

MEMORANDUM

City of Springfield

Date: 7/2/2018**To:** Gino Grimaldi, City Manager**COMMUNICATION****From:** Tom Boyatt, Interim DPW Director
Brian Barnett P.E., PTOE, City Traffic Engineer
Michael Liebler P.E., Transportation Planning
Engineer**PACKET****Subject:** 54th and Main Streets ARTS Improvements**MEMORANDUM**

The Oregon Department of Transportation (ODOT), in coordination with DKS consultants and the City of Springfield, applied for funding in 2015 for intersection improvements as part of the 2018-2021 round of All Road Transportation Safety (ARTS) program grant applications. The collision data set utilized to justify the application relied on the most current data available at the time of the application and covered the years 2009 through 2013. This data set identified left turning movement collisions from 54th Street onto Main Street as a crash type warranting mitigation at that time. Improvements intended to reduce the frequency or severity of this type of crash (also referred to as 'countermeasures') that were identified included: improving lighting; installing left turn lanes on 54th Street; and upgrading signal operations with protected pedestrian phases and flashing arrows to the 54th Street legs of the intersection. The application produced a high benefit-to-cost ratio, and in 2016 ODOT awarded \$1.7 million to fund these safety improvements.

Since the ARTS application was submitted, additional collisions have occurred at this intersection. The most severe collisions experienced from 2014 to date have resulted from disregard of the traffic signal and inattentive driving in the east and west direction of traffic flow. An initial review of the more recent collision data demonstrates that the countermeasures proposed in the ARTS application will not address the most severe collision types, including fatalities, recently experienced at this location.

The countermeasures proposed in the ARTS application for this intersection are applicable and appropriate for the collision types evaluated in 2015 based on data from 2009-2013. We concur with ODOT that these improvements would be a benefit to the intersection and would improve safety to some degree. However, we are concerned that given the more recent severe collisions and the opportunity to complete a more detailed analysis of the intersection through the Planning Phase of the Main Street Safety Project currently underway that we may expend safety funds on an improvement that is not sufficient to address severe and fatal collisions. Additionally, the proposed improvements may be removed in the future to implement more comprehensive and effective safety solutions for a broader range of collision types identified in the Main Street Facility Plan.

For the current ARTS application cycle (2022-2024 funds), roundabouts have been added as an option for use as a countermeasure in programming funding for safety improvements. Roundabouts more effectively address the most recently observed crash types at 54th Street (left turning errors, disregarding traffic signals, and inattentive driving) than the proposed treatments. Since the Planning Phase of the Main Street Safety Project will evaluate all collision mitigation solutions along Main Street, we believe that process presents an opportunity to evaluate an intersection safety improvement option at 54th Street that addresses all of the problematic severe crash types at this intersection.

If the proposed improvements proceed, it is probable that additional severe and/or fatal collisions will occur that cannot be mitigated with the proposed improvements. Additionally, these improvements may require removal by a more effective future safety project. Thus, City staff recommends that an alternative interim, low-cost and cost-effective safety improvement be implemented as follows:

- alter the signal timing to separate north and south vehicle movements on 54th Street (currently they operate at the same time); and
- add lighting to the intersection and surrounding area.

The first action has very low construction cost (changing signal heads) and will protect pedestrians crossing Main Street from traffic turning left from 54th Street, much like the proposed ARTS project which included 'installation of left turn lanes on 54th Street and upgrading signal operations with protected pedestrian phases'. A negative effect of this solution could be reduced traffic capacity and increased delay of all pedestrians and vehicles in the intersection. The second action will aid the safety of all traffic and pedestrians on Main and 54th Streets and may be retained or reused in any potential follow-on safety project, thus avoiding wasting safety funds. Both actions require ODOT approvals to proceed.