

## How do they work?

Have you ever tried to turn left out of a parking lot onto a busy road and found it so hard to get a space to make your turn that you turned right and made a U-turn? In many cases it was faster than waiting to directly make a left turn. Thru-turns use many of the same concepts to make a more efficient and safer left turn.

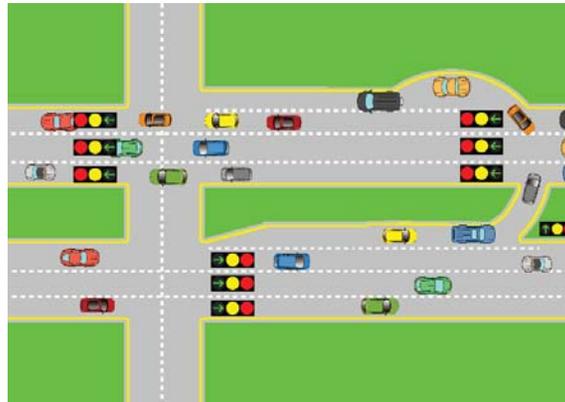
With a thru-turn, drivers wanting to turn left drive through the intersection and make a U-turn at a signalized median crossover. After making their U-turn, they get into the right-most lane and make a right turn. Since they are not in the intersection, other traffic movements are possible

The key element is that the thru-turn may take you a little out of the way, but can help more people make a left turn quicker. In addition, it can also provide more space for left turns in areas where there is limited space before the intersection. There are fewer changes required for the signal at the intersection, which means that engineers can give more time to the through traffic (and get them through the intersection faster too.) The turn is wide enough to handle all traffic, including busses, and can easily handle a large number of cars.

Alternative intersections, such as the thru-turn reduce the amount of time that traffic spends waiting for a turn by at least 25 percent. That means that even with the extra distance drivers must travel (maybe a fifth of a mile) they can still get through the turn quicker.



**Traditional left turns can back up and block the through lanes.**

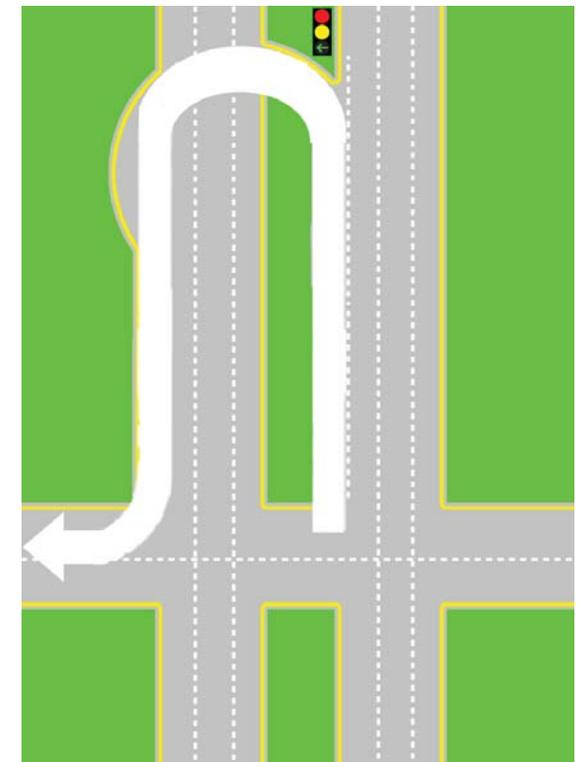


**Thru-turns can help traffic turn left quicker and safer.**

They can also improve the amount of traffic that can get through the intersection by up to 50 percent. This helps reduce the congestion on the through roadway and the cross street during peak traffic periods.

It may be a little different, but it is faster and it reduces the wait time at left turns – it's safer for drivers and for pedestrians. Thru-turns help keep you moving and keep you safer.

# Making it Thru a thru-turn





## What is a thru-turn?

The basic concept of the thru-turn has been used for nearly 50 years. The thru-turn is used in urban areas, but is similar to Michigan lefts, downstream U-turns, or J-turns, for instance. Collectively, these are called “alternative intersections.” The driver is prevented from making a direct turn, and needs to follow the highway to a U-turn location and make the turn by heading the other direction.

The common theme is that they are safer. Left turns can be a challenge. They slow down the flow of traffic, and in many cases, create the potential for fairly damaging side crashes. When large numbers of vehicles need to turn left, they can back up into through lanes and create congestion and crashes as well. Engineers look for ways to reduce the number of conflict points at the intersection (places where there is a chance that one vehicle could strike another). Thru-turns, as well as other similar types of intersections, help reduce right angle or “T-bone” collisions. These are when a vehicle on a side street doesn’t yield to through traffic. These crashes have the highest

chance of a fatality or a serious injury.

Thru-turns are used in more urban areas and use a signal to control the U-turn. Specifically, with a thru-turn, the driver travels through the intersection and gets into left turn lane. This lane is controlled by a signal. When the signal changes, the driver makes a wide U-turn into the farthest lane -- a lane dedicated only to traffic turning right. When the driver reaches the intersection, they turn right onto the side street. With long, dedicated left and right turn lanes, there is a lesser chance that turning traffic will interfere with through traffic, or back up into the intersection because of delays on the side street. This helps traffic flow through the intersection much more efficiently and much more safely.

## Are thru-turns safer?

Overall, a thru-turn intersection can reduce crashes by 20 percent to 50 percent. More importantly, because of the way the intersection is laid out, the chance of a side impact or “T-bone” crash is greatly reduced.

Similar types of alternative intersections currently used in Missouri have also proven to be much safer. The first J-turn was built in Jefferson County at Route M and Old Lemay Ferry in 2007. It was the first of 19 J-turns installed across the state.

The department looked at the crashes at 15 of those locations before and after the J-turns were installed. There was an average of 17 serious injuries per year at the 15 locations before the J-turns were installed – and an average of just over three fatalities each year.

After the J-turns were installed, overall crashes were reduced by nearly 25 percent. In addition, there were an average of just over two serious injuries per year (an 86 percent reduction) and an average of one fatality every three years (a reduction of 91 percent). These types of similar intersections have reduced the number of crashes significantly, and drastically reduced the number of serious and fatal crashes. These types of intersections that move the left turn have provided a significant reduction in injuries prevented and lives saved.