



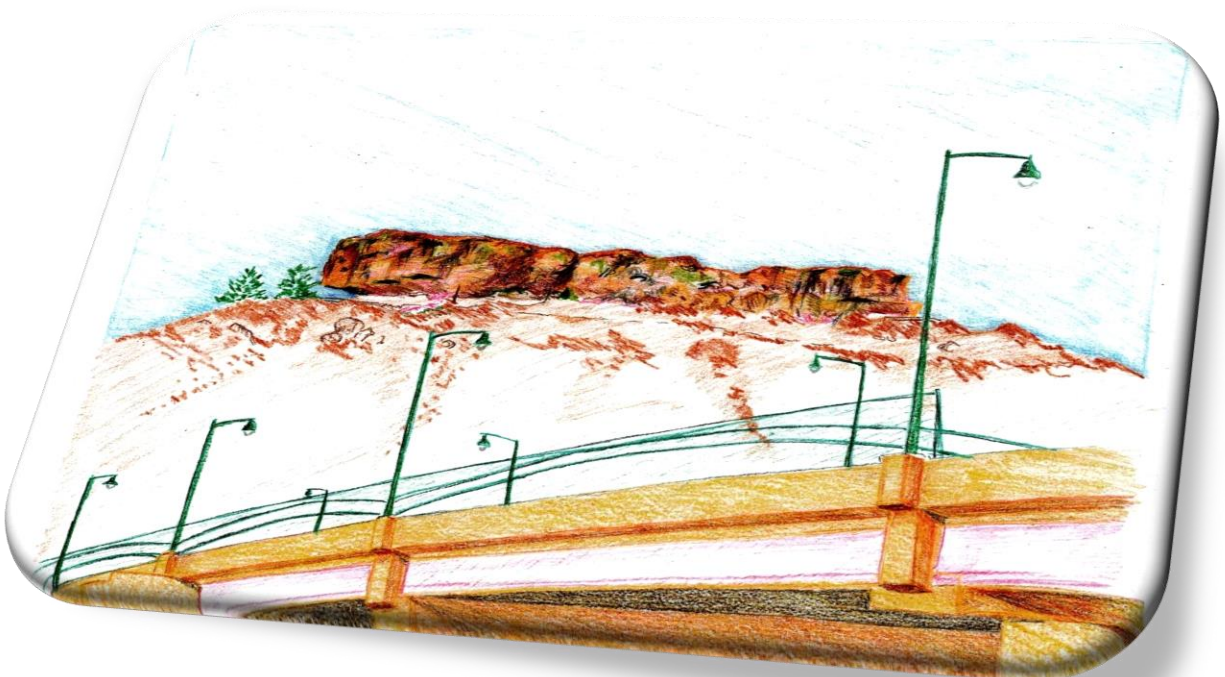
The Public Works Department operates under the CAN DO philosophy
- We are committed to doing the job right with a positive attitude
while staying dedicated to meeting the needs of our Town values
and continually searching for opportunities to improve.

