



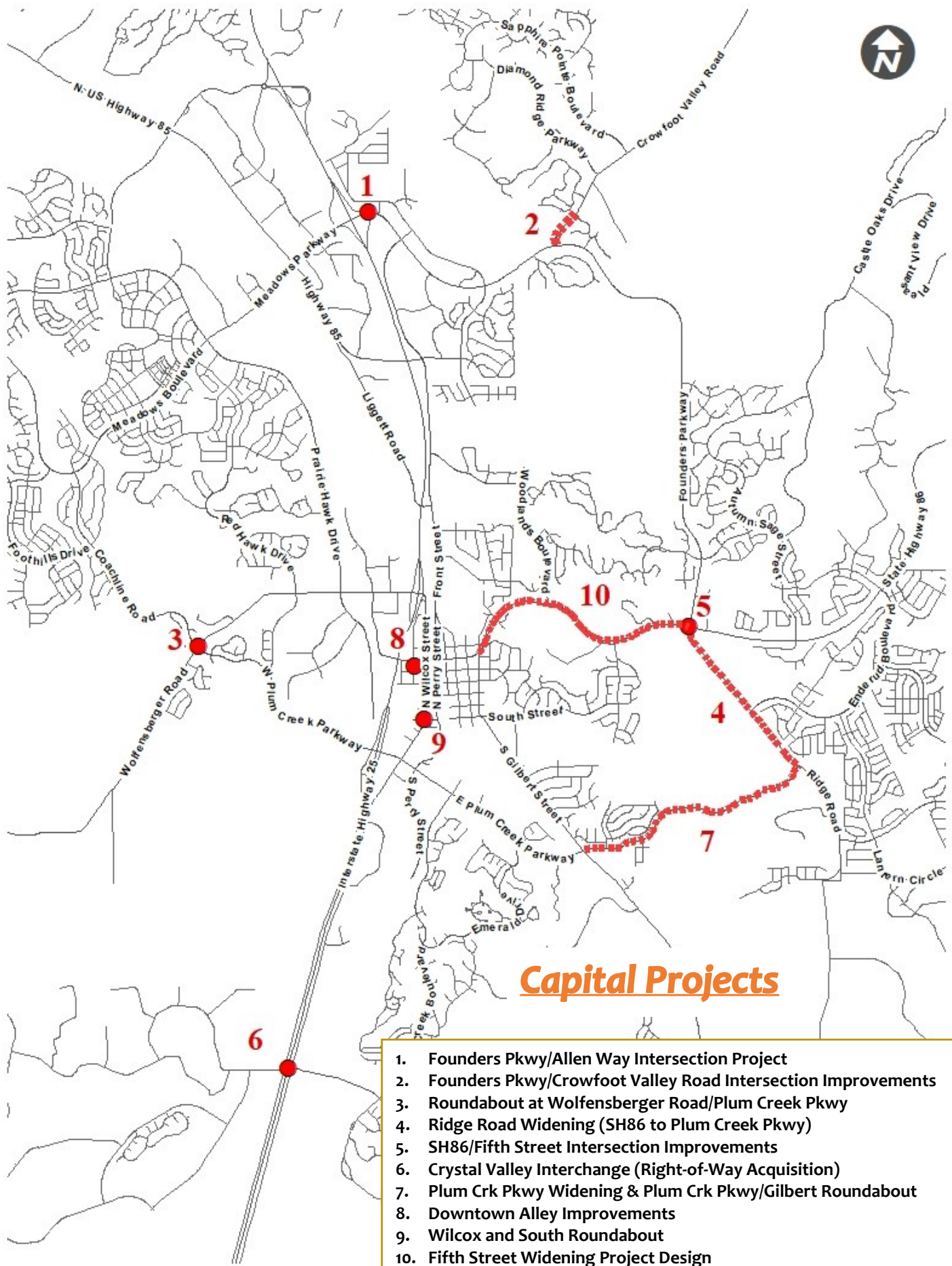
# Monthly Report

April 2021

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. Work continued on the close out phase with the preparation of the final contractor payment application and work on the completion of project documentation as required by CDOT. Work was performed to complete federal Buy America documentation required for CDOT to process the Town's reimbursements.

**Budget:** \$2.64M

**Close Out:** Spring 2021

**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:** Closeout phase. Town staff, project consultant and the contractor continue 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

**Close Out:** Spring 2021

**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:

Multiple tree removals were performed in advance of irrigation and landscaping activities

**Remaining Budget:** \$137,000

**Final Completion:** Fall 2021

**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 for Phase 1 by 1st Quarter 2022. Staff has received initial cost estimate from IREA. Staff plans to review and coordinate with IREA on possible phasing of the relocations. Staff has requested the design consultant to provide cost estimates for phasing the construction of the improvements. This request is related to coordinating the northern portion of the widening with the Four Corners Intersection Improvement project.

**Budget:** \$400,000

**ROW Acquisition:** Spring 2021-Phase 1; Fall 2023- Phase 2

**Targeted construction:** 2024

**5. Founders Parkway (SH86)/Fifth Street Intersection "Four Corners" Improvements** – With new traffic studies submitted, the consultant will investigate multiple alternatives to address safety concerns and capacity issues at the 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:

- Met onsite with the southwest property owners to discuss access points
- The project team has been working on the 30% preliminary design phase with plans expected for review in June along with another public outreach meeting.

