

Transit Cooperative Research Program

RESEARCH RESULTS DIGEST

May 1994--Number 2

Subject Area: VI Public Transit

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Synthesis of Information Related to Transit Problems

A staff digest of the progress and status of TCRP Project - 7, "Synthesis of Information Related to Transit Problems," for which the Transportation Research Board is the agency conducting the research. The principal investigators responsible for the project are Sally D. Liff Manager, Synthesis Studies, Donna L. Vlasak, and Stephen F. Maher, serving under the Studies and Information Services Division of the TRB.

OVERVIEW

A major new transit research program has been established--the Transit Cooperative Research Program (TCRP). The U.S. Department of Transportation proposed the TCRP, and it was authorized in the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991. On May 13, 1992, a memorandum agreement outlining operating procedures for the TCRP was executed by three cooperating organizations: the Federal Transit Administration (FTA); the National Academy of Sciences, acting through the Transportation Research Board (TRB); and the Transit Development Corporation, Inc. (TDC), a nonprofit educational and research organization established by the American Public Transit Association (APTA).

SYNTHESIS PROGRAM

A vast storehouse of information exists on nearly every subject of concern to the transit industry. Much of this information has resulted from both research and the successful application of solutions to the challenging issues faced by practitioners in their daily work. Because previously there has been no systematic means for compiling such useful information and making it

available to the entire transit community, the TOPS Committee--an independent governing board organized by the TDC and designated the TCRP Oversight and Project Selection Committee--authorized the TRB to undertake a series of studies to search out and synthesize useful knowledge from all available sources and to prepare documented reports on current practices in the subject areas of concern.

This synthesis series reports on various practices, making specific recommendations where appropriate but without the detailed directions usually found in handbooks or design manuals. Nonetheless, these documents can serve similar purposes, for each is a compendium of the best knowledge available on measures found to be successful in resolving specific problems. The extent to which these reports are useful will be tempered by the user's knowledge and experience in the particular topic area.

To develop these syntheses in a comprehensive manner and to ensure inclusion of significant knowledge, the TRB analyzes available information assembled from numerous sources including a large number of transit agencies.

A topic panel of experts in the subject area is established to guide the researchers in organizing and evaluating the data collected on each topic and to review the synthesis report.

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For each topic, the project objectives are (1) to locate and assemble documented information; (2) to learn what practice has been used for solving or alleviating the problems; (3) to identify all ongoing research; (4) to learn what problems remain largely unsolved; (5) to organize, evaluate, and document the useful information that is acquired.

Each synthesis is an immediately useful document that records practices that were acceptable within the limitations of the knowledge available at the time of its preparation. As the processes of advancement continue, new knowledge can be expected to be added to that which is now at hand.

Studies in Progress and Planned for 1994

Work is currently under way on the topics listed in Table 1. Topics selected for the current program are listed in Table 2. Questions on these topics should be addressed to the principal project investigators, Sally D. Liff, Donna L. Vlasak, or Stephen F. Maher, who can be reached at 202/334-3242.

Submission and Selection of Topics

One part of the project procedures that is not widely understood is the process for submission and selection of topics. TCRP Project Committee J-7 meets to select topics for study using funds from the upcoming fiscal year. The membership of this committee is given in Table 3. Current funding allows for initiation of about six syntheses per year.

The following factors are considered in the selection process for synthesis topics:

- The problem should be widespread enough to generate broad interest in the synthesis.

- The problem should be timely and critical with respect to economic impact, safety, or social impact.

- The problem is appropriate if current practice is nonuniform or inconsistent from agency to agency, or if the validity of some practices appears to be questionable.

- The quality and quantity of useful available information should indicate a need to organize and compress that which has already been learned and written on the topic.

- The topic should not be one where ongoing research or other activities in progress might be expected to render the synthesis obsolete shortly after completion.

The continued success of this project depends on a constant supply of worthy synthesis topics. The interest of those who have recommended topics is sincerely appreciated, and they are urged to continue. Candidate topics are suggested by members of the committee and by a variety of other sources, including transit professionals, state and local government officials, equipment and service suppliers, research organizations, FTA, APTA, and TRB committees.

Available Publications

The Syntheses of Transit Practice that have been completed under this project are listed in Table 4. Copies of these Syntheses can be obtained from the Publications Office, Transportation Research Board, 2101 Constitution Avenue N.W., Washington, DC 20418.

Conduct of the Studies

Throughout the year, following the project committee's selection of topics, studies are initiated in the order of priority assigned by the committee.

