Professional development program

Student Supplement (for Web seminar only)

The student supplement is a 10-35 page document which includes additional information that might not have been covered in detail during the presentation. This document should be of professional quality and consistently formatted, as it will be used for future reference by your participants. The document must follow along with the material organized in the presentation.

Examples of what would be included in the supplement are: case studies, excerpts from manuals/books, diagrams, formulas, charts and graphs. All borrowed information *must* include a reference.

Requirements for the student supplement include:

1. 10 page min. and 35 page max.
2. At least one case study
3. Reference page

Student Supplement Example: Below are a few abbreviated examples of the type of material included in the student supplement.

Additional references:

Websites relevant to this seminar. The following websites were mentioned in this seminar:

http://mutcd.fhwa.dot.gov/resources/interim_approval/pdf/ia-10_flashyellarrow.pdf for the Interim Approval of the FYA on the FHWA's MUTCD website

http://mutcd.fhwa.dot.gov/resources/interim_approval/ialistreq.htm for a list of agencies that have been granted an interim approval to use the FYA (IA-10) in their jurisdiction

http://www.regulations.gov is the website for submitting comments to the docket during the public comment period associated with the NPA, and is also the website that can be used to view all of the comment letters that have been received for the NPA docket (the docket number is FHWA-2007-28977)

Additional Background Information:

Purpose: The purpose of this memorandum is to issue an Interim Approval for the optional use of a flashing yellow arrow (FYA) signal indication as the signal display for left-turn movements during permissive turn intervals at signalized locations. Interim Approval allows interim use, pending official rulemaking, of a new traffic control device, a revision to the application or manner of use of an existing traffic control device, or a provision not specifically described in the MUTCD.

Background: For many years, some engineers have had concerns that drivers turning left on a permissive circular green signal indication might inadvertently mistake that indication as implying the left turn has the right of way over opposing traffic, especially under some geometric conditions. A variety of different indications and signal face arrangements for permissive left turns have been tried over the years by road authorities, but no comprehensive research had been conducted to evaluate all the potential displays.

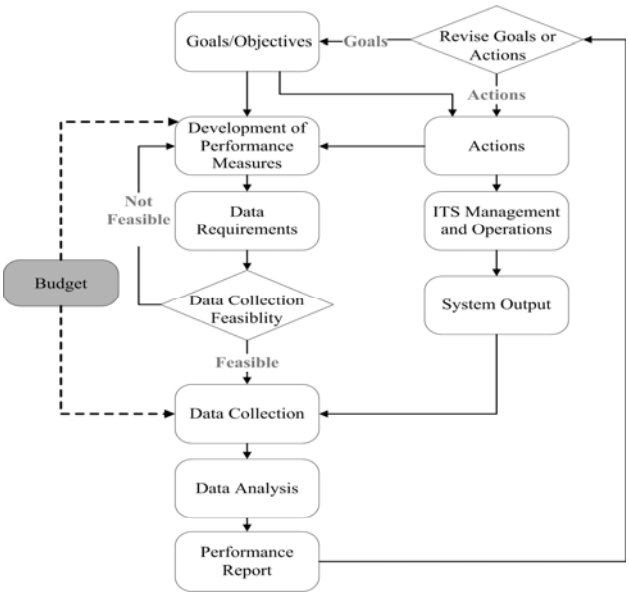
Research on the Flashing Yellow Arrow**:** National Cooperative Highway Research Program (NCHRP) Project 3-54, Evaluation of Traffic Signal Displays for Protected/Permissive Left-Turn Control, was initiated in the mid-1990s for the purpose of conducting the necessary definitive research to evaluate the wide variety of potential displays for permissive left-turn movements. The full report may be accessed via the Interim Approvals page of the MUTCD website at http://mutcd.fhwa.dot.gov.

Tables:

Table 1. Summary of operational performance measures for NTOC

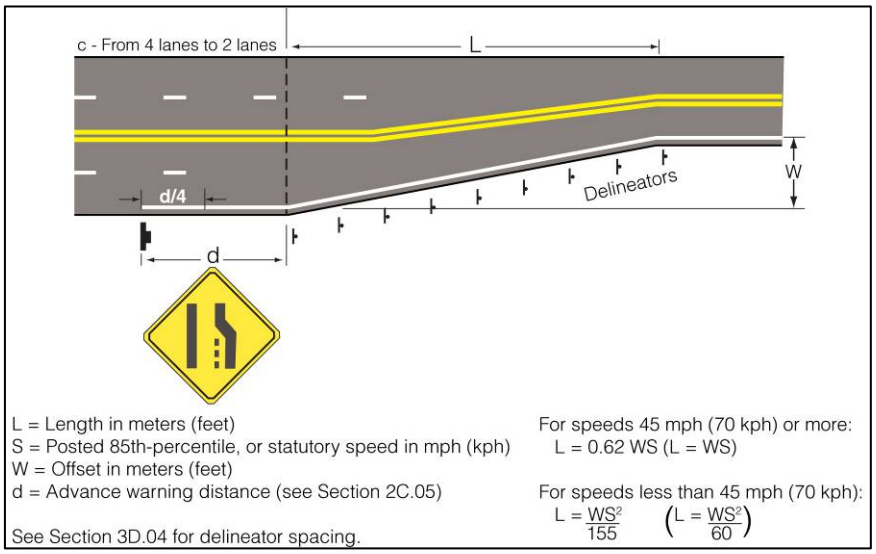
Measure	Sample Units of Measurement
Customer Satisfaction	Very satisfied Somewhat satisfied Neutral Somewhat dissatisfied Very dissatisfied Don't know/Not applicable
Extent of Congestion-Spatial	Lane miles of congested conditions or Percent of congested roadways
Extent of Congestion-Temporal	Hours of congestion
Incident Duration	Median minutes per incident

Diagrams:



Photos:

Reference photos from the Web or author as stated below:
Photo: pedbikeimages.com
Photo: First and Last Name and/or Organization Name



Reference photos from within a text as stated below:
Graphic Reference: MUTCD, Federal Highway Administration, 2003.

This chapter is organized in the following sections and addresses:

- Economic Effects and Walkability
- Safety
- Operations
- Road Diet Project Types and Examples
- Lessons Learned
- Research Gaps

CASE STUDIES

This chapter, which illustrates the application of the road diet at six case study locations, includes evaluations of factors related to the livability of the streets at each location. The road diet case studies are diverse geographically and with respect to their surroundings, scale, character, function, and form.

Six case studies were chosen for the survey and data collection. The case study sites are in Dunedin, New Zealand; Toronto, Canada; Athens, Georgia; Clear Lake, Iowa; and two in Vancouver, Washington. They represent a wide range of project contexts from an urban street in Toronto, Canada to a rural street in Iowa with varying project lengths, designs, and magnitude. Exhibit 3 shows the locations of the road diet case studies.

Exhibit 3: Location of Road Diet Case Studies

Residents and businesses in the vicinity of each case study were surveyed to examine how a road diet affects the livability of an area. The public opinion survey, which was modeled from surveys conducted by Donald Appleyard in *Livable Streets*[3], solicited information from people living and working adjacent to the streets with factors directly related to its livability. The survey included questions on:

- Household/business characteristics
- Perceptions on the street's traffic, safety, activities (street life) and friendliness
- Recommended improvements
- Reactions to the road diet

The surveys evaluated the livability impacts of road diet projects, addressing such issues as:

- Comfort and safety for pedestrians, bicyclists, and transit users
- Increased landscaping and beautification opportunities
- Improved quality of life and street character