

## 11. TRAFFIC CIRCLES

<p>As used for traffic calming purposes, traffic circles are relatively small circular or oval islands (usually landscaped) placed at the center of intersections of local and/or collector streets. Their primary purpose is to reduce speeds through an intersection or, if used in a series, reduce speeds for several blocks. Depending on their design, traffic circles can also reduce conflicts at intersections. Because they are located in the middle of two streets, they may give drivers on both streets the impression that the streets may not be “through”. They can be used with and without stop signs. Traffic circles are different from “roundabouts”, the latter being a more formalized version of a circle which are usually installed on higher-volume streets. Though roundabouts reduce speeds through an intersection, their primary purpose is to facilitate traffic flow rather than discourage it. Local examples: Addison/Bryant, Lytton/Fulton, and Park Blvd/Park Ave intersections (Palo Alto); Fair Oaks Neighborhood (near Atherton).</p>	
<b>Traffic Volume</b>	Reduced speeds and the appearance of obstructions in the roadway will reduce volumes by about 20 percent for a series of circles; minimal reduction for a single circle.
<b>Speed</b>	Speeds are reduced about 100-200 feet before and after the circle, compared to no previous traffic controls at intersection. Speeds are reduced to about 15 mph at the circle. A series of circles at several intersections will reduce speeds between intersections to 25-30 mph, depending on spacing.
<b>Noise, Air Quality, Energy Consumption</b>	If a circle replaces stop signs, noise, fuel consumption and emissions will decrease. A series of circles, by reducing overall speeds, will have the same effects over a length of street.
<b>Traffic Safety, Emergency Response</b>	Intersection accidents can be decreased where circles completely replace stop signs. For pedestrians, they may increase hazards or a feeling of discomfort, as vehicles are forced close to (but not into) the pedestrian crossing area. If the circles are used on higher volume streets that are also bicycle routes (e.g. exceeding about 4000 vpd), bicyclists may be adversely affected when they have to share the travel lane with vehicles around the circle. With a series of circles, bicyclists may benefit from overall speed and volume reductions. Some drivers, especially those of large vehicles, may turn left in front of the circle and therefore encroach into the oncoming traffic lane. Circles do not block access to any street. They will reduce speeds of emergency response vehicles, but emergency response vehicles must reduce speeds anyway at intersections. Circles may be used on emergency response routes.
<b>Aesthetics</b>	Circles may be landscaped, adding greenery where asphalt was formerly present. From a distance, trees may lead drivers to believe that the street is not a through street. New signs are required, adding visual clutter.
<b>Maintenance</b>	Every traffic calming device requires maintenance. Automatic irrigation decreases the need for landscaping maintenance and watering. Because circles are located in the center of streets, drainage and street sweeping are not affected.
<b>Approximate Cost</b>	The standard traffic circle design for Palo Alto includes landscaping and automatic irrigation, costing approximately \$30,000. A hardscape design costs about \$25,000.
<b>Other</b>	In order to provide passage for large fire trucks, it is likely that parking will be prohibited within about 50 feet of the intersection on all sides of the two affected streets. Utilities in the center of many streets may not allow planting of trees, may add to cost, and may cause other complications.