acceptance period (new hires, etc.) on the Price Proposal Form.

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12 Warranty

The Contractor shall provide a single point of contact for all warranty administration during the warranty period.

The Contractor shall confirm that it has reviewed and evaluated all information furnished by WRTA and has made all inquiries necessary such that the Contractor is fully aware of WRTA's business requirements and intended uses of system, as set forth or referenced in the Request for Proposals (RFP) and any Addenda, Amendments or Final Proposal Requests, as well as in discussions held previous to the Proposer's submission of the proposal and during the Pre-proposal Conference.

The Contractor shall warrant that the system satisfies the foregoing requirements in all material respects and will be fit for such intended uses.

The Contractor shall warrant that software (1) is free from defects in design, material and workmanship, and shall remain in good working order, and (2) function properly and in conformity with this Contract.

The Contractor shall provide any software updates and patches for the current software version at no cost to WRTA during the warranty period.

The Contractor shall warrant that WRTA shall acquire permanent title to all non-proprietary software provided under the Contract, free and clear of all liens and encumbrances.

The warranty period for the PSDS system shall run concurrently for all system components from the date of System Acceptance (SA), through to five (5) years from the date of SA, although the warranty must ensure that data is available for a minimum of seven years.

The Proposer shall offer pricing for an option to extend the warranty period for the PSDS system for additional years beyond five years. The WRTA may include an extended warranty in the contract with the Contractor. The Proposer shall itemize the cost of each extended warranty period and document any differences in the warranty terms for these option years in their proposal.

The Proposer shall describe the pricing and services offered as part of different levels of support available (e.g., four levels of support described earlier).

The Contractor shall warrant that the documentation provided shall completely and accurately reflect the operation and maintenance of the software and provide WRTA with all information necessary to maintain the system.

If there is a change in the production configuration of the PSDS software being installed prior to Final System Acceptance, the WRTA may require that all previously installed software be upgraded to match the updated configuration.

The Contractor shall warrant compliance with all applicable laws and regulations relating to the project.

During the warranty period, the Contractor shall, at no cost to WRTA, furnish such materials, labor, software, documentation, services and incidentals as are necessary to maintain the system in accordance with the warranty.

The Contractor shall warrant that its employees, agents and Subcontractors assigned to perform services under this contract shall have the proper skill, training and background to perform in a competent and professional manner, and that all work will be so performed. WRTA reserves the right to remove any subcontractors if their work is deemed incompetent or unprofessional.

In addition to the foregoing warranties, the Contractor shall assign to WRTA, and WRTA shall have the benefit of any and all subcontractors', suppliers', and vendors' warranties and representations with respect to the deliverables provided.

In its agreements with subcontractors, suppliers and vendors, the Contractor shall require that such parties (1) consent to the assignment of such warranties and representations to WRTA; (2) agree that such warranties and representations shall be enforceable by WRTA in its own name; and (3) furnish documentation on the applicable warranties to WRTA.

Appendix A: Price Proposal Form

Price Form to be Submitted by the Proposer (fill only those cells that are not greyed out). Please see "Price Form Notes" sheet for instructions

No.	Line Items	Installed Quantity	Unit Cost	Installed Total Cost	Spares Quantity	Spares Unit Cost	Spares Total Cost	Fixed Software License Cost	Total Number of Licenses	Total Capital Cost	Annual Operations & Maintenance Cost After Warranty	Alternative Cost: Software as a Service Subscription per Year	Alternative Cost: Per Trip Fee	If Cost is a Per Trip Fee, Number of Trips Assumed per Year	Alternative Cost: Per Vehicle Fee	If Cost is a Per Vehicle Fee, Number of Vehicles Assumed per Year
1	IT Infrastructure (Section 3)															
1.1	Hosting [Note 3] (Section 3.2, 3.6)		\$ -	\$ -				\$ -		\$ -	\$ -					
1.2	OS Licenses [Note 4] (Section 3.2)	Note 1	\$ -	\$ -				\$ -		\$ -	\$ -					
1.3	DB Licenses (Section 3.4)	Note 1	\$ -	\$ -				\$ -		\$ -	\$ -					
1.4	Miscellaneous (specify in price notes)	Note 1	\$ -	\$ -				\$ -		\$ -	\$ -					
1.5	Software (Section 3.2.2)	Note 1	\$ -	\$ -				\$ -		\$ -	\$ -					
1.6	Data Management (Section 3.4.2)	Note 1	\$ -	\$ -				\$ -		\$ -	\$ -					
1.7	Follow-up Analysis (Section 3.6.2)									\$ -						
	IT Infrastructure Subtotal			\$ -				\$ -		\$ -	\$ -					
2	Wireless Data Communication (Section 4)															
2.1	Interface with existing tablet (Section 4.1)									\$ -	\$ -					
2.2	Central Wireless Communication Gateway Software (Section 4.2.2)			\$ -				\$ -		\$ -	\$ -					
2.3	Other (please provide specifics in the Proposer Price Notes)	Note 1		\$ -			\$ -	\$ -		\$ -	\$ -					
	Wireless Data Communication Subtotal			\$ -			\$ -	\$ -		\$ -	\$ -					
3	Scheduling and Dispatch Software															
3.1	GIS and Mapping Software (Section 5 except 5.10)			\$ -				\$ -		\$ -	\$ -					
3.2	Scheduling and Dispatching Software (Section 6)															
3.2.1	Existing Trip and Client Database Conversion (Section 6.1)			\$ -				\$ -		\$ -	\$ -					
3.2.2	Client Registration (Section 6.2)			\$ -				\$ -		\$ -	\$ -					
3.2.3	Client Data Management (Section 6.3)			\$ -				\$ -		\$ -	\$ -					
3.2.4	Agency Resource Management (Section 6.4)			\$ -				\$ -		\$ -	\$ -					
3.2.5	Reservations Software (Section 6.5)			\$ -				\$ -		\$ -	\$ -					
3.2.6	Scheduling Software (Section 6.6)			\$ -				\$ -		\$ -	\$ -					
3.2.7	Dispatching Software (Section 6.7)			\$ -				\$ -		\$ -	\$ -					
3.2.8	Billing Software (Section 6.8)			\$ -				\$ -		\$ -	\$ -					
3.2.9	Customer Service Software (Section 6.9)			\$ -				\$ -		\$ -	\$ -					
3.2.10	Mobile Data Terminal (MDT) Interface (Section 6.10)			\$ -				\$ -		\$ -	\$ -					
	Scheduling and Dispatch Software Subtotal			\$ -				\$ -		\$ -	\$ -					
4	Customer/Rider System (Section 7)															
4.1	Customer/Rider System (Section 7)	1	\$ -	\$ -				\$ -		\$ -	\$ -					
	Customer/Rider System Subtotal			\$ -				\$ -		\$ -	\$ -					
5	Reports (Section 8)															
5.1	Reports (Section 8)	25	\$ -	\$ -				\$ -		\$ -	\$ -					
	Reports Subtotal			\$ -				\$ -		\$ -	\$ -					
6	CAD/AVL Integration, MDT/Tablet, Manifest Management and iCabbi Integration Functional Specifications (Section 9)															
6.1	CAD/AVL Integration, MDT/Tablet, Manifest Management and iCabbi Integration Functional Specifications (Section 9 except 9.4)	10	\$ -	\$ -	1	\$ -	\$ -			\$ -	\$ -					
6.2	Potential Interface with iCabbi (Section 9.4)	Note 1	\$ -	\$ -				\$ -		\$ -	\$ -					
	CAD/AVL Integration, etc. Subtotal			\$ -			\$ -	\$ -		\$ -	\$ -					

[illegible]

Explanation of Terms:
D) Installed Quantity: number of units to be installed
E) Unit Cost: cost of each unit along with installation cost. Please include associated firmware cost where applicable.
F) Installed Total Cost: total cost of installing required units. To be calculated as F= D x E
G) Spares Quantity: number of spare units
H) Spares Unit Cost: cost of each spare unit without installation cost
I) Spares Total Cost: total cost of spare units. To be calculated as: I = G x H
J) Fixed Software License Cost: one-time license cost of software
K) Total Number of Licenses: number of user licenses covered by fixed-software license cost (J)
L) Total Capital Cost: total capital cost to be calculated as: L = F+I+J
M) Annual Cost After Warranty: annual warranty cost associated with an individual line item once system warranty expires
N) Alternative Cost: Software as a Service Subscription per Year: annual software subscription cost
O) Alternative Cost: Per Trip Fee: scheduling software cost per trip
P) If Cost is a Per Trip Fee, Number of Trips Assumed per Year: assumed number of trips per year
Q) Alternative Cost: Per Vehicle Fee: scheduling software cost per vehicle
R) If Cost is a Per Vehicle Fee, Number of Vehicles Assumed per Year: assumed number of vehicles per year
Specific Notes
Note 1: Please enter the quantity as needed.
Note 2: The purchaser reserves the right to increase or decrease quantity based on the need for custom reports as determined based on an eventual review of standard reports available with the software.
Note 3: Please list the equipment being used to provide this functionality in the price notes.
Note 4: Please provide specific details in the proposal
General Notes:
The purchaser reserves the right to adjust a line item quantity up to +/- 10% at the stated unit price.
Proposers shall not modify this price proposal form. If proposals need to provide information on any details not covered by this form, they must include a separate sheet to do so.

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Appendix B: Compliance Matrix

Ref No.	Requirement
1	3 Information Technology (IT) Requirements
2	3.1 General
3	The selected vendor is referred to as the “Contractor” in the rest of this document.
4	The data center selected for installation of the PSDS must be approved by the WRTA.
5	The software applications shall include context sensitive help capability.
6	The software applications must run fully in the user context and shall not require elevated permissions or administrative permissions on the desktop.
7	Unless the new PSDS is a web Uniform Resource Locator (URL)-based system, all software applications must utilize the Microsoft Operating System consistent with WRTA upgrades, patches and service packs on the servers and desktops. The following Microsoft products must be used:
8	• Microsoft Office Suite: 2021 or above.
9	• Microsoft Windows Desktop Operating System (OS): Windows 11.
10	• Microsoft Windows Server 2022 or above.
11	• Microsoft Structured Query Language (SQL) Server: SQL Server 2019 (15.x) or above.
12	All software applications must support role-based security.
13	The Contractor is required to notify WRTA when new releases of software applications become available, and when current releases and related systems are no longer supported.
14	The Contractor must comply with WRTA’s change management process when making any changes to supported systems; these changes must be reported to WRTA project manager.
15	The Contractor shall implement a test environment, with all software components installed on parallel hardware in a hosted environment, where software updates and configuration changes can be tested prior to being implemented in the production system. Any future updates or upgrades must be tested in the test environment before being implemented on production servers.
16	All software upgrades or changes required by the Contractor must be made in an WRTA test environment and certified prior to moving into a production environment. Any on-board firmware changes must be tested first in a “bus-in-box” type test bench before installing them on vehicles.
17	3.2 Required Infrastructure
18	3.2.1 Hardware
19	The Proposer shall utilize the tablets that will be supplied by Systrans. The tablet is described in Section 4.1.
20	3.2.2 Software
21	Ownership of the source code ³ will be subject to the following requirements:

22	• The Contractor shall either (1) provide the WRTA (the licensee) with source code for the software, (2) place the source code in a third-party escrow arrangement with a designated escrow agent, which shall be identified to WRTA, and which shall be directed to release the deposited source code in accordance with a standard escrow agreement acceptable to WRTA, or (3) certify to WRTA that the software manufacturer/developer has named WRTA (the licensee), as the named beneficiary of an established escrow arrangement with its designated escrow agent, which shall be identified to WRTA (the licensee), and which shall be directed to release the deposited source code in accordance with the terms of escrow;
23	• Source code will be subject to code review. While WRTA will try to be reasonable, the Contractor must be willing to make necessary changes if WRTA finds the code to be unacceptable:
24	o There should be a separation of layers;
25	o Coding conventions and best practices should be followed;
26	o Business logic code should be reasonably commented; and
27	o Functioning unit tests should be provided; and
28	• Source code should follow Open Web Application Security Project® (OWASP) best practices related to security and vulnerabilities (i.e., https://www.owasp.org/index.php/OWASP_Guide_Project).
29	The Contractor cannot charge WRTA for copies of the source code or backups of the data after it is located in the Contractor's cloud.
30	The Proposer shall clearly define the approach for software hosting and access (e.g., Citrix's independent computing architecture [ICA] protocol, Microsoft's remote desktop protocol [RDP] over secure virtual private network (VPN) connection, completely web-based application accessible via hypertext transport protocol secure [HTTPS]) on standard web browsers (e.g., Microsoft Internet Explorer, Mozilla Firefox, Google Chrome and Apple Safari).
31	The Proposer must identify the cloud platform that will be used (e.g., Amazon Cloud Services, Microsoft Azure Cloud Services or other).
32	At least two parallel data centers in two different geographic locations shall be utilized.
33	The Central system shall be set up in redundant configuration by default. So, if the primary application fails, the secondary application that is configured to run in hot-standby mode shall automatically start running as the primary application to ensure fail-safe operation. The Proposer shall provide a clear description of their approach for enabling redundant server configuration.
34	The Contractor shall setup a "sandbox" environment for the WRTA, PBSTM, and other service providers to view the software platform, use it to demonstrate the software features, and use it for user (e.g., test group of selected riders and WRTA staff).
35	3.3 Information Security
36	The Contractor shall be asked to comply with best practices with all areas of IT Security as outlined by Health Insurance Portability and Accountability Act (HIPAA) rules. The WRTA may have specific policies in the following areas. The proposer should describe their software's security in these areas:
37	* Acceptable Use
38	* Automatic Log-Off
39	* Data Backup
40	* Emergency Access to EHR

41	* Encryption and Decryption
42	* IT Risk Management Program
43	* Malware Protection
44	* Password Management
45	* Portable Computing Device Privacy and Security
46	* Privacy and Security of Protected Health Information
47	* Termination of Access
48	* Transmission Security
49	* Unique User ID
50	* Workstation Use and Security
51	All software applications must support role-based security.
52	The WRTA requires the Contractor to perform regular periodic (every six months or every year) Penetration (Pen Tests) tests and report the results.
53	The Contractor shall follow the WRTA's IT Security Policies, which are under development and will be provided at a later date.
54	The Proposer shall describe the administrative needs to add users to the system.
55	The methods used for encrypting stored passwords must be disclosed. Industry standard encryption methods utilizing at least 256-bit encryption techniques are required.
56	The Proposer must disclose provisions to secure the database in its proposal. At a minimum, the Contractor must comply with all applicable statutes and regulations regarding the privacy and security of Confidential Information, and must in all other respects maintain the privacy and security of Personal Information (PI) and Protected Health Information (PHI) at a level and scope that is not less than the level and scope of requirements applicable to federal agencies, including, but not limited to, provisions of the Privacy Act of 1974 (5 U.S.C. § 552a), DHHS Privacy Act Regulations (45 C.F.R. §5b), HIPAA Privacy and Security Rules (45 C.F.R. Parts 160 and 164) that govern protections for individually identifiable health information and as applicable under State law.
57	Any vulnerabilities or exploits discovered by the Contractor or others for the proposed application must be reported to WRTA immediately with a proposed mitigation strategy.
58	The Contractor must encrypt PSDS data in two primary states: at rest (while stored) and in transit (while moving across networks).
59	Multi Factor Authentication (MFA) is required for PSDS administrators.
60	The Contractor must comply with Commonwealth of Massachusetts Regulation 201 CMR 17.00: Standards for the protection of personal information of residents of the Commonwealth. https://www.mass.gov/regulations/201-CMR-1700-standards-for-the-protection-of-personal-information-of-residents-of-the-commonwealth . Out-of-state companies must comply with 201 CMR 17.00 if they own, license, or process the personal information of Massachusetts residents.
61	Unless the new PSDS is a web URL-based system, the Contractor shall support Microsoft security patches and updates within seven (7) calendar days of release.
62	The system must track all activities performed by software users for auditing purposes (e.g., system configuration changes, geocoding addresses, trip booking, modifications and client data editing).

