

Michael W. Hancock, P.E., President  
Secretary, Kentucky Transportation Cabinet

Bud Wright, Executive Director



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(202) 624-5800 Fax: (202) 624-5806 · [transportation.org](http://transportation.org) · [centennial.transportation.org](http://centennial.transportation.org)

DATE: July 8, 2014

## ENGINEERING TSP PROGRAM INVOICES

Mr. Miguel Torres  
Secretary of Transportation and Public Works  
Puerto Rico Department of Transportation and Public Works  
P.O. Box 41269, Minillas Station  
San Juan, Puerto Rico 00940-1269

Dear Mr. Torres:

One of the most important ways in which AASHTO serves each of you and your staffs at State DOTs is through the provision of Technical Service Programs (TSPs). Technical Service Programs provide benefits to the member departments through the pooling of resources and expertise from across the country. This letter is to encourage your participation in funding the following AASHTO Technical Service Programs administered through AASHTO's Engineering and Technical Services Division (invoices attached). Other TSPs related to planning and environmental aspects of program and project delivery will be presented to you and your staff by separate notice.

Individual FY 2015 invoices are enclosed with this letter seeking voluntary contributions from your department to support the development and continued operation of each of these critical programs. Similar invoices are rendered each fiscal year. For more information on the Technical Service Programs, please see the enclosed descriptions, visit the TSP webpages, and select the link to the informational brochures.

<b>Technical Service Program</b>	<b>Abbreviation</b>
AASHTO Innovative Initiative (formerly the Technology Implementation Group (TIG))	All
AASHTO Product Evaluation Listing	APEL
Development of AASHTO Materials Standards	DAMS
Equipment Management Technical Services Program	EMTSP
Highway Safety Policy and Management Technical Service Program	SAFETY
Load and Resistance Factor Design (LRFD) Bridges and Structures Specification Maintenance	LRFDMS
National Transportation Product Evaluation Program	NTPEP
Operations Technical Service Program	OPERATIONS
Snow and Ice Cooperative Program	SICOP
Transportation and Civil Engineering Program	TRAC
Transportation Curriculum Coordination Council	TC3
Transportation System Preservation	TSP2

As we anticipate the adoption of a new AASHTO Strategic Plan later this year that will likely address the AASHTO responsibility to provide each of you with innovative technical services and products, we will continue to seek your input on where we can provide maximum value to each of you through TSPs. We also anticipate consolidating billing for AASHTO TSPs during the next year to better enable you to evaluate the full suite of services provided through TSPs.

If you have questions about any of these technical service program invoices, please contact Jim McDonnell, Program Director for Engineering, [jmcdonnell@aahto.org](mailto:jmcdonnell@aahto.org) or 202-624-5800. We would appreciate your response by October 1, 2014.

AASHTO appreciates your continued support and thanks you for your interest.

Sincerely,

  
Bud Wright  
Executive Director

Enclosures

CC: Member Department: Puerto Rico Department of Transportation and Public Works  
Associated AASHTO Committee

BW:mav

*Thanks for your support.  
Bud Wright*

























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FEDERAL I.D.#: 53-0204654

## INVOICE

JULY 8, 2014

BILLED TO:

Mr. Miguel Torres  
Secretary of Transportation and Public Works  
Puerto Rico Department of Transportation and Public Works  
P.O. Box 41269, Minillas Station  
San Juan, PR 00940-1269

Support AASHTO's FY 2015 participation in all Engineering Technical Service Programs.

<b>Engineering Technical Service Programs</b>	<b>Order #</b>	<b>AMOUNT</b>
Transportation System Preservation (TSP <sup>2</sup> )		\$ 20,000
Total for Puerto Rico Department of Transportation		\$ _____

PLEASE RETURN A COPY OF THE INVOICE WITH YOUR CHECK. YOUR CANCELLED CHECK IS YOUR RECEIPT.

