ABSTRAK

Perlintasan Pasar Alai adalah salah satu lintasan di mana dua jenis transportasi bertemu yakni jalan raya dan jalur rel. Pertemuan keduanya ini terletak di Jalan KH.Ahmad Dahlan Kota Padang. Di mana jalan ini berfungsi sebagai jalan masuk dan keluar dari Pasar Alai, Simpang Tiga Jati, Ampang dan Gunung Pangilun. Pusat perdagangan, dan tempat yang ramai. Selain itu, mobilitas arus lalu lintas kendaraan yang tinggi akan menyebabkan antrian Panjang dan tundaan kendaraan yang berpotensi menyebabkan kecelakaan lalu lintas.Dari perhitungan Panjang antrian untuk arah Timur – Barat survei selama 3 hari pengamatan didapat panjang antrian terpanjang di hari Senin waktu 16:19 sore sepanjang 85,83 meter dan sebanyak 48 kendaraan, untuk arah Barat-Timur panjang antrian maksimum terjadi pada hari Senin pukul 17:14 sepanjang 129,37 meter dan sejumlah 115 kendaraan, Rata-rata waktu menunggu terpanjang akibat penutupan pintu perlintasan kereta api adalah 64,512 detik per kendaraan, Sedangkan yang dari arah Barat – Timur yang terbesar adalah selama 69,70 detik/mobilitas. Akibat perlintasan rel kereta api arah Timur-Barat, pada hari Senin terjadi tingkat tunda tertinggi selama 117 detik.kendaraan, arah Barat - Timur terjadi di hari Senin selama 146 detik per kendaraan. Durasi penutupan palang pintu rata-rata perlintasan kereta api selama pengamatan 3 hari adalah selama 68,28 detik, Hasil koefisien Metode regresi linear digunakan untuk menghitung korelasi hubungan Volume terhadap panjang antrian dan tundaan yang terjadi pada perlintasan   Aplikasi modelnya untuk Tundaan terhadap Volume adalah **Y_1 = 40,688 + 0,817X**. Aplikasi modelnya untuk hubungan Panjang antrian terhadap Volume adalah **Y_2 = -7,289 + 1,582X**. Volume (X) memiliki hubungan positif yang mana semakin besar volume maka panjang antrian (Y_1) dan lama tundaan (Y_2)dalam semakin besar.

Kata Kunci: *Tundaan, Panjang Antrian, Penutupan Perlintasan Kereta Api*

ABSTRACT

Pasar Alai crossing is one of the routes where two types of transportation meet, namely the road and the rail line. The meeting between the two is located on Jalan KH.Ahmad Dahlan, Padang City. Where this road functions as an entry and exit route from Alai Market, Simpang Tiga Jati, Ampang and Mount Pangilun. Trade center, and bustling place. Apart from that, the high mobility of vehicle traffic flow will cause long queues and vehicle delays which have the potential to cause traffic accidents. From the calculation of the queue length for the East - West direction of the survey during the 3 days of observation, it was found that the longest queue length was on Monday at 16:19 afternoon. 85.83 meters long and 48 vehicles, for the West-East direction the maximum queue length occurred on Monday at 17:14 with a length of 129.37 meters and a total of 115 vehicles. The longest average waiting time due to the closure of railway crossing gates was 64,512 seconds per vehicle, while from the West – East direction the largest is 69.70 seconds/mobility. As a result of the railway crossing in the East-West direction, on Monday there was the highest level of delay for 117 seconds. Vehicles, in the West-East direction, occurred on Monday for 146 seconds per vehicle. The average duration of closing the gate at a railway crossing during the 3 days of observation was 68.28 seconds. The coefficient results of the linear regression method were used to calculate the correlation between Volume and queue length and delays that occurred at the crossing. The model application for Delay to Volume is **Y1 = 40.688 + 0.817X**. The model application for the relationship between queue length and volume is **Y2 = -7.289 + 1.582X**. Volume (X) has a positive relationship, where the greater the volume, the greater the queue length (Y1) and delay time (Y2).

Keywords: Delays, Queue Length, Closure of Railway Crossings