63	The methods used for encrypting stored passwords must be disclosed. Industry standard encryption methods utilizing at least 256-bit encryption techniques are required. Applications may not store or transmit passwords in clear text.
64	Any software which stores personally identifying information (PII), including but not limited to, "unique identifier number," driver's license numbers, etc., or any financial information, such as credit card numbers, bank routing information, etc., must fully protect the information for the entire duration of WRTA's use of the software, as defined in the eventual contract with the successful Contractor, and disclose the methods of data collection, storage, usage, transmission and disposal, data protection used, access protection methods, and life cycle handling of this data. Industry standard encryption methods utilizing at least 256-bit encryption techniques are required.
65	Compliance with HIPAA, Public Law 104-191, the Standards for Privacy and Security of Individually Identifiable Health Information, 45 CFR Parts 160, 162, and 164 (HIPAA), provisions of the HITECH Act, Title XIII, Subtitle D, Parts 1&2 of the American Recovery and Reinvestment Act of 2009, 42 USC 17934, et sec., applicable to business associates, and as applicable, to be bound by the provisions of the Confidentiality of Substance Use Disorder Patient Records, 42 USC s. 290 dd-2, 42 CFR Part 2, (Part 2), as any of these laws and regulations may be amended from time to time. Please note that agencies may record some health information as part of a customer record in order to determine eligibility for specific services.
66	Any HIPAA-related information must be protected in the database and application according to the law (e.g., display only last four digits of the Social Security Number (SSN)). The Contractor shall supply the WRTA with current HIPAA test results or be willing to be tested with regards to compliance with HIPAA policies on a yearly basis.
67	3.4 Database
68	All database-related components of the solution (e.g., tables, stored procedures, scripts, extensible markup language [XML] schema, and related information) shall be fully accessible and available for support and use by WRTA, as authorized, by the WRTA software administrator.
69	The Proposer's solutions should be developed and configured using prescribed standards for SQL Server and be flexible enough to run in consolidated database environments with other applications using different schemas and virtualization.
70	Data shall be retained in a read-only historical database for use by management and other WRTA staff to plan and assess system performance, and to address inquiries, conflicts and other related issues.
71	The system shall allow all such data to be retrieved, even if it has been archived.
72	All queries made to the database shall be logged for audit purposes. The WRTA shall have the ability to view these logs when required.
73	The online data storage system shall ensure data integrity in the event of a disk-drive failure.
74	In addition, the system shall include a means of archiving transaction data, or restoring data from an archive, while the system is in operation. It shall not be necessary to shut down the database to perform a successful backup operation.
75	The Proposer shall determine and describe the need and procedure for an incremental, daily or other time frame-based backup of data. Other needs related to the archiving of data, such hardware and software, shall also be determined and described by the Proposer.

76	Data kept for archive purposes must be in a location that is still subject to all HIPAA testing and be tested for compliance on a yearly basis.
77	The system administrator account shall not be used with SQL server applications. If it is, the solution must allow WRTA staff to change the system administrator password on a periodic basis without limitations.
78	3.4.1 General
79	The system shall allow PSDS system data to be retrieved, even if it has been archived.
80	In addition, the system shall include a means of archiving transaction data, or restoring data from an archive, while the system is in operation. It shall not be necessary to shut down the database to perform a successful backup operation.
81	The Proposer shall determine and describe the need and procedures for an incremental, daily or other time frame-based backup of the data (but not less than daily). Other needs related to the archiving of the data shall also be determined and described by the Proposer.
82	The Contractor must provide the following:
83	• Scripts in order to create and recreate database schemas, stored procedures;
84	• Entity relationship diagrams;
85	• Database schema with a data dictionary detailing all database entities (e.g., tables, columns, and attributes); and
86	• Documentation of recommended practices for support and maintenance of the database.
87	3.4.2 Data Management
88	Data shall be retained in a database for use by WRTA staff to plan and assess operational, financial and system performance, and to address inquiries, conflicts and related issues. Storage capacity must be large enough to retain operational history data online for at least two fiscal years. Data older than two fiscal years must be archived but still available for use by the WRTA.
89	After two fiscal years, the operational and financial data will be archived in a “non-live” database and will remain readily accessible when needed.
90	The Contractor may require the use of Commonwealth of Massachusetts data for development, maintenance, and testing work at an offsite location. WRTA restricts the use of the WRTA network for transmittal of data. However, data may be transferred using WRTA approved methods, with written approval from the WRTA Information Technology contractor. This approval will only be granted upon receipt of a letter certifying the following: the data will be maintained in a secure manner; the data will not be used for any purposes other than those required to fulfill the contract; and upon completion of the project the data will be destroyed. The letter must also disclose the location of the data while under the control of the Contractor. All external cloud-based services and hosted solutions must meet operational and security requirements to protect the confidentiality, integrity and availability of WRTA and Commonwealth of Massachusetts information.
91	Data backup for both live and non-live databases must be archived at redundant offsite locations.
92	The Proposer must describe the time it would take to restore the data into the database from the backed-up files in the event of a database crash.

93	The Contractor shall develop a long-term archival plan to store information in coordination with the WRTA. This data should be stored in such a way that it is searchable, and arranged by year so, as it moves beyond the number of years mandated in WRTA's document retention policy, it can be permanently destroyed.
94	The Proposer shall determine and describe in their proposal the need and procedures for an incremental, daily backup of the data. Other needs related to the archiving of the data, such hardware and software, shall also be identified and described by the Proposer.
95	The Contractor is required to provide a data dictionary. At a minimum, the following must be provided:
96	• All fields and associated attributes;
97	* A function within the Admin module to view the data dictionary; and
98	• Could be used for interface configurations to other applications or Application Programming Interface (API) setup.
99	3.4.3 Data Logging and Retrieval
100	All incoming and outgoing data shall be stored in a read-only historical database for retrieval, analysis, display and printing.
101	This historical information shall include all data exchanged between vehicles and dispatch (e.g., location data, vehicle logon/logoff data, device alarms, and canned data messages); and all central software user logons and logoffs.
102	The stored data shall be time and date stamped and shall contain sufficient information to enable selective sorting and retrieval based on user-specified selection criteria. At a minimum, the following sorting and selection criteria shall be supported for accessing the historical data from both the online and archived storage: date and time, global positioning system (GPS) latitude/longitude, name of service provider, vehicle number, vehicle operator number, dispatcher number, trip/run number, funding source(s)/eligibility, trip purpose, and incident type (where needed).
103	3.5 Data Access
104	The database structures and any proprietary interfaces shall be documented in the proposal.
105	The proposed system shall follow an open architecture model, providing the capability for the WRTA to independently develop system interfaces or enable integration with other internal or third-party systems. The use of standard network communication protocols (e.g., Transmission Control Protocol/Internet Protocol [TCP/IP] and system interfaces (e.g., Open Database Connectivity [ODBC] for databases) is required.
106	The WRTA shall allow royalty-free access to the database tables, and royalty-free use of the data and interfaces. If necessary, the WRTA shall be allowed to extend such access and use to third party vendors for integration purposes.
107	All system data shall be the property of the WRTA and shall be immediately available to the WRTA. The Contractor shall acknowledge in writing that WRTA will own any and all data and the database where the data resides.
108	3.6 Customer Support
109	Customer support shall be available 24 hours a day, 365 days a year. All technical requests from the WRTA must be addressed within one hour of the notification of a problem. If an issue requires a longer timeframe for resolution, the WRTA must be advised accordingly and an expected reasonable timeframe for resolution must be provided.

110	The Contractor's customer support activities must include the following:
111	• Responding to support tickets and questions agencies are unable to resolve;
112	• Verifying the existence of any software defect and determining the scope of its impact;
113	• Submitting feature requests and other feedback on behalf of agencies;
114	• Escalating incidents and other issues;
115	• Helping to maintain quality standards throughout the support process;
116	• Notifying agencies of planned system maintenance, expected outages, or alerts from third-party services;
117	• Providing agencies with copies of Incident Tracking and Monitoring logs and other relevant information from the Incident Management module;
118	• Collaborating with the Contractor's engineers/systems analysts/programmers to develop resolutions or workarounds;
119	• Contributing to outage reports that detail the root cause, impact, and actions taken to prevent recurrence; and
120	• Attending incident review meetings.
121	At a minimum, the Contractor shall provide four (4) levels of support:
122	Severity Level 1 (Critical Defect): A Severity Level 1 issue is a condition where the source code, or a critical component thereof, is non-functional, inaccessible, or so severely impaired that the software is rendered unusable for its intended purpose, resulting in a complete system failure or an inability to perform essential functions necessary for project development, deployment, or security compliance, with no viable workaround available. Service Guideline: Upon notification, the Contractor will acknowledge the issue and initiate corrective action within one (1) hour, applying continuous, commercially reasonable efforts to resolve the defect as quickly as possible, targeting resolution within four (4) to twenty-four (24) hours and no later than one (1) business day, while maintaining continuous, direct communication with the WRTA until full resolution is achieved.
123	Severity Level 2 (Major Defect): A Severity Level 2 issue is defined as a defect in which the source code, or a critical functional component thereof, is significantly impaired, resulting in substantial degradation of software functionality or security during normal operation, but not rendering the software completely unusable. Service Guidelines: Upon notification, the Contractor shall initiate analysis and corrective efforts to identify a workaround within five (5) business days or resolve the issue within this period if feasible. The Contractor shall target full resolution within twenty-one (21) business days from initial notification, delivering a remedy in the form of a software patch or minor release. The WRTA shall receive a status update on the issue's progress within the first five (5) business days following notification and will continue to be informed until the issue is resolved.
124	Severity Level 3 (Minor Defect): A Severity Level 3 issue is a defect that does not impede functional use of the source code and has no material impact on project development or security, with effective workarounds available. Service Guideline: Upon notification, the Contractor will analyze the issue, recommend interim workarounds as needed, and target resolution within thirty (30) business days. Final resolution timing will be set at the discretion of the Contractor's technical lead. The WRTA will receive a status update within thirty (30) business days, and the resolution will be delivered via a patch, minor release, or major software release.

125	Severity Level 4 (Enhancement Request): A Severity Level 4 issue refers to a request for new functionality or improvement that does not address a defect and does not impact current software operation. Service guideline: Such requests will be logged and reviewed by the Contractor for potential inclusion in a future release. Implementation of any requested enhancement, including timing, scope, and priority, will be determined solely at the Contractor's discretion, and the Contractor makes no commitment to deliver such enhancements within a specific timeframe.
126	The Contractor shall allow agencies to submit a support request via email, phone, and the Contractor's support website or other online location.
127	The priority and severity of a support request (critical, standard or general support) are assigned during an initial triage by the Contractor in conjunction with the WRTA.
128	At a minimum, the following table identifies the required response times to support requests.
129	First column: First row: Critical Defect Second row: Resolution: 4 hours Guaranteed Response: <60 mins Second column: First row: Major Defect/Urgent Second row: Resolution: 16 hours Guaranteed Response: <8 hrs Third column: First row: Minor Defect/Normal Second row: Resolution: As defined Guaranteed Response: <12 hrs Fourth column: First row: Enhancement Request/Low Second row: Resolution: As planned Guaranteed Response: <24hrs
130	The WRTA must be able to view the status of their support request(s) at any time through an online tracking system to be provided by the Contractor.
131	The Contractor shall arrange for support from one or more qualified firms to be available on-site on a four-hour response basis when needed by the WRTA to assist with fault diagnosis or component replacement.
132	If a support firm does not respond within the agreed-to response timeframe, or when a support firm is not able to provide the needed support, the Contractor shall provide, during the warranty period, supplementary support in accordance with an agreed-to escalation procedure. The escalation procedure can initially involve telephone support, but must culminate in the Contractor providing on-site support, if needed. The proposal must define the proposed support escalation procedures.
133	3.6.1 Hosting Requirements
134	All servers, routers, switches, data center security and facility power shall be monitored electronically 24 hours a day, 365 days a year. In the event there are any out of tolerance conditions with any server components, technical support shall be automatically notified. Technical support must respond to these issues within one hour of notification.

135	The data centers to be used for hosting must have existing scheduled routine maintenance and emergency situation management plans. The Proposer must submit maintenance schedules and emergency plans with the proposal.
136	The data centers must comply with all HIPAA requirements as it pertains to security and verification of credentials as well as any access to physical systems containing WRTA data.
137	3.6.2 Follow-up Analysis
138	The Contractor shall provide a follow-up analysis, including a written report on the findings of this analysis, on how the system is being used and provide training to address the issues. This follow-up analysis shall be conducted every six months under the warranty period and the first visit shall be conducted six months after the system acceptance. The follow-up analysis report shall categorize discovered issues under the following categories:
139	•Issues due to lack of training;
140	•Issues that require configuration changes;
141	•Issues that require system enhancements and can be addressed by upgrading to a more recent version of the system;
142	•Issues that have been identified at the WRTA and require system enhancement(s); and
143	•Issues that require system enhancements and will be fresh development for the Contractor.
144	3.6.3 Post-Implementation Support and Maintenance Program
145	The WRTA is in the process of developing a Service Level Agreement (SLA) for post-implementation support and maintenance. The Proposer shall provide a sample SLA that addresses these needs.
146	3.7 Software Updates and Upgrades
147	The Proposer must describe their maintenance update and upgrade approaches in their proposal.
148	The Proposer shall describe the difference in processes and costs associated with updates and upgrades.
149	The Contractor is required to notify WRTA at least one month in advance of the installation when new software releases become available.
150	The Contractor is required to notify WRTA at least six months in advance when it is expected that the current releases and related systems will no longer be supported.
151	The Contractor shall ensure that all existing software configurations are protected after the system has been upgraded or updated for the entire duration of the time when the WRTA use the product.
152	The Contractor must comply with WRTA's change management process when making any changes to supported systems. These changes must be reported to the WRTA Project Manager.
153	4 Wireless Data Communication Requirements
154	4.1 General
155	The Systrans CAD/AVL system will be providing the data communication infrastructure required to satisfy the communication needs for this project, which includes wireless data communication between demand-response vehicles and the central PSDS system.

156	The Contractor shall interface the PSDS with the Systrans-provided on-board hardware and CAD/AVL software. The on-board tablet being provided by Systrans is the Samsung Galaxy Active5, Model # SM-X308U. The specifications of this tablet can be found at https://www.samsung.com/ca/support/model/SM-X308UZGAXAC/ .
157	The PSDS must use the tablet in the vehicle via a driver application provided by the Contractor installed on the tablet. The PSDS must use the vehicle's location provided by the CAD/AVL system, and use the existing data and VoIP communication system controlled/resident in the vehicle. Once the Contractor and the driver application name are confirmed, Systrans shall implement an update on the tablet startup interface.
158	It is envisioned that at vehicle startup, the driver will be prompted to select the operating mode of the vehicle (fixed route or paratransit). If "fixed route" is selected, the current Systrans app will be launched; and if "paratransit" is selected, the new PSDS driver app will be launched.
159	4.2 Wireless Data Communications
160	The Proposer shall provide estimates of the bandwidth required for data exchange between the PSDS central system and vehicles (in terms of megabytes [MB] per month per unit).
161	The Contractor shall provide a canned report to monitor data usage by vehicle on a monthly basis.
162	4.2.1 Wireless Data Communications Network
163	The PSDS shall ensure the transfer of data between the PSDS central system and each demand-response vehicle in the WRTA service area.
164	4.2.2 Central Wireless Communication Gateway Software
165	4.2.2.1 General
166	The Proposer shall provide the following information in the proposal in terms of megabytes (MB) per month per unit based on their experience: bandwidth required for data exchange between the PSDS central system and vehicles.
167	The PSDS software shall process data messages in the order they are received or based on their associated priorities to be defined by the WRTA.
168	4.2.2.2 Data Message Processing
169	The PSDS software shall process data messages received from the vehicles and pass these to the PSDS central software.
170	The software shall process data messages received from the PSDS central software and pass these to an individual vehicle or a group of vehicles.
171	The system shall log relevant details about a data message including but not limited to the following:
172	• Sender and receiver of a message;
173	• Type of the message; and
174	• Follow-up action to a message, if applicable (e.g., acknowledgement).
175	4.3 Wireless Local Area Network (WLAN) Data Exchange (Optional)
176	4.3.1 General
177	Wireless communication between demand-response vehicles and the PSDS central system will be provided at WRTA's Operations and Maintenance Facility using the existing Institute of Electrical and Electronics Engineers (IEEE) 802.11x Wi-Fi hotspots. The specifications of these hotspots (Meraki wireless access point model "MR76") are shown in Appendix C.

