



## **Commercial Truck and Bus Safety Synthesis Program**

### **REQUEST FOR STATEMENTS OF QUALIFICATION**

#### **Task-Order Support for Commercial Truck and Bus Safety Synthesis Program for FY 2006 through FY 2012**

#### **BACKGROUND**

Safety is a principal focus of government agencies and private-sector organizations concerned with transportation. The Federal Motor Carrier Safety Administration (FMCSA) was established within the U.S. Department of Transportation (U.S. DOT) on January 1, 2000, pursuant to the Motor Carrier Safety Improvement Act of 1999. Formerly a part of the Federal Highway Administration, the FMCSA's primary mission is to prevent commercial motor vehicle-related fatalities and injuries. Administration activities contribute to ensuring safety in motor carrier operations through strong enforcement of safety regulations, focusing on high-risk carriers and commercial motor vehicle drivers; improving safety information systems and commercial motor vehicle technologies; strengthening commercial motor vehicle equipment and operating standards; and increasing safety awareness. To accomplish these activities, the FMCSA works with federal, state, and local enforcement agencies; the motor carrier industry; labor; safety interest groups; and others. In addition to safety, security-related issues are also receiving significant attention in light of the terrorist attacks of September 11, 2001.

Information exists on research and the successful application of solutions to the problems faced by safety practitioners in their daily work. Previously, there has been no systematic means for compiling this information and making it available to practitioners. Therefore, the FMCSA requested that the Transportation Research Board (TRB) establish a program to undertake a series of studies to locate and synthesize knowledge from the available sources and develop reports.

The Commercial Truck and Bus Safety Synthesis Program (CTBSSP) was established in late 2001 in support of the U.S. DOT FMCSA's safety and security research programs. It is anticipated that this program will continue in subsequent years (contingent on annual funding from FMSCA) and will initiate two synthesis reports annually that address concerns in the area of commercial truck and bus safety. For this program, commercial bus is defined as charter and intercity bus services. Public transportation is not covered in the program. A synthesis is a relatively short report (40-60 pages) that summarizes existing practice in a specific subject area based typically on a literature search and a survey of relevant organizations (e.g., state DOTs, trucking companies, or other organizations as appropriate for the specific topic). The program is modeled after the successful synthesis programs currently operated as part of the National Cooperative Highway Research Program (NCHRP) and the Transit Cooperative Research Program (TCRP).

Following the model of the NCHRP and TCRP synthesis programs, TRB has assembled an oversight panel for the program. This panel provides guidance to the program, oversees its progress, selects all synthesis topics, reviews reports for publication, and coordinates results with other safety activities. For each synthesis topic approved, a subcommittee of the oversight panel is formed to review the products associated with that topic.

A TRB staff officer administers each synthesis study. The staff officer guides the preparation of the work plan, oversees the progress of the research and report writing, provides assistance to the consultant in obtaining information, coordinates the panel review and comment on the draft report, and coordinates the synthesis publication process.

Since the inception of the program, 15 studies have been completed. The final reports for these can be viewed at <http://www.trb.org/news/blurbs/browse.asp?id=11>. In addition, one study is currently underway. In May 2007 the program oversight panel met and selected one new synthesis topic for the 2006 program, two new topics for the 2007 program, and an alternate topic if additional funding becomes available.

## **RESEARCH OBJECTIVE**

The objective of the CTBSSP is to provide synthesis reports that summarize existing practice in a variety of subject areas relating to commercial truck and bus safety.

This request for statements of qualifications and availability will be used to select at least two task-order contractor teams to prepare synthesis reports for the FY 2006 through FY 2012 CTBSSP programs. For these program years, three synthesis topics and one alternative were selected by the program oversight panel in May 2007. These topics are listed below and fully described in Attachment A. Additional topics will be selected for future years.

