



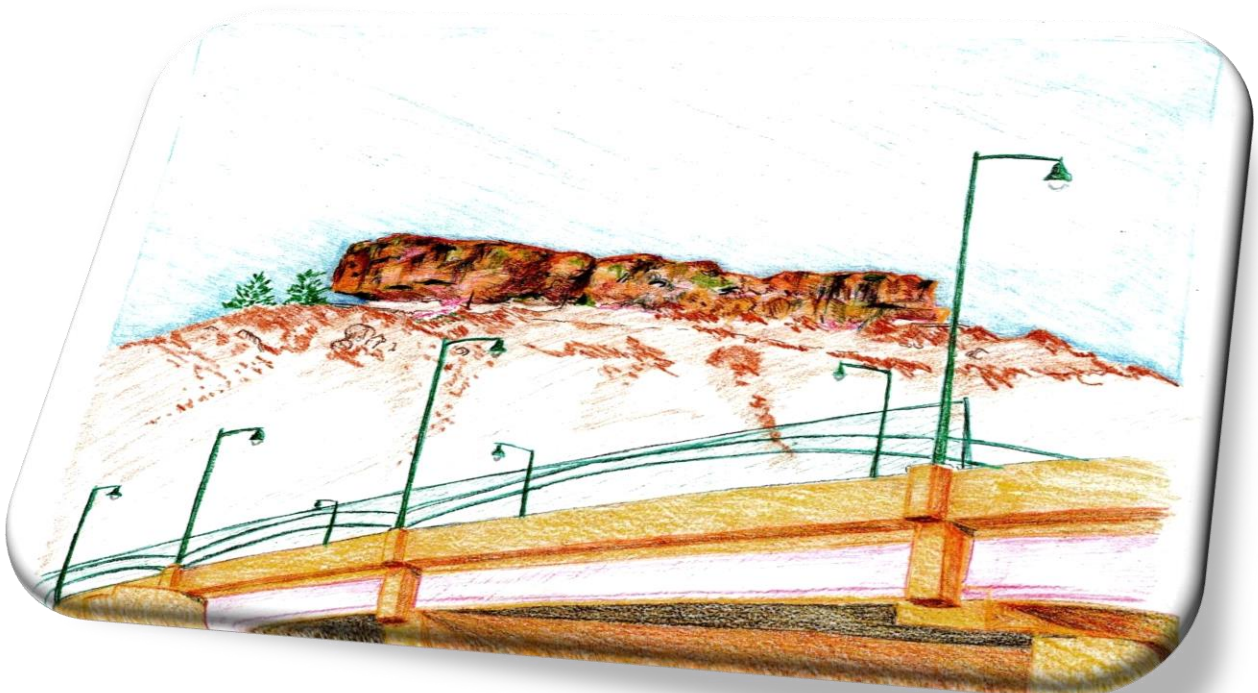
The Public Works Department operates under the CAN DO philosophy
- We are committed to doing the job right with a positive attitude while staying dedicated to meeting the needs of our Town values and continually searching for new opportunities to improve.

