# Traffic Count Methodology

## Methodology

The data for this report is collected and analyzed by the City of Tampa Transportation Division using mechanical counters that record the distribution of traffic by time of day, typically on an average workday. The data is summarized to show the Average Daily Traffic (ADT) and average weekday characteristic by traffic station.

## Data Uses

The traffic count information is extremely important to traffic planning, design, and operations. This data is regularly requested by developers, consultants, real estate agents, home owner associations, speculators, government agencies, and other citizens.

# Definition of Terms

## Average Daily Traffic

The total volume passing a point or segment of a roadway facility, in both directions, during a 24-hour period.  It is commonly obtained during a given time period, in whole days greater than one day and less than one year, divided by the number of days in that time period. Average Daily Traffic is commonly referred to as A.D.T.

## D or Directional Distribution Factor

This factor accounts for the directional distribution of traffic. Values generally range from .54 to .59 and are used to convert average daily traffic to directional peak hour traffic. Table 1 illustrates how the D-factor is calculated:

ESTIMATED D

| MEASURED DAY | PEAK HOUR | PEAK HOUR VOLUME | PREDOMINATE DIRECTION PEAK VOLUME | OPPOSITE DIRECTION PEAK VOLUME | D FACTOR |
|---|---|---|---|---|---|
| 1/18 | 4-5 PM | 1600 | 960 | 640 | 0.600 |
| 1/19 | 5-6 PM | 1900 | 1026 | 874 | 0.540 |
| 1/20 | 5-6 PM | 2000 | 1130 | 870 | 0.565 |
| SUM | | 5500 | 3116 | 2384 | 1.703 |
| AVERAGE | | 1833 | 1039 | 795 | 0.568 |
| ESTIMATED D FACTOR = 0.568 | | | | | |

TABLE 1

## K or Design Hour Factor

The ratio of design hour traffic to average annual daily traffic. The K-100 factor allows the conversion from a peak hour volume to a daily volume. Within urbanized areas the K- factor for the 100th hour is generally around 0.09. Table 2 is an example of a K-100 calculation:

CALCULATING K

| MEASURED DAY | PEAK HOUR | PEAK HOUR VOLUME | DAILY VOLUME | PEAK TO DAILY RATIO |
|---|---|---|---|---|
| 1/18 | 4-5 PM | 1600 | 20000 | .080 |
| 1/19 | 5-6 PM | 1900 | 25000 | .076 |

| MEASURED DAY | PEAK HOUR | PEAK HOUR VOLUME | DAILY VOLUME | PEAK TO DAILY RATIO |
|---|---|---|---|---|
| 1/20 | 5-6 PM | 2000 | 22000 | .091 |
| AVERAGE | | | 22333 | .082 |
| PEAK DAILY VOLUME/ AVEARGE DAILY VOLUME = 25000 / 22333 = 1.119 | | | | |
| **ESTIMATED K FACTOR = .082 X 1.119 = .092** | | | | |

TABLE 2

## P.M. Peak Directional Peak

The traffic volume for the peak hour in the predominant direction of flow, in vehicles per hour. PM DIR PEAK = (ADT) (K-100) (D-FACTOR)