



## Florida Department of Transportation Research

Alternatives for Estimating Seasonal Factors on Rural and Urban Roads in Florida, Phase II  
BD015-17

One of the most important measures used by FDOT planners is Annual Average Daily Traffic (AADT), which indicates how busy a road is. Planners use this information to help prioritize which facilities should be built or enhanced. AADT usually is estimated by multiplying a short-duration traffic count by a seasonal adjustment factor. Seasonal factors adjust for fluctuations in traffic patterns by time of year (e.g., traffic volume on a roadway near a beach may be higher during the summer months). Seasonal factors are developed using data collected by continuous traffic counters.

Usually, seasonal factors developed from several continuous counters are grouped together into a factor category. Grouping the factors helps to stabilize them by mitigating the influence of atypical traffic patterns caused by malfunctioning equipment or nonrecurring events such as wildfires or sporting events.

Researchers studied (1) criteria that could be used to group continuous counters into factor categories and (2) criteria needed to determine the factor category that should be used to adjust short-duration counts collected at a particular portable traffic monitoring site. Better information about local seasonal variables would improve the accuracy of portable site AADT calculations.

In a previous phase of study (BD015-03) limited to southeastern and northern parts of Florida, the researchers found that the specific variables are different in urban and rural areas and in different climate zones. They developed a method for applying the variables to portable site data in order to arrive at a valid local AADT.

In this phase of study, the researchers investigated whether the developed method could be applied statewide. They divided the



*Permanent traffic counters provide data that includes seasonal traffic variables .*

state into three climate zones: north, central, and south. Each zone was divided into urban and rural traffic reporting areas. The researchers identified which local variables impact traffic flow in each area. They also developed separate urban and rural traffic flow analysis models for each zone. These models adjust short-term data to account for the impact of seasonal variables.

To test the models, the researchers modeled AADTs for a particular location and then developed AADTs for the same location using data obtained from permanent and portable counters. The error rate for the modeled AADT, compared to the other AADTs, was about 5% overall. The models have potential to serve as the basis for software that could help transportation analysts improve the accuracy of AADT estimations, and thereby contribute to improving the overall efficiency of the transportation system in Florida.

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For more information, visit <http://dot.state.fl.us/research-center>.