



RUBICON RESPONSE TO:

HGACBuy
BID #FL03-21

FLEET SERVICES EQUIPMENT

Submitted: November 12, 2020 1:00 PM CT

Submitted by:
Michael Allegretti
Chief Strategy Officer
michael.allegretti@rubicon.com



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TAB 0 - INTRODUCTORY LETTER AND EXECUTIVE SUMMARY

November 12, 2020

HGACBuy

Houston-Galveston Area Council of Governments

3555 Timmons, Suite 120

Houston, TX 77027

To Whom it May Concern:

Rubicon is proud to submit our bid to continue providing fleet services equipment to governments across the United States of America via HGAC's Cooperative Purchasing Agreement. Thank you for including us in this opportunity. Rubicon is ready to continue delivering strong, comprehensive, and innovative solutions to local governments as outlined within the FLO3-21 document.

Rubicon is a software company that powers a digital marketplace, provides a suite of Software-as-a-Service (SaaS) products for waste, recycling, and smart city solutions, and collects and analyzes data for businesses and governments worldwide. With products and offerings including RUBICONSmartCity™, RUBICONPremier™, RUBICONPro™, and RUBICONVision™ Rubicon is bringing machine learning and Internet of Things applications to the world of waste and recycling.

MISSION & HISTORY: Rubicon's mission is to end waste; not only physical waste, but also wasted time, wasted tax dollars, and wasted energy. Rubicon uses technology to transform businesses into more sustainable enterprises and neighborhoods into greener and smarter places to live and work. With more than 4.9 million unique service locations, Rubicon is helping small businesses, multi-site locations, cities, and municipalities find economic value in their waste streams and confidently execute on their sustainability goals.

Founded in 2008, Rubicon's work began in the commercial solid waste space, working to help businesses - large and small - find value in their waste streams. Through our extensive, pre-qualified network of over 7,000 haulers, we serve thousands of commercial sites worldwide, including a large number of Fortune 500 companies such as Best Buy, Dollar General, and 7-Eleven.

In addition to managing the day to day solid waste operations for millions of commercial locations around the country, we help our commercial partners right size their recycling portfolios with an eye toward sustainability and economic viability. Our Subject Matter Experts manage commodity markets, zero waste programs and other sustainability offerings across our portfolio. An example of this impactful work is our partnership with the grocery store Wegmans. We worked with the company to set up a food scraps program that diverted approximately 30,000 tons of food scraps to compost or anaerobic digestion in one year. These sorts of stories have been replicated with companies like Chipotle, COX and the Atlanta Hawks basketball team, to name a few.

RUBICONSmartCity™: This direct and deep experience in the solid waste space is what informs our technology for city partners. RUBICONSmartCity™ was specifically designed to help city governments run faster, smarter, and more effective waste, recycling, and municipal fleet operations. Our technology was purpose-built through the eyes of municipal drivers and supervisors to best meet their particular needs. The resulting proprietary platform, RUBICONSmartCity, empowers municipal governments to streamline operations and work towards long term sustainability goals, while improving customer service.



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The RUBICONSmartCity system was first launched in the City of Atlanta, providing the City's Department of Public Works with transformative data regarding waste and recycling collection services. Rubicon's technology was deployed in the City's fleet of approximately 80 trucks servicing 96,000 locations, leading to potential annual cost savings over \$750,000. The deliberate and tailored approach we took in Atlanta has since been enhanced and replicated in all of our city partnerships. To date, RUBICONSmartCity has been rolled out in more than 55 cities across the United States, including Atlanta, GA; Buffalo, NY; Columbus, GA; Fort Collins, CO; Fort Smith, AR; Irving, TX; Kansas City, MO; Memphis, TN; Montgomery, AL; Orlando, FL; Philadelphia, PA; Santa Fe, NM; Spokane, WA; Tyler, TX; and West Memphis, AR. The HGACBuy consortium is our main route to contract.

B CORPORATION & SOCIAL RESPONSIBILITY: As a Certified B Corporation, affirming that the company meets the highest standards of verified social and environmental performance, Rubicon is actively transforming the traditional waste and recycling industry by balancing profit and purpose. Certified since 2012, Rubicon is the eighth largest B Corporation in the world, joining the ranks of companies like Patagonia and Ben & Jerry's. Rubicon's B Corp status is representative of how we leverage our business as a catalyst for environmental stewardship. In practice, this includes tangible measures such as increasing landfill diversion and promoting recycling and reuse of materials. In 2019, B Corp awarded Rubicon "Best for the World" recognitions for "Environment" as well as "Corporate Governance."

Rubicon has also been awarded a Great Place to Work[®] designation in 2018, 2019, and 2020, as well as, having been recognized as one of Glassdoor's "Top Ten Companies with Seriously Impressive Benefits" in 2018. Named an Ellen MacArthur Foundation Emerging Innovator and a World Economic Forum Digital Disruptor, Rubicon is also an inaugural signatory of the New Plastics Economy Global Commitment led by the Ellen MacArthur Foundation, in collaboration with the UN Environment Programme, and holds industry partnerships with Factor10, Ocean Exchange, TRUE Zero Waste, the U.S. Composting Council, the United Nations Global Compact, and the World Business Council for Sustainable Development.

With numerous successful RUBICONSmartCity launches currently underway or recently completed, numerous private hauler tech adoption, and a robust commercial business, we confidently believe our products and services meet or exceed all of the requirements and expectations set out within the Bid document.

Our submission contains the following components:

- Tab 0- Introductory Letter and Executive Summary
- Tab 1 - Forms, References, Service Organization Document
- Tab 2 - Forms D&E
- Tab 3 - Technical Specifications
- Tab 4 - Electronic Media

Thank you again for the opportunity to bid on this HGAC Contract. We look forward to the chance to continue our partnership with HGACBuy.

Sincerely,



RUBICON

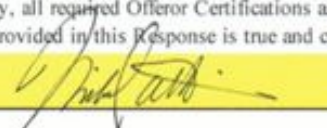
Michael Allegretti
Chief Strategy Officer
Rubicon Global, LLC.
(917) 270-5167
michael.allegretti@rubicon.com



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TAB 1 - FORMS, REFERENCES, SERVICE ORGANIZATION DOCUMENT

I. Form A - Offeror Identification & Signatory

FORM-A: OFFEROR IDENTIFICATION & AUTHORIZED SIGNATORY (DO NOT handwritten this Form. Information must be typed in.)		Invitation No.: FL03-21
Invitation Title: Fleet Services Equipment		
Offeror Company: Rubicon Global, LLC <small>(Legal name of business which will appear on contract, if awarded)</small>		
Offeror Status: <input checked="" type="checkbox"/> Manufacturer <input type="checkbox"/> Dealer/Distributor <input type="checkbox"/> Other		
Response Type(1): <input checked="" type="checkbox"/> Single Offeror Acting Alone Or As Lead <input type="checkbox"/> Multiple Offerors Acting Jointly		
Contract Signatory(2): Michael Allegretti		Title: Chief Strategy Officer
Mailing Address(3): 950 E. Paces Ferry Road, Suite 1900, Atlanta, GA 30326 <small>Street/PO Box City State & Zip</small>		
Physical Address: 950 E. Paces Ferry Road, Suite 1900, Atlanta, GA 30326 <small>Street City State & Zip</small>		
Phone: (917) 270-5167		Fax:
Email Address: michael.allegretti@rubicon.com		
Federal Tax ID No.: 27-0682429		Web Page URL: www.rubicon.com
<p>(1) If Joint Offering, all parties must submit a signed Form A. A contract will be offered to each.</p> <p>(2) Person who will sign final contract documents if an award is made.</p> <p>(3) Address to which final contract documents would be sent for signature.</p>		
Member Contact Information		
Contact Person (4): Conor Riffle		Title: Vice President, Smart Cities
Mailing Address: 950 E. Paces Ferry Road, Suite 1900, Atlanta, GA 30326 <small>Street/PO Box City State & Zip</small>		
Physical Address: 950 E. Paces Ferry Road, Suite 1900, Atlanta, GA 30326 <small>Street City State & Zip</small>		
Toll Free Phone: (917) 246-8430		Fax:
Email Address: conor.riffle@rubicon.com		
<p>(4) Person who End Users will contact for product information and to get pricing quotes.</p>		
The Signatory below, on behalf of Offeror:		
<ul style="list-style-type: none">- Acknowledges having thoroughly reviewed the Invitation;- Attests to having the authority to sign this response and commit Offeror to honor all requirements;- Makes, under penalty of perjury, all required Offeror Certifications as detailed in General Terms;- Certifies that all information provided in this Response is true and correct.		
Signature (2): 		Title: Chief Strategy Officer
Printed Name: Michael Allegretti		Date: 11/9/2020



Rubicon is proud to partner with Orbital Installation Technologies. Orbital is a certified RUBICONSmartCity Installer. Orbital's technicians have the proper certifications and technical training to successfully install, test, and configure the Pod telematics devices. Rubicon will work with Orbital for the installation and any subsequent repair of the Pod telematic devices and RUBICONVision camera. Please find the requested information for Orbital:


- **Company Name:** Orbital Installation Technologies
- **Address:** 9750 East 150th Street, Suite 1200; Noblesville, IN 46060
- **Phone Number:**
- **Applicable HUB Designation/ Certification:** MBE
- **NAISC CODE:** 238210





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III. Form C - Response Checklist

		SECTION C - H-GAC FORMS (Rev 03/21/2017)
For Use In Responding To Competitive Bid And Proposal Invitations		
Invitation No.: FL03-21		
Title: Fleet Services Equipment		
This Section contains the following H-GAC Forms (Reference the separate worksheets within this document)		
	FORM	DESCRIPTION
MA	Form-A	Offeror Identification and Authorized Signatory
MA	Form-B	Historically Underutilized Business Enterprises
MA	Form-C	Response Checklist
MA	Form-D	Offered Items Pricing
MA	Form-E	Published Options
MA	Form-H	Service and Marketing Plan
MA	Form W-9	Request for Taxpayer Identification Number and Certification
MA	Form CIQ	Conflict of Interest Questionnaire
MA	Form 1295	Certificate of Interested Parties
MA	HB89	Prohibition on Contracts with Companies Boycotting Israel
MA	CCI	Contractor Contact Information

These Forms are hereby made available in electronic format. They should be copied to Offeror's computer for completion and/or printout as required. The Forms may not be changed or altered in any way, except as may be specified on the Forms. This document SHALL be submitted in its original Excel format (no PDF) with all tabbed worksheets intact.

ALL completed Forms must also be submitted electronically on electronic media (flash/thumb drive), excepting of course for signatures. The printed "Original" of the response will be considered as the official copy in case of any discrepancy between the electronic version and the printed Original.



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IV. Form W-9

Form W-9 (Rev. October 2018) Department of the Treasury Internal Revenue Service	Request for Taxpayer Identification Number and Certification ▶ Go to www.irs.gov/FormW9 for instructions and the latest information.	Give Form to the requester. Do not send to the IRS.																																													
1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank. Rubicon Global, LLC																																															
2 Business name/disregarded entity name, if different from above																																															
Print or type. <small>See Specific Instructions on page 3.</small>	3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes.																																														
	<div style="display: flex; justify-content: space-between;"><div><input type="checkbox"/> Individual/sole proprietor or single-member LLC</div><div><input type="checkbox"/> C Corporation</div><div><input type="checkbox"/> S Corporation</div><div><input type="checkbox"/> Partnership</div><div><input type="checkbox"/> Trust/estate</div></div>																																														
	<input checked="" type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ P <small>Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.</small>																																														
	<input type="checkbox"/> Other (see instructions) ▶																																														
4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any) _____ Exemption from FATCA reporting code (if any) _____ <small>(Applies to accounts maintained outside the U.S.)</small>																																															
5 Address (number, street, and apt. or suite no.) See instructions. 950 East Paces Ferry Road, Suite 1900		Requester's name and address (optional)																																													
6 City, state, and ZIP code Atlanta, GA 30326																																															
7 List account number(s) here (optional)																																															
Part I Taxpayer Identification Number (TIN)																																															
<p>Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see <i>How to get a TIN</i>, later.</p> <p>Note: If the account is in more than one name, see the instructions for line 1. Also see <i>What Name and Number To Give the Requester</i> for guidelines on whose number to enter.</p>																																															
<table border="1" style="width: 100%; border-collapse: collapse;"><tr><td colspan="9" style="text-align: center;">Social security number</td></tr><tr><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td><td style="width: 25px; height: 25px;"></td></tr><tr><td colspan="9" style="text-align: center;">or</td></tr><tr><td colspan="9" style="text-align: center;">Employer identification number</td></tr><tr><td style="width: 25px; height: 25px; text-align: center;">2</td><td style="width: 25px; height: 25px; text-align: center;">7</td><td style="width: 25px; height: 25px; text-align: center;">-</td><td style="width: 25px; height: 25px; text-align: center;">0</td><td style="width: 25px; height: 25px; text-align: center;">6</td><td style="width: 25px; height: 25px; text-align: center;">8</td><td style="width: 25px; height: 25px; text-align: center;">2</td><td style="width: 25px; height: 25px; text-align: center;">4</td><td style="width: 25px; height: 25px; text-align: center;">2</td></tr></table>			Social security number																		or									Employer identification number									2	7	-	0	6	8	2	4	2
Social security number																																															
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2	7	-	0	6	8	2	4	2																																							
Part II Certification																																															
<p>Under penalties of perjury, I certify that:</p> <ol style="list-style-type: none">The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); andI am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; andI am a U.S. citizen or other U.S. person (defined below); andThe FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct. <p>Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.</p>																																															
Sign Here	Signature of U.S. person ▶	Date ▶ 1/9/20																																													
General Instructions																																															
<p>Section references are to the Internal Revenue Code unless otherwise noted.</p> <p>Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to www.irs.gov/FormW9.</p> <p>Purpose of Form</p> <p>An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.</p> <ul style="list-style-type: none">Form 1099-INT (interest earned or paid)Form 1099-DIV (dividends, including those from stocks or mutual funds)Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)Form 1099-S (proceeds from real estate transactions)Form 1099-K (merchant card and third party network transactions)Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)Form 1099-C (canceled debt)Form 1099-A (acquisition or abandonment of secured property) <p>Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.</p> <p>If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later.</p>																																															





CONFLICT OF INTEREST QUESTIONNAIRE
For vendor doing business with local governmental entity

A complete copy of Chapter 176 of the Local Government Code may be found at <http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm>. For easy reference, below are some of the sections cited on this form.

