

STATEMENT OF WORK

Table of Contents

- 1. Introduction – Overview1
- 2. Operating Requirements1
- 3. Vehicle and Highly Automated Vehicle (HAV) System Requirements2
- 4. Program Management & Other Requirements3

1. Introduction – Overview

This project will consist in a shuttle between the University of Florida (UF) and Downtown Gainesville. The service will operate with regular traffic conditions. The service would address mobility needs downtown by connecting the UF and City on hours where transit service is limited. Project area is limited to SE 3rd Street, 5th Avenue, Newell Drive and University Avenue.

2. Operating Requirements

- (a) Continuously transport passengers along a low speed (15mph limit), controlled access corridor shared with regular traffic, transit buses and emergency vehicles with public traffic crossing signalized intersections, and bicycle and pedestrian traffic.
- (b) ‘Project Team’ of City of Gainesville (RTS), Florida Department of Transportation (FDOT), and University of Florida (UF) will work with the contractor to develop the operating plan following FDOT findings on the “GATrIC Study Executive Summary” (see Attachment A).
- (c) Board and alight passengers safely at predefined stop locations with level curbside boarding or another method to allow mobility impaired individuals to access and egress the vehicle.
- (d) Proposer shall describe how to protect vulnerable road users.
- (e) Level 4 Autonomy or higher is preferred.
- (f) As RTS cannot provide any of its staff to operate, maintain or supervise the service, proposer should provide for such resources if required in their project plan. RTS will work with the selected contractor to identify these resources if requested.

3. Vehicle and Highly Automated Vehicle (HAV) System Requirements

- (a) Shuttle shall be appropriately designed and constructed to operate safely and efficiently at minimum within the limited operational design domain (ODD) described in this solicitation and more broadly, throughout downtown Gainesville and University of Florida.
- (b) Shuttle shall make both visual and audible next stop announcements in English.
- (c) Shuttle shall have the ability to be climate controlled. A/C to maintain internal temperature during cooling months no higher than 75 degrees Fahrenheit and heating to maintain no less than 65 degrees during heating season.
- (d) Vehicles shall be electric, preferably with the ability to be charged without wireline infrastructure.
- (e) Shuttle shall have 4G or better wireless connectivity with the ability to stream video and other data in real-time for both management and operations of the vehicles, as well as, for passengers.
- (f) HAV system shall be impenetrable to attempted access by outside parties for the purpose of modifying system operations or otherwise accessing data governing the system.
- (g) Proposer shall either provide or work towards self-certification of their vehicle consistent with Federal Motor Vehicle Safety Standards (FMVSS) and the Highly Automated Vehicle (HAV) system consistent with the US DOT 15 point Safety Assessment for deploying automated vehicle technologies.
- (h) If a proposer cannot certify that their proposed vehicle complies with all applicable FMVSS, an exemption from the National Highway Traffic Safety Administration (NHTSA) must be obtained in order to test on public roads.
- (i) Shuttle shall include a display to host real time information for RTS services connecting with RTS Automated Vehicle Location (AVL) system (<https://ufl.transloc.com/>).
- (j) Briefly describe the generation of the following systems:
 - a. Navigation
 - b. Obstacle detection
 - c. Chassis and drive
- (k) Proposer shall have the ability to begin testing and operation with existing traffic signal infrastructure.
- (l) Proposer shall coordinate with the UF Testbed Project team.
- (m) This coordination is expected to require Vehicle to Infrastructure (V2I) Dedicated Short Range Communications (DSRC) capability between shuttles and traffic signals and the potential for other Vehicle to Vehicle (V2V) and Vehicle to Anything (V2X), i.e., bicycle and pedestrian) applications as they become available.

