



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.

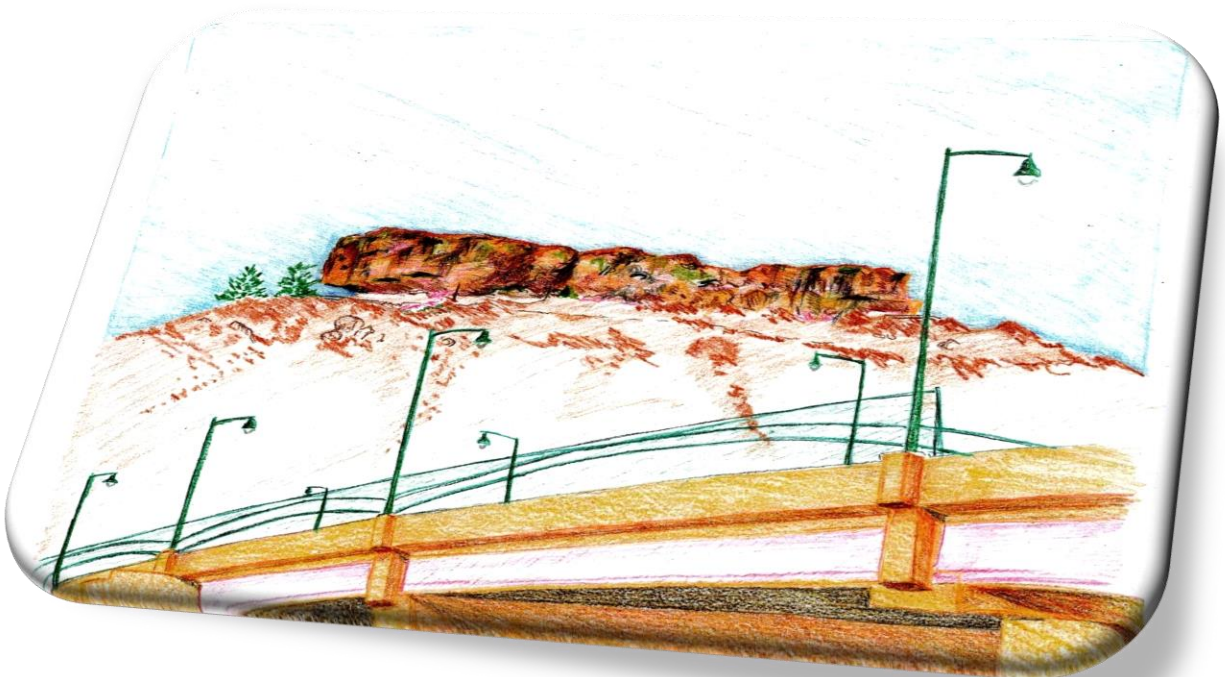
# PUBLIC WORKS DEPARTMENT



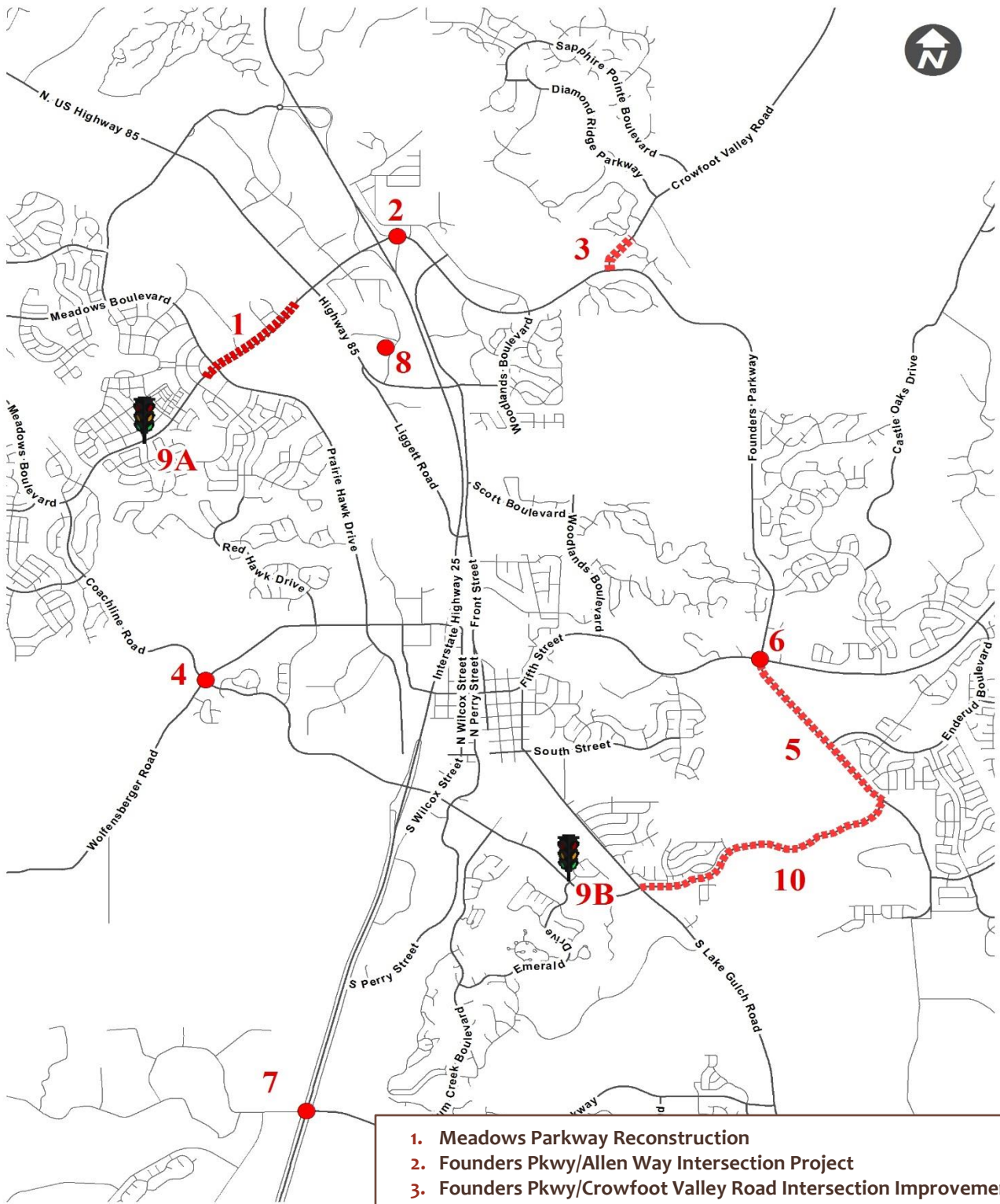
***Our Mission: To provide  
outstanding service, safety  
and support for  
transportation infrastructure  
and maintenance.***

## MONTHLY REPORT – MAY 2018

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# CAPITAL PROJECTS



1. Meadows Parkway Reconstruction
2. Founders Pkwy/Allen Way Intersection Project
3. Founders Pkwy/Crowfoot Valley Road Intersection Improvements
4. Roundabout at Wolfensberger Road/Plum Creek Pkwy
5. Ridge Road Widening (SH86 to Plum Creek Pkwy)
6. SH86/Fifth Street Intersection Improvements
7. Crystal Valley Interchange (Right-of-Way Acquisition)
8. Public Works Facility Expansion
9. 2018 Traffic Signal Program (9A & 9B)
10. Plum Crk Pkwy Widening & Plum Crk Pkwy/Gilbert Roundabout

**1. Meadows Parkway Reconstruction** - This improvement project will consist of the reconstruction of the existing 4-lane roadway of Meadows Parkway from the intersection of Meadows Parkway and Prairie Hawk Drive to the railroad overpass over Plum Creek near US 85. This reconstruction will also replace any broken curb/gutter, sidewalk, and add on-street bike lanes. **Phase: Construction – The project was awarded to Schmidt Construction Company. Felsburg, Holt, and Ullevig (FHU) will assist the Town with construction management. Construction began May 29 and is scheduled to be completed August 11. Budget: \$2,467,000 Construction Completion: Late Summer 2018**

**2. Founders Pkwy/Allen Way Intersection Improvement Project** – This project will address the need for the following improvements:

- An additional eastbound left turn lane from Founders Parkway to Allen Way
- A dedicated right turn lane from Founders Parkway to Allen Way
- An additional southbound right turn lane from Allen Way to westbound Founders Parkway
- An additional I-25 northbound on-ramp lane
- A second through lane at Allen Way and Allen Street

**Phase: Design & ROW Acquisition – Felsburg, Holt & Ullevig is the design consultant for this project. The following is a summary of the design activities that took place during this month:**

- Addressing all comments received for final bid documents.
- Traffic comments received from CDOT in May have been vetted through Town of Castle Rock for use in bid documents.
- Right-of-Way appraisals (4 total) have been provided to CDOT for fair market value comparison and authorization to proceed to negotiation with property owners. (As of 5/25 – one has been released and verbal terms generally agreed to.)
- Right-of-Way appraisals (2 total) have been provided to CDOT for agreement that value finding (cash settlement due to being small in size) can be made to property owners.
- Still awaiting confirmation from CDOT of Minor Interchange Modification Request (MIMR) progressing to FHWA.

