REQUEST FOR PROPOSALS

THE TOWN OF BRECKENRIDGE FREE RIDE TRANSIT TECHNOLOGY PROJECT

1. INTRODUCTION

The Town of Breckenridge Free Ride Transit (Fixed Route System) is committed to improving its operations through the use of new information technology enhancements. The goal of the Request for Proposals is to select a qualified contractor to deploy tools (software, hardware and installation) which will enable the Transit Division to enhance the Town of Breckenridge Free Ride Transit operations and Parking lot Information within the Town. The Technology enhancements will allow customers to access information on a real-time basis: bus arrival information, bus location tracking, bus stop locations, bus routes, bus schedules and Parking Lot Information. Technology will additionally provide trip planner ability, alternative transportation options/information, and incorporate information from nearby agencies to present a unified presence (Website, mobile web, mobile applications, and public displays and SMS texting, etc.). Additionally, digital displays on-board buses for next stop id, arrival time digital signs at transfer stations, ski resorts and other major transit stop or trip generators. This system will provide route and vehicle information in real-time to passengers, dispatchers and management.

The following are the major components the Breckenridge Free Ride is interested in purchasing as part of the Free Ride Technology Transit Project:

- Real-Time Passenger Information both Mobile and Web Based
- Computer Aided Dispatch (CAD) utilizing Geographic Positioning System (GPS/AVL technologies)
- Next Stop Annunciators and digital signs on-board for Public display
- Automatic Passenger Counting (APC) system
- Digital 'arrival' signs with Real-time basis arrival information
- Administrative and Reporting functions (Industry Standard Reports)
- Parking Lot Information, bus routes connectivity, and parking availability
- Transit providers/options outside of Fixed Service area
- Trip route/planning – ridesharing, transit providers, schedules/connections
- Demand Based Transit Service technology expandability

The selected contractor will provide the necessary hardware, software and support for each of the above components in achieving the project goals.

A goal of the technology project is to facilitate daily fixed-route service, and must be equipped with reporting capabilities to accurately stream operational service information (e.g., route timing, passenger wait time, trip counts, operator performance, vehicle speed and movement).

The vehicle tracking system shall include the functionality for hardware/software components to be installed in a minimum of 15 vehicles and be expandable in future.

The Town of Breckenridge currently utilizes technologies which allow customers to access real-time bus information on its Free Ride bus service via website, smart phone and social media. Since there is considerable transferring of customers between other transit providers in the area and the Free Ride, the Free Ride wants its Technology Bus program to provide the public with easy-to use linkages with the Free Ride and other nearby transit providers for a unified presence.

It is the intent of the Town of Breckenridge Free Ride to implement a new technology platform that is expandable to remain dynamic as transit industry standards change in future. The Town of Breckenridge is expecting to select, design, beta test and have full implementation of the project over a 12-16 month period. The Town of Breckenridge would plan to have the system fully operational by 11/01/17. Proposers are expected to describe ongoing maintenance including cost and support in their proposals under the Scope of Services section of the proposal.

2. GENERAL REQUIREMENTS

At all times during the performance of the Contract, Contractor shall strictly observe and conform to all applicable federal, state and local laws, rules, regulations and orders that have been or may hereafter be established.

3. TECHNICAL RQUIREMENTS

System Requirements

The Contractor should minimize proprietary hardware in favor of existing off-the-shelf hardware. A standard, off-the-shelf operating system that is non-proprietary is preferred. If proprietary hardware or operating system software must be provided to meet these requirements, the contractor shall indicate this in the proposal.

Hardware

Workmanship of all hardware shall meet the highest production quality and shall conform to all applicable quality control standards of the original manufacturer and the Contractor. All hardware provided shall be commercially available, standard, off-the-shelf products manufactured by well established and reputable manufacturers.

- At the time of installation, the hardware must be the current technology available and compatible with the vendor's software.
- Proposed system must be installed with minimally invasive techniques. Proposed system must not compromise existing vehicle integrity.
- Hardware shall remain under warranty for the initial term of the agreement.