### **CTBSSP MC-18: Older Drivers: Do They Pose a Safety Risk?**

### **CTBSSP MC-19: Chemical Substance Effects on Driving/Performance: Stimulants, Hypnotics, and Nutritional Aids**

### **CTBSSP MC-20: Operator Drug and Alcohol Testing Across Modes**

### **Alternative Topic for 2007: Special Safety Concerns of School Bus Drivers**

Proposals developed in response to this announcement shall include specific offers for these synthesis topics. Task-order contractors selected at this time may be assigned responsibility for one or more of the three currently funded topics. Proposals should offer multidisciplinary teams capable of preparing synthesis reports in a wide variety of commercial truck and bus safety subject areas. For the future program, the selected task-order contractor teams will compete for specific synthesis studies as they are identified. Selected contractors are expected to have significant in-house expertise, as well as an ability to assemble additional expertise as needed. Contractor teams should include expertise in at least the following commercial truck and bus subject areas:

- commercial truck and bus fleet operations;
- commercial truck and bus safety/risk management;
- commercial vehicle safety statistics;
- highway infrastructure design;
- commercial vehicle regulations/enforcement;

- commercial vehicle legal/liability issues;
- commercial truck and bus driver training;
- commercial truck/bus vehicle engineering/advanced technologies;
- economic analysis techniques; and
- labor/human factors.

For each synthesis topic, a fixed price of up to \$40,000 is available for the selected contractor team to conduct the research and prepare the synthesis report. Each synthesis shall be completed within 10 months of notice to proceed in accordance with the following schedule-

The 10-month contract period is based on the following milestones:

- TRB Notice to Proceed.
- Detailed Work Plan, Survey Questionnaire, and Report Outline- Due 1 month after Notice to Proceed.
- One month for oversight panel review and comment.
- Report First Draft- due 6 months after topic panel approval of work plan, questionnaire, and report outline.
- One month for oversight panel review and comment
- Report Final Draft- due 1 month after oversight panel comments on first draft are received.

The document *Instructions to Consultants Preparing Syntheses for the Commercial Truck and Bus Safety Synthesis Program* provides information on report formatting and other aspects of the preparation of synthesis reports. This document is available in PDF format at the following TRB web address: <http://www.trb.org/CRP/CTBSSP/CTBSSP.asp>

## INVITATION

Research agencies are hereby invited to express interest in participating as a task-order contractor for the TRB CTBSSP by submitting a statement of qualifications and availability. The response should specifically address the three FY 2007 synthesis topics and one alternative previously identified and should highlight the specific experience and background of the key personnel as such experience and background relate to potential subject areas in commercial truck and bus safety. Respondents shall provide the following under one cover:

- A discussion that clearly demonstrates the respondent's understanding of the key subject areas within commercial truck and bus safety. This section of the response should be limited to no more than five pages.
- Qualifications of the principal investigator and other key team members.
- Relevant accomplishments by the principal investigator and other members of the research team.
- Specific proposals for the each of the three synthesis topics and one alternative previously listed, and detailed in Attachment A. For each topic, provide a five-page (maximum) discussion of the topic, research plan, qualifications of the research team, and a preliminary schedule.
- An executed, unaltered liability statement.

## **BASIS FOR SELECTION**

It is the intention of TRB to select at least two contractors based on the following criteria:

- Demonstrated understanding of commercial truck and bus safety research subject areas.
- Demonstrated experience, qualifications, and objectivity of the research team in the same or closely related subject areas.
- Availability.
- Clarity and completeness of the response.
- Specific proposals for the four synthesis topics shown above.

## **SPECIAL NOTES**

A. *Statements of Qualifications* must be submitted by the response deadline with an executed, unmodified copy of the Liability Statement attached to this Request. Statements submitted without this unaltered statement *will be rejected*.

B. A *Disclosure* statement providing information relevant to TRB's need to ensure objectivity and to be aware of possible sources of significant financial or organizational conflict of interest in conducting the research must be presented in this section of the proposal. For example, under certain conditions, ownership of the proposing agency, other organizational relationships, or proprietary rights and interests could be perceived as jeopardizing an objective approach to the research effort, and proposers are asked to disclose any such circumstances and to explain how they will be accounted for in this research. If there are no issues related to objectivity, this should be stated.

