I attended a PNITDS presentation using three sensors being put into the portable configuration last fall here in Washington, D.C. Prior to the demonstration outside, they gave some results from the study which are very much like the results in section V of this report.

This PNITDS study was an extension of the work that was begun under the Guidestar NIT II testing completed previously. (SAS-I was one of the only sensors to receive “five stars” in that study). Prior to the study taking place, Guidestar and others had confirmed by moving various sensors into various geometries what the best geometry would be for each particular type of technology. When we were asked if we wanted to participate in the PNITDS, it was pointed out that the geometries that were to be explored would not necessarily be those that were favorable to the SAS-I — namely, in a position lower by at least 10 feet than we suggested was necessary. In fact, this unfavorable geometry had been confirmed by the NIT II testing at the same site. In the interest of expanding the users toolbox, we none-the-less agreed to participate in the portable application, knowing that due to the significantly lower mounting height, our technology would have a less accurate count than would be normal because “some vehicles would be run together” at low speeds during stop and go conditions. Those vehicles that were detected properly would still have an accurate speed attributed to them, but the actual count error would be greater than the 3-4% normally seen when mounted at the proper height. This is exactly what happened.

The performance results for SAS-1 aside, safety is the major concern for operations of our roadways. The point is that Guidestar wanted a simple approach for mounting non-intrusive sensors that could be fielded quickly. I applaud their approach. It is similar to that of Mr. Richard Bush in his deployment of radar detectors in the State of Virginia. We are of the opinion that any time the traffic manager can get traffic detectors out of the road bed, the better off he will be in terms of lowering life cycle cost and personnel safety.

Unfortunately, not all technologies are meant to be mounted as low as 15-20 feet above the roadway. Both camera based systems and the SAS-1, which are video and acoustic image based detection systems, are line of sight devices that must clearly “see” the vehicle being detected, so they like to be mounted higher so they can more easily differentiate one vehicle from another across multi-lane highways. Others have successfully used portable mounting schemes that put SAS-1 higher in the air and are getting very accurate results, even in heavy urban traffic. These schemes cost a bit more to implement, and cost is always a consideration, but they are very effective in preventing tampering with the device and are very quickly deployed and retrieved in the presence of heavy traffic. Safety is the primary motivator for all when deploying traffic detection devices. Again, any means of keeping work crews out of the roadway to collect traffic data is a good thing. Different technologies have to be applied differently. This study provides insight into another tool for the data collection manager to safely set up a road side counter for highway usage studies. I would only suggest a different mounting scheme if a SAS-1 is to be deployed. This has been confirmed by the PNITDS geometries.