- Proposed system must offer new equipment with the latest technology at the time of replacement and/or installation.
- All on-board equipment must be of commercial (not consumer) grade and ruggedized to operate in a transit environment.
- All equipment modules, cables, mounting hardware and connectors shall be designed to withstand the full range of operating environments found in the Alpine climate served by The Town of Breckenridge Free Ride.

Mobile Data Terminal (MDT) Hardware

- The MDT shall incorporate an integrated GPS receiver.
- GPS receivers shall report latitude, longitude, speed, time, direction of travel and whether the receiver has a GPS position.
- The GPS receiver shall have a cold start solution time of two minutes or less and a re-acquisition time of 30 seconds or less.
- The MDT shall be commercially available and off-the-shelf.
- The MDT shall have backup battery power.
- The MDT shall turn on automatically when the vehicle power is turned on, and shall shut down when the vehicle power is turned off.
- The MDT shall have connectivity to the existing public address system, digital signage and other devices.
- The MDT shall provide solid state storage (minimum of 2 GB Flash memory, 128 MB RAM).
- The MDT shall be designed to operate in accordance with these specifications for ambient temperatures from -20°C to +60°C.
- The MDT and all other on-board components shall be designed to withstand the vibration and shock forces associated with transit vehicles.
- MDTs shall be replaceable as discrete units and identified by unique serial number.

Public Vehicle Location Displays

- System shall provide the ability for Customer to use new or existing flat screen monitors to display ad version of the system that requires no user interfacing. The system shall require no user interaction in order to function. The system shall show all routes/buses at once on the public display, and be able to cycle between multiple screens without pause.
- Vendor shall be responsible for ensuring that all maps, routes, and information properly displays and automatically refreshes on digital screens at all times.
- The display shall include route name and the ability to differentiate routes by design or color. The system must have the capability to display multiple routes at the same time.
- The display shall include the ability to identify a specific vehicle and its associated route.

- The display must have the capability to be activated over wireless internet connection. There must not be a wired connection.

Software

- At the time of implementation, the software must be the current version and compatible with the vendor's hardware.
- No installations of any kind on any Free Ride computer or servers. Everything must be stored on Vendor's servers.
- Vendor must always ensure that the Free Ride is utilizing the latest approved software version available.
- Proposed system must offer automatic software updates during off-peak hours. These updates must be installed without Free Ride input.
- All proposed system software must be cloud-based.
- Proposed system database must be stored on geo-redundant servers, capable of avoiding catastrophic failure.

Management Software Requirements

- System shall provide real-time graphical displays of vehicle location using map interface.
- System shall provide a management interface to allow assignment of buses to routes by dispatchers.
- Interface should be intuitive and simple to use.
- System shall allow announcements to be posted immediately or in advance for posting a predefined time. System shall also allow announcements to be removed automatically at a pre-defined time in the future.
- System shall provide historical playback capability for all routes and buses. Administrators must be able to use historical playback capability for all routes and buses. Administrators must be able to use historical playback in order to see individual vehicle locations and data, including speed, passenger load, and name of vehicle/route.
- System shall include capability to display visualized aggregated origin and destination data. Administrators must be capable of identifying specific trip pairs visually. System shall allow for specific trip pairs to be clearly identified.
- All back end administrative tools and functions shall be available on cloud based web portal. Solution must be 100% cloud based so that login will be able to take place via a web portal at any time of the day.
- New accounts for login to the system must be able to be created instantaneously upon request. There should be at least three options for account privileges (dispatcher, viewer, admin, etc.)
- Certain management functions (e.g. assigning buses, activating routes) shall be allowed from internet-enable smart phones.

Mobile Data Terminal (MDT) Software

- The MDTs shall allow for a single logon for all on-board equipment including future expansion (destination signs, PA system and video system).

