WORKSHOP PROPOSAL: **Assisting Local Agencies with Safety Analysis in a Data-Limited Environment**

The theme of the proposed workshop will be "*Assisting Local Agencies with Safety Analysis in a Data-Limited Environment*." The workshop will seek to provide basic safety analysis skills for LTAP and TTAP center staff that do not have a formal background in traffic safety analysis. The workshop is designed to fill in the gaps between, and be complementary of, other existing safety analysis training that is currently available for this target audience and will focus on hands-on application of safety analysis processes that can be taken back to the LTAP and TTAP center's home state.

The approach to the workshop is to inform agencies about the processes and methods to complete the safety management cycle and will be tailored to suit their current data availability while providing a vision for future potential enhancements to data collection and capture toward use of more advanced safety performance methods (not covered in this workshop) as a target to work towards. The workshop will also broadly expose the agencies to the HSM (particularly Parts B: roadway safety management; and C: predictive models), and the tools and resources available to help local agencies and their consultants, particularly with network screening, supplemented by some aspects of diagnosis, countermeasure selection, and economic appraisal, and with designing projects (for new and rehabilitation corridors) to address safety.

Upon completion of the workshop LTAP center, participants will be able to:

- Utilize the freely available materials to assist local agencies with safety analysis on their road network.
- Use a baseline knowledge of crash data, crash reports and safety terminology to accurately extract actionable information from printed crash reporting forms.
- Explain the significance of the HSM with respect to higher level data intensive analysis which are not covered in this workshop.
- Execute the components of the "Safety Management Cycle" for a local agency given a variety of levels of data. Examples of the specific data levels that the course will be developed to encompass will include:
    - Assisting agencies that have a record of crashes in manual files, but do not have computerized crash data to use automated tools.
    - Agencies that have computerized crash data, but in their crash data the only location information is a verbal description of the crash location, not a milepost or a latitude and longitude that can drive automated tools.
    - Agencies that have partial crash data or no crash data, but have roadway inventory data and some traffic counting program, or are willing to develop it from video data or Google Street View.
- Execute a number of commonly-used analysis techniques of varying complexity to determine appropriate safety countermeasures.
- Outline the strengths, weaknesses and limitations of various analysis techniques.
- Effectively use published crash modification factors.

The workshop will be designed in a "Train the Trainer" format and electronics copies of the training and presentation materials will be provided to all LTAP centers with the goal of specific centers hosting similar training events for the local and tribal agencies within their state. The workshop will also provide contacts for LTAP centers who do not have access to a subject matter expert within their state or center

to deliver the program. The workshop is currently expected to require approximately 6 hours deliver, however it will be scalable to also be delivered in a full day session.

The workshop will be structured to allow LTAP participants to address safety assistance with the full range of local agency staff sizes capabilities, from extremely limited (e.g., counties without a professional engineer) to local agencies with a full professional engineering staff, and emphasis could be given to specific audience, as needed.

A draft of the proposed workshop agenda is presented below:

Proposed Workshop Agenda
for The National LTAP Pre-Conference Safety Workshop at the Annual NLTAPA Meeting
Title: *Assisting Local Agencies with Safety Analysis in a Data-Limited Environment*

1) Overview of Roadway Safety Management
    i. Purpose and outcome in the context of local agencies
    ii. Key steps forming the safety management cycle
    iii. Information resources and references
2) Working with Crash Data
    i. Over represented crash locations – local 2 lane rural roads/4-lane undivided
    ii. Common errors in crash reports
    iii. Regression to the mean
    iv. Crash types and severity classes
    v. Reading crash reports
3) Network Screening – Identifying "areas of interest"
    i. Investigating publically identified "areas of concern"
    ii. Dark spotting (crash frequency) and limitations associated with it
    iii. Crash rates and limitations associated with it
    iv. Introducing exposure (low, medium, high traffic volumes, in the absence of traffic counting programs) and how to appraise it in conjunction with crashes
    v. Introducing groupings by facility type
    vi. Safety performance functions (what are they and what are their purpose)
    vii. FHWA Systemic tool
    viii. usRAP Tools software

4) Diagnosis of "areas of interest"
    i. Site visits
    ii. Crash diagrams
    iii. Speed and traffic volume studies
    iv. FHWA systemic tool
    v. FHWA Intersection Guide
    vi. FHWA Roadway Segment Guide

5) Selecting Countermeasures
    i. Review of common countermeasures for intersections
    ii. Review of common countermeasures for curves and tangents

iii. Crash reduction factors (introduce term: crash modification factors) and CMF Clearinghouse
iv. Cost effectiveness evaluation of countermeasures
v. NCHRP 457 - Guide to evaluating intersection improvements
vi. FHWA Systemic Tool
vii. usRAP Tools software

6) Tool Demonstration of Executing the Processes (Sessions 1-5)
   i. FHWA Systemic Tool
   ii. usRAP Tools Software

7) Funding sources (not covered in the NLTAP workshop due the state to state variability, but will be tailored to specific state led sessions presented in the future).
   i. Funds for data collection
   ii. Funds for training