



The City of Cleveland, Ohio Department of Public Works, Division of Waste Collection & Disposal is seeking Request for Quotes from qualified and experienced firms to provide a real time information system for monitoring the City's waste, recycling, and bulk collection processes in order to further increase safety, operational efficiency, improve route and fleet methods and provide the city with insights into our collection related operations.

The selected vendor shall furnish all project implementation staff, labor, materials, tools, supplies, equipment, and training required to implement the technology. The selected vendor shall be responsible for providing all necessary hardware and peripheries which includes equipping drivers and vehicles with the necessary equipment, as well as performing necessary technical work to ensure all routes are entered into the system.

The overall goal is to procure a system that enables the City to more effectively service our citizens waste collection needs and analyze waste, recycle and bulk pickup operations based on the collected data to find areas of improvement.

BACKGROUND INFORMATION

The City provides weekly curbside trash collection and recycling (Monday – Saturday) for approximately 176,000 customers, 1st full week of each month includes Bulk Items pickup. Currently the City performs refuse related service using 93 large collection vehicles out of which 19 are automated side loaded (One Arm), 50 are rear load, and the remaining 24 large collection vehicles are Multi-pack.

In addition to our Large residential Collection Vehicles, we also have 20 small support vehicles as well, that are composed of Cars, Pickup trucks and SUV's.



The City does not currently utilize collections technology although customers have been supplied with black 96 gallon trash carts and blue 64 gallon recycling carts. The City will be migrating away from its existing Route navigation software.

SCOPE OF WORK

The City is seeking a Waste Collection Route and Service Management System. The Technology will be used on the City's Waste Collection vehicle fleet to optimize collection operations and routing, monitoring fleet and service performance, provide real-time data collection, and provide a remote management tool for staff.

The system should lead to better forecast for budgets, assist in identifying current and future routing and equipment needs, and simplify the production of reports.

The technology will be installed (mounted) in the trucks and give drivers the ability to report and flag issues while in the field. It is preferable that the technology is an in-cab mobile device/GPS-based application. The application must provide drivers with all the information they need to complete their routes, including all customer information, addresses, service information, as well as navigation assistance. It is required that the technology require limited driver interaction for safety.

The technology should communicate information from the mobile device application in real time to a web-based (cloud) portal or dashboard that can be accessed by varying levels of management and staff. The web-based portal should enable users to schedule routes, assign stops to routes, and optimize routes for various services. It should show real-time route completion progress, including service verifications by address. The portal should also display location-based information from the vehicles, including vehicle drive patterns, current and historical breadcrumb trails.



The ultimate goals of procuring this technology is to provide data and insights to include but not limited to the following:

- Digitized route and customer information
- Service verification at each location
- A dashboard of all vehicles and their locations
- Turn by turn directions for drivers
- Professional Services for Route Optimization
 - Creation of routes that maximize efficiencies based on current fleet size with the ability to internally adjust as the fleet changes
 - Creation of routes based on recycling and bulk item pickup
 - Route sequencing which includes dynamic route sequencing that could adjust routes and schedules based on equipment available and calculate completion times
- Increase operational efficiency overall
- Dynamic route assignment and dispatching
- Live and historical route status
- System canned reporting as well as the ability to export data to datalake for additional reporting capabilities
 - Ability to customize canned reports

FEE STRUCTURE

- Route Management
 - Software Application



- Professional Services – Project Management for Implementation and training, system configuration for route creation, dynamic routing, route sequencing, Geofencing, vehicle status, mapping, reporting,
- Equipment – in cab equipment (device), truck in-vehicle GPS, ancillary cart tags if needed

Request for Quotes should be sent to:

Larry Jones II

ljones4@clevelandohio.gov

A Pre-Proposal Conference will be held on March 27th at 2:00 PM EST. Below you will find the Microsoft meeting link.

[Join the microsoft teams meeting now](#)

Request for Quote submissions will be accepted up until April 18th at 3:00 PM EST, and should be emailed to

ljones4@clevelandohio.gov

REQUIREMENTS

1. Route Management

- A. Pre-loaded route information is visible to vehicle operators through a moving map display and customer information display, including visual identification of special collection addresses
 - a. Describe
- B. The ability to schedule recurring and static routes