178	Please note that because there are no wireless access points (WAPs) or additional connections for vehicles that DO NOT come to the WRTA Maintenance and Operations (M&O) Facility, data exchanged between the vehicles and central system shall be transferred via cellular or over-the-air connections. For example, SCM Elderbus vans are garaged at their facility each night and the data will transferred via the Systrans hardware and cellular connection – there is NO NEED for any additional modem/WAP equipment at their facility.
179	The Contractor must coordinate with WRTA's IT contractor for approval to the existing access points in the M&O.
180	4.3.2 Access Point Hardware
181	The existing WLAN access points support the Wireless Protected Access 2 (WPA2) security standard. The WRTA has the ability to independently change the encryption keys as often as desired. The WRTA shall communicate any change in encryption keys to the Contractor.
182	The WRTA has the ability to independently adjust the signal strength of each WLAN access point.
183	4.3.3 WLAN Data Transfer Support Software
184	The Contractor is required to provide WLAN data transfer support software to manages the WLAN data transfers between demand-response vehicles and the PSDS central software using the existing WLAN at the WRTA Maintenance and Operations facility. Wi-Fi hotspots are located at WRTA's Maintenance and Operations facility to upload/download the following information to/from WRTA's demand-response vehicles:
185	• Schedule/manifest data to vehicles; and
186	• Configurations, firmware upgrades, and patches to vehicles.
187	Once a demand-response vehicle has successfully associated with a WLAN access point, the WLAN data transfer software shall receive the file uploads initiated by the on-board mobile data terminal (MDT)/tablet.
188	When the PSDS WLAN data transfer software has a download available for a demand-response vehicle that has successfully associated with a WLAN access point, the WLAN data transfer software shall check with that MDT/tablet whether it has already received that download and if not initiate and complete that download.
189	Any new download file shall be downloaded as soon as possible when each vehicle returns to WLAN coverage each night and is configured to remain on for a set time configurable by the WRTA (e.g., at least 15 minutes after the ignition is turned off).
190	The PSDS system shall report on the status of the current status of downloads (e.g., download in progress, downloaded or download failed) for the WRTA's fleet.
191	5 GIS and Mapping
192	5.1 Map Source
193	The Proposer shall identify the source of GIS map data to be used for the proposed PSDS system. It is assumed that the Contractor will supply the base map, unless the WRTA specifies otherwise. If the base map is supplied by the Contractor, the Contractor is required to provide updates to the map within two weeks from the date when the updates are available. Third-party mapping systems (e.g., OpenStreetMap, Google Maps, Bing Maps) may be used as long as they meet the requirements described in this specification.
194	5.2 Built-in GIS Support

195	The software shall incorporate GIS capabilities that allow users to view maps of the service area and individual trip patterns, each at various specified user-defined zoom levels. GIS features shall be closely integrated with the individual modules of the PSDS system and access to maps shall be seamless within the PSDS system modules.
196	In addition to supporting the primary demand-response service functions, the GIS functionality of the proposed software shall support other GIS analyses and be capable of converting geographic files from other sources (e.g., Tele Atlas) to the format used by the Contractor's GIS (e.g., MapInfo or ESRI).
197	5.3 Spatial Layer Management
198	5.3.1 Map Overlay
199	GIS functionality shall include the ability to develop overlays for the coverage of municipal, township, census tracts or block groups, and zip code boundaries.
200	The system shall allow overlay of terrain, aerial or satellite layers on base maps when such layers are available.
201	5.3.2 Definition and Management of Geographic Boundaries
202	The system shall allow definition of polygon layers when such layers are not readily available for overlay. The system shall allow the user to assign a specific service characteristic to a polygon layer. These characteristics shall include but are not limited to the following:
203	• Agency service area for demand response and other services;
204	• Americans with Disabilities Act (ADA) complementary paratransit service area;
205	• Town boundaries; and
206	• Fare zones.
207	5.3.3 Definition of Physical Barriers
208	The system shall allow the definition or import of physical features that act as barriers to routing (e.g., rivers and lakes, road closures).
209	The system shall recognize these barriers when routing vehicles.
210	5.3.4 Definition of Point of Interest (POI) Locations
211	The system shall be capable of defining and displaying point files that may represent landmarks, public transit stops, major transfer points, major destinations of travel, or other POI locations (e.g., hospitals/medical centers, assisted living facilities, shopping centers, tourist attractions).
212	5.3.5 Import/Export of Map Layers
213	The system shall have the ability to import and export map layers in standard geographic file formats (e.g., Environmental Systems Research Institute's [ESRI's] SHP file format or Keyhole Markup Language [KML] format).
214	The system shall have the ability to import location data (customer address or POI database) if available in standard "point" file format (SHP or KML) that consist of latitude and longitude data.
215	5.4 Management of Spatial Attributes
216	The system shall allow authorized users to edit the base map layers (e.g., to add new streets, change municipal boundaries, define any incomplete address ranges).

217	A service area map shall include current data for all street segments to ensure, in part, that every segment is appropriately connected in the network and contains the necessary data for scheduling. For each street segment, this data shall include at a minimum a defined street name and address range, and segment speeds by time of day and day of week. The street network definition shall include segment characteristics (e.g., speed limits, one-way direction).
218	5.5 Geocoding
219	The system shall have full geocoding capability, allowing the system to locate the address on the map for an address input. The geocoding capability shall be seamlessly integrated with relevant features in the rest of the PSDS system (e.g., address input in the Reservations module, discussed later in Section 6.5). Please note that the geographic area within which addresses are geocoded shall be unlimited.
220	The street segments database shall be sufficiently complete to assure a geocoding success rate of 95 percent or better based on a sample of addresses developed by WRTA. The system shall be capable of handling various abbreviations of names (e.g., St. for Street and Av. or Ave for Avenue) in the geocoding process.
221	5.6 Miscellaneous GIS Features
222	5.6.1 Distance Computation
223	The system shall allow the user to calculate the distance between points or along a specified portion of the street or road network. The system must be capable of calculating two distances: the least path distance and the actual distance. ⁵
224	The system must store both distances so that reports can be run on actual and least-path trip distances.
225	The system shall allow the software user to select the unit of measurement (e.g., feet, mile) when computing distance.
226	5.6.2 Zoom/Pan
227	The system shall allow software users to zoom in, zoom out and pan map views.
228	The system shall allow software users to zoom in to a street-level view.
229	The system shall allow software users to select custom zoom level (e.g., 400% or 50%).
230	The system shall provide an “inset” view that can be turned on or off by users. The inset view shall display an overview map within the detailed map view and shall allow “pan” capability.
231	5.6.3 Save and Reload Map View
232	The system shall allow users to bookmark or save a particular view on the screen.
233	The system shall allow users to reload saved map views.
234	5.6.4 Spatial Search
235	The system shall allow geographic search within PSDS modules and shall support search based on at least the following data:
236	• Customer address;
237	• Trip origin or destination location;
238	• Current vehicle location; and
239	• POI location.
240	The system shall be able to identify whether or not a customer address is located within a buffer zone (e.g., ¼ mile) around a fixed public transit route or within a general public demand response service area. The parameter for the buffer zone shall be configurable.

241	The PSDS shall allow a user to view a list of all trips to a location or town within a specific time frame. This allows users to see which drivers are already in the area to do non-scheduled trips. This shall be displayed in a map view including real-time vehicle locations and in a table.
242	5.6.5 Legend
243	The system shall have the ability to display legend of the layers included in the GIS subsystem. The use shall have the ability to turn this feature on or off, as needed.
244	5.6.6 Printing
245	The system shall be capable of printing maps to peripheral devices (e.g., printers, plotters) directly attached to a workstation or available over a Local Area Network (LAN) or wireless LAN.
246	The system shall allow users to print and save a PDF version of the map view.
247	The system shall provide users the ability to format the layout of maps before printing. As a minimum the following capabilities shall be available: adjusting margins, adding title, adding legend.
248	5.7 Visualization
249	The system shall display vehicle locations on the map when such data is available from vehicles and/or the existing CAD/AVL system.
250	The vehicle icon on the map view shall display additional information (e.g., operator id, vehicle id) upon user request if such information is available in the system (please see Section 6.10 for MDT interface).
251	The map view shall support context sensitive menus and shall allow users to communicate with vehicles directly from the map view when such capabilities are implemented by WRTA (please see data communication requirements in Section 4).
252	5.8 Map Update Process
253	The system shall provide the WRTA with the capability to update the base map, if it is supplied by the Contractor.
254	Map updates, when available, must be made to the mapping data hosted system. Map updates should not be performed while a user is accessing the map.
255	For Contractor-provided maps, the WRTA shall be notified in advance of the map update schedule.
256	5.9 Integration of Real-time Traffic Information
257	Integrating real-time traffic information with the mapping/GIS as well as utilizing this information in scheduling and dispatching is required.
258	The software shall respond automatically to road conditions such as traffic congestion, weather, and vehicle breakdowns by using real-time traffic and mapping information to predict estimated time of arrival (ETA) and estimated time of completion (ETC) for trips within a customer-defined pickup window. The system shall automatically alert dispatchers to any deviations from the schedule and include a method of providing updates to riders via mobile app notifications or automated voice or text messages.
259	The system shall provide map views to visualize individual, multiple, or all vehicle routes, as selected by the user, that include real-time vehicle location and underlying street map, traffic information, and trip information.
260	5.10 Third-party Mapping (Google Maps, Google Earth, Bing Maps, MapQuest) Overlay/Integration [Optional]

261	The system shall have the ability to utilize a third-party GIS subsystem for geographic information display when built-in GIS capabilities are not available. When both capabilities are available in the proposed solution, the Proposer shall provide a comparison of features available in both GIS subsystems in their proposal.
262	The Proposer must describe the user-licensing terms and conditions associated with using third-party mapping products.
263	6 Trip Coordination, Scheduling and Dispatching Software (PSDS)
264	6.1 Existing Trip and Client Database Conversion
265	The Contractor shall be responsible for converting the following databases from the existing software at the WRTA:
266	• Existing client databases; and
267	• At a minimum, the most recent year client trip histories, including standing orders.
268	The Contractor will work with the WRTA Project Manager to develop a list of fields that will be converted from the existing databases to the new database. This development shall include the logic required to populate fields in the new database that have no match in the old databases.
269	In the event that certain fields within the existing client and trip history databases, and associated business logic to derive those fields are not supported in the selected system, the Contractor shall notify WRTA, and negotiations shall be held to determine the importance of the field and whether WRTA will require customization of the system client database structure to incorporate new fields.
270	The Proposer must explain how the conversion shall be accomplished.
271	The proposal shall identify specific quality control procedures to ensure that data is accurately converted and to ensure its integrity.
272	Prior to performing any data conversion, the Contractor must prepare and deliver a data conversion plan to the WRTA for review and approval.
273	6.2 Client Registration
274	The client database shall include at least the fields shown in Table 1. Specific characteristics associated with the entry of data elements are described after the name of the data field.
275	Table 2. Required Client Data Fields
276	Data Type, Data Field Name and Requirement
277	Demographics / Eligibility Determination, Client name . The system shall require entry of first name, last name, middle initial and suffix (e.g., Sr., Jr., III). When entering data, the system shall detect and alert the user if there may already be a client database entry under this name. Different clients with the same name shall be allowed.
278	Demographics / Eligibility Determination, Client's date of birth . The system shall require entry of the client's date of birth using an interactive calendar interface or drop-down menu, or by entering the date manually. The system shall automatically calculate the client age, expressed in years, based on the current date and the date of birth information.
279	Demographics / Eligibility Determination, Client's gender . The system shall allow for manual entry or for the field to remain blank.
280	Demographics / Eligibility Determination, Client's eligibility status . The system shall allow user selection from a pre-defined list of eligibility definitions that include physical and mental disabilities as well as DHHS categories such as protective custody. An "other" category shall be provided to allow manual entry of explanatory notes.

281	Demographics / Eligibility Determination, Income data to determine eligibility for low-income programs. Income data is not required. If not provided, the client will not be eligible for certain trips available to low-income individuals.
282	Address / Phone, Client's home address. This text field becomes the default pickup address in the absence of another address that is identified as the default pickup address (see below in Client's common locations). The system shall allow entry of an address that contains a "½" or "c/o" and an apartment number. The system shall ensure that the full address is printed on the manifest (e.g., 123 ½ West Market St., Apt. 15).
283	Address / Phone, Client's mailing address if different than the home address. This text field is used in case the client uses a non-street mailing address. The system shall allow entry of an address that contains a "½" or "c/o" and apartment number. The system shall ensure that the full address is printed on the manifest (e.g., 123 ½ West Market St., Apt. 15).
284	Address / Phone, Client's common locations. The system shall allow multiple address entries for common client pickup locations. If none are entered, the client's home address shall become the default pickup address. The locations shall be text fields and allow all characters necessary to accurately store and print on the manifest (e.g., 123 ½ West Market St., Apt. 15, 123 Main St., Suite 501).
285	Address / Phone, Directions to assist in locating pickup address. The system shall allow entry of a text field for special instructions for subsequent printing on manifests to assist in locating the client address. For example, where it is known that the actual address is different from the geocoded address, this would be noted in this text field for the manifest.
286	Address / Phone, Client phone numbers. Multiple fields for home phone, work phone including phone extension, mobile phone and phone number where messages can be left (if different from other phone numbers). The system shall require that one of these numbers is identified as the default client contact phone number. All fields that contain phone numbers shall contain the standard 10 digits for a phone number (xxx-xxx-xxxx).
287	Address / Phone, Backup client contact. The system shall allow entry of a backup client contact phone number.
288	Contacts, Caregiver/emergency contact name, address and phone number to be used in the event of an emergency. The system shall allow entry of the name, address and phone number of a client's caregiver/emergency contact.
289	Contacts, Caseworker/social worker contact name, address and phone number. The system shall allow entry of the name, address and phone number of a client's caseworker/social worker.
290	Vehicle Tier, The vehicle tier required by the client. See a definition of vehicle tiers in Section 6.4.2
291	Comments / Notes / Special Needs, Client's mobility aid(s). The system shall allow entry in a field indicating whether the client uses a mobility aid. The system shall allow selection from among a list of pre-defined mobility aids that includes an "other" category and allows manual entry of explanatory notes. The system shall allow entry of more than one type of mobility-aid.