**Budget: \$760,000 Design Completion: Summer 2018 ROW Completion: Fall 2018**



**3. Founders Pkwy (SH86)/Crowfoot Valley Road Intersection Improvement Project and Crowfoot Valley Road Widening Project** – This project will address the need for the following improvements:

- An additional eastbound left turn lane from Founders Parkway to Crowfoot Valley Road
- An additional northbound lane on Crowfoot Valley Road between Founders Parkway and Knobcone Drive
- A southbound free right turn lane from Crowfoot Valley Road to westbound Founders Parkway
- Widen Founders Parkway both eastbound and westbound between the Crowfoot Valley Road and Woodlands Boulevard
- Widen Crowfoot Valley Road from Founders Parkway to Knobcone Drive

**Phase: Design and ROW Acquisition – Kimley-Horn is the design consultant for this project. The following is a summary of the design activities performed this month:**

- Design plans are at 99% completion

- Town's Legal and Public Works staff continue to work on right-of-way and easement agreements with neighboring properties
- A revised right-of-way agreement has been submitted to CDOT for review
- CDOT has requested to use a radar system instead of the loop detective system

**Budget: \$650,000 (2016-17) Design Completion: 2nd Quarter 2018 ROW Completion: Summer 2018**

**4. Wolfensberger Road/Plum Creek Parkway Roundabout Project** This project will accomplish the design and construction of a roundabout at this intersection to improve operations and minimize potential accidents. **Phase: Construction** - Rocky Mountain Excavating was awarded the construction contract on May 15 and is scheduled to start July 24.

**Budget: \$1.14M Construction Completion: Late Summer 2018**



**5. Ridge Road Widening** – Ridge Road will be widened from two to four lanes between the Founders Parkway (SH86)/Fifth Street/Ridge Road intersection and Plum Creek Parkway. The goal is to reduce traffic congestion on the Ridge Road corridor. **Phase: Design: Stanley Consultants, Inc.,** has been awarded the design contract for this project. Design is currently at 30% awaiting design of the Founders Parkway/Fifth Street roundabout for tie-in location. **Budget: \$400,000 Design Completion: 2018**

**6. Founders Parkway (SH86)/Fifth Street Intersection Improvements** – The consultant investigated multiple alternatives to address safety concerns and capacity issues at the intersection and it was determined that a roundabout will be constructed at this location. **Phase: Design** – Short Elliott Hendrickson, Inc. (SEH) is the design consultant for this project. SEH has begun design and is scheduled to be completed by January 2019. Town staff met SEH to discuss traffic impacts of preliminary design and also with Emmaus Anglican Church for relocation of their driveway access to the church to accommodate the design of the roundabout. Preliminary design will be presented to CDOT after the church driveway location is set. **Budget: \$340,000 Design Completion: 2019**

**7. Crystal Valley Interchange – Right-of-Way Acquisition** – The purpose of this project is to achieve acquisition of remaining right-of-way and set aside future project funding allowing potential funding partnerships to assist with advancing construction. **Phase: Right-of Way Acquisition** – Staff is addressing all comments received from the Right-of-Way Plan Review (ROWPR) meeting held with CDOT on May 24. **Budget: Development Escrow ROW Completion: 4<sup>th</sup> Quarter 2018**

**8. Public Works Facility Expansion** – This project will complete design plans for the Service Center building expansion. **Phase: Design** - The following is a summary of the design activities that took place during this month:

- Continuing to work on the final design and bid documents
- Town staff, including the Water & Parks departments, is working on the Xeriscape landscaping design which promotes water efficiency.
- Town approved the 1<sup>st</sup> Amendment to the service agreement with D2C for additional design services requested by the Town.

**Budget: \$220,000 Design Completion: Spring 2018**

**9A&9B. 2018 Traffic Signal Program** - There are two intersections that are planned to be signalized this summer. These intersections include, Meadows Parkway/Low Meadows Boulevard, and Plum Creek Parkway/ Emerald Drive. Also included in this project is the Fire Department's emergency signal at their



new Fire Station #152 located on Crystal Valley Parkway. The 5<sup>th</sup> Street/Valley Drive intersection was also a part of the design project, and will be restriped to accommodate a westbound acceleration lane on 5<sup>th</sup> Street. **Phase:** Construction – The construction contract was awarded to WL Contractors. All activities leading up to and including the underground work was completed in May per the Contractor’s schedule. Signal cabinets and associated hardware are being built and bench tested prior install next month with other underground wiring. Signal poles are scheduled to be delivered and installed in June. **Budget:** \$473,728 (Traffic Signals) \$172,967 (Fire’s Emergency Signal) **Construction Completion:** Fall 2018

**10. Plum Creek Parkway Widening and Plum Creek Parkway/Gilbert Street Roundabout Project – This project will address the need for the following improvements:**

- Convert Plum Creek Parkway/Gilbert Street intersection into a roundabout
- Reconstruct the existing 2-lane section of Plum Creek Pkwy from Gilbert to Eaton streets
- Widen Plum Creek Parkway from Gilbert Street to Eaton Street
- Widen Plum Creek Parkway from Eaton Street to Ridge Road

