Center for Advanced Multimodal Mobility Solutions and Education

UTC Project Information – CAMMSE @ UNC Charlotte	
Project Title	Evolution of Advanced Transit Signal Priority with Gap-Based Signal Recovery Strategy
University	The University of Texas at Austin
Principal Investigator	Randy Machemehl
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Funding Sources and Amount Provided (by each agency or organization)	The University of North Carolina at Charlotte: $74,999 City of Austin: $37,500
Total Project Cost	$112,499
Agency ID or Contract Number	
Start and End Dates	10/01/2017 – 09/30/2019
Brief Description of Research Project	Transit Signal Priority (TSP) systems are implemented with the goal of reducing travel times for bus passengers and ensuring that buses adhere to schedules. TSP systems encounter trouble when there are multiple bus requests, heavy traffic conditions on cross-streets, or uncertain bus arrival times. In this study, existing logic concepts for TSP strategies will be modified by assuming access to video detection technologies to accurately provide bus and vehicle locations. The effect of these modifications are examined by testing different scenarios in CORSIM on parts of the Austin, TX downtown network during peak hours. Along with the "Base" scenario, other scenarios are designed to test variations of (1) whether cross-

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	streets are compensated for lost green time and (2) what sort of red truncation logic is used – traditional logic or logic that relies on video technology to gauge traffic conditions. Simulations will include bus occupancy levels to show the effect of switching between commute modes.
Describe Implementation of Research Outcomes (or why not implemented) *Place Any Photos Here*	
Impacts/Benefits of Implementation (actual, not anticipated)	
Web Links • *Reports* • *Project website*	https://cammse.uncc.edu/sites/cammse.uncc.edu/files/media/CAMMSE-UNCC-2018-UTC-Project-Information-07-Machemehl.pdf https://cammse.uncc.edu/sites/cammse.uncc.edu/files/media/CAMMSE-UNCC-2018-UTC-Project-Report-07-Machemehl-Final.pdf