



## PURPOSE

The purpose of this activity is to give you the opportunity to learn how left turn phasing decisions are made in practice.

## LEARNING OBJECTIVES

- Describe the process for selecting left turn phasing
- Contrast the advantages and disadvantages of each left turn phasing option

## REQUIRED RESOURCE

- *Traffic Signal Timing Manual*

## DELIVERABLES

Prepare a document that includes

- Answers to the Critical Thinking Question
- Completed Concept Map

## LINK TO PRACTICE

Read the sections from the *Traffic Signal Timing Manual* on left turn phasing as assigned by your instructor.

## CRITICAL THINKING QUESTIONS

When you have completed the reading, prepare answers to the following questions:

1. What are the advantages and disadvantages of the common left turn phasing options?
  
  
  
  
  
  
  
  
  
  
2. Describe the process followed in practice to select an appropriate left turn phasing plan.

3. Based on your reading, would you change the left turn phasing plan that you developed in Activity #50? Explain your answer.

## IN MY PRACTICE...

*by Tom Urbanik*

Two issues have a profound effect on left turn operation and therefore phasing considerations. First is available storage which may be constrained due to closely spaced intersections. If the cycle length is long and the volume is high, consideration may need to be given to running the left turn twice per cycle. While one might think it is less efficient with two clearance intervals per cycle, a green indication with through traffic blocking the left turning traffic or left turning traffic blocking through traffic is more inefficient.

The second issue is when does left turning traffic arrive at the left turn lane. Again, with closely spaced intersections, left turning traffic may arrive too late to be served on the current cycle, causing increased delay for left turning traffic. Lagging rather than leading the left turn phase may provide reduced delay. This situation is very common at diamond interchanges where lagging the left turn to the ramp is often the preferred sequence.

**CONCEPT MAP**

*Terms and variables that should appear in your map are listed below.*

lagging left turns

left turn phasing

protected left turns

leading left turns

permitted left turns



