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STUDY OF STORM WATER DRAINAGE SYSTEM ACROSS ROADS CASE STUDY ON COLOMBO – HORANA ROAD

(Section between Kohuwala and Piliyanthala Intersections)

A DESERTATION SUBMITTED IN PARTIAL FULFILMENT FOR THE DEGREE OF MASTER OF ENGINEERING

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ABSTRACT.

The Government of Sri Lanka has planned to develop its southern part in many areas to boost the socio and economic activities. Among the planned development activities, the infrastructure development takes the priority , particularly the improvements to existing roads and new road constructions. The proposed southern highway construction is one such major project that is currently being undertaken. And there are many link roads also to be developed to connect with the proposed highway, the Colombo – Horana road is one of the main link road to be connected to the proposed Southern Highway at Kahatotuwa.

At present, many sections of the Colombo – Horana road are in a deplorable conditions and inundate very often when it rains, mainly due to inadequate drainage facilities or inadequate road elevation. The road section, between Kohuwala and Piliyanthala intersections which is approximately 7km in length, and there are about twenty five (25) culverts in the section, is also has the very same problem mentioned above. Therefore, this report deals in Identifying the existing drainage problems of the section, Checking the adequacy of all the existing drainage structures within the study area and proposing a suitable design methodology for Road Trace, Safe Road Elevation corresponding flood to the required Return Period and for designing the drainage structure openings. And also to see the possibility of analyzing the drainage problem in using Geographical Information System (GIS).

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