Local Government Code § 176.001(1-a): "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

- (A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;
- (B) a transaction conducted at a price and subject to terms available to the public; or
- (C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

Local Government Code § 176.003(a)(2)(A) and (B):

(a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

(2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds \$2,500 during the 12-month period preceding the date that the officer becomes aware that

- (i) a contract between the local governmental entity and vendor has been executed; or
- (ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than \$100 in the 12-month period preceding the date the officer becomes aware that:

- (i) a contract between the local governmental entity and vendor has been executed; or
- (ii) the local governmental entity is considering entering into a contract with the vendor.

Local Government Code § 176.006(a) and (a-1)

(a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

- (1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);
- (2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or
- (3) has a family relationship with a local government officer of that local governmental entity.

(a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

(1) the date that the vendor:

- (A) begins discussions or negotiations to enter into a contract with the local governmental entity; or
- (B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

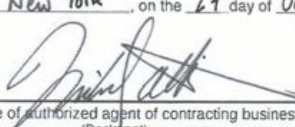
(2) the date the vendor becomes aware:

- (A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);
- (B) that the vendor has given one or more gifts described by Subsection (a); or
- (C) of a family relationship with a local government officer.



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VI. Form 1295 - Certificate of Interested Parties

CERTIFICATE OF INTERESTED PARTIES			FORM 1295	
			1 of 1	
<p>Complete Nos. 1 - 4 and 6 if there are interested parties. Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.</p>			OFFICE USE ONLY CERTIFICATION OF FILING	
1 Name of business entity filing form, and the city, state and country of the business entity's place of business. Rubicon Global, LLC Atlanta, GA United States			Certificate Number: 2020-682062	
2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed. Houston-Galveston Area Council			Date Filed: 10/23/2020	
3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract. FL03-21 Fleet Services Equipment			Date Acknowledged:	
4		Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)
				<input type="checkbox"/> Controlling <input type="checkbox"/> Intermediary
5 Check only if there is NO Interested Party. <input checked="" type="checkbox"/>				
6 UNSWORN DECLARATION				
My name is <u>Michael Allegretti</u> , and my date of birth is <u>May 13, 1979</u>				
My address is <u>505 Greenwich Street</u> , <u>New York</u> , <u>NY</u> , <u>10013</u> , <u>USA</u> (street) (city) (state) (zip code) (country)				
I declare under penalty of perjury that the foregoing is true and correct.				
Executed in <u>New York</u> County, State of <u>New York</u> , on the <u>27</u> day of <u>October</u> , 20 <u>20</u> (month) (year)				
 Signature of authorized agent of contracting business entity (Declarant)				



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VII. House Bill HB 89 Verification Form

House Bill 89 Verification Form

Prohibition on Contracts with Companies Boycotting Israel

The 85th Texas Legislature approved new legislation, effective Sept. 1, 2017, which amends Texas Local Government Code Section 1. Subtitle F, Title 10, Government Code by adding Chapter 2270 which states that a governmental entity may not enter into a contract with a company for goods or services unless the contract contains a written verification from the company that it:

- 1) does not boycott Israel; and
- 2) will not boycott Israel during the term of the contract

Pursuant to Section 2270.001, Texas Government Code:

1. "Boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes; and

2. "Company" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or any limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business associations that exist to make a profit.

I, (authorized official) Michael Allegretti,
do hereby depose and verify the truthfulness and accuracy of the contents of the statements submitted on this certification under the provisions of Subtitle F, Title 10, Government Code Chapter 2270 and that the company named below:

- 1) does not boycott Israel currently; and
- 2) will not boycott Israel during the term of the contract; and
- 3) is not currently listed on the State of Texas Comptroller's Companies that Boycott Israel List located at <https://comptroller.texas.gov/purchasing/publications/divestment.php>

Rubicon Global, LLC.

Company Name


Signature of Authorized Official

Chief Strategy Officer

Title of Authorized Official

11/09/20

Date

VIII. References

RUBICONSmartCity was designed to help city governments run faster, smarter, and more effective waste, recycling, and municipal fleet operations. Our technology was built through the eyes of municipal operators and supervisors to best meet their particular needs. The resulting proprietary platform, RUBICONSmartCity, empowers municipal governments to streamline operations and work towards long term sustainability goals, while improving customer satisfaction. We continually develop new software capabilities by collaborating with our city partners.

To date, RUBICONSmartCity has been rolled out in more than 55 cities across the United States, including Asheville, NC; Atlanta, GA; Buffalo, NY; Colorado Springs, CO; Columbus, GA; Fort Collins, CO; Fort Smith, AR; Houston, TX; Glendale, AR; Irving, TX; Kansas City, MO; Memphis, TN; Montgomery, AL; Orlando, FL; Philadelphia, PA; Roseville, CA; San Antonio, TX; Santa Fe, NM; Spokane, WA; Tyler, TX; and West Memphis, AR. Each city with which we have collaborated has seen significant improvements to their operations and community, and in turn we have gained insights that have allowed us to develop our technology to better meet the specific needs of our city partners. Please see a list of references below:



"Working with Rubicon as a member of its Board, I'm able to help the company expand its important mission to end waste to cities throughout the United States, and around the globe. Rubicon understands how to partner with governments and municipalities, and how to collaborate and bring technology and sustainability together for maximum community impact. They give city leaders the data, insights, and analytics that help drive improved customer service, better quality of life, and greater equity for all communities. It's important work that is at the core of what it means to be a truly smart city."

Honorable Michael Nutter –
Former Mayor, City of Philadelphia & Past Chairman, U.S. Conference of Mayors

1) The City of Fort Smith, AR - Division of Solid Waste Management

- **Agency Name:** Division of Solid Waste Management
- **Contact Name:** Kyle Foreman
- **Contact Email:** kyle.foreman@fortsmithar.gov
- **Contact Telephone Number:** (479) 784-2431
- **Address:** 623 Garrison Ave; Fort Smith, AR 72901
- **Date Sold:** August 2019 (Contract in progress)



In August 2019, the City of Fort Smith, Arkansas and Rubicon entered into a partnership to pilot Rubicon's next generation technology - RUBICONSmartCity™ - with the City's Division of Solid Waste Management's fleet of vehicles. After the allotted six months, the City and Rubicon entered into a three-year contract to deploy Rubicon's technology in the City's full fleet of 40 sanitation vehicles. The City procured Rubicon's technology through HGACBuy.

The City was particularly focused on reducing the number of missed pickups through near-real-time collection monitoring; the number of go-backs through service verification information; and identifying areas to improve route efficiencies that would result in the conservation of time, resources, and taxpayer dollars. Rubicon's preliminary analysis showed that by running a route optimization exercise, the city has the potential to realize \$172,000 in annual cost savings. Additionally, by deploying our technology, the City has the potential to recognize an estimated \$245,000 in annual cost savings.

2) The City of Asheville, NC - Sanitation Division

- **Agency Name:** Sanitation Division
- **Contact Name:** Jes Foster
- **Contact Email:** jesfoster@ashevillenc.gov
- **Contact Telephone Number:** (828) 259-5863
- **Address:** 70 Court Plaza; Asheville, NC 28801
- **Date Sold:** October 15, 2020 (Contract in progress)

Rubicon and the City of Asheville entered into a partnership in November 2019 to pilot Rubicon's next generation technology - RUBICONSmartCity™ - within a selection of 33 of the City's Sanitation Division solid waste vehicles. The pilot ran between December, 2019 and June, 2020. The City then used HGACBuy to procure Rubicon's technology in October, 2020.

In particular, the City focused on enabling route efficiencies through visibility and insights into route performance, including service verifications and vehicle tracking; track driver behavior such as hard driving and stationary time; monitor fleet issues through reporting and alerts to enable proactive maintenance; streamline new driver training by giving the drivers the ability to easily see and learn their routes; and improve communication between the Sanitation Division and The City by providing access to more data to be used by the customer service team in fielding citizen complaints. Rubicon's preliminary analysis shows the City has the potential to recognize \$37,710 in annual savings through reduced go backs, reduced complaint calls, and digitized routes. In addition, the City has the potential to realize \$115,570 in annual cost savings through a fleet optimization exercise that would balance and increase the efficiency of Asheville's recurring Residential routes.

3) The City of Montgomery, AL - Public Works Department

- **Agency Name:** Public Works Department
- **Contact Name:** Chris Conway, Director of Public Works
- **Contact Email:** cconway@montgomeryal.gov
- **Contact Telephone Number:** (334) 625-2696
- **Address:** 103 N Perry Street; Montgomery, AL 36204
- **Date Sold:** March 1, 2019 (Contract in progress)

In March 2018, the City of Montgomery, AL and Rubicon launched a six-month pilot project. After the allotted six-months, the City and Rubicon committed to a three-year contract in early 2019 to deploy our technology in the City's 80 trucks delivering MSW and yard waste service to 65,000 residential



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customers. During our pilot with the City, we carefully measured the impacts of our technology on the City's operations, especially around maximizing community safety gains and improving route efficiency. Rubicon's data showed that the City could reduce its routes to total approximately \$375,000 per year in taxpayer savings. After commencing work with Rubicon, the City earned a coveted *Smart 50 Award*. This international award annually recognizes the most transformative smart city projects across the world.

4) The City of Kansas City, MO - Department of Solid Waste

- **Agency Name:** Department of Solid Waste
- **Contact Name:** Michael Shaw, Administrative Manager
- **Contact Email:** michael.shaw@kcmo.org
- **Contact Telephone Number:** (505) 955-2012
- **Address:** 414 E 12th Street; Kansas City, MO 64106
- **Date Sold:** October 2019 (Contract still in progress)

After winning a competitive RFP, the City of Kansas City, MO and Rubicon signed a 3-year contract in October 2019. Rubicon's technology was deployed in 80 vehicles allowing the City to optimize scheduling and routing, provide near-real-time updates to drivers, improve customer service, and streamline management and scheduling systems. Using Rubicon's technology the Solid Waste Department has doubled the service area covered by those 80 vehicles, recognized significant cost savings through streamlined operations and optimized routing, and improved service delivery to residents and response time to requests or missed pickups.

At the beginning of this engagement, Rubicon successfully coordinated and managed integrating RUBICONSmartCity with both the City's billing and work order management systems. Challenges with this process included ensuring collaboration on exactly what data needed to be pulled and pushed between the two systems. However, with weekly check ins and ongoing communications, Rubicon implemented this project within budget and on schedule.

5) The City of Santa Fe, NM - Environmental Services Department

- **Agency Name:** Environmental Services Department
- **Contact Name:** Shirlene Sitton, Director of Environmental Services
- **Contact Email:** sesittion@ci.santa-fe.nm.us
- **Contact Telephone Number:** (505) 955-2200
- **Address:** 1142 Siler Road, Building A; Santa Fe, NM 87507
- **Date Sold:** May 2017 (Contract in progress)

In May 2017, the City of Santa Fe, NM and Rubicon launched a six-month pilot project. Following the completion of our pilot project with the Environmental Services Department, we won a competitively-sourced RFP for a 4-year contract. The technology was originally deployed in the city's fleet of 42 trucks servicing 32,000 residential and commercial customers for waste and recycling. Throughout the project, we provided all components of the technology, which consisted of hardware and software, specifically iPhone 6+ smartphones, Pod telematic devices, accessory kits, an operator-facing application (app), and a manager facing secure website (portal). In addition to the technology, the services also included on the ground support and training by a team of dedicated specialists. The City utilized RUBICONSmartCity to identify and geolocate graffiti hotspots across the City. Upon conclusion of this target three-week initiative, the Environmental Services Division had a comprehensive list of graffiti locations they could share across other City divisions to efficiently and effectively clean the hotspots.



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6) The City of Spokane, WA - Solid Waste Collection Department

- **Agency Name:** Solid Waste Collection Department
- **Service Types:** Residential & Commercial Solid Waste, Recycling, and Bulk Collection
- **Contact Name:** Erica Jacobo, Business Systems Analyst
- **Contact Email:** ejacobo@spokanecity.org
- **Contact Telephone Number:** (509) 309-5466
- **Address:** 808 W Spokane Falls Blvd; Spokane, WA 99201
- **Date Sold:** October 2018 (Contract in progress)

After winning a competitive RFP, the City of Spokane and Rubicon signed a 3-year contract in October 2018. The technology powers the City's fleet of 100 solid waste trucks, servicing more than 60,000 residential and commercial customers for waste and recycling. Rubicon provides all components of the technology including iPad Mini tablets, Pod telematics devices, accessory kits, operator-facing app and a manager-facing portal. In addition, we are providing on the ground support and training via our team of Customer Success Managers.

Until recently, Spokane's operation ran almost entirely on paper. All service information was kept in a giant rolodex and City staff dedicated time to filing two full boxes of paper records each week. With Rubicon's technology, the City is able to save \$25,000 annually through digitization of their paper routes, boosting the overall efficiency of their solid waste operation.

Spokane is especially effective utilizing the In Cab Interface (ICI) to note a variety of exceptions at the curb and using this data to drive revenue. For example, drivers utilize the ICI to note overflowing bins, locked gates, and contamination at the curb. Drivers also use the ICIs to document extra bags and other chargeable items at the curb, generating an additional \$2 million in revenue every year.

IX. Service Organization Documentation

NB: the following text is also included in Form H in the attached Excel sheet.

OVERVIEW

Rubicon excels in customer support. Our Customer Success Team is responsive to the needs of each City partner and works to resolve issues specific to individual operations based on our tiered support model. Our staff is available Monday - Friday, 8:00am - 6:00pm EDT to answer customer service related questions by phone or email, and we can arrange for specialized support for customers that need additional availability.

For issues related to technology, Rubicon provides support through our online help desk. Rubicon will work with the City to ensure operators, supervisors, customer support staff, office staff, and all other users are trained and able to utilize the technology; through the ICI, Portal, or both. Rubicon's Customer Success Manager will personally manage the City's ongoing needs; whether those be day-to-day requests or larger strategic assessments of how to modify business practices to best leverage the technology.

Prior to launch, the City's dedicated Customer Success Manager will work with the City to understand the City's specific customer service expectations and develop customized protocols to ensure Rubicon



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is meeting your needs in a timely manner. Rubicon provides maintenance and support services throughout the contract period.

SUPPORT

Rubicon follows a six point staffing and support plan to ensure that our government partners achieve and surpass their goals under this contract.

