



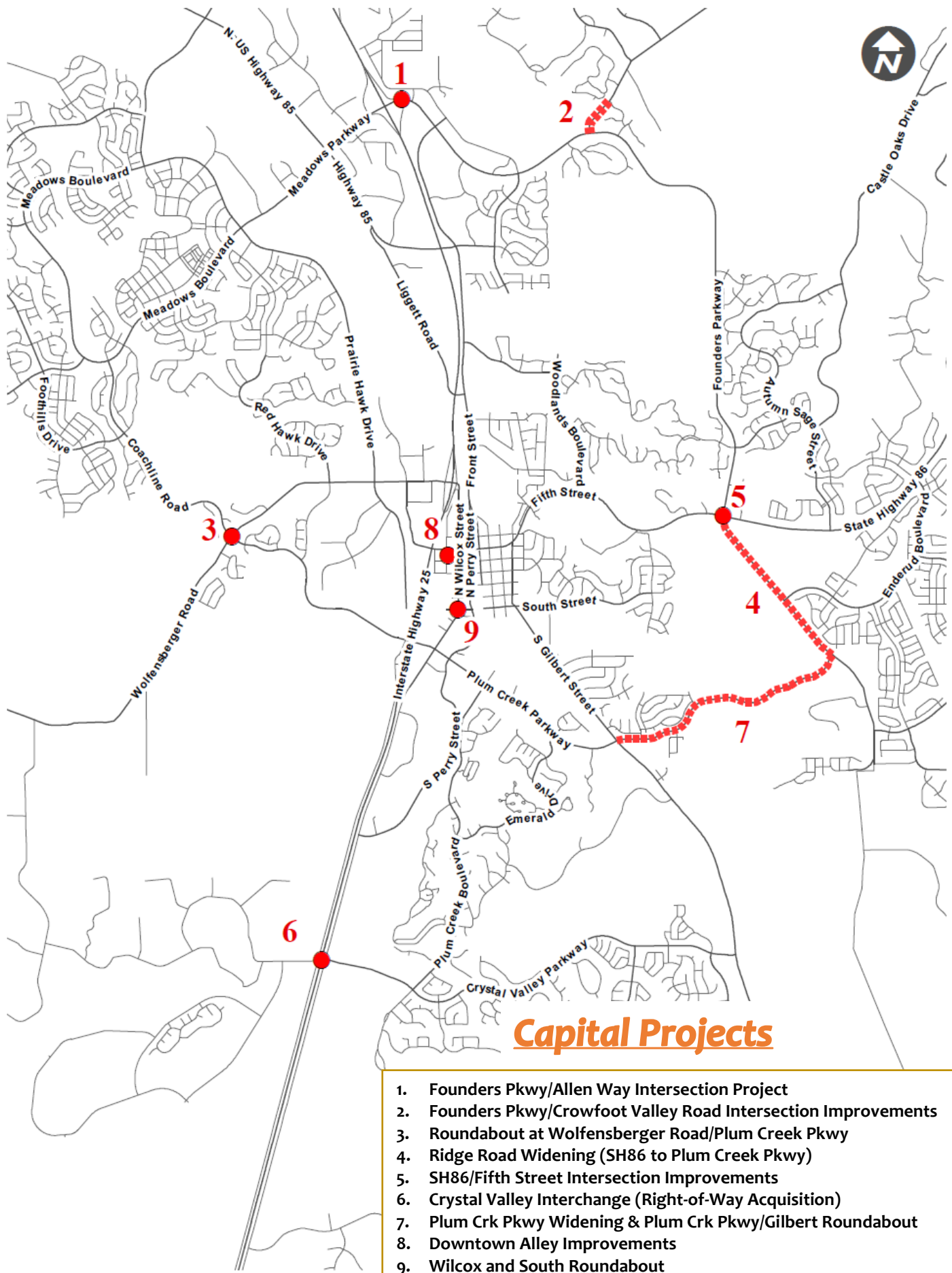
# Monthly Report

December 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.





**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. Town staff, project consultant and the contractor are working to complete required project documents for close out with CDOT.

