

CONTRACT MODIFICATION

1. CONTRACT NO: 200335	2. CONTRACT MODIFICATION NO.: 1	3. EFFECTIVE DATE OF C.M.- Section 9	4. CONTRACTOR NAME: Swiftly, Inc.
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5. AGREEMENT TO MODIFY CONTRACT:


The parties hereto agree to modify the Contract identified in Block 1, above, as described in Block 10, below, pursuant to the terms and conditions of the Contract. Except as modified herein, all other provisions of the Contract (including, but not limited to, price, delivery, and completion date) remain unchanged.

6. AMOUNT OF THIS CONTRACT MODIFICATION: **NO CHANGE**

7. TERM OR PERIOD OF PERFORMANCE: **NO CHANGE**

8. CONTRACTOR'S EXECUTION:

Name & Title: Jonathan Simkin, CEO
(print or type)

Signature: 
Date Executed: 8/27/2019

9. CAPITAL METRO - CONTRACTING OFFICER'S EXECUTION:

Name: Kirk Perry, Contracts Administrator
(print or type)

Signature: 
Date Executed: 8-28-19

10. DESCRIPTION OF CONTRACT MODIFICATION:

This modification makes the following change to the Contract for all pertinent purposes:

1. Refer to Exhibit F Scope of Services. Exhibit F shall be replaced in its entirety with Exhibit F-Revised-1, attached hereto and made a part hereof for all pertinent purposes. Changes are reflected with highlighted text and a line in the margin. Language is added for application access for community and public sector partners.

For and in consideration of the amount stated above, which is the final contract modification amount agreed to by both parties, the receipt of and sufficiency of which is hereby acknowledged and confessed. The contractor has released, acquitted, and forever discharged and by the presents does for itself, its successors and assigns release, acquit and forever discharge Capital Metropolitan Transportation Authority (Capital Metro) from and against any claims, debts, demands, or cause of action which the contractor has or may have had a result of furnishing labor, supplies, or materials for the change orders stated above. This modification may be executed in multiple originals, and an executed facsimile shall have the same force and effect as an original document.

END OF MODIFICATION #1

EXHIBIT F Revised-1 GENERAL TRANSIT FEED SPECIFICATIONS FOR REAL-TIME DATA SYSTEM SCOPE OF SERVICES

1. GENERAL SCOPE

1.1 Introduction. Capital Metropolitan Transportation Authority (“CMTA” or “Capital Metro”) is requesting proposals for services to provide and integrate a commercial off-the-shelf (COTS) General Transit Feed Specification for Real-Time data solution (hereinafter “GTFS-RT”) that will interface with existing software to create a GTFS-RT feed that will be consumed by internal and external applications to provide “real time” data for Vehicle Positions and Trip Updates. The selected Contractor (hereinafter the “Contractor”) shall supply hardware, software and all proper and necessary license requirements and services to fully configure and provide a GTFS-RT solution. The implementation approach must incorporate the agency’s current transit data systems and custom software developed by CMTA as part of the Real-Time feed. At the same time, the approach must maximize the out-of-the-box functionality to minimize development of customizations and complexity for future supportability and upgradability. The selected Contractor must assess, recommend and configure the GTFS-RT solution through the Plan and Design phases, to determine any impacts to the current CMTA environment including any specific technical modifications needed to carry out the intent herein.

1.2 Background. CMTA is the regional public transportation leader for Central Texas headquartered in Austin, Texas with 30 million boardings each year across bus, rail, and paratransit services. See <https://capmetro.org/about/> for additional background including ridership and budgets. CMTA is a public agency responsible for providing mass transit service within the City of Austin and the surrounding communities of Leander, Lago Vista, Jonestown, Manor, San Leanna, and Point Venture, as well as the unincorporated area of Travis County within Commissioner Precinct 2 and the Anderson Mill area of Williamson County. Capital Metro services include bus, ride-share programs, special event services, and special transit services for the mobility impaired.

