Traffic calming is defined as education, enforcement, or engineering treatments to reduce vehicle speeds, usually on urban or suburban residential or collector streets. Lower-cost approaches include conducting outreach, installing speed feedback signs, or increasing enforcement. If these approaches aren’t effective, well-designed engineering treatments can reduce the average vehicle speed, eliminate the highest speeds, and reduce the incentive for cut-through traffic. In addition to encouraging walking and biking, auto emissions are reduced when vehicles travel at a steady, moderate speed. For example, CO\textsubscript{2} emissions are lowest at 25 mph\textsuperscript{1} and treatments such as traffic circles, which require no stopping, cause fewer emissions than stop signs. This fact sheet shows some example treatments. Consult your local jurisdiction to see if any of these options work for your situation.

**CURB EXTENSIONS (“BULB-OUTS”)**

Curb extensions narrow the intersection or mid-block crossing distance by extending the curb into the street, making pedestrians more visible and reducing the speed of turning vehicles.  
**Costs:** $40,000-$80,000 for installation.\textsuperscript{2} Must accommodate emergency vehicles.  
**Benefits:** Can reduce speeds (7% in one study\textsuperscript{2}), and traffic volume (10% in another study\textsuperscript{2}), while providing areas for landscaping, public art, seating, or other amenities.


For more information, or to request a presentation, contact us at (858) 586-2600 or Kathleen.Keehan@sdcounty.ca.gov
SMALL CHANGES THAT MAKE A BIG DIFFERENCE

**SPEED HUMP OR SPEED LUMP**

Similar to a speed bump, but wider and gentler. Speed “lumps” are speed humps with precisely spaced breaks allowing large (emergency) vehicles to pass without damage or slowing.

**Costs:** Installation is approximately $2,500.  
**Benefits:** Found to reduce speed by 22%, traffic volume by 18%, and collisions by 13%.

**ROAD DIET**

Decreasing the number of vehicle travel lanes to reduce speeds while providing new space for medians, bike lanes, wider sidewalks, or landscaping.

**Costs:** Variable. Can be modest if the project is simply lane restriping following repaving or other road work.

**Benefits:** 4-lane to 3-lane conversions (pictured) decrease pedestrian crashes by 29%.

**MODERN ROUNDABOUT**

A circular intersection median that more safely processes conflicting traffic without the need for stopping, while increasing street capacity using existing lanes.

**Costs:** Around $1 million in San Diego County, but with lower maintenance costs than traffic signals. Requires more intersection width in some cases, which may increase costs.

**Benefits:** 40% reduction in crashes; 80% decrease in injuries. Emissions case studies found 16% (AM peak) and 59% (PM peak) reduction in CO2; for major pollutants 18-21% AM reduction and 43-65% PM reduction.