**Budget:** \$2.64M

**Acceptance:** Fall 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:** Close out phase. Town staff, project consultant and the contractor are working to complete required project documents for close out with CDOT. The Grading, Erosion, and Sediment Control permit remains open to monitor vegetation coverage and growth. Inspections will be performed until the requirements of the permit are achieved.

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

**Construction Completion:** Fall 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 accident potential.

**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 2021. The work completed this month in progression to project close-out is as follows:

- Completed draft agreement/contract to complete remaining landscaping

- Began negotiation of contract terms with CRDC

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

**Final Completion:** Winter 2020

**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 has received initial cost estimate from IREA. Staff plans to review and coordinate with IREA on possible phasing of the relocations.

**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. Improvements under evaluation include:

- Southbound traffic – add left turn lane, add a free right turn lane, convert right turn lane to through/right
- Eastbound traffic – convert right turn lane to through right, add free right turn lane
- Northbound traffic – add left turn lane, add second through lane, add a free right lane
- Westbound traffic – add through lane, add a free right turn lane

**Phase: Design:** David Evans & Associates (DEA) is the design consultant for this project. The following is a summary of the activities performed this month:

- Town staff and DEA met with and CDOT to discuss project scoping, which included design alternatives.
- Town staff and DEA held a meeting with CDOT to discuss feedback from the scoping meeting.
- The project team met to discuss the project’s communications plan, which will include soliciting public input. A schedule for public outreach meetings is being developed

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

**Design Completion:** Winter 2021

**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 partnerships to assist with advancing construction.

**Phase:** Right-of Way Acquisition

- Acquisition Services
  - o East Side of I-25 – Offers continue to be sent out. Several properties are in the negotiation phase.



- o West Side of I-25 – Appraisals are complete. Town staff and consultants are preparing Notice of Intent for several property owners.

**Phase:** Interchange Access Request and Environmental Assessment Reevaluation

- Town staff continues to meet with CDOT and FHWA to establish priority activities for the interchange approval.
- The Town received notice of the federal BUILD Grant award. Staff has been meeting with CDOT and FHWA staff to develop a plan to maximize efficiency's on getting the grant agreement and the Intergovernmental Agreement (IGA) done. The IGA is between CDOT and the Town which identifies the general terms of the grant, scope of work, and funding provisions awarded to the Town. Staff is also pursuing an Advanced Pre-Construction application which will allow the Town to get reimbursement for design activities prior to the grant agreement being complete. The funding of the grant is reimbursement of up to \$5.4M with a cost sharing of 45% grant and 55% funded by the Town.

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

**Completion:** Spring 2021 (right of way acquisitions)

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. The improvement has been broken out into 3 phases in order to meet the department's objectives. Phase 1A included portions of storm sewer improvements between Gilbert and Eaton. Phase 1B includes all roadway/utility/pedestrian access improvements between Gilbert and Eaton, including the implementation of roundabouts at the intersections of Gilbert and Eaton. Phase 2 includes all roadway/utility/pedestrian access improvements between Eaton and Ridge Road.

**Phase 1A: Drainage Improvements: Construction (100%)** - The following is a summary of activities performed this month:

- Town staff is inspecting punch list work for final acceptance.
- Staff is compiling final quantities and back charges for the contractor's contract

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

**Construction Completion:** Complete

**Phase 1B: Plum Creek Pkwy Widening and Roundabout: Construction (83% Complete)** - The following is a summary of activities performed this month:

- Completed mainline paving of Plum Creek Parkway (bottom lifts)
- Completed Roadway Tie-in to Eaton Street

- Completed Eaton Roundabout roadway (bottom lifts)
- Completed approximately 50% of concrete median cover
- Completed remaining concrete retaining walls
- 45% of street lighting installed

Mainline Plum Creek Parkway road is paved with bottom lift asphalt. Crews continue into January to complete pedestrian improvements (sidewalks) before winter shutdown. Topsoil, seeding and final punch list activities are scheduled to be completed in the spring of 2021 when conditions for seeding and final stabilization are favorable.