PUBLIC WORKS DEPARTMENT

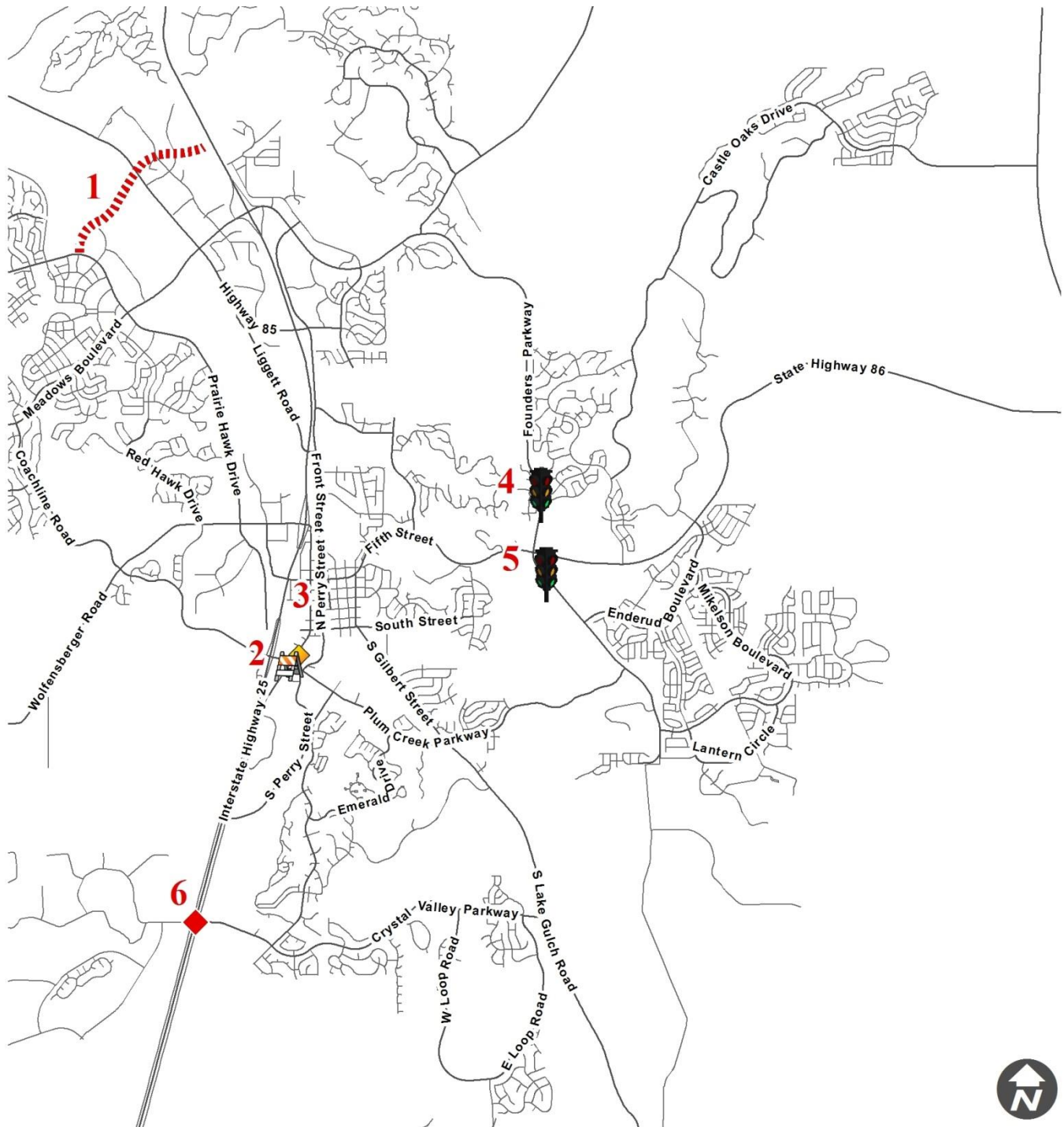
Monthly Report – February 2016

Our Mission: To provide outstanding service, safety and support for transportation infrastructure and maintenance.

“CAN DO”



CAPITAL PROJECTS



1. North Meadows Drive Extension Project
2. Plum Creek Pkwy Intersection Improvements
3. Downtown Alley Rehabilitation
4. Traffic Signal at Black Pine Drive/Copper Cloud Drive
5. Traffic Signal at Ridge Road/King Soopers Entrance
6. Crystal Valley Parkway/Dawson Ridge/I-25 Interchange

1. **North Meadows Drive Extension Project** - The Town's transportation project!! The following is a summary of the construction activities that took place during the month of February:

- Excavation and construction of I-25 on and off ramps and roadway
- I-25 cast-in-place and precast panel wall construction
- US 85 on-and-off ramp roadway construction (asphalt and concrete paving)
- Roadway construction between I-25 & US 85 (asphalt pavement and curb & gutter)
- Concrete barrier on US 85 bridge structure
- Installation of light standards on both US 85 & I-25 ramps and at roundabout between I-25 and US 85

Traffic impacts to the traveling public:

- Castlegate Drive North from US 85 to Castlegate Drive West is closed and will remain closed until the summer 2016.
- Traffic alignment lane shifts are present in the current configuration on US 85; please use caution and follow the posted speed limits.
- The new Phase 2 traffic configuration on I-25 has no shoulders and narrower lanes; please use caution and follow the posted speed limits.

Phase: Construction Budget: 2016 - \$9.5M Construction Completion Date: Summer 2016.



