In 2014, the number of traffic fatalities in the United States reached its lowest level at 32,744. Unfortunately, since then, the number of fatalities has been increasing each year, and in 2016, traffic related fatalities rose to 37,461 with pedestrian fatalities reaching close to 6,000 and bicycle related fatalities at well over 800.
Across the United States, communities are committing to Vision Zero. In addition to setting a goal of zero traffic deaths and severe injuries, Vision Zero also commits communities to a fundamental shift in how they approach traffic safety. A hallmark of Vision Zero in the United States is the creation of action plans. From mid-sized communities like Fremont, CA and Columbia, MO to big, urban cities like Los Angeles, CA, Boston, MA, and Austin, TX, these action plans are intended to lay the groundwork for the strategies that should move communities from vision to action and help achieve the goal of zero traffic deaths and serious injuries.

As part of its Action Plan to reduce collisions on publicly maintained streets, the City of La Quinta, CA, USA (population 41,000) has been preparing Annual Traffic Safety Reports (ATSRs) each year since 2006. The reports use CrossroadsTM software to identify:

- Intersections with the highest number of intersection collisions;
- Road segments with the highest number of mid-block collisions;
- The locations of all pedestrian collisions and bicycle collisions; and
- The locations of all single vehicle collisions, night time collisions and collisions involving parked vehicles.

The ATSRs propose mitigation measures to reduce collisions where a clear pattern can be identified for which there is an effective countermeasure.

**Implementation of Effective Countermeasures to Reduce Bicycle Collisions**

The City of La Quinta recognized the trend of rapidly rising bicycle collisions shown in Table 1, and in 2015 began a major effort to implement the following countermeasures to reduce bicycle collisions on public streets maintained by the City:

**Lane Diets:** As part of pavement resurfacing projects, on-street bike lanes were provided where they did not previously exist. This was done through narrowing travel lane widths to 10 or 11 feet in order to reduce traffic speeds and provide sufficient pavement to stripe on-street bicycle lanes. The minimum width of the bike lanes are 6 feet as measured from the face of curb. Refer to Figure 1 for an example of a location where lane diets were implemented to provide on-street bike lanes (In the before condition, no striped bicycle lanes existed).

**Video Detection Loops:** The City has been gradually changing detection at the 55 traffic signals it maintains from in ground
Bicycle Signal Timing: Minimum greens were increased for all through and left-turn phases at traffic signals to meet the guidance published in the American Association of State Highway and Transportation Officials’ (AASHTO) Guidelines for the Development of inductance loops to video cameras. As part of that process, detection for bicycles has been provided on all approaches where an on-street striped bike lane is provided.

Bike Legends: Bicycle legends with green colored backgrounds were striped on the approaches of all signalized intersections to provide guidance to bicyclists as to where they should position themselves to be detected and travel through signalized intersections. This improvement has been identified as a best practice in a recent article published in ITE Journal. Refer to Figure 2 for an example of a location where bicycle legends were striped.

Green Paint in High Conflict Areas: In areas where bicycles were anticipated to weave or merge with motorized vehicles, green paint was used to heighten awareness of both drivers and bicyclists to the potential for conflicts. Refer to Figure 3 for an example of a location where green paint was used in a transition area.

Posting Parking Restrictions: No Parking in Bike Lane Signs (R7-9a) have been posted every 550 feet along most of the street with striped on street bike lanes. The project was initiated in 2015 but will be completed in the fall of 2018.

Figure 2. Bicycle Legends

Figure 3. Green Paint for Highlighting Areas of Weaving and Merging Conflicts
Implement an “Educating Road Users About Bicycle Infrastructure” program similar to the ITE award-winning video produced by the City of Edmonton, Alberta, Canada.8

Table 1. Bicycle Collision Trends in the City of La Quinta (2014–2017)*

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Bicycle Collisions</th>
<th>Fatal/Injury</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td>2014</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>2015</td>
<td>13</td>
</tr>
<tr>
<td>After</td>
<td>2016</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>2017</td>
<td>5</td>
</tr>
</tbody>
</table>

* Includes collisions on public streets only

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References


Nazir Lalani, P.E. is the President of Traffex Engineers Inc., a transportation consulting firm in Ventura, CA, USA that provides transportation engineering consulting services to local agencies encompassing traffic operations, work zone traffic control, development review, and improvements for pedestrian and bicycle facilities. Nazir is currently the Contract City Traffic Engineer for the City of La Quinta in Southern California. In 2009, Nazir completed ten years of service with Ventura County, CA, USA as the Deputy Director of the Transportation Department. Nazir has also worked for the Cities of Phoenix, AZ, Lakewood, CO, Ventura, CA, the County of Santa Barbara, CA, and the Greater London Council in England. He is a course instructor and Complete Streets Safety Assessment Studies expert for the Institute of Transportation Studies at University of California, Berkeley. Nazir is a Fellow of ITE.

Kristopher Gunterson is the traffic management analyst for the City of La Quinta, CA, USA. Over the past 10 years, he has developed and implemented programs for traffic signal and street lighting maintenance for the city's 54 intersections. Kristopher has been involved in the design and construction of six major traffic signals, as well many traffic safety related projects. His certifications from the International Municipal Signal Association include; Senior Traffic Signal Technician, Roadway Lighting Technician, and Work Zone Safety. He has been asked to present before the staff of Econolite Control Products, a major developer of traffic signal technology, to provide insight and perspective on daily operations of a traffic signal technician.