

## **DEVELOPMENT OF A SAFE ROAD CROSSING AT THE ENGINEERING FACULTY ENTRANCE: A CASE STUDY**

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Pedestrians and cyclists use different alternatives for safe road crossing; however, records indicate that most accidents are linked with road crossing pedestrians. Some pedestrian crossings are obviously unsafe and are responsible for creating high traffic congestions during peak hours. Identification of measures to improve the safety of such crossings is important while the proposed alterations are economical and aesthetic.

The main access to the Engineering Faculty of Peradeniya University is provided from the Peradeniya-Badulla-Chenkaladi (AA005) road. Daily, a large number of students cross the road to move between the main university premises and the engineering faculty. Although, presently a yellow pedestrian crossing along with humps are provided at the place, mainly owing to disappointing disciplines of most local drivers, the desired level of safety of the students is not met. Frequently, conflicts and accidents are reported around the crossing some of them are serious. In addition, the students have to wait for a considerable time for the vehicles to stop and allowing them to use the crossing. Traffic congestion due to the use of the crossing is also inevitable, especially during peak hours. Hence, studying of possible means to improve the safety of students and minimize traffic congestion in the vicinity of the Engineering Faculty entrance is important.

A number of potential options were considered, and implementing of an underpass near the faculty entrance was deemed to be the best alternative. Both pedestrians and cyclists are going to benefit from the proposal which will also be beneficial to the disabled.

A pedestrian survey was carried out. Structural members for the underpass were designed conforming to BS 5400-2 and Eurocode 2. Geotechnical design was required to design the side walls of the underpass. Drainage and lighting systems for the underpass are proposed. The length, width and depth of the proposed underpass are 10 m, 3 m and 2.5 m respectively. The pedestrian flow rate through the underpass would be approximately 40 ped/min while Level of Service (LOS) for pedestrians is 'C'. A pedestrian bridge will be constructed for users to reach the underpass. The proposal was composed while appreciating the faculty aesthetic and faculty regulations as prime requirements.