**Budget:** \$7,507,723

**Substantial (Roadway) Completion:** January 2021

**Construction Completion:** Spring 2021

**Phase 2: Design and ROW Acquisition (30% Complete)** – The following is a summary of design activities performed this month:

- Completed 30% preliminary design for the Phase 2 Roadway (Plum Creek between Eaton and Ridge Road)
- Submitted preliminary design to all stakeholders for review
- Completed and submitted Phase II Drainage Report
- Commenced VE evaluation to determine cost/benefit of retaining walls vs. property acquisition

**Budget:** \$794,375

**Design Completion:** March 2021

**ROW Completion:** ROW – Fall 2021

8. **Downtown Alley Improvements:** Four alleyways in the downtown area are beyond their service life and are not providing an appropriate level of service. 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

**Phase – Design/Advertisement**

- IREA relocation schedule obtained
- Century Link relocation schedule obtained
- Continue public stakeholder outreach/coordination efforts to minimize construction impacts to affected businesses.
- Preparing construction contract bid documents, incorporating Utility relocation elements

**Budget:** \$900,000

**Completion:** Adjusted to Summer 2021

9. **Wilcox and South Roundabout** – This intersection is currently controlled by stop signs in two directions. As the traffic volumes increase, this existing traffic control will not be the most efficient and could contribute toward increased congestion and accidents. This project is for the design of a roundabout intersection, which will improve operations and minimize accident potential.

**Phase: Design:**

# Engineering Division

- The consultant 90% design was submitted in December for Town staff review
- Town Staff received all three purchase sales agreements with all right-of-way acquisition closings pending
- Confluence Company is finalizing construction phasing alternatives for Town leadership consideration by 1/8/21

**Budget:** \$1,850,000

**Design completion:** Early 2021

**Traffic Signal System Upgrades** – This project is a multi-year signal system upgrade project that began in 2015 and is ongoing 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.

- A detection system trial is still being concluded at Front and Black Feather. A purchase order request has been submitted to install new detection using the Town preference Iteris Next system at Front Street & Black Feather and N. Meadows & Butterfield Crossing.
- Staff is waiting for an IGA from CDOT for a traffic operation technology grant through a DRCOG application process. The project will make automated traffic signal performance metric (ATSPM) system improvements, including installing advance detection equipment and improve ATSPM software dashboard functions. Staff has begun drafting procurement documents while awaiting Notice to Proceed from CDOT.

**Budget:** \$993,700

**Construction Completion:** End of 2022 (for grant project)

**2020 Intersection Signalization Construction Project** – This project will construct two signals in 2020-2021, at Meadows Boulevard & Cherokee Drive and a temporary span wire signal at Hwy 85 and Liggett Rd.

- Span wire poles were installed and underground work was completed in December.
- An electrical permit was pulled with the building department by contractor, who is awaiting inspection to complete the IREA power meter install to power on at Cherokee Drive.
- Contract completion date has been changed to March due to delays in obtaining signal materials and Town supplied technology components. Delays have been due to reduced manufacturing capabilities of suppliers and delivery delays from COVID. The Contractor expects the project to be complete in early 2021.

