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An Evaluation of the Lae City Road Network Improvement Project

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Abstract : Lae Port Development Project, Four Lane Highway and other development in the extraction industry which have direct road link to Lae City are predicted to have significant impact on its road network system. This paper evaluates Lae roads improvement program with forecast on planning, economic and the installation of bypasses to ease congestion, effective and convenient transport service for bulk goods and reduce travel time. Land-use transportation study and plans for local area traffic management scheme will be considered. City roads are faced with increased number of traffic and some inadequate road pavement width, poor transport plans, and facilities to meet this transportation demand. Lae also has drainage system which might not hold a 100 year flood. Proper evaluation, plan, design and intersection analysis is needed to evaluate road network system thus recommend improvement and estimate future growth. Repetitive and cyclic loading by heavy commercial vehicles with different axle configurations apply on the flexible pavement which weakens and tear the pavement surface thus small cracks occur. Rain water seeps through and overtime it creates potholes. Effective planning starts from experimental research and appropriate design standards to enable firm embankment, proper drains and quality pavement material. This paper will address traffic problems as well as road pavement, capacities of intersections, and pedestrian flow during peak hours. The outcome of this research will be to identify heavily trafficked road sections and recommend treatments to reduce traffic congestions, road classification, and proposal for bypass routes and improvement. First part of this study will describe transport or traffic related problems within the city. Second part would be to identify challenges imposed by traffic and road related problems and thirdly to recommend solutions after the analyzing traffic data that will indicate current capacities of road intersections and finally recommended treatment for improvement and future growth.

Keywords : Lae, road network, highway, vehicle traffic, planning
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