



Department Source: City Manager  
To: City Council  
From: City Manager & Staff  
Council Meeting Date: February 18, 2019  
Re: Vision Zero Crash Analysis Team Report

## Executive Summary

Staff has prepared a Vision Zero Crash Analysis Team Report as it relates to work completed by the Vision Zero Crash Analysis Team. Data from the team has been and will continue to be used to guide aspects of work of the Vision Zero Engineering, Education and Enforcement Teams.

## Discussion

This is the first report of work completed by the Vision Zero Crash Analysis Team. The Crash Analysis Team is comprised of: Curtis Perkins, Columbia Police Department; Praveen Edara, P.E., University of Missouri-Columbia; Brad Frazier, Columbia Fire Department; Lawrence Simonson, PedNet Coalition; Jacob Ray, P.E., City of Columbia Public Works Department, Traffic Engineering; Richard Stone, P.E., City of Columbia, City of Columbia Public Works Department.

The Team has been analyzing fatal and disabling injury crashes to provide data and help the Education, Engineering and Enforcement Teams.

The Team reviewed all fatal crashes between 2013 and 2017 (42 total crash reports). Focus was examining crashes for potential commonalities and inspecting them for trends in location or route. The Team also examined information for all disabling injury crashes occurring in 2017 (47 total crashes) to see what kinds of common elements were present in both fatal and disabling injury type crashes. The team also looked for overrepresentation of any crash types such as left-turn angle crashes, pedestrian crashes, motorcycle crashes, etc.

Information examined by the Crash Analysis Team is being utilized by the Education, Engineering and Enforcement teams for their initiatives. Additional work by the Crash Analysis Team will continue to be shared with the other teams.

Key information gathered by the Team includes:

1. Motorcycle crashes are a significantly concerning issue with respect to fatal crashes in Columbia. The types of motorcycle crashes were not consistent and varied from one location to another.
2. Left turn related maneuvers are prevalent in both injury and fatal crashes.
3. Run off the road and lane departure collisions were significant.
4. Alcohol or drug impairment was a contributing factor in approximately 40% of fatal crashes.
5. A majority of major collisions involved persons with multiple violations (excessive speed, improperly licensed, unrestrained, etc.) The team will spend time over the next year to



try and see how those factors are related and plan to work with the Education team regarding potential future options to reduce or address those issues.

6. Crash analysis confirmed that vulnerable road users (cyclists and pedestrians) collisions were concerning given the likely limited volume of those types of travel modes. The Education and Engineering teams will be using information from the Crash Team in their separate initiatives.
7. Route B/Paris Road should be examined to see if systematic improvements could be made to lower the risk of fatal and injury crashes. The Crash Analysis Team recommended that the first Road Safety Audit (RSA) should be performed on Route B/Paris Road between College Avenue and Brown Station Road. The Engineering Team and Vision Team Leads agreed with this analysis and are in the process of pursuing the RSA along Route B. The plan is for the RSA to be pursued in 2019.
8. Based on analysis, three other routes: Rangeline St., Business Loop and College Avenue are routes that should be considered for targeted analysis of safety improvements. The fatal and serious injury collisions along these routes had patterns that were similar enough that systematic improvements might help lower collision or severity of collision risks. The Engineering team will utilize the information for additional analysis and if possible formulate recommendations for potential improvements. These routes will also be considered for Road Safety Audits moving forward.
9. Very detailed information is typically available for fatal crashes. Detailed information from disabling injury crashes is not as reliable or as extensive. There are some differences in how disabling injury crashes are reported by officers examining a collision. There also is a variability in what constitutes a disabling injury. Efforts are being taken at the state and federal level to provide better training regarding baseline information for types of injuries. The Team plans to continue to work with the Education and Enforcement teams and state officials to ensure that as good of data as is practicable is available for analysis. This is definitely something that needs to be improved by working with local law enforcement as part of the Vision Zero process. It is likely that several years will be required to refine the reporting process due to the complexity of the issue.
10. Generally, some similar patterns existed between fatal and injury collisions. However, there were some differences. More work will be needed to better understand what is similar and why. Again, improved data may be needed in the long term.

One factor that will be examined more over the next year (and beyond) will be speed information. Speeds 15 MPH in excess of the speed limit were contributing factors in approximately 25% of fatal crashes. There was limited data regarding likely speeds for injury collisions. While speed was attributed as a contributing factor in less than half of the injury collisions (too fast for conditions or exceeding the speed limit), it is not known whether or how much the travel speed contributed to those and other injuries. Again, data reporting for injury collisions could be improved.

Another factor for examination over the next year will be the impact of use or lack of use of seat belts. The statewide pattern is that seat belt use has been typically approximately 75 to 85% in Missouri over the last decade. Depending on the year, more than half to about two-



# City of Columbia

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thirds of fatalities include non-seat belt use occupants. Therefore, those not using seatbelts are significantly over represented in fatal crashes. There is limited current high confidence level local data regarding percentage of seat belt use within Columbia. A definitive statement can't yet be made regarding seat belt use or potential over representation of non-seat belt use occupants in fatal and injury collisions locally. However, fatal and injury crashes for Columbia appear to mirror state wide trends in this respect.

Included with this report is summary crash information along the Route B, Rangeline Street, Business Loop 70 and College Avenue corridors. Also included is summary information of the 2017 serious injury crashes and 2013-2017 fatal crash information.

The Crash Analysis Team will continue to review crashes moving forward and will work to provide better data and information for the Engineering, Enforcement and Education teams.

## Fiscal Impact

Short-Term Impact: \$30,000-\$40,000 for RSA funded from existing Vision Zero and Traffic Safety funding.

Long-Term Impact: We intend to complete one RSA per year. Funding is undecided.

## Strategic & Comprehensive Plan Impact

### Strategic Plan Impacts:

Primary Impact: Public Safety, Secondary Impact: Operational Excellence, Tertiary Impact: Tertiary

### Comprehensive Plan Impacts:

Primary Impact: Livable & Sustainable Communities, Secondary Impact: Mobility, Connectivity, and Accessibility, Tertiary Impact: Tertiary

## Legislative History

Date	Action
05/15/2017	REP37-17: City of Columbia Vision Zero Action Plan 2017-2020.
12/19/2016	PR178-16: Adopting a "Vision Zero" Policy; setting a goal of eliminating traffic deaths and serious injuries in Columbia by 2030. The vote on PR178-16, as amended, was recorded as follows: VOTING YES: TRAPP, SKALA, THOMAS, NAUSER, PETERS, TREECE, RUFFIN). VOTING NO: NO ONE. Policy resolution declared adopted.

## Suggested Council Action

This report is informational only.