- The MDT shall provide a touch screen interface that allows the driver to perform the following functions: set route, record passenger boardings, view and respond to messages from dispatch, view status, and view graphical headway analysis information.
- The MDT shall send a location report, indicating its current GPS location and mileage reading every 15 seconds or less and whenever the vehicle is within the bounds of a bus stop (geo-fence).
- All transmitted data shall be stamped with following information: date and time, GPS location latitude and longitude, vehicle number.
- All fixed route packets shall include route number, trip number, and mileage reading where applicable.
- The MDT shall store the most recent ten (10) minutes of GPS data, so that if the GPS receiver is not able to report the location, the last known location will remain available to be transmitted when the network reconnects.

Route Assignment Module

- The MDT shall allow the driver to select which route is currently being run.
- The MDT shall allow the driver to indicate that the vehicle is off duty (dead-heading).
- The MDT shall display to the driver the next scheduled bus stop (when on route).

Automatic Passenger Counting (APC) Module

- The APC system shall be integrated with the AVL system to provide time and location of each stop.
- For each stop, a data record shall be created to store the number of boarding passengers.
- Each data record shall also include the current GPS location latitude and longitude, as well as the current date/time, vehicle number, vehicle operator ID number, route number, trip number, and direction of travel.
- Data records shall be stored on the MDT, with sufficient on-board memory capacity to allow for storage of at least 72 hours of APC data.

Fixed Route CAD/AVL Software General Requirements

- The proposed system must have the capability to capture and transmit vehicle location information on a real-time basis. System should have an update frequency rate as close to real-time as possible, 2-5 second updates or refresh rates, at minimum.
- The system shall offer detailed area and route maps, preferably using familiar maps like Google.
- System shall be turn-key and cloud hosted. Vendor should describe their go-live strategy and average release timelines. Vendor must offer full implementation/installation/release in contract specified timeline.
- Based on configurable thresholds, the system shall use the reported schedule adherence data to designate when vehicles are “early,” “late” or “on time.
- The system shall highlight the vehicle IDs of those vehicles that are operating early, late or off-route, using map displays to indicate their current schedule and route adherence

status. The map display symbols for these vehicles shall use distinct and configurable color codes for early, late and off-route status.
- An open application programming interface (API) that allows approved 3rd party developers to receive a live data stream at no additional cost to the Free Ride.
- Web-based; no software to install and runs in the latest version of IE, Chrome, and Firefox.

Schedule Adherence / Headway Analysis Module

- When a vehicle operator is logged in to a run, the MDT shall display the name of the next upcoming time point, and the schedule adherence status as of the most recently passed time point or current location.

Two-Way Messaging Module

- The MDT shall support two-way messaging that allows the Free Ride to send text messages to drivers.
- Driver Messages shall only be viewable while the vehicle is not in motion.
- The driver shall have the ability to confirm the receipt of "confirm" messages.
- The driver shall have the ability to select from a list of "Canned" driver-to-dispatch messages.

Mapping Module Requirements

- Bus location with accuracy within 20 feet.
- Ability to create geo-fences for speed, boundaries and stops.
- Ability to locate a customized list of points of interest by address.
- Arrival predictions/schedule adherence calculations.
- Reporting module that allows the user to interact with the data (rather than just view the output).
- An open application programming interface (API) that allows approved 3rd party developers to receive a live data stream at no additional cost to the Free Ride
- Ability to assign buses to routes both in advance and in real time.
- Visual representation of bus location plotted over a 2D map.
- System reports when an on-board device has disconnected.
- System reports when on-board device has poor GPS coverage.
- System should have an update frequency rate as close to real-time as possible, no more than 2-5 seconds between updates.
- System shall offer detailed route maps, preferably using familiar maps like Google Maps, showing all major streets.
- System shall display areas of overlapping routes in a manner as to clearly distinguish the different routes.
- System shall provide bus arrival predictions to upcoming stops.

Route Planner Module Requirements

- Ability to assign changes to Routes in Advance (detours, closures, special events, etc.)
- Ability to assign vehicles to routes for day of operation.