C. It is expected that each synthesis will be led by a qualified task leader supported by specialized technical and other services as needed. Therefore, the statement of qualifications should stress the specific experience and background of the principal investigator and any other key personnel.

D. Selection of the task-order contractor teams to perform each individual synthesis study for the topics shown in Attachment A will be made by the CTBSSP program oversight panel, based on competitive proposals developed for each synthesis study, in accordance with this RFQ.

## **FUNDS AVAILABLE**

It is anticipated that at least two new synthesis studies will be initiated in each year of the CTBSSP. Each synthesis study will be allocated \$40,000.

## CONTRACT TIME

The base task-order contracts will be for 60 months. Each individual task-order synthesis study will take up to 10 months to complete.

## STAFF RESPONSIBILITY

Ms. Donna Vlasak, 202/334-2974 (E-mail: [dvlasak@nas.edu](mailto:dvlasak@nas.edu))

## AUTHORIZATION TO BEGIN WORK

December 2007--estimated

**Proposals (30 single-bound copies) are due not later than 4:00 p.m. on  
October 12, 2007.**

This is a firm deadline, and extensions simply are not granted. In order to be considered, all 30 copies of the agency's proposal accompanied by the executed, unmodified Liability Statement must be in our offices not later than the deadline shown, or they will be rejected.

### Delivery Address:

PROPOSAL-CTBSSP  
ATTN: Ms. Donna Vlasak  
Senior Program Officer, Synthesis Studies, Division B  
Transportation Research Board  
500 Fifth Street, NW  
Washington, DC 20001

### Liability Statement

The signature of an authorized representative of the proposing agency is required on the unaltered liability statement in order for the CTBSSP to accept the agency's proposal for consideration. **Proposals submitted without this executed and unaltered statement by the proposal deadline will be summarily rejected.** An executed, unaltered statement indicates the agency's intent and ability to execute a contract that includes the provisions in the statement.

A printable version of the CTBSSP Liability Statement in PDF format can be found at  
<http://www.trb.org/CRP/CTBSSP/CTBSSP.asp>

## **General Notes**

1. According to the provisions of Title 49, Code of Federal Regulations, Part 21, which relates to nondiscrimination in federally assisted programs, all parties are hereby notified that the contract entered into pursuant to this announcement will be awarded without discrimination on the grounds of race, color, religion, sex, national origin, or disability.
2. In the interest of saving paper, reduced mailing costs, and ease of handling, it is desired that proposal pages be printed on both sides using the lightest bond weight permitting such practice and maintaining margins of less than 1 inch.
3. The total funds available are made known in the project statement. This is a fixed price and cannot be exceeded by the task order contractor.
4. All proposals become the property of the Commercial Truck and Bus Safety Synthesis Program. Final disposition will be made according to the policies thereof, including the right to reject all proposals.
5. Potential proposers should understand that follow-on activities for this project may be carried out through either a contract amendment modifying the scope of work with additional time and funds, or through a new contract (via sole source, full, or restrictive competition).

## ATTACHMENT A

### SCOPES FOR CURRENT SYNTHESIS TOPICS

#### **CTBSSP MC-18: Older Drivers: Do They Pose a Safety Risk?**

Recently, a study on the truck driver shortage showed nearly three percent of the total truck driver population in the year 2000 to be above the age of 65 years. By 2004, according to the study, that percentage had risen to 3.7 percent. If this trend continues, more than 5.5 percent of the truck driver population would be over the age of 65 years old by 2014.

Further, the industry wide average truck driver age continues to increase at a greater rate than that of the overall workforce. Over eight years beginning in 1994, it rose by 2.7 years while the average age of the entire labor force rose only 1.7 years.

Recruitment of older workers raises questions about the future of an already aging truck driver population. The American Trucking Association (ATA) and the Truckload Carriers Association among others outside the trucking industry, recently partnered with the national retirement age worker advocacy organization, American Association of Retired Persons (AARP) in the Alliance for an Experienced Workforce, a coalition designed to keep older workers in jobs. Promoting trucking as a second or third career for mature workers is at the forefront of their efforts within *the Alliance*, now attracting older potential drivers from other professions where they may have “hit the wall” in terms of pay or satisfaction.

