

Coverage Count Program

There were 3,286 roadway segments or links on the Road Inventory network of DelDOT in 2002. On those 74 links where the ATR stations were operational, accurate hour by hour traffic volume data were continuously recorded throughout the year, processed, and analyzed. For the remaining 3,212 links, the annual traffic data was estimated on the basis of a short-term traffic count or coverage count program along with the statistical information acquired from the permanent ATR stations.

There are approximately 1,600 links of the Road Inventory network on which the AADT exceeds 1,000 vehicles per day. DelDOT is using a 3-year cycle coverage count program wherein the traffic count is performed annually at over 500 sites continuously for a period of one week at each site to complete the coverage count on all links carrying over 1,000 vehicles per day. Sporadic short-term traffic counts are conducted on the remaining highway links over 1,600, each of which carries under 1,000 vehicles per day. In 2002, there were over 500 coverage counts on the highway links carrying over 1,000 vehicles per day, and approximately 300 such counts of one week duration at each site were conducted on less traveled roads. Pneumatic rubber hoses, which count axles and not vehicles, are employed in the coverage count program. Since the number of axles in motor vehicles are variable, appropriate Axle Correction Factors (ACF) are applied to convert the counted axles into the number of vehicles. The Axle Correction Factors are derived from the vehicle classification program, both short-term and at permanent sites.

Furthermore, the ADT over a period of one week is obtained in the coverage count program. In order to estimate the AADT, there is a need for multiplying Seasonal Adjustment Factors (SAF), because the weekly traffic varies over the span of a year.

$$\text{Thus, ADT} = \text{Coverage Count} * \text{ACF}$$

$$\text{And, AADT} = \text{ADT} * \text{SAF}$$

The SAF in this case pertains to the particular month of the year in which the coverage count is conducted. Based on the recorded data retrieved from ATR stations, the SAF for each of the 12 months of the year, computed for all Traffic Pattern Groups, is calculated and stored in the traffic monitoring database. The applicable SAF was used in the determination of AADT at all of the 800 + coverage count sites for 2002. For those highway links of the Road Inventory network not counted in 2002, the AADT data were obtained by multiplying previous year's AADT with the applicable Growth Factor.