Light Standard Installation on Southbound US 85 On Ramp

2. **Plum Creek Parkway Intersection Improvements at Wilcox & Perry to I-25** – This improvement project will consist of the following components:

- Remove the dip at the intersection of Wilcox Street and Plum Creek Parkway (located on the east side of Wilcox Street).
- Reconfigure the above intersection to have two northbound left turn lanes from Wilcox Street to Plum Creek Parkway. In addition, the eastbound approach will have a free right turn lane onto southbound Wilcox and the westbound approach will have a dedicated right turn lane onto northbound Wilcox.
- Add a southbound free right turn lane from Perry Street to Plum Creek Parkway.
- Add a westbound right turn lane from Plum Creek Parkway to northbound I-25.

Phase: Design - Due to needed approvals from CDOT for the proposed improvements in the

I-25 right-of-way, the project has been separated into two separate plan sets. The project engineer consultant, Hartwig and Associates, has submitted 100% plans for both plan sets. CDOT has sent a recommendation of concurrence to FHWA for the Minor Interchange Modification Request (MIMR). The project will be advertised for bid in early March when FHWA provides approval/concurrence of the MIMR. **Budget: \$345,000 Projected Construction Completion: Summer 2016**

3. **Downtown Alley Rehabilitation** – The Town has been awarded two grants to improve accessibility in public alleys within the downtown area. Public Works and Development Services have received direction from Town Council and will plan for the reconstruction of four alley segments. Three of the alleys are located from 1st Street to Briscoe Street between Wilcox & East Plum Creek; one alley is located north of 7th Street between Wilcox & Perry. The design services contract has been awarded to Bohannon Huston, Inc. (“BHI”). **Phase: Design** – Construction plans are 100% complete for the project. Western States Land Services, Inc. has been retained to acquire two storm water easements to complete the plans. Public Works has advertised the project for bid, with the bid opening scheduled for March 10. **Budget: Grants: \$202,000; Public Works: \$115,000; Utilities Department: \$45,000 - Total: \$362,000 Projected Construction Completion: Summer 2016**

4& 5. **Intersection Signalization Projects** - This project will complete the installation of two new traffic signals; one at the intersection of Black Pine Drive/Copper Cloud Drive/Founders Parkway; and one at Ridge Road/King Soopers Entrance. **Phase: Design** – Staff has submitted comments back to Muller Engineering based on the 95% plans. With comments being pretty minimal, it is expected that there will be a quick turnaround for the 100% plans and review. To ensure that the manufacturers can meet the CDOT pole specifications as well as delivery timeframe, staff has sent out a request for qualifications to pole manufacturers.

Based on the current warrant study for the Black Pine/ Copper Cloud and Founders Parkway intersection, CDOT has approved the need for a traffic signal. With the final plan set almost completed and pole information confirmed, staff will advertise for the project later this month to obtain a construction contractor. Construction for these signals will break ground for construction in spring/ summer. **Budget: \$460,000 Projected Construction Completion: Fall 2016.**

6. **Crystal Valley Parkway/Dawson Ridge/I-25 (CVDR) Interchange – Environmental Assessment Update** - An update of the CVDR Interchange Environmental Assessment (EA) will be necessary as part of the approval process to construct the interchange. The present EA was completed in 2004. Based on discussions with CDOT, all sections of the 2004 EA must be updated as necessary to meet current Federal requirements. **Phase: Planning** - The EA update for a phased interchange is presently on hold. FHWA representatives stated interchange phasing is not consistent with AASHTO policy and is not receptive to phasing the construction of the interchange. The Town may advance the project with acquisitions of right-of-way needed for the project. Public Works is also analyzing other improvement concepts that would provide alternate routes for the Heckendorf/Crystal Valley Ranch community. Public Works is requesting information from CDOT and the Public Utilities Commission to determine what is necessary to advance plans for the alternate route scenarios. **Budget: \$250,000 (Development Escrow Account)**

Traffic Signal System Upgrades (Phase 1) – This project is the first step in implementing the system improvements that were initially identified as part of the October 2013 Signal System Evaluation study. The three main components of the Phase 1 project are a central communications upgrade, a central software upgrade that manages the signal system, and individual intersection traffic signal controller upgrades. **Phase: Construction** – Dillie & Kuhn began splicing fiber optic cable along the Town’s traffic signal corridors. They plan to have the splicing



completed by early March so WL Contractors can establish communication which means that the fiber optic communication will be completed around mid-March.

