The "Superstreet" Intersection Concept

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The Superstreet concept refers to a reconfiguration of a traditional intersection. Simply, it is a method to safely and efficiently manage high traffic volumes at intersections with multiple approaches along a divided highway. The Superstreet concept functions by redirecting through and left turning traffic from the side street approach to turn right, proceed to a nearby U-turn and then return to its original course. At first, this may seem to be a complex solution to a very simple objective - to cross the intersection or to make a left turn. However, when designed correctly, it is actually a simple and safe solution to the problems caused by congestion.

The Primary Superstreet

The Primary Superstreet requires the through and left turning vehicles from the minor street approach to turn right, proceed to the downstream U-turn and then return in the opposite direction. The movements from the major street are unaffected as the main intersection still allows for all movements from the major street.

The illustration below shows the Primary Superstreet configuration. A major benefit of this configuration is that the number of conflict points (opportunities for cars to collide) are minimized. The other major benefit is that signalization is simplified into two phases. The two signal phases first give a green light to the major street through traffic, followed by the second phase which gives the green light to the left turns from the major street at the same time as the right turns from the minor street. The two median U-turn locations would also be signalized and would operate similarly with only two phases; the first again being the through traffic and the second allowing the U-turn movement. The reduction in the number of movements that occur at each intersection allows the intersection to operate more efficiently and to give more of the green time (typically about 70% of the total cycle length) to the heavy through movements. Another benefit is the improved ability to coordinate the signals along the corridor, which reduces overall travel time.

The Reverse Superstreet

The Reverse Superstreet allows left-turns from the minor street directly onto the major street roadway. The benefits of this configuration over the Primary Superstreet concepts are that it can accommodate high left turn volumes from a minor street which may overwhelm the U-turn signal.

How is a Superstreet safer than a conventional intersection?

A Superstreet intersection (both primary and reverse) reduces the number of "conflict points," meaning that there are fewer points for possible collisions (32 vs. 14).

The most severe conflict points (side collisions or T-bones) are significantly reduced from 16 to 2.

How do I navigate a Superstreet intersection?

How do pedestrians and bicyclists cross the street?

Superstreets are actually safer for pedestrians than conventional intersections. There are fewer conflict points for pedestrians because of the simplified traffic flow.

To cross the main street, pedestrians will cross one direction at a time, waiting in the median for the signal to change to finish crossing.

Where have Superstreets been constructed?

US 15-501 at Erwin Road

The Major Benefits of a Superstreet:

1. Safety
2. Time savings
3. Increased capacity
4. Access Management
5. Improved traffic flow
6. Land use and corridor protection
7. Alternative to interchange (Less $$$)
8. Smaller "footprint" than an interchange