

## Community Focus Statement C: Improve road conditions, congestion, and traffic safety in Oak Hills

**Action Statement C.4: Advocate to San Bernardino County Public Works and or form a Special District to install traffic calming features along key roadways and solicit funding.**

C4

**Benchmark:** Traffic calming plan prepared and funding secured for three features.

**Champion:** Volunteer group or person or can be identified by the community

**Estimated Cost:** Variable depending on proposed projects

Action	Action Leader	Timeline	Resources
1. Establish a Street Safety Committee	Champion	Month 1	Smart Growth America Coalition <a href="https://smartgrowthamerica.org/program/national-complete-streets-coalition/">https://smartgrowthamerica.org/program/national-complete-streets-coalition/</a>
2. Establish a Street Safety Committee to discuss traffic calming approaches and applicability to the community.	Street Safety Committee	Months 1 – 3	Federal Highways Administration – Traffic Calming on Main Roads Through Rural Communities <a href="https://www.fhwa.dot.gov/publications/research/safety/08067/">https://www.fhwa.dot.gov/publications/research/safety/08067/</a>
3. Develop a list of goals and project ideas specific to Oak Hills in order to demonstrate the practical uses and safety benefits to the community.	Street Safety Committee	Months 4 – 10	County of San Bernardino Public Works <a href="http://cms.sbcounty.gov/dpw/Home.aspx">http://cms.sbcounty.gov/dpw/Home.aspx</a>
4. Approach the San Bernardino County Board of Supervisors with the focus group’s findings and encourage support of traffic calming considerations in future projects.	Street Safety Committee	Month 11	County of San Bernardino Service Area 70 J – Oak Hills <a href="http://www.specialdistricts.org/index.aspx?page=104">http://www.specialdistricts.org/index.aspx?page=104</a>
5. Coordinate with San Bernardino County Public Works to express the support for safety measures to be implemented in the design of future roads.	Street Safety Committee, San Bernardino County Public Works Department	Month 12	US Department of Agriculture, Rural Development Grants <a href="http://www.rd.usda.gov/programs-services">http://www.rd.usda.gov/programs-services</a>
6. Conduct a traffic calming study that includes a needs assessment, recommended improvements, conceptual design, a cost estimate, and an implementation plan.	Street Safety Committee	Month 12 - 18	US Department of Housing and Urban Development,

Action	Action Leader	Timeline	Resources
7. Attempt to secure grant funding for design and construction.	Street Safety Committee	Months 19 –40	Reinvestment and Recovery Grants <a href="http://portal.hud.gov/hudportal/HUD?src=/recovery">http://portal.hud.gov/hudportal/HUD?src=/recovery</a>
8. If grant funding is not available, coordinate with the County Special Districts Department to establish a Community Services District for Oak Glen safety and traffic calming improvements. (Combined effort with Action Statement B.2.)	Street Safety Committee	Months 41 – 104	Special Districts <a href="http://www.specialdistricts.org">http://www.specialdistricts.org</a>  Institute of Transportation Engineers (ITE): <a href="http://www.ite.org/traffic/tcdevices.asp">http://www.ite.org/traffic/tcdevices.asp</a>
9. Conduct outreach with community representatives and emergency services providers to obtain community consensus on proposed improvements. Obtain community and stakeholder input on proposed improvements.	Street Safety Committee	Months 105 – 112	Bushell et al. Costs for Pedestrian and Bicyclists Infrastructure Improvements. Federal Highway Administration. October 2013. <a href="http://www.pedbikeinfo.org/cms/downloads/Countermeasure%20Costs_Report_Nov2013.pdf">http://www.pedbikeinfo.org/cms/downloads/Countermeasure%20Costs_Report_Nov2013.pdf</a> , accessed July 11, 2016.
10. Procure final design plans for proposed improvements and submit to County Public Works for plan review.	Street Safety Committee	Months 113 – 130	Federal Highway Administration, 2016. <a href="http://www.fhwa.dot.gov/publications/research/safety/00067/000672.pdf">http://www.fhwa.dot.gov/publications/research/safety/00067/000672.pdf</a> , accessed July 11, 2016.
11. Construct/implement corridor improvements with coordination with County Public Works.	Public Safety Committee and County Public Works	Month 131 – 146	<a href="http://www.fhwa.dot.gov/publications/research/safety/00067/000672.pdf">http://www.fhwa.dot.gov/publications/research/safety/00067/000672.pdf</a> , accessed July 11, 2016.
12. Conduct community outreach/education program to inform users of the operational changes to the corridor with assistance of County Public Works.	Street Safety Committee and County Public Works	Months 147 – 150	An Information Guide, FHWA-RD-00-67, Federal Highway Administration, Exhibit 5.2, pp 106, Washington, DC, June 2000. ( <a href="http://www.tfsrc.gov/safety/00068.htm">www.tfsrc.gov/safety/00068.htm</a> ).

