

MONTHLY PROGRESS REPORT

November 2012

Title: *Evaluation of Guide Sign Fonts*

Federal Project: TPF-5(262)

MnDOT Contract: 99007 Work Order No. 1

TTI Account: 99-479520-001

MnDOT Technical Liaison: Cory Johnson

Principal Investigators: Bari Kotwal, Sarah Hammond
Texas A&M Transportation Institute

Research Progress

Task 2: Comprehensive Topic Investigation. Research related to legibility distances of highway guide sign fonts, specifically Clearview and Series E(Mod) fonts, was reviewed and summarized. The Topic Investigation deliverable will be forwarded to Cory Johnson for his review.

Also, to ensure a timely start date for the closed course roadway study, all paperwork and required forms have been submitted to the Texas A&M University Institutional Review Board for approval of research involving human subjects. The submission has undergone preliminary review, and we are currently awaiting final approval.

Task 3: Closed Course Testing. Based on findings in the Task 2 Topic Investigation, a more detailed work plan and study design is being finalized.

Researchers have contacted PennDOT to ask if they have any questions or concerns with what TTI is doing in this study. PennDOT is interested in the project and would like to join the advisory panel as a friend, if the panel is amenable. TTI also contacted SignCAD to discuss their experience with creating the SignCAD E(Mod) font, and TTI has received the SignCAD E(Mod) font from Avery Dennison for inclusion in this study.

Prior to the closed course roadway study, researchers are planning to conduct a laboratory study to determine the fonts with the greatest overall legibility from the experimental group of fonts being considered. The lab study will incorporate a 'blur tolerance' technique in which individual words will initially be presented fully blurred on a digital screen, and the word will be brought into focus in a stepwise progression. The measure of effectiveness will be the level of focus at which the word can be read for the various font types tested. The best 3 to 5 fonts will then be tested on full-size guide signs for the closed course roadway study.

In preparation for the closed course study, researchers are in the process of identifying and locating materials, hardware, supports, and machinery to be used so the overhead guide signs can be presented in a stable and consistent manner. We are also reviewing a variety of methods of changing the sign legends so this can be done accurately and efficiently between presentations. Efforts are also being focused on the design of the signs themselves, including such issues as overall dimensions, number of lines of text to include on the signs, as well as identifying the specific words to be presented. Special care is being taken to identify words with similar footprints which also contain letters with a variety of ascenders and descenders, as these features tend to reduce word legibility, especially on signs with multiple lines of text.

Researchers will continue to refine both the laboratory and closed course roadway studies over the next few weeks.