PUBLIC WORKS DEPARTMENT

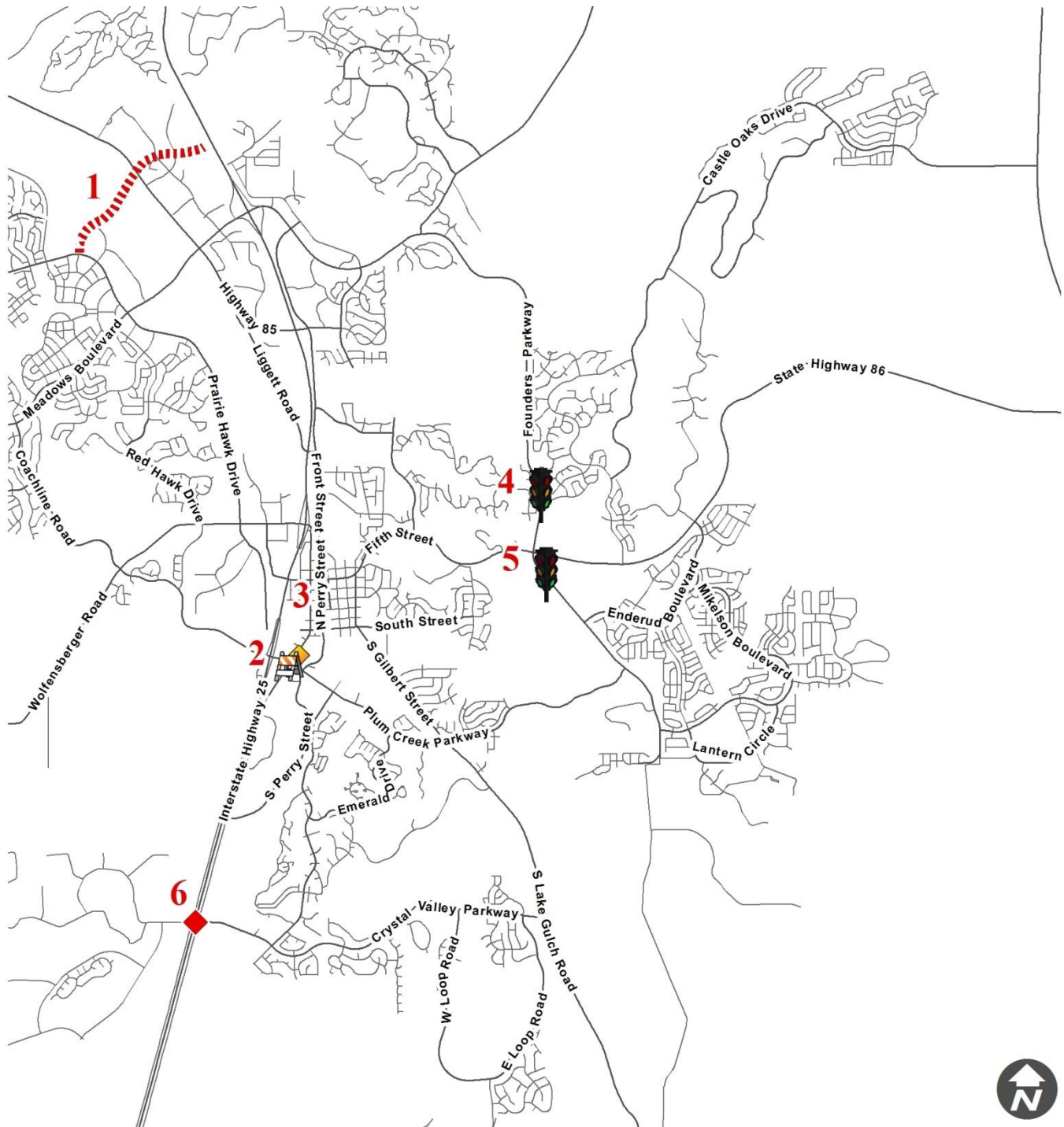


***Our Mission: To provide
outstanding service, safety
and support for
transportation infrastructure
and maintenance.***

MONTHLY REPORT – APRIL 2016



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

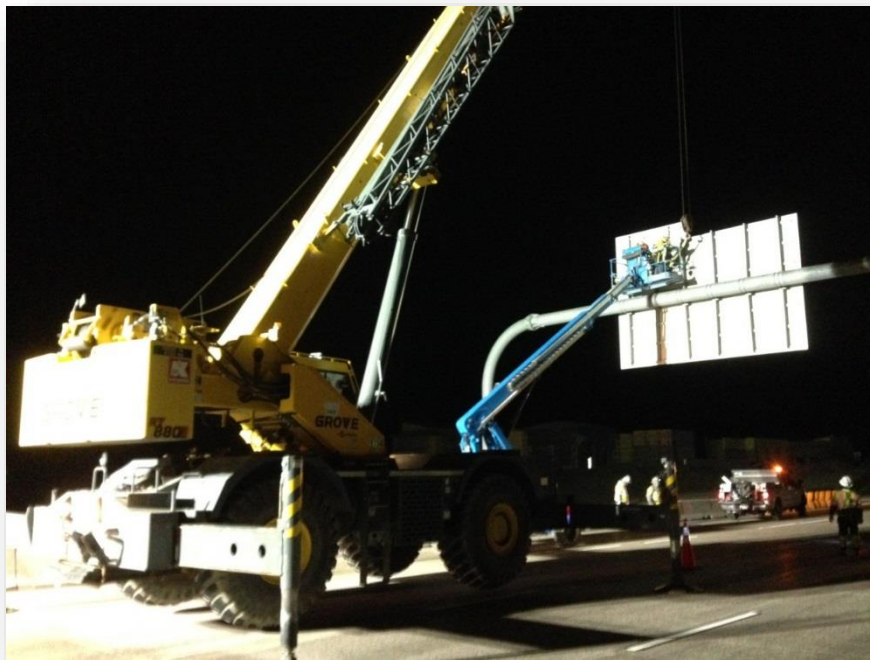
1. **North Meadows Drive Extension Project** - The Town's transportation project!! The following is a summary of the construction activities that took place during this month:

- Excavation and construction of I-25 on and off ramps and roadway
- I-25 cast-in-place and precast panel wall construction
- I-25 sign bridges – 3 total have been installed, 3 cantilever signs structures remain to be installed
- I-25 southbound off ramp paving complete
- Concrete barrier on US 85 bridge structure
- Single Point Urban Interchange (SPUI) signal bridge installation
- US 85 SPUI lighting has been completed

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.



Installation of Sign Bridge and Panel – Southbound I-25

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.
- Through the Pavement Maintenance Program, concrete restoration will occur on Plum Creek Parkway from Wilcox Street to the Douglas County Fairgrounds entrance.

Phase: Construction - Public Works opened bids for the project on April 14th with the low bidder being PLM Asphalt and Concrete, Inc. A resolution to award the contract will be presented to Town Council at the May 3rd Town Council Meeting. If Council awards contract, work on the project shall commence late May or early June. **Budget:** Capital Fund: \$3,050,000; Pavement Maintenance Fund: \$553,850; Utilities Department: \$59,000 **Projected Construction Completion:** Summer 2016

Downtown Alley Rehabilitation – The Town has been awarded two grants to improve accessibility in certain 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.

Phase: Construction – Bid opening was conducted on March 10th with one bid received from Technology Constructors, Inc. (TCI) for \$357,142. Bid documents and contract was presented to Public Works Commission at their April 4th meeting where staff received a recommended approval to forward to Town Council at the May 3rd Council meeting. If Council awards contract, work on the project shall commence early June. **Budget:** Grants: \$202,000; Public Works: \$115,000; Utilities Department: \$71,835 - Total: \$389,442 **Projected Construction Completion:** Summer 2016