A

panel consisting of practitioners and researchers is formed for each topic. At its first meeting, this topic panel thoroughly discusses the topic, refines the scope, suggests sources of information, and identifies and discusses potential topic consultants.

Following this meeting, an agreement is negotiated with a consultant to gather information on the topic, synthesize it, and draft a report. Typically, the agreement covers about 50 workdays over a period of about 1 year.

Information gathering and preparation of the first draft of the synthesis report usually take from 6 to 8 months. This draft is reviewed by the topic panel with the consultant at the second panel meeting. A revised draft is then prepared by the author and reviewed by the topic panel. Subsequent drafts and meetings are scheduled if needed, although this rarely occurs.

After the topic panel is substantially satisfied with the report, a final draft is sent to the members of TCRP Project Committee J-7 for their approval. At the same time, members of the topic panel have their last chance to review the report. Comments from these reviews are incorporated into the final report, which is published as a TCRP Synthesis of Transit Practice.

Suggestions for synthesis topics may be sent to the TCRP Manager at any time (*see address on back*). Topics suggested must be accompanied by a brief scope (a paragraph or two).

Interested in writing a synthesis? For details, contact Sally D. Liff, Donna L. Vlasak, or Stephen F. Maher at 202/334 3242.

These **Digests** are issued in the interest of providing an early awareness of the research results emanating from projects in the TCRP. By making these results known as they are developed, it is hoped that the potential users of the research findings will be encouraged toward their early implementation. Persons wanting to pursue the project subject matter in greater depth may do so through contact with the Cooperative Research Programs Staff, Transportation Research Board, 2101 Constitution Ave., N.W., Washington, DC 20418.

TABLE 1 SYNTHESIS STUDIES--In Progress as of May 1994

No.	Title
SA-1	Bus Route Evaluation Standars
SA-2	System-Specific Spare Ratios—Bus
SA-3	System Specific Spare Ratios—Rail
SB-2	Transit Involvement in Suburb-to-Suburb Commuting
SC-2	Waste Control Practices at Bus Maintenance Facilities
SC-4	Retrofit of Buses to Meet Clean Air Regulations
SD-1	Regulatory Impacts on New Design and Retrofit of Bus Maintenance Facilities
SD-2	Rail Transit Tunnel and Underground Structures Inspection Policy and Procedures
SE-1	Transit Bus Service Line and Cleaning Functions
SF-1	Bus Occupant Safety
SG-1	Risk Management for Small/Medium Urban and Rural Bus Systems
SG-2	Reducing Fraudulent Third-Party Claims Against Public Transit Agencies
SG-3	Management Information Systems
SG-4	The Role of Performance-Based Measures in Allocating Funding for Transit Operations

TABLE 2 SYNTHESIS STUDIES--Pending as of May 1994

No.	Title
SA-4	AVL/AVM Technology Status Report
SA-5	Customer Information at Bus Stops
SA-6	Passenger Transfer System Review
SA-7	Field Control Practices
SF-3	Methods for Improving Passenger Security
SH-1	Transit-Focused Development: A Synthesis of Experiences in the United States and Internationally
ALTERNATIVE 1994 SYNTHESSES IN (PRIORITY ORDER)	
SD-2	Field Welding of Rail
SG-5	“Turnkey” Contracts for Transit System Design and Construction
SF-4	Public Transit Access to Shopping Malls

TABLE 3 TCRP PROJECT COMMITTEE J-7

	Name	Affiliation
Chair	Jack M. Reilly	Capital District Transit Authority
Member	Gerald Blair	Indiana County (PA) Transit Authority
Member	Kenneth J. Dueker	Portland State University
Member	Alan Gibbs	National Transit Institute
Member	Henry Hide	Cole Sherman & Associates, LTD
Member	Maxine Marshall	ATE/Ryder Management
Member	Patricia McLaughlin	Los Angeles County Metropolitan Transit Authority
Member	Beverly G. Ward	University of South Florida
Member	Robert E. Spicher (Liaison)	Transportation Research Board

TABLE 4 PUBLISHED TCRP SYNTHESSES

No.	Title	No. of Pages	Price
1	Safe Operating Procedures for Alternative Fuel Buses (1994)	48 pp.	\$16.00
2	Low-Floor Transit Buses (1994)	44 pp.	\$12.00
3	Employee Incentive Programs to Improve Transit Performance (1994)	45 pp.	\$16.00
4	Integration of Bicycles and Transit (1994)	53 pp.	\$12.00

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