- a. Describe
- C. Assign new services to routes electronically
 - a. Describe
- D. The ability to sequence stops on ad-hoc and daily routes
 - a. Describe
- E. Supervisor and Management staff have the ability to update routes that are currently running in near real time
 - a. Describe
- F. Does the system provide navigation to service customers with unique street addresses
 - a. Describe
- G. In the event of equipment failure or problems encountered during a route, will the supervisor have the ability to electronically move the remaining stops to another driver
 - a. Describe
- H. Can the system show the status of all routes in a single view
 - a. Describe
- I. Will the driver have the ability to sort or search for missed or remaining pickups throughout their route
 - a. Describe
- J. Adjust, share, or reassign routes
 - a. Describe
- K. On-demand route status and completion verification, including detailed listing of any portion of a route
 - a. Describe



- L. Incorporate City maintained GIS Layers (City Council Wards, Census Tracts, Service Grids, Waste Collection sites)
 - a. Describe
- M. Web based interface for office users providing management of dispatch task and services
 - a. Describe
- N. Import, optimize, and sequence bulk stops
 - a. Describe

2. Service Verification

- A. Ability to verify service at each service location
 - a. Describe
- B. Can custom exception be logged using the in-cab mobile device
 - a. Describe
- C. Ability to capture and send photos, issues and notes from in-cab device
 - a. Describe
- D. User interface for customer service staff with time information, including customer pickups as they occur
 - a. Describe
- E. Ability to search for an account, by account number, customer name, address, etc.
 - a. Describe
- F. Does the system provide the ability to add notes, comments, and photos to the address record
 - a. Describe
- G. A method for ticket entry by vehicle operators for large, uncontained set outs
 - a. Describe



3. Tracking

- A. Ability to create a digital pre-trip and post-trip vehicle inspection form
 - a. Describe
- B. Does the system have Geofencing capabilities
 - a. Describe
- C. Ability to capture pickups per hour by type of service, drive, day
 - a. Describe
- D. Ability to capture idle/stationary time by truck or driver per day
 - a. Describe
- E. Capable of archiving and retrieving historical mapping, travel paths and activity of vehicles
 - a. Describe
- F. Weekly reports of tonnage data by route, by driver, by day
 - a. Describe
- G. Ability to track various vehicle data (speed, direction, idle time, etc.)
 - a. Describe
- H. Utilize geofencing, including monitoring location, establish arrival/departures, etc. within the user-defined fence
 - a. Describe
- I. Option of turn by turn navigation directions for waste collection, recycling and bulk items collection stops
 - a. Describe



4. Reporting

- A. Ability to provide driver performance reports
 - a. Describe
- B. Ability to provide pickups per hour reports by type of service, by driver, by day
 - a. Describe
- C. Ability to provide reports by service type, including tonnage
 - a. Describe
- D. Pre-trip and post trip reports can be electronically sent to supervisory and fleet management staff for maintenance
 - a. Describe
- E. Search and report on all fields in the database, including user defined fields, with the ability to organize, summarize and sort
 - a. Describe
- F. Ability to easily and quickly download reports in excel or CSV format
 - a. Describe
- G. Ability to schedule reports to be emailed on selected basis
 - a. Describe
- H. Ability to access directly or export vehicle/route activities in ArcGIS compatible format
 - a. Describe
- I. Ability to export/print paper route sheets/maps for off-line access in system down event
 - a. Describe

5. Other



- A. Ability for in-cab technology to be installed (mounted) by City’s Fleet Management Division after initial setup
 - a. Describe
- B. Ability to provide appropriate training that is tailored to the role of relevant City staff, including vehicle operators, supervisors and managers, fleet maintenance and customer service (dispatch) personnel
 - a. Describe

6. Professional Services Requirements

The City requires Professional Services for the Software Installation, Configuration, Training and Technical Support.

- Software Configuration
- Technical Support
 - Remote support Monday – Friday 9 AM – 5 PM
- Software Training
 - Development of customized reports
 - Development of Alerts
 - Software usage

7. Vendor Requirements

- Work Orders & Invoices shall be produced by the vendor and shall include the Date of Service, Invoice Number, itemized cost by software, configuration, training and installation/programming service and a total cost



- All work and software must be guaranteed and be acceptable to the City of Cleveland
- When requested the Vendor will supply the City with software warranty information
- The Vendor will be fully responsible for any damage to or loss of City equipment while in the Vendor's possession or under the Vendor's control
- The Vendor will provide the required services and will not subcontract or assign the services without the prior written approval of the Department of Public Works
- The City reserves the right to approve or reject the use of outside subcontractors by the Vendor
- The Vendor is responsible for having sufficiently trained, certified technicians available to rapidly process Waste Collection & Disposal maintenance, repairs and/or professional service installation
- The Vendor will provide proof of Worker' Compensation coverage for its employees, a general liability policy in an amount not less than \$500,000 per occurrence

THE CITY OF CLEVELAND IS AN EQUAL OPPORTUNITY EMPLOYER