

Standard Practice for Tru-Traffic Travel Time Runs

Signal System Timing and Operations

The North Carolina Department of Transportation *Standard Practice for Tru-Traffic Travel Time Runs* for the evaluation of traffic signal system timing plans is as follows:

Software Requirements

- *Tru-Traffic* Version 10 with a GPS receiver is the only acceptable data collection method for this Standard Practice.

Study Period

- Typically, the study period for travel runs are the peak traffic periods, by direction.
- Study periods shall reflect the time periods of the coordination plans.
- The study period(s) must be approved by the Department if they do not reflect the operational periods of the coordination plans.

Data Collection Standards

- Travel time runs should be representative of typical trips through the system. Runs skewed by bus stops, trains, crashes, turning traffic, or other obstructions should be discarded.
- Runs should not be performed during the following conditions, (unless the study period has been specifically defined for that condition):
 - Lane closure or active work zone
 - Adverse weather (rain, snow, etc.)
 - On a Monday or Friday
 - During special events
- *Tru-Traffic* must be synced with the appropriate timing plan before beginning run (See Sync Clocks)
- Driving style may be either "floating car" or "maximum car" method. (Reference TRAVEL TIME DATA COLLECTION HANDBOOK Report No. FHWA-PL-98-035)

Number of Runs

- Six (6) or more travel runs per direction should be completed for each study period. An exception to this minimum may be granted by the Department.
- Multiple days may be required to complete the minimum number of runs, depending on the length of the corridor.
- Distribute runs throughout the bandwidths.

Sync Clocks

- Sync *Tru-Traffic* file to timing plan at the beginning of red interval of the coordinated phase when there's a call on the subsequent phase.
- Watch one cycle to confirm that the file is synced correctly with the timing plan before beginning travel run.

Reporting (pulled from SOW)

- Generate reports (Travel Time, Delay, Stops, Speed and LOS) that show the current operational status of the signal system
- *Tru-Traffic Travel Time & Delay Report* that includes:
 - Cumulative summaries for each separate direction of coordination and a cumulative summary of both directions together (i.e. "*Cumulative Summary of all runs, either direction through the artery*") for each/all of the timing plans
 - All trip logs used to generate the reports
 - Metrics
 - *Cumulative Travel Time (CTT)*
 - *Cumulative Delay (CD)*
 - *Cumulative Stopped Delay (CStopD)*
 - *Cumulative Actual Average Speed (CAS)*
 - *Cumulative Number of Stops in Run (CStops)*
 - *Levels of Service Delay (LOSDelay)*
 - *Cumulative Urban Street LOS (CSpeedLOS)*