**Domestic Scan Proposal Form**

AASHTO is now soliciting proposals for a **Calendar Year 2017 US Domestic Scan Program** (NCHRP Panel 20-68A).

Selected scan topics will be investigated by one of three ways: (type 1) site visits to three to six locations for approximately a two week period or less, by webinar; (type 2) peer exchange; or (type 3) conducted by a group of eight to 12 transportation professionals with expertise in the selected topic area. Proposed topics should meet the following criteria:

* Address an important and timely need for information by transportation agencies;
* Are of interest to a broad national spectrum of people and agencies;
* Are complex and also “hands-on,” meaning they lend themselves particularly well to exploration through on-site visits; and
* Are sufficiently focused that the tour participants are able to investigate and understand key issues in the limited time available on the tour.

Before submitting your proposal it is highly recommended that you read [**What Makes a Good Scan Topic Proposal**](http://www.domesticscan.org/what-makes-a-good-scan-topic-proposal)[**http://www.domesticscan.org/what-makes-a-good-scan-topic-proposal**](http://www.domesticscan.org/what-makes-a-good-scan-topic-proposal)

This form is designed to collect the full length of your proposal. Sections requiring essays have unlimited space for you to use. Contact information has some limited text. ***Use your TAB🡪 key to advance to the area where you need to complete information.***

**Proposals should be returned no later than OCTOBER 15, 2016.**

**IMPORTANT NOTE on How to save your document**: ***LastNameFirst Initial, underscore\_Organization Acronym \_CY2017.***

***Saved Document Name Example: VitaleM\_AASHTO\_CY2017***

***If you have more than one, add a number after first initial: VitaleM1\_AASHTO\_CY2017***

**Domestic Scan Proposal Contact Information**

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Bijan Khaleghi | Address | 7345 Linderson Way SW, Tumwater WA 98501 |
| Title | State Bridge Design Engineer | E-mail | khalegb@wsdot.wa.gov |
| Member Department | WSDOT | Telephone number | (360) 705-7181 |
| AASHTO Committee | All | Date of submission | 9/30/2016 |

**Title of Proposed Scan****:** Bridges-Of-The-Future

**Problem Statement** (What topic is to be examined? What drives the need for the scan? Why now?)

Many leading highway bridge practitioners and researchers have been in the forefront of investigating novel materials and methods to transform infrastructure engineering. The objective of this Domestic scan is to investigate and discuss practical and efficient methods to widely implement innovation in bridges and develop an action plan with milestones and measureable indices for future implementation of innovation in bridge engineering. The implementation of the recommendations from this scan are anticipated to create a broad mechanism and infrastructure for research, development, adoption, and widespread field implementation of advanced technologies and materials in construction of bridges and other civil infrastructure systems. The target bridges and systems are those commonly encountered in the highway network and not necessarily signature, exceptional systems that constitute a small fraction of the overall civil infrastructure population. A Domestic scan on bridges for the future will accomplish its mission by outreach to many Domestic leading stakeholders that include researchers, technology industries, public officials, practicing engineers, and construction industries.

**Scan Scope** (What specific subject areas are to be examined? Which cities and states might be visited? Which agencies/organizations (including specific departments or types of staff if applicable)?

The proposed scan will be proactively integrated into follow-up technology transfer activities. The scan team implementation plan will document how information gathered from the scan tour will be incorporated into national conferences, forums, and documents of FHWA, AASHTO, TRB, and NCHRP. As a result, the scan will produce a coordinated infusion of knowledge into the practice and planning of bridge projects with innovative materials and construction methods in all regions of the United States.

Special steps associated with innovative designs include:

• Promote awareness of technological developments and expertise in other fields and encourage dissemination to current bridge engineering practice.

• Engage and educate the general public in the debate on future technology in bridge infrastructure, both existing and new. Promote coordination between federal, state and local funding sources for innovative projects and develop a process to evaluate and disseminate success stories.

• Address construction management issues (contract practices to avoid claims and maintain project costs and keeping schedule on track, geotechnical baseline reports, etc.).

The scan findings will be essential in developing an Domestic inventory of bridges with innovative designs and materials. Scan findings will be published and made available for AASHTO consideration in advancing bridge specifications for innovative designs, materials and standards.

**Anticipated Scan Results** (What key information is to be gained? What information is to be shared after the scan? Who would the audience be for this information?)

The scan will identify lessons learned from construction of bridge projects with innovative design and materials. The information collected will allow States to consider innovative design and materials for future highway projects with a better understanding of the construction risks of innovative design and materials.

The Domestic scan will facilitate the development of AASHTO guidelines and standards for highway bridges in the United States. With a national bridge inventory (NBI), and better information on existing projects attributes, we will be in a better position to identify infrastructure needs with respect to safety and security.

Transportation agencies will have better information to assess programmatic needs (such as program level cost, scope and schedule) for improving highway security, traffic and emergency operations, maintenance, and inspection best practices that will likely go along with future design and construction standards.

**Benefits Expected** (Including potential impacts on current technology or procedures)

 The Domestic scan on bridges of the future will be addressing the following topics: long-term-performance, constructability, education, outreach, research, and information dissemination with the overall goals of developing immediate, short-term, and long-term action plans.

The action plan after completion of the scan is to develop a process to identify the appropriate stakeholders in the DOT that would champion new technology. The findings of this scan will facilitate (1) establishing a center for identifying, evaluating, and communicating new technologies for bridge engineering to all stakeholders; (2) creating a process to make demonstration projects more visible to all stakeholders for both an education and information dissemination tool; (3) developing formal courses (modules) on “bridges-of-the-future” for graduate programs and short courses for DOT personnel and practitioners; and (4) educating researchers on how to get technologies and products accepted with the DOTs and how to develop implementation plans for public letting.