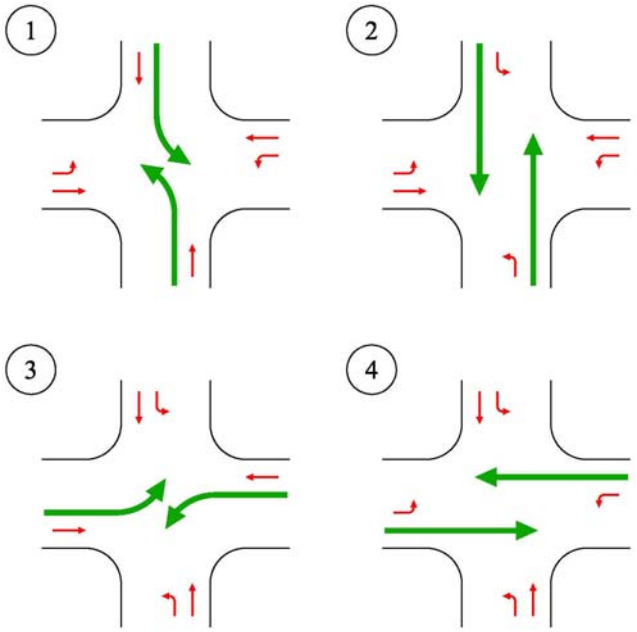
What Is Signal Coordination?

Signal coordination is the process to synchronize the start of the “green light” along the major roadway (e.g., northbound and southbound Columbia Road traffic), so that vehicles can travel through a group of signals with minimal or no stopping. There are three key timing parameters to make signal coordination work - “cycle length”, the individual traffic movement “green + yellow + red” phase (referred to as a movement “split”), and intersection “offset,” or progression.

Cycle Length

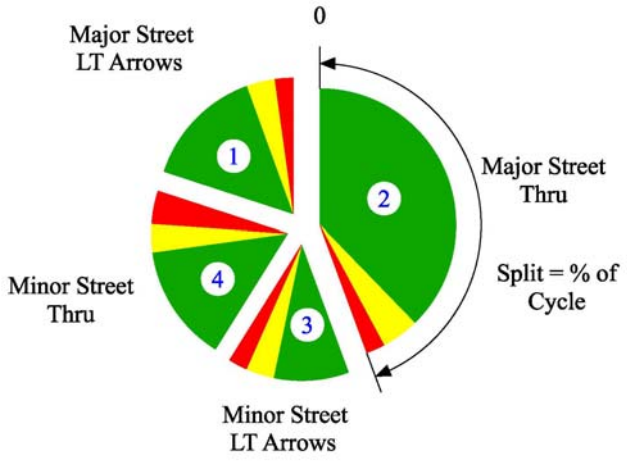
The cycle length is the total time to complete one sequence of all movements around an intersection. As shown in the illustration to the right, one cycle length is the total time required to complete Interval 1 through Interval 4.



Cycle Length

Split

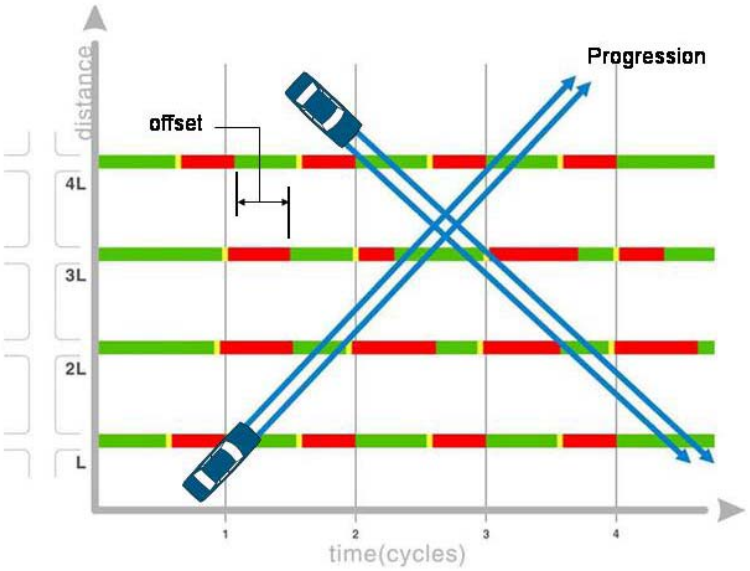
The individual movement (e.g., northbound left turn arrow at Columbia Road/24th Avenue) split is the sum of the “green time + yellow interval + red clearance interval). The movement split represents a percentage of the total cycle length. The total amount of split is constrained by the cycle length and other conflicting movements; therefore, they need to be balanced.



Split

Offset (Progression)

The offset is the time between the start of the “green light” at one intersection and the start of “green light” at another intersection. The offset defines the movement of traffic along the arterial, also referred to as “progression.”



Progression