

Care must be taken to avoid increasing rear end crash potential by implementation of countermeasures intended to reduce other types of crashes. For example, installation of traffic signals, addition of protected only left turn signal phasing at traffic signals, and red light camera enforcement are all countermeasures that may be used to reduce right angle or left turn crashes. However, they also tend to increase the potential for rear end crashes.

Since right angle and left turn crashes tend to be more severe it may be reasonable to implement these countermeasures at locations with a history of these types of crashes. It may not be appropriate to use these countermeasures at locations where there is not a history of more serious crashes because of the increased risk of rear end crashes.

Approach Turn Crashes

Approach turn crashes occur when someone turns left in front of oncoming traffic without yielding the right of way. There are two main causes of approach turn crashes:

Poor estimation of distance and/or speed of approaching through traffic -- These accidents occur at both signalized and unsignalized intersections. Poor visibility can contribute to these accidents. Offset left turn lanes can result in vision obstructions as shown in the illustration below. Note that this offset created between opposing left turn lanes is a disadvantage of raised medians at intersections.

Inappropriate response to the onset of the yellow or red signal display – This situation can occur at signalized intersections where permissive left turns are allowed. A driver waiting to turn left on a green ball or flashing yellow arrow at a signalized intersection is required to yield the right-of-way to opposing through traffic. When the traffic signal turns yellow and/or red, some left turning drivers assume that oncoming traffic will stop. This causes them to turn in front of oncoming traffic that may not be able (or willing) to stop.

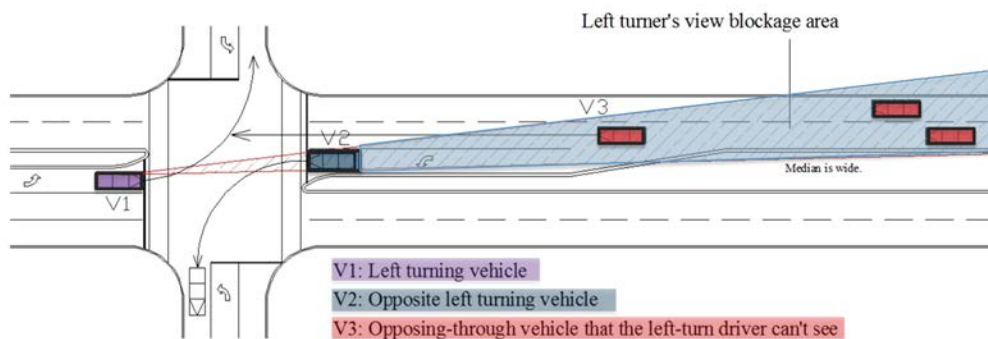
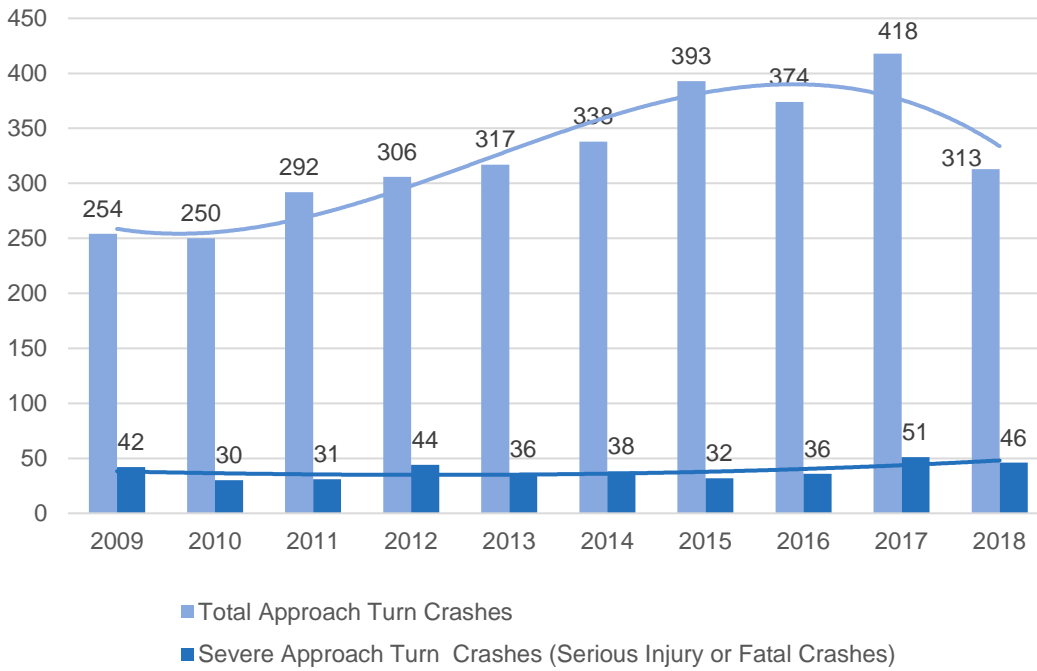


Figure 36
Depiction of typical approach turn crash

Number of Approach Turn Crashes

The chart below shows the historical trend of approach turn crashes in Fort Collins. After years of an increasing trend, the number of approach turn crashes was down 25% in 2018. Severe approach turn crashes were also down 10% from 2018, and similar in number as 2012.



Approach turn crashes decreased **25%** in last year

Figure 37
Historical Approach Turn crash data (10 years)

Approach Turn Crashes by Location (2014–2018)

The figure below shows both the number and percentage of approach turn crashes by location and type of intersection for the past five years.

The majority of approach turn crashes (70%) happen at signalized intersections. The combination of increased complexity and higher turning volumes along with the issue of turning on the yellow/red are likely causes to this trend.

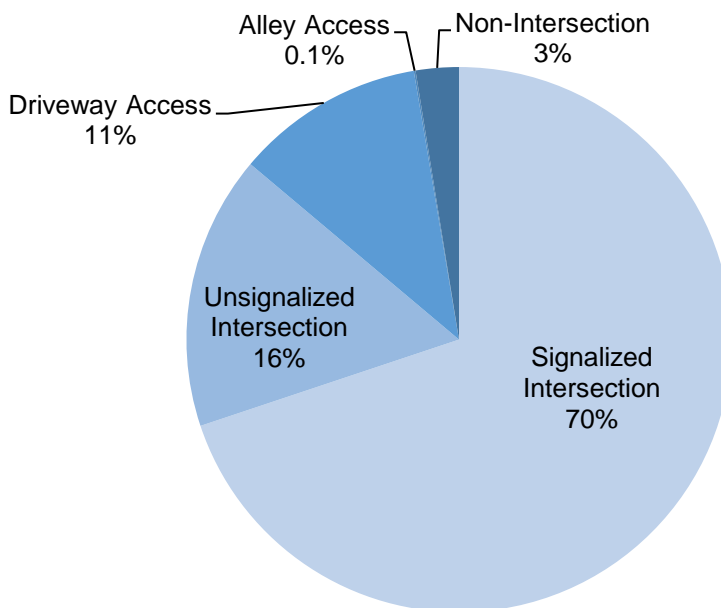


Figure 38
Location of approach turn crashes. (2014-2018)