1. **Hire and deploy highly-qualified and trained staff to support cities:** Rubicon's staffing plan for our contracts starts with hiring the most qualified staff and ensuring they have the resources necessary to support our cities. Over the last three years, we have assembled a highly-qualified team that brings outstanding technical and domain knowledge to all of our contracts. We have further deepened this team's skills and experience with on-the-ground practice. Our technology has been deployed in over 55 cities across the U.S. and our team has learned firsthand how to best support municipal contracts.
2. **Ensure staff are located in close proximity to our city partners wherever they are located:** Rubicon now employs a nearly 100% remote workforce. Our headquarters remains in Atlanta, GA, and the RUBICONSmartCity team is primarily based in New York, NY, but our Customer Success staff is spread around the rest of the country, ensuring that key personnel are within close proximity to most customers. Rubicon will provide support from across all of its offices and remote locations. Please see a full list of positions and their locations, as well as full addresses for each of Rubicon's two primary office locations:

KEY POSITIONS

- Phil Rodoni, Chief Technology Officer - *San Francisco, CA*
- Ryan Alexander, Director, Product Development - *Atlanta, GA*
- Kyle Walz, Director, SaaS Enablement - *Atlanta, GA*
- Fred Hannon, Director, Customer Success - *New York, NY*
- Michael Allegretti, Chief Strategy Officer - *New York, NY*
- Conor Riffle, Vice President, Smart Cities - *New York, NY*

OFFICE LOCATIONS

- Atlanta: 950 E. Paces Ferry Road, Suite 1900, Atlanta, GA 30326
- New York: 335 Madison Avenue, 4th Floor, New York, NY 10017

3. **Provide world-class launch support and staff training:** Immediately upon commencement of the contract, the dedicated Customer Success Manager will coordinate all launch, work planning, and contract milestones directly with city staff. During the launch, the dedicated Customer Success Manager will work directly with city staff to oversee installation of the technology, train drivers, train city staff, and provide in-person support as long as the city requires it. After the launch phase is complete, the dedicated Customer Success Manager, along with our Director of Customer Success, Fred Hannon, will be the direct points of contact throughout the duration of the contract. We have developed a fully virtual launch and training program for staff to keep City employees safe during COVID.



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4. **Provide full-time staff support to our cities:** All staff listed above are full-time employees of Rubicon. We use third-party contractors for installation of the technology, but always with direct oversight and coordination provided by full-time Rubicon staff.
5. **Deploy ongoing support and training:** Our Customer Success Team is responsive to the needs of each city partner and works to resolve issues specific to individual operations based on our tiered support model. Our staff is available Monday - Friday, 8:00am - 6:00pm EDT to answer customer service related questions by phone or email, and we can arrange for specialized support for customers that need additional availability. For issues related to technology, Rubicon provides support 24/7 through our online helpdesk service.
6. **Provide multiple ways to contact Rubicon:** Our team is available in numerous ways, via phone, email, web portal or in-person, for customer service-related questions.

There are various support channels available to our city partners. Government staff simply choose which channel is most appropriate to use depending on the severity of the request. Potential options include the following:

- Directly calling the city's dedicated Customer Success Manager
- Directly emailing the city's dedicated Customer Success Manager
- Reporting technical issues or feature requests directly through the Phone (ICI) or Manager Portal
- Reporting issues through Rubicon's online helpdesk service.

Please find an example support services plan below:

Example Support Services Plan (Specific support plan to be agreed upon with individual customers)	
<i>Dedicated Support Resource</i>	<ul style="list-style-type: none">• Rubicon is reinventing customer support in the fleet management and solid waste industry by providing each customer with a dedicated specialist with multiple ways to access them. Our team is available by phone, email or web portal, as well as in-person visits.• Rubicon supports our cities with a dedicated team of Customer Success Managers, all of whose mission is to deliver on our commitments to meet or exceed a city's expectations. These advocates and specialists manage customer service requests, including hardware and software troubleshooting.• The Customer Success Manager is responsible for contract adherence, relationship health and continuous



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	<p>improvement of customer experience. Every customer has specific criteria for customer service expectations. Rubicon therefore partners with our customers to develop support protocols that meet their specific expectations.</p>
<i>Onsite</i>	<ul style="list-style-type: none">• Onsite support is available as needed, such as during launch and initial driver training, in the event of a major software update, as well as critical contract milestone meetings.
<i>Online</i>	<ul style="list-style-type: none">• Reporting issues directly through the Phone (ICI) or the Portal.• Reporting issues through Rubicon's online helpdesk service.
<i>Telephone/ Email</i>	<ul style="list-style-type: none">• Our customers are in direct contact with their dedicated Customer Success Manager
<i>Agreement / Response Times</i>	<ul style="list-style-type: none">• Rubicon establishes backup or contingency plans for its critical processes. We clearly understand that under all circumstances, our customers must be serviced timely and effectively.• Each of our customers has unique requirements that we must fulfill to deliver services according to their needs. For that reason, we start each relationship with a mutually agreed-upon service level agreement (SLA) for a common understanding of deliverables. We then create customer-specific procedures to ensure all employees who service a customer are aware of the steps required for proper service delivery and contingency options.• Rubicon's Customer Support team is staffed from 8:00am - 6:00pm ED Monday - Friday.• Our city partners should also feel empowered to directly reach out to their Dedicated Customer Success Manager for time-sensitive or serious support requests that require immediate attention.
<i>Problem Escalation</i>	<ul style="list-style-type: none">• Our dedicated Customer Success



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	<p>Manager may become aware of issues through inputs from customers and from internal metrics. Regardless of the manner of input, we record the issue with a service ticket and assign the ticket to the proper functional team in order to ensure each ticket is resolved in a timely manner. We have performance expectations established for each type of ticket to ensure that those with the greatest turgency are resolved first.</p> <ul style="list-style-type: none">• Our dedicated Customer Success Manager can escalate urgent issues to our Director, Customer Success, Fred Hannon. If our Director, Customer Success is unable to resolve, he will escalate to our Vice President, Smart Cities, Conor Riffle.• Using this process Rubicon ensures that we manage issues in an accurate and timely manner. Any urgent requests by our customers are moved to the top of our request queue.• When we find that there are performance issues, either through the data that we collect or through end-user feedback, we follow a few paths:<ul style="list-style-type: none">○ We review the document procedure to determine if updates are required or if processes need to be amended. If we find that processes are sound, we determine the origin of the issue and work together on corrective action.○ When we find that issue was related to employee performance, we direct our corrective action to the team member(s) to ensure that the processes are understood and followed.
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INVENTORY

Rubicon maintains sufficient inventory levels of hardware, components, and accessories, which support the SaaS product(s). Inventory replenishment processes exist, which are reviewed on an annual, or as needed basis. Additionally, Rubicon utilizes a software-based inventory management system to help us meet customer needs.



TRAINING

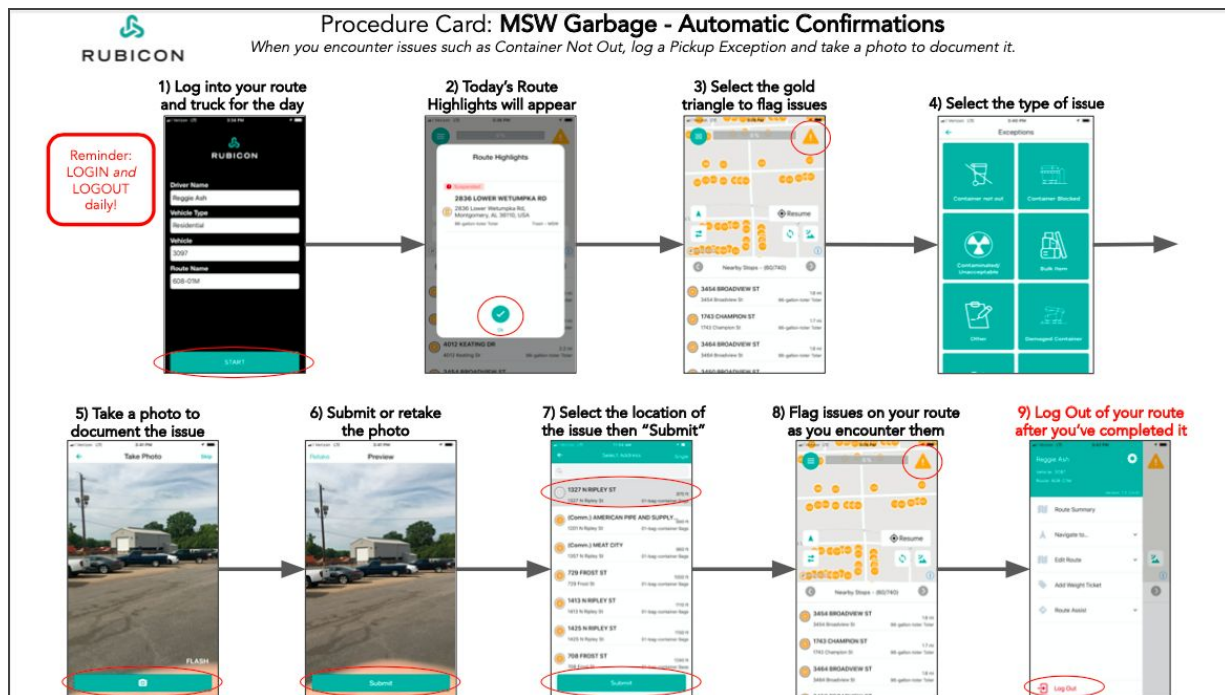
Training is a core competency of Rubicon's offerings. Without excellent training, a new technology program will ultimately fail. Even if a city is collecting a treasure trove of useful data, it is not valuable if city staff cannot interpret the data and translate it into actionable items. That's why we put extra focus towards making sure that supervisors, managers, and other project staff receive the best possible training. We meet staff where they work to easily provide ample opportunities for training that meets the varied needs of a diverse staff. In our experience, our efforts ensure all staff are capable of getting the most out of the technology.

In order for training to be successful, Rubicon expects that city partners will actively coordinate available times that work best for the highest number of relevant project stakeholders to schedule training sessions, and that these participants will have access to a computer/tablet and web-browser to access the Portal. Our training philosophy is that hands-on, live use of the technology is the best way to learn. Our lead Customer Success Manager will train staff directly on the city's live dashboard within the Portal. Training is more valuable and effective when staff are able to view their own vehicles and use their city's unique dashboard. We do not believe in providing canned, one-size-fits-all content for training our customers.

Rubicon will organize comprehensive and specialized training sessions for different city stakeholders to ensure city staff understand how our technology will make their day-to-day jobs easier and more rewarding. We have outlined below the key types of training Rubicon provides. Training is focused up front during the initial installation window, but Rubicon provides training throughout the lifetime of the contract.



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EXAMPLE OF A "DRIVER CARD", WHICH CAN BE STORED IN THE VISOR OF THE TRUCKS TO HELP DRIVERS WITH THE BASIC FUNCTIONS OF THE ICI AND MOBILE APPLICATION.

DRIVERS

Format: In-person/Virtual led by RUBICONSmartCity Customer Success Manager

Time Requirement: 1-hour training and Q&A. Ride-along training can also be scheduled for drivers if desired.

Drivers will be trained on the In-Cab-Interface. Customer Success Manager's schedule a training session with all app users ahead of launch and supply ICI's with demo routes loaded so that the users can see the app and experiment with the functionality before it goes into a truck. Interaction is limited, but this eliminates a number of questions users may have when we go live. At launch, drivers are guided a second time through the main functionality (i.e. logging in, viewing route details, logging exceptions). Our Customer Success Managers are also available for ride-alongs if needed.

CUSTOMER SERVICE REPRESENTATIVE (CSR)

Format: In-person/Virtual led by RUBICONSmartCity Customer Success Manager

Time Requirement: 30 minutes to 1-hour training and Q&A. Ongoing training can be provided as needed.

Customer Service Representatives will be trained on the Manager Portal. CSRs are trained to investigate customer complaints. These most commonly include learning how to investigate speeding and service complaints using the Portal as well as key reporting tools.

DISPATCHERS & SUPERVISORS

Format: In-person/Virtual led by RUBICONSmartCity Customer Success Manager



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Time Requirement: 30 minutes to 1-hour training and Q&A. Ongoing training can be provided as needed.

Dispatchers and Supervisors will be trained on the Manager Portal specifically on how to use the Dispatch Board, create new routes, and use data collected by the Pod telematics device to identify root causes for vehicle issues and service complaints. They will be trained on how to use the Fleet Insights functionality to improve safety, customer service, operational efficiencies.

MANAGEMENT

Format: In-person/Virtual led by RUBICONSmartCity Customer Success Manager

Time Requirement: 30 minutes to 1-hour training and Q&A. Ongoing training can be provided as needed.

Department Management will be trained on the Manager Portal, specifically on how to analyze and understand overall trends regarding the following data collected, features of the dashboard, how to locate vehicle location and insights, pull relevant reports, and view historical routes and breadcrumb trails, among other features.

SUPER USERS

Format: In-person/Virtual led by RUBICONSmartCity Customer Success Manager

Time Requirement: Two 1-hour training sessions and Q&A. Follow up remote sessions as required. Ongoing training can be provided as needed.

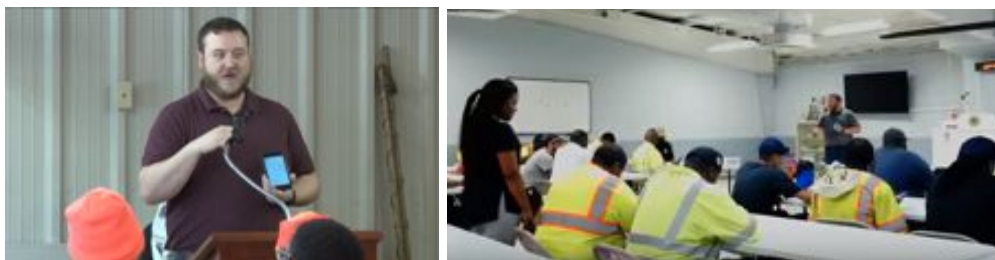
Rubicon will provide “train the trainer” sessions for City staff that are selected as super users. Training will be comprehensive covering the Driver App and all functionality provided through the Portal. The Customer Success Manager will walk any designated city “super users” through RUBICONSmartCity functionality as well as common questions city staff may encounter from other city users. Super users can subsequently assist with Driver and other Supervisor training for practice, and Rubicon’s Customer Success Manager will provide feedback. Additional remote training will be provided as needed.

SYSTEM ADMINISTRATOR (PASSWORDS, SECURITY)

Format: In-person led by RUBICONSmartCity Customer Success Manager

Time Requirement: 30 minutes to 1-hour training and Q&A. Ongoing training can be provided as needed.

A System Administrator can be trained to set-up individual logins for users on the Manager Portal, assign certain levels of access for users, and add/edit user information. However, this is not a required role, as all of these tasks can also be performed by the Customer Success Manager at the City’s request.