User Management / Configuration Module Requirements

- Ability to create, delete and edit users
- Ability to set user permissions

Reports Module Requirements

- All vehicle location and status data shall be maintained online for a period of three months for retrieval, analysis, display and printing.
- Historical information shall include all data transmitted from vehicles (log-on/log-off data, vehicle system alarms, location data, and data transmitted from other equipment on-board the vehicles).
- Reporting module that allows the user to interact with the data (rather than just view the output).
- Ability to export reports to Excel and PDF.

Fleet Management Reports

- Vehicle history
- Speed Infraction
- Speed violation history
- Vehicle idle
- Garage pull out
- Speed fence violations
- Vehicle mileage summary
- Vehicle speed summary
- Boundary fence activity by class
- Vehicle location proximity
- Vehicle engine time summary
- Vehicle idle time summary
- Vehicle idle by location

Traveler Information Reports

- Public site usage report
- Technology phone app usage report
- Passenger feedback report

Performance to Schedule Reports (Fixed Route)

- Arrivals-departures
- Route utilization
- Headway analysis

APC Reports

- Passenger boardings by vehicle
- Passenger boardings by route
- Passenger boardings by bus stop

Public Web Site

- Users shall have ability to view only routes that are of interest to them.
- Users shall have the System remember chosen routes from past times they have loaded the website
- Vendor shall have capability to utilize customer-supplied logos/graphics to identify customer's transit system. Vendor will also provide a web address that is easy to market to riders.
- System shall continuously update the web page (whenever a new estimated time of arrival (ETA) is determined, bus is added/removed, etc.), without the user being required to refresh the webpage.
- System must provide estimated time of arrivals for the next two vehicles arriving at each stop. System must provide estimated time of arrivals for all vehicles on all routes. System shall provide arrival estimates that are updated in real-time, without the need to refresh the page.
- No software to load (pure HTML implementation) that displays vehicles laid over a 2D map.
- Branded specifically for The Town of Breckenridge Free Ride.
- Routes are drawn in different colors.
- User has the ability to show one, some, or all routes on the map.
- The website shall allow customer to choose a stop and display the next arrivals for routes serving that stop. Shared bus stops served by multiple routes should be clearly identified.
- The website shall display the location of all active vehicles in real-time.
- An Icon for each in service vehicle shall be rendered on the web site.
- Bus icon positions should update without the need for refreshing/polling.
- On click of the bus icon, additional info is provided to the user:
    - Route Identifier
    - Bus number
    - Next Stop
- Estimated Time of Arrival (ETA) to Next Stop
- Real-time Bus arrival times are provided for each bus stop.
- ETAs are provided for each bus en route to a bus stop (e.g.: if two buses are on their way to a bus stop, there shall be two arrival time predictions).

- There shall be a section of the screen that is reserved for public service announcements from the agency.
- Integrated help system.
- Page will provide a link back to the Free Ride's web site and to the Town of Breckenridge Free Ride web site.

Technology "App"

- App share key information from Web via mobile device
- For phones with GPS capability, System should provide geolocation components to allow rider to identify location on map.
- Logos and colors branded specifically for The Town of Breckenridge Free Ride.
- Real-time Bus AVL tracking/Route information.
- Parking Lot Information - locations
- Parking Lot Pay Rates and nearest Bus Stops/routes
- Parking Lots Color coded (i.e. Free, Pay, and overnight)
- Parking Lot Utilization
- Real-time Bus arrival predictions.
- Support for users to leave feedback.
- Support for public service announcements.
- Integrated help system.

Smartphone Access

- For smart phones (iPhone, and Android), System should provide interface that shows steady vehicle movement without reloading. All vehicles within the system must move fluidly, without hopping or jumping from location to location.
- For smart phones with GPS capability, System should provide geolocation, Feature/s to allow riders to identify location on map.
- System should provide a free-to-download native iPhone application.
- System should provide a free-to-download native Android application.
- System shall provide an optional notification platform for riders. This notification platform must have a platform within the application that provides distributed information from system administrators. The notification platform must also provide a system outside of the application that is capable of providing a push notification to riders, without activating the ringer.
- System should allow riders to set automatic notifications when their vehicle is predicted to arrive in a predetermined amount of time. The proposed system must provide a robust alerts system, including the capability to see alerts at any time, as well as the ability to provide push notifications outside of the app. Announcements must be

capable of being tagged as “urgent” or “not urgent”, changing the display of each announcement to riders.