South Street Alley

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:** Construction – Public Works staff opened bids on April 12th where two bids were received with the low bidder being WL Contractors, Inc. The bid documents and contract will be presented to the Public Works Commission at their May 2nd meeting and to Town Council at their May 3rd Council meeting. Once approved by Town Council, a pre-construction meeting will be held with construction to begin shortly thereafter. **Budget:** \$460,000 **Projected Construction Completion:** Late Summer 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 has received information from CDOT and the Public Utilities Commission to assist in planning the improvement projects for the interchange area. **Budget:** \$250,000 (Development Escrow Account); Capital Fund: \$1,500,000

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** – The broadband radios were installed at signalized intersections where either fiber was too costly to install given the terrain or to serve as an access point between two radios. Staff verified the network was online through performing an OTDR (Optical Time Domain Reflectometer) test of the fiber connections as well as pinging the intersection switch IP address. After the given success of our trial run with the eight Cobalt controllers placed in the field, the remainder of the controllers on our coordinated corridors were installed. Installation of the new central traffic signal software system is underway and is expected to be complete by sometime in May. After installation, staff will be trained in the operation of the system and the testing/acceptance period of the new system will begin. **Phase 1 Budget: \$700,000 Construction Completion: With the completion of the central software installation, Phase 1 will be completed Spring 2016**

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 in June. **Phase 2 Budget: \$400,000 Construction Completion: Winter 2016**

ENGINEERING DIVISION

2016 Pavement Maintenance Program (PMP) - The 2016 PMP will focus its efforts in the north PMP area with additional work taking place on Mikelson Boulevard, Fifth Street, and the downtown area.



