METROLINK.

SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY

900 Wilshire Blvd. Suite 1500 Los Angeles, CA 90017

metrolinktrains.com

AMENDMENT NO. 3 TO CONTRACT NO. H1656-15

BETWEEN

SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY

AND

MASABI, LLC

FOR

MOBILE/ONLINE TICKETING

This Contract Amendment, effective June 26, 2019 is entered into by and between the SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY (hereinafter "Authority") and MASABI, LLC (hereinafter "Contractor/Consultant").

R E C I T A L S

WHEREAS:

I.   Authority and Contractor/Consultant entered into an agreement for Mobile Online Ticketing on March 15, 2015.

II.   Effective March 3, 2017, the Authority amended the contract under Amendment No. 1 to increase contract authority by $2,246,000 for a new total contract authorization not-to-exceed amount of $3,846,000 and revise Attachment A, Scope of Services.

III.   Effective September 26, 2018, the Authority amended the contract under Amdnement No. 2 to increase contract authority by $68,000 for a new total contract authorization not-to-exceed amount of $3,914,000 and revise Attachement A, Scope of Services.

NOW, THEREFORE, Authority and Contractor/Consultant hereby amend the contract under Amendment No. 3 to revise Attachment A, Scope of Services as follows with no additional cost:

I.   Attachment A, Scope of Services is deleted in its entirety and replaced with the revised Attachment A, Scope of Services (attached).

The parties have caused this Contract Amendment to be executed as of the day and year written above.

MASABI, LLC

SOUTHERN CALIFORNIA REGIONAL
RAIL AUTHORITY

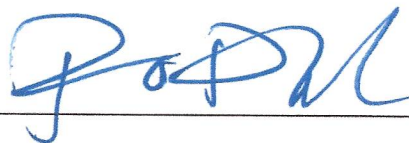By: _S.H. Poulton_

Sara Poulton
Vice President of Services

By: _____

Sonny Ibrahim
Interim Director, Contracts,
Procurement & Materials
Management

APPROVED AS TO FORM:

Don O. Del Rio
General Counsel

MASABI, LLC

SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY

By: _S. H. Poulton_____

Sara Poulton
Vice President of Services

By: _Sonn_____

Sonny Ibrahim
Interim Director, Contracts,
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Don O. Del Rio
General Counsel

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ATTACHMENT A
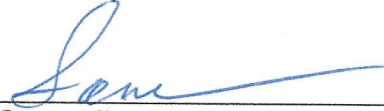# SCOPE OF SERVICES

**SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY
METROLINK COMMUTER SYSTEM**

CONTRACT NO. H1656-15

MOBILE/ONLINE TICKETING

ATTACHMENT A — SCOPE OF SERVICES

1. Overview

The Southern California Regional Rail Authority (SCRRA), operating a commuter rail system – "Metrolink" – desires to provide greater choice in fare purchase options to our riders. To achieve our goal we are pursuing both Mobile and Online (print at home) ticketing solutions for the Authority which needs to connect and integrate into other transit agency systems. The proposed mobile/online solution will need to allow passengers seamless travel throughout the SCRRA service area which is a Joint Powers Authority (JPA) that serves and connects the following five County Member Agencies but are not limited to the following:

- Los Angeles County Metropolitan Transit Authority
- Orange County Transit Authority
- Ventura County Transit Commission
- Riverside County Transit Commission
- San Bernardino Associated Governments

The proposed solution shall provide the Authority's passengers with reliable, secure, intuitive interfaces for various ticket types, including: One-way and Multi-ride Tickets, 7 Day Passes, Monthly Passes, and Weekend Day Passes, as well as promotional tickets and pricing options. The system also needs to support discounts for Student, Senior/Disabled, Children, as well as for off-peak travel.

Proposed solutions shall provide "ease of use" functionality in fare enforcement. The solution shall offer both visual and electronic (bar code, QR, and/or scanner) forms of fare verification to support the Authority and its partner agencies (Amtrak, etc.).