292	Comments / Notes / Special Needs, Disability status . The system shall require entry in a field specifying disability status. The system shall allow user selection from a pre-defined list of disability definitions that includes an “other” category and allows manual entry of explanatory notes.
293	Comments / Notes / Special Needs, Client car seat . The system shall allow entry in a field indicating whether the client requires a car seat. The system shall allow entry of the type of car seat in a drop-down box, with the following options listed: 5-point, High back, Flat and None.
294	Comments / Notes / Special Needs, Client mode restriction . The system shall allow entry in a field indicating if the client is restricted to a particular mode of transportation.
295	Comments / Notes / Special Needs, Manifest comments . This system shall allow entry of comments or information that will appear on all manifest trip entries for that client. The system shall allow a scheduler to view these comments and notes when taking a reservation.
296	Comments / Notes / Special Needs, Additional information . This system shall allow entry of additional information about the client in a text field. Information in this field shall not appear on any manifest trip entry for that client since it may contain HIPAA-sensitive information.
297	Funding / Billing, Authorization date . The system shall allow entry of a date defining when the client is authorized to begin receiving service. If this field is left blank the client is authorized to receive service. Since some clients have temporary eligibility, the system shall also allow entry of a certification expiration date. Automatic notifications will be sent to the reservationist or scheduler when authorization will expire within the next week 30 days or has expired.
298	Funding / Billing, Service suspension date range . This system shall allow entry of the start and end date for the time period when a client’s ridership privileges are suspended. The system must allow an override of these dates in order to schedule a ride for the client (see Section 6.5.1).
299	Funding / Billing, Funding sources/Billing codes . The system shall allow entry of one or more billing codes for each client, indicating a third party to be billed for certain trip purposes. The system shall allow user selection from a pre-defined list of trip purposes and selection of a billing code for each selected trip purpose. Effective and expiration dates must be capable of being specified separately for specific funding sources. This defines the time period the client is authorized to receive service from a specific funding source. The system shall allow the expiration date to be left blank to indicate the service is ongoing until further notice. Dates shall be entered using an interactive calendar interface or drop-down menu or entered manually. Also, the system shall allow entry of the limit of the number of units of service allowed per time period (e.g., week, month or year).
300	The Contractor must provide a portal for funding/purchasing agencies to enter or update client eligibility online. Clients may have multiple eligibilities for various trip purposes. For example, a client may be eligible for Non-Emergency Medical Transportation for some medical trips, while also being eligible for Senior Services transportation for some other types of trips.

301	The system shall identify and automatically geocode the location associated with each entered address. If the automatic geocoding fails, the system shall provide alternative methods of establishing x- and y- map coordinates for the address. One of the alternative methods supported shall be clicking on a map location with the mouse.
302	The system shall track the number of trips taken by customers by funding source/billing code and alert the scheduler when the allowed number of trips for a customer for a given timeframe for a specific funding source/billing code has been met (e.g., only ten (10)) trips per customer in a month may be allowed).
303	The system shall allow agency software users to attach files to a customer profile in order to store any relevant information. The Proposer shall describe the file formats that can be supported in their proposed solution. At a minimum, the following formats must be supported: DOC, JPG, PDF, and WAV. The system shall allow the reservationist or scheduler to view these files when taking a reservation.
304	The system shall allow WRTA to select specific client information that should be included in the driver manifest.
305	If necessary, the client record shall be stored with incomplete data. All fields other than last name may be left blank. An alert shall warn the user that there is missing information.
306	If the proposed system contains additional fields to be considered in client registration, the Proposer must include a description of these fields in their proposal.
307	The system shall use the existing client identification number when data is migrated from the current system to the new system. If the client is not in the existing client database, the system shall assign a unique client identification number for each new client entry in the database. The unique client identification number shall be used to link to other tables in the database (scheduled trips, trip history, etc.). The system shall allow a client record to be retrieved by the client identification number.
308	6.3 Client Data Management
309	6.3.1 Edit Personal Details/Preferences
310	The system shall allow authorized users to edit customer details in the database at any time.
311	The system shall keep track of client demographics and maintain a history each time the client details are changed. WRTA shall rely on this history for audit purposes.
312	6.3.2 Future Tracking of ADA Eligibility by Client
313	The system shall be able to track ADA Eligible clients which shall be billed to ADA, based on start and ending eligibility dates and eligibility type.
314	The system shall automatically suspend standing orders on holidays when WRTA services are not in operation. The system shall provide a function to allow the reservationist to enter or adjust such holidays. The system shall notify the reservationist upon accessing a client profile within one month of a scheduled trip that a recurring trip will fall on a holiday.
315	The system shall track at least the following attributes for each client:
316	•ADA eligibility start date;
317	•ADA eligibility end date; and
318	•Eligibility type such as "Conditional," "Pending," "Ineligible," and "Temporary."
319	The system must alert the scheduler regarding any upcoming expiration dates for client eligibilities.
320	6.4 Agency Resource Management

321	Detailed requirements for managing driver and vehicle information are contained in the following two subsections.
322	6.4.1 Driver Management
323	The system shall provide the ability to manage a list of drivers for WRTA that includes both agency and volunteer drivers. Because some data, such as driver's license information, needs to be stored securely, only authorized users shall have access to this part of the system.
324	The system shall allow WRTA to specify at least the following attributes for each driver:
325	• Employment status: whether a driver is employed full time or part time
326	• Driver association: which service provider the driver is an employee of
327	• Date of birth (DOB)
328	• Driver's License Number
329	• Date of hire (hire date for WRTA drivers)
330	• Employment status: whether a driver is active or inactive
331	• License information: current status of driver license and type of license (Commercial Driver's License [CDL] or non-CDL), issuing state and license number
332	• Medical certifications/licenses (e.g., CPR)
333	• Status of background checks: date that background checks were performed and due date for the next check
334	• Date that driver is due for medical exam
335	• Whether driver has employer-issued cell phone, and if so, the cell phone number
336	• Whether driver has employer-issued keys
337	• Status of driver training: date that driver received specific training and due date for the next scheduled training
338	• Whether a safety seat has been issued to the volunteer driver
339	• Address: contact address for the driver
340	• Phone number: primary and alternate contact numbers for the driver
341	The system shall have the ability to alert WRTA when a driver's license renewal, medical exam, or training re-certification is due. The thresholds for alerts shall be configurable.
342	The system shall allow software users to attach files to a driver profile in order to store any relevant information. The Proposer shall describe the file formats that can be supported in their proposed solution. At a minimum, the following formats must be supported: DOC, JPG, PDF, and WAV.
343	6.4.2 Vehicle Management
344	The system shall provide the ability to manage lists of WRTA-owned vehicles.
345	The system shall provide the ability to maintain at least the following data about vehicles:
346	• Agency that owns or operates the vehicle, if not WRTA
347	• Vehicle type: agency
348	• Vehicle Identification Number (VIN)
349	• Make
350	• Model
351	• Model year
352	• Date when vehicle was purchased for WRTA-owned vehicles
353	• Vehicle size
354	• Number of seats

355	• W heelchair capacity
356	• W heelchair access: lift or ramp
357	• L ow floor vehicle (Y/N)
358	• F uel type
359	• V ehicle tier (see below for vehicle tier definitions)
360	• R egistration status and tag number
361	• V ehicle insurance information
362	• M aintenance schedule
363	• I nsurance cards
364	• A vailability status (available, in-service or in-maintenance)
365	• D ate or odometer reading when next service is due for WRTA-owned vehicles
366	• R estricted uses
367	• O ther information (e.g., funded by a particular grant or organization, such as identifying vehicles acquired through the Mobility Assistance Program (MAP) which is managed by the Massachusetts Department of Transportation (MassDOT); cost broken out by Federal/state/local, location of third-party maintenance facility)
368	Vehicle tiers are defined as follows:
369	• S tandard Passenger Vehicle. A vehicle that is not designed to be handicapped accessible or require a commercial motor vehicle driver license to operate. The vehicle type is similar to those used as a personal or family vehicle and includes: cars, trucks, SUVs or minivans. Tier 1, Tier 2, and Tier 3 drivers can operate a standard passenger vehicle.
370	• A ccessible Vehicle. A vehicle that has been designed to be accessible for passengers with mobility impairments and is equipped with a ramp or lift but does not require a commercial motor vehicle driver license to operate. An accessible vehicle may be considered an enhanced passenger vehicle when equipped with additional specialized equipment and/or features. Examples of an accessible vehicle are: accessibility equipped mini-vans, accessibility equipped standard vans, and accessible small light transit vehicles designed to seat 15 or fewer passengers. Tier 2 and Tier 3 drivers can operate accessible vehicles with proper licensing as required by state law for operating an ambulette.
371	The system shall have the ability to alert appropriate WRTA staff regarding vehicles for which the insurance or registration is about to expire. The thresholds for alerts shall be configurable.
372	The system shall have the ability to generate a report about WRTA vehicles for which the registration, safety inspection or insurance will expire in a given time period.
373	The system shall be able to generate reports on a daily basis, listing vehicles which are due for a state inspection and scheduled preventive maintenance based on mileage and intervals set by WRTA.
374	The system shall be able to generate reports on a monthly basis, listing vehicles which are due for inspections or preventive maintenance.
375	6.5 Reservations
376	Trip reservations can be requested by an individual (the person traveling or a caregiver) or facility (e.g., hospital, sheltered workshop) via a Client Portal or Facility Portal, respectively. Alternatively, an individual or facility can call WRTA to request a trip.
377	6.5.1 Trip Booking

378	The system shall permit WRTA call takers and schedulers to retrieve client records by entering the client ID number, client last name, or other data field such as telephone number. All fields that contain phone numbers shall contain the standard 10 digits for a phone number (xxx-xxx-xxxx). Once a client is selected, a trip booking data entry screen shall be displayed to the call taker or scheduler pre-populated with all data for that client which remains constant (e.g., ID numbers, mobility limitations). Along with the client data, the system shall display to the reservationist or scheduler all trips booked for a specific client. Also, the system shall allow the reservationist and scheduler to modify and/or cancel any future trips booked for a specific client.
379	The system shall display an alert if a client has already met the quota of trips allotted to them for a given funding source for a given time period, is suspended for traveling during a given time period, or has an excess of no-show trips. The number of no-show trips and time periods shall be defined by WRTA.
380	The system shall also record the name of the person making the reservation; the date and time the caller requested the trip; the number of attendants/escorts; scheduled date of service; requested pickup time; required arrival time at destination; specifics/comments; same information for return trip, if applicable; day(s) of service (if subscription trip); agency billing codes; and required vehicle type, if applicable.
381	The system shall allow for multiple funding sources to be assigned to a trip. However, the system shall automatically determine funding eligibility and allow the scheduler to change the selected funding source(s) for which the client is eligible.
382	The system shall automatically present in the trip booking screen the address configured as the default pickup address. The system shall allow entry of an alternative pickup address using keystroke entry or from a list of common locations.
383	The system shall allow selection of the dropoff address from a list of common locations, including frequently and/or recently used dropoff addresses for that client. The system shall allow entry of an alternative dropoff address using keystroke entry or from a list of common locations.
384	The system shall provide the ability to book a return trip for a client trip. The system shall include a default pick-up time (configurable by WRTA) for the return trip and shall allow the return pickup time to be left blank if the client will contact WRTA when they are ready to be picked up.
385	The system shall provide the ability to book multi-legged trips by allowing entry of the pickup and dropoff addresses for each leg.
386	The trip date shall be entered using an interactive calendar interface. The system shall be capable of accepting trip bookings up to 180 days in advance of the requested trip date for subscription trips and 14 days from the requested trip date for regular trips. These thresholds shall be configurable by WRTA.
387	The system shall allow entry of a start and end date for the time period when a client's ridership privileges are suspended. If the selected trip date is within a time period that the client's services are suspended, the system shall alert the scheduler that the trip booking cannot be completed for this reason. The system must allow a supervisor to override the suspension.
388	During the trip booking process, the system shall allow entry of the names of any Personal Care Attendants (PCAs) or other companions (e.g., children, service animals) that will accompany the client on the trip.

389	The system shall permit trip booking while the client is on the phone. The system shall be capable of booking both subscription (standing order) and demand response trips in this manner.
390	Pick-up time negotiation requirement, if utilized, is no more than a configurable number of minutes before or after the client's desired departure time. WRTA shall be able to determine the configurable number of minutes. The system shall require entry of a requested pickup time and allow entry of a negotiated pickup time within the limits of this window.
391	The system shall allow the WRTA scheduler to link trips together for a group of two or more individuals traveling to a common destination that will be scheduled, as a matter of system policy, to the same run. The system shall allow the scheduler to remove the link and/or delete the trips.
392	The system shall allow the WRTA scheduler to designate any completed trip booking as a group booking (e.g., a trip for a group of two or more individuals traveling to a common destination that will be scheduled, as a matter of system policy, to the same run), and then add or delete individual clients from the group booking.
393	The system shall allow for the identification of service types that are customizable and can be applied at the client level and the trip level. Service types shall include at least door-to-door and curb-to-curb.
394	The system shall show whether trips that were requested during the previous 48 hours were actually assigned to a driver or vehicle. Further, the system shall show whether trips that were scheduled were scheduled and taken; scheduled and not taken (e.g., cancelled or failure to board); or never scheduled and never taken, with a field for the scheduler to indicate the reason (e.g., no provider available or trip ineligible).
395	Once all other trip booking information has been entered, the system shall indicate to the WRTA scheduler any applicable fare(s) to be paid by the client and any companions.
396	Once data has been entered, the system shall determine the most appropriate trip options for WRTA dedicated vehicles based on client preferences and eligibilities, as stored in the client profile, and the following parameters: vehicle tier, hours in service and service area/zone. The trip options shall be presented to the WRTA scheduler. The WRTA scheduler shall select one of the options to conclude the trip booking process.
397	The system shall, at the conclusion of the trip booking process, confirm to the WRTA reservationist or scheduler that the booking was successfully entered into the system. Also, the system shall present a summary of the booked or offered trip to the WRTA reservationist or scheduler.
398	During each trip booking, the system shall display, using the GIS software capabilities described in Section 5, the map locations for the pickup and dropoff locations.
399	The system shall alert WRTA call taker or scheduler if the client has previously booked a trip with a trip time period that is in conflict with the selected booking pickup time. The system shall allow all users, particularly the call taker or scheduler, to book the trip nonetheless by overriding this feature. The system shall flag all trip bookings for which this override was applied.
400	The system shall monitor the percentage of standing order (subscription) trips out of all trips, by hour and day, for ADA-eligible clients, to ensure compliance with ADA regulations (40 CFR Part 37.133(b)).