Age related declines in cognitive, perceptual, and physical abilities have been established and are associated with an increased accident risk. In particular, decrement in memory, in visual perceptual skills, impairment in visual acuity and useful field of view, decrease in visual attention, as well as difficulty in judging and responding to traffic are all associated with an increased risk of being in an at-fault crash. Medical impairments have also been documented as related to driving difficulties. In a survey of over 3,000 older drivers applying for license renewal, one researcher found a clear pattern of lower annual mileage and greater avoidance of high-risk driving situations associated with lower levels of cognitive and visual functions.

A comprehensive literature review on the topic of age as it pertains to driving will be prepared and surveys of commercial truck and bus companies, industry organizations, insurance companies, states DOTs, and other relevant organizations will be conducted. This TRB synthesis study will examine whether industry safety managers and State Motor Vehicle administrators perceive that a need exists for a performance-based test for older CMV drivers. To the extent possible, significant programs and applicable information available in other countries should be summarized, as well.

## **CTBSSP MC-19: Chemical Substance /effects on Driving On Performance: Stimulants, Hypnotics, and Nutritional Aids**

Policy makers for commercial transportation equipment operators (particularly for truck and bus/motor coach operators) and health and safety advocates throughout the industry are not well informed about the accumulating body of research results on the human performance effects of the numerous chemical substances to which drivers have access. Little is known about the effects ingested chemical substances have on drivers' level of alertness, onset of fatigue, tendency toward errors and mistakes, accidents, etc. as well as what repeated self-administration of chemicals and drugs does to short and long term health. Less is known about the synergistic effects of ingesting multiple chemical compounds such as the effects of taking self-administered antihistamines interacting with dietary measures, etc.

Commercial drivers can and do purchase and use numerous chemical substances to manage levels of alertness and driving performance. These substances may include but not be limited to stimulant compounds such as caffeine in various forms, diet pills, and health foods/nutritional aids; athletic boosters such as ephedrine; legal and illegal stimulant drugs; a variety of prescription drugs; as well as hypnotic compounds such as sleeping pills; sedating/non-sedating antihistamines; and other sleep-inducing compounds.

This synthesis would provide a state of the practice literature review, documenting what the health and performance issues are concerning truck and bus operators. It would review and report on available scientific research about the effects that ingestion chemical compounds have on truck and bus operators' levels of alertness and performance.

The synthesis could/would also address both the safety and ethical issues of permitting or "prescribing" commercial drivers' use of a variety of chemical substances. Should the use of so-called non-sedating antihistamines, sleeping pills, the hormone melatonin, various energy drinks containing stimulant substances, etc. be permitted? What are the roles of the safety officer, medical personnel, and/or highway safety enforcement personnel in this issue?

The synthesis audience would include : the Federal Motor Carrier Safety Administration (FMCSA), TRB Truck and Bus Safety Committee (ANB 70), the commercial truck and bus/motor coach community, corporate officials, safety and health advocates, risk managers, etc.; commercial driver training enthusiasts, the Commercial Vehicle Safety Administration (CVSA and allied truck and bus inspection teams, police enforcement community, etc; trucking trade industry and advocacy groups, i.e. ATA, NPTC, OOIDA, etc.; and commercial transportation research community, safety and health research specialties.

The primary sources of information will be a comprehensive literature and surveys of selected entities.

Agencies to be surveyed would be those in transportation arenas who are responsible for or are involved in setting standards, regulations research agendas, etc. These include but are not limited to: state DOTs; health, safety, and transportation operator groups for all modes of commercial transportation in the US; FMCA; NIOSH and including both the Center for Disease Control in Atlanta

and NIOSH research centers in West Virginia and Cincinnati; US military sources involved the use of drugs and in accomplishing performance research, and/or establishing drug use policy during military operations such as USAAR, USARIEM, WRAIR, NHRS, NAMRL, USAF-HED, etc.. To the extent possible, relevant information from agencies in other countries such as Canada, Australia, the United Kingdom, and Germany should also be summarized.