Rubicon Customer Success Team Leading Driver Training Session with a Partner City



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After implementation, Rubicon's Customer Success Manager will manage ongoing city training needs. Additional Portal training can be conducted on any desktop, laptop, or tablet that has access to a web-based portal. Rubicon utilizes RingCentral to conduct web-based training. Both systems are simply designed and sessions can be accessed with a simple two-step process (call-in and screen sharing). Rubicon will provide dial-in credentials and a URL link with screen sharing capabilities to conduct the training. City staff will only need access to a web browser on any desktop or laptop computer to join the training. The vast majority of updates pushed to the ICI and Portal do not require any additional training. If an update is substantial enough to require training, Rubicon will work with the city to schedule training sessions with the necessary stakeholders.

Rubicon proposes the following system for providing training throughout the duration of the contract beyond initial training.

NEW STAFF TRAINING In the event that newly hired staff must be trained, Rubicon will coordinate with the city to schedule a training session. New Staff Training can be conducted virtually or in person dependent upon what is most feasible.

SCHEDULED TRAINING FOR MAJOR SOFTWARE UPDATES While the clear majority of software updates will be minor and not require additional training, in the event that a major software update occurs, Rubicon will coordinate with the city to schedule and conduct a training session on the new updates. Ideally, this training will take place no later than 48 hours after a major software update is announced. Scheduled Training for major software updates can be conducted virtually or in person dependent upon what is most feasible.

TRAINING UPON REQUEST The city can coordinate with Rubicon to schedule training upon request at any point throughout the duration of the contract. One-off training requests can typically be conducted virtually.

ACCESS TO TRAINING MANUALS AND MATERIALS Rubicon has developed Portal training manuals that can be accessed by Solid Waste Department staff at any time. Manuals are digitally accessible. FAQs are also available through the Portal. The FAQ's are sorted by type, and provide quick access to the most common software and hardware questions.



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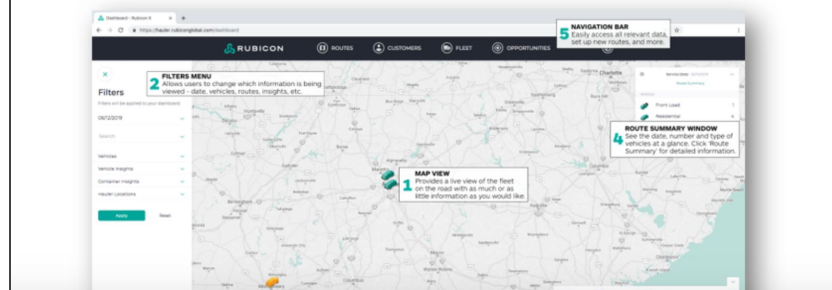
Manager Portal: Dashboard Tour

Welcome to the Manager Portal

The **Manager Portal** is the center of operations for hauler dispatchers, managers and administrators. It is designed to provide a wealth of information and insights at a glance, while allowing users to change views or drill down for more information with a quick click.

Designed for Convenience

Once the portal is set up, many users spend nearly all their time on the **Dashboard**. The first screen users come to after logging in to the Manager Portal, the Dashboard is designed to keep all the most important information at your fingertips. And when you need more details, they're just a click away.



Training Manuals and Materials are available through Rubicon's Online Help Desk

Additional Training Options

Given the impacts of COVID-19, Rubicon developed an alternative virtual training program to safely accommodate all end-users. Training can be conducted on any desktop, laptop, or tablet that has access to a web-based portal. Rubicon utilizes RingCentral and/or Microsoft Teams to conduct web-based training. Both systems are simply designed and online training sessions can be accessed by phone or computer audio. Rubicon will provide dial-in credentials and a URL link with screen sharing capabilities to conduct the training. City staff will only need access to a web browser on any desktop or laptop computer to join the training.

RESUMES & PROJECT PERSONNEL

Rubicon will support the city partners across three specialized and experienced teams: Product Development & Technology, Customer Success, and Smart City Partnerships. Each team includes industry experts and professionals who will be responsible for collaborating with city staff to ensure successful implementation, deployment, and maintenance of the technology throughout the contract duration. These teams bring exceptional experience - in solid waste, technology, and city government - to meet and exceed general support expectations. Rubicon will also assign a dedicated Customer Success Manager for each city. The following resumes are included below:

- Phil Rodoni, Chief Technology Officer
- Ryan Alexander, Director, Product Development
- Kyle Walz, Director, SaaS Enablement
- Fred Hannon, Director, Customer Success
- Michael Allegretti, Chief Strategy Officer
- Conor Riffle, Vice President, Smart Cities



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Phil Rodoni -
Chief Technology
Officer

San Francisco, CA

EXPERIENCE WITH RUBICON | Phil is the Chief Technology Officer at Rubicon, where he continually seeks opportunities to enhance the company's cloud-based platform and deliver a superior experience to city partners and haulers. Phil has been a part of the Rubicon team since 2015. Phil and his team will be involved in the development and maintenance of the hardware and software throughout the duration of this contract.

QUALIFICATIONS | Phil is well-versed in financial services, mobile internet, and software development. He was previously the Vice President of Software Development at Esurance where he enabled the company to expand its offerings and geographic footprint. He also worked as Vice President at Charles Schwab, building a platform that supported 100,000 concurrent users, and brings 26 years of industry experience. Rodoni holds a Bachelor of Arts in Economics and Master of Business Administration from the University of California, Berkeley.

ROLE TO BE PERFORMED | As Rubicon's CTO, Phil has played a high-level role in managing the technical support and product development throughout the duration of the contract term for all of the 50+ cities Rubicon has worked with over the last three years.



Ryan Alexander -
Director, Product
Development

Atlanta, GA

EXPERIENCE WITH RUBICON | Ryan joined the Rubicon team in 2015 and is currently the Director of Product Development. His responsibilities include product design and development for the company's customer, vendor, and city technology solutions. During his time at Rubicon, Ryan previously held the position of Product Manager of Mobile Technology Solutions and RUBICONSmartCity.

QUALIFICATIONS | Ryan has worked within procurement specifically with a focus on strategic sourcing initiatives. Throughout his career, Ryan has held multiple positions at a Fortune 500 Company, West Rock, including roles within Procurement, Supply Chain, and Six Sigma. Ryan holds a Bachelor of Science in Mechanical Engineering from the University of Tennessee, Knoxville.

ROLE TO BE PERFORMED | Collaborating with the Customer Success Managers, Ryan will work on the back-end enhancement of hardware and software to meet all of Rubicon's city partner's development requests.



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Kyle Walz-
Director, SaaS
Enablement and
Support
Atlanta, GA

EXPERIENCE WITH RUBICON | Kyle joined Rubicon in 2016. As Director of SaaS Enablement and Support, Kyle is responsible for ensuring that city partners experience a seamless integration with the RUBICONSmartCity technology suite. Prior to his current role, Kyle fulfilled the duties of Director of Launch, Director of OpEx & Innovation, and National Account Launch Manager at Rubicon. Over the past three years, Walz has led a dedicated team of managers and junior managers to construct and implement a robust customer launch process for Rubicon customers. Kyle and his team have launched major national customers totaling thousands of locations across the United States.

QUALIFICATIONS | Kyle came to Rubicon after holding roles in Logistics, Operations, and Transportation Procurement at Amazon.com, BDP International, and JB Hunt. At Amazon, Kyle supported growth strategy for supply chain logistics and managed U.S. outbound global logistics solutions for Amazon customers across multiple marketplaces.

ROLE TO BE PERFORMED | Kyle will work with Columbus' dedicated Customer Success Manager - Alex Arnett- to ensure all the City's technology needs and requests are met.



Fred Hannon-
Director of
Customer Success
New York, NY

EXPERIENCE WITH RUBICON | Fred Hannon joined Rubicon at the start of 2020. He is tasked with the development and management of Rubicon's Customer Success department. Fred previously built customer-focused management teams and has more than 10 years of municipal management experience.

QUALIFICATIONS | Fred has 20+ years of leadership experience, most notably with early-stage companies involved in municipal services. He's held positions in publishing, financial services, parking enforcement and an entrepreneurial venture as a landscape designer. Fred currently manages a team with direct responsibility for Rubicon's entire municipal portfolio including Spokane, WA; Montgomery, AL and Santa Fe, NM.

ROLE TO BE PERFORMED | Fred will oversee all phases of the engagement to ensure the City's needs are met and exceeded. David Battaglia will report and escalate any issues to Fred as required. During the launch and implementation phase, Fred will dedicate his time to help ensure a seamless transition of the technology deployment. Following the completion of the launch and implementation phase, Fred will support the City on an as needed basis



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Michael Allegretti -
Chief Strategy
Officer
New York, NY

EXPERIENCE WITH RUBICON | As Chief Strategy Officer at Rubicon since 2016, Michael leads all government partnership and sales efforts, including the licensing of company technology to city governments and pursuing enterprise contracts through competitive bidding. Additionally Allegretti, identifies business risks and opportunities created by federal, state, and local public policy, as well as overseeing Rubicon's sustainability, marketing, and communications functions. He serves as a thought leader and external spokesperson, authoring opinion pieces, fielding media, and delivering speeches.

QUALIFICATIONS | Allegretti has had extensive experience in public policy throughout his career. Prior to Rubicon, he served as Director of the Center for State & Local Leadership at the Manhattan Institute and the Senior Manager for Public Policy at Uber Technologies. Additionally, Allegretti was a congressional candidate for the U.S. House of Representatives in 2010.

ROLE TO BE PERFORMED | Michael oversees all government partnership and sales efforts, including the licensing of company technology to city governments and pursuing enterprise contracts through competitive bidding.



Conor Riffle-
Vice President,
Smart Cities
New York, NY

EXPERIENCE WITH RUBICON | Conor Riffle, Vice President of Smart Cities, joined Rubicon in 2017. He oversees business development and customer success for Rubicon's Smart Cities product. Conor has supported city governments in delivering more sustainable, efficient services for the last ten years.

QUALIFICATIONS | Before Rubicon, Conor was one of the early employees at the Clinton Foundation, where he helped to build the C40, a network of the world's largest cities dedicated to climate change action. Beginning in 2010, Conor served as the founding Director of Cities and Data Product Innovation at CDP, an international environmental NGO. Under Conor's leadership, CDP's cities program achieved global recognition as the premier platform for city governments to report environmental data. More than 600 global cities now use CDP's platform annually. In 2013 and again in 2017, Bloomberg Philanthropies announced major investments in CDP's work with cities. Conor has overseen the successful deployment of RUBICONSmartCity in over 50+ cities, including Atlanta, GA; Spokane, WA; Montgomery, AL; and Santa Fe, NM. In Montgomery, this included the implementation of the Pod telematics device and ICI solution in the City's 80 sanitation vehicles. More information on this implementation project can be found in our Client references.

ROLE TO BE PERFORMED | Conor will oversee all phases of the engagement to ensure the City's needs are met and exceeded.



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The city's dedicated Customer Success Manager will report and escalate any issues to Conor as required.

REPAIRS

Rubicon will replace up to five ICI devices per year under a standard agreement. All devices have a life expectancy of 4+ years. Rubicon will also replace any other standard hardware (charging stations, cables, mounts, etc), up to five items per year, at no cost. The number of devices to be replaced is subject to change based on the size and scope of a particular city's operation, and/or a separate agreement between a city and Rubicon.

Hardware Replacements Outside of Warranty

1. Rubicon will work with the city to determine standard operating procedures to report, qualify, and execute hardware replacements.
2. If the city has purchased the hardware, replacement of any devices outside of the warranty period will be the responsibility of the city. Replacement devices can be ordered through Rubicon and billed to the city.
3. If the city is leasing the hardware throughout the duration of the contract, Rubicon will work with the city to establish a standard process for reporting and qualifying hardware replacements.

Rubicon will also perform software troubleshooting as needed. If software is not performing as designed, Rubicon will take steps to fix the software. End users simply report the problem to their Customer Success Manager, or log a ticket within Rubicon's online helpdesk center. Rubicon has more than 10 fully trained software engineers on staff or under contract, all of who are qualified to perform software fixes and improvements on various aspects of our system. For information about the training we provide to our government customers, please see the above section entitled "Training."

The table below is an example maintenance plan. If awarded the contract, we will agree upon specific dates with the End User.

EXAMPLE MAINTENANCE PLAN	
Initial	• During the initial installation period, a two-week calibration period is conducted to ensure proper functionality of all hardware.
	• In the event that a piece of hardware is deemed dysfunctional during the calibration period, Rubicon will replace and reinstall a new device without additional expense to the city.
Monthly	• Rubicon makes updates to the software regularly. Reports on these updates and system upgrades will be shared monthly with the city.
	• Rubicon will conduct monthly check-ins to ensure all pieces of hardware are functioning, collecting data, and that the appropriate parties are receiving the data.
	• In the event that an issue is identified with the software or hardware functionality, Rubicon will notify the city of the issue within 24 hours.
Ad Hoc	• In the event that the city requires an inspection or maintenance assistance aside from the regularly scheduled maintenance plan,



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	the city will notify Rubicon within 24 hours of the issue identification. Standard operating procedures on how to report these issues will be determined by Rubicon and the city. Rubicon will qualify maintenance requests and schedule a maintenance inspection accordingly.
	Software Troubleshooting In the event that an issue is identified by the city with the ICI or Portal software, the city shall notify Rubicon within 24 hours of identification. <ul style="list-style-type: none">• Rubicon will look into the reported issue within 24 hours of receipt and send a troubleshooting analysis with recommended next steps.

SOFTWARE UPDATES & NEW FEATURES

Rubicon updates its software regularly. Updates and new features happen automatically in the Portal and App with no intervention required by users. These updates and new features are available to users immediately and at no additional cost through Rubicon's Software as a Service (SaaS) model.

While the majority of software updates will be minor and not require additional training, in the event that a major software update occurs, the Customer Success Manager will coordinate with the city to schedule and conduct a training session on the new updates. Scheduled Training for major software updates can be conducted virtually or in person dependent upon what is most feasible.