401	The system shall be capable of booking same day trips. On the service day, the system shall allow for last-minute changes that modify runs based on last-minute passengers. These changes must be communicated immediately to dispatcher(s) and drivers.
402	6.5.2 Management of Standing Order (Subscription) Trips for Clients
403	The system shall allow the entry of standing order (subscription) trip bookings, with flexible options to specify recurring travel dates. At minimum, the system shall support selection of a recurring daily trip; recurring weekly day or days (e.g., every Tuesday or every Monday through Friday), a recurring monthly day (e.g., every 2nd Wednesday) or a recurring monthly date (e.g., the 4th of every month).
404	The system shall allow for subscription trips and shall allow the following data to be entered: number of passengers; names of passengers (if necessary); date and time of reservation request; requested days of pickup (by date or day of week); pickup location; destination location; required arrival time at destination; requested pickup time for return trip; specifics/comments; agency billing code; same information for return trip: contact person (making reservation); service type (e.g., door-to-door, curb-to-curb); ability to lock trip out from future reservations; reservationist or scheduler code; required vehicle tier (agency-specific; ambulatory; lift equipped; car seat).
405	The system shall allow the scheduler to temporarily suspend a particular subscription, with entry of both start and end dates of the suspension time period. These dates shall be entered using an interactive calendar interface or drop-down or entered manually.
406	The system shall automatically suspend subscriptions on holidays when provider or agency services are not in operation. The system shall provide a function to allow the entry or adjustment of such holidays. The system shall notify the scheduler upon accessing a client profile within one month of a scheduled recurring trip that will fall on a holiday.
407	Once all other trip booking information has been entered, the system shall display any applicable fare(s) to be paid by the client and any companions.
408	Once data has been entered, the system shall display the most appropriate trip options for WRTA-dedicated vehicles based on client eligibilities and restrictions and the following parameters: vehicle tier, driver tier, hours in service and service area/zone. The trip options shall be presented to the WRTA scheduler. The WRTA scheduler shall select one of the options to conclude the trip booking process. The system shall confirm that the booking was successfully entered into the system and present a summary of the booked trip.
409	The system shall alert the user when a client's subscription's end date is approaching. The alert shall be made within a configurable number of days prior to the end date.
410	The system shall alert the user if the client has previously booked a trip with a trip time period that is in conflict with the selected booking pickup time. The system shall allow the user to book the trip nonetheless by overriding this feature. The system shall flag all trip bookings for which this override was applied.
411	6.5.3 Trip Modification/Cancellation

412	The system shall allow the WRTA reservationist or scheduler to access existing trip bookings to edit the pickup address, dropoff address, trip date, and/or pickup time upon client request. The Proposer must indicate whether or not a trip modification can be made to add or subtract the number of people traveling on this reservation and if a PCA can be added or subtracted from the reservation. The system shall assign a unique identification number to each trip booking record to facilitate trip editing. The unique identification number shall not be automatically reset at any time and must remain unique for a period of at least one year.
413	The system shall permit cancellation of any trip booking, when consistent with WRTA policies. The system shall retain the trip booking and flag it with the date and time when it was cancelled to facilitate WRTA's management of its cancellation policies. The system shall track late cancellations and no-shows.
414	The system shall provide the capability to enter a reason for trip cancellations (e.g., cancellation initiated by client/doctor/caregiver/WRTA or caused by weather or some other reason).
415	If the cancellation is received after a certain time-window, as defined by WRTA, it shall be identified as a late cancellation. The system shall allow for recording of whether the ride was taken or if the client failed to board without cancelling the ride.
416	Any trip modification or cancellation shall generate an audit record – one in which the WRTA reservationist's or scheduler's name is noted along with the date and time the change was made, the type of modification that was made, and the reason for the modification (if one is noted).
417	6.6 Scheduling
418	At this point, WRTA will be scheduling trips using the correct vehicle tier with WRTA-dedicated vehicles. Please note that the schedules developed using the process described below shall be optimized in real-time so that the desire to keep WRTA-dedicated vehicles full is fulfilled.
419	After trips are accepted, WRTA shall be able to view vehicles on the daily schedule.
420	The system shall allow trips to be scheduled with WRTA or volunteer drivers.
421	The system shall be capable of scheduling, in batch mode, all bookings for a future range of dates. The Proposer must describe the parameters used in scheduling customer trips. For example, scheduling may be based on the actual street network in the service area, using parameters associated with street network segments as established in the GIS system (e.g., physical barriers, running speed by time of day, and appropriate dwell times for the boarding and alighting of passengers). At least the following parameters shall be included:
422	•Dwell time;
423	•On-board capacity;
424	•Average vehicle speed profile for street segments;
425	•Grouping based on geographic location of origin and destination of trips;
426	•Avoidance of street segments with detours/road closures;
427	•Driver and vehicle tiers; and
428	•Accessibility needs/mobility aids.
429	The system shall permit WRTA to set all ADA complementary paratransit trips as priorities since the ADA requires higher service standards (i.e., the six service criteria). The Proposer shall describe how the system processes trip priorities during scheduling by the WRTA.

430	The system shall produce a daily manifest for each run, indicating pull-in and pull-out times, the projected arrival time of a vehicle at each pickup and dropoff location, and listing the trip events in chronological order.
431	When creating a daily manifest, the system must take into account any vehicle assignment restrictions. For example, certain vehicles can provide only a specific type of trip (e.g., buses with wheelchair ramps).
432	Once generated, the system shall be able to display all manifests with all driver instructions for a given day. The system shall provide the capability to print one or more manifests as a backup to being displayed on the in-vehicle tablet. The system shall provide tools to allow and track manual adjustments to the daily manifests, including manually adding notes and moving trips between manifests. The system shall allow manifests to be viewed on a map using GIS coordinates to display pickup and destination points.
433	The system shall have internal validation checks to ensure that manifests do not violate work and labor rules (e.g., driver work hours and breaks). The system shall also perform validation checks to ensure that policies limiting travel times for individual passengers are not violated. Validation shall also occur to ensure clients are assigned to the appropriate vehicle tier.
434	The system shall allow easy dispatcher entry of trip event completion times (i.e., as written on the manifest by the driver, reported by radio or entered on a tablet).
435	The system shall allow subscription run templates to be developed, based on standing orders (subscriptions). The system shall optimize the templates for least distance and/or travel time, based on the street network segment parameters stored in the system.
436	The system shall schedule each run based on an assigned vehicle, recognizing the accessibility needs of the scheduled clients, client tiers, and vehicle capacity constraints.
437	The system shall allow trips to be added to an existing run on the same day as the run. The system shall identify and display a range of alternatives for assigning the trip to existing runs for that day so as to best satisfy the requirements of the reservation while minimizing any impact on existing reservations. The system shall present these alternatives in rank order with a numerical “score” to indicate the degree of difference between choices presented to the reservationist or scheduler.
438	The system shall allow trips to be assigned to an overflow provider if no vehicle is available to provide a mandatory trip (such as court ordered visitations or dialysis). The system shall allow for entry of the taxi fare in a trip cost field.
439	The system shall present a list of available drivers for a trip, based on their stored schedules. The system shall allow certain trips to be marked priority to indicate a trip where a driver must be found.
440	The system shall show whether trips that were requested during the previous 48 hours were actually assigned to a driver. Further, the system shall show whether trips that were scheduled were scheduled and taken; scheduled and not taken [e.g., cancelled or failure to board]; or never scheduled and never taken. The scheduler will enter the date and time of the request, and the system shall be capable of producing a report that shows the trip request was then scheduled and assigned to a driver.
441	6.7 Dispatching
442	6.7.1 Trip Management

443	The system shall allow dispatchers to access run manifests using the run number, vehicle number, client number, or client name. The system shall display the run number, the list of passengers, the scheduled pick up and drop off times for each passenger, funding source for each trip, the scheduled arrival time for each pickup and dropoff, and any special circumstances. The run manifest display shall list trip events in chronological order, beginning with the next upcoming trip event.
444	The system shall automatically display any same day manifest changes to the dispatcher and to the affected drivers via the mobile data terminal. The system shall allow the dispatcher to enter road closure or detour information with respect to a road segment.
445	The system shall allow the dispatcher to use sorting functions to make changes that improve productivity using manual override, computer assisted, and fully automated modes of trip scheduling. After modifying runs, the system will allow the dispatcher to print each run's stops and routes in order to have fully updated schedules.
446	The system shall allow the dispatcher to define a region and display a region's runs on the computer screen with maps.
447	The system shall allow dispatchers to process no-shows when reported by drivers. The system shall track any such events.
448	If a vehicle must be removed from service, the system shall allow the dispatcher to associate a newly assigned vehicle with the run. If no alternative vehicle is available and the run must be cancelled, the system shall attempt to dynamically reschedule all the affected trips onto existing runs, with priority to any trips that were already underway on the affected vehicle.
449	The system shall allow easy transfer of trip event completion data from a printed manifest (that the driver has used to report trip event data), mobile data terminal or reported by radio/phone. This data must include the trip status (taken, no-show, cancelled), actual arrival time at pickup point, actual time passenger boarded, actual dropoff time, pickup odometer reading, dropoff odometer reading and any notes made by the driver (such as complications with mobility devices or violation of policies [i.e., too many bags]).
450	The system shall allow dispatchers to add any vehicle event information associated with a trip. The system shall log the information in trip history with corresponding date and timestamp. The dispatcher shall be able to select from a list of pre-configured events or manually enter information.
451	The following trip data is needed for management information reports: actual arrival time at pickup point; actual time passenger boarded; actual dropoff time; actual odometer reading at beginning of trip (typically at pickup); actual odometer reading at end of trip (typically at dropoff); trip status (taken, no show or cancelled); was trip a subscription trip; trip number assigned; total vehicle and revenue miles for each vehicle; total vehicle and revenue hours for each vehicle; and any additional information required (manual entry).
452	6.7.2 Incident Management
453	The system shall allow the dispatcher to initiate a new incident report. The new incident report form shall appear in a separate window, including an automatically generated date/time and a list of incident types.
454	The dispatcher shall be able to select an event to form the basis for an incident report, with the incident report form auto-populated with all information already known in the system about the event.

455	There shall be one central incident/accident report accessible from a server so everyone sees the same current report information, but only one instance of the report can be open at a time for editing.
456	The system shall allow authorized users to append to an existing open incident report, with other system users limited to read-only access.
457	The system shall allow authorized users to view and append to an existing open incident report, with other system users limited to read-only access. The user shall be able to select from a list of currently open incident reports that can be sorted by date/time, incident type or initiating dispatcher. The selected incident report shall appear in a separate window and shall be available for editing.
458	The open incident report shall be repeatedly accessed and modified, until it is marked closed after which further modifications shall not be possible, unless by authorized personnel with specific authorization to do so.
459	The system shall allow authorized users to close an existing open incident report. The user shall be able to select from a list of currently open incident reports, which can be sorted by date/time, incident type or initiating dispatcher. The user shall be asked to confirm the selected incident report before the incident is closed.
460	The incident report database shall indicate for each incident report the date/time of opening the report, the incident type, the initial incident text, the initiating user, the date/time of each subsequent modification, each modified version of the text, the modifying user(s), the date/time the incident was closed and the closing user.
461	Authorized users shall have the ability to attach files (e.g., an image file) to the incident report.
462	The system shall track the user and date/time when the incident report is opened, modified or closed.
463	6.8 Billing
464	In order to enable the system to bill funding agencies, the system must be able to track the number of trips, number of miles, tolls paid by drivers and trip status (trip taken, no-show, cancelled) by client for each funding source.
465	The Billing module shall allow the WRTA to define and customize the following information to implement and track multiple billing rules based on the terms of negotiated contractual agreements, and/or grant agreements. The system shall allow the WRTA the option of tracking this data by contract year, WRTA's fiscal year or other date range (e.g., year-to-date, quarterly).
466	6.8.1 Funding Sources
467	The system shall be able to track as many funding sources as necessary.
468	The system shall allow definition of at least the following attributes related to funding sources:
469	• Unique system-generated identifier by funding source;
470	• Funding source name;
471	• Funding source address;
472	• Contract effective and expiration dates;
473	• Maximum contract dollar amount for the contract time period; and
474	• Funding source status to indicate whether funding source is currently active or whether it is used for historical or future trips.
475	6.8.2 Billing Rates

476	The system shall be able to track multiple billing rates for each funding source. Per trip, per passenger-mile, per least path distance passenger-mile, per-revenue mile, per-total mile, per-revenue hour, and per-total hour rates shall be entered. Rates may be able to be left blank. The system shall allow rate changes any time a new rate is put into effect. The old rate's expiration date should be updated, and the new rate added with a new effective date. Billing charges shall be calculated for each trip date using the billing rates applicable for that date.
477	Trip status must be taken into account when determining which trips to bill. For example, not all funding sources will pay for no-show trips.
478	Trips are charged at different rates based on trip mode category and include trip charge, mileage, tolls and taxi fares. The system shall allow and track the collection of donations (not fares) for trips billed to other funding sources.
479	Please note that for shared rides, WRTA should be able to allocate shared ride trip data so that it is possible to bill the proportionate costs of shared rides to the appropriate funding agencies based on all possible rate structures (e.g., per-mile or per-trip).
480	6.8.3 Fiscal Years
481	The system shall account for and manage each funding source's fiscal year date range.
482	6.8.4 Trip Mode Categories
483	The system shall be able to track multiple trip mode categories. Trip mode is a mandatory field in all billing and reporting options.
484	The system shall be able to track multiple trip mode descriptions such as "Van," "Bus," and "Taxi."
485	The system shall be able to track and implement rules which require specific codes for modes of transportation and HIPAA related codes, as well as reimbursement rates.
486	6.8.5 Trip Purpose Categories
487	The system shall allow WRTA to track multiple trip purpose categories based on specific billing source contractual agreements and billing rules. Some funding programs may define specific trip purpose categories which are correlated to eligibility, billing and reporting options.
488	6.8.6 Driver Details Tracking
489	The system shall allow tracking of pre-and post-inspection times for agency drivers.
490	6.8.7 Trip Status Categories
491	The system shall allow WRTA to customize and track as many trips statuses as necessary. Based on contractual agreements, only certain trip statuses may be billed. For example, No-Shows may have different billing rules under different funding programs. All reporting options shall use the trip status field in the criteria selection and sorting.
492	The system shall allow WRTA to update status of a trip such as "scheduled taken," "denied," "cancelled by client," "cancelled by office," "late cancel," "no-show," "driver no-show" or "inability to find driver."
493	6.8.8 Billing Status Categories
494	The system shall allow WRTA to customize and track as many billing status categories as necessary.
495	6.8.9 HIPAA Transportation and Other Codes
496	The system shall be able to track HIPAA compliant transportation and other service-related codes by WRTA.
497	6.8.10 Trip Details by Client

498	The system shall be able to track multiple rides per client, using the unique client identification number as described in Section 6.2. This assumption is being used when defining specifications for tracking individual client trip details and billing options.
499	The system shall allow entry of the following information for billing with respect to the client trip data entered in the system as part of trip booking process (see Section 6.5.1)
500	•Funding Source Identification: to track the trip Funding Source ID
501	•Vendor ID: to track the Vendor ID
502	•Mileage: used in all billing, management and operations processes and reports to track mileage statistics.
503	•Trip Charge: used in all billing, management, operations and associated processes to track trip charges per trip.
504	•Other charges: to track other charges when clients incur expenses for other services that are related to transportation needs, such as hotels, meals, tolls, parking fees. Rules need to identify and process such charges differently. These charges are not included in reporting and analysis options which summarize regular trip charges.
505	•Fare Amount: to track and look up fare amounts per trip. Cross Reference to Fare Amounts by Billing Source specifications. The Contractor shall be given the fare matrix that will be necessary to look up fare amounts per trip.
506	•Invoice Date: to track when Invoices are balanced and generated.
507	•Billing Status: to track multiple billing statuses.
508	•Resubmit Flag: A “Resubmit” is a trip record which was denied and needs to be billed again, after errors in processing are fixed. Resubmitted trips cannot be double counted, while reconciling and generating statistical agency wide reports.
509	6.8.11 Other Contracts
510	The system must be able to generate billing reports/invoices for local partners, state agencies and third parties (e.g., other contracts).
511	The system shall be able to generate billing reports for internal accounting and specific contract required billing procedures that list clients, trips, time, mileage, and other parameters for a given time period.
512	6.8.12 Fares
513	The system shall be able to generate a report of daily fares, co-pays and donations broken down by run.
514	6.9 Customer Service
515	The new PSDS shall be fully integrated into WRTA’s existing Salesforce platform as an option. The new PSDS platform shall be able to make application programming interface (API) calls to Salesforce to integrate information mainly for customer feedback. This integration shall provide future opportunities to use customer relationship management (CRM) tools in other WRTA areas.
516	The system shall allow customers to fill out a brief survey after their trip (on paper, online or via an app) to indicate satisfaction with their ride/the service. This feedback shall be logged along with any responses made as a result of the customer feedback. The survey shall include the opportunity for the customer to input an open-ended comment and a rating for the trip, in addition to yes/no or multiple-choice questions.
517	The system shall have the ability to log and track the status of customer complaints and commendations.
518	The system shall automatically assign an identification number or a case number once the complaint or commendation is saved.