Sidewalk, curb, and gutter repairs kicked off in early-April. The residents within the North PMP area were notified via letters mailed to their homes as well as the use of variable message boards, that repair and maintenance work was to begin. In general, work will progress through the North PMP area in a counterclockwise manner, starting in the Sapphire Pointe area, then Castle Oaks and finally Cobblestone Ranch. The Town's contractors will be preparing the streets to receive slurry seal and asphalt overlay treatments. Sidewalk, curb, and gutter repairs are expected to run through May and asphalt patching is scheduled to begin in May and run into June. The asphalt overlays and slurry seals will follow.

Traffic was shifted on Mikelson Boulevard in mid-April to signify the start of the concrete pavement reconstruction. The Town's contractor began the removal of the deteriorated concrete pavement on the northbound lanes of Mikelson Boulevard at Sovereign Street. Concrete pavement, crosswalk, sidewalk, curb, and gutter repairs started in the downtown area on Wilcox and Perry streets in late-April, with the delays caused by the recent adverse weather conditions the concrete work is scheduled to be complete by mid-May.

Public notification planning and website updates are continuing with assistance from the Community Relations team.



The PMP team continues working on condition rating of streets within the east PMP area and the primary street network. Staff is anticipating this to be complete by mid-May. Condition rating is the evaluation of asphalt or concrete pavement; this applies a score which 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 – The construction contract with PLM Asphalt & Concrete, Inc. has been approved and staff is working with the contractor to develop the project schedule. 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.

This project is tentatively scheduled to begin in late August.

2016 Bridge Maintenance Program – The contract for the Castle Oaks Drive Bridge over Cherry Creek - Approach Slab Leveling Project has been approved and staff is working with the contractor, KECI Colorado, Inc., to develop a project schedule.

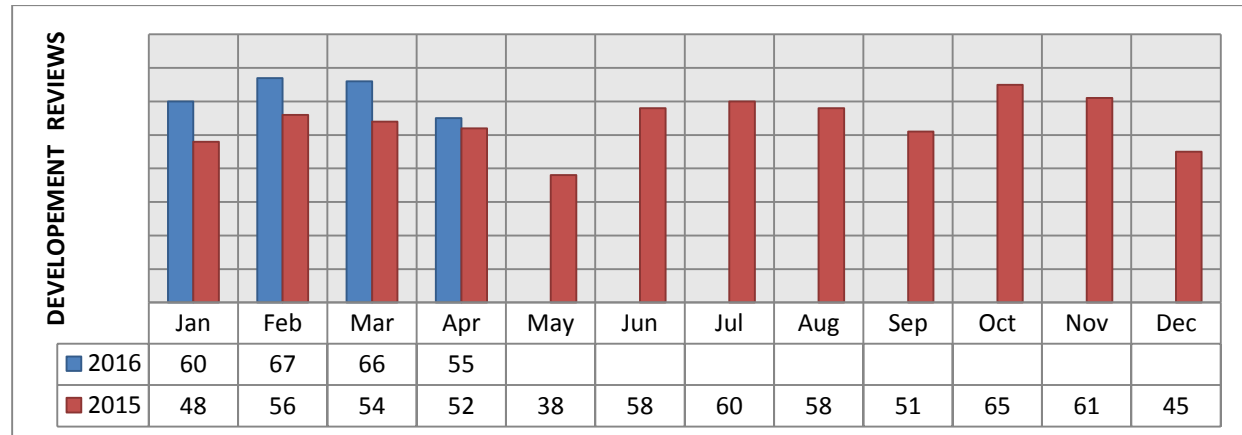
The Wilcox Bridge over Sellers Gulch repair has also been approved as part of the 2016 Asphalt Patching, Overlay and Reconstruction project. The approach slabs have been repaired and the bridge deck mill and overlay will be completed in May during the night work operations.

