ORIGINATOR Director, Bureau of Highway Operations		2-2-1
CHAPTER 2	Signal Investigation Study	
SECTION 2	Data Collection	
SUBJECT 1	Vehicular/Pedestrian Volumes	

Vehicular traffic counts and pedestrian volumes **shall** include the periods of the average day when signal control is expected to provide the greatest benefit. The traffic counts **shall** be at least 8 hours in duration; however, 16-hour counts are recommended. The traffic counts **shall** contain the greatest percentage of 24-hour traffic, and *should* include 15-minute counts during the A.M. and P.M. peak hour to determine the peak-hour factor (PHF). Typical hourly volume counts are collected from 6:00AM to 6:00PM, however, if volumes remain steady after 6:00PM, counts *should* continue until volumes decrease significantly.

When vehicular volume data is unobtainable during the time when signals *may* be warranted, vehicular volumes *may* be factored to represent peak periods. Traffic volume factors are different in various regions of the state. These factors (seasonal, monthly, daily, or hourly) *may* be available from WisDOT Planning Section in some cases. When volume factors are used, they must be supported and fully explained as to why they are being used in lieu of actual turning movement counts.

Vehicular volume counts **shall** be conducted for each traffic movement by approach. Vehicles *may* be classified by type: heavy trucks, passenger cars, and buses. Refer to Figure 1 for an example of the “Vehicle Volume Summary” form.

When pedestrian volumes are significant, the pedestrian volume counts on each crosswalk **shall** be recorded during the same periods as the vehicular volume counts or during hours of highest pedestrian volume. Bicyclists using pedestrian crosswalks *should* be counted as pedestrians and bicyclists using the roadway *should* be counted as vehicles.

A summary of the vehicle and/or pedestrian count information *should* be prepared, using the Department form DT 1902 (see Figure 2) which can be obtained by contacting the Regional traffic unit or an equivalent summary (i.e., volume counting software). This form and the actual counts summarized hourly volumes *should* be submitted with the

signal investigation study. In some cases it *may* be necessary to break the hourly volumes down into 15-minute intervals, although this is not a requirement.

For proposed developments, projected traffic volumes can be used to determine whether signals are warranted. Volume projection methods *should* be documented, including the trip generation rates and source. Projected traffic volumes *should* be added to existing traffic counts for the location, if traffic exists. The analysis of projected traffic volumes must follow all criteria as stated in this manual.

LOCATION :

VEHICLE VOLUME SUMMARY

% right turns used for analysis

N W E S

COUNTY : **DATE :**

WEATHER : **BY :**

○ All Vehicles
○ Trucks and Buses Only
○ Pedestrians

○ Urban ○ Rural

○ Major Street ☐ Two or more thru lanes per approach

○ Major Street ☐ Two or more thru lanes per approach

NAME OF STREETS	FROM NORTH				FROM SOUTH				FROM EAST				FROM WEST				TOTAL		
TIME	R	A	L	TOT	R	A	L	TOT	R	A	L	TOT	R	A	L	TOT	N-S	E-W	ALL
MIDNITE - 1 A.M																			
1 A.M. - 2 A.M.																			
2 A.M. - 3 A.M.																			
3 A.M. - 4 A.M.																			
4 A.M. - 5 A.M.																			
5 A.M. - 6 A.M.																			
6 A.M. - 7 A.M.																			
7 A.M. - 8 A.M.																			
8 A.M. - 9 A.M.																			
9 A.M. - 10 A.M.																			
10 A.M. - 11 A.M.																			
11 A.M. - NOON																			
NOON - 1 P.M.																			
1 P.M. - 2 P.M.																			
2 P.M. - 3 P.M.																			
3 P.M. - 4 P.M.																			
4 P.M. - 5 P.M.																			
5 P.M. - 6 P.M.																			
6 P.M. - 7 P.M.																			
7 P.M. - 8 P.M.																			
8 P.M. - 9 P.M.																			
9 P.M. - 10 P.M.																			
10 P.M. - 11 P.M.																			
11 P.M. - MIDNITE																			
TOTAL																			
Approach																			
TOTAL																			

Figure 1. Vehicle Volume Summary

TRAFFIC SURVEY VEHICLE VOLUME COUNT
GRAPHIC SUMMARY SHEET
DT1902 2002 (Replaces ET704)

