

UTC Project Information	
Project Title	Bus Transit Operational Efficiency Resulting from Passenger Boardings at Park-and-Ride Facilities (Former title: Park and Ride Linkage to Public Transit Service Productivity)
University	San José State University Mineta National Transit Research Consortium
Principal Investigator	John S. Niles
PI Contact Information	Mineta Transportation Institute San José State University 210 N. Fourth Street, 4 th Floor San Jose, CA 95112 Niles@globaltelematics.com (206) 781-4475
Funding Source(s) and Amounts Provided (by each agency or organization)	Research and Innovative Technology Administration University Transportation Centers Program (\$29,963) California Department of Transportation Office of Research—MS42 (\$29,963)
Total Project Cost	\$59,926
Agency ID or Contract Number	DTRT12-G-UTC21
Start and End Dates	October 2014 – September 2016
Brief Description of Research Project	In order to save time and money by not driving to an ultimate destination, some urban commuters drive themselves a few miles to specially designated parking lots built for transit customers and located where trains or buses stop. The focus of this paper is the effect Park-and-Ride (P&R) lots have on the efficiency of bus transit as measured in five bus transit systems in the western U.S. This study describes a series of probes with models and data to find objective P&R influence measures that, when combined with other readily-available data, permit a quantitative assessment of the significance of P&R on transit efficiency. The authors developed and describe techniques that examine P&R as an influence on transit boardings at bus stops and on bus boardings along an entire route. The regression results reported are based on the two in-depth case studies for which sufficient data were obtained to examine (using econometric techniques) the effects of park-and-ride availability on bus transit productivity. Both Ordinary Least Square (OLS) regression and Poisson regression are employed. The results from the case studies suggest that availability of parking near bus stops is a stronger influence on transit ridership than residential housing near bus stops. Results also suggest that expanding parking facilities near suburban park-and-ride lots increases the productivity of bus

	<p>operations as measured by ridership per service hour. The authors also illustrate that reasonable daily parking charges (compared to the cost of driving to much more expensive parking downtown) would provide sufficient capital to build and operate new P&R capacity without subsidy from other revenue sources.</p>
<p>Describe Implementation of Research Outcomes (or why not implemented)</p>	<p>Niles, John. "Park-and-Ride Success: A GIS Analysis." Presentation at the 2015 Environmental Systems Research Institute (ESRI) User Conference, San Diego, CA, July 22, 2015.</p> <p>Niles, John. "Park-and-Ride: A GIS Analysis of Productivity Implications for Transit." Presentation at the 2015 American Public Transportation Association (APTA) Annual Meeting, San Francisco, CA, October 4-7, 2015.</p> <p>Niles, John. "Park & Ride Influence on Public Transit Productivity." Presentation at the King County Metro Briefing, Seattle, WA, May 11, 2015.</p>
<p>Place Any Photos Here</p>	
<p>Impacts/Benefits of Implementation (actual, not anticipated)</p>	
<p>Web Links</p> <ul style="list-style-type: none"> • Reports • Project Website 	<p>Final report (MNTRC Website): http://transweb.sjsu.edu/project/1401.html</p>