

COMMUNICATION BASED TRAIN CONTROL (CBTC) BEFORE/AFTER COST EFFECTIVENESS STUDY

AGENCY: Federal Transit Administration (FTA), DOT
ACTION: Notice for Request for Applications (RFA)

SUMMARY: FTA is seeking research proposals for Communication Based Train Control (CBTC) Before/After Effectiveness Study. FTA's research activities are authorized by 49 USC 5312, Research, Development, Demonstration, and Deployment Projects. Improving Capital and Operating Efficiencies is one of FTA's five Strategic Research Goals. Under this goal, FTA has set forth objectives to identify practices and technologies to control capital costs and identify methods and technologies to improve transit operational efficiency. Rail transit operations (commuter, heavy and light rail) comprise over 50% of transit service and represent a much larger component of capital expenditures and operating costs. FTA seeks applications for research proposals that will support the achievement of these goals and objectives.

DATES: An applicant must submit a proposal electronically to <http://www.grants.gov> by August 31, 2008 for consideration. All potential applicants are advised to begin the <http://www.grants.gov> registration process immediately, if they have not previously submitted Federal assistance applications through <http://www.grants.gov>, in order to be able to meet the deadline. FTA expects to award funds through a cooperative agreement in October 2008. In the event of a system problem or technical difficulty with the application submittal, the applicants should contact the FTA Project Manager for delivery instructions.

ADDRESSES: The website <http://www.grants.gov> allows applicant organizations to electronically find and apply for competitive opportunities from all Federal agencies that award Federal assistance. This website is the single access point for over 1000 Federal assistance programs administered by the 26 Federal agencies.

FOR FURTHER INFORMATION CONTACT: Technical, program management and administrative questions should be directed to Terrell Williams, Office of Technology (TRI-20), E43-469, Federal Transit Administration, U.S. Department of Transportation, 1200 New Jersey Ave, SE, Washington, D.C. 20590; email address: Terrell.Williams@dot.gov, or by phone at 202-366-0232.

SUPPLEMENTARY INFORMATION: Reports from the Transit Cooperative Research Program on Communications Based Train Control should be referenced.

Objectives

This project would study "before and after" comparisons of successful CBTC implementations and document the percent improvement on capacity, reliability, energy usage and cost reduction.

Background

Communication Based Train Control systems permit more efficient operations over conventional systems by allowing trains to operate safely at much closer headways, greater flexibility and greater precision in train control, and by providing continuous safe train separation assurance and overspeed protection. Additional benefits of CBTC technology include improved reliability and reductions in maintenance costs through a reduction in wayside equipment. However, a business case needs to be presented to the transit operators and local officials to demonstrate the benefits and payback of investing in CBTC.

Project Description

This project will evaluate the effectiveness of implementing a CBTC system at a U.S. transit agency with light rail or heavy rail operations. CBTC offers significant performance improvements while at the same time increasing safety and lowering operating costs.

The selected organization should conduct the following tasks;

- 1) Document implementation of CBTC on one or more transit systems in the U.S. Identify service levels and operational issues before CBTC was installed.
- 2) Conduct a return on investment or cost/benefit analysis of installed CBTC systems.
- 3) Evaluate the level of service levels, operational improvements and change in dispatcher and crew errors after the installation of CBTC.
- 4) Examine and document project management issues such as keeping within scope, schedule and budget faced by agencies implementing CBTC.
- 5) Document lessons learned in the freight railroad industry in the application of Positive Train Separation (PTS) and Positive Train Control (PTC) systems.

Award Information

FTA will fund one application under this program. The total available funding is \$200,000. Future funding will depend on Appropriations. The FTA will participate in activities by attending review meetings, commenting on technical reports, maintaining frequent contact with the project manager and approving key decisions and activities including redirecting activities if needed.

Cost Sharing or Matching

Federal transit funds are available to research projects at up to 100 percent of the project cost. However, cost sharing will be an evaluation criterion.

Eligibility Information

Eligible recipients include State and local government agencies, public and private transit agencies, universities, non-profit organizations, consultants, legally constituted public agencies, operators of public transportation services, and private for-profit organizations.

Proposal Content

This announcement includes all of the information that you need to apply. The following forms are available in grants.gov and are required to be completed:

1. SF 424 Mandatory
2. Other Attachments Form

SF 424 Mandatory

Most of SF424 is self explanatory. The application should answer the following items as follows:

- 1a – application
- 1b – annual
- 4a – Leave blank
- 4b – 26

Other Attachments Form:

1. The application should attach a pre-application (not more than 15 pages in length) as outlined in Chapter II (Item 9.b) of FTA Circular 6100.C: Transit Research and Technology Programs: Application Instructions and Program Management Guidelines. http://www.fta.dot.gov/laws/circulars/leg_reg_4121.html

This pre-application should also address the six criteria laid out below in the Application Review Information section. The project budget justification should include identification of any matching funds and their source. The Formal Application described in the Circular is not being requested at this time.

2. The application should attach information on the qualifications of key personnel, including biographies.

Anyone intending to apply should initiate the process of registering on <http://www.grants.gov> by August 30, 2008 for consideration. All potential applicants are advised to begin the <http://www.grants.gov> registration process immediately, if they have not previously submitted Federal assistance applications through <http://www.grants.gov>, in order to be able to meet the deadline.

Application Review Information

A review panel will be convened to review each proposal. Project proposals will be evaluated based on the following criteria;

1. Proposed Research, which includes the applicability of the proposed research to the requirements, the uniqueness and or need for the research, and the expected results. Proposals should explain how a particular practice or technology will improve rail operations. The proposed project must identify train control issues facing public transportation, why it is of national significance, the uniqueness or relationship of this project to other research, and how the proposed research will address the issue.
2. Qualifications of Key Personnel, which includes knowledge of and prior experience with train control technology.
3. Technical Management Plan, which includes the management approach for planning, scheduling, administering, coordinating and conducting the work effort.
4. Past Performance on activities relevant to the proposed work.
5. Cost and Cost Sharing.
6. Plan for evaluation and data collection. The proposal must address how success will be measured (e.g. before and after studies).

Award administration Information

The anticipated notification date for successful applications is October 2008. Following receipt of the notification letter, the successful entities will be required to submit the Formal Application as outlined in Chapter II (Items 10-25) of FTA Circular 6100.C: Transit Research and Technology Programs: Application Instructions and Program Management Guidelines http://www.fta.dot.gov/laws/circulars/leg_reg_4121.html: through the FTA Transportation Electronic Award Management (TEAM) system website.

FTA will manage the cooperative agreement through the TEAM system Web site. Before FTA may award Federal financial assistance through a Federal grant or cooperative agreement, the entity must submit all certifications and assurances pertaining to itself and its project as required by Federal laws and regulations. Since Federal fiscal year 1995, FTA has been consolidating the various certifications and assurances that may be required of its awardees and the projects into a single document published in the Federal Register. Fiscal year 2008 Annual List of Certifications and Assurances for FTA Grants and Cooperative Agreements and guidelines is published in the Federal Register and posted on the FTA Web site at: http://www.fta.dot.gov/funding/apply/grants_financing_7411.html.

Recipients will be required to manage their projects in accordance with FTA Circular 6100.C: Transit Research and Technology Programs: Application Instructions and Program Management Guidelines. : http://www.fta.dot.gov/laws/circulars/leg_reg_4121.html This includes requirements on project management and administration including quarterly reporting, financial management, and payment.