

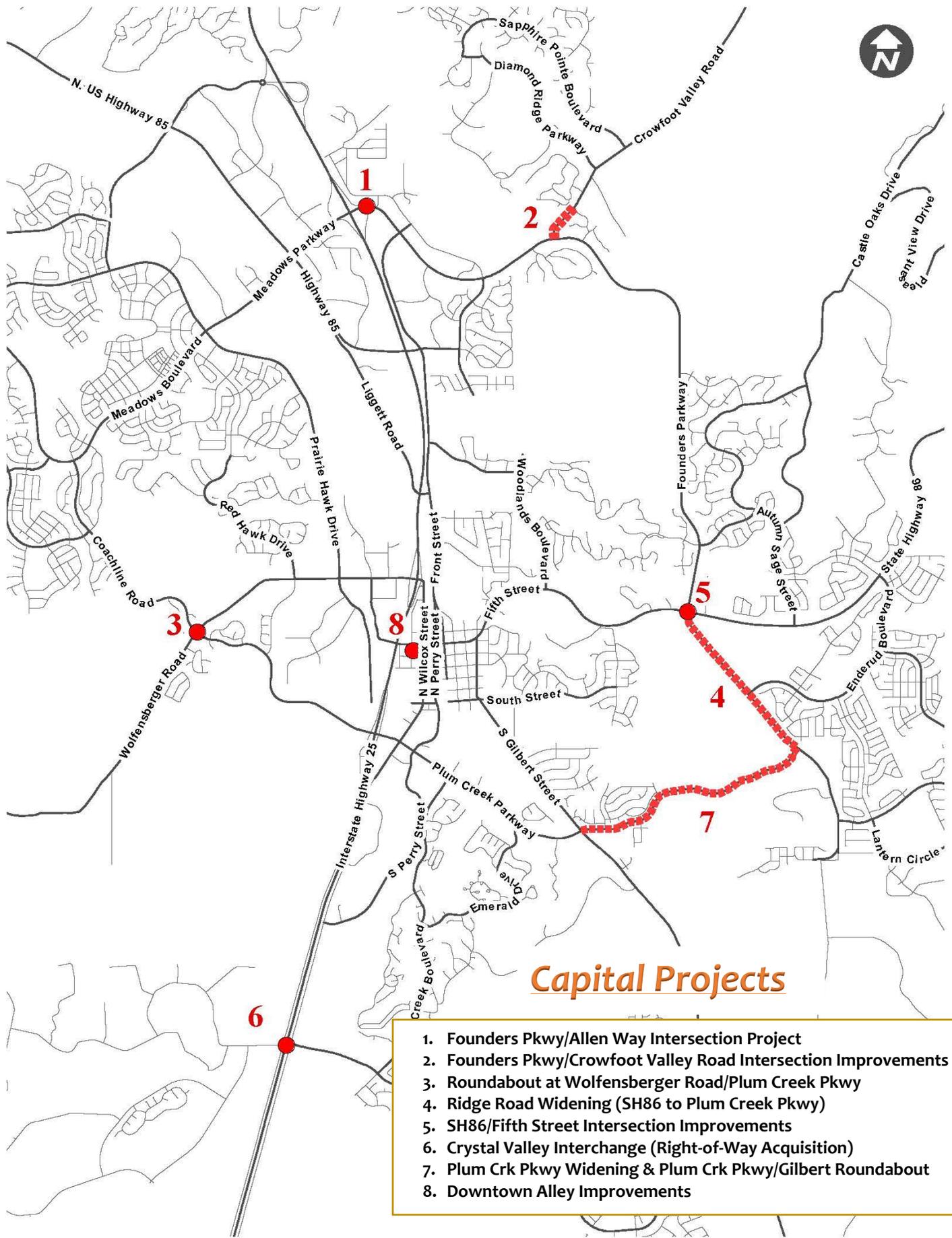
# Monthly Report

April 2020

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.