While the expectations are that this will be a phased deployment with the initial phase being a "Metrolink" only – non-transfer introduction period, the initial offering must be relatively mature and adaptation ready as subsequent phases affecting transfers to other agencies throughout our system; parameters of which are yet to be decided, will be "last mile" focused requiring support for seamless regional travel throughout the five Counties that encompass the Authority's service area. Solutions will provide for, and contractors will demonstrate, the capability to support transfer agreements with participating municipal bus and rail systems throughout our service area. Said transfer technology must be "real" and demonstrable before the close of the introductory phase of launch – close date to be determined.

The Contractor shall provide the primary Mobile/Online solution capabilities and interface and shall provide Metrolink with the necessary support required to assist in the early stages of the implementation of the mobile/online solution.

The Authority requires a turnkey Mobile and Online Ticketing solution. This shall include design, manufacture, testing, delivery, site preparation, installation, and assistance with associated hardware, software, communications, all system interfaces, all other system components, operations, maintenance, licenses, support and training. Contractor is responsible for all work required for the Mobile and Online Ticketing to be fully operational except where tasks or responsibilities of the Authority, other Contractors operating on behalf of the Authority, or others are specifically stated in this Statement of Work.

While Contractor shall provide all services described in this Scope of Services, many of the services shall be supported using systems within the Authority's infrastructure to be furnished by Authority personnel and located at its facilities.

It is fully expected that additional participants will need to interface with the mobile/online solution in the future. Contractor shall be cognizant of current and future regional system participants when designing the online and mobile application interfaces. Expected future participants include, but are not limited to:

- City of Los Angeles
- Foothill Transit
- Santa Clarita Transit
- Antelope Valley Transit Authority
- Gardena Bus Lines
- City of Montebello Bus Lines
- Norwalk Transit
- LADOT
- Culver City Bus
- Torrance Transit
- Long Beach Transit
- Santa Monica (Big Blue Bus)
- Glendale Bee
- Pasadena ARTS
- Burbank
- Carson / Compton / Lawndale
- LA World Airports
- Redondo Beach
- Palos Verdes
- Monterey Park / Baldwin Park / Huntington park
- LA County DWP
- OCTA
- RTA

- Sunline Transit Agency
- City of Banning
- City of Beaumont
- City of Corona
- City of Riverside
- Palo Verde Transit Agency
- Vista Inner City Bus
- Vista Dial-A-Ride
- Coastal Express
- Omnitrans
- Barstow Area Transit
- Morongo Basin Transit Authority (MARTA)
- Needles Area Transit
- V Trans
- Access Services Incorporated (ASI) Local Transit System Services (LTSS) All other Agencies in adjacent counties such as, Orange, Ventura, San Bernardino and Riverside, among others. San Diego MTS, San Francisco MTC, NCTD, Amtrak , Caltrains

While there are no specific plans, the Authority's mobile/online solution will not be limited to fare collections purposes alone.

2. Next Generation Mobile Capabilities

The Authority's desired platform shall have the four most desired mobile functions for commuters within the five-county-multi-agency Southern California service area:

- o 1) Ability to buy and use mobile tickets via visual authentication, QR code scanning, or NFC
- o 2) Ability to view real-time passenger information and plan trips.
- o 3) Integrated Fare Enforcement tools
- o 4) Interface with Amtrak California's QR Code tracking system. This will include the ability to read a QR Code on the Authority's monthly pass by the Amtrak conductor. The Authority will need to be able to read the QR code on the Amtrak month pass holders' tickets. *Option 1) By virtue of SCRRA's desired integration with fare collection systems throughout our member agencies, the ability to manage and top up a physical smartcard and add new mobile fare products and functionality within the existing Cubic back-office systems and services for TAP and LA Metro. This integration provides for joint reporting, reconciliation, and support. Most importantly, it will allow the Authority's riders to tap through LA Metro faregates.

* Option 1 may be executed at any time by the Authority and contractor must Demonstrate ability to provide interfaces as noted.

