**Domestic Scan Proposal Form**

AASHTO is now soliciting proposals for a **Calendar Year 2019 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 SEPTEMBER 28, 2018.**

**IMPORTANT NOTE on How to save your document**: ***LastNameFirst Initial, underscore\_Organization Acronym \_CY2019.***

***Saved Document Name Example: NgetheP\_AASHTO\_CY2019***

***If you have more than one, add a number after first initial: NgetheP1\_AASHTO\_CY2019***

**Domestic Scan Proposal Contact Information**

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| AASHTO Committee |       | Date of submission | 9/28/2018 |

**Title of Proposed Scan****:** Best Practices In Preventing Wrong Way Entry Onto Limited Access Facilities

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

While wrong-way collisions represent only roughly 3% of the crashes on high-speed divided highways, wrong-way crashes are much more likely to result in fatalities and serious injuries than other types of highway crashes. The topic to be examined in this scan is the available and emerging countermeasures and educational approaches that various states are deploying to reduce wrong-way entry onto high-speed roadways and detect wrong-way vehicles. The need for the scan is driven by the fact that when there is a wrong-way crash on a mainline highway, 42% result in fatality or serious injury. While wrong-way crashes are a small percentage of the crashes on our highways, they represent an ever-increasing number of serious injury or fatal crashes. This scan is pertinent now because many states have tried a number of different approaches to attempt to prevent wrong-way crashes. A scan of the approaches that have been tried across the country would contribute to safety and could lead to the development of better design standards and/or educational methods that reduce wrong-way driving crashes.

**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 scope of the scan will be to evaluate countermeasures that have been deployed to reduce the likelihood of wrong-way entry onto limited access roadway facilities; and countermeasures that detect and identify wrong-way vehicles on mainline roadways. It will also be beneficial to learn during the scan of any educational materials developed or distributed to help pervent wrong-way crashes. The intent is to scan for all types of mitigating strategies including Intelligent Transportation Systems (ITS), improved signing and marking, geometric improvements, intersection redesign, and education. Some states to be visited could include Texas, Illinois, California, Florida, Colorado, and Arizona. The agencies involved in each of those locations would include the state DOT's as well as the research organizations that have completed research for those states. For example, in the state of Texas, Houston has implemented several wrong-way entry countermeasures; San Antonio has a multi-disciplinary Wrong-Way Driving Task Force; and Texas A&M University in College Station has completed much research in this area. Thus, the intent of the scan would be to see the countermeasures in the field and glean from the agencies lessons learned from deploying them, and to gather information related to installation costs, operating costs, and any relevant challenges. The research agencies could be included in the scan to try to identify effectiveness metrics that would help in evaluating the efficacy of the various wrong-way treatments and to help identify successful implementation strategies.

The Arizona DOT implemented a system using FLIR infared cameras to detect wrong-way vehicles on freeways in the Phoenix area. The thermal detection cameras were installed at 90 locations above exit ramps and mainline locations along Interstate 17. When a wrong-way vehicle is detected, an alarm is initiated at the ADOT operations center and the center staff can then implement the appropriate response immediately.

Similar to Texas and Arizona, the other states listed have all tried various methods to reduce wrong-way crashes. Colorado, for example, might be considered because of its widespread use of roundabouts at interchanges. This provides a geometric intersection configuration that should be expected to greatly reduce the possibility of wrong-way entry. A detailed assessment of their successes would be helpful to other agencies faced with wrong-way crashes at a location that may lend itself to implementation of a roundabout.

**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 key information to be gained from the scan is a comprehensive understanding of the various wrong-way crash countermeasures that have been tried and relevant agency experience with them. It is anticipated that a wide array of information can be gathered that can then be compiled and shared at the end of the scan. The intended audience for the information would be all of the state DOT's and other highway safety practitioners. The report summary and the scan findings will be presented nationally through presentations made at various national venues such as the TRB Annual Meeting and the ITE Annual Meeting.

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

The expected benefits of this scan would be to compile and consolidate information from several states that have tried a variety of countermeasures implemented to reduce wrong-way entry and wrong-way driving related crashes. The results will allow for determination and development of prudent countermeasures for wrong-way driving at access points and segments along interstate systems while determining the types of educationl materials and/or campaigns that could be used to help prevent wrong-way driving crashes. With the comprehensive scan approach envisioned, to include both agency and research staff, it is anticipated that the lessons learned will be useful in driver education and improvement of design and operations of roadways; notably, reduction in the likelihood of wrong-way crashes, serious injuries, and fatalities.