DATA COLLECTION INSTRUMENT FOR THE INTERSECTION SAFETY CHALLENGE

Intersection Safety Challenge, Phase 1B **Primary Data Challenge** instrument of data collection will be a **website submission** with the following elements:

- **Contact Information Form**. Collects contact information via form, including submitter's name, contact e-mail, organization, organization location (State).
- **Data File Upload**. Derived from an analysis of Government-provided data from an experiment in a closed course environment, submitters will upload a structured data file with the position, classification, and motion path of vulnerable road users and vehicles present in the challenge test cases. For example, the data file may be structured to identify a detected vulnerable road user at a specific time entering the intersection area, with a specific timestamp and x-y coordinate. The detected vulnerable road user position and direction of travel will be indicated by an updated row to the file each second until the road user exits the intersection. Further, the file will include meta-data around the classification of the vulnerable road user (e.g., pedestrian pushing a stroller), and a prediction of future path (time stamp and x-y coordinate) if the vulnerable road user does not exit the intersection within the timeframe of the Government-provided data.
- **Code File Upload**. Submitters upload relevant software code related to the methods used to create the data file (above) derived from the Government-provided experimental data. The code is used to validate the technical approach used by the submitter.
- **Supporting Document Upload**. Submitters must include an explanatory Word file providing other supporting technical materials related to the application of their technical approach.

Intersection Safety Challenge, Phase 1B **Open Data Challenge** instrument of data collection will be a **website submission** with the same elements discussed above. However, as described in the Supporting Statement, the scope of the Data File Upload and Code File Upload will be significantly reduced. Additionally, the Supporting Document Upload is optional for Open Data Challenge participants.