



June 2010

Flashing Yellow Arrows – Coming Soon To An Intersection Near You

If you haven't come across a flashing yellow arrow at a traffic signal yet, chances are you will soon. Flashing yellow arrows are the newest tool in the traffic engineer's toolbox. When traffic engineers design traffic signals, they face two competing goals: efficiency and safety. The flashing yellow arrow is a strategy for delivering more of both, to the benefit of drivers as well as developers.

The flashing yellow arrow is a technique used to reduce motorist delay without sacrificing safety. The left turn lane at an intersection outfitted with the system is controlled by a separate 4-section signal, as shown at right. The flashing yellow arrow provides for a "permissive" left turn, meaning drivers must yield to oncoming traffic. Permissive turns are in contrast to "protected" turns, which occur on the solid green arrow and give the right-of-way to drivers turning left.

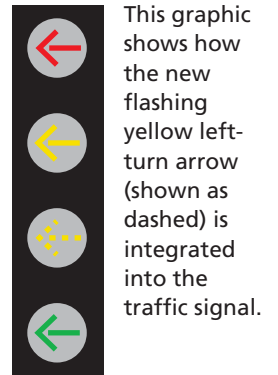
Studies conducted at dozens of test intersections across the country over the past several years have shown that the flashing yellow arrow can be readily understood. In fact, the flashing yellow arrow was found to be safer than a solid green light for permissive left turns, due to fewer drivers making unsafe turns when they should have been yielding.

When the solid green arrow appears, drivers may proceed through the intersection normally. When the flashing yellow arrow appears, drivers may proceed if the intersection is clear; if not, they must yield to oncoming traffic. When the solid yellow arrow appears, it's a warning that the solid red arrow is about to appear and that drivers should either stop safely in advance of the intersection or clear the intersection when safe to do so.

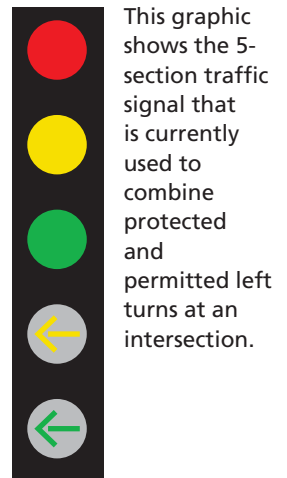
This system may sound familiar. Signal arrangements that allow for both protected and permissive left turns already exist. In most states, the typical configuration is the vertical 5-section arrangement shown at right, in which permissive left turns are accomplished on the solid green light.

Though the current system works, the flashing yellow arrow provides an opportunity to vary signal phasing based on traffic volumes or time of day. When traffic volumes are low and left turns can be made without the protection afforded by a green arrow, the signal can operate using only the flashing yellow arrow, resulting in fewer phases and therefore less delay to all traffic.

The flashing yellow arrow system enhances safety and efficiency and is expected to become increasingly common. Land developers will want to inquire whether this latest tool can be used to incorporate the most up-to-date traffic design into their next project.



This graphic shows how the new flashing yellow left-turn arrow (shown as dashed) is integrated into the traffic signal.



This graphic shows the 5-section traffic signal that is currently used to combine protected and permitted left turns at an intersection.

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