Make checks payable to: **AASHTO**

Send remittance to:

AASHTO  
Department 5051  
Washington, DC 20061-5051

**AASHTO Innovation Initiative**

(Formerly known as the Technology Implementation Group, TIG)

<http://aii.transportation.org/>

*Associated AASHTO Committees: Standing Committee on Highways, Research Advisory Committee*

In May 2014, the AASHTO Board of Directors changed the name of the Technology Implementation Group (TIG) to the *AASHTO Innovation Initiative* to better reflect the dynamic environment in which the program operates. The AASHTO Innovation Initiative actively seeks out advancements in transportation technology and invests time and money to accelerate their adoption by agencies nationwide. Each year, the program selects highly valuable (but largely unrecognized) procedures, processes, software, devices, or other innovations that have been adopted by at least one agency, are market ready, and are available for use by other interested agencies. The purpose of the Initiative is to share information with AASHTO member agencies, local agencies, and their industry partners to improve the nation's transportation system. While the program's name has changed, its primary objective has stayed the same.

To date, more than 40 transportation agency innovations have been adopted by members through the program. These include now-common advances such as cable median barriers, self-propelled modular transporters for use in accelerated bridge construction, the TowPlow, and the ARC-GIS Online-based geospatial transportation mapping platform known as UPLAN.

\$6,000 per year

**AASHTO Product Evaluation Listing (APEL)**

<http://apel.transportation.org/>

*Associated AASHTO Committee: Subcommittee on Materials*

APEL is a web-based technical service program that serves as a clearinghouse for state-level evaluation as well as testing of new and/or proprietary engineered transportation products. The program allows manufacturers to submit products online for evaluation by an independent testing facility contracted through AASHTO. The resulting report is available to all state agencies through the APEL system. This process saves the states individual resources used for evaluation of proprietary products and saves the manufacturer time and expense for evaluation by multiple state agencies.

APEL also serves as a web-based listing that details individual state evaluations and certification of new products. Use of the online reviews permits states to streamline new product evaluation processes and lower the evaluation costs.

The APEL Council, which works with the National Transportation Product Evaluation Program, is charged with program guidance and development.

\$1,200 per year

**Development of AASHTO Materials Standards (DAMS)**

<http://materials.transportation.org>

*Associated AASHTO Committees: Subcommittee on Materials*

The DAMS program supports the development of new materials standards and test methods as well as providing support for technical revisions and updates to current standards. The financial contributions provide additional resources in the form of independent technical writers to help write new standards or make major revisions to current standards.

The funds assist in expediting the development of these important documents and allow the subcommittee members to better manage the limited volunteer time they have for subcommittee work.

\$5,000 per year

**Equipment Management Technical Service Program (EMTSP)**

<http://www.emtsp.org/>

*Associated AASHTO Committee: Subcommittee on Maintenance*

On average, State DOT fleets comprise a significant asset investment, ranging from 5,000 to 8,000 pieces of equipment with replacement costs of approximately \$400 million. Annual expenditures can reach upwards of \$80 million per year and are a large portion of all public works agencies' budgets and expenses. The effectiveness of such equipment fleet operations affects the public agencies' ability to adequately perform normal activities and successfully respond to emergency events. In addition, the rate of advancement of technology associated with roadway construction and maintenance equipment is so rapid that it is nearly impossible for individual public agencies to stay abreast of the latest technologies, evaluate these technologies, and implement the most cost-effective technologies to gain the advantages that they could provide.

The Equipment Management Technical Service Program keeps current data pertaining to new types of equipment along with advancing innovation and technology directly related to equipment fleets. This program also helps advance asset management principles in the management of these fleets. This information is disseminated throughout the state DOTs to reduce costs of maintenance operations.

\$3,000 per year

**Highway Safety Policy and Management Technical Service Program (SAFETY)**

*Associated AASHTO Committees: Standing Committee on Highway Traffic Safety and Subcommittee on Safety Management*

AASHTO member departments coordinate and cooperate with numerous public safety agencies and highway safety partners to develop and implement programs for improving safety on all public roads. The Highway Safety Policy and Management TSP supports these State DOT efforts, as well as AASHTO's highway safety efforts, including support for the continued development of the Highway Safety Manual and the "Toward Zero Deaths" initiative. It also supports staff efforts to revise and implement other safety-related publications, coordinate and cooperate with other public safety agencies and highway safety partners to develop and implement programs, and coordinate AASHTO input into the publications of other organizations, with the ultimate goal of reducing highway fatalities and injuries.