Contractor must be able to demonstrate at a minimum, but not limited to:

- That the proposed solution is already in place with agencies similar to the Authority's system with demonstrated ability to support a multi-agency operating environment (Example is Rail, Bus & Rail2Rail).
- Support for Amtrak inter-operable fare media providing support for the Authority's Rail2Rail Program reading the QR code on the monthly pass holders mobile ticket.
- Highly capable enforcement capabilities for fare inspectors and transit police. The Authority's desired fare enforcement requirements need to support QR-scanning, and NFC for closed-loop transit card and open-loop contactless bankcard payment validation; as well as issuance of electronic citations. Electronic citations are issued from a portable hand-held device, phablet or tablet to a Bluetooth enabled printer.
- Robust trip-planning and RTPI capabilities via various APIs (e.g.: Google GTFS-R, Open Trip Planner).
- Option to use Bluetooth Low-Energy to provide for push of RTPI from fixed BLE beacons at rail platforms.
- Operational support to agencies in the form of 24/7 operations support and account management and training teams.

3. Mobile Ticketing Components

- Passenger app for iOS, Android and Windows operating systems that supports the ability to buy and use agency fares and access mobile services such as trip planning and arrival times.
- E-Commerce website that allows users to create and manage accounts; and purchase fare media online, then have those purchased fares appear in the passenger app.
- Enforcement capabilities that allows fare inspectors to scan QR codes in passenger app tickets and validate ticket credentials.
- Back-office management software that allows agency personnel to manage fare structure, view real-time sales and transaction data, view geo-analytics of system use and passenger behavior, manage ticket appearance and security features, and run custom reports.

4. Ticket Design & Security Capabilities

- Ability to create custom, animated tickets for visual authentication through back-office software suite
  - Change colors, components, speed, rotation, opacity, and duration of animation.
  - Integrate image layering to make images overlap and therefore much more difficult to copy.
  - Automate changes for monthly, weekly, or other time-fixed schedules or rules.
- Ability to create special events tickets or merchant branded tickets for community events or commercial/member agency partnerships.

- Support for interactive touch feature that proves animated ticket is not a video replay.
- Ability to integrate alpha-numeric day codes or security codes that correspond to other agency fare media.
- Support for displaying time stamps for ticket validation and expiration.

5. User-Experience Capabilities

- Ability to use tickets for multiple riders from one device in tandem as a multiple passenger feature.
- Ability to buy and use tickets without creating an account as an Anonymous purchase feature.
- Ability to use more than one payment mechanism for checkout as a Split purchase feature.
- Ability to use tickets in an off-line environment or dead-spots (cellular or wi-fi).
- Ability to purchase tickets from e-commerce website and have those tickets appear on the passenger app.
- Ability to access Order History from the app and online.
- Ability to change password for app log-in directly from the app and from e-commerce website.

6. Fare Enforcement Capabilities

- Ability to see location where user validated ticket.
- Real-time verification of ticket usage to show if user's tickets have been purchased and/or previously validated.
- Ability to flag citation in the app and track when fare inspectors issue written warnings or lawful citations for expired fares or other reasons.
- Support for external hardware extension that provides laser-scan capability, extended battery life, and ruggedized shell (e.g.: Linea Pro 4/5 or equivalent).
- Support for agency device management and provisioning to allow agency to activate and de-activate devices remotely preventing unauthorized access.
- Ability to see list of alpha-numeric day codes or other security codes used in fare media.
- Ability to update the Fare Enforcement app remotely and add new features and security updates that can be pushed to device while in the field without an "app update".
- Ability to scan and validate QR codes of existing paper-tickets.
- Ability to fill out and issue citations via Bluetooth tethered printer.

7. Back-Office Capabilities

- Ability to manage fare structure and product tax requirements.
    - Change pricing.
    - Change animation and visual security features such as time stamps.
    - Ability to enable or disable individual ticket types.