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





## Capital Projects

1. Founders Pkwy/Allen Way Intersection Project
2. Founders Pkwy/Crowfoot Valley Road Intersection Improvements
3. Roundabout at Wolfensberger Road/Plum Creek Pkwy
4. Ridge Road Widening (SH86 to Plum Creek Pkwy)
5. SH86/Fifth Street Intersection Improvements
6. Crystal Valley Interchange (Right-of-Way Acquisition)
7. Plum Crk Pkwy Widening & Plum Crk Pkwy/Gilbert Roundabout
8. Downtown Alley Improvements

1. **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: Construction – Close out phase. The following is a summary of the construction activities that took place during this month:

- The contractor installed an illuminated Street Sign for Founders Parkway on the north bound off ramp signal pole
- The contractor is working on seeding and soil mitigation as weather allows
- Final closeout expected by end of May 2020

**Budget:** \$2.64M

**Construction Complete:** Spring 2020

2. **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: Construction, Intersection Improvements:**

The following is a summary of the construction activities performed this month:

- The project was walked for an initial punch list for acceptance
- The installation of the street lights was completed

- The contractor is working on seeding as weather allows

- Median cobble installed in first week of May
- Paving operations are scheduled for the second week of May, with expected completion May 13

**Budget:** \$3,550,000

**Construction Completion:** Spring 2020

3. **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: Closeout – Substantial completion was issued in Spring 2019. Punch list items are complete. The Town is working with the adjacent property owners to complete the final landscape tie-ins and adjustments. The final landscaping work is anticipated to be complete by fall 2020.

**Remaining Budget:** \$120,000

4. **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:** 100% plans have been provided. The consultants continue to work on ROW acquisition.

- Staff is working with IREA to initiate agreements to have their facilities relocated as needed
- Work order being submitted to IREA this week for completing their design
- Right-of-way and easements effort ongoing with appraisals ongoing

**Budget:** \$400,000

**ROW Acquisition:** Winter 2020

5. **Founders Parkway (SH86)/Fifth Street Intersection “Four Corners” Improvements** – With new traffic studies submitted, the Town, and CDOT will continue to investigate multiple alternatives to address safety concerns and capacity issues at this intersection.

**Phase: Design –**

- The DRCOG grant was awarded to the Town

- Project will be designed per Federal requirements/standards
- Town staff is reviewing submitted IGA with CDOT for CDOT to design and manage the project
- IGA review by Town expected to be complete the first week of May, to be sent to CDOT with formal revision request and scope of work review
- Working with County on IGA for construction participation

**Budget:** \$1,200,000 for design in 2020 with DRCOG Grant Reimbursement (Town share \$240,000)

**Design Completion:** Pending award

6. **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

- Acquisition Services
  - East Side of I-25 – Offers are being sent out on the majority of the properties. The bill boards are being appraised.
  - West Side of I-25 – Appraisals are targeted for completion in May and June, 2020.

**Budget:** \$4,600,000, and Development Escrow

**Completion:** Winter 2020

7. **Plum Creek Parkway Widening and Plum Creek Parkway/Gilbert Street Roundabout Project** – This project will implement the Transportation Master Plan’s identified improvements for this corridor. The addition of the remaining two lanes of the master planned four-lane roadway on Plum Creek Parkway between Eaton Street and Ridge Road. Not only will it include the addition of 2 lanes, but also bicycle and pedestrian multi use lanes. It will also include roundabout modifications at Ridge Road.

**Phase 1A: Drainage design package: Construction**

- The following is a summary of activities performed this month:

- The contractor continues installation of improvements along Plum Creek Pkwy
- The storm sewer crossing at Live Oak Rd. was completed

- Additional conflicts on the storm sewer and sanitary sewer crossings are being evaluated, and impacts are being evaluated
- Anticipated completion date is May 2020

**Budget:** \$1,158,300

**Construction Completion:** Spring 2020

**Phase 1B: Plum Creek Pkwy Widening and Roundabouts: Construction** - The following is a summary of activities performed this month:

- Contractor Jalisco completed 3000 CY of excavation at the future detention pond area
- Staff issued Change Order to add temporary signalization of the intersection to the contract in order to reduce traffic congestion during construction
- The team accomplished the first major traffic switch at the intersection of Plum Creek Parkway and S. Gilbert Street, moving the project into the first major phase of construction
- IREA mobilized to site to begin relocation work at the intersection of Plum Creek Parkway and South Gilbert Street
- Continued utility coordination for utility relocations

