

# Development of Traffic Signal Model for an Intersection

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## ABSTRACT

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The main purpose of this project is to design a new traffic signal for an intersection. According to the data and the research I collected in front of INTI University, I realized that traffic jam will occur during the peak hour which are 1200-1300 and 1800-1900. Due to the traffic problems, I have decided to design a new traffic signal to avoid traffic jam from happening in front of INTI University so that it would be more convenient for the road users, where the new intersection point will be designed exactly in front of the new INTI football field. This is done to reduce accident occurrence, providing safety to road users.

The traffic signal design had been designed according to my researches, data collected on site (in front of INTI University), calculation and results. Besides that, the traffic timing is also based on my calculation to function, so that lesser traffic jam will happen in front of INTI University. Base on the calculation, we know that 1200-1300 and 1800-1900 has peak flow rate compare to 0800-0900 and 1500-1600. When it is peak hour,  $q$  will be 408veh/h and 444veh/h and normal time  $q$  will be 132veh/h and 180veh/h, the higher the  $q$ , the more serious of traffic jam. The signal timing estimated to be 100 seconds for whole cycle.

According to my final result, my study has met my purpose which is provide shortcut or detour of road user movement from Jalan Persiaran Perdana(roundabout shown in Figure 4) to the INTI for faster access and lesser travelling time. Besides, it also improve the flow at intersection and no more traffic jam will occur in front of INTI University.