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

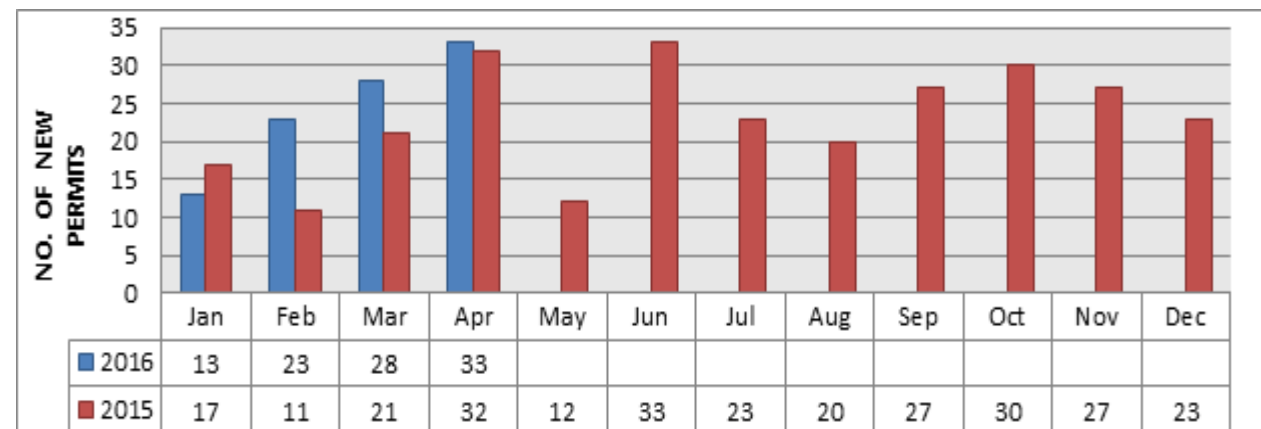
- Wilcox Bridge over Sellers Gulch
- Perry Street Bridge over Sellers Gulch
- Plum Creek Parkway Bridge over BNSF Railroad

Development Review and Permitting

Development Review - Included in the 55 submittals are 28 first time applications with six pre-applications. All reviews were completed on or before the due date assigned by the Development Services Project Manager.