**Phase:** Design and ROW Acquisition – Kimley-Horn is the consultant for this project. The following is a summary of design activities performed this month:

- Obtained horizontal utility locates along the corridor
- Performed topographic survey from Gilbert to Ridge Road
- Prepared ROW and Ownership Mapping
- Traffic Data Collection
- Reviewed existing available studies and SEACR construction plans
- Conducted Public Open House #1 on May 22
- Prepared a summary of public comments received

**Budget:** \$794,375 **Design & ROW Completion:** 4<sup>th</sup> Quarter 2018

**Traffic Signal System Upgrades (Phase 3)** – This project is the third and final phase of a multi-year project that was approved as part of the Town’s Strategic Plan early in 2015. The two main components of the Phase 3 project are installation of CCTV and travel time monitoring devices at key intersections. In the month of May Traffic Division Staff (TD) installed one manufacturer’s pan-tilt-zoom (PTZ) camera on a trial basis at Butterfield and North Meadows intersection. Another camera model and software is in the works for trialing at a different intersection next month. Trial camera installations and management software will be evaluated prior to final product selection and locations.

Traffic Division staff are currently trialing travel time monitoring technologies, Acylica (Wi-Fi) and Trafficast’s BlueToad (Bluetooth) products. An evaluation criteria has been established for desired system performance and an evaluation period is ongoing. Staff performed traditional travel time measurements and will be comparing these results with these technologies. We will also be determining the number of data points and their reliability to the field measured travel times. Bluetoad devices were installed on the Wolfensberger corridor from Red Hawk to I25, including an off corridor location at Meadows and Prairie Hawk. Acylica devices were installed on Plum Creek Parkway corridor between Gilbert and I25, including off corridor locations at Sixth and Wilcox, and Fifth and Woodlands. Devices provide real time and historic data of travel time and speed on Town’s primary arterial corridors, share the travel time info to public via web based viewer and with CDOT’s COtrip information service, as well as provide management center analysis data for origin and destination, and route finding. Town Staff are currently evaluating the reliability, ease of use, and other analytical tools each software provides. **Budget:** \$520,000 **Project Completion:** Late Fall 2018



## ADMINISTRATION DIVISION

### **CONGRATULATIONS TONY MARUSIAK & JACOB VARGISH**

Congratulations to both Tony and Jacob for passing their Professional Engineer (PE) exam and becoming licensed as a PE. This is a well-earned honor, mark of a professional. It's a standard recognized by employers and their clients, by governments and by the public as an assurance of dedication, skill and quality.



"Basically being a PE means that you are at the top of your game, top of your profession. They don't just hand that out to anybody."  
-- Randal E. Riebel, P.E.

## **Engineering Division**

**2018 Pavement Maintenance Program (PMP)** - The 2018 PMP will focus its efforts in the East PMP area with additional work taking place on primary streets (Woodlands Boulevard, Wilcox Street, Prairie Hawk Drive, Plum Creek Boulevard, and Meadows Boulevard). Sidewalk, curb and gutter repairs continue throughout the East PMP area. Asphalt patching, and crack seal began in the East PMP area in preparation for the slurry seal treatment. The East PMP area crack seal and asphalt patching is expected to be complete by end of June, with the Slurry Seal starting on July 9. The residents within the East PMP area were notified via letters mailed to their homes as well as the use of variable message boards that repairs and maintenance work was to begin. Work notices are delivered to the residents 48 -72 hours prior to start of work.



In general, work will progress through the East PMP area in a clockwise manner, starting in the northern portion of Founders Village, then Castlewood 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.

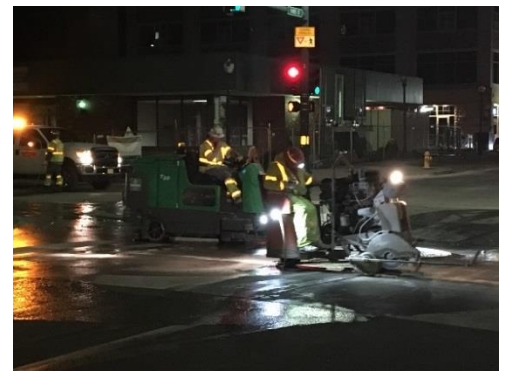


Work on the primary streets began with the completion of the Prairie Hawk Drive's night operation mill and overlay.

Woodlands Boulevard mill and overlay is scheduled to begin June 6.



Wilcox Street concrete repairs are complete along with the smoothness grinding. Night operations continue with joint sealing, which is expected to be completed by June 6.



Work on Lantern Trail is progressing nicely. The contractor has shifted the closure to the second section (between Kensington and Galena) with the completion of the bottom mat of asphalt pavement on the first section. The contractor is scheduled to shift the closure to the third section by June 8, pending weather.