- o Ability to set rider class.
- o Ability to set geo class or zones.
- Ability to manage the sale of all fare products using serialized Inventory Management process. System shall allow agency to authorize set number of tickets to be sold, then gives administrators ability to authorize or curtail additional inventory.
- Ability to provide refunds to riders.
  - o Refund all unused tickets.
  - o Refund select tickets.
  - o Refund specific monetary value.
  - o Credit tickets.
- Ability to provide PCI Level-1 certified payment processing.
  - o Option for indemnified payment support (indemnifies agency against PCI liability, fraud, chargebacks, or bank fees).
- Ability to see sales and transaction data in real-time, with capability to select custom date ranges for selected data.
  - o Ability to select time-of-day for viewing data (ex: peak hours data).
- Ability to view geo-analytics on live map.
  - o View location of fare purchase.
  - o View location of ticket validation.
  - o View location of tickets scanned by fare enforcement personnel.
  - o Sort map data by User type.
  - o Sort map data by Ticket type.
- Ability to easily export all data for integration with other software systems or tools:
  - o .csv
  - o .xml
  - o JSON
  - o .PDF
- Ability to run Sales reports
  - o Inventory serial ID
  - o Date ticket was used
  - o Date if refunded
  - o Fare Type
  - o Fare Value
  - o Payment card last four digits
  - o Type of payment
- Ability to run Geo-reports
  - o Purchase, validation, scan Latitude and Longitude
  - o Date of action
  - o Order ID
  - o Rider Type
  - o Ticket ID
  - o Ticket Type
- Ability to run Usage Summary reports
  - o Number of new users
  - o Attrition / Retention analysis

- o Total revenue
- o Number of riders using system
- o Number of tickets purchased
- o Number of tickets used
- o Number of users in system
- Ability to run User statistics reports
  - o Total number of riders by type
  - o Percentage of rider type
  - o Revenue per rider type
  - o Percentage of revenue for rider type
  - o Type of rider
  - o Total count for all riders
- Ability to run Ticket Statistics report
  - o Count of ticket type
  - o Percentage for type of ticket
  - o Revenue for ticket type
  - o Percentage of revenue for ticket type
  - o Ticket type
- Ability to run Revenue Summary report
  - o Total revenue for period
  - o Total refunds for period
- Ability to run Enforcement report
  - o Enforcement by individual inspector
  - o Enforcement by ticket type
  - o Enforcement by rider type
  - o Enforcement by latitude and longitude

8. Marketing Capabilities

- E-commerce website should have the ability to be integrated into MyMetrolink online subscription portal. The Authority captures customer data through MyMetrolink and information is stored in Salesforce.com.
- Customer call center should have the ability to obtain customer record and mitigate customer issues.
- Mobile/Online platform must have the ability to use promotional codes that allow for discounted tickets, trial tickets and special tickets that will be utilized by the Marketing and Customer Engagement departments for marketing campaigns and customer related issues.
- Must demonstrate ability to integrate a loyalty program. The Authority is interested in implementing a loyalty program as an integrated part of mobile and online ticketing. This could be in the form of points, miles or another measurement and be redeemable for certain rewards.
- Push notifications should be available (using geo-fencing) to customers who approach a designated area (typically around a station) that can communicate a destination, promotion, train status update or third-party advertisement.

- Look and feel of mobile and online ticket should be branded by the Authority. That design shall remain the property of the Authority.
- Ability to offer multiple promotional tickets (Angels Express, Rail Series).

9. Integration Capabilities

Integration Requirements for Optical Reader Installation, Development and Maintenance on Metro Fare Gates

- Development*. Contractor will perform all software development, unit testing, configuration, integrations, and necessary enhancements to the JustRide platform to support this program.
- Configuration and lab testing*. Contractor will work with Cubic verify the functionality of the software API and barcode scanning hardware. Upon completion, Contractor will work with Cubic to display this functionality at the Metro lab.
- Hardware purchase. Contractor will procure all hardware. Delivery times vary but Contractor recommends one-month procurement timeframe for delivery of all required devices. Payment due upon order confirmation to ensure project timeline.
- Pilot installation and testing. Contractor recommends that Metrolink start with a pilot phase at a limited number of stations. During this phase, Contractor will be in a heightened support mode and available in Los Angeles to address any issues. Recommended pilot length is 1-2 weeks.
- Full gate deployment and installation. Based on successful pilot results, remaining stations can be deployed based on Cubic support for all installation needs.