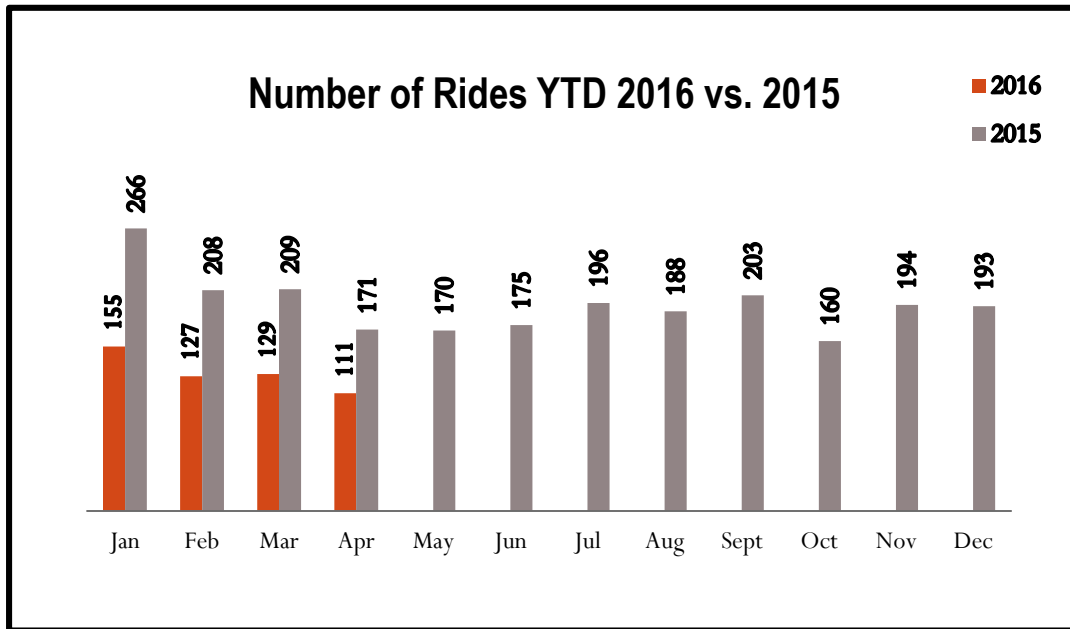


Permitting - Included in the 33 permits are: 4 - Residential Developments (Plum Creek Fairway 14, Phase 3; Promenade Block 3B – multifamily; Meadows F20, Phase 2; and Meadows F17, Area 4 Virtuoso Loop); and 29 permits for work within the public right-of-way (five of which were necessary due to current development, six involve pavement cut for utility repairs, and four for Town 2016 PMP projects).

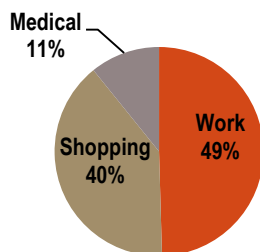


TRANSPORTATION SERVICES

Taxi Voucher – For the month of April the Taxi Voucher Program funded 111 rides. This is about a 35% decrease over last April's total of 171 rides. The rides have decreased since last month due to the inclement weather and two big snow storms. Ridership should increase in the next coming months with weather improving.

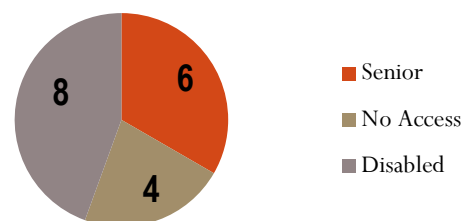


Ride Destinations

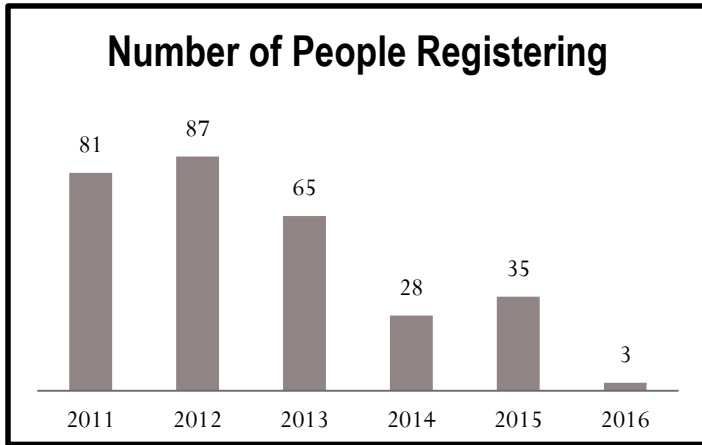


Rides are available for work, shopping or medical trips. Transportation services are provided for Castle Rock residents who are senior citizens, have a disability that prevents them from driving, or do not have access to a vehicle. In April, there were 18 individuals who used the Town's Taxi service.

Types of Riders

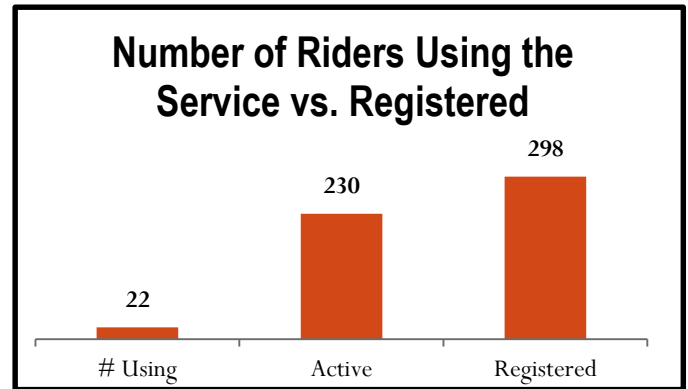


Number of People Registering



There were no new registrants for the Taxi program this month. Since its inception, a total of 299 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



Senior Center Shuttle - The Senior Center provided 673 rides in the month of April which was an increase of 4% from last month's rides of 646. The volunteer driver program provides service Monday through Friday from 9 am to 3 pm.

