

Research Need for Operations and Maintenance Technical Advisory Group

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1. Issue Identified:

Effectiveness of Leading Pedestrian Intervals for Left-Turn Movements at Traffic Signals

2. Summary of Problem:

A leading pedestrian interval is a traffic signal treatment that provides pedestrians with a head start, typically 3 to 7 seconds, before parallel vehicular traffic receives a green indication. The LPI was developed to improve pedestrian visibility and establish pedestrian presence within the crosswalk before vehicles begin turning.

3. Desired Results/Outcome:

This research should evaluate the effectiveness of LPIs for reducing both right-turn and left-turn pedestrian conflicts under a variety of intersection configurations, traffic volumes and pedestrian activity levels. The study should assess whether current LPI timing recommendations provide adequate safety benefits for left-turn movements or whether additional guidance is needed regarding the selection and duration of LPIs based on the predominant turning movement. The anticipated outcome is to provide engineers with data-driven recommendations for the application and timing of LPIs to enhance pedestrian safety while supporting future refinements to *Manual on Uniform Traffic Control Devices* guidance and related national practices.