MARKETING PLAN

Rubicon has dedicated Partnership Development and Marketing teams focused on outreach to potential city partners across the US and abroad. Our Partnership team -- based out of New York -- brings many years of direct government experience at a municipal and federal level, as well as deep expertise in government vehicle technology applications and solid waste and recycling. Our Marketing team -- based in New York and Atlanta-- is composed of individuals with impressive marketing expertise across a number of industries with a deep understanding of the needs of city governments. Our Partnership Development and Marketing teams work together to contact eligible municipalities across the USA and generate maximum exposure for the RUBICONSmartCity product, including:

- **Attending Industry Conferences:** Our Partnership Development team attends more than 25 major industry conferences throughout the year to speak directly with potential government customers and stakeholders, including Smart Cities Connect, WASTECON, WASTEEXPO, Government Fleet Expo, and Public Works Expo. We are now attending these events virtually due to the COVID-19 pandemic.
- **US Conference of Mayors:** Rubicon is a member of the US Conference of Mayor's Business Council. We attend 2 events per year through the US Conference of Mayors, where we have the opportunity to meet and collaborate with Mayors from cities across the country.
- **Geotab Marketplace:** In 2020, Rubicon became an official Geotab Marketplace partner. Our product, RUBICONSmartCity, is now listed publicly on the Geotab Marketplace where any existing Geotab customers can find our product on the Geotab Marketplace and simply add it



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onto their current Geotab subscription. This partnership allows us to work with over 100 official certified Geotab resellers to bring in RUBICONSmartCity as a waste specific solution on top of their existing Geotab devices. Please find a link to our listing on the [Geotab Marketplace](#) as well as our initial [press release](#).



Smart waste solutions available on global marketplace

News | 21 Jul 2020 | by SmartCitiesWorld news team

Rubicon, whose solutions are used by more than 50 cities in the US, has made its smart city technology products available on the Geotab Marketplace.



- AWS Marketplace:** In 2018, Rubicon's product became available on Amazon Web Services (AWS). Rubicon goes to market together for our RUBICONSmartCity product, massively expanding the reach of our product and Partnership Development team. Through our partnership with AWS, we have the opportunity to engage in other joint marketing initiatives such as conferences. In October 2020, for example, AWS sponsored Smart Cities Week and invited our Chief Strategy Officer, Michael Allegretti, to lead a panel discussing the benefits of RUBICONSmartCity and the value of smart city technology to cities around the world.

SMARTCITIESDIVE Deep Dive Opinion Library Events Topics ▾

BRIEF

Rubicon's smart waste tech is now available on AWS marketplace

- Meeting with Existing Rubicon Customers:** In addition to our RUBICONSmartCity partners, Rubicon serves a large portfolio of commercial waste and recycling customers -- Best Buy, 7-Eleven, Dollar General, and many others -- by partnering with independent waste and recycling haulers in local markets. In many of these markets, we partner with city governments that run their own commercial waste hauling operations. As a result, we have established business relationships with hundreds of local governments across the US. This pool of potential



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government customers, which are already familiar with Rubicon, is particularly valuable for conversations about purchasing our fleet technology.

- **Direct Outreach through Email and by Phone:** Where Rubicon does not have existing relationships, we run email marketing campaigns, identifying cities with interest in purchasing the technology. We invite them to learn more about our offerings through direct conversation with a member of our partnerships team.
- **Introductions via Staff and Board Members:** Our staff and board members supply countless meaningful introductions to cities on a regular basis. Our Board of Directors includes two influential former mayors - Mayor Steve Goldsmith of Indianapolis and Mayor Michael Nutter of Philadelphia respectively. Both Mayors serve as thought leaders in the municipal and political world.

Together, these outreach activities represent a robust marketing plan for identifying potential customers who will procure Rubicon's technology through HGAC. Our marketing plan has proved successful over the past two years we have partnered with HGAC, and we believe it will continue to bring quality revenue opportunities to our business. We are happy to confirm that we are able to market Rubicon's product in all 50 states, and we are capable of servicing any government in the US that may wish to procure through HGAC.

TAB 2 - FORMS D & E

Form D

Please find the full version of Form D in Tab 5 - Electronic Media.



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NOTE: Pricing on this document shall be in one of two forms: (1) for catalog / price book line items (subsections A, B, C, D, E), price a % discount off list; (2) for non-catalog line items (i.e. specific models/systems, such as wash systems), price as a specific H-GAC price (\$X). On catalog bids, Offeror shall include a copy of catalog, and if separate, an associated list price document (in printed and electronic formats). Catalog line items below that are submitted by Offeror with a zero-percent discount shall be deemed as non-compliant. The catalog and associated list price book in effect at the time of H-GAC's open bid period shall apply. Offeror shall refer to Section-B for additional requirements. As per Section-B, for vehicle lifts and wash systems, Offeror shall include pricing (on Form-E) for installation and other related services. Per Section-B, all pricing shall be exclusive of delivery charges.

Product Code	Manufacturer	Description	Offeror (for joint bids, insert the company names of all parties. Joint bids must include the required forms (Form-A, W-9, CIQ, 1295, HB89, and CIF) for ALL participants)	Base Unit Price, in Whole Dollars	Discount-Off-List Percentage (use this column for "catalog" line items)
G: GPS Tracking and Other Monitoring Solutions					
GPS and video solutions shall be complete, turn-key pricing and shall include, on this Form-D: (1) <u>all hardware (including digital recorders and standard GPS in-vehicle transponder-sender unit</u> (on video systems: a camera \$/vehicle or \$/camera, et cetera) standard wiring, cabling, harnesses, etc., for a single vehicle base system application), and (2) associated, required standard "home office" software and mobile applications (Application Service Provider (ASP)/Single-Instance, Single-Tenant Legacy application and/or Software-as-a-Service (SaaS)). <u>Any required activation, service / monitoring, and maintenance fees shall be detailed and included as well on Form-D (such mandatory fees that are usually monthly in nature must be presented as a yearly figures to accommodate the HGAC purchase order system (one-time single PO, with associated single PO fee remittance to HGAC).</u> Options, such as multi-seat licenses, additional vehicle pricing (e.g. 2+, 5+, 10+ vehicles, et cetera, shall be priced on Form-E, along with all available options. <u>All bid responses shall include detailed descriptions of (and technical specifications for) all the equipment comprising their Form-D price.</u> As needed, Offeror may include attachments for additional Form-D pricing clarification / itemization. <u>Offeror shall include a separate quotation document detailing all the components, hardware, software, required fees / licensing that are included in the Base Unit system described and priced on this Form-D document as the "Base Unit" solution.</u>					
FL21G06	Rubicon Global	<u>Smart City Fleet and Route Management Solution:</u> standard, automatic data upload, cloud-based solution; Features: smartphone or tablet in-cab monitoring; onboard plugin device (OBD port interface), GPS transponder, software (and phone app) licensing; software functionality includes: active vehicle status tracking and monitoring (idle time, stationary time, fuel consumption, engine status, fault code tracking, miles traveled, etc.), asset management (refuse bin condition, location flagging, etc.), route management (route progress, speeding and hard driving, automated service verifications, work order tracking, pre and post trip reports, etc.), data collection (pot holes, graffiti, vacant home, downed trees, etc.), navigation (turn-by-turn directions, navigation to disposal sites, etc.) (Offeror shall include the Form-E options prices: differential upgrade price for hardware enhancements beyond the standard offering including camera integration)	Rubicon Global, LLC	\$190 monthly p/vehicle	

Form E

Please find a completed version of Form E in Tab 6 - Electronic Media.



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FORM-E: PUBLISHED OPTIONS		Invitation	FL03-21
Offeror:			
Notes:	(1) Use a single Form-E for ALL option/accessory items and quote each on a single, separate line. Add or insert additional lines as necessary.		
	(2) Completely describe each item. Include the manufacturer's code or part number. Each item listed MUST have a unique code or part number so that it can be identified in any subsequent contract's PO.		
	(3) Options which replace standard equipment on a Form-D Item should be priced net of any credit due for the replaced item.		
	(4) Options which are upgrades/downgrades of a Form D Item should be priced at the differential amount between the cost of the Form D Item and the upgrade/downgrade option.		
Code or Part No. (leave blank, as applicable, for services)	Option Description	Offered Price in Whole Dollars	
Note for catalog type line items: list pricing books shall be included as separate documents (NOT listed on this form)			
RSC1	Rubicon Y - monthly p/vehicle	\$26	
RSC2	Rubicon X (Phone Option) - monthly p/vehicle	\$135	
RSC3	Rubicon X (Tablet Option) - monthly p/vehicle	\$120	
RSC4	Rubicon Z - monthly p/vehicle	\$450	
RSC5	Rubicon Y Installation - p/vehicle (One Time Charge)	\$125	
RSC6	API Integration - p/hour	\$250	
RSC7	Launcher Training/Implementation - p/hour	\$250	
RSC8	Fleet Optimization - p/route	\$500	

TAB 3 - TECHNICAL SPECIFICATIONS, PRODUCT BROCHURES, & WARRANTY DOCUMENTATION



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NB: The hardware, software, and features described below are included in the base pricing provided in Form D & E.

Solution Overview

RUBICONSmartCity's full suite of technology includes three main hardware components: the Pod telematics device, which plugs directly into the on board diagnostic (OBD) port within the vehicle; the In-Cab-Interface (ICI), a specially configured device (iPhone, Android, or Tablet) mounted on the dashboard of the vehicle, preloaded with our customized application; and RUBICONVision (Camera), a forward-facing camera mounted on the inside of the windshield facing the road that automatically captures images to provide additional information to office staff without any operator interaction. These devices work together to collect data that is transmitted in near-real-time back to a web-based portal (Portal).



RUBICONSmartCity HARDWARE AND SOFTWARE

RUBICONSmartCity is a flexible solution enabling easy transfer across vehicles and applicability across a variety of fleet operations.

CORE OFFERINGS RUBICONSmartCity provides full suite telematics, automatic service verifications, dynamic routing, contamination monitoring, and the ability to gather abundant community insights to enhance municipal operations. Together the components of our technology—the Pod, the ICI, and the Portal—provide the following capabilities:



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- **Service verification** for commercial pick-up locations, and residential service areas without Radio Frequency Identification Devices (RFID). Service status is available to management and supervisors in near-real-time as operators complete their routes.
- An end-to-end **route and service management solution** for refuse collection, including paperless routes and the ability to provide near-real-time communication of all information between the vehicles and office staff.
- An **In-Cab-Interface** that provides operators with relevant route and customer information, turn-by-turn navigation, pre-and post-trip inspections with a customizable list of items for inspection, the ability to log weight tickets, and **field collections data** in real-time including:
 - **Exception flagging** and **photo capabilities**, which enable operators to log issues and take time-stamped photos in real-time as they drive their routes.
- Comprehensive and dynamic **route sequencing** functionality to aid in the routing and dispatching of ad hoc, bulk, cart delivery, and residential routes.
- A complete **telematics solution** for solid waste collection, including the ability to provide near-real-time and historical truck location and data related to routes and driving metrics for all vehicles.
- The ability to report **critical community issues** via the ICI mounted on the dashboard of the vehicle. Potential issues include potholes, illegal dumping, graffiti, street sign locations, vehicle license numbers, and overflowing waste bins, but cities have the ability to customize this list to their specific wishes with nearly any other issue.

Our standard solution includes:

- Pod devices (onboard plug-in device with OBD-II port interface)
- Apple (iOs-based) Smart Phones in military-grade cases
- High resolution Camera Technology
- Near-real-time GPS
- External hosting in a secure cloud environment
- Installation, training, maintenance, and warranty included
- Unlimited access to the Manager Portal

Technical Specifications

A. Hardware and Software Description

RUBICONSmartCity's full suite of technology includes three main hardware components: the Pod telematics device, which plugs directly into the on board diagnostic (OBD) port within the vehicle; the In-Cab-Interface (ICI), a specially configured device (iPhone, Android, or Tablet) mounted on the dashboard of the vehicle, preloaded with our customized application; and RUBICONVision (Camera), a forward-facing camera mounted on the inside of the windshield facing the road that automatically captures images to provide additional information to office staff without any operator interaction. These devices work together to collect data that is transmitted in near-real-time back to a web-based portal (Portal).



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POD TELEMATICS DEVICE: Rubicon will install its latest and most powerful Pod telematics device in the City's vehicles. The Pod device plugs directly into a vehicle's OBD-II port and requires no operator interaction. The installation takes less than 30 minutes per vehicle and does not require any hard-wiring. Once installed, the Pod telematics device provides state-of-the-art GPS technology, g-force monitoring, and engine and battery health assessments. The device offers a 32-bit processor, 64-Mb non-volatile flash memory that can hold up to 80,000 logs in offline mode (out of coverage), and accident data memory that can record over 100 minutes of second-by-second data (6,000 logs) of which the last 1.2 minutes are sent instantly on accelerometer-triggered accident-level events.

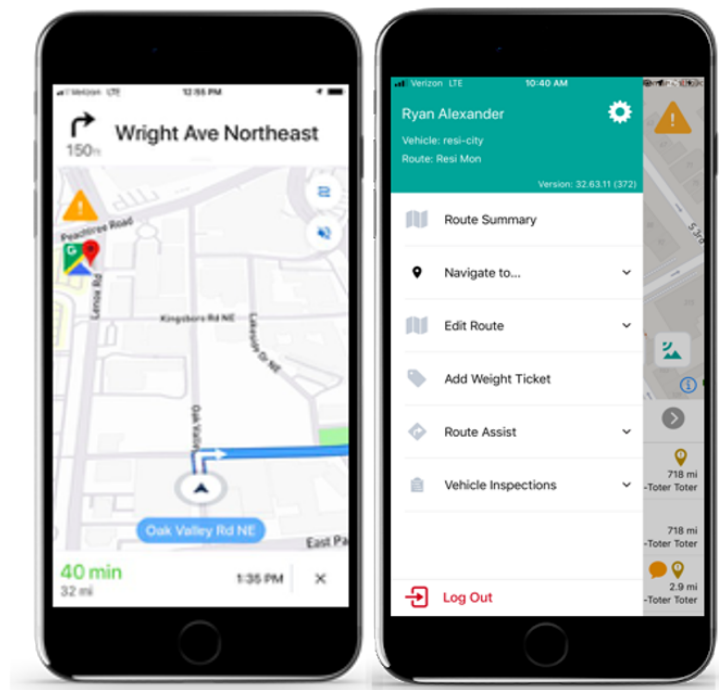
RUBICON'S IN-CAB-INTERFACE: The second key component of our solution is the ICI, which sits in a swivel mount inside the cab of the truck and requires no hard-wiring. The ICI was purposely designed to be mobile and interchangeable allowing any operator to use any ICI in any vehicle.

When not in use, our city partners typically house the ICI devices in a secure room at the truck yard. Rubicon provides the proper number of charging mounts (each mount supports 10 ICI devices) and cords. Rubicon understands that heavy vehicles often require maintenance that will temporarily bring them off of the road. **Due to the portability of the ICI devices, the City only needs as many devices as there are daily routes, reducing the need to procure hardware for every vehicle in your fleet.** This is an important distinction from most other service providers - both in terms of flexibility and cost savings - as they require hard-wiring across an entire fleet for **all** components of their solution, meaning that a city is still paying for technology on a truck that is out of service.