Town Trolley - The Trolley provided rides for one event for the month of April. The single event was for the World Compass Academy School and their kindergarten field trips to Rock Park. The kids got to enjoy a fun trolley ride while learning about the Rock's history. As the event season approaches, 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 - For the month of April there were a total of fourteen non-routine traffic signal maintenance visits completed by either Town staff or the Town's signal maintenance contractor. With inclement weather there were a few signals that were in flash due to voltage drops.



The signal contractor also changed out the incandescent bulbs to LED bulbs at the remaining intersections; 3rd Street at Wilcox Street, 6th Street at Wilcox Street, Wolfensberger at Park Street, and Wolfensberger at Caprice Court. With this final change out, all of the signalized intersections within the Town have been upgraded from incandescent bulbs to LEDs.

Finally, the signal contractor finished the second quarter traffic signal preventative maintenance checks on all 31 Town maintained signals.

Street Signs and Pavement Marking Maintenance - The month of April was an eventful month as the Signs and Markings crew spent 29 hours in support of the Town snow removal operations. The crew also spent 40 hours fabricating 81 signs, 34 hours fixing signs from the snow storms and eight hours straightening posts. Finally, the crew inspected 1,229 signs creating 79 work orders.



Kolbe Striping, the Town's paint contractor, stripped 116,289 L.F. in the south area of Town. Kolbe's operations should be completed by mid-June. Also, if all goes as planned, the Town crews will be starting our own painting soon which consists of crosswalks, parking lots, and stop bars, etc.

Transportation Planning

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

- The homeowner along Elk Run Drive has returned the initial support petition to complete a speed evaluation. The speed/volume study was conducted April 25 – 29 due to weather delays. The Signs Division is also working on installing a new speed limit sign on Elk Run Drive for motorists turning off of Foothills Drive.
- Town staff has been conducting follow up work to complete the Working Group's proposed traffic calming plan on the Saddleback Drive traffic calming project. The plan includes speed cushions on both Saddleback, Ridgetrail, and Black Pine Drives. The speed cushion was added to Black Pine once it was determined that the traffic conditions at Saddleback and Black Pine did not require a 3-way stop sign. Also included is a pedestrian center refuge crossing, and a pull out area along Saddleback near the mail kiosk. Staff is still estimating the cost of the mail kiosk pull out area that may require a slight realignment of Saddleback Drive. Once the proposed traffic plan is estimated, it will be shared with the Working Group for final approval. If the Working Group approves the plan, Town staff will prepare the plan to be mailed to all homeowners along Saddleback, Ridgetrail, and Black Pine for final approval.



Transportation Master Plan (TMP) Update

After completing the review of the proposals received, the Town selected Felsburg, Holt, and Ullevig to conduct the Town's Transportation Master Plan update. A pre-kick off meeting is scheduled for May 4th to discuss scope of work and budget.

Development Review

- Staff continues to meet with the Canyons South development team on traffic and DA issues. The Town just recently received the revised transportation study to accurately account for changes in the development. Town staff met with homeowners from the Timber Canyon HOA to discuss concerns from the proposed Canyons South development. Concerns primarily centered on transportation issues, such congestion along Founders and at the Founders and Crowfoot Valley intersection, pedestrian access to the proposed trail network, and how to manage the future construction traffic.
- The Pine Canyon proposed development and annexation has been placed on hold until the Town receives the revised transportation impact analysis.
- Staff completed the review of four traffic impact studies on time during April.

Safe Routes to School (SRTS)

The Town received notice from CDOT that we were not selected to receive SRTS grant funds that staff applied for earlier this year.