The Town has purchased fifteen Intuicom radios which will be part of the upgraded communication network. Intuicom will perform a site survey in mid-March to determine radio functionality at certain locations, and the need for repeaters (two radios at a single location). Staff began programming the Cobalt controllers purchased at the end of the fiscal year and installing them at various intersections.



Staff has finished evaluating the RFP's received for the traffic signal software upgrade. We are awaiting to have the IGA in place with CDOT within the next few days before announcing our selection.

In a joint effort with the Fire Department, staff is in the process of reviewing the possibility of removing traffic signal nighttime flash operation throughout the Town. The nighttime flash operation disables the fire preemption equipment at the traffic signal which means the Fire Department is experiencing an increased emergency response time. If removed, we would be running a timing plan that will not cause additional delay to drivers and pedestrians beyond what is currently experienced with nighttime flash. A decision and necessary announcement should be made in March. **Phase 1 Budget: \$700,000 Construction Completion: Spring 2016**

Traffic Signal System Upgrades (Phase 2) - Components included as part of Phase 2 of this project include battery back-up systems at all Town signals, upgraded vehicle detection systems that can bring video feeds back to the traffic operations center and a communication links to the CDOT signals in Town. This project is expected to kick-off next month. **Phase 2 Budget: \$400,000 Construction Completion: Winter 2016**

ENGINEERING DIVISION

2016 Pavement Maintenance Program (PMP) - All five PMP contract documents have been prepared and signed by the proposed contractors. Staff will present these contracts along with corresponding resolutions to the Public Works Commission on March 7 for their recommendation to Town Council at the March 15 Council meeting.

Contracts under consideration this year are:

- Asphalt Patching, Overlay and Reconstruction Project
- Curb, Gutter, Sidewalk and Miscellaneous Concrete Project
- Slurry Seal Project
- Concrete Restoration Project
- Mikelson Boulevard Reconstruction Project

Staff is working with the neighborhood HOA's to attend their March meetings. These meetings give staff the opportunity to communicate to residents within the north PMP area on the proposed treatments for their street as well as their neighborhood. An Open House is also planned for the downtown area work and will provide staff the opportunity to brief residents and businesses on the maintenance activities, and schedules including night work pending Council approval.





The PMP team is beginning to work on condition ratings of streets within the East PMP area and the primary street network. Condition rating is the evaluation of asphalt or concrete pavement which applies a rated score and is utilized by the Town's pavement management software to help determine the proper pavement treatment along with staff recommendations.

2016 Facilities Parking Lot Improvement Program – Staff has verified all bid documents and are recommending award of this contract to PLM Asphalt & Concrete, Inc. Construction is anticipated to begin last August. This contract will see needed improvements to eight (8) Town facility parking lots as follows:

- Founders Village Fire Station will receive asphalt patching, a full asphalt seal coat, and concrete pavement joint sealing.
- Crowfoot Valley Fire Station will receive asphalt patching, a full asphalt seal coat, concrete repairs, and concrete pavement joint sealing.
- Butterfield Park will receive asphalt patching, a full asphalt seal coat, concrete repair, and concrete pavement joint sealing.
- Coachline Trail Head Parking lot will receive a full asphalt seal coat.
- Matney Park Parking lot will receive asphalt patching, and a full asphalt seal coat.
- Meadows Water Treatment Plant will receive concrete repairs, asphalt patching, and a full asphalt overlay.
- Diamond Ridge Pump Station will receive a full asphalt seal coat.
- Police Station Parking lot will receive a full asphalt seal coat.

2016 Bridge Maintenance Program – Staff plans to present the contract for the Castle Oaks Drive Bridge over Cherry Creek - Approach Slab Leveling Project to the Town Manager for approval by mid-March with their recommendation to award to KECI Colorado, Inc. This work is scheduled to begin mid-July.