After retrieving the ICI from the provided charging station at the beginning of their day in the truck yard, operators place the ICI in the mount in the truck for the duration of the route. At the end of their day, operators simply remove and return the ICI to the charging station.

The ICI is responsible for tracking data points such as vehicle location, route completion, and service verification for waste vehicles in near-real-time and without the need for Radio Frequency Identification Devices (RFID). The ICI also provides turn-by-turn capabilities, route information, transit time estimates, and weight ticket logging to support improved collection operations and customer service. In addition, the ICI enables operators to complete a fully electronic and DOT compliant pre- and post-trip inspection for every trip. These supported features enable cities to fully digitize their operations on the front and back end.

The ICI provides operators with turn-by-turn directions to specific points. Operators can choose from a pre-populated list of destinations, for example, the first or last stop of their route, a disposal facility, the truck yard, and directions along a sequenced residential route. Other notable features include the ability to provide directions audibly. Navigation is particularly helpful for operators that are new to the routes (for example, in the case of sickness or employee turnover).

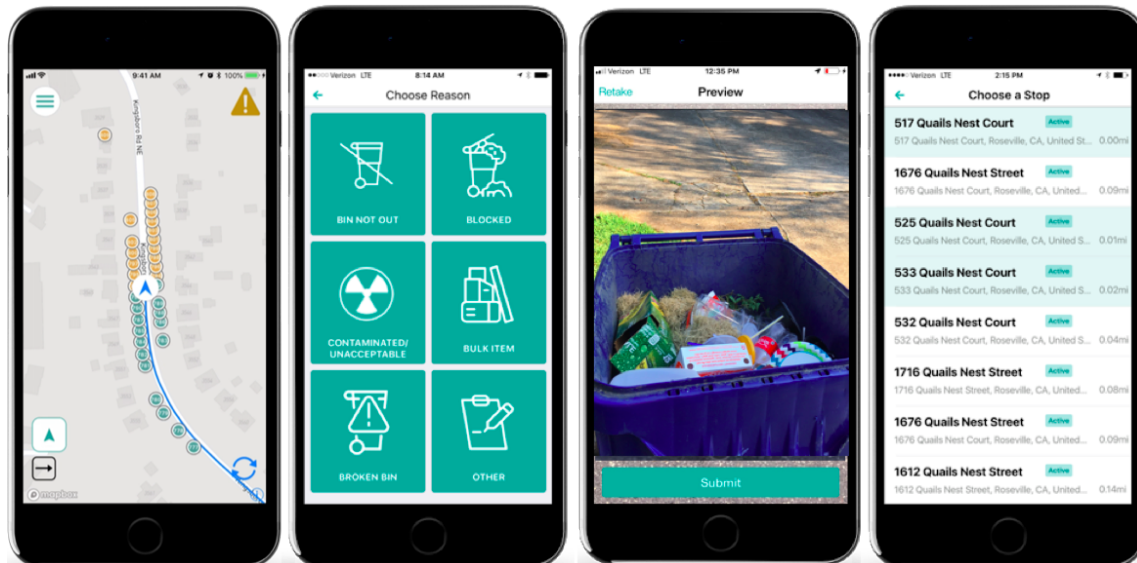


ICI SHOWING NAVIGATION AND ACTIONS AVAILABLE TO OPERATOR

Finally, the ICI empowers operators to relay issues as they see them along their route by tapping an exception button on the ICI. These exceptions provide office staff with near-real-time information on an address-by-address level of what an operator is encountering while on route. The list of exceptions is vast and customizable, with standard items including overflowing containers, contaminated bins, and illegal bulk waste. Beyond reporting an exception, the ICI allows operators the ability to capture images using the device to provide office staff and supervisors with additional insight into issues encountered on route. A reduction in calls is a common benefit of the system because as your operators document issues with photos, your customer service representatives in the solid waste department are able to communicate this new level of documentation to frequent callers. If desired, the images operators capture en route can prompt an automatic email to the customer providing further accountability. Over time, photo-based evidence of bins not out or blocked bins leads to a decrease in customer calls.



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In addition to photo taking capabilities, the ICI gives office staff the ability to program a pop-up note for the operator at any address. For example, office staff can create a note alerting an operator that a specific address requires back-door service. The ICI also allows operators to make notes at each address. For example, operators can log notes about the specific location of a bin at a particular address, allowing any operator the ability to proficiently run any route. Notes created by office staff or operators are linked to the customer address and are available for office review and can be visible to other drivers in a scenario where they need to provide assistance on a route.

RUBICONVision: Our camera technology contains several connected components, including a high definition camera and an on-board computer. The camera is safely and securely mounted to the dashboard of solid waste vehicles, facing out through the windshield. The computer portion of RUBICONVision is hard-wired to the truck's battery; when the vehicle starts, the device begins operating. Just like the Pod telematic device and ICI, the RUBICONVision camera collects data that is then transmitted in near-real-time back to the Portal for supervisor use and analysis.

Unlike other cameras on the market, RUBICONVision takes static pictures every few seconds that are sent directly to the cloud. These static images are automatically sent to the Portal and remove the need to filter through hours of video footage, or to regularly pull memory cards from a vehicle's video systems saving City staff's time and effort. This is an incredibly important distinction from most solutions on the market.

For cities who are committed to reducing driver interaction at the curb when necessary, we have developed "Strobe", which leverages the technology of RUBICONVision. Strobe provides an alternative method to verify service and identify exceptions along a driver's route and requires absolutely no driver interaction. When running the Strobe model, images of an operator's route are captured and reported back to the Portal for review without requiring any operator interaction.

Supervisors and in-office staff can click through the 'movie reel' to move forward or backward in seven second intervals along a given route. More importantly, these images are tied to addresses and Supervisors can easily review issues at the curb by simply searching an address in the Portal. Utilized correctly, the data Strobe collects - without any driver interaction - can help resolve customer issues,



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better understand environments your operators encounter on a daily basis, and provide an extra layer of transparency.



PORTAL DISPLAYING A STROBE “MOVIE REEL” CONNECTED TO BREADCRUMB TRAIL

THE PORTAL: The information collected by the Pod telematics device, the ICI, and RUBICONVision feeds back into the Portal in near-real-time. The Portal is a password protected, browser-based dashboard that is a City’s “go to” for everything and anything solid waste related. Digitized customer, route, and vehicle information can be searched, edited, and exported. Dispatchers can easily create, edit, and optimize both recurring and point to point routes. For day to day operations, the dashboard displays service verifications, a map of all vehicles and their locations in near-real-time, and insights to aid effective and flexible operations. Supervisors can watch route progress in near-real-time and adjust stops as needed; meanwhile, 311 agents can utilize data being gathered at the curb about exceptions in order to respond to citizen 311 requests in real time. To drive long-term operational improvement, the Portal provides reports and presents data that supervisors and in-office staff can use to develop new training and procedures. This also includes improving driver safety, optimizing routes, and focusing on preventative maintenance. **Rubicon provides access to the Portal to an unlimited number of users at no additional cost**, and levels of access can be customized by the City. This is another notable thing that distinguishes Rubicon’s offering from the competition.

B. System Requirements and Uptime

Rubicon uses a Software-as-a-Service (SaaS) model for software. The ICI runs custom-designed Rubicon software that is compatible with either iOS or Android. The Portal is compatible with and accessible via any modern desktop browser and runs on PC or Mac computers.



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The ICI - Rubicon's proprietary software application runs on the Phone and tracks several metrics including automated service verifications, vehicles location, route status and completion, and more, all in near-real-time. The City's routes are loaded onto the app, allowing drivers to simply log into a route at the beginning of a shift and have immediate access to pertinent customer information and routed addresses. The driver application is available in both iOS or Android, depending on what type of device (e.g. Apple or Samsung) the City prefers.

Environment: Apple iPhone / iPad or any Phone / Tablet running Android

System: iOS or Android

Up-time: 99.5%

The Pod - Rubicon's pod device plugs directly into a vehicle's on-board diagnostic computer and requires no driver interaction. It tracks several key metrics related to truck condition and driving behavior, including fault codes, idle time, hard braking instances, speeding instances, fuel consumption levels, among others.

Environment: Any vehicle with an on-board diagnostic (OBD-II) port

System: Geotab GO9

Up-time: 99.5%

The Camera - Rubicon's camera contains several connected components that are safely secured and mounted to the dashboard of solid waste vehicles. Just like the Pod telematic device and ICI, the RUBICONVision camera collects data that is then transmitted in near-real-time back to the Portal for supervisor use and analysis.

Environment: Econ Systems High Resolution Camera

System: N/A

Up-time: 99.5%

The Portal - The Manager Portal (the Portal) receives near-real-time information from the ICI, the Pod, and the Camera. Beyond simply giving supervisors the ability to access data analytics, the portal goes a level deeper, providing insights and recommending actionable items to improve operations, in near-real-time while drivers are still completing their routes.

Environment: Any computer with a modern browser

System: Browser-based with a modern browser

Up-time: 99.5%

Please find detailed specifications for each piece of hardware below:

iPhone 6+ Specifications				
<u>Display</u> 5.5" 1920x1080 IPS LCD 201 PPI	<u>Camera</u> 8 MP F2.2 Aperture F-Stop OIS	<u>Battery</u> 2915 mAh	<u>System</u> 2GB RAM A8 + None	<u>Storage</u> 16, 64, 128



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Pod Telematics Device				
<u>Interfaces</u> Legacy Interfaces: Physical Interfaces: J1850 PWM, J1850 VPW, J1708, 9141-2 and ISO 14230 (KWP2000) at Pins 2 and 10. <u>Manufacture/Model</u> Geotab GO9 <u>Diagnostic/application protocols:</u> OB2 Input/Output: Buzzer LEDs- Ignition, GPS, Cellular IOX Internal GPS/ Cellular antennas	<u>Cellular</u> LTE ATT: LTE (CAT-1): Bands 2/4/5/12. 3G: Bands % Verizon: Single Mode LTE (CAT-1) Bands 4/13	<u>GPS Receiver</u> 72-channel engine (GPS/GLONASS/ Beidou/Galileo/SB AS/WAAS/EGNO S/MSAS/GAGAN) Under 1 second Time-To-First Fix for hot and aided starts Cold start:26s Concurrent GPS & GLONASSsystem A-GNSS Accuracy: ~2.0 m CEP OTA FW updates supported	<u>Mechanical</u> Weight: 70 g (0.15 lb) Dimensions: 75mm L x 50 mm W x 23 mm H Housing: Flame retardant black ABs	<u>Electrical</u> Voltage: 12 V and 24 V systems supported Current: At 12V <ul style="list-style-type: none"> Operating Mode: 60-300 mA Operating mode + 10X: Up to 2 A Sleep mode: 4.5 mA At 24 V <ul style="list-style-type: none"> Operating Mode: 35-180 mA Operating Mode + IOX: Up to 2 A Sleep mode: 3.0 mA Resettable overcurrent protection to IOX

Camera (RUBICONVision)			
<u>Megapixel Count</u> 3.4 MP	<u>Image Quality</u> High Resolution	<u>Size, Weight, and Design</u> 40.7mm X 40.7mm X 33.4 mm	<u>Zoom Lens and Image Stabilization</u> 8X digital zoom



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C. Hosting, Security, Disaster Recovery

Rubicon is externally hosted using Amazon Web Services (AWS). Working together with AWS, Rubicon has multiple layers of data security protocols in place to ensure that city government data stays safe, secure, and accessible 24/7/365:

- All data is stored in highly secure AWS data centers.
- Data is encrypted in transit with TLS across all services.
- We use network firewalls built into Amazon and web application firewalls.
- Rubicon has private connections from our offices and to the AWS infrastructure.
- Rubicon personnel create and maintain customer access credentials.
- From a monitoring perspective, we use Amazon Cloud Watch to monitor our network for specific events and thresholds.
- Lastly, we engage in periodic penetration tests against our own environment to ensure any vulnerabilities are identified.

Furthermore, AWS employs procedures and planning to mitigate the risk of data loss in the case of disaster. These plans include:

- **Design Redundancy:** Data centers are designed to anticipate and tolerate failure while maintaining service levels. In case of failure, automated processes move traffic away from the affected area. Core applications are deployed to an N+1 standard, so that in the event of a data center failure, there is a sufficient capacity to enable traffic to be load-balanced to the remaining sites.
- **Business Continuity Planning:** AWS' Business Continuity Plan outlines steps to ensure that AWS can continue to serve its customers in the case of disaster. The company models scenarios, including environmental disasters and pandemics, that may affect its operations and bases its planned actions on these scenarios.

D. Backups and Recovery

Our entire application is deployed in the AWS cloud. We use RDS SQL server in the AWS system with AWS Multi AZ for the failover mechanism (Multi Availability Zone:

<https://aws.amazon.com/rds/features/multi-az/>). We also have an automated backup system which enables a 7 day backup.

All data associated with a city's account is retained throughout the entire length of the city's contract and stored in our AWS database. Up to six months of historical data is available in the Portal for city staff to download, with older data accessible upon request. There are no storage limits on a city's data, nor are there any additional fees associated with storage.

If a city partner were to terminate its contract with Rubicon or choose not to renew it, we can provide city staff with all of the city's data in an Excel download. As above, the last six months of data can be exported to Excel directly from the Portal by city staff. Where a city needs additional data Rubicon staff will arrange an export directly from the servers and provide it to the city. All of this will be performed by Rubicon at no additional cost.



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Key Features of RUBICONSmartCity

A. Telematics

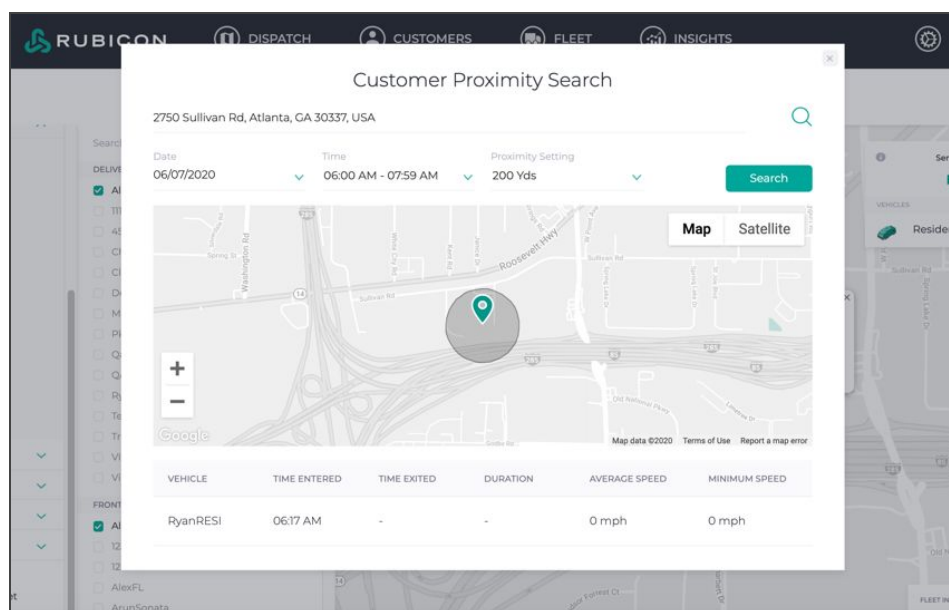
RUBICONSmartCity provides a GPS/AVL system for vehicle tracking. Once installed, the Pod telematics device and Rubicon ICI enable supervisors and office staff to track all vehicles using the Portal.

