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**A STUDY ON THE MAINTENANCE OPERATION OF ELEVATED  
HIGHWAY BRIDGES**

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## **ABSTRACT**

Highways design that takes into consideration maintenance aspect during the design phase affect the performance of the elevated highway bridge when it is fully operational. Most of the highways designers (architects and engineers in particular) claim they have the experience and knowledge in maintenance, but there are still many that are less cognizant of when a road designed maintenance. A survey was conducted on three concessionaires who manage maintenance around Kuala Lumpur and Selangor, where it involves a federal road and the two elevated highway bridge. The purpose of this study is to identify problems in the maintenance of elevated highways bridge today, especially those arising from the failure of design, lack of information, the use of poor quality materials, construction did not follow the specifications set because of lack of supervision and damages that often occur in an elevated highways. In sensitivity of the safety precautions at work area can cause bad things from happening, a lack of knowledge with respect to the types of temporary signs, traffic control and site locations to suit the specifications that have been listed in a guidelines to be the main factor is negligible and not complied with. As such, it is important for the management of the concession company that emphasizes the maintenance issues to minimize the problems mentioned above.

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# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

Elevated Highway Bridge or flyover is single purpose structures that provide an essential function in society today. They have to contribute so many benefits especially at the urban area. As we know, the road system now in urban does not get more accommodates vehicle capacity. Although road expansion was done, but still cannot solve the congestion problems. Construction of the elevated highway in the area that experience congestion that have began to be implemented and it great help traffic flow fluency. *(Source: Michael J. Ryall (2010))*

Elevated Highway Bridge is also a structure that provides for crossing over places such resistance on the river, railways, canals, and many more, without covering the road below. It also connects the community and contributes to national development. *(Source: Hyun-Moo Koh, Dan M. Frangopol 2008)*

Over time, a bridge will deteriorate and become unfit for its intended purposes if no intervening action such as maintenance, rehabilitation or strengthening is taken. Due to their strategic locations over natural or other manmade obstacles, any failure of a bridge may limit or severely disrupt the traffic flow in the networks, with consequent inconvenience and economic loss to community. Although rarely happens, catastrophic collapse of bridges very often result in tragic loss of human lives. It is therefore imperative that bridges be regularly inspected and appropriate actions taken. *(Source: Hyun-Moo Koh, Dan M. Frangopol 2008)*