Potential Traffic Calming Measure	Description	Cost (typical per measure or item)
Traffic Calming Study	<ul style="list-style-type: none"> <li>• Study to indicate proper locations for traffic calming measures</li> </ul>	\$20,000–\$50,000
Speed Table	<ul style="list-style-type: none"> <li>• Long raised speed humps with a flat section in the middle and ramps on the ends; sometimes constructed with brick or other textured materials on the flat section</li> <li>• Sometimes called flat top speed humps, trapezoidal humps, speed platforms, raised crosswalks, or raised crossings</li> </ul>	<p>An overall reduction of motor vehicle speeds. More specifically, 85th percentile speeds reduced by 4 to 23 mph.</p> <p>Costs: Both speed humps and speed tables cost on average approximately \$2,500 each, with low estimates of about \$1,000 and high estimates of \$6,900 (Costs for Pedestrian and Bicyclist Infrastructure Improvements – FHWA 2013).</p>
Raised Intersection	<ul style="list-style-type: none"> <li>• Flat raised areas covering entire intersections, with ramps on all approaches and often with brick or other textured materials on the flat section and ramps</li> <li>• Sometimes called raised junctions, intersection humps, or plateaus</li> </ul>	<p>Raised crosswalks are approximately \$5,000–\$7,000, depending on drainage conditions and materials used. The cost of a raised intersection is highly dependent on the size of the roads. They can cost from \$25,000 to \$70,000. (FHWA 2016).</p>
Neighborhood Traffic Circle	<ul style="list-style-type: none"> <li>• Raised islands, placed in intersections, around which traffic circulates</li> <li>• Higher speeds allowed (&gt;25mph)</li> <li>• Stop, signal, or give priority to entering vehicle</li> <li>• Require drivers to slow to a speed that allows them to comfortably maneuver around them</li> <li>• Sometimes called intersection islands</li> <li>• Different from roundabouts</li> </ul>	<p>The cost is approximately \$5,000–\$15,000. The cost varies depending on whether the traffic circle is landscaped and/or on an asphalt or concrete street. Traffic circles typically have a service life of 25 years (FHWA 2016).</p>

Potential Traffic Calming Measure	Description	Cost (typical per measure or item)
Roundabout	<ul style="list-style-type: none"> <li>• Circular intersection, without stop signs or traffic lights</li> <li>• Maintain relatively low speeds (&lt;25mph)</li> <li>• Yield at entry</li> <li>• Roundabouts are not traffic circles</li> <li>• Today's roundabouts are not like traditional traffic circles, which are often large, high-speed intersections that require the vehicles traveling in the circle to stop or yield to those entering. This often results in congestion, as well as crashes. Roundabouts are typically smaller, have slower speeds, and make entering vehicles yield to those already in the roundabout.</li> </ul>	<p>The average construction cost of roundabouts is estimated at approximately \$250,000. Roundabouts discussed in this report ranged in cost from \$194,000 to just under \$500,000, depending on their size (or "footprint" and right-of-way acquisitions that were needed) (FHWA 2000).</p>
Chicane	<ul style="list-style-type: none"> <li>• A series of narrowings or curb extensions that alternate from one side of the street to the other forming S-shaped curves</li> <li>• Also called deviations, serpentine, reversing curves, twists, and staggerings</li> </ul>	<p>The cost per unit is approximately as follows:</p> <p>Median: \$8,050            Average: \$9,960            Minimum: \$2,140            Maximum: \$25,730            (Costs for Pedestrian and Bicyclist Infrastructure Improvements – FHWA 2013)</p>

Potential Traffic Calming Measure	Description	Cost (typical per measure or item)
Curb Extension/ Bulbout/Choker	<ul style="list-style-type: none"> <li>• Curb extensions at midblock or intersection corners that narrow a street by extending the sidewalk or widening the planting strip</li> <li>• Can leave the cross section with two narrow lanes or with a single lane</li> <li>• At midblock, sometimes called parallel chokers, angled chokers, twisted chokers, angle points, pinch points, or midblock narrowings</li> <li>• At intersections, sometimes called neckdowns, bulbouts, knuckles, or corner bulges</li> <li>• If marked as a crosswalk, they are also called safe crosses</li> </ul>	<p>Costs can vary depending on drainage, the addition of street furnishings, landscaping, and special paving, and whether utilities must be relocated. The cost to retrofit a four-leg intersection with curb extensions would be approximately \$100,000 (8 X \$12,620).</p> <p>Per unit, however, costs are as follows:</p> <p>Median: \$10,150 Average: \$13,000 Minimum: \$1,070 Maximum: \$41,170</p> <p>(Costs for Pedestrian and Bicyclist Infrastructure Improvements – FHWA 2013)</p>
Center Island Narrowing	<ul style="list-style-type: none"> <li>• Raised islands located along the centerline of a street that narrow the travel lanes at that location</li> <li>• Sometimes called midblock medians, median slow points, or median chokers</li> </ul>	<p>Cost per square foot:</p> <p>Median: \$9.80 Average: \$10.00 Minimum: \$2.28 Maximum: \$26</p> <p>(Costs for Pedestrian and Bicyclist Infrastructure Improvements – FHWA 2013)</p> <p>Cost per island:</p> <p>Median: \$10,460 Average: \$13,520 Minimum: \$2,140 Maximum: \$41,170</p>