\$10,000 per year



**Load and Resistance Factor Design Bridges and Structures Specification Maintenance (LRFD)**

<http://bridges.transportation.org>

*Associated AASHTO Committees: Subcommittee on Bridges and Structures*

The LRFD Bridge Design Specifications were adopted in 1993. In anticipation of changes during the early years of transition, AASHTO and FHWA funded NCHRP Project 12-42 to provide maintenance and enhancements to the LRFD. In 2003, the NCHRP project came to a close and AASHTO took over responsibility for funding the maintenance of these documents. This technical service program supports maintenance of the LRFD specifications, as well as other related bridge specifications. Funding is also used for special studies on various design issues, AASHTO staff support to the Subcommittee on Bridges and Structures, and updates of LRFD design examples.

In recent years, the program has paid for technical assistance and support contracts in the areas of seismic design and load-rating issues for the Subcommittee on Bridges and Structures, as well as research and software development on bridge management (element level inspection). The program recently completed a new edition of the *LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals* to be published next year, as well as the just released 7<sup>th</sup> edition of the *LRFD Bridge Design Specifications*. In addition, ten technical committees are able to meet face-to-face each year to update specifications and write research proposals.

\$10,000 per year

**National Transportation Product Evaluation Program (NTPEP)**

<http://www.ntpep.org/>

*Associated AASHTO Committees: Subcommittee on Materials, Maintenance and Traffic*

This program generates independent, unbiased data for AASHTO member departments to utilize for product qualifications. Conservatively, the program generates \$2,000,000 of test data each year, saving member departments hundreds of man-hours of product qualification testing and manufacturing audits. NTPEP was established by the AASHTO Board of Directors in 1994 to cooperatively test manufactured transportation products that are of common interest to all member departments and share the results from these laboratory and field evaluations. By pooling the physical and professional resources of member departments, NTPEP is able to provide coordinated evaluations on various products and manufacturing processes in the areas of traffic safety, construction, and maintenance.

The program is evaluated every four years for financial viability, its effectiveness, the funding mechanisms to support it, and the need for its continuance. NTPEP is run through a joint funding concept between participating Industry and AASHTO members, with revenue from industry being used primarily for auditing or testing of and reporting on their products, and with voluntary member dues used primarily for support services to administer NTPEP.

\$12,000 per year

## **Operations Technical Service Program**

*Associated AASHTO Committee: Subcommittee on Transportation Systems Management and Operation*

A voluntarily-funded technical service program to support the new National Operations Center of Excellence was established by the AASHTO Board of Directors in May 2014. The Center is a collaborative effort of AASHTO, FHWA, ITE, and ITS America. Scheduled for launch in January 2015, the Center will provide a one-stop shop for technical support to member departments and other agencies through a web site, webinars, workshops, and summits with the goal of promoting and improving best practices in systems operation and management for practitioners, policymakers, and researchers. It also will eventually establish programs and support activities in the areas of transportation systems management and operations; freight operations; and security and emergency management.

In addition to contributions from the AASHTO member departments, FHWA is expected to commit \$500,000 per year to the Center.

\$15,000 per year

## **Snow and Ice Cooperative Program (SICOP)**

<http://www.sicop.net/>

*Associated AASHTO Committee: Subcommittee on Maintenance*

The Winter Maintenance Technical Service Program/SICOP is a pooled-fund effort established by AASHTO in 1994 in which all member departments, as well as APWA and NACE, are invited to participate. The objective of the WMTSP/SICOP is to identify a series of high-priority winter maintenance research and technology transfer projects, and fund them using pooled funds. Additionally, if warranted, member departments, APWA, and NACE are invited to contribute additional pooled funds to SICOP to support one or more specific projects in which they have a special interest. The projects chosen thus far have been selected through workshops attended by representatives of the participating states and then approved by the WMTSP Committee.