The Wagonwheel Trail Reconstruction started on May 29 with the closure of Wagonwheel Trail between Enderud Boulevard and Courtney Avenue. The contractor is scheduled to shift traffic to the next section by June 12, pending weather.

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

**2018 Facilities Parking Lot Improvements Program** - This contract was awarded to Straight Line Sawcutting, Inc. and is scheduled to start late August. This will provide needed improvements to three parking lots at Town parks, and one parking lot in the downtown area as follows:

- Parking Lot at 4<sup>th</sup> Street and Perry Street
- Metzler Park Parking Lot next to the In-line Skating Rink
- Metzler Park Main Parking Lots
- Rock Park Parking Lot

Maintenance will be performed on the Castle North Park parking lot, and the Town of Castle Rock Museum parking lot under a separate contract due to the nature of the treatment.

**2018 Bridge Maintenance Program (BMP)** – The Town’s on-call consulting engineer, Felsburg, Holt & Ullevig, is currently working on the design of structural repairs. The design is scheduled to be completed early July. The following locations have been identified for the 2018 BMP:

Structural Bridge Repair

- Castle Oaks Bridge at Rocky View Road
  - ✓ Girder repairs
- Fifth Street Bridge over I-25
  - ✓ Place riprap at column and repair spalled areas
- Perry Street Bridge over Sellers Gulch
  - ✓ Repair girder and girder bearing and upgrade approach rail

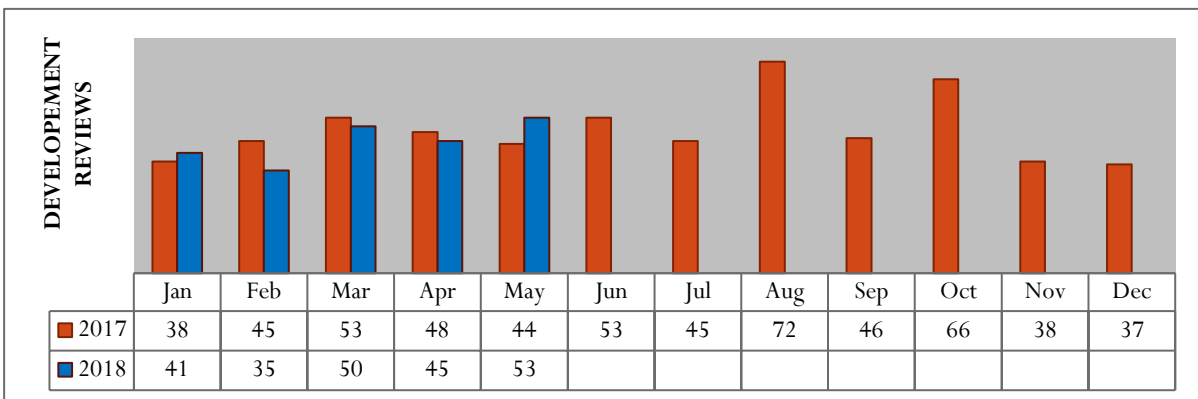
Bridge Surface Treatment

- Front Street Flyover
  - ✓ Mill and overlay wearing surface

Treatments and locations may change pending current evaluation taking place and/or actual bid pricing received that may require some modifications.

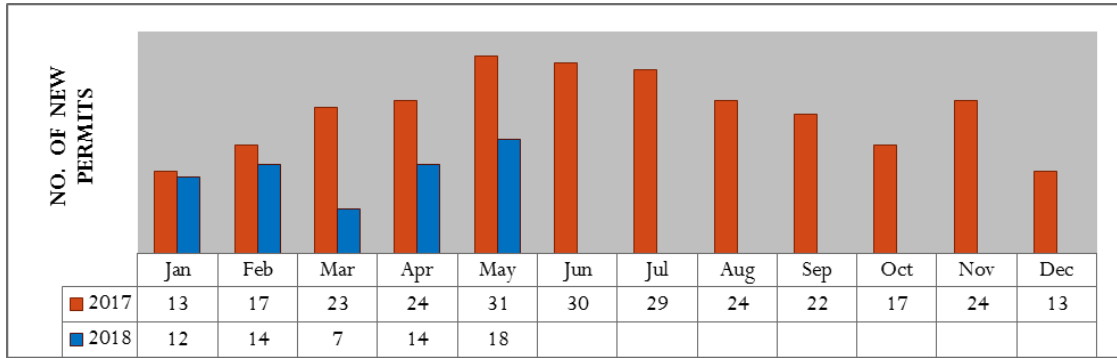
**Development Review and Permitting**

**Development Review** - Included in the 53 submittals are 20 first time applications with eight pre-applications. All reviews were completed on or before the due date assigned by the Public Works Review Team.



