

Activity #C06 - Evaluating the Performance of System Using Optimized Split Times

Purpose: The purpose of this activity is to evaluate the performance of your network using the optimized split times that you computed in Activity C05.

Tasks:

Task 1. Based on the results of your critical movement analysis for each of your four intersections, determine the split times for each phase at each intersection. The split times for the non-critical phases should be set equal to the split times for the corresponding critical phases. For example, if phases 1 and 2 are critical phases, the split times for phases 5 and 6 should be set equal to the split times for phases 1 and 2.

Task 2. Make changes to the timing plans in VISSIM using the data from task 1.

- Continue to use a cycle length of 100 sec and a zero offset at each intersection.
- The Max 1 time for each phase should be equal to the split time for that phase minus the Y and RC times.
- The Split time for each phase should be as calculated in task 1.
- Verify that the cycle length remains at 100 sec after you have made the changes to the Max 1 and Split times. Adjust the split times as needed so that the cycle length is 100 sec.

Task 3. Collect data and prepare summaries

- Run the simulation.
- Export Node data and Travel Time data.
- Prepare summary tables for the delay data and the stops data, for each movement at each intersection and for each intersection as a whole, and the travel times for the system of four intersections.
- Prepare side by side summary tables for these data comparing the base case with the results for the split time optimization.

Task 4. Complete evaluation and prepare report

- Prepare answers to the following questions:
 - Describe the traffic operational problems based on your observation of the VISSIM animation.
 - Describe the traffic operational problems based on the delay and stops data.
 - What has changed from the base case to this case?
- Prepare an Excel spreadsheet with the following information
 - Tables prepared in Task 3.
 - Answers to the questions listed above.