1.3 Current GTFS-RT Environment. The current system consists of GTFS data generated by Trapeze which is transformed using CMTA’s FME workbench (an ETL tool) to a more user-readable format and validated by internal tools before being sent to HaCon, CMTA’s traveler tool vendor (for the capmetro.org website and the mobile application), Google and the [Texas Open Data Portal](#). Detours and service alerts are generated using a Service Alert Visualizer (SAV) and manually uploaded to HaCon for inclusion in the [Trip Planner](#). Vehicle trip updates are extracted from CMTA’s Computer Aided Dispatch and Automatic Vehicle Location (CAD/AVL) software, OrbCAD. Vehicle position is also provided by onboard wireless routers (SierraWireless MG90) but not incorporated in the current GTFS-RT feed.

2. GTFS-RT SOLUTION FUNCTIONAL REQUIREMENTS

2.1 Functional requirements. The requirements in this Exhibit F Scope of Services and Exhibit G Compliance Matrix are functional in nature and do not encompass all requirements. The Contractor shall determine, through the Plan and Design phases, the impacts to the rest of the system and specific technical modifications needed to carry out the intent herein. The Contractor shall document and discuss said needs with Capital Metro and implement the agreed-upon final solution accordingly.

2.2 Inclusions. The minimum functional requirements are listed below.

- 2.2.1 Deliver a GTFS-RT system that provides real-time and predictive data that may be consumed by internal and external systems with a frequency of no more than ten (10) seconds
- 2.2.2 Fully integrate with CMTA's existing mobile application and web traveler tools provided by Bytemark/HaCon
- 2.2.3 Utilize historical data to continually improve real-time arrival predictions
- 2.2.4 Integrate live data from third-party sources e.g. Google Traffic to inform real-time data
- 2.2.5 Optional - provide analytics tool for CMTA use to run reports for on-time performance, runtime analysis, (e.g. traffic patterns, dwell times, route/trip drive time, stop relocation analysis, lost time, Transit Signal Priority (TSP) metrics and other performance measures and other performance measures
- 2.2.6 Optional - develop up to five (5) custom reports specific to CMTA's data/requirements
- 2.2.7 **Access – For purposes of clarity, the Authority and Contractor acknowledge and agree that, at no additional cost to the Authority, the following partners may access the licensed applications under the Contract, including Transitime and Insights, as authorized users under the Authority's licenses: City of Austin, University of Texas, Austin Community College, and Travis County. These partners may not use the Swiftly platform in a competitive manner and will only use Swiftly for the benefit of the Authority." The Authority will provide Contractor with written notice of a Partner User who requires access and the type of Authority data to be accessed. Contractor will coordinate with the Authority to establish such access.**

2.3 Hosted Solution. Capital Metro seeks a hosted software solution with data fed from a server in CMTA's DMZ that will be published to the provider. The solution will be subject to the requirements found in Exhibit J - Additional Terms and Conditions for the Performance of Information Technology (IT) Products and Services-Hosted Solutions. CMTA will be responsible for providing any hardware requirements for the solution including, but not limited to, servers, workstations, and other hardware that may be necessary or preferred for full access to and functional operation.

2.4 Integration. Integration will be achieved by ingesting the GTFS data provided by Capital Metro, the GTFS-Detour data generated by Capital Metro internal tools and the vehicle location data from the Sierra MG90 routers as well as the CAD/AVL data from the OrbCAD system. The proposed solution should then generate a hosted GTFS-RT feed (vehicle location & trip updates) consumable by our partners (e.g. Dynamic Messaging Signs, mobile app, website trip planner), and the public.

2.5 Systems Environment. Systems Environment. CMTA uses several systems to create its GTFS and GTFS-RT feeds. CMTA has limited documentation on APIs for 3rd party products. Contractor is responsible for coordinating with the vendors listed below to obtain any information and assistance needed and any cost associated therewith. See System Architecture Diagram, Attachment 1. Systems that generate or utilize the GTFS-RT data include:

- 2.5.1 Conduent - CAD/AVL Intelligent Transportation System (OrbCAD) - **Static schedule data, GPS, Route/Block, Vehicle ID**
- 2.5.2 Verizon Network - Cellular provider for vehicle wireless routers - **GPS, Vehicle ID**
- 2.5.3 Trapeze - Scheduling software – **Generates Static schedule data**
- 2.5.4 Service Alert Visualizer (SAV) – **Generates Static schedule detour data**
- 2.5.5 Texas Open Data Portal - **Consumes Static schedule data and GTFS-RT feed**
- 2.5.6 Bytemark/HaCon - Mobile App and Web Traveler Tools - **Consumes GTFS-RT feed**
- 2.5.7 waySine/CHK - Solar-powered Dynamic Message Signs Pilot - **Consumes GTFS-RT feed via the HaCon API**
- 2.5.8 Daktronics - Dynamic Message Signs - **Consumes GTFS-RT feed - Will continue to use the OrbCAD ITS system feed and not this solution**