4. Support

- Vendor will provide 24-7 support when needed in case of severe emergencies
- Vendor should be accessible via phone, web and e-mail.
- Turnaround response time of vendor for any mission critical component of the system should not exceed 4 hours.
- Support shall be available during normal business hours. Standby support shall be available at all other times, including nights, weekends, and holidays.
- Vendor must offer an online support system for ticket submission and troubleshooting.
- Vendor must offer a 2 hour critical support time-to-response.
- Vendor must have a standby support member available at all times.
- Vendor must offer a dedicated service agent for provision of all system updates, including building all system updates.
- Vendor must offer dedicated data team for all changes to routes and stops. These changes must be made through a member of the vendor’s support team.
- Vendor must offer unlimited changes to all routes and stops through the vendor’s support team.

5. Training

- Vendor shall also provide optional web-based training to all dispatchers, supervisors, administrators, and maintenance technicians prior to deployment of system and on an as-needed basis for future trainees.
- Vendor must provide training prior to deployment of the proposed system.
- Vendor must have dedicated support team available 24/7/365 for training of additional team members.
- Vendor training team cannot be assigned project manager of the system.

6. WARRANTY

The successful bidder guarantees for a period of a minimum of one (1) year from the date of receipt to repair and/or replace any part of modular component determined to be defective in material or workmanship under normal use and service at no additional cost.

Extended warranty options must be made available and outlined within the proposal.

7. TIMELINE

August 24 – RFP Release
September 13 – Requests for information or clarifications due
September 19 – Proposals due
Oct. 03 – Oct. 07 – Interviews Scheduled
October 14 – Award Contract

8. PROPOSAL FORMAT

As minimum respondents are required to include the following information in the proposal:

a. Company Background – Include the number of years in business, location of headquarters and other offices as well as location of staff (including subcontractors) who will be involved in the Town of Breckenridge Free Ride Technology project. Provide an organization chart.

b. Qualifications and Experience – Provide relevant information regarding previous experience related to developing similar IT solutions for medium and small-sized transit systems.

c. Names and locations of a minimum of three references involving similar projects. Include name, address, phone number and email of contact person on the customer-side overseeing the project.

d. Scope of Services – A detailed description of the products and services being proposed to meet the requirements set forth in the RFP. The description should include a price chart of the individual components, as possible (Project Phasing). Please include a project schedule showing key milestones including beta-testing of components and expected "go live" dates of each of the Ten (10) Technology Bus components listed in Section 1 - Introduction of the RFP. Respondents should assume a project kick off at time of Contract signing.

e. List of Project Personnel – Identify the contact person with primary responsibility for this project, additional personnel proposed for this contract and any subcontractors. Please describe their individual areas of responsibility. Provide resumes of key project personnel.

f. Cost Proposal – Proposers should provide a breakdown of costs by each of the Ten (10) major components (Section I). One-Time costs should be shown for each of the Ten (10) components. Hardware costs should be provided separately. In addition, ongoing Annual maintenance and support costs should also be provided as separate cost/s by: Cost Year One and Cost @ Year Five. Please include any Notes if necessary, for defining the Ten (10) components, if finer description is needed.

g. Product brochures

h. Expectations of the Town of Breckenridge Free Ride

Written proposals are due Monday, September 19th by 3:00 pm (MST). Proposals should be mailed to: Town of Breckenridge, PO Box 168, Attn: James Phelps - Public Works Department, Breckenridge, CO 80424. Proposals can be dropped off at: Public Works Administration Building, 1095 Airport Road, Breckenridge, CO 80424. Each proposal should include (5) Five copies for Town of Breckenridge Project Team by September 19th 3:00 pm (MST). All proposals shall be sealed in mailing envelopes and clearly marked SEALED PROPOSAL FOR **THE TOWN OF BRECKENRIDGE FREE RIDE TECHNOLOGY PROJECT**. The name of the Proposer must be written on the outside of the envelope. Questions and requests for clarifications must be made by September 13th, 2016 by 3:00 pm (MST) to James Phelps, Assistant Director Public Works. jamesp@townofbreckenridge.com 970-453-3181 Any Proposals received/time stamped after September 19th; 3:00 pm (MST) time will be rejected.

