

**AASHTO STANDING COMMITTEE ON RESEARCH  
AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS**

**I. PROBLEM NUMBER**

To be assigned by NCHRP staff.

**II. PROBLEM TITLE**

Expansion of the Transportation Research Thesaurus

**III. RESEARCH PROBLEM STATEMENT**

In 2001 TRB published NCHRP Report 450, *Transportation Research Thesaurus and User's Guide*. The primary purpose of the Transportation Research Thesaurus (TRT) is to provide a common vocabulary for producers and users of TRB's TRIS database. Indexers can describe documents in a consistent way, and TRIS users can successfully retrieve TRIS records in their areas of interest by searching the thesaurus terms.

In FY2006 NCHRP Project 20-70 funded the development of web access to the TRT on the TRB website as well as improvements to the technology that supports use of the TRT by TRIS indexers. Both tasks were successfully completed and implemented.

Although the technical improvements have been significant, many users would benefit from the addition of new content, specifically term definitions. Thesauri, in the limited sense, do not include definitions, just scope notes to allow the user to distinguish between terms that have more than one definition, for example cranes (birds) and cranes (equipment). Providing more information to those indexing or defining their reports and resources would provide for more consistent use of vocabulary across repositories and thus to improved access to like information. Definitions would support the user who is working outside his specialization and would allow the user of the TRT on the web to improve his search strategy. Anecdotally, members of the TRB Committee on Library and Information Science for Transportation have heard many times that users of the TRT are surprised to find that definitions are not included.

A source of definitions to add to the TRT already exists in the draft multi-modal glossary of the American Association of State Highway and Transportation Officials (AASHTO), which was developed under NCHRP Project 20-7/153. The proposed project would leverage that material to improve and enhance the TRT.

**IV. LITERATURE SEARCH SUMMARY**

The Transportation Research Thesaurus was developed in accordance with the principals of the *Guidelines for the Construction, Format, and Management of Monolingual Thesauri* (ANSI/NISO Z39.19-1993), an American national standard developed by the National Information Standards Organization and approved August 30, 1993, by the American National Standards Institute. The standard, which was updated most recently in 2005, specifies equivalence (synonymous), hierarchical and associative relationships among terms and recommends print and screen formats to show these relationships. It mentions the need for field definitions to describe fields for purposes such as providing term definitions. Procedures for maintaining the intellectual content of the TRT are detailed in *Transportation Research Thesaurus and User's Guide*. The standards and procedures should guide development of the proposed products.

**V. RESEARCH OBJECTIVE**

The objective of the research is to expand the Transportation Research Thesaurus to include definitions of terms that exist in both the TRT and the AASHTO Glossary. The process would involve approval of the terms and definitions by the appropriate AASHTO body. The details of the process would be determined jointly by the project panel and AASHTO. The contractor or contractors would facilitate the work. It is assumed that AASHTO may still want to publish the glossary as a separate document. The general tasks are as follows:

1. Appropriate AASHTO groups review and approve some (or all) of the terms/definitions in the draft AASHTO glossary and submit them to the contractor.
2. Contractor 1 maintains the list of terms and definitions in a format that will facilitate import and identifies which of the terms exist in the TRT. Terms not in the TRT may become candidate terms eligible for addition to the TRT through standard processes.
3. Contractor 2 adds the field or fields necessary to accommodate the definitions to the TRIS production database and to the web TRT.
4. Contractor 1 exports the data in a suitable format to TRB
5. Contractor 2 adds the definitions to the database.

## **VI. ESTIMATE OF PROBLEM FUNDING AND RESEARCH PERIOD**

### **Recommended Funding:** \$90,000

TRB will provide staff support to enhance the existing application to accept the content. The contractor shall use whatever working application will allow for export of the enhanced data to the TRB and other users, including the NTL.

### **Research Period:** 24 months

Tasks 1-3 will be completed during the first 15 months of the study. Task 4 will be completed during the month 18 of the study. Task 5 will be completed in month 21 of the study.

## **VII. URGENCY, PAYOFF POTENTIAL, AND IMPLEMENTATION**

The Transportation Research Thesaurus is used by multiple agencies, some not known to TRB, for descriptive metadata to allow for consistency of information across repositories. Providing more information to those indexing or defining their reports and resources will provide for more consistent use of vocabulary across repositories and thus to improved access to like information. Providing definitions to general users will meet their existing expectations of the TRT and improve their ability to conduct successful searches of the TRIS database.

Increasing adoption of a common vocabulary will improve communication between information producers and information users. All those involved in transportation research and the application of research results will have better access to technical information.

## **VIII. PERSON(S) DEVELOPING THE PROBLEM**

Sandra Tucker  
Chair, TRB Committee on Library and Information Science for Transportation  
Associate Professor  
Engineering and Applied Sciences Librarian  
Texas A&M University Libraries  
979-862-1043  
s-tucker@tamu.edu

## **IX. PROBLEM MONITOR**

A statement of the specifics (name, title, affiliation, address, telephone number, e-mail address) of the person who will be assigned by the Administrator or Committee submitting this problem to monitor

the research, if programmed, from inception to completion. The monitor's final responsibility will entail recommendations to the Standing Committee on Research as to how the research results could be implemented.

**X. DATE AND SUBMITTED BY**

Submitted September 15, 2006 by

William P. Carr  
Director – Research and Technology  
District of Columbia DOT  
2000 14<sup>th</sup> Street, NW, 7<sup>th</sup> Floor  
Washington, DC 20009  
Phone: 202-671-1371  
Fax: 202-671-0617  
Email: [williamp.carr@dc.gov](mailto:williamp.carr@dc.gov)

*Please submit completed problem statement to the following e-mail address:*

**nchrp@nas.edu**

*Questions on the process can be directed to the same address or [cjencks@nas.edu](mailto:cjencks@nas.edu).*