Florida Department of Transportation

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GOVERNOR

605 Suwannee Street
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KEVIN J. THIBAULT, P.E.
SECRETARY

April 28, 2020

To Whom It May Concern:

Please consider this letter as a request for a license to use Cellular-Vehicle-to-Everything (C-V2X) devices.

The Florida Department of Transportation (FDOT) is an executive agency, which means it reports directly to the Governor. FDOT's primary statutory responsibility is to coordinate the planning and development of a safe, viable, and balanced state transportation system serving all regions of the state, and to assure the compatibility of all components including multimodal facilities. FDOT acts as an infrastructure owner and operator of connected vehicle technology and equipment.

With the proper licensure, FDOT will deploy a Signal Phase and Timing (SPaT) project at twenty-three (23) signalized intersections along US 19 from Beckett Way (north end) to Ulmerton Road (SR 688) (south end) in the Pinellas County, Florida and at two (2) signalized intersections at the Traffic Engineering and Research Laboratory (TERL) in Tallahassee, Florida using connected vehicle (CV) equipment and technologies.

The project will utilize roadside units (RSUs) and on-board units (OBUs) using the 5.9 GHz bandwidth to broadcast the CV messages. The equipment will be used for safety and mobility applications using C-V2X technology. These units will allow to communicate between RSUs and vehicles equipped with OBUs. The vehicles will be presented with information such as status of traffic signal phases (remaining green, red and yellow times) and traveler information messages or warnings.

The project objectives are as follows:

- To compare the functionality of the C-V2X technology with the dedicated short-range communication (DSRC) technology.
- To leverage SPaT application for improving the safety and mobility of the project location
- To understand the potential role of C-V2X technologies to achieve safety and mobility objectives
- To test the effectiveness of vehicle-to-vehicle (V2V) applications such as collision warning, emergency electronic brake light and emergency vehicle approaching by using C-V2X communication technology

- To test the effectiveness of vehicle-to-infrastructure (V2I) applications such as intersection warning, speed warning, construction zone warning, transit priority and emergency vehicle preemption by using C-V2X communication technology
- To test the effectiveness of vehicle-to-pedestrian (V2P) applications such as pedestrian warning and pedestrian in intersection warning by using C-V2X communication technology

Current RSU designs focus on DSRC. DSRC has been used in few of the FDOT CV deployments. Chip makers and automobile manufacturers are exploring C-V2X. Using C-V2X in the project allows for testing and developing C-V2X technology. Dual mode DSRC and C-V2X are available, and FDOT would like to test equipment with C-V2X communication.

The estimated length of time that will be required to complete the program of experimentation is three years (July 2020 through July 2023). FDOT plans to use 36 RSUs equipped with C-V2X communication.

Thank you in advance for any help you might be able to offer.

Sincerely,

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