SICOP provides invaluable listserv services to the winter maintenance community through the website. Over 800 winter maintenance professionals from state DOTs, counties, cities, and the private sector use the services of the listserv daily. They often obtain answers to difficult operational questions about implementing new and emerging technologies by simply posting their query on the listserv and getting opinions from other practitioners. Message strings that have lasting value for the participants are archived for easy retrieval and future use.

\$4,000 per year

## **Transportation and Civil Engineering (TRAC) Program**

[http://mmsd.transportation.org/trac\\_rides/](http://mmsd.transportation.org/trac_rides/)

*Associated AASHTO Committee: Standing Committee on Finance and Administration*

Established as an ongoing AASHTO student outreach program, Transportation and Civil Engineering (TRAC) was initiated to encourage students in grades 5 through 12 to pursue higher education in civil engineering and transportation followed by careers in those fields. The TRAC program works by providing schools with curriculum enhancements in the form of hands-on activities that demonstrate engineering and transportation principles. A bridge-building competition is held each year at the AASHTO Spring Meeting to engage the best student teams across the country in technical presentations and interaction with leaders in civil engineering.

A recent partnership with Mississippi has provided a new opportunity for states to begin workforce development as early as kindergarten. Roadways into Developing Elementary Students (RIDES) introduces younger elementary students to engineering and transportation careers through activities that emphasize classification, sequencing, and graphing process skills. Additionally, it teaches these young students about varying forms of energy focusing on Newton's Laws; helps them make the connection between various modes of transportation and the environment; and links simple machines, humans, and transportation to energy types, propulsion, and "fuel types."

\$7,000 per year

### **Transportation Curriculum Coordination Council (TC3)**

<http://tccc.gov/>

*Associated AASHTO Committees: Standing Committee on Highways; Subcommittees on Construction, Maintenance and Materials*

TC3 was established as a technical service program in 2013 to continue the work of FHWA's pooled fund project of the same name. More than 40,000 individuals – in both the public and private sectors – have been trained through TC3 courses in the past 5 years. Goals for this program include improving training opportunities for transportation technical workers and applying innovative measures to reduce duplication of effort and cost to state and local transportation agencies.

The TC3 combines resources from state and industry partners to develop standardized technical training materials for the construction, materials, and maintenance front-line workforce. TC3 has selected online courses as the primary means of delivering and maintaining relevant training tailored to the workforce of the transportation industry. TC3 provides states with the following benefits:

- **Cost savings:** TC3 allows states to cost effectively train staff with quality and relevant course material, saving money and avoiding duplication.
- **Innovation:** Courses provided by TC3 are developed through a collaboration of national best practices and content matter experts.
- **Skilled workforce:** TC3 is dedicated to helping protect against the loss of knowledge and preparing the workforce for advancements in technologies through quality training.

The funds contributed to the TC3 program are used primarily for curriculum hosting and management, administrative and operating costs, expenditures to cover new course development, and preparation for the transition to a self-funded program.

\$20,000 per year

**Transportation System Preservation Technical Service Program (TSP<sup>2</sup>)**

<http://www.tsp2.org/>

*Associated AASHTO Committee: Subcommittee on Maintenance*

TSP2 supports the research, technical, and program needs of the member states in the development and implementation of their own preservation programs for both pavement and bridges. AASHTO, in collaboration with the National Center for Pavement Preservation, initially implemented this technical service program to assist states with their pavement preservation efforts, including the establishment of regional pavement preservation partnerships. This template was then used to expand TSP2 to include bridge preservation issues.

An Oversight Panel guides the implementation and operation of the TSP2 program, including representation from the AASHTO Subcommittees on Bridges and Structures, Maintenance, Materials, and Asset Management, and Design's Joint Technical Committee on Pavements, as well as members from each of the AASHTO regions. Voluntary contributions fund technical support staff for the operation of the TSP2, as well as regional groups for both Bridge and Pavement Preservation. The program also supports the website for bridge and pavement preservation as a clearinghouse for preservation, technical support and preservation news. TSP2 has proven to be a successful program and, in this increasingly tight economy, participation in this program helps the State DOTs preserve not only their pavements but their bridges as well.

\$20,000 per year