



State of Utah

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DEPARTMENT OF TRANSPORTATION

CARLOS M. BRACERAS, P.E.
Executive Director

SHANE M. MARSHALL, P.E.
Deputy Director

July 26, 2017

PAWR Project Office

Subject: **Letter of support for University of Utah and Salt Lake City PAWR proposal**

To Whom It May Concern,

The Utah Department of Transportation (UDOT) is pleased to support the PAWR proposal entitled, "POWDER: *Platform for Open Wireless Data-driven Experimental Research*", from the University of Utah/Salt Lake City team. The Utah Department of Transportation expects to partner with and support the POWDER team as outlined below.

UDOT is dedicated to innovation and the development and deployment of new technologies to benefit the travelers in and through the state of Utah. As the first state department of transportation to employ design-build techniques on large highway infrastructure, we have continued to break new ground with public-private fiber optic deployments, accelerated bridge construction, innovative intersections (diverging diamonds, continuous flow interchanges and thru-turns), traffic signal performance measurement, road weather performance management, and truck platooning testing. We have been involved in connected vehicle planning and implementation for fifteen years through various TRB, FHWA and AASHTO committees and panels, and are actively working to bring these technologies to fruition on our infrastructure. For example, UDOT has a near-operational DSRC infrastructure deployment on a public corridor in the Salt Lake City area.

UDOT will contribute to the POWDER effort through the following *in-kind contributions*:

- To augment the proposed dense base station deployment on the University of Utah campus, UDOT will work with the POWDER team to deploy some of their base stations on three to four UDOT signal poles. UDOT will also work with the POWDER team to integrate these base stations with the rest of the POWDER deployment.

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- To augment the fiber backhaul needed by the proposed POWDER platform, UDOT will provide access to their extensive fiber infrastructure.
- We anticipate UDOT technical staff to be involved in the project in an advisory and / or collaborative capacity.

Given UDOT's activities in connected vehicle technology, we also anticipate *using the POWDER platform*. Example use case that might be of interest to UDOT include:

- UDOT is interested to prototype and / or experiment with various connected vehicle applications (e.g., a red light running / warning application) beyond those currently being deployed. The instrumented vehicles in the proposed POWDER platform would enable this.
- While DSRC is an established technology, there are competing technologies (e.g., 5G). The POWDER platform could be used to evaluate such competing vehicle communication technologies.
- UDOT is also interested in applications related to automated vehicle-based sensing of pavement roughness and damage. Again the instrumented vehicles in the proposed POWDER platform would enable experimentation with such applications in a controlled, but realistic, environment.

UDOT expects that some of the above platform use will be covered through our in-kind contribution and will consider more extensive uses, if warranted, based on other negotiated terms.

UDOT looks forward to being a part of this important study with our partners at the University of Utah. We are committed to new technologies which will bring about smarter transportation for our present and future citizens.

Sincerely,



Blaine D. Leonard, P.E., D.GE., F.ASCE
Technology & Innovation Engineer