519	•Client identification number (when the customer is not registered, allow for information to be ignored or for passenger name to be entered instead);
520	•Reason for complaint (e.g., later arrival of vehicle) or commendation;
521	•Type of complaint: ADA, Title VI, Reasonable Modification, etc.
522	•Billing source;
523	•Date and time of complaint or commendation;
524	•Current status of a complaint or commendation;
525	•Current owner of the case (who is handling the complaint or commendation currently); and
526	•Ability to generate a report showing complaints and commendations for the month by program/billing source.
527	The complaints/commendation module shall support workflow management which shall allow agency staff members to assign a case to a specific agency employee's queue (currently only one person handles complaints/commendations) depending on the nature of the complaint or commendation.
528	The system shall have the ability to alert the authorized management staff automatically about any complaints or commendations that have not been addressed for a defined period of time and closed out.
529	All data shall be stored in the PSDS database and WRTA shall have the ability to run reports that require access to this data.
530	6.10 Mobile Data Terminal (MDT) Interface
531	Requirements in this section assume that WRTA vehicles shall be equipped already with existing MDTs/tablets, and data communication hardware and software. The on-board MDTs/tablets are described in Section 4.1. Data communication can be accomplished with the Contractor's own server, provided that the Contractor shares their network requirements with the WRTA. This is necessary so that communication can be allowed through the existing on-board Cradlepoint since the Subscriber Identity Module (SIM) card uses a private Access Point Name (APN) and the Contractor firewall must allow the data communication.
532	6.10.1 Data Messaging
533	The system shall allow the dispatcher to view received text messages in a tabular display that also indicates the vehicle ID and the time of the message.
534	The system shall allow the dispatcher to send a text message to a single MDT, a predefined group of MDTs or all MDTs within an area selected on the map display.
535	The system shall allow the dispatcher to select one of a set of predefined text messages or enter a free text message.
536	The system shall allow any message sent by dispatch to be flagged as requiring operator acknowledgement and shall allow the dispatcher to view a list of such messages that have not yet been acknowledged.
537	6.10.2 Manifest Transmission and Changes
538	The system shall produce a daily manifest for each run, indicating pull-in and pull-out times, the projected arrival time of the vehicle at each pickup and dropoff location, listing the trip events in chronological order.
539	The system shall be able to generate and display all manifests for a given day. The system shall provide tools to allow manual adjustments to the run manifests, including manually moving trips between manifests.

540	The system shall send manifest trip pickup and dropoff data to the MDT in the vehicle assigned to that manifest.
541	The system shall send the manifest for the next day to each driver via e-mail.
542	The dispatcher shall be able to configure which portions of the upcoming manifest entries shall be sent to the MDT.
543	Additional portions of the manifest shall be automatically sent to the MDT on an ongoing basis as trip events are completed, in accordance with WRTA-configured manifest transmission parameters.
544	The system shall automatically display any same day manifest changes, such as trip additions, no shows or cancellations, to the dispatcher and transmit these manifest changes to the MDT in the vehicle assigned to that manifest, displayed in a different color text or highlighted.
545	6.10.3 Trip Events Logging
546	The system shall receive trip pull-in, pull-out, pickup, no-show approval requests and dropoff event reports from MDTs, and use this data to update the time and reported location for each trip event.
547	The system shall acknowledge the receipt of trip event messages to the MDT.
548	The system shall store trip event messages sent to the MDT and acknowledged by the vehicle operator.
549	Based on the logged trip events, the system shall update the estimated time of arrival for the remaining manifest trips and display this information to the dispatcher. This does not change the actual manifest – this updated information informs the scheduler/dispatcher so that they can inform clients if their pickups are expected to be delayed.
550	The system shall receive no-show approval requests from MDTs, allow dispatchers to decide whether to authorize the no-show, record the time when the no-show was authorized, mark the pickup and dropoff in the manifest as a no show, and transmit the cancellation of the pickup and dropoff as manifest changes to the MDT in the vehicle assigned to that manifest.
551	7 Customer/Rider System Requirements
552	7.1 General
553	The system shall allow riders to select and update primary and secondary preferred communication channels and shall automatically distribute all communications via both preferred channels.
554	7.2 Self-Service Communication Channels
555	The system shall provide at least the following self-service options and communication channels to riders or integrate with currently available customer technologies to provide such self-service options and communication channels:
556	• W RTA phone system;
557	• R VR system as described in Section 7.9.4;
558	• S hort message service (SMS) text message as described in Section 7.9.3;
559	• E mail, as described in Section 7.9.3;
560	• W eb Portal provided by the successful Proposer as described in Section 6.5; and
561	• M obile application provided by the successful Proposer as described in Section 7.9.5.

562	The system shall allow customers/clients or their designated caregivers or service providers to access their trip history (including ability to define a history over a user-defined date range), scheduled trip information, customer/client profile, and account balance via all self-service channels.
563	The system shall allow riders to access all information about a trip's status during the day of service via all self-service channels.
564	The system shall allow customers/clients to schedule, modify, cancel, and track trips within customer policy and procedure limitations set by WRTA, via all self-service channels.
565	The system shall allow customers/clients or their designated caregivers or service providers to update their rider account profile via all self-service channels.
566	The system shall send customers/clients or their designated caregivers or service providers a trip rating message via the rider's preferred communication channels at the end of each trip and record the rider response as a part of the trip's record (as described in Section 6.9).
567	The system shall provide the ability to solicit feedback through surveys at the completion of each trip for a randomly selected rider sample and record the feedback as a part of the trip's record.
568	7.3 Eligibility-Related Communications
569	The system shall communicate key eligibility information with customers/clients or their designated caregivers or service providers, including appointments and eligibility changes (e.g., eligibility appointments, reevaluation assessment, suspensions, expiration) according to customer policies and procedures.
570	7.4 Night Prior Reservation Confirmation
571	The system shall send out reservation confirmations based on the customer/client's preferred method of communication to inform riders of the next day's scheduled trips.
572	The system shall communicate with customers/clients or their designated caregivers or service providers the details for each trip including date, pick-up window or the actual pickup time, origin and destination, and fare. The number of communications sent to each customer/client will be based on the number of trip reservations (i.e., a round-trip made as a single reservation will receive one (1) message).
573	The system shall attempt to contact with customers/clients or their designated caregivers or service providers through alternate communication channels if the initial communication attempt is unsuccessful (i.e., message undeliverable; call not answered and voicemail left) through the rider's preferred channel. Customer/client shall define the number of unsuccessful attempts prior to trying a different channel.
574	The system shall complete all reservation confirmations by a customer-defined time on the night prior to the scheduled trips.
575	7.5 Day-Of Trip Update
576	The system shall message the customer when the vehicle is on its way to pick up the customer (e.g., 15 minutes before pickup or when the vehicle is a mile from the pick up).
577	The system shall automatically send trip alerts to customers/clients related to any changes that may impact the scheduled pick-up window (e.g., vehicle break-down).

578	The system shall communicate to customers/clients or their designated caregivers or service providers the details for each trip, including the origin and destination of the trip, the actual pickup time, and the estimated time of arrival (ETA) in real-time based on actual conditions in any instance where the scheduled trip details have changed.
579	7.6 Trip Status
580	The system shall automatically push trip status updates to customers/clients or their designated caregivers or service providers based on pre-determined parameters (e.g., arrival time, vehicle location). The system shall also allow customers/clients to customize trip status preferences and access trip status and information on-demand. Trip status updates shall include the following information:
581	•Date;
582	•Pick-up window or actual pick-up time;
583	•Origin and destination;
584	•Fare or co-pay if required;
585	•ETA in real-time based on actual conditions; and
586	•Actual vehicle location for trips within thirty (30) minutes of the pick-up window or actual pick-up time.
587	Within a customer-defined actual pick-up window, the system shall provide customers/clients with access to real-time vehicle location information and estimated time of arrival with the ability to monitor vehicle location through actual pick-up.
588	7.7 Cancellations
589	The system shall communicate to customers/clients the details for the trips that they request to be cancelled prior to cancellation to ensure the proper trip is cancelled. Trip details to be communicated prior to effectuating any cancellation request include: date, pick-up window or the actual pickup time, and the origin and destination.
590	The system shall notify customers/clients if cancellation is in violation of customer policy and/or carries a penalty.
591	The system shall request, but not require, riders indicate the main reason for cancellation based on customer-defined fields.
592	The system shall provide the customers/clients confirmation that the trip has been cancelled via the customer/client's preferred communication channel.
593	7.8 Rider and Account Information
594	The system shall allow customers/clients or their designated caregivers or service providers to modify the following account information as needed:
595	•Favorite physical addresses (e.g., home, work);
596	•Phone number;
597	•Primary contact;
598	•Secondary contact;
599	•Password;
600	•Security questions;
601	•Language preference;
602	•Preferred communication channel;
603	•Emergency contact;
604	•E-mail address; and
605	•Payment Information if applicable (via connection to customer's payment system; no payment data will be stored in the rider database within the system or otherwise accessed or stored by vendor).

606	The system shall allow riders to view, but not modify, eligibility end date and will automatically notify riders via the rider's preferred communication method when the rider must have eligibility reviewed.
607	7.9.1 Real-time Customer Information
608	The Proposer shall describe their proposed system's ability to independently provide or export through a standard protocol, appointment reminders to WRTA staff and clients. The time period (e.g., X hours before a scheduled appointment) and format (e.g., Text Message, Automated Phone Call, etc.) in which reminders are provided shall be configurable by WRTA or client.
609	7.9.1.1 Predicted Arrival Time
610	The system shall have the ability to dynamically generate and update the predicted arrival times for in-service WRTA vehicles.
611	The system shall be able to account for at least the following operational anomalies in making corrections in the predicted arrival times:
612	• Travel time variability by day and time of day;
613	• Service disruption (e.g., vehicle breakdown or weather-related disruption) and detours; and
614	• Driver logon/logoff error.
615	7.9.2 Web-based Trip Status
616	The system shall allow customers/relatives to view the status of their trip on the WRTA website, web-enabled personal devices or on a smartphone application. Registered customers shall be able to view the status of their trips by logging onto their profile.
617	The system shall allow customers to view the location of their vehicles on a map-based interface.
618	7.9.3 Email/Text Alerts
619	The system shall be able to send emails to customers based on their trip preferences.
620	The system shall be able to send text messages to customers based on their trip preferences.
621	The system shall have the ability to respond to customer requests for real-time status of a prescheduled trip.
622	7.9.4 Interactive Voice Response (IVR) Alerts and Reservation Access
623	The PSDS system shall have the ability to interface with an IVR system to provide customer alerts regarding ride reminders and real-time arrival information via IVR system.
624	The IVR shall allow customers to cancel their trips using a series of prompts to identify their trip reservation, cancel the reservations and confirm the cancellation.
625	7.9.4.1 General
626	The IVR system shall provide the capability for customers to access and be contacted with information about WRTA services and reservations via telephone. The Contractor shall be responsible for supplying hardware and software, technical support, and warranty coverage on implemented hardware and software.
627	The IVR system shall be interfaced with the PSDS and predicted arrival time (described above) to provide current predicted arrival time for customers 30 minutes prior to the predicted arrival time.
628	The IVR shall contact customers with a reminder call about their trip the day before service.

629	If a customer's trip is predicted to be delayed by more than a configurable number of minutes, the IVR shall contact the customer with an updated arrival time.
630	The Proposer shall indicate how the IVR system will be compliant with FCC Section 255 of the Communications Act and Limited English Proficiency requirements.
631	The system shall provide both a web- and phone-based customer interface for registering with the IVR system.
632	7.9.4.2 Phone System Integration
633	The IVR shall be integrated with the existing telephone system at the WRTA. The Proposer shall describe and provide cost of any needed upgrades in the existing phone system to meet the IVR functionality.
634	7.9.4.3 Customer Interface
635	The customer interface shall consist of voice prompts to which the customer may respond by either voice commands or by touch-tone key selection.
636	The IVR system shall provide a welcoming message as its first response to incoming callers or call recipients. The system shall allow for an additional optional message to be spoken after the welcome message.
637	The IVR system shall be designed such that incoming calls with no touch-tone or voice response within a short period of time by the customer are acted upon automatically (time-out). The Proposer shall specify proposed options for calls that time-out or for which there is no touch-tone service.
638	The voice prompts shall encourage incoming callers to use the automated menu-based interface as a first choice over communication with a live Customer Service Representative.
639	The voice system structure shall provide key-ahead of touch-tone inputs such that experienced users do not have to wait for voice messages or prompts to complete prior to making a touch-tone or voice selection.
640	At any time during the call, the customer may request a transfer to WRTA Customer Service via touch-tone key or voice command. The touch-tone key used for this particular selection shall remain consistent throughout the customer interface.
641	7.9.4.4 Call Transfers
642	The proposed system shall handle at least 2,500 calls per day. Please note that this call volume may have to be increased once there is an understanding of the actual average daily number of calls.
643	The proposed IVR system shall be capable of transferring calls to WRTA Customer Service.
644	When a transfer request to Customer Service is initiated by a caller after business hours, the IVR system shall provide an informational message to the caller and then return the caller to the first level of the IVR system voice menu.
645	When a transfer request to Customer Service is initiated by the caller during regular business hours, the IVR system shall transfer the caller to Customer Service if a call taker or queue space is available.
646	When a transfer request to Customer Service is initiated by the caller during regular business hours but when call takers are busy and the queue is full, the IVR system shall detect the queue-busy condition, hold the call, announce the approximate amount of time the caller may be on hold and provide IVR menu options for automated assistance.
647	7.9.4.5 Usage Data Collection and Reporting

648	The IVR system shall collect customer call data and provide reports for administrative purposes.
649	The Contractor shall describe the level to which data may be collected for incoming customer calls and for the touch-tone responses to menu options.
650	The proposed system shall allow a system administrator to generate reports for specific time periods, including the following types of reports:
651	•Number of total incoming calls;
652	•Number of calls that transfer to Customer Service; and
653	•Call duration for each call.
654	The proposed IVR shall allow the system administrator the capability to generate the above reports by the following selectable periods: hourly, daily, range of days, weekly, monthly and yearly.
655	7.9.4.6 Vocabulary Management
656	The proposed IVR system shall provide the capability for the system administrator to record and edit vocabulary words and construct the phrases that will be used by the IVR system.
657	The Contractor shall specify the method(s) for recording and editing vocabulary words and constructing phrases.
658	The proposed IVR system shall provide speech editing features. The Contractor shall specify features supported by the vocabulary management environment, including but not limited to:
659	•Individual vocabulary edits;
660	•Pause deletions and insertion; and
661	•Undo/redo individual vocabulary edits.
662	The IVR system shall provide the capability to store and manage all vocabulary words and phrases used by the system. The Contractor shall describe how the vocabulary words and phrases are to be stored and managed.
663	7.9.5 Mobile Application
664	The PSDS software shall include a mobile application for demand response customers that provides a modern, user-friendly, and accessible interface for managing transportation services. The application shall be available for both iOS and Android devices, and shall comply with applicable accessibility requirements.
665	At a minimum, the mobile application shall provide the ability to:
666	•Request, schedule, modify, and cancel trips:
667	oCancellation must be at least one (1) hour before pick-up time. If cancellation is made within one (1) hour of pick-up, it would be considered a 'No-Show.'
668	oOnly same-day trips can be cancelled.
669	oSame day trips cannot be modified;
670	•View upcoming, active, and completed and verified trips;
671	•Receive real-time trip status updates and service notifications;
672	•Track the assigned vehicle in real-time on an interactive map;
673	•View vehicle identification information; including vehicle number, vehicle description, and estimated arrival time;
674	•Receive notifications when the vehicle is approaching, has arrived, or when service disruptions occur;