**Budget:** \$588,000

**Construction Completion:** Spring 2021

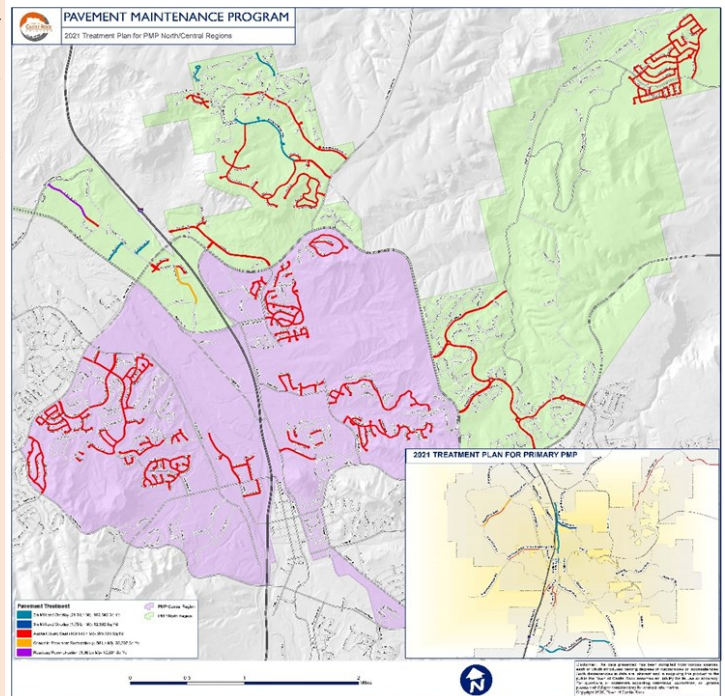
## 2020 Pavement Maintenance Program (PMP)

All scheduled 2020 PMP is complete. Staff is working with contractors to put all contracts into warranty.

## 2021 PMP

The PMP team has completed the bid packages for the 2021 PMP projects. Six (6) bid packages were sent to Rocky Mountain E-Purchasing on December 8, 2020. The bid packages were for the Asphalt Overlay, Full Depth Reclamation, Curb, Gutter and Sidewalk Replacement, Slurry Seal, Concrete Pavement Restoration and Town Facilities Parking Lot Improvements. All six bid packages have pre-bid meeting set up for January 6 and 7, 2021 with the bid openings for all projects scheduled for January 13 and 14, 2021.

The PMP map (shown below) indicates the proposed scheduled treatments for streets within the North/Central PMP area and Primary Streets. This map may change based on maintenance treatments and resources available.



## 2021 Facilities Parking Lot Improvements Program

The PMP team has completed field reconnaissance for the 2021 Town Facility Parking Lot Improvements Program. Changes in the proposed facilities may occur due to current evaluation taking place and/or actual bid pricing received that may require some modifications.

Facilities scheduled for 2021 are:

- Service Center front and back parking lot
- Red Hawk Golf Course Parking Lot (North Half)
- Red Hawk Maintenance Shop
- Rhyolite Park
- Rec. Center Parking Lot
- Castle Oaks 6 Well Field
- Castle Oaks 7 Well Field
- Prairie Hawk Well Field (A7)
- Canyon South Well Field
- Woodlands 1 Well Field
- Tank 16
- Sellars Gulch Lift Station
- Mitchell Creek Lift Station

All PMP bid books were reviewed by the Town Legal Department and are being reviewed by staff prior to being placed on Rocky Mountain E-Purchasing for competitive bids.

## 2021 Bridge Maintenance Program (BMP)

Staff is working with FHU, in cooperation with CDOT, to finalize the process of design and cost estimates for 5h Street Bridge over I-25 and S. Wilcox Bridge over Plum Creek work. Once this is complete, package will be submitted for competitive bids.

## Development Review and Permitting

**Development Review** - All 23 reviews were completed on or before the due date by the PW Development Services Team.

**Permitting & Inspection** – 26 right-of-way permits were issued.

# Transportation Planning & Traffic Engineering Division

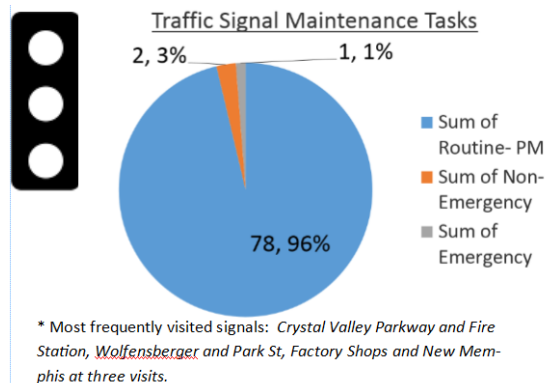
## Taxi Voucher Program

For the month of December, the Taxi Voucher Program funded 149 rides; this was about a 20% increase from last year's December total of 123 rides and a 25% increase from last month's total rides. 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 December, 19 individuals used the Town's Taxi service. Of those that used the service, 73% of the rides were for work, 21% were for shopping trips, and 6% for medical appointments.