9. ALTERATIONS AND CORRECTIONS

Any alterations, erasures, additions to or omissions of required information, any changes in the specifications or in the proposed schedule are made at the sole risk of the Proposer and such alterations and corrections may result in the rejection of the proposal, unless such alterations and corrections are authorized by the specifications.

10. OPERATING CONTRACT

The successful Proposer will be required to enter into a Contract within fourteen (14) days after receiving written notification of award. A copy of the contract will be provided to the winning proposer immediately upon notification of award. The Contract will be subject to all the provisions contained within this document.

11. REQUIRED INSURANCE

Throughout the contract period the successful Proposer shall obtain and maintain, at the successful Proposer's sole cost and expense, general commercial liability insurance coverage in the minimum amount of $1,000,000 per occurrence and per person.

12. COMPENSATION

The selected contractor will be paid for completion of key deliverables defined as the Ten (10) major components, per Contract. Additional payments will be made for delivery of hardware. Ongoing costs associated with support and maintenance of the system will be paid based on mutual agreement between the Town of Breckenridge Free Ride and Contractor.

13. PROPOSER EVALUATION

Proposals will be evaluated on the basis of the following: (1) Proposers' qualifications including experience and performance with similar projects; (2) Qualifications of project personnel and any subcontractors; (3) Proposed scope of service and work plan; (4) The reputation, experience and efficiency of the Proposer; (5) Project Cost; (6) The ability of the Proposer to

perform the contract or provide the goods and services within the time specified; (7) The comparative quality of the goods and services bid; (8) The Proposer's performance under previous contracts with The Town of Breckenridge Free Ride; (9) The number and scope of conditions attached to the proposal; (10) The Proposer's interest in the project, as well as its understanding of the project scope and the specific requirements of the Town of Breckenridge Free Ride. The Town of Breckenridge Free Ride reserves the right to select the most responsible and responsive proposal which it finds to be within the best interests of the Town of Breckenridge Free Ride.

14. ACCEPTANCE OF PROPOSAL

The Town of Breckenridge Free Ride will choose the proposal deemed most acceptable and qualified by the Town of Breckenridge Free Ride Project Team. The Town of Breckenridge Free Ride reserves the right to reject any or all proposals.

15. RECORDS

The successful Proposer shall maintain records of all transactions and make such records available to The Town of Breckenridge Free Ride within a reasonable amount of time upon written notification.

16. THE TOWN OF BRECKENRIDGE FREE RIDE RIGHTS AND DISCLAIMER

The Town of Breckenridge Free Ride reserves the right to reject any and all proposals, to waive any informalities and/or irregularities in the proposals, to re-advertise, to negotiate with any party for identified services, to put identified or other services out to bid, or to otherwise proceed to provide any identified or other service in the best interest of The Town of Breckenridge Free Ride in its sole discretion. Any proposal received as a result of this request is prepared at Proposer's expense and becomes Free Ride property. Proposals and all ideas contained therein shall not be deemed proprietary with respect to The Town of Breckenridge Free Ride and may be used by The Town of Breckenridge Free Ride in any manner deemed in its best interest. The Town of Breckenridge Free Ride may, at its sole discretion, modify or amend any and all provisions herein.

The Town of Breckenridge Free Ride will not pay for any information herein requested, nor is it liable for any costs incurred by any responses hereto.

The Town of Breckenridge Free Ride reserves the right to extend the Request for Proposals date if needed. All changes or clarifications will be posted on the Free Ride website at www.FreeRide.com or www.townofbreckenridge.com