

ITE, FHWA, AND CARMANAH RALLY TO KEEP RECTANGULAR RAPID-FLASHING BEACONS IN OUR SAFETY TOOLBOX

In today's rapidly changing environment, our profession's ability to quickly adapt to new and emerging traffic control devices is critical to meeting the needs of the communities we serve. The advent of autonomous and connected vehicles, implementation of Complete Streets designs, and new mobility services are driving increased demands for additions and changes to the *Manual on Uniform Traffic Control Devices* (MUTCD). ITE, recognizing the critical role that the MUTCD plays in ensuring safety and mobility throughout our nation's transportation system, has been an active voice in encouraging the Federal Highway Administration (FHWA) to utilize Interim Approvals, Official Interpretations, and MUTCD Revisions to supplement and update the MUTCD in ways that allow professionals to move forward while waiting for the next full edition to be released.

ITE headquarters closely monitors updates regarding these tools, so much attention was focused on FHWA's December 21, 2017 announcement that a patent dispute issue necessitated their termination of the Interim Approval granted in 2008 for Rectangular Rapid Flashing Beacons (RRFBs). The termination was necessary because the MUTCD prohibits inclusion of patented devices, in either the Manual, an Interim Approval, or an approved experiment, and FHWA discovered

that aspects of the RRFB devices covered by the 2008 Interim Approval were covered by patents.

Given that RRFB devices are proven to save lives at pedestrian crossings on uncontrolled approaches, with hundreds if not thousands of these devices not yet installed but part of active construction projects, ITE members had considerable interest and concern. ITE leadership immediately began working to address the issue through engagement with the National Committee on Uniform Traffic Control Devices (NCUTCD), discussions at ITE Council meetings, communication with FHWA staff, and discussion by the ITE Board of Direction.

On January 9, 2018, ITE International President Michael Sanderson sent a letter to FHWA Acting Administrator Brandye Hendrickson communicating ITE's concerns and outlining three specific requests: provision of time for jurisdictions to complete existing RRFB commitments; assistance from FHWA as ITE works with its public agency members and the NCUTCD to develop and evaluate alternative configurations that accomplish the safety performance objectives of RRFBs; and continued efforts by FHWA to seek a solution with the patent holder that would allow the RRFB to eventually be re-approved for use.

On January 29, ITE was pleased to inform members that FHWA responded to the letter by issuing a revised Q&A on the subject, stating "FHWA believes it is in the public interest...to complete projects that have documentation of RRFBs with procurements issued and/or construction plans underway prior to FHWA's December 21, 2017 notice." FHWA also indicated a willingness for its Division Offices to work with agencies faced with challenges in replacing RRFBs in projects in the design process. ITE Executive Director Jeffrey F. Paniati noted, "This is a great example of ITE's ability to represent the interests of its members on an important issue and to work collaboratively with FHWA to achieve a positive result. We extend our thanks to Acting Administrator Hendrickson and Associate Administrator Martin Knopp and his staff for their willingness to listen and respond to the issues being raised by ITE members." After this development, ITE continued work with members, the National Committee on Uniform Traffic Control Devices, and FHWA to develop and promote alternatives to the RRFB and created a working group on the topic.

On March 20, 2018, good news for public agencies deploying RRFBs arrived when Carmanah Technologies Corporation of Victoria, BC, Canada, announced that it had purchased and disclaimed all patents restricting RRFBs from gaining federal approvals in the United States. Immediately following Carmanah's actions, FHWA released Interim Approval IA-21, which allows RRFBs as an approved option, as described in its March 20, 2018 Memorandum.

Carmanah purchased all RRFB patents with the sole purpose of disclaiming them, a move that propels the RRFB into the public domain, stating, "the market is open for anyone allowing all current and future manufacturers to produce RRFBs without licensing fees or fear



The image shows the ITE Community logo, which includes the text "ite Community" in a stylized font with a person icon. Below the logo is the website address "community.ite.org". To the right of the logo are three social media icons: Facebook (ITE Headquarters), LinkedIn (Institute of Transportation Engineers), and Twitter (@ITEHQ).

of patent infringement.” Carmanah adds that it aims to continue advancing RRFB technology with the goal of increasing roadway safety as more and more RRFBs are deployed in crosswalks throughout the United States and around the world.

