

**CRITERIA TO IDENTIFY OPTIMUM SPACING FOR  
SERVICE AREAS ON SOUTHERN EXPRESSWAY  
EXTENSION**

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## DECLARATION

I declare that this is my own work and this thesis does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any other University or institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text.

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## **ABSTRACT**

Southern Expressway is the first E class highway in Sri Lanka currently spanning from Kottawa to Godagama. This expressway is 126.1 kilometers long from Kottawa to Godagama. In most expressway projects, service area which will serve passengers is common. From Kottawa to Godagama there is one service area located at Welipenna. Southern Expressway extension will extend the expressway from Matara to Hambanthota including Expressway link to Mattala. From Welipenna to Hambanthota, there is approximately 177 km. So, it is evident that there needs to be additional rest areas located in the southern extension project.

Service area is an integral part of a long expressways. Purpose of the service area in an expressway is to provide services to the passengers and provide a resting place for the drivers in their long journey. Placing of the service area is very important because it will affect the accident rate in expressways.

In this research using traffic data collected which include the vehicle entrance time and date to the expressway, exit time and date from the expressway, vehicle type, entered interchange and exit interchange from existing southern expressway, location for a service area is proposed by calculating the optimum distance between the service areas. Quantitative data gathered from the expressway is analyzed to obtain a criteria for deciding the optimum location for the service area of the expressway extension. According to the findings 60km was proposed for distance between service areas and 30km was proposed as the distance between the rest areas.

**Keywords** – Service area, Southern expressway extension, traffic analysis

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