

## Signalized Intersection “Raw Data” Required from Public Works or DOT

### Traffic Engineering Data

1. **Traffic Signed & Sealed Signal Plans of Record** for each intersection effective from the red light camera program began to the current date, and the set of signal plans that were in effect prior to the signal plans in effect when the red light camera program began. There may be many traffic signal plans for a given intersection. Each Traffic Signal Plan contains a drawing of the intersection, including speed and grade on all approaches to the intersection, as well as phase diagrams and timing charts, the latter containing the yellow change and all-red clearance intervals. The signal plan also contains the signature and seal of the licensed professional engineer responsible for the intersection plan.
2. **A copy of logbook from the traffic controller box at each intersection.** The log may be kept online depending on the municipality. This logbook indicates the time when field engineers put the traffic signal plan into effect on the ground. The field engineers may implement several changes at an intersection at once. One needs to properly associate engineering changes to red light incursions.
  - a. They may increase/decrease the yellow durations.
  - b. They may increase/decrease all-red clearance intervals.
  - c. They may increase/decrease max green.
  - d. They may increase/decrease gap outs.
  - e. They may install detection loops at or near the critical distance.
  - f. They may replace the signal heads with signals which include flashing yellow arrows.
  - g. They may change protected-only left turn phases to protected/permitted or vice-versa.
  - h. There may be a change of speed limit.
3. **Clearance/Time Sheets.** The MUTCD (4D.26 03) requires engineers to set the yellow change intervals to values *determined* by engineering practices. For every signal plan, there must exist a clearance time sheet demonstrating how the engineer computed the yellow change and red clearance intervals for each phase. Because the sheet is an engineering specification, the sheet must be sealed and signed by the traffic engineer who calculated the values. Make sure that all the yellow durations for all the phases have been computed in the timesheet.

For jurisdictions that do not include yellow change intervals in seconds in a Timing Chart on the signal plan itself, the clearance timing sheets become mandatory. For all jurisdictions, one cannot change the yellow change intervals within the lifetime of the traffic signal plan--MUTCD 4D.26 (09)—*standard*.

## Red-Light Camera Data Required from Jurisdiction

### Red-Light Camera Data

1. **The red-light camera installation plan** for each red-light camera intersection, signed, sealed and dated by a professional engineer licensed in the State where the red-light cameras are to be installed.
2. **A spreadsheet (or CSV file) of red-light camera violations**, NOT A PDF, containing a table containing one row per red light camera citation for the entire period the camera has been running. Each spreadsheet file may contain many sheets. Each sheet represents a highway *approach*. Each sheet contains a table containing hundreds of thousands of rows, each row being one instance of a red light running violation.

The table must have an approach ID associated with it identifying the intersection and direction (NB, WB, EB, SB) the cameras face. Each table must contains these columns:

- a. **Time of violation including date and time (YYYY-MM-DD HH:mm:SS)**
  - b. **Time into red**
  - c. **Yellow Change Interval (if available. Some companies, like ATS and ACS, have this data.)**
  - d. **Lane number (identifies, left, through or right lanes)**
  - e. **Any other data which would identify a right-turning driver.**
  - f. **Speed of vehicle as detected by camera**
  - g. **Speed limit of road**
  - h. **Status of Citation (e.g., PAID, DISMISSED, NEVER PAID, SENT TO COLLECTIONS, etc.)**
  - i. **Zip Code of Owner/Driver of Car (optional)**
3. **Red Light Camera Delay (aka, grace period).** The time between the light turning red and the activation of the red-light camera detection loop. For each approach,
    - a. The red-light camera delay
    - b. The period of time when the delay was in effect
    - c. The methodology used to determine the delay
    - d. The name of person who determined the delay. If the delay was determined by a licensed professional engineer, then disclose the specification sheet and the engineer's certification.
  4. **The Red-Light Camera Threshold Speed in the right-turn lane.** Vehicles travelling faster than the threshold speed activate the red-light camera for right-turning vehicles. For each approach:
    - a. The threshold speed
    - b. The period of time when the threshold was in effect.