**Budget:** \$6,817,145

**Construction Completion:** Winter 2020

**Phase 2: Widening Plum Creek Parkway from Eaton to Ridge Road – Designer Kimley-Horn, ROW Acquisition Western States**– The following is a summary of design activities performed this month:

- Continued development of construction plans for Phase 2, the widening between Eaton St. and Ridge Rd., and the roundabout at Ridge Rd. Including finalizing ROW needs.
- Continued utility coordination for utility relocations

**Budget:** \$794,375

**Design & ROW Completion:** June 2020

8. **Downtown Alley Improvements:** Four alley ways in the downtown area are beyond their service life

and are not providing an appropriate level of service to the Town. Reconstruction of alley pavement in addition to drainage improvements and sanitary sewer system replacement will renew the service life of both the pavement and sanitary sewer in the area.

- 2 Alleys (Westerly Alleys) – Located West of Jerry St. between 5<sup>th</sup> and 3<sup>rd</sup> streets
- 2 Alleys (Easterly Alleys) – Located East of Perry St. between 6<sup>th</sup> and 4<sup>th</sup> streets

#### **Monthly Progress & Status**

- Final (90%) design is complete for the Westerly and Easterly alleys. Town of Castle Rock stakeholders have completed their final design review and returned comments. Final utility investigation (SUE) is scheduled to begin in the coming month.

#### **Target Milestones**

- **Advertise Construction Contract: June 2020**
- **Construction – Late Summer 2020**

**Budget:** \$900,000

#### **Traffic Signal System Upgrades –**

This project is a multi-year signal system upgrade project that began in 2015 and is on-going as funds are available. The project has included proven technology advances at signalized intersections, for our daily operations, and for communications between the center and each intersection.

- CDOT has travel time monitoring devices for Meadows/Founders Pkwy and Wolfensberger and I25 signals and is working on gathering network and server information for device programming. CDOT is responsible for installation, and is experiencing slow work time frames due to COVID-19.
- Detection equipment replacements are complete on Wolfensberger Road. Meadows Parkway is scheduled for early May.
- We are currently trialing a new vehicle detection system that uses a single camera for all four approaches at Plum Creek Parkway and Plum Creek Boulevard. However, there have been some vehicle detection reliability issues that the vendor is still working to resolve.
- Beyond the existing traffic signal detection replacements, all other Town funded upgrade projects have been put on hold to assist with reducing 2020 expenditures.

- Town staff is preparing a Letter of Intent for the DRCOG traffic signal system call for technology projects that opened in April for fiscal years 2021-2023. Our priority project is upgrading to vehicle detection in advance of intersections on regional corridors, and amplify the use of traffic signal performance measures on more of the system to improve operational efficiency and safety.

**Budget:** \$125,000

**Construction Completion:** End of year 2020

#### **2020 Intersection Signalization Construction Project –**

This project is the construction of one new signal in 2020 at Meadows Boulevard & Cherokee Drive.

- This project has been postponed until later in the year, which is due to initial bids being higher the first go around that we hope to have reduced with a new advertisement in August.

**Budget:** \$305,000

**Construction Completion:** End of year 2020

#### **2020 Illuminated Street Name Sign Project –**

This project is the 2<sup>nd</sup> year we will be installing illuminated street name signs at several signalized intersections in Town along the major “ring” road that loops around the Town of Castle Rock.

- This project has been postponed until another year to assist with reducing 2020 expenditures.

**Budget:** \$0

**Install Completion:** Likely 2021

#### **Rectangular Rapid Flashing Beacon (RRFB) 2020 Project –**

This project addresses the requested pedestrian beacon crossing locations that staff received in 2019 at the 10 highest priority locations.

- In April, we tested beacon technologies including cellular modem and cloud connectivity to get real time status and monitoring capability.
- A contract for the low-bid contractor that will assemble and install the equipment is being reviewed.
- Safety improvements that can be made in 2020 at lower priority locations are being evaluated.

