LAPURAN PROJEK TAHUN AKHIR

KURSUS DIPLOMA LANJUTAN KEJURUTERAAN AWAM

KAJIAN KEJURUTERAAN

INSTITUT TEKNOLOGI MARA

SHAH ALAM

TRAFFIC FLOW CHARACTERISTICS ALONG

FEDERAL HIGHWAY

(KUALA LUMPUR — KLANG)

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SYNOPSIS

In our project, we were to study the pattern and traffic flow characteristics of the Federal Highway, Kuala Lumpur - Klang. At present, its volume seems to have been exceeded the design limit tremendously and recorded data shows that it has the greatest traffic volumes per day compared to other highways in Malaysia which results in frequent traffic jam alongwith.

The main objective of the project is to collect travel flow data of traffic volume and their characteristic-pattern by locating some station-survey along the route to forecast travel demands, analyse road capacity and to suggest plans for future development.

Traffic flow at a given location depends on numerous factors peculiar to that site. As would be expected, it varies by hours of the day, days of the week, and months of the year. Likewise, its character changes; for example the percentage and kind of lorries is a function both time of the day and the contributing area. The number of vehicles passing a given point during a specified period of time, or the number of vehicles that pass over a given section of a lane or a roadway during a specified period of time is the volume measured. The total volume 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, commonly abbreviated as ADT. For the 'average annual daily traffic' commonly called as AADT, as volume may be stated on an hourly basis, such as the 'hour observed traffic volume' or 'estimated thirtieth-hour volume', which is commonly used.

But, we could not obtain the actual data since it is difficult for us to do the survey throughout the year for obtaining the AADT unless with the informations collected from the Highway Planning Unit (HPU), Ministry of Work Malaysia. In fact, they also did not conduct the survey daily throughout the year, April and October only.

The number of vehicles occupying a unit length of a moving lane or lanes of a roadway at a given instant, usually expressed in vehicles per kilometre is termed as concentration. The relationship between the factors; when volume is expressed in vehicles per hour, is $Q = KS$. In fact, the highest traffic concentrations occur when vehicles are practically at a stand-still, in which case the traffic volume would approach zero. For any given volume, the efficiency of flow can be determined by observing the concentration. The smaller the concentration, the quicker the movement of traffic, and the greater the efficiency of flow. It is goodwise to have the hourly pattern of the characteristic traffic flow in order to forecast the capacity of the highway of a length period of a week, and to record the types of vehicles for futher improvements.