“The ability to use RRFBs will undoubtedly help reduce pedestrian and bicycle injuries and deaths. We hope that the RRFB interim approval may one day become a full inclusion in the MUTCD,” said John Simmons, Carmanah CEO. “Our vision is to be the global leader in the signals industry, and one of the traits of a good leader is knowing when to take a stand for the benefit of all. We believe in improving safety, and we believe in this product: we could not stand by and do nothing when technology with the proven ability to save lives is at risk of being stifled,” Simmons said. “We believe manufacturers should not compete on intellectual property; technology should be in the public domain so we can all compete on the merits of our ideas and quality of manufacturing.”

With the RRFB’s interim approval rescission and newly issued interim approval, a lot of attention has been drawn to the wide range of enhancements available for uncontrolled pedestrian crossings. The working group ITE formed to address the RRFB issue has now evolved into a Pedestrian Crossing Safety Working Group, which is part of the Ped-Bike Standing Committee in the Complete Streets Council. Their first product is a webinar, *Engineering the Uncontrolled Pedestrian Crossing*, on May 24, 2:30–4:00 p.m. EDT. The webinar, will feature perspectives from two local agencies, Seattle, WA and Des Moines, IA, as well as the Florida Department of Transportation, and how these agencies are addressing their uncontrolled crossings. Learn more and register online through ITE’s Learning Hub at www.pathlms.com/ite/courses/6954/webinars/3367. [itej](http://www.ite.org)

IMPROVING ARTERIAL ROADS TO SUPPORT PUBLIC HEALTH: HOW CAN WE DO THIS?

By Ed Christopher and Carolyn McAndrews

A desire to protect and enhance public health has motivated improvements to arterial roads and corridors. There are countless “on the ground” examples that illustrate this. In 2016, the Urban Land Institute (ULI) published a report on its Healthy Corridor Project describing how four communities in the United States implemented improvements along specific corridors with the goal of making positive changes in the health of the people who live, work, and travel along them. The improvements targeted health by expanding the set of relevant issues to include food access, physical activity, economic opportunities, and affordable housing in addition to pedestrian and bicycle safety.¹

In 2017, ULI added four more sites to its Healthy Corridor Project. The new sites will build upon lessons learned from the initial phase, including the refinement of what constitutes a “healthy corridor,” strategies to incorporate these elements, and ways to engage local stakeholders to use a health lens while revitalizing the areas.²

In 2016, the Federal Highway Administration (FHWA) released the Health in Transportation Corridor Planning Framework. The FHWA framework provides action-oriented information about incorporating health into the corridor planning process. In addition, it includes a step-by-step guide for transportation practitioners. Five communities beta-tested the framework.³

We can point to many other examples of transportation practitioners integrating public health into their work, but the examples above are unique because they focus on arterial roads. When thinking about public health, arterials are important because of their intense automobile use, and the array of health and health equity outcomes

they influence. Perhaps more importantly, cities and states frequently redesign and reconstruct arterials which presents timely opportunities to experiment with and learn from innovations in health-focused design, operations, and maintenance strategies.

Coinciding with these high profile efforts to bring a health lens to corridor and arterial improvements, in 2015 the Transportation Research Board’s (TRB) Technical Activities Council voted unanimously to establish a new task force on the topic—the Task Force on Arterials and Public Health. The purpose of the task force is to develop a portfolio of research needs to inform the planning, design, and operation of arterial roads while considering both their positive and negative health implications.

Of the many topics the task force has discussed, the one that comes up at every meeting is how to bring health considerations into corridor analysis. Although both the ULI and FHWA efforts addressed this, they focused on a high-level policy and planning perspective. The opportunity now is to focus on the needs of transportation engineers, who often manage the technical analysis and implementation of the policy and planning goals. What seems to be missing is a way to infuse health-related metrics and thinking into the analytical and design processes.

Traffic engineers use a suite of measures and metrics that typically include:

- Delay and level of service;
- Travel time and speed;
- Peak hour excessive delay;
- Travel time reliability;
- Traffic density;
- Queue length;
- Crashes, injuries, and fatalities;
- Fuel consumption and emissions; and
- Noise.