## **CTBSSP MC-20: Operator Drug and Alcohol Testing Across Modes**

Various regulated modes have established minimum drug and alcohol testing regulations. Some in the regulated community have established practices and procedures that exceed the minimum regulatory requirements for their industry. There is a need to identify the current best practices utilized to deter drug and alcohol use among operators within the regulated community.

This synthesis will identify the current regulatory requirements of each mode and practices implemented by the regulated community that exceed the regulatory requirements to include: substances tested for, thresholds, collection methods, percent of operators tested for various test types, reporting requirements, methods of storing results, requirements and methods for disclosure of results, positive rates for each mode and a comparison of positive rates for different specimens types tested, when data is available. The synthesis should also document the pros and cons of various specimen types and their appropriateness for various testing requirements such as: pre-employment, random, post accident, reasonable suspicion.

Some specimen types are more prone to adulteration and substitution and an industry that supports circumventing drug and alcohol testing has emerged. The synthesis should identify the varied methods/products available that are utilized to defeat drug and/or alcohol testing programs and the prevalence of their use.

The Synthesis audience would include: Federal Motor Carrier Safety Administration (FMCSA), Federal Railroad Administration(FRA), Federal Aviation Administration (FAA), Pipeline and Hazardous Materials Safety Administration (PHMSA), Federal Transit Authority (FTA), United States Coast Guard (USCG); Regulated community (trucking, rail, aviation, maritime, pipeline and hazardous material and the U.S. Coast Guard); Drug and Alcohol testing organizations (collectors, labs, medical review officers and third party administrators) and insurance companies.

Agencies to be surveyed would include: FMCSA, FRA, FAA, FTA, PHMSA, USCG, members of the regulated community that have implemented drug and/or alcohol testing that exceed the minimum federal regulations, collectors and labs with experience with various specimen types and/or testing methods.

Information Sources: Current regulations for the various modes, summary reports submitted to regulatory agencies by the regulated community, information from the regulated community, associations representing the regulated communities, information from participants in drug and alcohol testing such as: collectors, labs, medical review officers and third party administrators and their associations.

MC-20 Agency Contact Information and Applicable Regulations:

### Federal Aviation Administration (FAA)

Diane J. Wood  
Drug Abatement Division  
Room 803 (AAM-800)

Independence Ave, SW  
Washington DC 20591  
Phone: 202-267-8442  
Fax: 202-267-5200  
drugabatement@faa.gov

For employers and employees in the aviation industry  
14 CFR Part 121  
Appendix I & J

Federal Motor Carrier Safety Administration (FMCSA)

Jim Keenan  
Enforcement & Compliance  
Room 8314  
400 7th St. SW  
Washington DC 20590  
Phone: 202-366-2096  
Fax: 202-366-7908  
jim.keenan@dot.gov

For carriers and commercial driver's license holders (CDL)  
49 CFR Part 382

Federal Railroad Administration (FRA)

Lamar Allen  
Office of Safety  
1120 Vermont Ave, NW  
Washington DC 20005  
Phone: 202-493-6313  
Fax: 202-493-6230  
Lamar.allen@fra.dot.gov

For employers and employees working in the railroad industry  
49 CFR Part 219

Federal Transit Administration (FTA)

Jerry Powers  
Office of Safety & Security  
Room 9301I  
400 7th St. SW  
Washington DC 20590  
Phone: 617-494-2395  
Fax: 202-366-3394  
Gerald.Powers@fta.dot.gov

For employers and employees working in the mass transit industry  
49 CFR Part 655

Pipeline & Hazardous Materials Safety Administration (PHMSA)

Cindy Ingrao  
Office of the Administrator  
Room 8321  
400 7th Street, SW  
Washington DC 20590  
Phone: 202-366-2350  
Fax: 202-366-3666  
Cindy.Ingrao@dot.gov

For operators and employees working in the pipeline industry  
49 CFR Part 199

United States Coast Guard (USCG)

