



11/10/2022

Dear Secretary Buttigieg:

Please accept this letter of support for the **Connected, Rural, Equitable, and Autonomous Transportation for Everyone (CREATE)** grant application to the United States Department of Transportation's Advanced Transportation Technology and Innovation (ATTAIN) Program. CREATE advances the North Carolina Department of Transportation (NCDOT)'s vision and strategy – led by the Integrated Mobility Division (IMD) – to partner with transit agencies and leaders, private industry, and the research community to deliver affordable, convenient, safe, and expanded transit services to transportation disadvantaged communities in rural areas using advanced technology. CREATE builds on North Carolina's existing on-demand and shared mobility efforts and seeks to evolve the state's Connected Autonomous Shuttle Supporting Innovation (CASSI) program by piloting and evaluating higher speed, Federal Motor Vehicle Safety Standards (FMVSS)-compliant autonomous vehicles (AVs) by testing and integrating the vehicles into rural transit fleets.

NCDOT IMD will partner with May Mobility, Via, Bridgestone, Toyota, the Community Transportation Association of America (CTAA), and North Carolina Agricultural and Technical (NC A&T) State University to deliver autonomy-enabled and accessible microtransit services that connect transportation disadvantaged communities to essential services and job opportunities, such as:

- Bridgestone Americas' tire manufacturing facility – the single largest industrial employer in Wilson County, NC with over 1,800 employees – by building on the Wilson RIDE service,
- Nash General Hospital (Nash UNC Health Care) – the third largest employer in Nash County, NC with over 1,600 employees – by complementing the existing fixed route service,
- Multiple employers and key destinations in downtown Asheboro, NC including Randolph Health with more than 1,000 employees, Asheboro Senior Center, and the YMCA – by establishing a new fixed route circulator service as an additional option alongside the existing demand response service.

Microtransit is a technology-enabled, shared mobility service that typically uses shuttles or vans to provide pooled, on-demand transportation with dynamic routing. It provides several benefits to riders including more efficient and responsive service, shorter wait and travel times, and flexibility to address changing mobility needs. By integrating AVs into microtransit services, CREATE will enable NCDOT IMD to gather data and information to better understand the impact of AVs within the transit context including assessing the readiness of the state, communities, the technology, and FTA for autonomous driving while also providing useful transit service that supports workforce development, improved mobility, and better access to key destinations and services. On-demand service zones and routes supported by CREATE are designed to address local gaps in the transit system and are informed by NCDOT's Transportation Disadvantage Index (TDI) tool that uses six quantitative indicators (race, income, personal vehicle access, people with mobility impairments, the elderly and youth) to identify populations facing barriers to transportation access.

CREATE will demonstrate a new vehicle platform developed by May Mobility in close collaboration with Toyota – the ADA-compliant and wheelchair accessible, FMVSS-compliant, hybrid-electric Sienna Autono-MaaS (S-AM) passenger van. The S-AM can operate up to 30 miles per hour at SAE Level 4 autonomy in mixed traffic

with seating for up to five passengers. The technology has been deployed in 10 cities to date carrying over 325,000 passengers. Via will provide the software for managing the microtransit service and the AVs will operate in mixed fleets alongside manually operated vehicles.

CREATE is committed to safe, environmentally-conscious, and accessible autonomous travel – the hybrid-electric vehicles can comfortably carry a person using a wheelchair, interfaces are designed to be fully accessible in accordance with ADA and WCAG standards, and safety operators are trained to assist wheelchair users and others with mobility limitations. NC A&T State University will provide access to a first-of-its-kind rural autonomous vehicle test track to evaluate the performance and capabilities of the vehicles before they are deployed for public transportation.

Rural communities that lack transportation options for all people encounter formidable barriers to access essential services and other destinations which leads to problems like poorer health outcomes, reduced safety, and limited economic development. By addressing rural transit, CREATE will meaningfully improve the lives and economies of North Carolinians by increasing access to healthcare, employment, education, and other services while piloting and evaluating AVs to make these connections. By addressing challenges faced by rural areas and increasing transportation options for all travelers, CREATE supports multiple FHWA focus areas, including advanced public transportation systems, the ROUTES Initiative, and Complete Trip Program.

The modernization and automation of public transportation in North Carolina is vital to creating vibrant and inclusive communities by connecting people to places, addressing mobility needs, and increasing high-quality transportation choices for all people. CREATE fulfills the state's vision to deliver transit more equitably to everyone with a focus on underserved and rural populations.

Thank you for considering the CREATE grant application for ATTAIN program funding.

Sincerely,

 for Dr. Eric Muth

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