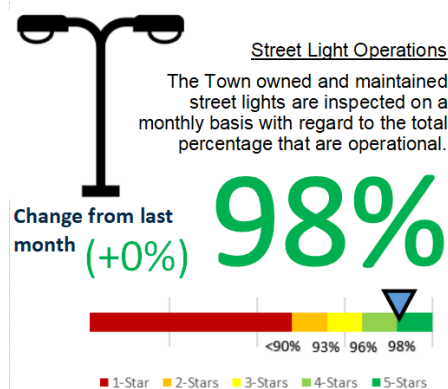
The Castle Rock Senior Center provided 657 rides in December.

## Traffic Engineering and Operations

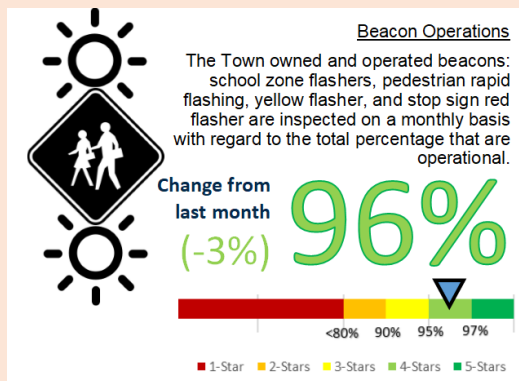
### Traffic Signal Operations and Maintenance



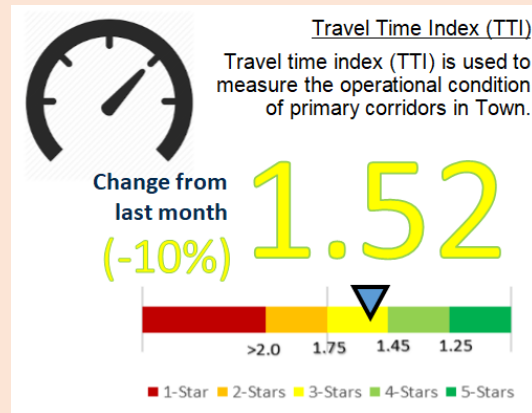
### Street Light Operations



## Beacon



## Operations



## Street Signs and Pavement Marking Maintenance

During the month of December, the crew accomplished 2,531 tasks. Of the tasks, 2,160 of them were sign work activities related to fabrication, install, repairs, replacements, inspections and investigations. 50 were related to miscellaneous sign projects, two Work Zone activities, and we performed 263 rectangular rapid flash beacon windshield inspections.

## 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 traffic calming inquiries in December.

The construction work for traffic-calming on Diamond Ridge Pkwy will be included in the Town's Pavement Maintenance Program contract, which will be advertised in December for construction in summer 2021.

### Castle Rock Downtown Alley Master Plan:

Town staff released the Request for Proposals for the Downtown Alley Master Plan. Proposals are due to Public Works on January 15, 2021. The project is expected to begin in spring 2021.

# Fleet Services

*Keeping Castle Rock on the Move*



ACCREDITED AGENCY



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 continues to make sure that Town vehicles and equipment are ready for operation. This includes public safety vehicles like Police & Fire but also other department vehicles that need to be in use to provide great service for our residents.

The Fleet Division had a very productive month of December to close out the year of 2020. Revenue was up to \$94,000 and technician productivity also increased. The parts department completed it's year end inventory which went very well. Town staff was also able to pre-order 15 new vehicles so we can have them as early as possible. A very productive December and that shows in our benchmark comparisons listed below. The Fleet Division billed out \$94,000 of parts and labor and completed 103 work orders.

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

**Outcome:** Fleet team completed 64% 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. Fleet technicians had some large repair jobs last month which caused longer repair times.

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

**Outcome:** Town vehicles and equipment were available 98.4% 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:** Technician productivity was 78.6%. This productivity number was a very good increase considering the difficulty in getting some parts and some larger jobs that were completed.