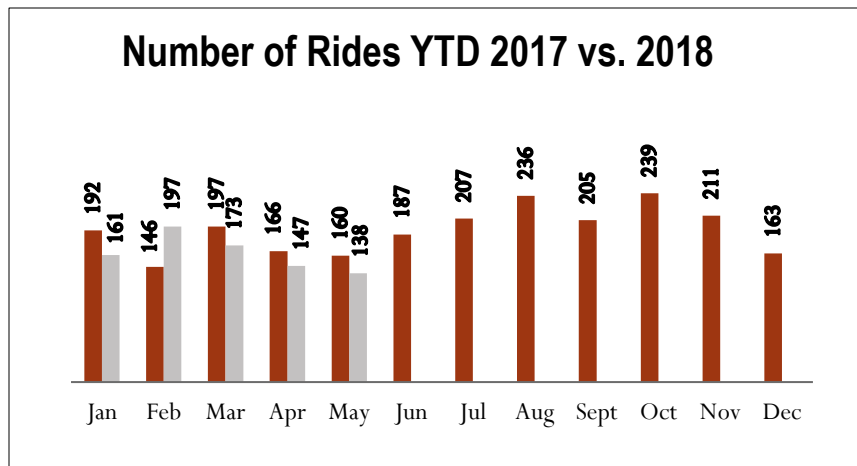


**Permitting** - Included in the 13 permits are for work within the public right-of-way.



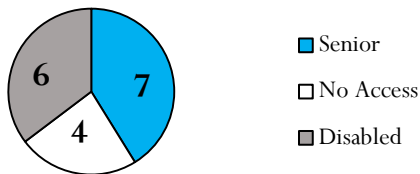
## Transportation Division

**Taxi Voucher** – For the month of May the Taxi Voucher Program funded 138 rides, this was a 14% decrease from last May’s total of 160 rides. Ridership this month is down from last month due to a few regular riders not needing rides to get them to their jobs and grocery runs.

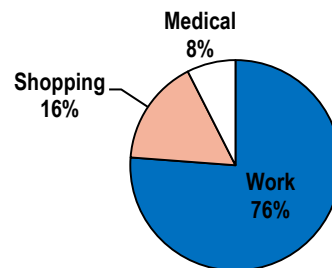


Rides are available for work, shopping or medical trips. Transportation services are provided for Castle Rock residents who are senior citizens, have a disability that prevents them from driving, or do not have access to a vehicle.

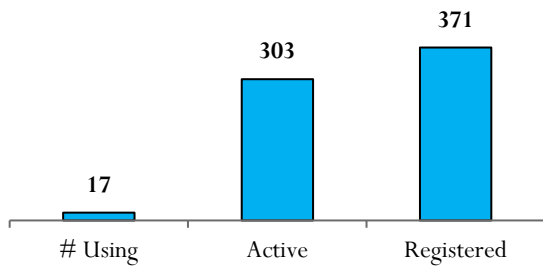
### Types of Riders Using the Service



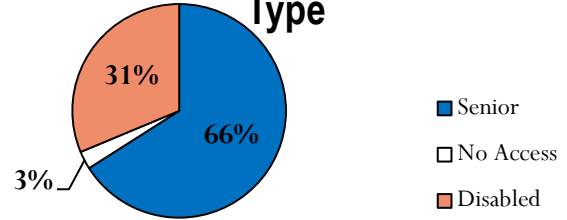
### Ride Destinations



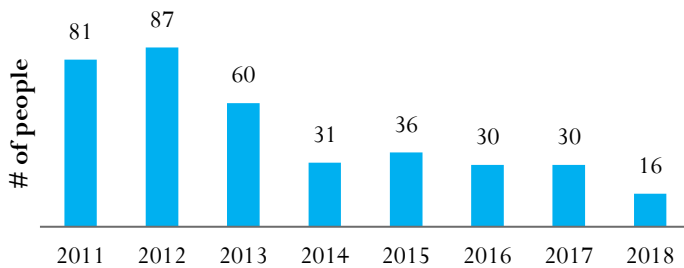
### Number of Riders Using the Service vs. Registered



### Percentage of the Total Rides (138) by Each Rider Type



### Number of People Registering for Program



There was one new registrant for the Taxi program this month. Since its inception, a total of 371 people have registered for the Town of Castle Rock Taxi Voucher Program. Currently 68 of these past registrants are inactive or have dropped out of the program.

**Senior Center Shuttle** The Senior Center provided 721 rides in the month of May which was a 1% increase from last month's rides of 711. The volunteer driver program provides service Monday through Friday from 9 am to 3 pm.