2.6 Data Migration - Optional. Integrate CMTA historical on-time performance data into analytics tools and reports.

2.7 Data Archiving/Disaster Recovery/System Availability. The solution shall meet or exceed CMTA's required availability and recovery requirements:

- 2.7.1 System availability 24 x 7 x 365, 99.99% availability.
- 2.7.2 Downtime procedures for scheduled maintenance windows or outages with option for after regular office hours as needed.
- 2.7.3 Disaster recovery plan.
- 2.7.4 Security Plan to include but not limited to: Data breach process, Auditing schedule, Standards used, Data Privacy process

3. PHASE TASKS AND DELIVERABLES

The Contractor shall perform the following phase tasks and provide the associated deliverables required to deploy all hardware, software, updates and configurations resulting in a fully functional and tested system. Contractor shall obtain CMTA review of all deliverables and make changes and updates to deliverables per CMTA review as needed. CMTA acceptance of all deliverables for each phase as evidenced by a signed phase acceptance certificate is required prior to invoicing.

3.1 Plan. Meet with CMTA project manager and business area stakeholders for project planning, including review of proposed schedule, roles and responsibilities, as well as conduct a complete review of functionality to be delivered, and other project activities. Plan Deliverables:

- 3.1.1 Project organization chart
- 3.1.2 Project schedule (draft)
- 3.1.3 Action Items and Issues log (AIL)
- 3.1.4 Infrastructure and Integration Audit
- 3.1.5 Initiate Risk Register/ Risk Management Plan (Draft)
- 3.1.6 System Implementation Plan (Draft)
- 3.1.7 Compliance Matrix Review and Update
- 3.1.8 Kick-off meeting and base product demo with stakeholders to review and clarify requirements including confirmation of any required updates to CMTA's environment regarding licensing, network infrastructure etc., identified in the proposal

3.2 Design. Contractor's technical requirements gathering and detailed design, beginning with an assessment and discussion with affected CMTA departments. This phase will determine system architecture and integration and how it will be managed. The Contractor will work with CMTA to develop materials that will provide a basis to help instruct CMTA stakeholders in the easiest and most efficient way to use the system to their utmost advantage. Design Deliverables:

- 3.2.1 Assessment; Documentation of Findings
- 3.2.2 Configuration Management Document ("CMD" - Draft)
- 3.2.3 System Implementation Plan (Final)
- 3.2.4 Quality Assurance Plan (Draft)
- 3.2.5 Risk Management Plan participation (Final)
- 3.2.6 Installation/Deinstallation (Rollback) Plan (Draft)
- 3.2.7 Review of Design and System Implementation Plan with Stakeholders
- 3.2.8 Update of Design based on review
- 3.2.9 Project Schedule (Baseline) with Resource Loading
- 3.2.10 Compliance Matrix Review and Update

3.3 Develop. Development, configuration and installation of the solution and integration as well as installation within a development and a test environment so configuration and testing of the required functionality can be started. This task will include setting the initial configuration values by the Contractor so they can be tested and changed if needed. During this phase, the rollout of the system must be worked on to include training all IT and Operational staff who will use or have on-going support roles. Develop Deliverables:

- 3.3.1 Quality Assurance Plan Including QA/QC Checklist (Final)
- 3.3.2 Development Environment Installation
- 3.3.3 Test Environment Installation
- 3.3.4 Supporting Infrastructure Implemented
- 3.3.5 Application and Functionality Development
- 3.3.6 Test Procedure/Plan including Test Scripts, Acceptance Test Criteria Demonstrating that Each Component of the Compliance Matrix is Developed and Meets Requirement (Draft)
- 3.3.7 Update Compliance Matrix with Test Number(s)
- 3.3.8 CMD Update
- 3.3.9 Review of CMTA Changes to Business Process Flowcharts
- 3.3.10 High-level Training of CMTA Staff to Prepare for Test Phase
- 3.3.11 Role-based Training Plan for all User Types (Draft)
 - 3.3.3.1 Submit a training plan including the training schedule and course outlines for review a minimum of three weeks prior to the scheduled classes
 - 3.3.3.2 Training shall be on site.
 - 3.3.3.3 Provide all equipment, tools, training aids and other materials necessary to train participants (CMTA will provide space and laptops)
 - 3.3.3.4 Schedule the training staff to be on site timely to ensure equipment, materials, student accounts and classroom are set up to be fully ready for when class begins
 - 3.3.3.5 Arrange for an instructor(s) with thorough knowledge of the material covered in the course(s) and the ability to effectively lead the knowledge transfer
 - 3.3.3.6 Provide customized training manuals specific to CMTA's environment in Microsoft Word and PDF. Contractor shall provide hard copies in the number of agreed-to number of training participants as well as the Instructor versions
- 3.3.12 Warranty and Maintenance Plan Review
- 3.3.13 Review and Feedback of CMTA Support Responsibility Matrix

3.4 Test. Integration and testing by Contractor and CMTA to determine that all functionality required of the installed EPPM solution, software and integrations into the existing environment is in place and working. The testing phase shall not be deemed complete until all functional requirements of the newly implemented system have been fully tested and approved by the project team. The Contractor shall provide a Test Procedure document with test scripts, use cases and acceptance test criteria for review and acceptance by CMTA for all phases. Only CMTA data is to be used for testing. Before CMTA performs any testing, the Contractor shall provide the written test results of the full test procedure/plan demonstrating no Class 1 or Class 2 failures. Test Deliverables:

- 3.4.1 Installation of required Software
- 3.4.2 Training Plan (Final)
- 3.4.3 Document Procedures and Migrate Environment from Development to Test
- 3.4.4 Contractor's Successfully Test Procedure/Plan Results
- 3.4.5 Documentation including User and Training Manuals (Draft)
- 3.4.6 Test Procedure/Plan including Test Scripts, Use Cases and Acceptance Test Criteria (Final)
- 3.4.7 System Acceptance Test (SAT) Plan Developed (Subset to Use to Determine Go, No-Go before Go Live)
- 3.4.8 Security Penetration Test
- 3.4.9 Disaster Recovery Test – End-to-End
- 3.4.10 Test Failure Log & Remediation Plan. Contractor shall lead testing of the solution including integrations and resolve all Significant (Class 1) and Severe (Class 2) Test Failure Results (TFRs). Contractor shall

endeavor to resolve Minor (Class 3) TFRs during this phase; however, the requirement for Class 3 resolution is during the Closeout phase. Definition for each class are as follows:

Severe - A Class 1 test failure is a severe defect that prevents, inhibits, or significantly impairs further testing or operation of the system.

Significant - A Class 2 test failure is a significant defect that does not prevent further testing or has a minimal effect on normal operations of the system.

Minor – A Class 3 test failure is a minor or isolated defect that does not impact or invalidate the testing or normal operations of the system.

- 3.4.11 Regression Testing of the Entire Test Plan for Any Class 1 and Class 2 Failures
- 3.4.12 Introduction to Contractor's Support Manager and Team
- 3.4.13 Detailed Processes and Contact Information for Post Go Live Support
- 3.4.14 Compliance Matrix Review and Update

3.5 Deploy/Go Live. Deploy: once all the test failures have been corrected, the Contractor shall install and configure the software and incorporate it into the live environment. Go Live: the system shall go live and be monitored for the first 30 days of operation. If Severe (Class 1) or Significant (Class 2) issues arise, the Go-Live period may be cancelled, extended or restarted at CMTA's discretion. The Contractor shall be required to participate in the monitoring of the system and respond to issues so they are quickly resolved. Deploy/Go Live Deliverables:

