

Highway Capacity and Quality of Service

Transportation Research Record: Journal of the Transportation Research Board Volume 2615 (2017)

ISBN: 978-1-5108-5418-5

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2017) by Transportation Research Board of the National Academies
All rights reserved.

ISBN (Print) 978-1-5108-5418-5
ISBN 2017 Printed Set (All Issues) 978-1-5108-5406-2

Printed by Curran Associates, Inc. (2018)

For permission requests, please contact Transportation Research Board of the National Academies
at the address below.

Transportation Research Board
The National Academies of Sciences, Engineering, and Medicine
500 Fifth Street, NW
Washington, DC 20001

Phone: (202) 334-2934
Fax: (202) 334-2519

trbsales@nas.edu

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

Preparing Oregon for Connected Vehicle Deployment: Application Prioritization Process	1
<i>Bertini, Robert L.; Wang, Haizhong; Carstens, Kevin</i>	
Evaluation and Testing of Driver-Assistive Truck Platooning: Phase 2 Final Results	11
<i>Bishop, Richard; Bevly, David; Humphreys, Luke; Boyd, Stephen; Murray, Daniel</i>	
Influence of Remotely Operated Stop–Slow Controls on Driver Behavior in Work Zones	19
<i>Debnath, Ashim Kumar; Blackman, Ross; Haworth, Narelle; Adinegoro, Yusuf</i>	
Estimation of Saturation Headway in Work Zones on Urban Streets	26
<i>Hajbabaie, Ali; Kim, SangKey; Schroeder, Bastian J.; Aghdashi, Seyedbehzad; Roupail, Nagui M.; Tabrizi, Kambiz</i>	
Naturalistic Study of Truck Following Behavior	35
<i>Nodine, Emily; Lam, Andy; Yanagisawa, Mikio; Najm, Wassim</i>	
Optimizing and Modeling Tollway Operations Using Microsimulation: Case Study Sanand Toll Plaza, Ahmedabad, Gujarat, India	43
<i>Bains, Manraj Singh; Arkatkar, Shriniwas S.; Anbumani, K. S.; Subramaniam, Siva</i>	
Estimating the Effects of Urban Street Incidents on Capacity	55
<i>Massahi, Aidin; Hadi, Mohammed; Cutillo, Maria Adriana; Xiao, Yan</i>	
Measuring Performance on Two-Lane Highways: Empirical Investigation	62
<i>Al-Kaisy, Ahmed; Jafari, Amirhossein; Washburn, Scott</i>	
Calibrating Vissim to Analyze Delay at Signalized Intersections	73
<i>Buck, H. Sebastian; Mallig, Nicolai; Vortisch, Peter</i>	
Novel Area Occupancy–Based Method for Passenger Car Unit Estimation on Multilane Urban Roads Under Heterogeneous Traffic Scenario	82
<i>Mishra, Raunak; Kumar, Pallav; Arkatkar, Shriniwas S.; Sarkar, Ashoke Kumar; Joshi, Gaurang J.</i>	
Modeling Pedestrian Delays at Signalized Intersections as a Function of Crossing Directions and Moving Paths	95
<i>Zhao, Jing; Liu, Yue</i>	
Application of High-Resolution Vehicle Data for Free-Flow Speed Estimation	105
<i>Roupail, Nagui M.; Kim, SangKey; Aghdashi, Seyedbehzad</i>	
How Weather Events Affect Freeway Demand Patterns	113
<i>Dehman, Amjad; Drakopoulos, Alexander</i>	
Operational Analysis of a Single-Lane Roundabout with a Mix of Driverless Vehicles	123
<i>Shi, Liang; Prevedouros, Panos D.</i>	
Car Drivers’ Experienced Level of Service on Freeways	132
<i>Jensen, Søren Underlien</i>	
Relationship Between Cycle Overflow Probability and Capacity at Signalized Intersections: Application for Delay Estimation	140
<i>Wu, Ning; Giuliani, Stefan; Geisfeldt, Justin</i>	
Proposed Framework for Evaluating Spillback in the Highway Capacity Manual	148
<i>Zheng, Yinan; Armstrong, Michael; de Andrade, Gustavo; Elefteriadou, Lily</i>	
Queue Length at Signalized Intersections from Red-Time Formula and the Highway Capacity Manual Compared with Field Data	159
<i>Liu, Xueying; Benekohal, Rahim F.; Shaik, Mohammed Abdul Rawoof</i>	
Author Index	