



Florida Department of Transportation

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Question and Answers #2

ADVERTISEMENT NUMBER: RFI-DOT-18-19-5001-UCF

DESCRIPTION: District Five PedSafe/Greenway Deployment Project-Autonomous Shuttle for University of Central Florida Campus

DATE: September 6, 2018

- 1) Would FDOT accept the electronic copy of the response on a USB drive in place of a CD or DVD?

Answer: No, please only send either a CD or a DVD.

- 2) Please confirm respondents should base their responses on sections I and II in Enclosure 1, Technical Requirements?

Answer: The intent of the Department's RFI is to obtain as much information concerning available options, technologies, operational procedures and more related to AV shuttles and services. Enclosure 1, Section I – Minimum Technical Requirements for Autonomous Shuttle outlines the basic functions and features the Department expects as standard for all vendors to meet or exceed. Enclosure 1, Section II – Information Requested are additional functionalities, features and/or inquiries the Department would like to gain further knowledge upon in order to develop the final Request for Proposal (RFP) package. Responses should clearly indicate each vendor's compliance with the Minimum Technical Requirements and provide vendor-specific information related to the questions posed in Section II, as well as any additional information the vendor may deem relevant to the Department.

- 3) Is FDOT's intention to have 1 vehicle in operation serving the CFE Arena/Knights Plaza and the Student Union, and 1 vehicle in operation serving around Apollo Circle; incorporating stops at the locations indicated within Exhibit A, Enclosure 2, District 5 Site Locations on page A-11?

Answer: Yes, this is the intent for the initial deployment and vendor responses shall reflect as much. Proposal includes two independent shuttle routes: linear operation between the CFE Arena/Knights Plaza and the Student Union, and circular operation around Apollo Circle. Each route shall be serviced by a maximum of one vehicle operating, defined as carrying passengers, at a time. The number of total vehicles required to satisfy this operation may vary and should be detailed in vendor's schedule of operation.

- 4) Do you anticipate a secure facility for vehicle storage and charging will be provided by FDOT or UCF for this AV project? If yes, would such a space(s) be located near potential routes, within ¼ mile or less?

Answer: This item is still in coordination between the Department and the University of Central Florida.

- 5) What is the intent or process post RFI; does FDOT anticipate the release of an RFP, and if so, is there an anticipated timeline for issue?

Answer: Yes, the Department will utilize information received during the RFI process to finalize development of the associated RFP. The release of the RFP is anticipated for mid calendar year 2019.

- 6) Please provide details regarding any existing V2X infrastructure within the UCF campus.

Answer: The Department is currently overseeing a project that will upgrade all signalized intersections within the University of Central Florida to include Advanced Transportation Controller (ATC) model signal controllers, managed field Ethernet switches, and Dedicated Short-Range Communication (DSRC) radio Road Side Units (RSU). Each intersection will be equipped with hardware allowing for select Connected Vehicle (CV) applications, including Signal Phase and Timing (SPaT) and map-data messages, emergency vehicle preemption, transit signal priority, and more. This project is presently in the design phase and is expected to be let for Construction bids in May 2019, with anticipated start later in the calendar year 2019.

- 7) Please outline any requirements related to shuttle stop structures or infrastructure respondents need to account for in their response.

Answer: Vendor responses shall include all infrastructure that may be necessary to facilitate safe boarding and alighting of all passengers from their specific vehicles onto the pedestrian-access facilities. This may include, but not be limited to, installation of concrete landings, ramps or sidewalks for ADA compliant electrical ramps, pedestrian handrails, detectable warning surfaces, signing and marking, etc.

- 8) Page., A-6, Exhibit A Scope of Services, II. Services, A., Automated Shuttle Service, item "a" states "Vendors shall provide accommodations for one vehicle to service each existing, expansion and/or proposed route-as based on item 10- for the entirety of the hours of operation." Would FDOT please clarify the details of item 10, and indicate where this is referenced within the solicitation document(s)?

Answer: Please refer to Exhibit A - Scope of Services, Section II – Services, Figure 4 (A-8) and Enclosure II – District 5 Site Locations for proposed shuttle stop locations. Proposal includes two independent shuttle routes: linear operation between the CFE Arena/Knights Plaza and the Student Union, and circular operation around Apollo Circle. Each route shall be serviced by a maximum of one vehicle operating, defined as carrying passengers, at a time. The number of total vehicles required to satisfy this operation may vary and should be detailed in vendor's schedule of operation.

- 9) Exhibit A Scope of Services, Enclosure 1 Technical Requirements, I. Minimum Requirements for Autonomous Shuttle, L; Page A-9 states “Vehicle shall be compliant with Wireless Access in Vehicular Environment (WAVE)/Institute of Electrical and Electronic Engineers (IEEE) Standard 1609, SAE Standard J2735 DSRC Message Set Dictionary, and Web Content Accessibility Guidelines (WCAG) Standard 2.0.” Can you please provide clarification on the specific elements of both WAVE/IEEE Standard 1609 and SAE Standard J2735 expected for compliance from the vehicle, and what elements are applicable to AV vehicles?

Answer: Compliance with the provided standards is in reference for the vehicle to be able to communicate V2I via DSRC methods. If vendors are unable to provide this communication methodology, or utilize an entirely different methodology, responses shall detail this alternative, including system(s) description and details, environmental limitations, use cases, and proven deployments.