

2017 Quarterly Report (July-September)

SAFETY

Rural Roads - Several locations on rural roadways around the state will undergo safety improvements paid for with federal funds administered by CDOT through the High Risk Rural Roads (HRRR) Special Rule, which requires states like Colorado with high fatality rates on rural roads to allocate a portion of federal Highway Safety Improvement Program (HSIP) funds to rural highway safety.

In Region 1, shoulder widening and intersection safety improvements will be constructed in rural Douglas County. The Pueblo West area of Region 2 also will see intersection and school zone safety improvements. Shoulder, embankment and guardrail improvements will help make Mesa and Archuleta County roads on the Western Slope safer.



Cortez Cover - This photo of downtown Cortez graces the cover of the Cortez traffic safety study.

Small Towns and Cities - Traffic engineering safety studies were recently completed for five smaller Colorado cities and towns: Cortez, Gunnison, Burlington, Manitou Springs, and Elizabeth. These safety reports, funded by CDOT and prepared by a leading traffic engineering firm (Stolfus & Associates, Inc.), provide recommendations to local agencies on ways they can improve traffic safety and operations in their jurisdictions through low-cost projects such as upgrading traffic signs,

modifying signals, adjusting pavement striping, and making minor geometric changes. The cities and towns that requested the reports have uniformly expressed appreciation for the professional guidance and options for improving their traffic safety.

Motorcyclist Safety - Motorcyclist safety is one of the emphasis areas of the 2014 *Strategic Highway Safety Plan*. Engineering safety improvements focusing on motorcycles will be undertaken on a segment of Highway 67 in Douglas County. This scenic and popular riding route experiences occasional motorcycle crashes. Proposed signing and geometric changes on Highway 67 are expected to improve safety for motorists as well.



Highway 67 - Safety improvements benefitting motorcyclists and motorists will be made on this stretch of highway. (GoogleEarth photo)

Heat Was On - Law enforcement agencies across the state cited 1,184 impaired drivers during the Colorado Department of Transportation's (CDOT) *The Heat Is On* Labor Day driving under the influence (DUI) enforcement period, Aug. 18-Sept. 5. This number represents an increase from the same period last year, which reported 964 DUI arrests.

"Summer is one of the busiest seasons for law enforcement, especially as it relates to DUI arrests and impaired fatalities," said Darrell Lingk, Director of the Office of Transportation Safety at CDOT. "While summer is coming to an end, the emphasis on preventing impaired driving is still a top priority across the state as fall approaches."

Among the 121 agencies that participated in the enforcement, Colorado Springs Police Department (106 arrests), Aurora Police Department (93 arrests) and Denver Police Department (88 arrests) recorded the highest arrest totals. In addition, the Colorado State Patrol made 161 arrests. Visit bit.ly/HIOArrests to access all arrest results statewide. Arrest data can be sorted by county, law enforcement agency and enforcement period.

Personal Breathalyzers - To help prevent impaired driving, CDOT launched an innovative new statewide effort as part of *The Heat Is On* to equip Coloradans with personal breathalyzers. The campaign, *Before You Go, Know*, urges people to check their blood alcohol content (BAC) to confirm they are sober before they get behind the wheel. CDOT partnered with BACtrack, a leading personal breathalyzer company, to offer 20 percent off breathalyzer products through the end of September.

MOBILITY



Congested Corridor – C-470 shown here is one of the nation’s most congested corridors at certain times of the day. Two recent financial milestones will provide two-thirds of the needed funds to expand the corridor. (CDOT photo courtesy of Shahn Sederberg)

Major Milestones - One of the most congested corridors in the nation, C-470, will be expanded, partly as a result of the High Performance Transportation Enterprise (HPTE) and Colorado Department of Transportation (CDOT) achieving these two major milestones when HPTE closed on:

- \$161.7 million in revenue bonds for the project, the first bonds ever issued directly by HPTE.
- \$106.9 million federal Transportation Infrastructure Finance and Innovation Act (TIFIA) loan supporting the project.