675	•Manage recurring/standing order trip requests, where authorized (an end date restriction must be put in place so that a customer should not be able to update more than one month out);
676	•Update customer profile and contact information within specific restrictions such as not being able to change eligibility (which is determined by WRTA/PBSTM), physical address, etc.;
677	•View fare information and payment options (when applicable);
678	•Communicate trip-specific instructions or special accommodation needs to the WRTA and the vehicle operator;
679	•Access trip history and account information;
680	•Manage companion, personal care attendant (PCA), and guest rider information, where applicable.
681	The mobile application should provide an experience comparable to modern transportation network company (TNC) platforms while supporting the operational and accessibility requirements of public transit demand response services. Integration with the scheduling and dispatch system shall ensure that trip information, vehicle location, customer notifications, and reservation updates are synchronized in real-time.
682	8 Reports
683	The reporting system must first present data in a summary format and then allow users to drill-down and drill-through the tables for further details. Any graphical illustrations shall be provided as necessary.
684	Reporting is required for both internal and external (e.g., MassDOT) use.
685	The system must allow sorting, grouping and filtering of information on-the-fly by relevant data fields.
686	The system must allow WRTA to export all trip data into a spreadsheet to perform analysis.
687	In addition to canned reports required in the system, the reporting tool must allow WRTA to generate and save ad-hoc reports easily.
688	The system shall allow reports to be viewed on screen, sent to a printer or saved to a file.
689	The system shall allow WRTA to access the database to create and execute stored procedures written by WRTA.
690	The software shall provide standard reports based on the stored data. The Proposer shall provide details in their proposal related to reports that are offered and degree to which they can be configured. The standard reports shall include at least reporting on:
691	•Logon/Logoff summary
692	•Trips provided
693	•Number of riders
694	•Unduplicated riders for a specified time period or specified funding source
695	•Non-revenue vehicle hours and miles (the time from when the vehicle leaves the garage to the vehicle's first pickup, driver's lunch time, time from the last drop-off to when the vehicle is fueled and brought back to the garage)
696	•Passenger travel time, by run or user group
697	•Revenue vehicle hours and miles (hours of vehicle operation in which there is the expectation to carry passengers)
698	•Passenger-miles, by run or user group
699	•Least path distance passenger-miles, by run or user group

700	• N umber of cancellations
701	• N umber of no-shows
702	• N TD S-10 reporting; functionality for a one-click NTD S-10 report, or quick flat-file export
703	• D ata specific to shared rides depicting the proportionate time, mileage, and costs of shared rides distributed among appropriate funding agencies based on various possible rate structures (e.g., per-mile or per-trip).
704	It is critical that the software provides the WRTA the ability to access data to assist in the analysis of passenger trips, vehicle miles, and vehicle hours whose costs are shared by multiple funders. WRTA should be able to use the software to determine passenger-miles, vehicle miles, vehicle hours, and costs associated with each funder.
705	The software shall have the capability to generate reports based on exceptions as per thresholds set by WRTA.
706	If reporting shall be provided via a third-party application (e.g., Crystal, Jasper, Power BI), that application must be identified in the Proposer's response.
707	WRTA shall define the need and elements required for a dashboard for system users. The Proposer shall describe their capability to build a dashboard that can provide access to reporting as well as operational performance metrics.
708	9.0 AD/AVL Integration, MDT/Tablet, Manifest Management and iCabbi Integration Functional Specifications
709	9.1 SDS Integration with Systrans CAD/AVL System
710	See Section 4.1.
711	9.2 MDT/Tablet Specifications
712	9.2.1 "Safe Driving" Mode
713	For driver safety, the MDT has the "safe driving" mode enabled when the vehicle is moving above a configurable speed limit (e.g., 5 miles/hour).
714	The safe driving mode allows WRTA management to determine the criteria that will prevent vehicle operators from interacting with MDTs when driving. The MDT allows the WRTA to enable the following screen configurations under safe driving mode:
715	• B lank display on the screen;
716	• D isabled MDT buttons/keys to stop vehicle operators from performing any actions on the screen; and
717	• D isplay of information relevant to vehicle operators when of high priority (e.g., navigation, manifest, or missed messages or calls from dispatchers).
718	The WRTA shall have the ability to remotely change the configurations for the safe driving mode.
719	The WRTA shall be able to change the safe driving mode configurations by vehicle operator login. For example, the safe driving mode could be disabled for maintenance or training purposes.
720	9.2.2 Navigation Assistance
721	The MDT is equipped with a navigation assistance module to provide visual and audible turn-by-turn instructions with real-time traffic information to vehicle operators. The system must allow the ability to turn the navigation audio on and off.

722	The MDT displays a map showing the current location of the vehicle, the location of the next pickup or dropoff, and a continuously updated suggested routing between them, at the closest zoom level where this route fits on the display. As the vehicle travels, the map view automatically pans and zooms to continue to show this entire routing at the closest possible zoom level.
723	The MDT allows operators to override the map zoom level or pan the map display, and to select for the display to return to the default mode that automatically follows the routing.
724	The driving instructions shall include both the turn directions and the name of the street, and this information is provided in advance of the turn.
725	The navigation module allows the operator to activate and deactivate the navigation map display and/or the audible instructions as desired.
726	If the navigation application is active when a manifest change notification or text message is received, the audible alert tone shall be provided without interrupting the navigation application. This will allow the operator to acknowledge and review the manifest changes or text messages at the next appropriate opportunity without interrupting the navigation support.
727	The navigation assistance system shall not direct vehicles operators to streets that have restrictions for their vehicles (e.g., restrictions on bridge clearance for oversized vehicles).
728	9.2.3 Vehicle Operator Logon
729	The MDT shall allow vehicle operator logon using operator ID and run ID entry. The MDT shall check with the PSDS central system to validate that the operator ID and run ID are valid (and not already logged in on another MDT). In the event of a conflict, the system shall notify the vehicle operator of an “invalid” logon. If the operator ID and run ID received from the MDT are valid, a message shall be sent to the MDT indicating whether the logon attempt was successful or failed.
730	Once the operator and run IDs have been validated, the MDT shall complete the logon by selecting the schedule/manifest data stored in the MDT that corresponds with that run/trip.
731	After logon, the operator terminal shall display the current run, route, trip, next time point, and vehicle operator ID.
732	The MDT shall allow the vehicle operator to logoff by selecting the logoff key.
733	If the vehicle operator has not properly logged off at the end of their run (after a configurable amount of time), a dispatcher shall have the ability to remotely log off that specific MDT.
734	Alternatively, the system shall automatically log off an MDT after a configurable number of hours that the MDT has been inactive.
735	The MDT shall send a message to the dispatcher as a confirmation of the vehicle operator logoff.
736	The MDT shall periodically attempt to send a logon or logoff message until it receives an acknowledgement message from the central system, or if no response is received from the central system within a WRTA-configurable time, the MDT shall provide the operator with a “no logon response” message, and the system will continue to attempt to send the logon or logoff message.
737	9.3 Manifest Management
738	9.3.1 General

739	Manifests and manifest updates sent by the PSDS or a dispatcher shall be displayed on the MDT screen. The screen shall display upcoming pickup or dropoff trip events in summary format including at least event type (e.g., pickup, dropoff), arranged pickup time, appointment time (if applicable), client name, gender, event location, fare or co-pay amount (if appropriate), mobility assistance requirements, image of the client, and other pertinent information, as determined by the WRTA.
740	The MDT shall allow the vehicle operator to select a trip event to get details identified by WRTA on the pickup or dropoff on a separate screen, which shall include, at a minimum, pickup/dropoff, first and last name, client id, gender, appointment time, pickup time, location, location comments, fare or co-pay amount, fare type, number of passengers and Personal Care Attendant (PCA).
741	The MDT shall request manifest data from the PSDS on a periodic, ongoing basis to display at least the next 10 trip events or trip events scheduled in the next 60 minutes, with these thresholds being configurable by WRTA.
742	The MDT shall not allow a request for no-show until a WRTA-configurable time interval has passed after the 'arrive' trip event or the start of the customer pickup time window, as determined by WRTA.
743	Once any of these trip events are selected on the MDT, the MDT shall send a message including the date, time, and location to the central software.
744	The MDT shall require that the vehicle operator acknowledge the receipt of an insertion, deletion or change to the current manifest (including no-show events). There shall be an audible tone from the MDT when any such manifest change notification is received. All changes in the manifest will be highlighted in distinct colors.
745	9.3.2 Trip Events
746	The MDT shall send a corresponding message to the PSDS when the vehicle operator selects a pull-out, pull-in, pickup, no-show requests, no-show event (after requesting a no-show from dispatch), or dropoff trip event.
747	The operator shall use the MDT to select an 'arrive' event by pressing a button when first arriving at the location, and then again use the MDT to select a 'perform' event when about to depart the location. The vehicle must not be in motion to select 'arrive' and 'perform' events.
748	In the case of grouped trip events, the vehicle operator shall register a single 'arrive' event.
749	The MDT will be configured to not allow the 'arrive' event unless the vehicle reaches within configured radius of the pickup location.
750	If the customer is not available at the location, the operator shall use an MDT button to request a 'no-show'.
751	Pickups with a pending no-show request or that have been cancelled due to a no-show shall be indicated to the dispatcher.
752	The MDT shall not allow a request for no-show until an agency configurable time interval has passed after the 'arrive' trip event or the start of the customer pickup time window, whichever is later.
753	Once any of these trip events are selected on the MDT, the MDT shall send a message including the date, time, location and odometer value to the central software.
754	The operator shall have the opportunity to update the fare type at the time of selecting the perform trip event and send the updated information to the PSDS.

755	The trip event message shall include the date/time, trip event type, location and odometer value. Prior to sending the trip information, the operator shall be allowed to verify and adjust the odometer value for that trip.
756	The MDT shall continue to periodically attempt to send a trip event report until it receives an acknowledgement from the central software that the report was received.
757	9.4 Potential Interface with iCabbi
758	No actual integration is planned between iCabbi (used by Yellow Cab) and the Systrans CAD/AVL system. If a tablet is used by other demand-response service providers, such as Yellow Cab and the Bethel Group, shall be able to install their own applications, such as iCabbi, without any technical integration with the CAD/AVL.
759	Any non-Systrans application installed on the tablet can communicate with its own server, provided the service provider shares their network requirements. This is necessary so communication can be allowed through the Cradlepoint router on-board each vehicle since the Subscriber Identity Module (SIM) card uses a private Access Point Name (APN) and their firewall must allow the traffic.
760	10 Future Capabilities
761	The WRTA has identified future or optional functionality of the PSDS, including the Contractor providing a Microtransit Module. This optional Microtransit Module shall be able to be activated by the WRTA during the contract term. The module should support the management and operation of flexible, on-demand transit services through dynamic scheduling, including commingling of demand-response services; dispatching; trip booking; and vehicle routing capabilities.
762	At a minimum, the Microtransit Module should provide:
763	• Real-time trip scheduling and dispatching;
764	• Dynamic route optimization and ride-pooling;
765	• Mobile, web-based, and call center booking options;
766	• Real-time vehicle tracking and customer notifications;
767	• Service zone and virtual stop management;
768	• Integration with fixed-route and demand-response operations;
769	• Operational reporting and performance analytics (dashboards)
770	The WRTA has not yet identified a specific service area, operating model, or implementation timeline for microtransit services. This module shall be available as an optional component that may be implemented at the WRTA's discretion during the term of the contract. The Proposer shall identify any additional licensing, implementation, support, or transaction-based costs associated with this module in addition to identifying their capabilities as they relate to providing this future functionality.
771	11 Project Implementation
772	11.1 General
773	The Contractor shall prepare all deliverables in both Microsoft Office (Word, Excel or PowerPoint) and Adobe PDF formats, with WRTA granted full rights to reprint as needed.
774	11.2 Required Project Schedule
775	Table 2 shows the required schedule of activities and deliverables that will be described in subsequent subsections.
776	Table 2. Required Timeline of Activities and Deliverables
777	Item, Description, Time Since Last Item

778	1, Notice to Proceed,
779	2, Draft System Implementation Plan (SIP), 2 weeks
780	3, Kickoff Meeting/Requirements Review Meeting, 2 weeks
781	4, Revised SIP, 2 weeks
782	5, Preliminary Design Document (PDD), 6 weeks
783	6, Preliminary Design Review (PDR) Meeting, Within 1 week of completing the PDD
784	7, Final Design Document (FDD), 3 weeks
785	8, Final Design Review (FDR) Meeting, Within 1 week of completing the FDD
786	9, FDD Approval, 3 weeks
787	10, Acceptance Test Procedures (ATP) for Factory Acceptance Test (FAT), 6 weeks
788	11, FAT, 3 weeks
789	12, FAT Punch List, FAT Results Document and FAT Approval, 2 weeks
790	13, Resolve FAT Punch List, 3 weeks
791	14, Training Manuals and Training, 3 weeks
792	15, ATP for Pilot/Installation Testing, 3 weeks
793	16, Pilot/Installation Testing, 3 weeks
794	17, Pilot/Installation Testing Punch List, Pilot/Installation Testing Results Document and Pilot/Installation Testing Approval, 2 weeks
795	18, Resolve Pilot/Installation Testing Punch List, 4 weeks
796	19, ATP for System/User Acceptance Testing, 4 weeks
797	20, System/User Acceptance Testing, 4 weeks
798	21, System/User Acceptance Testing Punch List, System/User Acceptance Results Document and System/User Acceptance Testing Approval, 3 weeks
799	22, Resolve System/User Acceptance Testing Punch List, 3 weeks
800	23, Burn-in/Rigorous Testing, 4-6 Weeks
801	24, Burn-in/Rigorous Testing Results Document and Burn-in/Rigorous Testing Approval, 2 weeks
802	25, Resolve Burn-in/Rigorous Testing Punch List, 4 weeks
803	26, Final System Acceptance, 2 weeks
804	11.3 Project Management
805	11.3.1 Project Status Tracking
806	The Contractor shall prepare a System Implementation Plan (SIP), including detailed implementation activities and a schedule for these activities, the roles and responsibility of parties (Contractor, WRTA and other parties) in the proposed project team, progress milestones and status, and assigned Contractor staff.
807	The Proposer must submit their data conversion plan as part of the draft SIP provided in their proposal. Potential risk items and their resolution must be clearly identified per the Proposer's prior experience with similar implementations.
808	The initial draft of the SIP shall be provided to WRTA within two weeks from Notice to Proceed (NTP).
809	The Contractor shall participate in a kickoff meeting with WRTA Project Manager, other WRTA staff, and outside consultants as determined by WRTA Project Manager. The SIP shall be discussed at the kickoff meeting. After the kickoff meeting, the SIP must be revised by the Contractor based on comments made during the kickoff meeting and by WRTA. The revised document shall be provided to WRTA within two weeks after the kickoff meeting. Please refer to Table 2 for recommendations on high-level tasks that should be included in the SIP.

810	The SIP must be approved and accepted in writing by WRTA before it can become effective.
811	An updated SIP shall be submitted to WRTA at the beginning of each month, until project completion and system acceptance by WRTA.
812	The SIP shall include a rollout plan for all WRTA-dedicated vehicles.
813	The Contractor shall maintain and provide to WRTA an Action Items List (AIL), indicating for each item the following: (1) item number; (2) date generated; (3) item priority; (4) brief item descriptive title; (5) assigned person with lead resolution responsibility; (6) date resolved; and (7) ongoing dated notes on resolution status.
814	The AIL shall be sorted, primarily by unresolved vs. resolved items, priority, and by the date the item was generated. WRTA reserves the right to negotiate additional items for the AIL prior to formal acceptance.
815	11.3.2 Bi-Weekly Conference Calls
816	The Contractor shall participate in bi-weekly conference calls with the WRTA Project Manager, other WRTA staff, and outside consultants as determined by the WRTA Project Manager.
817	The agenda for these meetings will be to discuss the most current status of and plans related to all issues identified in the recent releases of the SIP and AIL.
818	The WRTA reserves the right to identify for discussion any additional issues beyond those in the SIP and AIL.
819	A status report shall be issued to WRTA at least two days prior to each conference call, including (1) an agenda for the upcoming conference call highlighting key discussion items; and (2) an updated AIL with the updates incorporating the discussions of the previous bi-weekly conference call as well as other subsequent developments since the previous AIL release.
820	The Contractor shall be represented in these conference calls by at minimum their Project Manager, as well as any additional Contractor staff necessary to properly address the current issues and project status.
821	The WRTA may be represented by their designated implementation management representatives. Outside consultants may attend or participate in all conference calls, as needed.
822	Conference call facilities will be arranged and paid for by the Contractor.
823	The Contractor shall submit minutes of the call within two days of each conference call. The minutes shall be included as a task on each AIL submitted following a conference call.
824	11.3.3 Minimum Required Onsite Work
825	At the first onsite meeting, which is the Kickoff Meeting/Requirements Review (see Table 3, Item 3), the Contractor shall be prepared to discuss WRTA's feedback on the draft SIP and conduct a Requirements Review (RR).
826	At the second meeting, which can either be online or onsite, is the Preliminary Design Review (PDR). At this meeting, the Contractor shall be prepared to discuss WRTA's feedback on draft Design Review documentation.
827	During the third meeting, which can either be online or onsite, is the Final Design Review. At this meeting, the Contractor shall present the Final Design Review documentation for review. Based on discussion at this meeting, the Contractor shall make final revisions to the FDD.

