**Project Title:** Safety Performance Functions  

**PennDOT Technical Advisor:** Gary Modi  

**Project Duration:** Aug 2013 – Oct 2014

**Project Purposes:**

Project purposes are to:

- Develop Pennsylvania-specific Safety Performance Functions (SPF) to effectively and efficiently adopt and implement the Highway Safety Manual (HSM) into PennDOT’s policies and procedures of project delivery and program management.

SPFs will be developed for two-lane rural, state-owned highways (covering approximately 10,000 miles) with three-digit numerical designations (e.g., SR 322). The SPFs will be developed to be consistent with the HSM, including the characterization of crash frequency and severity for two-lane rural road segments and the following intersection types:

1. Four-leg rural, undivided intersections of two-lane roads (both state roads)
2. Four-leg rural, undivided intersections with stop signs on the minor road only
3. Three-leg signalized intersections of two-lane, state-owned rural roads

In support of PennDOT's Strategic Goals:
- Leverage resources to maximize effectiveness
- Continually increase efficiency
- Continuously foster a "Safety First" culture embraced by all
- Promote continuous improvement and innovation

**Anticipated Outcome:**

Anticipated project outcomes include:

- A more consistent and accurate identification of high-priority locations (i.e., sites with promise of safety improvement) than the use of crash frequencies and crash rates.
- More efficient allocation of limited safety dollars to areas with the greatest need to continue to significantly reduce fatal and severe crashes in Pennsylvania.

**Implementation Plan:**

PennDOT is currently working towards developing PA-specific SPF's to be utilized when analyzing projects with the HSM process, per the State Transportation Innovation Council’s (STIC) initiative to integrate the Highway Safety Manual (HSM) into the project development process. This will require new policy to be developed (in progress), and employee and stakeholder training (PennDOT training coordinators are working on development of a training contract).

**Research Partner:** Pennsylvania State University  

**Principal Investigator:** Paul Jovanis  

**Project Cost:** $499,936.00