Combined, the issuance of the bonds in June and the receipt of the federal loan in September provides more than two-thirds of the funding needed for this important project. The other third will come from state and local contributions. The project is expected to be completed from mid- to late-2019.

The expansion project for the corridor in the southwest part of the Denver metro area will add new express lanes and improve general purposes lanes between I-25 and Wadsworth. The \$106.9 million TIFIA loan, provided by the U.S. Department of Transportation’s Build America Bureau, also provides attractive interest rates and repayment terms for the project, including:

- HPTE has 35 years after the project is open to repay the loan;
- Interest payments do not begin until five years after the project is open;
- The loan is subordinate to the bonds; and
- HPTE can prepay the loan at any time without a penalty.

Strategic Plan for Biking and Walking to School - CDOT recently completed a [2017-2022 Safe Routes to School Strategic Plan](#) to guide the department's efforts in increasing the number of children bicycling and walking to and from school. The more children who engage in such active transportation, the healthier they are. The fewer children who are dropped off and picked up from school by private vehicles, the less congestion around schools and the cleaner the air.



School Bikers – Children bicycle to school in a group, one of many biking and walking activities the CDOT Safe Routes to School tries to encourage. (Photo courtesy of Colorado Safe Routes to Schools)

Goals for the Colorado Safe Routes to School (CSRTS) program as outlined in the plan are:

- Demonstrate that more children are walking and bicycling to and from school as a result of the CSRTS.
- Establish a user-friendly grant-making approach that makes it easier for more agencies to apply and compete for funding.
- Raise awareness of the effectiveness of CSRTS in getting more children walking and bicycling to and from school.
- Influence policy decisions that promote and support more children walking and bicycling to and from school.
- Develop capacities of communities to launch, maintain, and sustain Safe Routes to School initiatives.

The CSRTS provides training and resources to support communities' efforts to enable and encourage more children to walk and bicycle to and from school. Grants to assist cities, towns, counties, school districts, and individual schools are distributed through a statewide competitive process. The CSRTS also has curricula, training, and technical assistance to help municipalities and schools build strong programs in their communities. Since 2005, CSRTS has distributed \$20.8 million through 226 grants to schools, school districts, cities, towns, and counties. Safe Routes to School programs have been implemented in 61 percent of Colorado counties in 579 schools across the state, and continue to grow.

Moving Faster - The I-70 Mountain Express Lane, an upgraded shoulder lane open at peak periods, had a total use of 223,780 vehicles over the 70 days it was open through Oct. 1.

Those who drove in the express lane during peak hours were able to move at a mean speed of 60 mph compared to drivers of the general purpose lanes, who moved at a mean speed of 50 mph.



The express lanes captured 8.56 percent of the total traffic in 2017, compared to the 6 percent of total traffic captured in 2016. This increase occurred despite an unusually late start of the 2017 snow season and unusually warm temperatures in the last half of March. The doubling of use of the express lane in the winter of 2017 over 2016 - from 4 percent of total traffic to 8 percent - could be a reflection of people having greater confidence they could return from the slopes in a reasonable time.

High Volume, Higher Speeds - The I-70 Mountain Express Lane is the lane on the other side of the heavy white line. Traffic in the lane moves at higher speeds than the rest of the traffic during high-volume times. (CDOT photo)

The eastbound I-70 Mountain Express lane is usually open on the weekends, holidays, and other days and times of high traffic volume for a 13-mile stretch from Empire Junction to Idaho Springs. Tolls are \$5 on Saturdays and \$6 on Sundays to those who purchase transponders or stickers through the [E-470 website](#) and double that for those who do not have transponders or stickers. The tolls fluctuate according to demand, however, and can be higher or lower. The shoulder was upgraded at a cost of \$72 million to become another travel lane during peak times. Benefits of the express lane include:

- Keeps traffic moving because prices fall to encourage drivers to use the lane and rise as the lane reaches capacity.
- Reduces travel time by nearly half from the Eisenhower/Johnson Memorial Tunnels to the top of Floyd Hill, resulting in an average 30-minute time savings.
- Provides drivers with the choice of a new, more reliable travel lane.
- Implements an operational solution by using the shoulder as a third express lane during peak hours.
- Enhances recent Twin Tunnels (Veterans Memorial Tunnels) improvements.
- Allows for faster speeds in all lanes, thus decreasing overall travel time.

