

**OUTLINE FOR  
NATIONAL COOPERATIVE RAIL RESEARCH PROGRAM  
PROBLEM STATEMENTS**

**I. PROBLEM TITLE**

The title should be no more than 10 words.

**II. RESEARCH PROBLEM STATEMENT**

In no more than three paragraphs, provide a general description of the problem requiring research.

**III. OBJECTIVE**

Include a clear, concise statement of the objectives (anticipated products) that are expected to be met by this research.

**IV. RESEARCH PROPOSED**

Provide a statement of the specific research proposed, how it relates to the research problem statement in Section II, and, if possible, describe the research approach and the tasks envisioned.

**V. ESTIMATE OF THE PROBLEM FUNDING AND RESEARCH PERIOD**

**Recommended Funding:** Include an estimate of the funds necessary to accomplish the objective stated in Section III. As a general guideline, the current cost for research averages approximately \$250,000 per professional staff-year. NCRRP projects will typically be in the \$300,000-\$600,000 range. A detailed budget is not needed in this problem statement.

**Research Period:** Provide an estimate of the period of time needed to complete the research, including 3 months for review and revision of a draft final report.

**VI. URGENCY AND PAYOFF POTENTIAL**

Include a statement on the importance of this particular research. Identify and, if possible, quantify the potential payoff from the achievement of the project objective. Any institutional, political, or socio-economic barriers to implementation of the anticipated research products should also be identified.

**VII. RELATED RESEARCH**

If known, provide information on other research—completed, in progress, or pending—that is closely related to the proposed problem.

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

Provide the specifics (i.e., name, title, address, telephone, and fax numbers) for the person(s) who developed the problem.

**IX. PROCESS USED TO DEVELOP PROBLEM STATEMENT**

State whether this problem statement is the product of an individual, a formal committee, or another entity.

**X. DATE AND SUBMITTED BY**

Provide the specifics for the person(s) who submitted the problem and the date of submission.

Submit to:

**NCRRP  
Transportation Research Board  
500 Fifth Street, N.W.  
Washington, D.C. 20001**

**FAX 202/334-2006  
ncrrp@nas.edu**