

Methods to Reduce Traffic Speed in High Pedestrian Areas

Deliverables

- I. **Form an Advisory Committee** – An advisory committee comprised of interested Minnesota transportation professionals will be formed.

Deliverable: A brief task summary report will be submitted, listing the advisory committee members, contact information, and their role in the project

Duration: 1 month
- II. **Conduct Literature Review** – We will expand the literature review we have already conducted to include more recent findings and findings which are specific to high pedestrian areas.

Deliverable: A task report will be submitted containing an annotated bibliography of the literature on methods to control motorist speed. This report will be used in selecting final speed control strategies in Task III.

Duration: 6 months
- III. **Select Case Study Experiments** – Under the advisory committee’s direction, experiments will be identified to test speed-reduction strategies.

Deliverable: Four case study locations are identified in the Work Plan (Attachment A) —Twin Lakes, North Shore of Lake Bemidji, Tofte, and Schroeder. These sites will be reviewed with the study committee for final approval. A task report will discuss the package of speed reduction techniques to be tried at each location, who is responsible for installing the improvements, the timing of construction, the timing of data collection, and precise locations at each site for collecting speed data. This report will constitute a specific work plan for each experiment location.

Duration: 2 months
- IV. **Develop Experimental Designs** – Based on the experiments selected by the advisory committee, we will prepare experimental designs that will ensure that ample data are collected to perform statistical analysis.

Deliverable: A task report will describe, for each site, the sampling plan, measures to be calculated, and anticipated statistical significance of the data. This task will be conducted in association with the Human Factors Research Laboratory (HFRL) at the University of Minnesota to ensure that data are collected that will aid in improving the reliability of the simulator work conducted by the HFRL.

Duration: 2 months in 2000, 4 months in 2001
- V. **Schedule Data Collection and Development of the Application of Strategies with Local Agencies** – CTRE will consult with the agency closest to the experiment to

schedule on-site data collection and the timing of the application of the speed reduction strategy so that before and after data may be collected with a minimum of travel to and from the site.

Deliverables: The basic schedule will be established in Task III. This task will fine-tune the schedule and specific arrangements in the weeks before field work begins. E-mail communication to the project manager will inform of final arrangements.

Duration: 1 month in 2000, 4 months in 2001

- VI. **Collect Traffic Data** – CTRE’s mobile traffic data recording units will be transported to case study sites in Minnesota for collecting before and after data.

Deliverables: There will be two data collection cycles. “Before” condition data will be collected at each site in the summer of 2000. “After” condition data will be collected in the summer of 2001. A Task VIa report will be submitted in the fall of 2000, describing the data collection effort in the summer of 2000. A Task VIb report will be submitted in the fall of 2001, describing the data collection effort in the summer of 2001. Each task report will describe locations, traffic volume, weather conditions, pedestrian activity and any other qualifying information necessary to evaluate the data. Video tapes and data analysis results will be made available to the Human Factors Research Laboratory.

Duration: 2 months in 2000, 2 months in 2001

- VII. **Analyze Data** – Information on videotapes will be reduced and the data will be statistically analyzed to conduct an evaluation of each speed reduction strategy.

Deliverable: A task report will describe the findings of the before and after studies. This will be a technical report, containing the results of statistical analysis.

Duration: 2 months in 2000, 3 months in 2001

- VIII. **Final Report and Recommendations** – A report will be prepared and edited by CTRE’s in-house editorial staff. All CTRE publications are professionally prepared for readability and visual appeal. The required number of copies will be printed for distribution by the Local Road Research Board.

Deliverable: A final report will be submitted that describes all project tasks. The edited task reports will form the basis for the final report. An Executive Summary will clearly describe the practical findings that will be of use to traffic engineers.

Duration: 1 month in 2000, 2 months in 2001