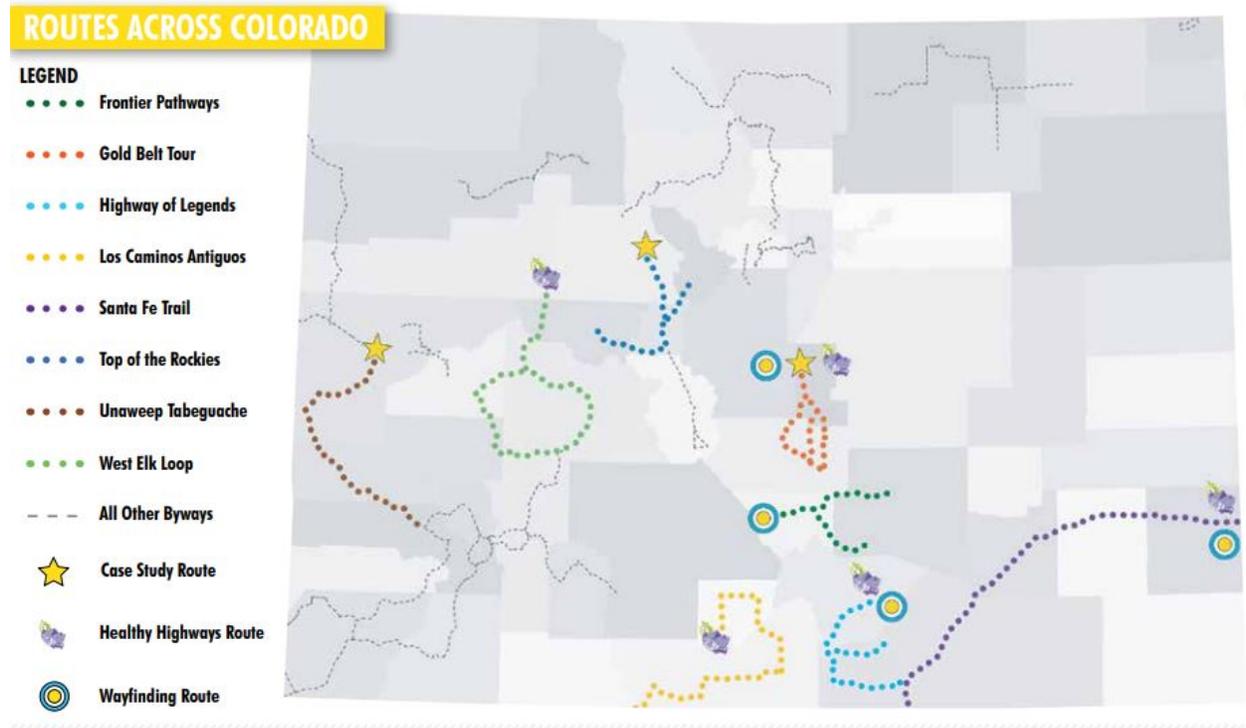
ECONOMIC VITALITY

Scenic Byways Analysis Update - On Aug. 22, CDOT surveyed a small sample of visitors to Colorado's 26 Scenic Byways to better understand usage of the byways and to gather more accurate visitor spending data on the impact of the byways on local economies.