Additionally, the Portal displays historical bread crumb trails to show where the vehicle has driven, and houses vital information about operator behavior, including speeding instances, hard braking, hard acceleration, hard turning, etc. Fleet supervisors and managers can utilize the Portal to:

- **Easily Identify Idle Vehicles** - On the live map, each truck is represented by an icon that shares its location. These icons change color based on activity. If a truck has been inactive for 15 minutes the icon will turn yellow; active vehicles—or those that have not been stationary for 15 minutes—will be green; while icons for trucks that did not run a route, where the engine is turned off, or that have been inactive for 2 hours or longer will be grey. The timing thresholds are completely customizable and can be adjusted by the city. The thresholds noted above are simply the default settings.
- **Identify Trucks for Preventative Maintenance** - The Pod telematics device tracks and reports vehicle fault codes from every truck. These truck fault code insights can be used to improve the city's truck maintenance program by providing diagnostic information about the vehicles that was previously unavailable to supervisors and other city personnel. Rubicon also can create email alerts at any time for the fleet director, or anyone else from the city, who would like to be notified every time a critical truck fault code is triggered (or a daily report), signaling to the supervisor that a particular truck should either be pulled off the road immediately, or scheduled for maintenance before the damage worsens and repairs become costlier.
- **Improve Driver Safety** - Office staff can view hard driving and speeding instances on the Portal's map, set up custom email alerts for specific thresholds, or analyze long-term behavior in the "Safety" report in the Portal's insight page.
- **Address Citizen Speeding Complaints** - Using the Customer Proximity Search, city office staff can look up if any vehicle has been within a certain vicinity of a customer address, and if so, the vehicle's recorded speed. This is an especially useful tool for handling any citizen complaint of speeding and was developed with the direct feedback from the city.



RUBICON



PORTAL DISPLAYING CUSTOMER PROXIMITY SEARCH FEATURE

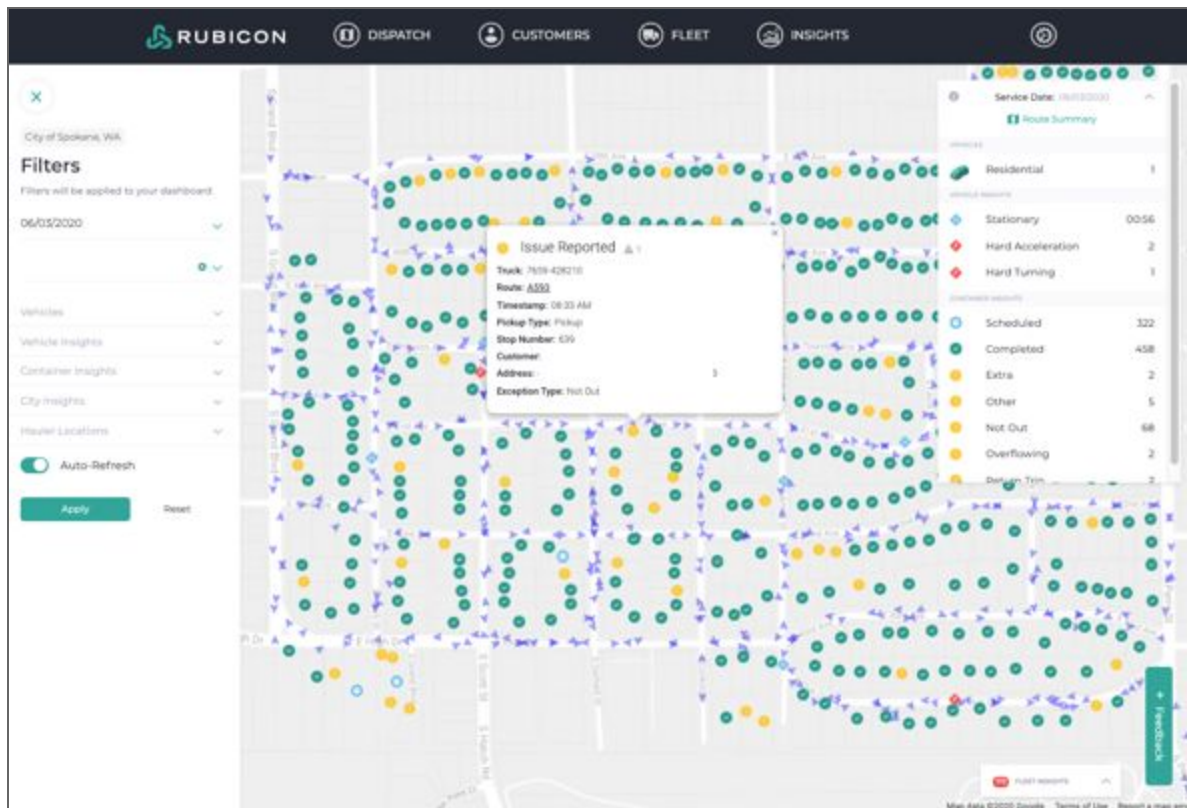
B. Service Verifications

One of RUBICONSmartCity's unique abilities is to verify service for commercial pick-up locations and residential service areas **without RFID**. **Based upon Rubicon's experience, relying on cumbersome hardware RFID to consistently and accurately perform is a cost liability.** We are intimately familiar with municipal government and its budgetary constraints. By providing a hardware-light solution instead of one that is hardware-intensive, we are able to save the city money, both in upfront costs, but also in long term hardware repair and replacement costs. Without extensive hardware, the risk of continued maintenance costs and outdated hardware is essentially eliminated.

To verify that service has occurred in a particular area, our solution leverages the ICI and the Pod telematics device to collect a multitude of parameters about the operation of solid waste vehicles. Using the speed and location of a solid waste vehicle in conjunction with a geocoded customer address, we are able to verify that the vehicle was servicing the area. Our patented technology analyzes the collected parameters to determine if service could have taken place. Using the ICI, operators can flag issues along the route to better inform supervisors and in-office staff about reasons why they were unable to perform service at a given address. This technology allows the solid waste department to verify when and where service has taken place, reducing unnecessary trips, vehicle wear and tear, and overtime. Each verification is tagged to an exact time and location, and customer location.



RUBICON



PORTAL DISPLAYING A DETAILED VIEW OF A ROUTE SHOWING COMPLETED STOPS (GREEN), MISSED STOPS (BLUE), AND YELLOW STOPS (A REPORTED EXCEPTION)

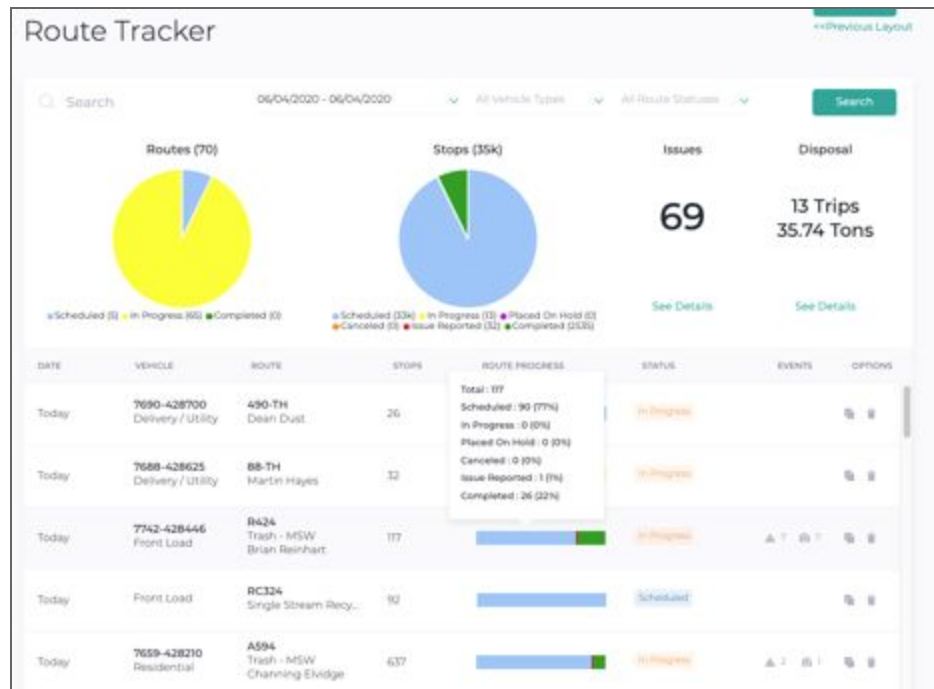
C. Routing and Work Order Management

RUBICONSmartCity provides a full-service customer, route, and work order management solution for city solid waste operations. Rubicon's ICI is designed with the operator in mind. When routes change or stops need to be updated, supervisors and in-office staff can make the necessary changes in the Portal that automatically push to the operator. When operators arrive at the beginning of their shift, they simply log into a route on the ICI.

ROUTE MANAGEMENT: City staff can manage, edit, and optimize routes in Rubicon's Portal. In the Dispatch tab Supervisors and in-office staff can view daily route progress in real time. Supervisors have the ability to hover over any truck or route on the live map dashboard to view individual route progress. Using the Route Tracker page, Supervisors can view all this information to easily identify where and if routes need to be adjusted to ensure the best customer service possible.

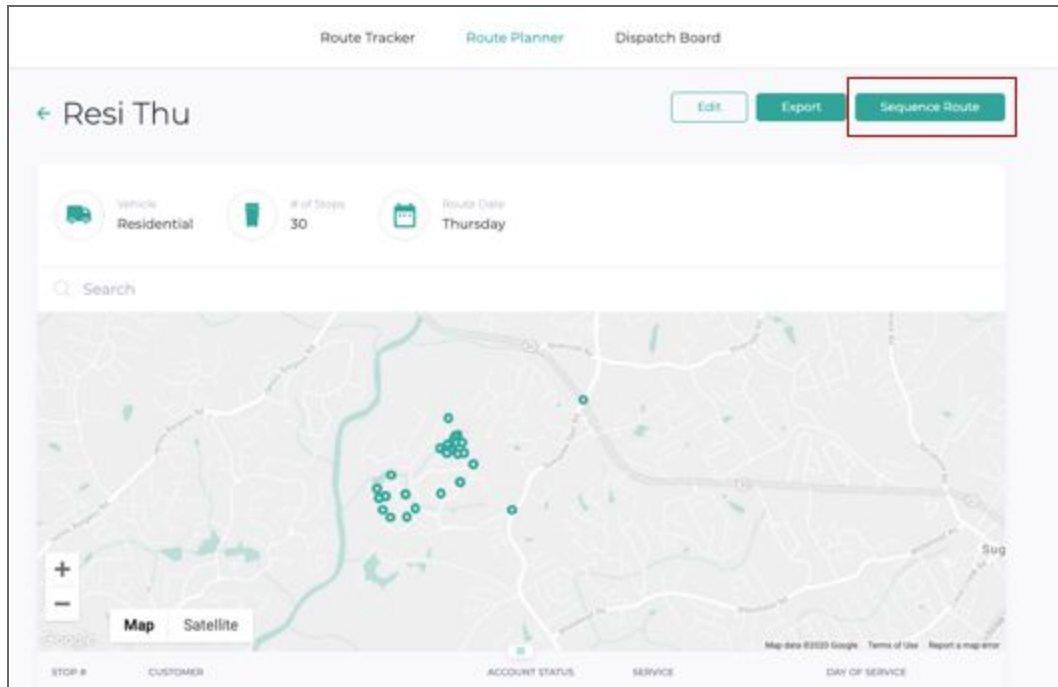


RUBICON



SCREENSHOT OF ROUTE TRACKER PAGE

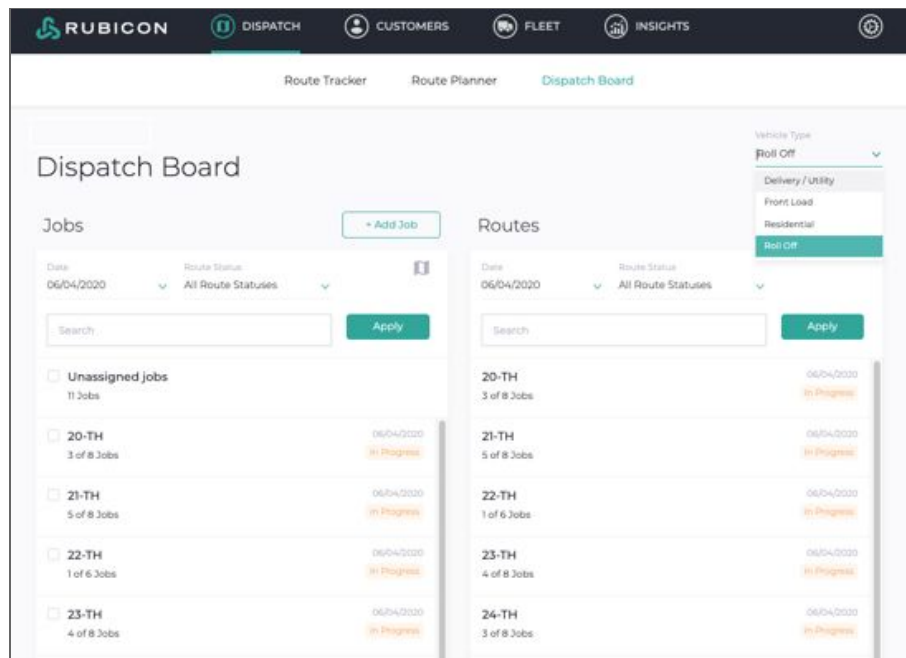
For recurring MSW routes, the city can easily view, edit, and optimize stops automatically in the Portal to ensure maximum efficiency and cost savings. Sequencing takes into consideration many factors including reducing left turns, reducing u-turns, trips to landfill, and time spent on residential, ancillary, and highways, and other constraints. This functionality can be especially helpful as new customers are added or removed from existing routes; enabling cities to maintain optimized routes through these changes.