**Budget:** \$305,000

**Construction Completion:** 2020

## 2020 Pavement Maintenance Program (PMP)

The 2020 PMP will focus its efforts in the Central PMP area with additional work taking place on primary streets (Meadows Boulevard, Prairie Hawk Dr., Factory Shops Blvd., and Park Street).

**Sidewalk, curb and gutter** repairs kicked off April 21. The residents & businesses within the Central PMP area were notified via letters as well as the use of variable message boards, that repair and maintenance work was to begin.



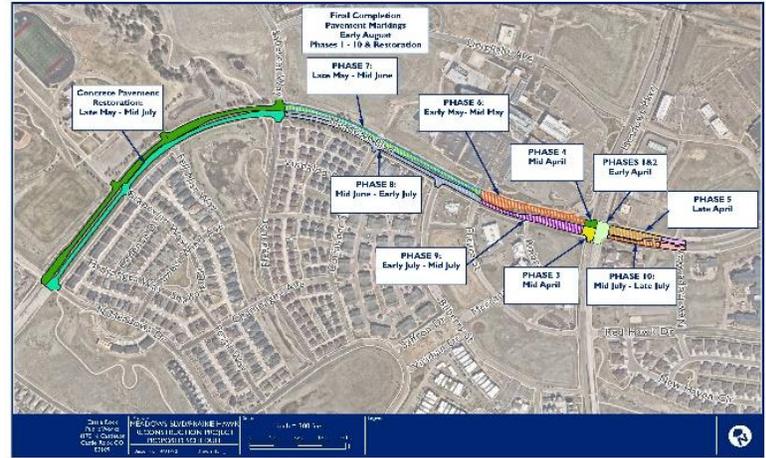
In general, work will progress through the Central PMP area in a clockwise manner, starting in an area off Red Hawk Ridge Drive. The Town's contractors will be preparing the streets to receive crack seal and mastic, as well as asphalt patching. Sidewalk, curb and gutter repairs are expected to run through June and asphalt patching is scheduled to begin in mid-June and run through July. The asphalt slurry seal that is typically included with the PMP each year has been canceled. This was done to reduce 2020 expenditures given the expected revenue shortfall related to the COVID pandemic.

**Meadows Blvd/Prairie Hawk reconstruction project** began on Monday, April 6. Initial work focused on the removal and replacement of the four phases of the intersection at Prairie Hawk Drive. The contractor was able to complete existing concrete removal and pave the intermediate and bottom mats. The subgrade was treated to improve stability. The contractor will move on to



remaining phases beginning in phases 5 & 6 and proceeding as the overall map (below) indicates.

Overall map:



The **Asphalt Overlay Project** began construction with concrete repairs on April 6 on Factory Shops Blvd. Milling of the existing asphalt surface began Monday, April 20. Overlay paving and permanent striping was done on April 23 & 24. Lanes were open to traffic well ahead of the original date to allow for local business traffic.



**Full Depth Reclamation** concrete repair work started on April 8. The work started at Barbi Ct. and Parkview Ct. in the Castle North subdivision. Concrete repairs, reclamation and asphalt paving is to progress in a clockwise fashion. The project is expected to be completed by June 1.



## 2020 Facilities Parking Lot Improvements Program

This contract saw the reduction to the scope of work that was originally bid. The Parks Department, Public Works Service Center, and the Golf Course made the decision to cancel the parking lot improvements due to the COVID-19 pandemic. However, Castle Rock Water decided to go forward with their parking lot improvements. The parking lots include the following:

- Milestone Pump Station (Founders Pkwy)
- Miller Treatment Plant (Plum Creek Blvd)
- Prairie Hawk Well Field (A7)
- Castle Oaks Lift Station

Work is scheduled to begin in August and continue through September.

## 2020 Bridge Maintenance Program (BMP)

Bids for the 2020 Bridge Rehabilitation for 5<sup>th</sup> Street Bridge over I-25 will be submitted for competitive bids upon Colorado Department of Transportation's completion of the proper paperwork and environmental studies. The project will include repair work around a few of the bridge piers and walls next to Plum Creek and next to I-25. The project is expected to start in June and be complete by the end of July 2020, pending weather.

