UNIVERSITY TRANSPORTATION RESEARCH CENTER RESEARCH BRIEF

Project Title: The Role of Social Media in Improving the Safety and Efficiency of Traffic Operations during Non-Routine Events such as Incidents and Planned Special Events

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The objective of this project was to present an assessment of how social media is used to support the management of traffic operations during non-routine events. To accomplish this, the authors reviewed literature related to social media use for transportation, and for disasters and crises. Further, the team reviewed social media sites and data provided by various transportation agencies, in particular the messages related to traffic and non-routine events. Based on the key findings, recommendations for transportation agencies are made to help transportation agencies better use social media for non-routine traffic events.

Currently, social media is not universally used as a governmental channel of communication with the public. There is no clear consensus among transportation managers on how social media could or should be utilized to collect and disseminate actionable information. To provide guidance on social media use in transportation, this paper looks at the content, as well as social media approaches taken by agencies in delivering actionable transportation information during crises and other non-routine events.

Generally, transportation agencies have been using social media for more than five years, yet there is no clear guidance or consensus on social media best practices for disseminating critical information. The evolution of social media occurred so rapidly that many transportation agencies were not able to plan how these systems would be used to support traffic operations generally, and particularly for non-routine events. In most cases, social media was used by transportation agencies on an ad-hoc basis. This problem is compounded by the existing budgetary constraints these agencies face; they often don't have the staff to make these systems fully and consistently operational.

The extent to which social media is used to support traffic management during events (i.e. such planned special events as concerts and sporting events, and such unplanned disruptive events as natural disasters and weather) varies a great deal among agencies. Agencies large and small have demonstrated success, but they have also experienced difficulty in creating and leveraging social networks. Based on the research conducted for this project, some guidelines and conclusions for using social media for traffic operations were identified that significantly impact the usefulness of an agency's social media program, including:

- Develop (or update) the social media policy
- Provide timely information
- Use visuals when possible
- Engage the users
- Make the public aware of the system
- Work with other agencies

Based on the data collection and analysis conducted as part of this project it has been determined that using social media data as a traffic sensor is not cost-effective or reliable. Although it is possible to scrape tweets in real-time based on keywords, the number of possible word combinations that people can use is almost endless.

This research has demonstrated that transportation agencies, primarily in the United States, have been actively engaged in enhancing their communication networks through social media. This state-of-the-practice assessment makes clear that transportation agencies have challenges in deploying such a system, but that, with the proper steps, social media can provide great benefits to motorists, however, the question remains as to whether the benefits will outweigh the costs.