SCREENSHOT OF ROUTE PLANNER PAGE

DISPATCH BOARD: RUBICONSmartCity's Dispatch Board is the “go to” tool for managing day to day routes. Staff can use the Dispatch Board to shift a few stops from a recurring waste route because a truck went out of service, or to schedule and optimize a city's ad hoc, point to point routes (i.e. pre scheduled bulk, cart delivery, etc).

For example, in the event of equipment failure or problems encountered during a route, the office staff has the ability to electronically move the remaining stops and transfer them between routes using the Portal. This can be as easy as dragging and dropping specific stops over to a new route, or viewing the stops on a route and utilizing the “lasso” tool to select those that need to be adjusted. These updates are then pushed out to the ICI to notify operators in the field of the change. Operators are alerted of changes made to their route through a pop-up that displays on the ICI. City staff can make these adjustments for any route type including Roll Off, Delivery/Utility, Front Load, or Residential.

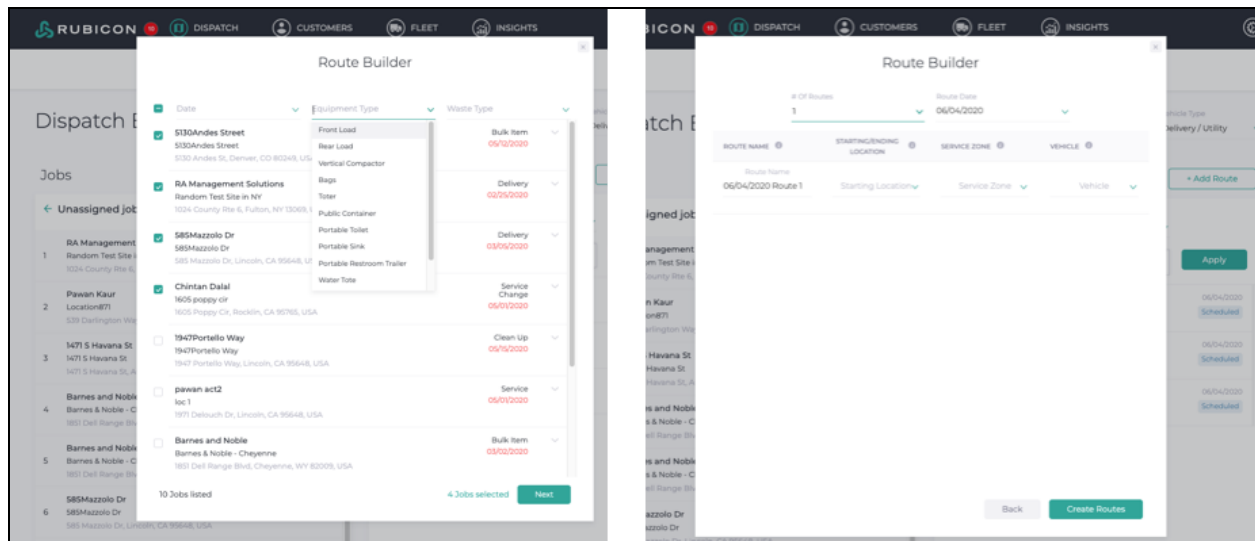


SCREENSHOT OF THE PORTAL SHOWING THE DISPATCH BOARD WITH JOBS, ROUTES, AND VEHICLE TYPES

City staff can also use the Dispatch Board to easily create any point to point ad hoc routes (i.e. pre scheduled bulk or commercial routes). On a daily basis, office staff responsible for receiving and scheduling these routes have the ability to add customer locations individually, or import them from a pre populated Excel file. The Dispatcher can then click the “Route Builder”, filter the jobs as needed, and create a pre-specified number of routes. Rubicon’s system will then optimize and sequence these stops in the most efficient order with a click of the button. When operators arrive at the beginning of their shift, they log into their route on the ICI. The ICI can then provide turn-by-turn directions so operators can run their route without confusion. Additional service orders can be added to any active route at any time by the office staff.

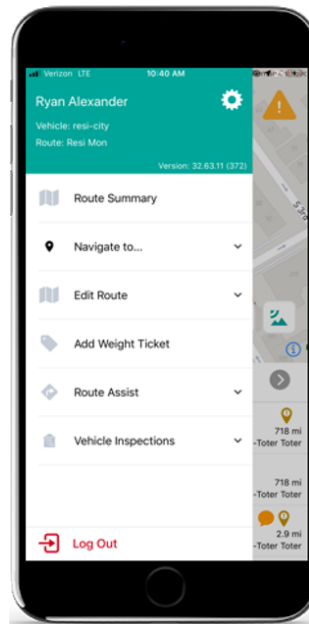


RUBICON



SCREENSHOT OF THE ROUTE BUILDER: 1) SHOWING HOW TO FILTER STOPS; 2) SHOWING HOW TO SCHEDULE AND SEQUENCE ROUTES

ROUTE ASSIST: Operators can also work together to cover each other's stops in the case of a vehicle breakdown or other unanticipated emergency. If an operator is unable to complete his or her assigned route for any reason (i.e. vehicle maintenance issues or sickness) the operator can request assistance utilizing the ICI. Operators select "Route Assist" from the ICI menu and an alert is sent to nearby vehicles to inform them of the request. If a nearby operator accepts the request, he or she can utilize turn-by-turn directions to be routed to unfinished stops on the new route. Customer locations along the new route will be displayed in a different color and shape on the ICI to provide clarity for the operator. Our system will recognize that another vehicle (or multiple vehicles) are assisting and verify service as usual. This functionality is particularly helpful if a truck breaks down mid-route with a maintenance issue, and will help cities guarantee consistent service to all of its customers.



SCREENSHOT OF ROUTE ASSIST ON THE ICI

D. Reporting and Data Analysis

RUBICONSmartCity provides city partners with daily insights and reporting to help cities better analyze and understand trends, patterns, and opportunities. One particularly important feature is Route Playback. When examining a certain router, office staff can select the Route Playback button to view how a driver ran a specific route. Through geofencing, supervisors can begin to understand how and where drivers are spending their time each day. Geofencing, in combination with the ICI, provides the ability to identify particular days or routes where drivers are spending an inordinate amount of time at a disposal facility, or better understand the time spent either servicing or transiting to and from a route, as well as the time spent in their respective yards or operational facilities each day. All of this data is presented in an easy to digest format, directly in the Portal.



RUBICON

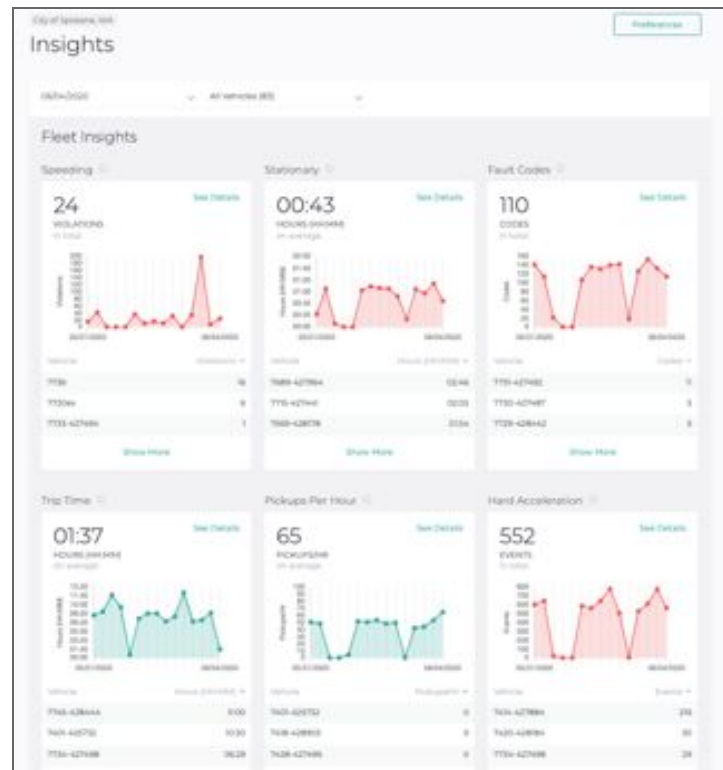


ROUTE PLAYBACK FEATURE IN PORTAL

For fleet wide analytics, near-real-time driving insights - pickups per hour, stationary time, speeding, fault codes, trip time, hard acceleration and others - are visually displayed on the Portal's Insights page. Fleet managers can quickly view this data and drill down on a specific instance. In addition, city staff can quickly download and export reports into Excel for further analysis. Some of these on-demand reports include Route Summary, Driver Performance Metrics (including a unit's start, stop, time on site, as well as instances of speeding, hard braking, idle time, etc.), Fault Code Information, Route Issues Reported, Disposal Data, and more. Rubicon welcomes feedback from our city partners and oftentimes include this feedback as part of subsequent releases. The city's dedicated Customer Success Manager will also work with the city to conduct deep dives into operational data to assess where operations can be streamlined and optimized.



RUBICON

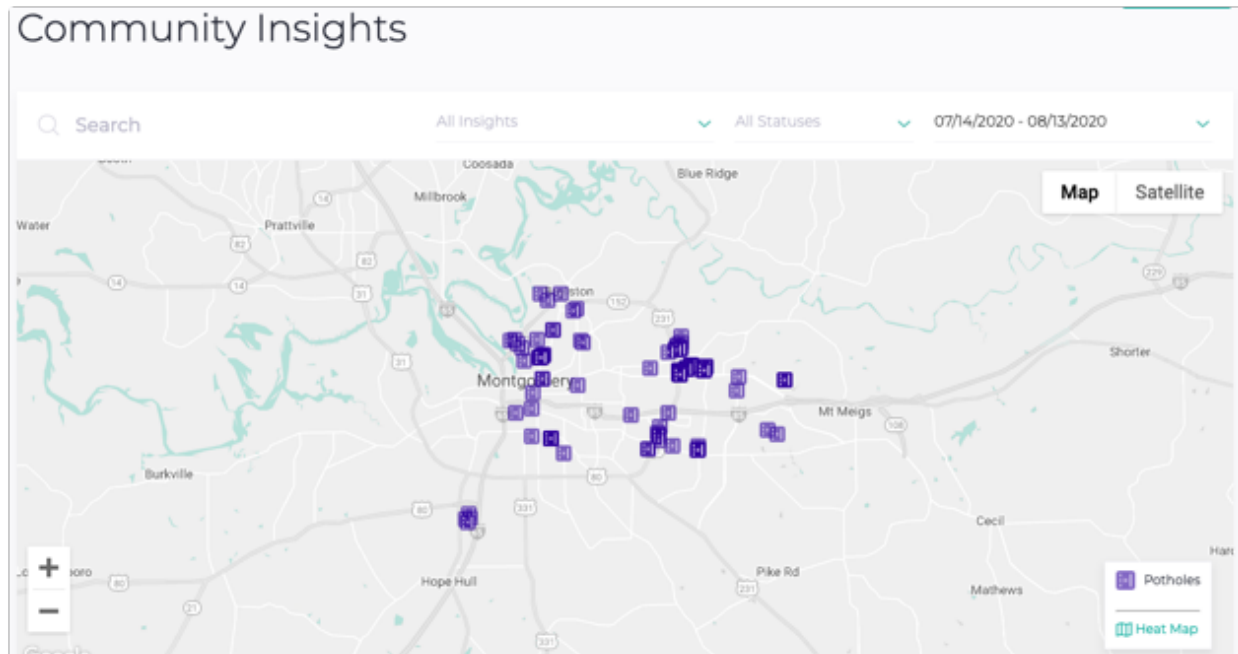


SCREENSHOT OF DAILY INSIGHTS VIA THE PORTAL

In addition to solid waste functionality, RUBICONSmartCity technology can also empower drivers to use waste vehicles to gather additional data from around the city. Solid waste vehicles go up and down every street in the city at least once per week, making them an ideal platform from which to collect additional data. Why not enable these vehicles to collect additional key insights as they go about their day-to-day jobs? RUBICONSmartCity does exactly that. Using the “exception flagging” feature described above, solid waste truck drivers can also flag potholes, vacant homes, graffiti hotspots, illegally parked or abandoned cars, road hazards, accident locations, and anything else that the city wants to track and monitor. Through RUBICONSmartCity, the city can extract additional value from their sizable solid waste fleet investment, helping the city and its residents improve quality of life. With RUBICONSmartCity, waste vehicles can become a city’s eyes and ears, taking stock and recording important city infrastructure data as drivers go about their normal routes.



RUBICON



SCREENSHOT OF THE PORTAL SHOWING FLAGGED POTHOLE LOCATIONS

The ICI within RUBICONSmartCity allows solid waste vehicle operators to flag community insights. These flags are reported back in near-real-time to managers and supervisors who are able to run downloadable reports and share the best course of action with relevant stakeholders. For example, in the City of Santa Fe, a Rubicon partner for over three years, the Environmental Services Department asked its drivers to flag graffiti around the city for a three week time period. At the end of the initiative, the City had a list of graffiti locations that the Department could then remediate. This initiative was touted as a very cost-effective smart city win.

The following are examples of RUBICONSmartCity's standard "City Flag" exception codes. This exception list can be fully customized by the city to reflect community needs and these are simply the default settings

- Vacant homes
- Graffiti hotspots
- Illegally parked or abandoned cars
- Road hazards
- Accident locations

With RUBICONSmartCity, municipal governments can become "smarter" by integrating data and technology into city-owned assets, rather than investing millions of dollars into new infrastructure and resources.



Warranty Documentation

RUBICONSmartCity's hardware - the Pod telematics device, ICI, and Camera - have a life expectancy of 4+ years. Maintenance of Rubicon's technology is simple, since the devices all provide live indicators of their health to our systems. At any point, we can determine the operational status of a specific deployed device with a few clicks. We monitor devices for failures to ensure no data is lost. We supplement this remote monitoring with occasional physical inspections as needed and agreed with the County.

If we find an issue with one of the ICI devices, we will replace the device on a schedule agreed upon in advance with the County. Rubicon will also replace any other standard hardware (charging stations, cables, mounts, etc. Hardware replacements beyond these numbers will fall outside of warranty.

In addition, Rubicon runs a calibration period at the beginning of every installation. This testing period takes place immediately once the Pod devices have been installed in city vehicles. The period lasts up to two weeks. During this period, if any of the Pod devices fail, Rubicon will replace them at no charge and without counting these replacements against the warranty agreement.

TAB 4 - ELECTRONIC MEDIA

All forms and documents are included in the accompanying "Rubicon Global - FL03-21" electronic media folder, which was submitted via the HGACBuy online submission process.