Robert C. Schoening  
Office of Investigation & Analysis  
Room 2404 (G-MOA)  
2100 2nd St. SW  
Washington DC 20593-0001  
Phone: 202-372-1033  
Fax: 202-372-1907  
Robert.C.Schoening@uscg.mil

For employer and employees operating commercial vessels  
46 CFR Part 16  
46 CFR Part 4

Regulated Community and Drug Testing Organizations contact information:

J.B. Hunt Transport, Inc.  
David Whiteside  
615 J.B. Hunt Corporate Drive  
Lowell, AR 72745  
(479) 419-3807

Quest Diagnostics  
Ellen Faulkenberry  
(972) 768-6357

Compliance Safety Systems

Terry Lewis

P.O. Box 887

Bedford, TX 76095

(817) 320-4254

Psychemedics Corporation

Raymond C. Kubacki, Jr.

President and Chief Executive Officer

5832 Uplander Way

Culver City, CA 90230

(800) 628-8073

Burlington Northern Santa Fe (BNSF)

Art Freeman

Director Medical Services and Environmental Health

(817) 352-1615

Norfolk Southern (NS)

Dr. Ray Prible

Medical Director

(800) 552-2306 ext 5338

CSX Corporation

Dr. Tom Neilson

Medical Director

(904) 359-7645

McLane Company, Inc.

Joy Odem, VP HR

(972) 364-2000

## **Alternative 2007 Topic: Special Safety Concerns of School Bus Drivers**

School bus drivers face somewhat unique safety concerns as professional drivers. They carry what is perhaps our most precious cargo, face a wide range of distractions, and are subject to upholding laws other professional drivers are not held accountable for. The proposed synthesis will identify these safety concerns, review the relevant literature and research surrounding these areas, and evaluate and discuss methods for addressing these concerns. Below are examples of the topics to be covered:

- Situational awareness during passenger loading/unloading
- Passenger distractions and keeping order/enforcing rules on the bus while operating the bus
- Passengers as pedestrians (e.g., crossing in front of the bus)
- Illegal passing of stopped buses by other vehicles
- Railroad crossings
- Visibility issues (e.g., field-of-vision and blind spots)
- Impact of weather on safety (e.g., reduced visibility, reduced road conditions, etc.)
- Driver and passenger safety belt usage
- Risks associated with rural vs. urban routes (e.g., curvy mountain roads, traffic density, etc.)
- Emergency evacuation procedures
- Ensuring that the bus is empty upon completion
- Route navigation
- Driver training issues
- Routine maintenance and performing “walk-a-rounds” before/after routes
- Driver screening issues (e.g., background checks)

The primary audience for this deliverable would be school bus fleet safety managers and transportation superintendents. However, enforcement agencies, school bus contractors, and parent organizations will also benefit.

### Agencies to Survey

- State DOTs
- Local and state police
- School board officials
- School bus drivers
- School bus manufacturers and engineers
- National Association for Pupil Transportation (NAPT)
- National School Transportation Association (NSTA)
- National Association of State Directors of Pupil Transportation Services (NASDPTS)
- Transportation Research Board (TRB)
- Federal Motor Carrier Safety Administration (FMCSA)
- School bus insurers and insurance risk-management organizations
- Attorneys specializing in school bus crash litigation
- Special interest groups (e.g., National Coalition of School Bus Safety; Parent-Teacher Associations)

## Information Sources

- Transportation Research Information System (TRIS)
- FMCSA research publications
- Traffic safety research literature (e.g., Accident Analysis & Prevention)
- Proceedings of the International Truck & Bus Safety Symposia (e.g., Knoxville 1997, 1999, 2002; Washington, DC 2005) and School Transportation Conferences)...
- Websites and publications of special interest groups (e.g., School Bus Transportation News)
- Industrial safety management literature (e.g., *Ergonomics*, *Journal of Safety Research*, *Journal of Organizational Behavior Management*, *Professional Safety*, *Occupational Health & Safety*, *Work & Stress*)