## Development Review and Permitting

**Development Review** - All 47 reviews were completed on or before the due date by the PW Development Services Team.

**Permitting** – 25 right-of-way permits were issued and over 200 inspections were conducted.

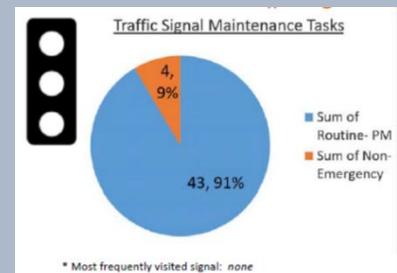
# Transportation Planning & Traffic Engineering Division

## Taxi Voucher Program

For the month of April, the Taxi Voucher Program funded 111 rides; this was slightly less than last year's April total of 130 rides. Surprisingly ridership in April did not significantly drop from last month, in fact rides were only down 14 in total. Transportation services are provided for Castle Rock citizens who cannot drive, have a disability that prevents them from driving, or do not have access to a vehicle. In April, 19 individuals used the Town's Taxi service. Of those that used the service, 84% of the rides were for work, 5% were for shopping trips, and 11% for medical appointments. There were no new riders that registered for the service keeping the total of registered riders to 436 in the Taxi Voucher Program. The Castle Rock Senior Center provided a total of 258 rides in April. The Senior Center is also providing seniors reassurance calls, and grocery shopping and delivery service, as well as prescription pick up delivery service due to the COVID-19 impacts.

## Traffic Engineering and Operations

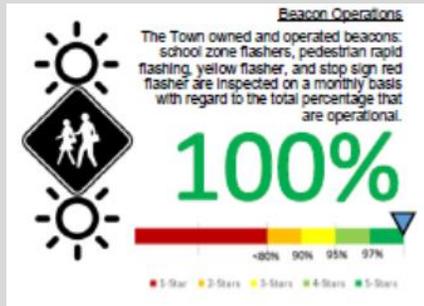
### Traffic Signal Operations and Maintenance



### Street Light Operations



## Beacon



## Operations



## Street Signs and Pavement Marking Maintenance

During the month of April the crew accomplished 526 tasks. Of these tasks 258 of them were sign work activities related to fabrication, install, repairs and replacements, etc. This month the team completed 15 original installs and 27 sign replacements as part of the tasks identified in the sign inspection we did back in January. These signs were either missing, never installed or needed replaced as they no longer met the thresholds to function as a safe and effective sign on the roadway. We also started the paint season late in April and completed 94 marking inspections for material verification and 89 replacements of markings. The team also helped out with what will hopefully be one of the last snow events of the 2019/2020 season.

## Transportation Planning

### Neighborhood Traffic Calming Program (NTCP):

The NTCP exists to verify and address quality of life items associated with vehicular traffic on local

neighborhood streets and certain collector roadways. There were no new speed study inquiries in April. However, residents in the Meadows on Rising Moon Way inquired about changing the mini circle installed by the developer to a less impactful traffic calming device. A petition and data was sent to the point of contact to complete. The following provides updates for the two active projects:

- **Diamond Ridge Pkwy:** The Diamond Ridge Parkway traffic calming plan is continuing to work with the study area's working group. Speed results from the demonstration project were shared with the working group and public. There were also a series of questions asked of the working group about the speed data and how to proceed with the plan. Town staff is still awaiting replies to the questions and how to proceed. A follow up is planned for May unless the working group decides on another way to proceed.
- **Bittern Street / Loon Circle:** Back in December, a working group for the neighborhood recommended replacing both existing traffic circles with speed cushions. A vote of the residents who live on the streets in question was conducted in February and the proposed plan was approved. A postcard was mailed to the residents in March. The replacement work is set to occur this summer.

### Castle Rock Transit Feasibility Study:

Town Council was presented an update to the transit feasibility study on April 21<sup>st</sup>. During the meeting, the three transit options recommended from the Focus Group and Technical Advisory Committee were shared and discussed. Council was questioned if the study should continue to further analyze these options. There was agreement and the study will continue to analyze the following three service models.