828	During subsequent onsite efforts, the Contractor may configure system access and conduct acceptance testing. These onsite system configuration and testing efforts will occur over an extended period and will likely involve several different onsite trips and a range of different Contractor staff.
829	11.3.4 Invoicing
830	The Contractor shall only submit an invoice once a fully signed Acceptance Certificate is generated by WRTA indicating that a progress payment milestone has been achieved.
831	11.4 Design Reviews
832	11.4.1 Requirements Review (RR)
833	The Contractor shall participate in the RR, as part of the first onsite meeting. The RR will initialize the Requirements Matrix (RM) and the Contractor will use this Matrix to produce the draft Design Document for conducting the Preliminary Design Review (PDR) at the second on-site meeting. The RR meeting shall discuss, for each contract requirement, the following: (1) WRTA design intent; (2) the intended Contractor design approach; and (3) the general Contractor approach to demonstration through the acceptance testing process.
834	Finalized contractual requirements will be prepared after the RR meeting and will be referred to as the Requirements Matrix hereafter.
835	11.4.2 Preliminary Design Review
836	There shall be two design reviews in which the Contractor must participate. For the design reviews, the Contractor will be required to prepare comprehensive documentation on the technical details of the system before proceeding with the installation. The design review materials to be prepared by the Contractor will include overall system documentation, details for installation with each vehicle type/site and fixed facility, and an itemization of how their design responds to each individual specification requirement. An important principle with the design review process is that WRTA acceptance of the design review documentation will not represent acceptance of the system, which can only result from successful system acceptance testing.
837	The beginning of the design review process is a Preliminary Design Review (PDR) meeting, which deals with the Contractor's initial version of the system design. This meeting is an important opportunity to identify any misunderstandings of the design intent and to adapt the design within the Contractor's constraints to best suit WRTA's needs.
838	The Contractor shall prepare the Preliminary Design Document (PDD), which shall include the following materials: (1) a conceptual diagram illustrating all elements in the system and data flow will be required; (2) an overview of the equipment, system and configuration proposed for implementation; (3) detailed technical documentation for each equipment item; (4) detailed technical documentation on all software, addressing the functions of each module, the format of all user interface screens, the format of all reports, the data fields to be included in all data exchange interfaces and any other software aspects warranting advance agreement with WRTA prior to system customization/configuration; and (5) a table providing cross-references for each section of the PDD to the appropriate element of the RM.
839	The WRTA shall review the PDD in advance of the PDR meeting and finalize their review and comments on the PDD after the PDR meeting is held.
840	11.4.3 Final Design Review

841	The second step in the design review process is a Final or Critical Design Review (FDR), which deals with the Contractor's final system design, based on the results of the PDR and updated RM. The FDR meeting involves consensus building in an onsite meeting or conference call once the design is finalized.
842	Based on comments made by WRTA on the PDD, the Contractor shall make revisions to prepare the final design document (FDD).
843	The FDD shall include the following materials: (1) updated PDD incorporating WRTA feedback and comments; (2) final list of equipment to be procured; (3) final design and configurations of the system to be built including all customizations to be made to the system; (4) an updated table providing cross-references between sections in the FDD and elements of the RM; and (5) updates to the Project Schedule.
844	The Contractor shall conduct the FDR onsite or via conference call three weeks after the FDD has been submitted.
845	The PDD and FDD are intended only to reduce the chance of any misunderstandings on the design intent or interpretation of the contract requirements. The PDR and FDR shall not alter the need for the successful formal demonstration of each requirement through the Acceptance Testing process.
846	Once the FDD is complete and accepted by WRTA, the Contractor shall provide a detailed list of equipment for the system.
847	The Contractor shall create a detailed list of system configurations. An example of these configurations is a list of canned messages, and list of incidents and accidents codes.
848	The Contractor shall document configurations of the computer hardware and networking infrastructure as part of the FDD.
849	11.5 Testing
850	As mentioned in Section 3.2.2, the Contractor shall setup a "sandbox" environment for the WRTA, PBSTM, and other service providers to view and become familiar with the software platform, use it to demonstrate the software's features, and to conduct user (e.g., test group of selected riders and WRTA staff) testing.
851	The Contractor shall submit an Acceptance Test Procedures document (ATP), for WRTA approval prior to undertaking any testing.
852	The ATP shall clearly address: (1) how each testable contract requirement (listed in the RM) will be demonstrated, including the method for performing the test; (2) the results that will constitute success for each test; (3) responsibilities of both Contractor and WRTA's representatives during each test; and (4) a cross-reference to which contract requirements from the RM are being addressed by each test procedure.
853	The ATP shall include an updated RM from the design review documents, to include the test stage at which each contract requirement will be demonstrated; and a cross-reference to the test procedure(s) that serves to address each contract requirement.
854	The ATP document shall be submitted to WRTA at least three weeks in advance of any intended testing.
855	The ATP shall reflect the following distinct testing stages for the proposed system: (1) Factory Acceptance Test (FAT); (2) Pilot Testing/Installation Testing; (3) System/User Acceptance Testing; and (4) Burn-in/Rigorous Testing.
856	FAT shall be completed as the PSDS software is being made available to the WRTA, and deficiencies shall be rectified before moving to the next testing phase.

857	FAT shall be witnessed by WRTA's representatives (WRTA staff and/or designated support consultants).
858	Pilot/Installation Testing shall be completed for at least one or more vehicles operated by all WRTA service providers. Pilot/Installation testing will include the Contractor, working with WRTA's IT staff, and operating the system in a test environment. Pilot/Installation testing will be conducted on-site at the WRTA. The Contractor will be required to submit proposed test procedures, which will need to include a cross-referencing to identify which procedure(s) demonstrate each requirement from the Requirements Matrix (RM). Any deficiencies observed in a four-week period following Pilot/Installation testing shall be rectified before the initiation of System Testing (ST). Vehicles used during Pilot Testing will be in operation for four weeks to observe issues that arise in daily operations.
859	Prior to commencement of Pilot/Installation Testing, the Contractor shall validate scheduling parameters and on-board data configurations to ensure that they are reasonable and accurate.
860	Pilot/Installation Testing shall be witnessed by WRTA representatives.
861	System/User Acceptance Testing shall be completed after the entire system has been installed, and deficiencies shall be rectified before the initiation of Burn-in/Rigorous Testing.
862	System/User Acceptance Testing will include operating the system using live data. This testing stage will be conducted on-site at WRTA. The Contractor will be required to submit proposed test procedures, which will need to include a cross-referencing to identify which procedure(s) demonstrate each requirement from the Requirements Matrix (RM).
863	System/User Acceptance Testing shall include the testing of all spare components.
864	System/User Acceptance Testing shall be witnessed by WRTA representatives.
865	Burn-in/Rigorous Testing shall involve revenue service use of the system over a 30-day period after the completion of System/User Acceptance Testing, and deficiencies shall be rectified before WRTA will grant Final System Acceptance (SA) for the system. This testing stage will be conducted on-site. The Contractor will be required to submit proposed test procedures, which will need to include a cross-referencing to identify which procedure(s) demonstrate each requirement from the Requirements Matrix (RM).
866	The WRTA may authorize the Contractor to proceed to the next testing stage with certain deficiencies not yet resolved.
867	The Contractor shall provide written notice to WRTA at least two weeks in advance of any testing, indicating the specific tests to be completed. The Contractor will coordinate the date, time and location of testing to minimize disruption of service.
868	The Contractor shall be required to reschedule testing if WRTA witnessing representatives cannot be present or if other circumstances prevent testing from taking place.
869	The Contractor shall provide written Test Results Documentation (TRD) after completing each stage of testing.
870	The TRD shall document the results of each ATP procedure and provide an updated RM that indicates which contract requirements have been demonstrated.
871	The TRD must be approved before WRTA grants System Acceptance.

872	System Acceptance will not be granted for the system until all contract requirements have been formally demonstrated through Burn-in/Rigorous Testing.
873	The RM shall be used as a “punch list” to track which requirements have not yet been demonstrated at each stage of testing.
874	A requirement classified as having been “demonstrated” during a certain testing stage can be subsequently redefined as having been “not demonstrated” if compliance issues emerge prior to System Acceptance.
875	11.6 Documentation
876	The Contractor shall provide User Manuals (UMs) for the users of the PSDS system, documenting use of all functions of the software.
877	The Contractor shall provide Vehicle Operator Manuals documenting use of the MDTs and on-board equipment.
878	The software application shall include context sensitive help capability.
879	The Contractor shall provide a Systems Manuals (SMs), documenting (1) the configuration of the PSDS system software; (2) PSDS system functions and operations; (3) scheduled maintenance required for the PSDS; and (4) database structure and data dictionary.
880	The Contractor must provide disaster recovery documentation highlighting how system can function and prevent any data loss in the event of a natural disaster or other unexpected events.
881	11.7 Training
882	The Contractor shall provide training courses for at least the following positions:
883	* Reservationist / Scheduler / Dispatcher
884	* Administrative Staff
885	* System administrator/IT staff
886	* Vehicle operators
887	* Customer service representative;
888	* Systems administrator;
889	* Database Managers
890	* Managers
891	WRTA will provide the actual number of staff for each of the above categories of trainees.
892	The Contractor will describe the necessary pre-requisite computer skills and knowledge expected for each of the training courses in order to develop training classes based on user skill level.
893	The Contractor shall provide all training materials in either Microsoft Office or Adobe PDF formats with permission to reproduce copies later on.
894	The Contractor shall provide additional training to the original trainees after Final System Acceptance for the system at no additional cost if major modifications are made to the system after the initial training due to system upgrades or changes made under warranty; and/or Final System Acceptance occurs at least three months after the completion of training, due to delays for which the Contractor is responsible.
895	The Training Plan, including the training schedule and course outlines, must be provided to WRTA for review at least three weeks in advance of the start of training. Training must be conducted prior to the User Acceptance Testing.
896	Each Proposer shall provide a sample Training Plan with the following details in their proposal:

897	• T otal number of onsite training sessions proposed;
898	• T otal number of web-based training sessions proposed;
899	• L ist of training courses;
900	• N umber of classes per course;
901	• M aximum number of attendees per class; and
902	• N umber of follow-up sessions (specify on-site or web-based) or itemize cost per session.
903	The Training Plan must be approved in writing by WRTA before the start of any training.
904	The Contractor shall furnish all special tools, equipment, training aids and any other materials required to train course participants, for use during training courses only.
905	The instructors shall demonstrate a thorough knowledge of the material covered in the courses, familiarity with the training materials used in the courses, and the ability to effectively lead students in a classroom setting.
906	If any instructor is considered unsuitable by WRTA, either before or during the training, the Contractor shall provide a suitable replacement within five business days of receiving such notice from WRTA.
907	The Contractor shall provide brief refresher versions of each training course to the original trainees between three to six months after System Acceptance of the system at no additional cost.
908	During the warranty period, the Contractor shall provide additional training to the original trainees after System Acceptance for the system at no additional cost if major modifications are made to the system after the initial training due to system upgrades or changes.
909	The Proposer shall provide the cost of additional training for staff after the System Acceptance period (new hires, etc.) on the Price Proposal Form.
910	12 Warranty
911	The Contractor shall provide a single point of contact for all warranty administration during the warranty period.
912	The Contractor shall confirm that it has reviewed and evaluated all information furnished by WRTA and has made all inquiries necessary such that the Contractor is fully aware of WRTA's business requirements and intended uses of system, as set forth or referenced in the Request for Proposals (RFP) and any Addenda, Amendments or Final Proposal Requests, as well as in discussions held previous to the Proposer's submission of the proposal and during the Pre-proposal Conference.
913	The Contractor shall warrant that the system satisfies the foregoing requirements in all material respects and will be fit for such intended uses.
914	The Contractor shall warrant that software (1) is free from defects in design, material and workmanship, and shall remain in good working order, and (2) function properly and in conformity with this Contract.
915	The Contractor shall provide any software updates and patches for the current software version at no cost to WRTA during the warranty period.
916	The Contractor shall warrant that WRTA shall acquire permanent title to all non-proprietary software provided under the Contract, free and clear of all liens and encumbrances.

917	The warranty period for the PSDS system shall run concurrently for all system components from the date of System Acceptance (SA), through to five (5) years from the date of SA, although the warranty must ensure that data is available for a minimum of seven years.
918	The Proposer shall offer pricing for an option to extend the warranty period for the PSDS system for additional years beyond five years. The WRTA may include an extended warranty in the contract with the Contractor. The Proposer shall itemize the cost of each extended warranty period and document any differences in the warranty terms for these option years in their proposal.
919	The Proposer shall describe the pricing and services offered as part of different levels of support available (e.g., four levels of support described earlier).
920	The Contractor shall warrant that the documentation provided shall completely and accurately reflect the operation and maintenance of the software and provide WRTA with all information necessary to maintain the system.
921	If there is a change in the production configuration of the PSDS software being installed prior to Final System Acceptance, the WRTA may require that all previously installed software be upgraded to match the updated configuration.
922	The Contractor shall warrant compliance with all applicable laws and regulations relating to the project.
923	During the warranty period, the Contractor shall, at no cost to WRTA, furnish such materials, labor, software, documentation, services and incidentals as are necessary to maintain the system in accordance with the warranty.
924	The Contractor shall warrant that its employees, agents and Subcontractors assigned to perform services under this contract shall have the proper skill, training and background to perform in a competent and professional manner, and that all work will be so performed. WRTA reserves the right to remove any subcontractors if their work is deemed incompetent or unprofessional.
925	In addition to the foregoing warranties, the Contractor shall assign to WRTA, and WRTA shall have the benefit of any and all subcontractors', suppliers', and vendors' warranties and representations with respect to the deliverables provided.
926	In its agreements with subcontractors, suppliers and vendors, the Contractor shall require that such parties (1) consent to the assignment of such warranties and representations to WRTA; (2) agree that such warranties and representations shall be enforceable by WRTA in its own name; and (3) furnish documentation on the applicable warranties to WRTA.
	Footnotes:
	³ PS "Source Code" means the source code, design and associated preliminary materials, object code, file formats and specifications, build and compilation scripts and instructions, databases, configuration data, audio, video, literal and other media and materials, including accompanying documentation relating to or comprising the software built by a WRTA contractor and is owned by the WRTA.
	⁴ PS "Non-Live" database refers to a "read-only" database that is not being accessed by any application. This database may not be up and running all the time and can be shut down or restarted, as needed.

⁵ Please review the Complexities Created by CCAM Cost Sharing Principles section in the Cost Allocation Technology for Non-Emergency Medical Transportation Final Report (located at <https://www.transit.dot.gov/sites/fta.dot.gov/files/2020-09/Cost-Allocation-Technology-for-Non-Emergency-Medical-Transportation-Final-Report.pdf>) which discusses the difference between least path distance miles and revenue miles.

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Appendix C: Specifications of WRTA's Operations and Maintenance Facility Wi-Fi Hotspots



