INTISARI

Jumlah kecelakaan di Indonesia per tahunnya meningkat pesat dari tahun 2007 dengan rata-rata 136 kejadian per hari, hingga menjadi 323 kejadian per harinya pada tahun 2012. Maka dari itu Program Dekade Aksi Keselamatan Jalan disusun dengan salah satu strateginya yaitu menyelenggarakan keselamatan jalan menggunakan pendekatan efisiensi biaya melalui tindakan kuratif dan preventif. Penelitian ini bertujuan untuk menganalisis potensi kecelakaan kemudian diusulkan pencegahannya dengan menyempurnakan fasilitas perlengkapan jalan pada ruas Jalan Tol Cikopo-Palimanan (Cipali), Jawa Barat.

Analisis potensi kecelakaan dilakukan dengan menggunakan data teknis jalan, bangunan fasilitas tol, fasilitas perlengkapan jalan, kecepatan operasional kendaraan, kondisi geometrik jalan dan lingkungan, serta kecelakaan lalu lintas pada ruas Jalan Tol Cipali. Kecepatan kendaraan diperoleh dengan metode *running speed* kemudian dianalisis berdasarkan nilai *central tendency*. Pada area tertentu, batas kecepatan maksimum diturunkan kemudian panjang peralihan kecepatan disesuaikan dengan menggunakan prinsip perhitungan kinematika gerak.

Hasil analisis menunjukkan bahwa kendaraan bus dan truk dapat mengganggu arus lalu lintas karena kecepatan reratanya sekitar 60 km/jam. Potensi kecelakaan muncul pada: (a) jalan menikung; (b) jalan menanjak; (c) area *diverging*/pemisahan jalan; (d) area *merging*/penggabungan jalan; (e) area disekitar tempat istirahat; (f) area disekitar simpang susun; (g) area disekitar jembatan *overpass* untuk kendaraan; (h) area disekitar jembatan sungai dengan elevasi yang tinggi; (i) sepanjang 1 km sebelum dan sesudah gerbang tol; (j) area pelebaran; serta (k) area *u-turn*. Terdapat 10 lokasi yang diprioritaskan dalam penurunan batas kecepatan maksimum menjadi 80 km/jam dan 60 km/jam dengan panjang peralihan minimum berturut-turut 110 meter dan 87 meter. Usulan tersebut diiringi dengan menambahkan fasilitas perlengkapan jalan berupa rambu-rambu lalu lintas, *rumble strips*, *speed camera*, dan *warning light*.

Kata kunci: Jalan Tol Cikopo-Palimanan (Cipali), Potensi Kecelakaan, Pencegahan Kecelakaan, Fasilitas Perlengkapan Jalan.

ABSTRACT

The number of road accidents in Indonesia increased rapidly each year, on average 136 crashes a day in 2007 up to 323 crashes a day in 2012. To solve that problem, the Decade of Action for Road Safety is arranged by government and one of the strategies is organizing road safety using cost efficiency approach through a curative and preventive action. This study aims to analyze the potential crash and to recommend its prevention in the use of road signs and markings at Cikopo-Palimanan (Cipali) Toll Road, West Java.

The analysis of potential crash was done by using the data of road specifications, toll facilities, road signs, road markings, vehicle operating speed, road alignment, environmental conditions, and also road accident at Cipali Toll Road. The vehicle speed was obtained by using running speed method and then analyzed by the value of central tendency. At the certain area, the speed limit was lowered and the trasition length of speed was adjusted by using kinematic equations.

The results showed that the combined mean speed of bus and truck is about 60 kph which could disrupt traffic flow. Frequently, the potential crash appeared on: (a) road curve; (b) uphill road; (c) diverging area; (d) merging area; (e) around rest area; (f) around interchange; (g) around vehicle overpass; (h) around high level bridge; (i) along 1 km around gate toll; (j) widening lane area; (k) u-turn area. It has been chosen 10 locations which were prioritized in reducing speed limit to 80 kph and 60 kph with the minimum transition length were 110 m and 87 m, respectively. These recommendations were accompanied by adding more road signs and road markings such as rumble strips, speed camera, and warning light.

Keywords: Cikopo-Palimanan (Cipali) Toll Road, Potential Crash, Road Accident Prevention, Road Signs and Road Markings.