

Section 5

Improving Roadway Safety

A successful improvement of a roadway safety requires collaborative efforts from the City, the community, and individuals. It involves road users, vehicles, infrastructure, technology and emergency response. Roadway safety is complex, and both big and small initiatives are important.

The data in this report is used across a broad spectrum of efforts within the City that include engineering, education, encouragement, enforcement, and evaluation. Some of the strategies are site specific and/or are identified to mitigate particular trends. Others, especially education-related efforts, are applicable across the City and address more behavioral issues.

Engineering

Low Cost Improvements

Sometimes there are minor, inexpensive solutions that can be funded with maintenance budgets that provide a high benefit to cost ratio. This can include tree trimming for visibility, implementation of flashing yellow arrows, changes to striping to create center turn lanes, signal timing adjustments, etc.

In the past year, staff has focused on the implementation of two types of low cost improvements:

- Flashing Yellow Arrow (FYA) that run protected-only by time of day, and
- Leading Pedestrian Intervals (LPIs).

Flashing Yellow Arrows involve a four-section signal head that can allow a permissive left turn, as well as protected-only left turn. These can be varied by time of day. At some intersections, the left turns are allowed to run permissive most of the day, but restricted to protected-only during the peak hours when end-of-phase left turn crashes tend to occur. An example of a location recently implemented is Snow Mesa and Harmony. The intersection will be monitored in the coming year to determine whether safety improvements have been realized.

Leading Pedestrian Intervals involve the walk light for pedestrians coming on a few seconds before the adjacent green light for vehicles. This allows the pedestrian a 'head start' in crossing the road which improves their visibility to motorists. The intersection of College and Conifer is an example.

Capital Projects

The Capital Improvement Projects list uses crash history as one criterion for prioritization. In addition, the Engineering Department's Arterial Intersection Prioritization Study weighs crash history heavily in their identification of potential projects. Subsequently, projects that move forward use detailed crash analysis to develop improvements targeted at specific crash types and patterns. Recently completed and upcoming projects include:

- Timberline / Prospect: Construction of additional auxiliary turn lanes and an eastbound to southbound 'free right'.



- Shields / Vine: replacement of the signal with a single lane roundabout
- College / Prospect: intersection re-built to add double left turns and pedestrian 'pork chop' islands
- Shields / Elizabeth: intersection re-built to add pedestrian/bike underpass, double left turns.
- College / Horsetooth: intersection to be re-built in 2018 to add double left turns and pedestrian 'pork chop' islands.

These projects will be monitored in coming years for their safety impact.

Shields and Elizabeth:

This capital project was completed in 2017 and added a grade separated underpass for bikes and pedestrians, an additional approach lane eastbound, lengthened left turn auxiliary lane northbound and signal timing adjustments. There has been a distinct benefit in terms of operations, efficiency and emissions, but there has also been a safety benefit.

Shields / Elizabeth

Before: 35.3 crashes/year

After: 25.3 crashes/year

Result: **28% reduction in crashes**

Safety Grants

The City's Traffic Operations Department collaborated with the Engineering Department to apply for Federal Highway Safety Improvement Program (HSIP) funding. Utilizing crash data and a proposal for improvements, funds were granted for improvements to the following intersections:

- College Avenue and Horsetooth Road intersection improvements: \$1,000,000. This project will be built in 2018.
- College Avenue and Trilby intersection improvements: \$2,250,000. Design has begun on this project and is expected to be built in the next few years.

\$ 3.25 million

Federal safety funding received for two Fort Collins intersection improvements projects

Multi-Modal and Planning Projects

The FC Moves department utilizes crash data in developing a variety of planning documents (area plans and bike, pedestrian plans) and specific efforts such as bike pilot projects are supported through crash analysis. An example is the Multberry Protected Bike Lane project to be built in 2018.