## Traffic Engineering & Operations

**Traffic Signal Operations and Maintenance** - In the month of May we addressed five requests from the public related to traffic signal and intersection operations and maintenance. A total of 73 traffic signal maintenance visits were completed; thirty-four of those visits were planned inspections for quarterly preventative maintenance; thirty-nine were for non-routine traffic signal maintenance (twenty-nine were completed by Town staff and approximately 10 visits by the Town's signal maintenance contractor). Non-routine visits included addressing detection recall, bulb burn outs, signal head adjustment, and other repair and replacement of parts. First quarter preventative maintenance which, began in March was also completed in May by Town staff with assistance from our maintenance contractor.



PUBLIC WORKS DEPARTMENT



The new bucket truck was put into service in May and staff also completed the installation and repair of parts, signal troubleshooting, and made signal adjustments due to work zone activities.

**Street Signs and Pavement Marking Maintenance** - For the month of May, the Signs & Markings section, which includes one technician and three newly hired seasonal employees, installed ten new signs and painted four new symbols. Inspections were completed on 263 signs for their reflectivity. The crew started our painting program by reapplying 34 symbols. Also, the striping in three areas in Town - N. Meadows Drive, Liggett Road, and Fifth Street (at Valley Drive) - were re-configured and re-striped by our contractor, Colorado Barricade.



The crew also assisted with two special events and supplied traffic devices to two work zones.

## Transportation Planning

### **Neighborhood Traffic Calming Program (NTCP)**

#### New Inquiry Updates

- A resident in the Meadows near Aspen View Academy raised concerns about cars speeding on their street. The policy and a support petition was emailed to them should they decide to pursue the NTCP.

#### Previous Inquiries

- Sapphire Point Boulevard - The Public Works department along with the Police Department are continuing to collect and analyze traffic data at the homeowner's request. It will be known in early June if the street qualifies for the NTCP.

#### Town Staff Identified Projects

- From the conceptual striping plan for the roadway, staff is recommending that a multi-purpose lane be striped along Butterfield from North Meadows Drive to Meadows Blvd. The lane would be 7 to 8 feet in width and allow for cars to park in pre-determined areas based on a set of criteria to keep the street safe for all users. For example, on-street parking would not be allowed in sight triangles or within 20 feet of a crosswalk so as not to obstruct the visibility of people crossing the street or on-coming traffic. This striping is proposed to be an interim plan but could become permanent with the reconstruction of the road next year as part of the PMP.

### **Development Review**

- Staff reviewed and commented on four transportation impact studies during the month. All were completed by the due date.

**Downtown Mobility Study** - The project web page is now up and active on the Town's website. Town staff and Kimley-Horn staff are receiving public feedback from the survey placed on the new web page. Since the site was activated, the Town has received 34 surveys with comments ranging from congestion concerns, biking issues, parking for all modes, and questions about serving the area with transit. Public outreach and data collection will continue into June. The first public workshop is scheduled for June 6 at the Police Station downtown.

**I-25 / Blackfeather Trail Interchange and Founders Corridor Study** - Town staff is working with Felsburg, Holt, and Ullevig (FHU) to finalize the scope of the study. Once finalized, the Town will approach CDOT and Douglas County for concurrence prior to pursuing the study.

**I-25 / Crystal Valley Parkway Interchange Study** - The first draft of the report is expected to be ready for staff review the first week of June.



**DRCOG Active Transportation Plan (ATP)** - The purpose of the ATP is to develop a regional active transportation vision, implementable plan, and products to support the development of a robust active transportation network in the DRCOG region. Town staff has provided extensive data on the biking and walking conditions in Castle Rock for the DRCOG first Active Transportation Plan. A meeting will be held by DRCOG in early June with local jurisdictions to complete data and review what has been reported prior to releasing the first draft of the plan.

**DRCOG 2021 – 2023 Transportation Improvement Program** - A sub-regional TIP Steering Committee was held in May. Several issues were discussed and agreed upon. As a part of the discussion, the Committee decided not to place a cap on how much funding each project could apply for. This means any project can ask for the full sub-regional amount and receive all the sub-regional funds. In addition, a \$250,000 minimum is required for project submittals (\$100,000 for studies). And, the maximum overmatch point total will be given to a project that provides more than 50% local match. Finally, appointed staff members can vote for the elected officials should they not be able to attend a Steering Committee meeting. During June, a Memorandum of Understanding (MOU) defining the process will be developed for all participating sub-regional jurisdictions to approve and sign.



**Future CDOT Bustang Stop** - A short term interim stop is not currently being planned by CDOT. Town staff will continue to work with CDOT staff to identify a long term stop in Castle Rock that will be able to serve the entire Town.