- 3.5.1 Conduct Training for all User Types
- 3.5.2 Document Procedures and Migrate Environment from Test to Production
- 3.5.3 QA/QC checklist Sign off
- 3.5.4 Update to Disaster Recovery Plan
- 3.5.5 Delivery of all Documentation including User and Training Manuals (Revise Draft)
- 3.5.6 Deployment, Implementation, Configuration and Integration of the GTFS-RT data feed with all environments
- 3.5.7 System Acceptance Test (SAT)
- 3.5.8 Resolution of SAT TFRs
- 3.5.9 Go Live Schedule and Transition Plan
- 3.5.10 System Go Live
- 3.5.11 Technical Lead On-site During First Week of Go Live, or Longer if System Issues are Experienced
- 3.5.12 Review and coordinate with CMTA to update CMTA Process Flowcharts
- 3.5.13 Revised (final) Copies of all Required Documentation including User and Training Manuals
- 3.5.14 Compliance Matrix Review and Update

3.6 Close. Obtain acceptance by CMTA to formally close the project. Apply appropriate updates to project documents. Provide contract close out documentation as requested and Close Deliverables:

- 3.6.1 Follow-up training on areas identified during Go Live and Training Documentation (Final)
- 3.6.2 Final recommendations for CMTA-updated Process Flowcharts
- 3.6.3 All AIL items closed
- 3.6.4 Resolution of all Minor (Class 3) TFRs
- 3.6.5 Final Documentation for Environment Refresh (Develop-Test-Production)
- 3.6.6 Disaster Recovery Plan (Final)
- 3.6.7 Configuration Management Documents (CMD – Final)
- 3.6.8 APIs and All Documentation Related to All Integrations (Final)
- 3.6.9 Warranty and Maintenance Procedure Review and Forms
- 3.6.10 As-builts: updates to any documentation including design document changes

4. PROJECT MANAGEMENT

The Contractor shall manage the project continuously beginning with the Notice to Proceed through Close, and shall lead the project and is expected to drive and manage all aspects of the project including the management of any subcontractors. CMTA shall manage and coordinate all its resources. A full-time Project manager or technical lead is required to be onsite at least two weeks per month during each phase of the project. A PMP is preferred and shall be approved by CMTA. Project Management Deliverables:

- 4.4.1 Active Partnership with CMTA in assuring Project Success
- 4.4.2 Onsite At Least Once a Month During Each Project Phase (May Be Performed by Technical Lead Depending Upon Scheduled Activities By Agreement with CMTA)
- 4.4.3 Single Point of Contact for All Communication Regarding Work Under This Contract
- 4.4.4 Task Coordination with The Designated CMTA project manager
- 4.4.5 Regular Communication with The Project Manager and any other staff designated to discuss progress, critical risk factors, schedule, or unique issues that may surface.
- 4.4.6 Specification of CMTA's staff resources needed for project success with at least two weeks' notice in advance within the project schedule.
- 4.4.7 Support Responsibility Matrix Review and Updates as Needed

- 4.4.8 Semi-monthly Status Meetings with Updated Schedule and AIL
- 4.4.9 Review and Feedback of Change Requests as Needed
- 4.4.10 Monthly Risk Registry Updates
- 4.4.11 Monthly Management Review Meetings
- 4.4.12 Monthly Project Status Report
- 4.4.13 Quarterly attendance and Status Presentation at Steering Committee Meetings
- 4.4.14 Responsible for ensuring all project documentation, including meeting minutes, AIL updates, project schedule and plans are kept updated in the CMTA SharePoint site

5. Payment Milestones. Payment for each of the above described project phases shall be paid in the following percentages of total Project Costs:

- 5.4.1 Plan: 10%
- 5.4.2 Design: 15%
- 5.4.3 Develop: 15%
- 5.4.4 Test: 15%
- 5.4.5 Deploy/Go Live: 30%
- 5.4.6 Closeout: 15%

6. Payment Method. Payment will be governed based on:

- 6.4.1 Notification of Plan Phase Completion with Proof of Deliverables
- 6.4.2 Sign off on Go Live Phase Acceptance Certificate
- 6.4.3 Phase Invoice upon Receipt of CMTA Authorization to Invoice which must contain the CMTA signed Acceptance Certificate

7. Contract Completion/Termination. Within five (5) days of the expiration or termination of a final agreement for any reason, or upon CMTA's request, Contractor will provide CMTA with a copy of all relevant portions of CMTA data, without limitation, from the solution and associated servers or other storage means and assist with and accommodate transition/transfer of such data to CMTA or another provider. The format of the data transition shall be determined by CMTA.