City Manager's Office

MEMORANDUM

DATE: 10/16/2023

TO: Mayor and City Council

THROUGH: Doug Thornley, City Manager   Approved Electronically

FROM: Kerrie Koski, Director of Public Works & City Engineer

SUBJECT: Plumb Lane - Grant Application for AI-Powered Pedestrian Detection Systems

The Regional Transportation Commission (RTC) of Washoe County, in coordination with the City of Reno, has applied for a $1.1 million Strengthening Mobility and Revolutionizing Transportation (SMART) grant from the U.S. Department of Transportation to help fund a regional Artificial Intelligence (AI)-Powered Pedestrian Detection Pilot Program. This program aims to improve the safety of pedestrians and cyclists and to provide a more reliable experience for all roadway users at nine intersections and one mid-block pedestrian crossing along the Plumb Lane corridor from Virginia Street to Terminal Way.

Problem to Solve
There is a pressing demand for safe pedestrian and bicycle mobility within the Plumb Lane corridor. The current signal timing is on a set schedule and does not respond to changes in pedestrian or vehicular flow, impacting safety and congestion. From 2016 to 2020, this 1.3-mile stretch of road had 9 pedestrians and 4 bicyclist-involved incidents, the consequences of which included one fatality and 11 individuals left with injuries.

Proposed Solution
The proposed AI system will offer precise traffic detection and classification for pedestrians, bicyclists, and vehicles. It will dynamically adjust traffic signal timings based on the demand from different users, optimizing traffic flow and increasing intersection safety.

Desired Outcome
The desired outcome is a reduction in pedestrian-vehicular and bicycle-vehicle incidents, along with a reliable experience for drivers and all users on the Plumb Lane corridor.

Demographics

The Plumb Lane project area spans five census tracts, all designated as disadvantaged. These census tracts have lower incomes and higher percentages of minority residents.

Public Engagement

To engage the public, the RTC will implement a public engagement campaign to ensure that residents and visitors are informed about the AI-powered pedestrian detection system, its benefits, and its impact on pedestrian safety and mobility.

Collaboration

This project is a collaboration between the RTC, City of Reno, Washoe County, University of Nevada, Reno, Nevada Department of Transportation, and the Vision Zero Truckee Meadows Task Force.

Local Match

The RTC has proposed $250,000 in local funding to ensure that the scope of this planning grant is sufficient to explore new technology ideas and determine the reality of what can be implemented both locally and beyond as part of possible future regional implementation efforts. Once grant funds are expended, any cost overruns to complete the project will be covered with county fuel tax funds, which are a stable and reliable funding source.

Grant Notification

The RTC will be notified in early 2024 on whether this grant application was successful.