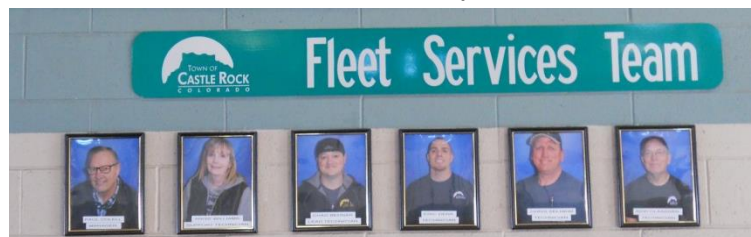


## Fleet Services

*“Keeping Castle Rock on the Move”*



As we drive around this Town of ours and see how busy all the different departments are with all the growth, from the Fire and Police departments along with Parks, Public Works, Water and Development Services relying on their Town issued vehicles to keep up with the first class service that we provide to the citizens of Castle Rock here at the Fleet Services Division, we take great pride in knowing that those vehicles are reliable and safe to operate!



May was another very busy month for the Fleet Services team keeping Castle Rock on the move. The Fleet Services Division completed 112 work orders and billed out over \$62,000 of parts and labor; which was 10% ahead of last year.



The upgrade of our Fleet software system is coming along with 72% completed and looking at a go-live date of July 1.

New vehicles continue to roll in and the technicians are working hard to get them into service. One Chevrolet Colorado was put into service for the Water Department.



**Objective/Benchmark:** Complete at least 75% of our Work orders within 24-hours of coming to shop.

**Outcome:** Fleet team completed 80.7% of the work orders within 24-hours of opening repair requests or service requests. This benchmark how quick the Fleet Division is working on vehicles to get them back on the road.

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

**Outcome:** Town vehicles and equipment were available 98% of the time. This high fleet availability rate means that Town vehicles and equipment are ready when they are called upon to perform.

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

**Outcome:** Technican productivity was 72%. This was above our benchmark of 70% compared to the standard set by the American Public Works Assosiation (APWA).

## Street Operations & Maintenance Division

During the month of **May**, the Street Operations & Maintenance Division (SO&MD) performed work in seven (7) maintenance operations:

- Crack Seal
- Pothole Patching
- Street Sweeping
- Gravel Road Maintenance
- Asphalt Patching
- Special Operations
- Training



### Crack Seal

April continued to bring unseasonably warm weather and the crew responded by getting a jump-start on crack seal operations. Of the 100-mile goal for the spring season operations, 53% of this goal has been met with the completion of 53 lane miles so far. These operations work to preserve the life expectancy of the paved surfaces in the Town.

### Pothole Patching

Streets O&MD received a number requests for pothole repairs during the month and completed repairs on 276 potholes using roughly 92 bags of cold mix asphalt. The major areas addressed were in Plum Creek, Downtown, Meadows, and on a few roads in preparation for the Tri-the-Rock event.



### Street Sweeping

Staff has completed the spring sweep finishing off the remaining 128 miles! We also completed enhanced sweeping operations in the Town's alleyways in response to their condition. Also, the area was swept in preparation for the Tri-the-Rock event. These operations enhance the overall health and appearance of our Town by reducing the amount of trash and detritus on the Town streets. We will resume the normal sweeping routine of the downtown and business areas twice monthly.



### Gravel Road Maintenance

Crews completed gravel road maintenance operations, resurfacing both Castle Oaks Drive and Rocky View Road. Heavy traffic can prove detrimental to these types of road surfaces and regular blading and compaction will assist them at providing a safe and enjoyable drive.

### Asphalt Patching

Crews responded to a number of large asphalt patching needs, including a large emergency patch on Meadows Boulevard where the road was undermined by a leak in a storm water drain. Excellent collaboration between the Water Department and the Public Works Department ensured that this potential hazard was repaired quickly, with a minimal impact to the travelling public. Other locations that received repairs were on; Gordon Drive where a contractor service installation patch failed, Cantril Street at the site of a water repair, and some large holes that required patchwork in the downtown alleyways.



### Special Operations

The new Snow Storage/Slash & Mulch site was used to deposit millings from the roadwork done on Prairie Hawk Drive. Crews used this recycled asphalt to improve the PW Snow Storage/Slash & Mulch facility. Crews also made a temporary fencing to keep critters out and young children in the backyard, and cleaned up debris, after a vehicle related accident on North Meadows Boulevard.



### Training

Thirteen staff members completed two L-Tap training courses, one on Motor Grader Operations and another regarding Guard Rail Maintenance and Replacement. These courses will help our staff and our operations to be more efficient and versatile at serving the stakeholders of our Town.

### Looking Ahead

Looking to the month of **June**, we will continue our efforts to keep the Town's roadways in good condition with potholing, asphalt patching, and street sweeping operations as needed. We will continue to crack seal the areas as part of our Preventative Maintenance Program, (Castle Oaks, Terrain, Timber Canyon, Diamond Ridge, and Sapphire Point). We will also be onboarding seasonal personnel to augment our summer maintenance efforts in crack sealing and with other operations like road shoulder maintenance and bridge maintenance operations. We will also keep up our efforts to develop all of our personnel with ongoing training.