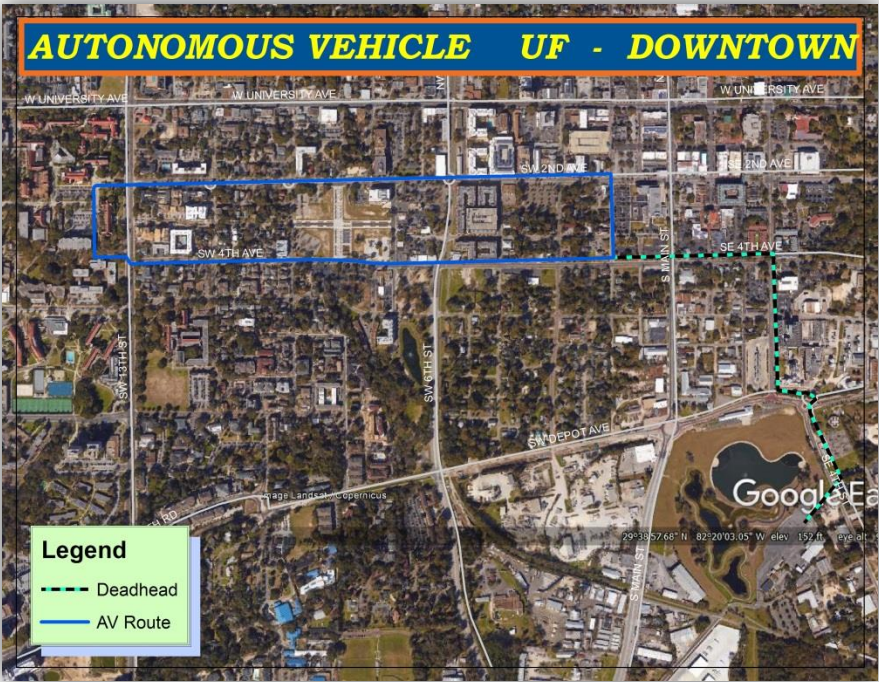
- (n) To facilitate this, provision of sensor inputs to the HAV system which allow for receipt and interpretation of Signal Phase and Timing (SPaT) and MAP messages from forthcoming Roadside Units (RSU) being installed at SW 2nd Avenue and SW 4th avenue on SW13th Street intersections.
- (o) Allow for vehicle wrap with space to advertise and identify project partners.

4. Program Management & Other Requirements

- (a) Proposer shall provide a preliminary schedule with their submission. RTS would like to start service once the proposer and Project Team meet and mutually agree upon a realistic start date which is reflective of the activities required to prepare and carry out the service. RTS requires a preliminary schedule to be submitted with the proposal to see when offerors anticipate able to launch service.
- (b) RTS will identify a single point of contact on its staff as project manager.
- (c) After Notice to Proceed (NTP), a testing plan for deployment of the service shall be jointly developed and agreed upon by the proposer and 'Project Team' to be carried out by the proposer. Start date may be flexible depending on approval of the proposal.
- (d) Also subsequent to NTP, proposer shall furnish 'Work Plan' which describes how to address operations, safety processes, and security as well handling of exceptions, emergencies and recovery in a variety of scenarios. This shall include a preliminary and operational hazard analysis subject to review and acceptance. Evaluations of recommendations of the GATrIC report need to be part of the analysis.
- (e) Proposer shall identify the archived and real-time datasets to be shared with the 'Project Team' to support the development of an Evaluation Plan.
- (f) As additional resources to continue the service could be made available upon the successful demonstration of certain key performance measures, a commitment to work with the 'Project Team' to identify and meet and/or exceed these measures to make that additional service funding available.
- (g) Describe other required infrastructure including storage and charging facilities. Coordinate with RTS regarding potential use of RTS original facility. Proposer should include costs to provide storage and charging facility for their vehicles as an option to be exercised by RTS. Proposer may choose to not involve RTS in where vehicles are stored, secured and charged overnight. Access to public utilities will be coordinated with RTS and Gainesville Regional Utilities (GRU).
- (h) Proposer shall coordinate with RTS identify if proposed solution is a simply a mobility product or a platform for autonomy in pursuit of other automation within a Smart City Strategy.

Gainesville Autonomous Transit Innovation Connector (GATrIC)

This project will consist in a shuttle between the University of Florida (UF) and Downtown Gainesville. The service will operate with regular traffic conditions. The service would address mobility needs downtown by connecting the UF and City on hours where transit service is limited. Project area is limited to SE 3rd Street, 5th Avenue, Newell Drive and University Avenue.



- Monday through Friday, 8 hours per day from 10:00 a.m. to 2:00 p.m. and from 6:00 p.m. to 10:00 p.m.
- 2 miles (circulator route)
- 1 mile (Deadhead miles: from route to maintenance facility)
- 15 mph speed limit
- At operating speed less than half of bus, could operate at 10 minute frequency with 3 vehicles
- Charging and Storage at Original RTS facility (as an option)
- Fares will not be collected during the demonstration period