**Introduction**

Traffic Monitoring Program: Federal funds for highway transportation allocated to states based on highway usage. The key parameter for determining highway usage is the annual average daily traffic (AADT).

- **Objective 1:** Develop a procedure, rooted in statistics, for identifying and deleting outlier daily volume records before the computation of AADT.

- **Objective 2:** Investigate two alternative counter-duration-counter-cycle schemes to determine which yields more accurate estimates of the AADT. One scheme is employed by Tennessee, and the other is recommended by FHWA.

**Data and Methodology**

**Data Required and Available**

- AADT for the state of Tennessee for years 2003 to 2015.
- Monthly volumes to estimate AADT for each state of the year.
- Seasonal trends.
- Annual growth factors.

**Calculation of AADT and SFs**

- State Highway and Transportation Officials (AASHTO) method, or the average of averages method.

**SPTC Program**

- Small number of road sections in each county.
- Traffic on these sections monitored continuously all year round.
- Traffic volumes used to determine AADTs for development of:
  - Seasonal factors (SFs)
  - Annual growth factors (AGFs)

**Pervasive Traffic Monitoring (PTM)**

- Conducted on all major traffic routes in the state.
- Counts started for a short duration:
  - Typically 48 hours
  - 63 PTC stations
  - 365 days
- SPTC volumes converted to AADT using UFH data.

**Objective 2**

- Some 24-hour cycle periods.
- 15.68% of volumes.
- 2.25% of volumes.

**Conclusions/Recommendations**

- Use of simple average or AASHTO method for calculating AADT.
- Associated month and day.
- Use 24-hour cycle period.

**Future Work**

- Investigate whether the method of averaging multi-year SFs will produce more accurate estimates of AADT.
- Use of simple average or AASHTO method for calculating AADT when data is missing.
- Micro-level analysis of outlier procedure using hourly data to identify atypical volumes before the deletion of daily volumes.

**References**

- GDOT. 2013. Traffic Monitoring Program. Office of Transportation Data, Georgia DOT.
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