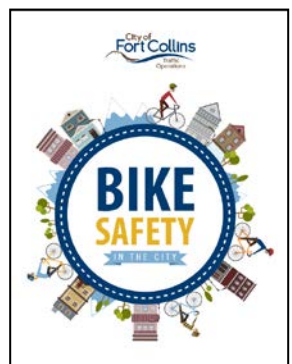
The update of the Transportation Master Plan In 2017 and 2018 will also include safety elements.

Education and Encouragement

Education is an important component to a safer transportation system. This includes a broad range of efforts from staff in several departments, and data is used to inform specific education campaigns.

Neighborhood Traffic Mitigation Program

Traffic in neighborhoods can affect the quality of life of residents and the traveling public. With the goal of calmer streets, the program uses a variety of data, including crash data to identify potential changes. In 2017, the program received 234 total requests and over 100 work orders were generated. This included 101 deployments of temporary radar speed signs, one neighborhood with new permanent radar speed displays, and seven neighborhoods with new installations of speed humps.



101 locations where temporary radar speed signs were deployed.

7 neighborhoods received speed humps.

School Transportation (Including Safe Routes to School)

The department works closely with Poudre School District on all elements of transportation in the vicinity of about 50 schools. This includes crash data review and identification of potential changes, especially at congested high school locations.

The City also has a comprehensive Safe Routes to School (SRTS) Program that reaches more than 10,000 students each year at about two dozen schools. SRTS staff also pursues grants for construction of bike and pedestrian projects.

Bike and Pedestrian Safety Town

The FC Moves Department received funding and worked with numerous partners to construct a “miniature city” complete with streets, bike lanes, and traffic signs. Constructed in a church parking lot, families, adults, children, and safety classes use the town to practice safe cycling and walking skills.

Bike Classes (including Bike Friendly Driver Program)

FC Moves oversees a number of cycling classes, providing more than 100 total classes each year. The Bicycle Friendly Driver program is a 90 minute interactive class, taught by Bicycle Ambassadors aimed at educating all drivers on the best and safest ways to share the road with people on bicycles. The program was developed by FC Bikes in collaboration with Bike Fort Collins. The curriculum is based heavily on bike crash data and has reached more than 3,500 participants since its launch in 2015.

Tours and Presentations

Staff is available to provide safety presentations to interested groups throughout the year. This includes tours that occur every other month, service club presentations (several per year), and other specialized safety presentations (such as work zone efforts).

Enforcement

Police Services is the lead entity for enforcement, and can utilize crash data to identify specific types or locations of crashes to target for enhanced presence and/or enforcement.

DUI Enforcement

Fort Collins Police Services undertakes targeted DUI campaigns and sobriety checkpoints to support roadway safety. Often done in partnership with other agencies, these are efforts to reduce incidents of intoxicated and impaired motorists being involved in collisions. They also provide an opportunity at increasing community awareness of consequences of driving impaired.

Bicycle Traffic Citation Course

In partnership with the City of Fort Collins Municipal Court, the FC Bikes Bicycle Ambassador Program offers a Bicycle Traffic Citation Course for individuals who have received citations related to cycling. This alternative sentencing option teaches cycling laws and offers tips for safe cycling.



Community Impact Days

Fort Collins Police Services has recently begun Community Impact Days to focus on traffic enforcement and reduce dangerous driving behaviors. Police Services works with Traffic Operations to identify locations for targeted enforcement based on crash data.

Bike Safety Week

Bike safety week is a collaborative effort between FC Bikes and Fort Collins Police Services to make roads safer for everyone. Typically held in the spring and again in the fall when school starts, cyclists and motorists are encouraged to Ride Smart and Drive Smart through targeted education and enforcement by both Police Officers and Bicycle Ambassadors.

Evaluation - Ongoing Monitoring

Finally, a key for the roadway safety program is to continue ongoing monitoring of the overall transportation system, trends, patterns as well as specific locations. Efforts to ensure data quality and completeness, robust analysis, and systematic use of the information in all aspects of roadway safety strategies will continue. The result of evaluation helps to determine the effect of the various safety projects, and identify the types of projects that are most beneficial.