

Chapter 5

Conclusions

Pedestrian fatalities in Sri Lanka account for 40 % of all road deaths. The majority of the victims is in their prime age of 25 to 35 years. The main cause of pedestrian accidents is identified as the absence of separate facilities to segregate the pedestrians from the motorists. Drivers pay only scant attention to the right of pedestrians to use the road even at legal crossing locations designated for pedestrians. However, compared to many other developing countries, the response of Sri Lankan drivers at pedestrian crossings is better. It is possible to improve this situation by driver training and education as well as by enforcement, but significant results can be achieved only in the long term.

In order to achieve a considerable reduction of accidents in the short term, it will be necessary to implement physical engineering measures aimed at separating the pedestrians from the motorists. The road safety secretariat should consider allocating more resources for this purpose. Traffic accidents in the western province account for 66 % of all traffic accidents in Sri Lanka. Therefore, attention should be paid to introduce safety measures in the Western province, particularly in Colombo district as a matter of priority.

It may be necessary to make meaningful changes in investment policies in the Transport and Highways sector if the road safety problem is to be tackled effectively. In view of the limited financial resources available, low priority may have to be given for new construction of highways for a period of about three years, and divert adequate resources towards road safety. An implementation plan could be drawn up giving priority to construction of and maintenance of facilities for pedestrians and pedal cyclists such as foot walks and pedestrian – bicycle ways. These facilities should include providing guard rails and kerbs, paving shoulders, construction of raised zebra crossings, installation of traffic signals at pedestrian crossings and other devices to segregate the pedestrian from the motorist.

A meaningful road safety programme implemented paying attention to Transport Systems Management, could not only result in reducing accidents but also will increase the capacities of roads relieving congestion among other beneficial effects.

According to Road User Charges Study done by the Transport Studies and Planning Committee in 1992, only 3% to 4% of the funds for road improvement projects has been spent to provide facilities for the vulnerable road users. The major component of cost in all foreign funded road rehabilitation projects is for the asphalt surfacing. This trend needs to be reversed. A low cost surfacing such as surface dressing will leave adequate funds to improve road shoulders to enable them to be used by pedestrians and pedal cyclists. Appraisal of road rehabilitation schemes under foreign funded projects should include saving in accident costs as benefits and the models used for project appraisal must be calibrated to accept low levels for road roughness inputs in computing vehicle operating cost savings so that low cost surface constructions give higher returns.

It is observed that on all roads rehabilitated under foreign funded projects, road shoulders have been left as gravel surfaces that have eroded to form gullies making them unsuitable for walking. The right of way has thus been wasted or left unused only to be encroached for unauthorised purposes. It is possible to provide pedestrian - bicycle ways on a two-lane road with a right of way of 15 metres without resorting to demolition of any legally constructed building.

It is advisable to utilise the full width of 7.5 metres from the centre of the road up to the building limit on two lane roads for the road surface with mountable kerbs with intermittent openings for drainage, to separate the carriageway from pedestrian – bicycle lane. Two 3.5 metres wide carriageways for motor vehicles, together with two pedestrian – bicycle ways separated by a kerb can be accommodated within the 15 metres width as shown in fig.4.4. A rumble-strip divider, 1.5 metres wide can also be provided at zebra crossings to serve as a refuge. This will ensure no overtaking at pedestrian crossings. Provision of humps and staggering the zebra markings for the opposite lanes will enhance the safety of the pedestrians.

For dual carriageway roads with 20 metres width, two lane of 3.25 metres width in either direction separated by a rumble median 2.5 metres wide throughout can be provided together with two pedestrian – bicycle lanes. Four lane roads without centre refuge are the most dangerous roads to cross. Therefore a rumble median of adequate width will provide a safe refuge for the pedestrians to cross the road in two stages.

Raised centre medians are not suitable for most of the four-lane roads in Sri Lanka due to ribbon development, which necessitate frequent right turn movements. Rumble medians could provide a practical solution to this problem, as they are mountable for right turning and at the same time prevent fast driving over them. The rumble strips must be painted with reflective or luminous paint for improved visibility at night. Rumble median on Colombo – Katunayaka road has somewhat regulated the traffic but the width of the rumble median is inadequate being only one metre. Due to this, vehicles overtake with the rumble strips in between the wheels. A width of 2.5 metres should be adequate for rumble medians to prevent driving over them.

Where separate facilities cannot be provided for the vulnerable road user, particularly the pedestrian, to segregate them from the motorists it is essential that vehicle speeds be reduced by physical engineering constructions to compel motorists to slow down to give way to pedestrians at legal crossing locations designated for them. According to Motor Traffic Act, a driver is expected to slow down at a zebra crossing, and stop on seeing a pedestrian stepping on to the crossing. As very few drivers obey this rule it is necessary to provide self enforcing measures for the drivers to slow down to enable them to stop for the pedestrian. Properly designed raised zebra crossings can achieve this objective. Humps with gradually increasing thickness ahead of the raised zebra crossing will compel the drivers to slow down as they approach the crossing.

Drivers' response to pedestrians is better at signalised crossings than at zebra crossings. As motorists are used to stopping on seeing red signals their perception of risk of red running is higher than the perception of risk of not stopping at a zebra crossing. This research revealed that there was a 228% increase in the drivers choosing to stop after signalising zebra crossings. However, the response of pedestrians at signalised crossings was found to be very unsatisfactory.

This is due to the lack of knowledge of using pedestrian operated signals. The situation will improve with awareness and education. A trained policeman at each signalised crossing for a few days could improve the usage. Publicity through the media also will help educate the people in the proper use of these crossings.

A short-term program to install pedestrian signals in the Colombo City and suburbs will have a significant effect in reducing accidents. The cost of civil works at installation sites is quite high compared to the electronic components of the signal units. Therefore in order to reduce total cost of installations, when selecting locations consideration should be given for the need for avoiding acquisition of land, availability of power supply in the proximity and the ease of construction. Overhead installation in certain locations may be less expensive and require less space than at grade installations.

While implementing self-enforcing physical engineering measures, it is necessary to take effective steps to educate the people to be safety conscious on the road. Usually children are the target group in safety education programmes. But in Sri Lanka, children seem to be more safety conscious and disciplined on the roads than adults. Compared to other developing countries, child pedestrian fatalities are low in Sri Lanka. This may be due to the high awareness of road safety among school children in Sri Lanka. Deployment of school children as traffic wardens to control traffic near schools during opening and closing times of school has a beneficial effect on the behaviour of school children on the road. However, teaching of road safety in schools is not very satisfactory. Training in road safety practices to children is important and it is worth the while introducing into school curriculum in Sri Lanka.

Parents should also be involved in road safety education programmes, as they are the most concerned about the safety of their children. Electronic media could be better made use of to take road safety messages to the people, but very little is being done by the media men in this direction. Road development Authority could provide funds through the road safety secretariat to telecast short programmes regularly. It will also be possible to get organisations such as insurance companies to sponsor these programmes, as they will also be beneficiaries of road safety improvement.

Enforcement of road safety rules is very poor in Sri Lanka as in other developing countries, and very little reliance can be placed on law enforcement to reduce pedestrian accidents in a short-term road safety programme. It is better to mount regular blitzes to detect traffic offenders in predetermined areas than island wide deployment of police personnel daily. Necessary personnel can be drawn from nearby police stations for short periods to implement these operations. Publicity should be given in the media regarding the number and the type of detections to alert the public. Senior police officers should supervise the operations.