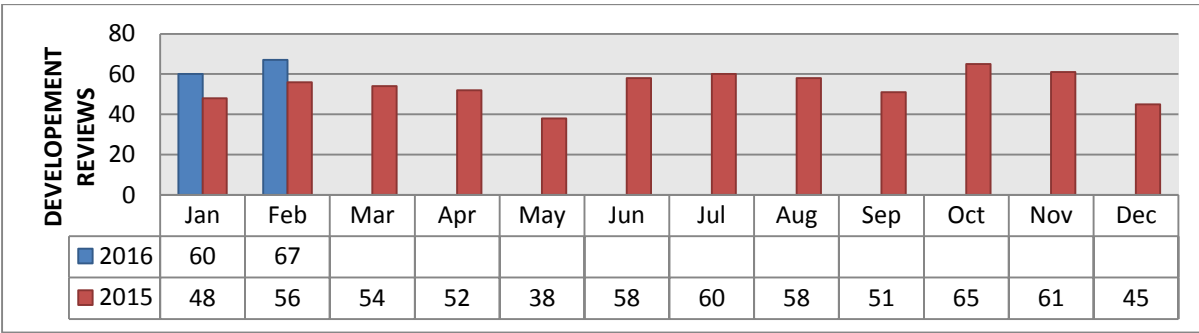
The Wilcox Bridge over Sellers Gulch Repair Project will be presented to the Public Works Commission on March 7, and Town Council on March 15 as part of the 2016 Asphalt Patching, Overlay and Reconstruction project.

The following locations are proposed for painting maintenance and will be performed by the Street Operations and Maintenance Division:

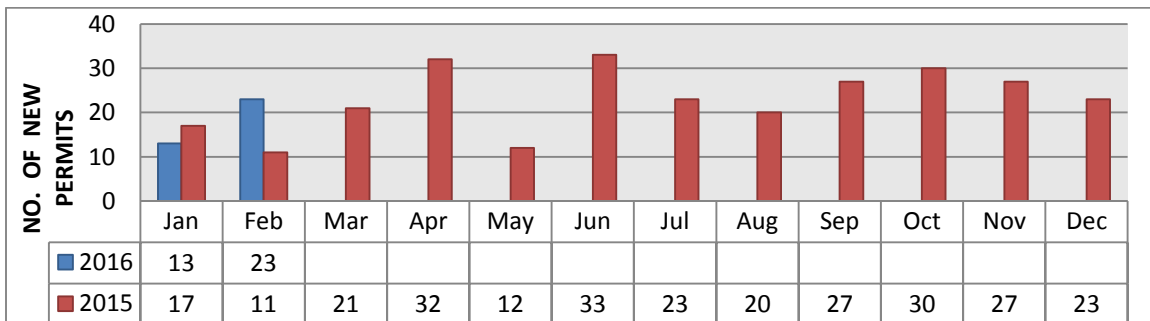
- Wilcox Bridge over Sellers Gulch
- Perry Street Bridge over Sellers Gulch
- Plum Creek Parkway Bridge over BNSF Railroad

Development Review and Permitting

Development Review - Included in the 67 submittals are twenty-six first time applications with three pre-applications. All reviews were completed on or before the due date assigned by the Development Services Project Manager.