Overall we completed 103 work orders and processed \$94,000 in parts and labor and another \$23,000 in fuel transactions.





*Putting back together a plow truck after extensive repair.*

## Street Operations & Maintenance Division

During the month December, the Street Operations & Maintenance Division (O&MD) carried out operations in a number of core functionalities.

The Streets team performed work in the following maintenance operations:

- |                                    |                          |
|------------------------------------|--------------------------|
| *Asphalt Patching & Pothole Repair | *Sweeping Operations     |
| *Road Shoulder Maintenance         | *Equipment Maintenance   |
| *Ice Mitigation                    | *Snow Plowing Operations |

### Asphalt Patching and Pothole Repair

December saw the continuation of asphalt patching and pothole repair and inspections. The asphalt patch utilized nearly 10 tons of material and was in response to a Water Department repair, requiring 96 labor hours to complete. The pothole inspections are part of a proactive pothole repair program intended to actively search out potholes and schedule their repair before they become potentially damaging. The potholes found during this inspection as well as notifications from stakeholders were scheduled and repaired as quickly as possible. The Pothole program utilized nearly 192 hours and used approximately 3240 pounds of cold mix asphalt to repair the equivalent of 167 potholes.

### Ice mitigation

December brought a number of snowstorms, most were relatively small amounts of snow but they brought cold and moisture. With this combination and Colorado's well-known freeze thaw cycle, the icing on the roadways began. Streets Division responded to this by deploying supervisors to investigate and prioritize problems called in by stakeholders as well as patrolling

known problem areas and identifying areas as they came across them. Crews were then dispatched to mitigate these areas with equipment, salt, or other means as the situation required. The Streets team dedicated 108 labor hours to trying to control the encroachment of ice onto the roadway clearing approximately 3300 linear feet of roadway.

### Road Shoulder Maintenance

Crews worked to ensure the aesthetic nature the Town enjoys by maintaining the vegetation, picking up trash along the roadway, and maintaining the road shoulder for safe roadway egress. Crews completed a total 84.57-edgeline miles of mowing operations as well as shoulder reconstruction. In addition to mowing, the crews also picked up 231 bags of trash from the side of the roadways. These operations are intrinsic to the proper drainage, visibility, and overall appearance of the roadways. Crews dedicated 305 labor hours to the completion of these tasks.

### Sweeping Operations

Streets Division completed the Fall sweep of all of the roadways in Town during December, totaling 180.8 lane miles of roadway swept, 104 labor hours used, and approximately 70 cubic yards of material removed for this program. In addition to the Fall Sweep, Streets also participates in a post storm sweeping program administered by the Denver Regional Council of Governments (DRCOG) to mitigate air pollution by removing salt and sand laid down during snowstorms. Timely removal of this material prevents it from being ground into an airborne particulate that contributes to smog. Streets Division removed 17 cubic yards of material from the roadways after snowstorms.

### Equipment Maintenance

Streets crews dedicated a large amount of time in maintaining the snowplow fleet as well as the sweepers and other pieces of equipment to ensure their performance capabilities are intact for wintertime operations. Crews spent nearly 668 labor hours taking care of these machines.

### Snow Plow Operations

A number of storms came during December. The 10<sup>th</sup>, 12<sup>th</sup>, 14<sup>th</sup>, 18<sup>th</sup>, and 28<sup>th</sup> brought a total of about 9.2 inches of snow to the Town. Streets Division crews worked approximately 920 hours to return the roadways to normal operation as quickly as possible. The average time to open up the roadways for December was 6.5 hours. Crews used approximately 131.5 tons of salt/sand to keep the roadways as safe for travel as possible.

### Looking Forward

Looking into the new year, Streets crews will maintain vigilance to respond to snowstorms as they occur. Ice and potholes are an ever-present problem at this time of year, needing to be proactively sought out and mitigated. Equipment maintenance will be one of the tasks at the forefront as the equipment is vital to the divisional response capabilities. The supervisory team is also looking into training opportunities as well as working to revamp current personnel training procedures.