DRCOG Transportation Improvement Program (TIP) / CDOT FASTER Projects

Public Works staff met with CDOT representatives to begin discussions on the three transportation projects awarded federal and state funds in 2014. These projects include the reconstruction of Meadows Parkway between US 85 and Prairie Hawk, intersection improvements at Founders and Allen Way, and intersection improvements at Founders and Crowfoot Valley. The local agency representative for CDOT will be providing the Town with the necessary CDOT forms to initiate the projects. Funding for the Meadows Parkway reconstruction and Founders / Allen Way intersection become available July 1st. Funds must first be appropriated by CDOT and an IGA must be in place with the Town and CDOT.



Fleet Services

"Keeping Castle Rock on the Move"



Another busy month for the Fleet Services Division in the month of April. The team worked very hard to keep snow removal equipment on the road after several heavy wet storms that took a toll on the equipment.



The number of work orders completed and the amount that was billed out were both 12% increases compared to the previous year. The Fleet Services team billed out \$64,000 of labor and parts. Fleet technicians completed 127 work orders which is also higher than our average of 105 work orders per month.



The Fleet Services Division was also honored to receive the **Green Leaf** award for the second year in a row; congratulations to the team for all their efforts in

sustainability initiatives.



Fleet Services also received several new vehicles and put into service. Including a Bobcat skid-steer for the Utilites Department and a Toro mower for the Parks Department.



Fleet Services technicians using new mobile column lifts to install a rebuilt transmission.

Objective/Benchmark: Complete at least 80% of our work orders within 24-hours of coming to shop.
Outcome: Fleet Services team completed 79.4% of the work orders within 24-hours of opening repair requests or service requests. This number is slightly below our benchmark but still a good result.

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

Outcome: Town vehicles and equipment were available 97.3% 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 73.4% which is above our benchmark.

Street Operations & Maintenance Division

In the month of **April**, the Streets Division performed work in the following operations:

Snow Control –

During the month of April the Streets Operations & Maintenance Division, with the assistance from the Utilities and Parks departments, performed plowing and deicing operations during 2 snow events. The first snow event was really a monster, and delivered us with 17” of heavy wet snow. During this event 32 personnel from Public Works, Utilities, and the Parks departments, along with the aid of 4 contract loaders, worked hard to keep our roadway network open. Although this storm was big in terms of snowfall totals, it was much easier to deal with considering the snow fell over a 40 hour period of time.



The second snowfall event of the month was thankfully a lot easier to deal with. This event lasted for the better part of 3 days and delivered us with an additional 8” of snow. However, during this second event, the roads remained wet for the most part, and we only had to deploy 2 personnel out for some minor slushing in various areas.



What made this last month so unusual was the snowfall totals; Castle Rock received about 25” of snow in April, which is huge considering our average for the month is normally only around 9”. One more interesting note is that over this last winter season Castle Rock has received 95.75” of snow, which is well above our annual average of 62”.



Asphalt and Concrete Operations -

During the month of April, the crew once again focused some of our operations on pothole patching. Over the course of the month, staff received 15 requests for potholes to be patched. During the month the crews patched **642 potholes on asphalt streets**. The patching was performed on the following roads; Wolfensberger,

Auburn, Black Feather Trail, Front Street, Ridge Road, and Scott Boulevard. Additionally the crew patched **908 potholes on concrete roadways** on Butterfield Crossing Drive, Meadows Boulevard, Wilcox Street, and Plum Creek Parkway. In total the crews patched **1550** potholes compare to our previous months total of 2725 potholes.



Crack Seal Operations -

During the month of April, the staff was able to complete **18 lane miles** of crack sealing work in Sapphire Point subdivision in preparation for the upcoming Pavement Maintenance Program work later this year. This leaves us 19.5 lane miles remaining to seal in order to reach our goal of sealing 55.5 lane miles this year ahead of the PMP work.

Miscellaneous Operations -

During the month of April, in between the snow storms, the Streets Operations & Maintenance Division also performed maintenance operations in the following programs; utility cut repairs (2), street sweeping (116 yards swept), emergency gravel road maintenance (on Pleasant View in Castle Oaks), and performed a large amount of equipment maintenance to our plows and dump trucks.



Looking Ahead -

During the month of May crews will continue address the potholes but the main focus will be on completing the crack sealing operations ahead of the PMP slurry seal operations that are scheduled to start at the end of the month.