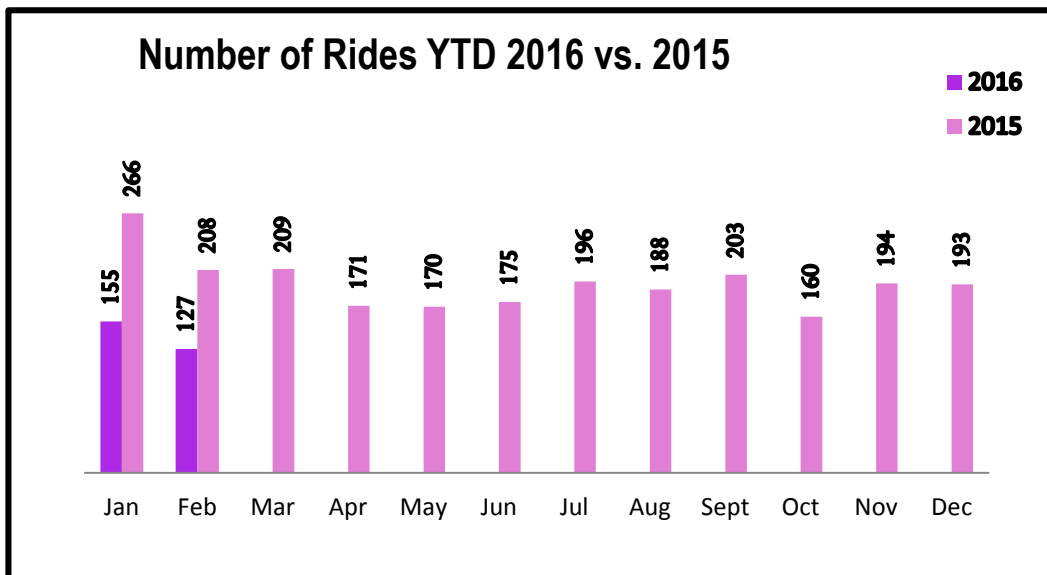


Permitting - Included in the 23 permits are: 3 - Commercial Developments (Promenade – Block 1, Phase 1; Mirage Dental - 1st Bank of Douglas County, Lot 1; Tripp Building - Village North 10th Amendment, Lot 5); 3 - Residential Developments (Oakwood Homes -Meadows Filing 20, Phase 2; CRDC, Meadows Filing 20, Parcel 5; Castle Oaks-Terrain, PA 45); 1 - Town Project; and 16 permits for work within the public right-of-way (three of which were necessary due to current development, and five of which requires a pavement cut).

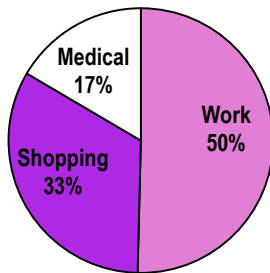


TRANSPORTATION SERVICES

Taxi Voucher – During the month of February, the Taxi Voucher Program funded 127 rides, this was about a 39% decrease over last February's total of 208 rides. The rides have decreased a little since last month partially due to weather conditions.

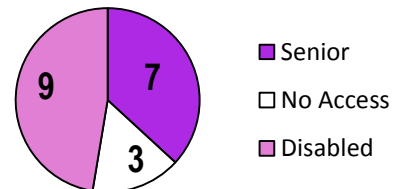


Ride Destinations

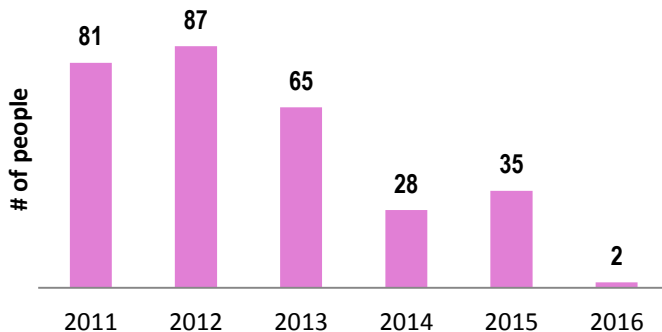


Rides are available for work, shopping or medical trips. Transportation services are provided for Castle Rock residents who are senior citizens, have a disability that prevents them from driving, or do not have access to a vehicle. In February, there were 19 individuals who used the Town's Taxi service.

Types of Riders

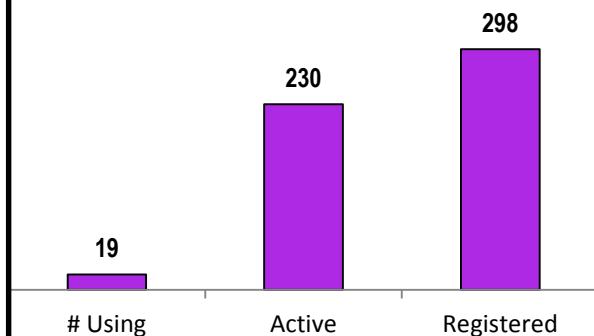


Number of People Registering

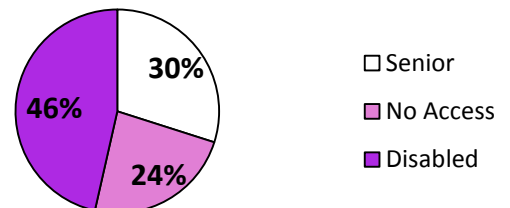


There were two new registrants for the Taxi program this month. Since its inception, a total of 298 people have registered for this program. Currently 68 of these past registrants are inactive or have dropped out of the program.

Number of Riders Using the Service vs. Registered



% of the Total Rides (127) by each Rider Type





Senior Center Shuttle - The Senior Center provided 556 rides in the month of February which was a decrease of 10% from last month's rides of 616, partly due to a snow day closure. The volunteer driver program provides service Monday through Friday from 9 am to 3 pm.

Town Trolley – The Trolley took the month of February off to take a little R&R after a long and productive 2015 season. Trolley sponsorships for 2016 are currently available and will close at the end of March. The Trolley is looking forward to another fantastic season of events, tours, and many other occasions to provide Castle Rock residents with a fun ride around Town!



