SOMCHAI SIRIWARAPITAK : IMPACT OF NEW SIGNALIZED INTERSECTION AND TWO-WAY OPERATION ON BANGKOK TRAFFIC. THESIS ADVISOR : ASSO. PROF. KUNCHIT PHIU-NUAL, 106 PP. ISBN 974-576-864-2

This research study is divided into two parts. The first part deals with testing of new strategy by adding new signalized intersections onto the network. The aim is to reduce effect of high turning movement at bottleneck intersections. The studied intersections are Urupong and Ploenchit/Wittayu. The second part deals with studying of effect of one-way traffic operation in congested area, and testing of new proposal of two-way and unbalance flow.

The result of separate evaluation reveals that the strategy of new signalized intersections which add local roads and new signal onto the network for Soi Phyanak (case 1) and Soi Ruamrudi (case 2) would reduce turning volume at bottleneck intersections. The average travel speed of the system increase somewhat although more vehicles come into system. The average delay reduced from about 2689.3 vehicle-hour/hour to 2519.1 for case 1 and 2584.4 for case 2.

For the study on one-way versus two-way traffic operation in Bangkok, it reveals that two-way traffic with unbalance flow operation will help reduce traffic congestion. The average travel speed of the system would be 9.4 kilometre/hour which is somewhat higher than the existing condition which average travel speed is approximately 8.7 kilometre/hour. Also, in a new traffic operation, more vehicles would be able to come into system but with less congestion.