1. Point to Point On-Demand Service
2. First/Last Mile Service
3. Local microtransit

A reminder that these three service models were identified as the most feasible options for the Town while still meeting the transit needs. The next steps of the study will be to develop conceptual models with service plans, costs, and budgets.

### Future CDOT Bustang Stop:

During a meeting with CDOT and Douglas County the long term Bustang location was discussed along with a short term location that could be quickly implemented, such as the Wolfensberger & I-25 location. Potential partnerships were also discussed but would need to be incorporated into an IGA at a later date. The Town will also continue to work on the intersection analysis at Wolfensberger and Wilcox and access to the CDOT parcel.

## Fleet Services



As you drive around Castle Rock and see many different departments providing first-class service, you will notice how they rely on their Town-issued vehicles. The Fleet Division takes great pride in knowing that those vehicles are reliable and safe to operate.

Fleet Services Division has gone back to full staffing in late April after using split shifts for a the last month. Work has still been very steady and the team has done a great job of keeping Castle Rock on the move. During the slower times the staff has been working on repair and maintenance of shop equipment as well as continued training and certification.

The Fleet Division was very productive and that shows in our benchmark comparisons listed below. The Fleet Division billed out \$69,000 of parts and labor and completed 135 work orders. As well as meeting the following objectives and benchmarks:

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

**Outcome:** Fleet team completed 82.4% of the work orders within 24-hours of opening repair requests or service requests. This benchmark number shows how quickly vehicles and equipment get serviced and repaired and back on the job.

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

**Outcome:** Town vehicles and equipment were available 98.3% 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 77.2%. Very high productivity well above our benchmark. .

Overall we completed 135 work orders and processed \$69,000 in parts and labor and another \$28,000 in fuel transactions. The fleet parts division returned a large number of obsolete parts and received a credit of \$2,000. Fleet technicians Chris Selheim, Eric Dena, Rod Claassen, and Caleb Wood all worked on ASE certifications and other training when at the shop.



*Using overhead crane to work on a trailer.*

# Street Operations & Maintenance Division

During the month of April, the Street Operations & Maintenance Division (SO&MD) performed work maintenance operations:

- Snow and Ice Control
- Sweeping
- Pothole Repair
- Roadway Shoulder Maintenance
- Asphalt Patching
- Training (from home)

## Snow and Ice Control Operations

In April, Streets crew responded to three snow events totaling 11.7 inches. Streets were cleared within 5 hours of the cessation of snowfall. This is one of the essential emergency services that the Streets Division provides to the town.

## Pothole repair

This month, crews inspected 84 miles of roadway for potholes. 24 separate areas were identified and crews used 2850 pounds of cold mix asphalt to make repairs on the equivalent of 190 potholes prior to their becoming more hazardous. This is another of the essential services provided by the Streets Division.

## Asphalt Patching

Crews also addressed some asphalt patches due to repairs made by CR Water. Teams completed 8 full depth roadway repairs, using 23 tons of asphalt. This is part of a new program aimed at providing greater efficacy and value to the Town’s stakeholders in regards to Water Department patching needs.

## Sweeping

In April, Crews were focused on the annual spring sweep as well as assisting the Signs and Markings team by sweeping ahead of the long line painting contractor. Part of the spring sweep is to address the material that has built up on sidewalks and ADA ramps over the winter. During April the team cleared 113 miles of sidewalk, swept 208 of the almost 700 total lane miles and collected 300 cubic yards of debris.

## Training

In the spirit of keeping crews safe and isolated during the current pandemic, crews were kept working from home as much as possible, to protect the crew’s ability to respond to essential/emergency operations such as

snow and ice control. Crews working from home during the month of April, engaged in training as well as reviewing policies and standard operating procedures totaling 791 hours of training.

## Looking Ahead

In May, crews will be as close to normal operations as possible while ensuring that “Safer at Home” protocols are adhered to. The Streets Division is planning on performing road verge maintenance, continuing the spring sweep, crack sealing (weather permitting), and maintaining vigilance for snow control operations as we are not quite out of the woods yet.