The surveys were sent to the 480 people who requested CDOT Scenic Byways maps between January and May of 2017. These were among the major findings from the 94 completed surveys (a 19.58 percent response rate):

- San Juan Skyway, Trail Ridge Road, Peak to Peak, and Collegiate Peaks are the most popular byways.
- Eighty-six percent of the 94 respondents said they planned to travel on a byway or a byway was their main destination.
- Seventy-five percent of the groups had two adults, 70 percent stayed overnight, 70 percent were more than 50 years old, 83 percent had no children, and 57 percent had household incomes of more than \$75,000.
- The groups originated mostly in Colorado and east of Colorado. Not many came from the Western states.
- Visitors reported spending a per person per day average of \$97.39 on accommodations, \$47.09 on food and beverages, \$37.38 on transportation, \$25.30 on retail and services, and \$23.51 on recreation and entertainment.

While the first goal of better understanding usage of Scenic Byways was accomplished, a more representative sample needs to be obtained to collect usable visitor spending estimates. Younger people who are more likely to get maps and information from the website rather than ask for such information by telephone likely were underrepresented in the survey. CDOT plans to send the survey twice a year to the list of people who request the Byways and Bicycle Map. In hopes of broadening the sample, the survey also will be distributed through the [CDOT Scenic Byways webpage](#).



Scenic Byways - The San Juan Skyway, Trail Ridge Road, Peak to Peak, and Collegiate Peaks are the most visited of Colorado's 26 byways. Ways to measure the economic impact of each the byways on their local economies are being refined. (Map is from the Strategic Plan for the Colorado Scenic and Historic Byways Commission, published in January 2017)

MAINTENANCE

Preservation Focus -The Transportation Commission's \$10 million program for maintenance preservation work for the period April 2017-June 2018 is making a dent in the maintenance backlog. Fifty-three projects are under way, with 16 of the projects carried out by CDOT maintenance staff. The Division of Highway Maintenance in partnership with Pavement Management Program administers the program.

According to a September 2017 update, 733 lane miles have been scheduled for treatment with either chip seal or crack seal, and 140 miles had been completed. The 140 miles that have been completed were carried out by CDOT crews in CDOT Engineering Region 2 (Pueblo), and in CDOT Engineering Region 3 (Grand Junction).

Chip seal combines one or more layers of asphalt with one or more layers of fine aggregate, and crack seal is sealing pavement cracks with flexible rubberized asphalt. The rubberized asphalt bonds to the crack walls and moves with the pavement. Both chip seal and crack seal make pavements last longer.



Crack Sealing - Workers seal cracks on Highway 7 to help preserve the pavement. (CDOT photo)

Model Match - The Surface Treatment Program finished Fiscal Year (FY) 2017 with an 88.6 percent match between bid projects and recommendations from the Pavement Management modeling software, surpassing the CDOT program goal to achieve an 80 percent match between bid projects and model recommendations.

CDOT's asset management models, including the Pavement Management model, are built to identify the most cost-effective investments to preserve assets. When CDOT delivers projects that match model recommendations, the taxpayers know that CDOT is making wise investment decisions.

Back to Work - Recently incarcerated persons have been working on bridge preservation projects for the CDOT Division of Highway Maintenance in CDOT Region 1, which covers the Denver metro area. Work began May 15. As of Sept. 1, the crews had maintained 20 CDOT structures for a cost of about \$84,000. The work performed ranges from washing/rinsing to maintaining all bridge components.

The project of employing recently incarcerated persons was funded for \$260,000 a year for the next four years. Under the project, the Governor's Office contracts with the [Center for Employment Opportunities](#) to provide former prisoners with job training and the necessary skills to be productive.

While the former prisoners are working primarily on bridges, they're also picking up litter, removing clutter left behind by homeless persons, cleaning off graffiti, controlling vegetation, and cleaning vehicles.



Slope Cleaning – A crew of formerly incarcerated prisoners cleans up the slope paving on one of the bridges in CDOT Region 1 in the Denver metro area. (Photo courtesy of CDOT Division of Highway Maintenance)