Wisconsin Department of Transportation

Date	Day	Time To	Sheet Of
District	County	Rural	City
Intersection		And	
Weather	Road Condition		Observers

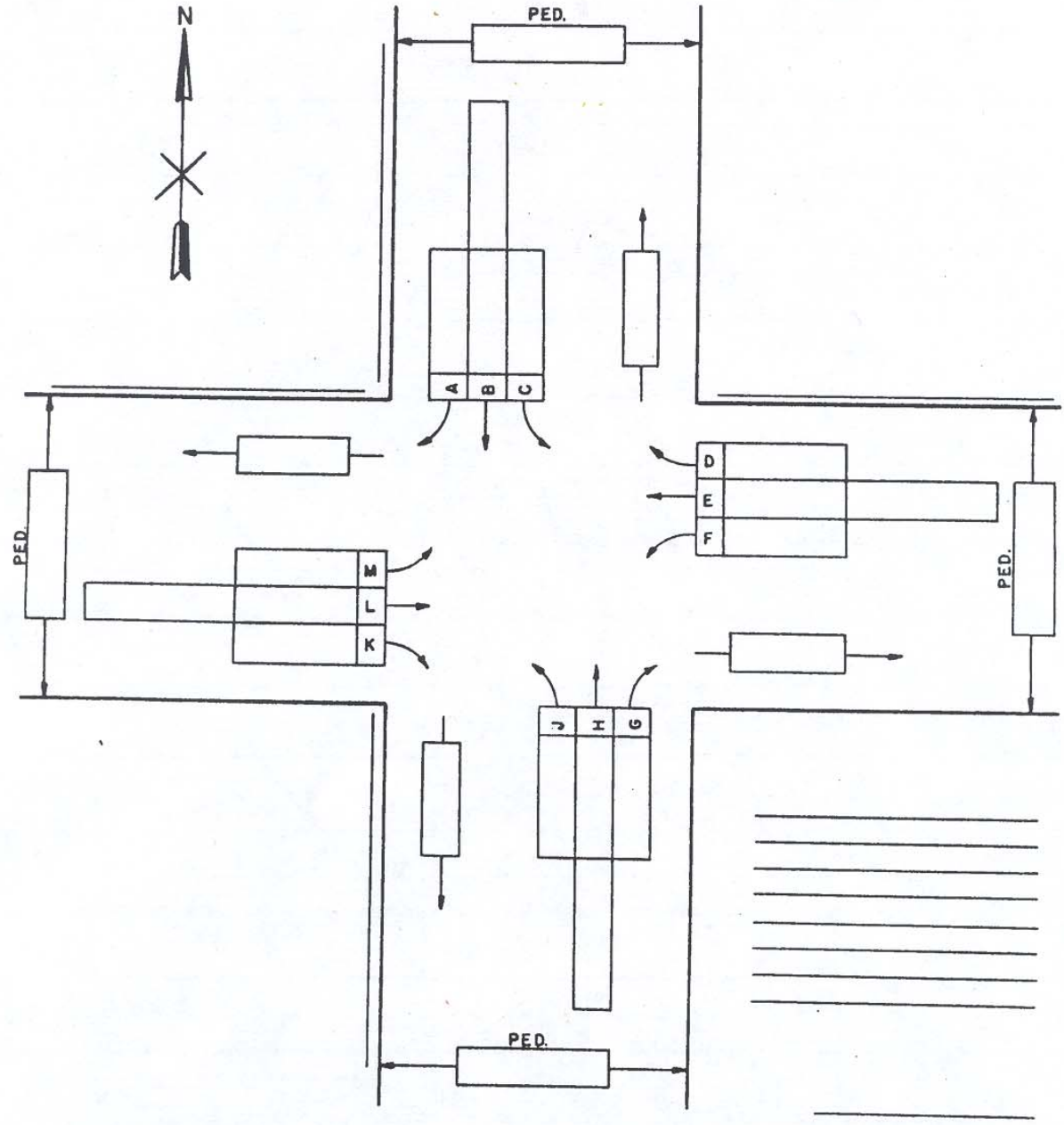

Figure 2. Form DT1902