Traffic Engineering & Operations

Traffic Signal Operations and Maintenance - The following provides a summary of the activities during the month of February with regard to the operation and maintenance of the traffic signal system.

- For the month of February there were a total of five non-routine traffic signal maintenance visits completed by either the Town staff or the Town's signal maintenance contractor. With the stretch of warmer weather experienced during the month, it's probably one of the reasons for the fewer number of non-routine signal issues. Of the issues received, there were traffic signal LED's that had burned out and needed replacement.
- WL Contractors performed their quarterly maintenance on all traffic signals for the month. There were only minor issues found most of which have already been addressed.

Street Signs and Pavement Marking Maintenance - The Signs and Markings crews completed 85 work orders for the month of February. Also within the month, 141 utility locates were checked and cleared by the sign technicians. They also spent a portion of the month on sign boot/post maintenance replacing 19 posts around Town.

With regard to snow and ice removal, the crew spent 33 hours in support of the snow removal operations.

The crew also fabricated 220 signs for installation. At the same time, 156 signs were added to the Arc GIS inventory bringing the total number of signs in the Town to 14,438.



Finally, the crew began to work toward installing new rectangular rapid flash beacons at three street crossings located at Woodlands Blvd/Saddleback Drive, Enderud Boulevard/Heritage Avenue, and Coachline Road/Ridgeline Trailhead.

Transportation Planning

Neighborhood Traffic Calming Program (NTCP) - NTCP inquiry updates:

- A homeowner along Elk Run Drive inquired about the NTCP along with other signing and traffic concerns. The homeowner was sent information on the program, including the initial support petition and how to begin the process. Once the signed petition is received, staff will begin the process. The homeowner's other concern included posting a speed limit sign on Elk Run Drive. This was discussed with the Signs & Markings Supervisor and he will get this sign installed. The Police Department was also notified about speeds on Foothills Drive.
- Staff has reserved the Panorama Room at the Recreation Center for the Saddleback Drive traffic calming neighborhood meeting. The meeting will be held March 2 at 6:30 pm. All homeowners in the Woodlands and Escavera neighborhoods were contacted about the meeting. The meeting will include a brief presentation given by staff on the NTCP and traffic conditions on several neighborhood streets. It will also include staff's conceptual plan, but the primary purpose of the meeting will be to establish a neighborhood working group to develop a final plan. Currently, staff is recommending several speed cushions on Saddleback Drive and Ridgetrail Drive with a pedestrian center refuge crossing.



Transportation Master Plan (TMP) Update

The draft scope of services has been completed and is under review. Once completed, an RFP will be drafted and sent to the four consultants on the Town's pre-qualified list of consultants.



Radar Feedback Signs

The three radar feedback signs have arrived and are being inspected by the Signs & Markings crew. The policy document is being reviewed for consistency between the Public Works Department and Police Department of how they are deployed.



Fleet Services

"Keeping Castle Rock on the Move"



The Fleet Service Division had one of our most productive months ever in the month of February! The Fleet Services team billed out \$79,000 of labor and parts which was our second highest total to date and was \$18,000 higher than our monthly average. Fleet technicians completed 120 work orders which is also higher than our average of 105 work orders per month. Fleet was also able to put into service a F150 for the Utilities Department.

Fleet Services is also proud to announce that we have received the ASE "Blue Seal of Excellence" shop certification for the third straight year. This shows our commitment to excellence in all our fleet operations. The Town of Castle Rock Fleet shop is one of 12 municipal maintenance shops in the State of Colorado that has the ASE shop certification.



BENCHMARKS

Objective/Benchmark: Complete at least 80% of our work orders within 24-hours of coming to shop.

Outcome: Fleet Services team completed 79.3% of the work orders within 24-hours of opening repair requests or service requests.

Objective/Benchmark: Town vehicles and equipment available for use 95% of time.

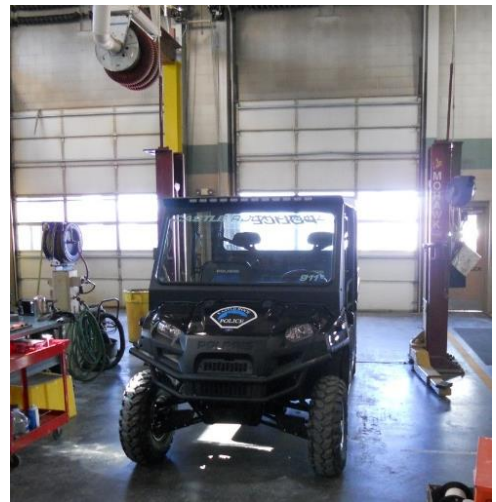
Outcome: Town vehicles and equipment were available 97.2% of the time. This demonstrates a very low percentage of downtime and shows how well we are keeping Castle Rock on the move even with major repairs needed on several vehicles.

