Santa Fe

Safety Study

EXECUTIVE SUMMARY

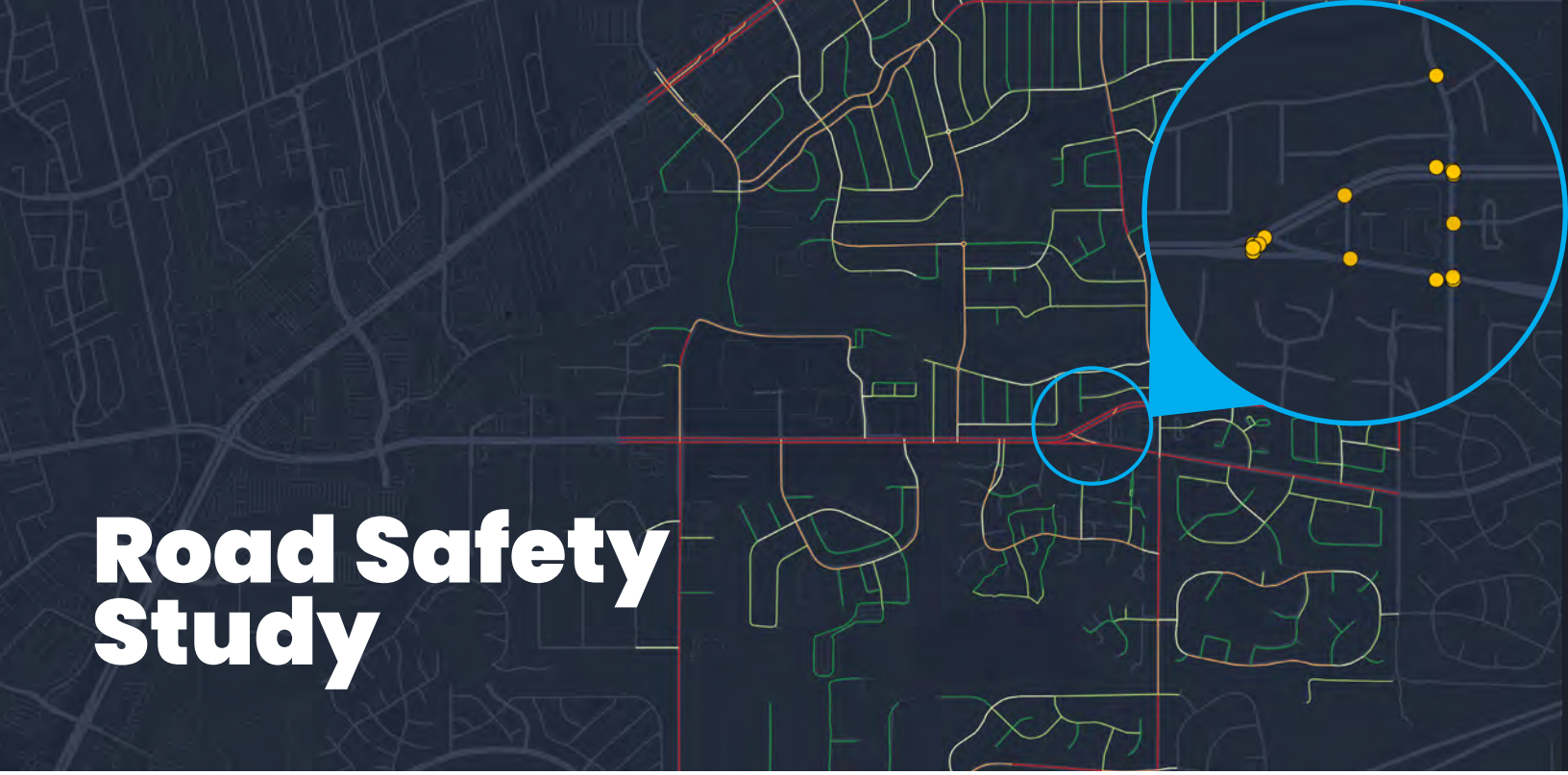
The City of Santa Fe, New Mexico leveraged Urban SDK to evaluate road safety concerns in a two-square-mile study area located south of Cerrillos Road and generally west of Yucca Street. Stakeholders sought to verify residents' concerns about speeding. They also wanted to identify areas on the network where road safety concerns may exist but had not yet been reported.

Officials intended on using the study area as a pilot neighborhood to develop a replicable process for identifying hot spots, as well as evaluating and recommending road safety enhancement tools, mitigation measures, and interventions.

By working with Urban SDK, officials created a systematic and proactive process, rather than a reactive approach, focused on responding to neighborhood complaints.

This study was centered around the Vision Zero road safety concept; a now globally adopted philosophy that all fatalities and serious injuries incurred on the road network are ultimately preventable. A key focus of Vision Zero road safety initiatives is the paramount importance of vehicle speeds in determining the risk to other road users.

Research has clearly demonstrated that faster vehicular traffic increases both the risk and severity of collisions with those vehicles. Therefore it was imperative that road safety interventions be focused around the most effective method of preventing deaths and serious injuries on the road network: reducing vehicular speeds.



Road Safety Study

Methodology

To review and inform road safety conditions within the study area, we analyzed two datasets: vehicle speeds and collision data from each road within the study area. Speed data included: average speed, 85th percentile speed, 95th percentile speed, and travel time (in seconds). Collision data included crash type, severity, cause, and whether pedestrians, cyclists, motorcycles, or heavy trucks were involved. Focus was placed on Vision Zero principles: where injury or fatalities occurred, and collisions involving pedestrians and cyclists.

The datasets were mapped and major areas of concern were identified. Areas with high vehicle speeds, or with a significant density of high-severity collisions or those involving vulnerable road users existed, were cross-referenced with existing conditions. Urban SDK then developed opportunities for road safety improvements, based on industry-standard mitigation measures and Vision Zero best practices, tailored to the existing conditions of each area of the network.

Findings

Cerrillos Road is a high-speed, high-volume arterial road intersected by numerous business driveways. It's also a designated cycling route, with continuous painted bike lanes throughout. There are high vehicle speeds due to the 40 mph speed limit, though the average speed rarely exceeds 32 mph and 85th percentile hovers around 41 mph. Nevertheless, there's a very high rate of collisions (529), including 9 fatalities, 55 involving pedestrians, and 27 with cyclists. This can be partially attributed to the large number of potential conflict points for turning traffic.

Consolidating site accesses and potentially removing left-turn access to stores will reduce number of conflict points and may similarly reduce the number of crashes. Reducing the speed limit to either 35 or 30 mph may decrease the severity of collisions; similarly, as almost 35% of observed collisions on Cerrillos were rear-ends, reduced speed limits may also decrease the number of collisions.

Finally, separating cycling infrastructure — multi-use paths, raised tracks, and/or protected intersections — may increase levels of comfort and safety, both reducing the incidence of cyclist-involved collisions and encouraging uptake in the cycling mode.