Dependencies and Constraints

*Dependencies on Cubic. Configuration and lab testing must be completed no later than April 28, 2017.

10. Project Plan & Implementation Testing

- Contractor shall present a detailed project plan & test plan prior to the execution of a contract, upon award. For the RFP response, contractor shall provide sample plans used in other similar implementations. Details pertaining to the Authority's implementation will be mutually agreed upon prior to implementation and documented by contractor after award.

11. Free-Form – Total Capabilities

- Contractor shall present all capabilities with all of contractor's products, maintenance, services & support capabilities. This is a free-form section to show full capabilities of contractor within or outside the scope of the RFP.

12. Develop and deploy Ticket History API for Corporate Customers

- Contractor will perform all software development, unit testing and any necessary enhancements to the JustRide platform to deliver an API that provides filtered transaction data needed by Web Advanced for their implementation and provides a method to retrieve username (email address) tied to ticket transactions.
- The API should restrict Web Advanced access to Contractor's backend data so that they do not have access to payment related data (i.e. first six / last four digits of payment card, billing zip code).
- Contractor will work with Web Advanced and the SCRRA internal team to verify the functionality against the Contractor test environment. Contractor will provide the API to Web Advanced and SCRRA for their respective evaluation in their own environments.
- Contractor will ensure that the API has adequate performance, measured by response time of no more than 5 seconds between the time information was requested and a response was sent, under normal operating conditions. Since the transactional history data will accumulate over time, and may cause performance to the API to slow down, SCRRA agree to keep up to 2 years of history and archive the remaining transactions in an off-line database at SCRRA
- Contractor will create and deliver a test plan that will verify the functionality of the API and shall perform all quality assurance testing on the deliverables listed below. Contractor will present the final test plan and documentation to SCRRA, which shall have 5 days to verify and accept the test plan, otherwise, it will be deemed as having passed.
- Deliverables:
    - Provide Ticket History Specifications
    - Implementation of Ticket History API
    - UAT Version: Ticket History API
    - Internal Platform Load Testing: Ticket History API
    - Load Testing Resolution Period

13. 2D Barcode Interoperability between INIT and Masabi

INIT and Masabi shall collaborate to ensure continued interoperability with the new INIT ticket vending device fare-payment system by having the ability to validate the 2D barcodes printed on paper tickets. The new INIT TVD system will produce paper fare media with encrypted 2D barcodes, which will provide additional security above current paper ticket barcodes. An important factor to the success of the new TVD infrastructure performance is for Masabi to have the ability to validate the encrypted 2D barcodes printed on paper tickets with the installation of the new INIT TVD fare-payment system. The Masabi validation of the new INIT paper fare media will be critical for both inspection of fare media, and access to faregate readers at LA Metro rail stations. Without integration between INIT and Masabi, these critical functions will not be possible. The interoperability of this project shall

commence immediately upon the contract amendment/notice-to-proceed and shall be designed by October 31, 2019 (Q4, 2019).

INIT's CDRL 10-1 shall be the authoritative interface control document. The integration with Masabi will require the specifications listed in:

Attachment B - INIT CDRL 10-1: 2D Barcode Specifications; and

Attachment C - Masabi's Proposal to Customize for INIT's specifications to achieve interoperability between both systems. In addition, the below specifications/requirements apply to the INIT and Masabi integration and/or contract amendment:

- Inspection app will read the barcode and validate the inspection based on the barcode expiry timestamp (including the date and time);
- Metro fare gates will read and validate the barcode expiry timestamp but ignore the time part from the timestamp information;
- Will provide a dedicated Program Manager for all integration efforts with the INIT system;
- Will be available and engaged for integration testing with INIT from October to November 2019;
- Will be available and engaged for field Integration testing from January to February 2020;
- Will support any follow up troubleshooting and bug fixes as a result of testing until issues are resolved; and
- Any failure to provide the support above will result in withholding of final payment.