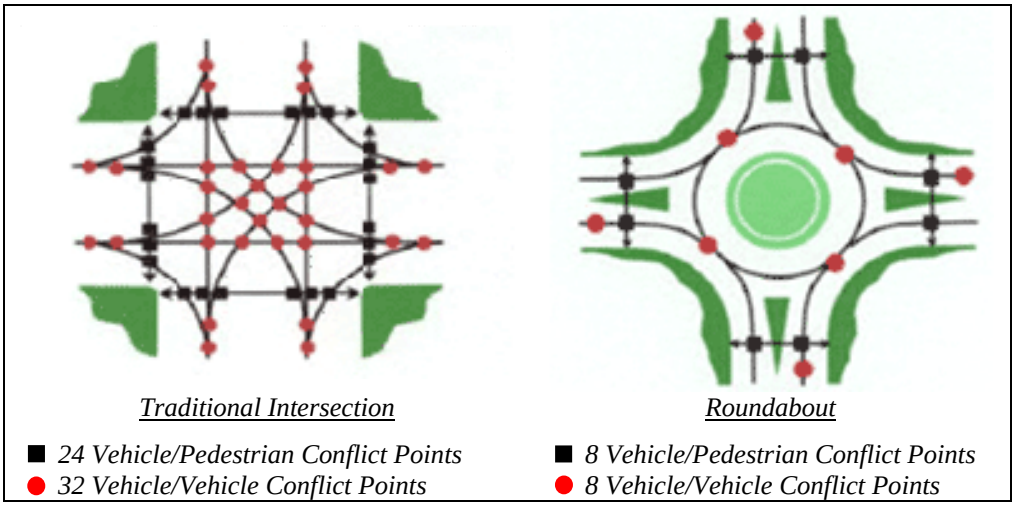
Benefits of Roundabouts

Safety

- According to an Insurance Institute for Highway Safety study, converting a traditional (stop sign or traffic signal controlled) intersection to a roundabout brings a significant drop in crash rates. In this study, which had surprisingly similar results to other US and international studies, all crash types were reduced by 40%. Even more remarkable were the reductions in injuries and fatalities – 70% and 90%, respectively.
- Roundabouts have far less "conflict points" than do traditional intersections. Conflict points are the locations within an intersection where vehicles cross paths with other vehicles or with pedestrians. Each conflict point brings the potential for crashes. The following figure illustrates this point:



Another interesting observation is that in a roundabout, the potential for head-on and T-bone crashes are removed. These are the most severe types of crashes.

- Drivers must slow down to enter a roundabout. Roundabouts are specifically designed to keep traffic flows at 15 to 25 miles per hour.
- Because there are no traffic signals, drivers are not encouraged to speed up to beat the yellow signal.
- Pedestrian Safety: All available research (there is a lack of good research in this area) shows roundabouts are safer or similar to conventional intersections for pedestrians. Single-lane roundabouts are safer than multi-lane roundabouts for pedestrians, because pedestrians have less width to cross. Even though there is a lack of research into pedestrian safety at roundabouts, there are now around 2,000 roundabouts in the United States. To date, there are no known pedestrian fatalities at a roundabout in the United States, and the number of pedestrian injuries is extremely low.

  When pedestrians cross at roundabouts, they determine when they have a safe gap, cross one direction of traffic and wait in the pedestrian refuge in the median, then cross the opposite direction of traffic. It is believed the slower vehicular speeds, the shorter crossing distances, and the provision of a pedestrian refuge all contribute to pedestrian safety at roundabouts.
- Bicycle Safety: There is also a lack of bicycle safety studies at roundabouts in the United States. Internationally, bicycling habits and policies vary dramatically from

those in the United States, so studies abroad most likely do not confer to the United States. Similarly to the pedestrian record in the US, bicyclist injuries at roundabouts have been very low.

- Bicyclists have two options at a roundabout. They may "take the lane" and ride through the roundabout as a vehicle, or they may dismount and use the pedestrian crossings and sidewalks.
- When the electricity goes out, roundabouts still work without the intervention of the police.

Efficiency

- Most gasoline-powered automobiles are the least efficient when idling and accelerating from a stop. Roundabouts reduce the number of total stops dramatically, which in turn makes the overall energy efficiency of the intersection increase.
- One would think that, due to the slower vehicle speeds, roundabouts are less efficient than their traffic-signal controlled counterparts. This is not the case. While some vehicles will make it through a green light without even slowing down, they may be stopped at the very next traffic signal for a full cycle length. Roundabouts cause a regulation of speed. The fastest vehicles are not travelling much faster than the slowest vehicles.
- In the off-peak times, it is rare to be stopped at a roundabout. No more waiting for 60 seconds at a traffic signal in the middle of the night (or the day, for that matter).

Environmentally Friendly

- Because there are fewer complete stops at a roundabout, there is less acceleration. Traffic flows are slow and smooth. Therefore, there is no heavy acceleration that can be heard at traffic signals of similar traffic volumes. This reduces air and noise pollution, as well as fuel consumption.
- Roundabouts generally require less pavement than a typical intersection, and therefore, there is less stormwater runoff.

Aesthetically Pleasing

- A typical roundabout has several islands; one on each entry, and one central island. These lend themselves to landscaping and hardscaping (such as decorative pavements and/or brick pavers).
- Roundabouts do not require the use of unsightly poles and wires that are used for traffic signals.

Have the Potential to Save Money

- There is no mechanical equipment to purchase and maintain.
- Landscaping could become an "Adopt-a-Spot" to reduce the costs of maintaining landscaping.