Objective/Benchmark: Technician productivity percentage of 70% (APWA standard).

Outcome: Technician productivity was 79%; well above our benchmark!



Fleet Techs using overhead crane to remove pump from vacuum unit.



Police Department 4-Wheeler in for Maintenance.



Utilities Meter Services New Ford F150

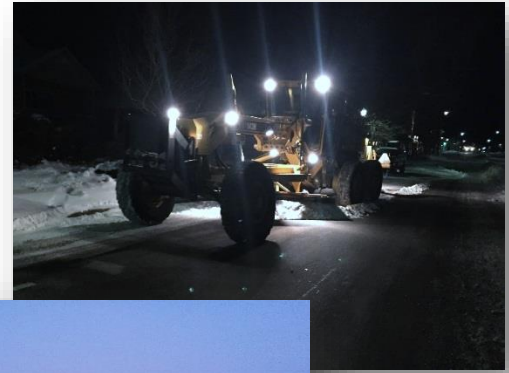
Street Operations & Maintenance Division

In the month of **February**, the Streets Division performed 5 specific operations:

- ❖ Snow Control
- ❖ Ice Control
- ❖ Asphalt and Concrete repairs
- ❖ Street sweeping
- ❖ Gravel Road maintenance

Snow Control –

During the month of February the Street Operations & Maintenance Division performed plowing and deicing operations during **2** snow events. These snow events delivered a total of **13-1/2"** of snow. On each of these events, the crew was able to complete the plowing operations ahead of our **8** hour performance goal. Then after the major snow event, the crew was able to remove the snow from the downtown area ahead of our **72** hour goal.



Ice Control –

The Street's crew continued to work on the ice control operations during the month of February. The crews performed ice control activities in The Meadows, Plum Creek, and in Baldwin Park. Then in the middle of the month we received some help with some nice warm days. As a result of the warmer weather, the remaining ice melted quickly in almost all of the other areas around town.

Asphalt and Concrete Operations -

During the month of February, the crew was able to repair **2,138** potholes on the following roadways; Plum Creek Parkway, Ridge Road, Mikelson Boulevard, Meadows Boulevard, Coachline Drive, and Turnstone Avenue. This was a very large increase of production, thanks again to the warmer weather, compared to the previous month's 708 potholes. The focus of the operations was to repair the potholes that have the potential to create damage to vehicles first. The crew also repaired one Utility cut on Switch Grass Drive during the month.

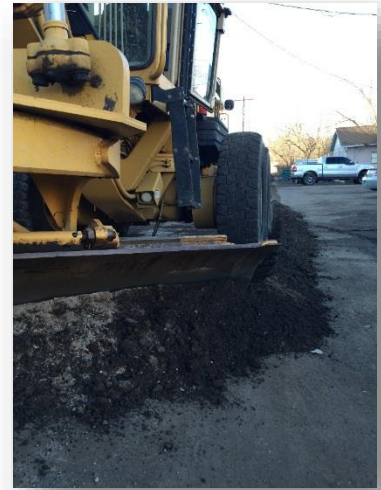


Street Sweeping -

In the month of February we were once again able to perform street sweeping operations on a few nice warm days. The crews picked up materials from our primary roads network in the North part of the town and completed another one of our night time sweeping operations, this time in the Downtown business area. The night time operations are completed in the early morning hours to minimize traffic disruptions and to get into the parking stalls that are usually full of cars during the day.

Gravel Road Maintenance -

Gravel road maintenance was completed for one of the downtown alleyways. The alleyway is located just north of Seventh Street to the east side of Wilcox. Due to the previous couple of month's snowfall events and icing conditions, these operations could not be completed until now. The crew received a lot of praise and positive feedback during these operations.



Looking Ahead -

During the month of March the Streets Operation & Maintenance Division will continue tackling the dreaded potholes around Town, and will also begin our crack sealing, and road shoulder maintenance operations. As always, the crew will stay ever ready for the next snow storm should it arise.