

Traffic Counts & Traffic Data Survey

Traffic Count collection and responsibilities TESSB perspective

1. How and why do you use traffic count information? What are the primary technical uses for this information for your section/unit? Be as specific and descriptive as possible. Please also cite any state/federal requirements.

The Traffic Safety Unit (TSU) use electronic and hard (paper) copies of turning movement counts (including truck and pedestrian movements) for traffic engineering safety and operational analyses. The primary use (roughly 80%) of the counts is for traffic signal evaluations (installation, removal, timing, phasing, etc.) based on signal warrant analyses in accordance with MUTCD signal warrants. This information is ultimately used to determine roadway improvements to increase the safety and operational capacity of roads on the State Highway System (SHS) through TIP, hazard elimination, and spot safety projects. This information is also provided to signal engineers, congestion management engineers, and Division Traffic Engineers (DTEs) on a regular basis.

Traffic volume counts (AADT counts) are also used by the TSU for crash rate and critical crash rate analyses for all location crash requests including general requests by citizens, the media, municipalities, lawyers, law enforcement agencies, the Attorney General's office, and research groups. Traffic volume counts are also used for Highway Safety Improvement Program (HSIP) locations, fatal crash investigations, spot safety benefit/cost (B/C) evaluations, and safety remediation evaluations.

2. Based on Question # 1, does your section/unit collect most of your traffic count needs? Who else besides your group (i.e. Traffic Survey Group, or consultants, or others) do you rely on to provide this information? What percent (rough estimate) of total count needs are collected by you vs. these other groups?

Our unit does not directly collect traffic count (turning movement or volume) information. We rely on consultants to collect turning movement count information through the use of limited service agreements (LSAs). We rely on the Traffic Survey Group to collect traffic volume (AADT) information. With the exception of the occasional manual count that we may perform, approximately 100% of all information we use is provided either by consultants under contract, or by the Traffic Survey Group.

3. In what format do you currently receive traffic count information from the Traffic Survey Group? What is the standard turnaround time for your requests? What improvements would you suggest for the delivery of this information to you (specifically ideas that speed up the process, leverage technology, make your work more efficient, etc.)?

We do not make any requests to the Traffic Survey Group for turning movement counts. It is my understanding that, from past experience, they can not provide the information we need in the time frame in which we need it (generally two weeks). For traffic volume (AADT) information, we utilize the electronic AADT maps located on the NCDOT web site.

We do not have any suggestions for using the Traffic Survey Group for turning movement counts unless they are provided sufficient resources to travel around the state, collect the counts, and provide us with the information within one or two weeks of the request. Traffic volume (AADT) counts are provided on the Information, Mapping, and Graphics (IMG) web site in a time frame sufficient for our needs.

4. In what format do you currently receive traffic count information from the consultants? What is the standard turnaround time for your requests? What improvements would you suggest for the delivery of this information to you (specifically ideas that speed up the process, leverage technology, make your work more efficient, etc.)?

We receive turning movement count information in both electronic and hard (paper) format. The electronic format consists of pictures (JPG files), turning movement count information (PPD format), and the entire output package (PDF format). The turnaround time for our request is generally one to two weeks, depending on the request and the location.

In order to speed up response time and reduce the use of internal resources for turning movement counts, we are currently in the process of phasing out the hard (paper) copies and loading electronic copies directly to our web site (<http://www.ncdot.org/doh/preconstruct/traffic/safety/TSI/>) for distribution and availability to our customers (citizens, divisions, congestion management, signals, etc.). In this way, customers will have direct access to pictures and count documentation (JPG and PDF files), and can download the raw data (PPD files) for evaluation in the PC Warrants software.

5. What ideas do you have for improving the way traffic count information can be accessed by internal and external customers? Should counts collected by the various DOT units and consultants be captured and archived in a single database? What are the pros/cons to this idea? What amount of savings (rough estimate) of staff time and financial resources could be achieved?

As stated before, we are moving forward with placing turning movement count information onto our web site to make it more accessible to our customers, so no cost savings would be realized from also including this information within a centralized database. However, any traffic count information (turning movement counts or traffic volumes) included in a database should meet the following criteria: (1) it should be on the internet

(not the portal) so non-NCDOT customers can access it, and (2) it should be in a format useable by customers (JPG, PDF, and PPD formats).

6. What is our section/unit spending on consultant services per year? Could any of this work be done with additional staff at the Division level, in Traffic Surveys or in another unit?

The six limited service agreements (LSAs) currently in effect by our unit with consultants are worth a maximum total of \$1,000,000 over a two-year period (through September 30, 2009). We have completed internal reviews of hiring staff to provide this service (including salary, labor rate, per diem, travel expenses, hardware, software, etc.) and have concluded that it is just as cost effective to hire consultants.

7. What are your suggestions (short and long term) for how traffic counts could be more efficiently or strategically collected? Do you think we need more permanent devices or more weigh-in-motion stations or should NCDOT move towards using portable devices?

We have been through this, internally, from many perspectives. Our most recent limited service agreements (LSAs) for turning movement counts have expanded to include 8-hour, 12-hour, and 16-hour options (instead of exclusively requesting 16-hour counts), regional coverage (instead of statewide coverage) to reduce travel costs and, therefore, payroll and per diem expenses, the removal of a professional engineering services requirement (to allow non-PEF consultants to compete), and the opportunity for smaller firms (MBE, WBE, and DBE) to compete.

8. Do you have any other suggestions/improvements regarding the collection, delivery and use of traffic count information for NCDOT?

The Traffic Surveys Group should be provided the opportunity to purchase advanced equipment for the collection of traffic volume (AADT) information so that they may collect additional important information including speed data and vehicle type data.