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

**Design Completion:** Winter 2022

**ROW Acquisition:** TBD during Preliminary Design stage

**Targeted construction:** 2022

**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
  - Eastside of I-25 – The Kuna and Vander Muelen properties closed in late April. The remaining properties are in various states of negotiation.
  - Westside of I-25 – Town staff and consultants are preparing Notice of Intent for several property owners. The Peachy property closed in late April.

**Phase:** Preconstruction Activities - Interchange Access Request and Environmental Assessment Reevaluation, and Design

- Town staff continues to meet with CDOT and FHWA to establish priority activities for the interchange approval.
- 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). The IGA between CDOT and the Town which identifies the general terms of the grant, scope of work, and funding provisions awarded to the Town. The IGA draft has been accepted and is in the process of getting approval signatures. Staff received approval on the Advanced Pre-Construction application from FHWA, which will allow the Town to get reimbursement for preconstruction activities prior to the grant agreement being complete. The draft BUILD grant agreement has been sent to the Office of the Secretary for review, staff is anticipating to get approval for signatures by mid-June. 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.
- The advertisement for the Design Request for Proposal (RFP) ended in mid-March. We received 5 proposals all together from reputable firms (AECOM, Atkins, FHU, HDR and Jacobs). Staff worked with all stakeholders, including CDOT and interviewed the top two ranked firms. Staff has submitted the recommended firm to CDOT for concurrence. Tentative schedule at this time will have staff approaching the Public Works Commission and Town Council in June for approval of the Design Consultant.
- Staff has completed the delivery method workshop. This workshop consisted of a panel of all stakeholders determining which method of delivering will be most beneficial to the project schedule and budget. The result of the workshop was the CM/GC delivery method would be the best to achieve the successful delivery of this project with the proposed schedule. Staff will be moving forward with evaluating and making recommendations as the process continues.

**Budget:** \$6,500,000, and Development Escrow

**Completion:** Spring 20213

**Targeted construction:** 2023

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 awaiting a May 2021 project final inspection (warranty walk)

**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:

- Replace sections of damaged curb & gutter
- Executed change order for soil amendment to improve seeding establishment
- Completed 10% of project final grading and soil amendment placement
- Installed erosion controls

Topsoil, seeding, paving, final stripping, and final punch list activities are scheduled to be completed in April through June of 2021.

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

**Construction Completion:** June 2021

**Phase 2: Design and ROW Acquisition (60% Complete)** – The following is a summary of design activities performed this month:

- Completed draft lighting design
- Initiated project design with IREA
- Received environmental permit for construction from the Army Core
- Progressed roadway design to 70%

**Budget:** \$794,375

**Design Completion:** Spring 2021

**ROW Completion:** Fall 2021

**Targeted construction:** 2022

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 – Construction**

- IREA relocation completed
- Century Link completed
- Held preconstruction meeting
- Expected construction commencement 5/17

**Budget:** \$877,900

**Completion:** Fall 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:** Construction

- Traffic detours have been setup and the Phelps/Perry connection constructed
- Communications Plan continues execution
- Detour signage daily adjustments as needed
- Phase 1 between Union and Berkenkotter under construction

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

**Construction Completion:** Summer 2021

10. **Fifth Street Widening Project Design** – Fifth Street is a major arterial connecting local and regional travel between the easterly portions of Town and I-25. Roadway and pedestrian improvements for Fifth Street have been identified within the 2017 Transportation Master Plan (TMP) that will maintain adequate capacity and ensure efficient road network connections for future development.

The Fifth Street Widening project will complete all design elements for implementation of the full build-out transportation network from South Gilbert Street to Ridge Road as identified in the TMP. The transportation network improvements identified in the TMP are as follows:

- 4-lane major arterial configuration from Woodlands Blvd. to Ridge Road
- Implementation of on-street bike lane/shoulder from South Gilbert Street to Ridge Road
- Addition of sidewalk from Woodlands Blvd to Ridge Road along south side of Fifth Street

**Fifth Street Widening Project Design (3%)** - The following is a summary of activities performed this month:

- Selected preferred consultant (proposal)
- Began scope and fee negotiations

**Budget:** \$1,500,000

**Design Completion:** December 2021

**Right-of-way acquisition:** 2022

**Targeted construction:** 2023 (Phases 1 & 2 which include pedestrian improvements and an eastbound climbing lane from Woodlands to Ridge)

**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.

- Staff is a part of the CDOT managed, adaptive signal system review team, that will select a technology to implement adaptive signal timing on Founders and Meadows Parkway, as well as a few abutting Town signals. All parties are eager to get moving on the project which will begin as early as late spring and last about 10 months.
- Staff has an executed IGA from CDOT. Additionally, staff are creating bid documents for the vehicle detection procurement and installation which will be advertised in Summer 2021. 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:** \$868,700

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

**2020 Intersection Signalization Construction Project** – Signals were constructed at Meadows Boulevard & Cherokee Drive (mast arm signal) and at Hwy 85 & Liggett Rd (temporary span wire signal).

- Signals are operational and performing well.
- Staff will use ATSPM to fine tune the timing plans at both intersections.
- The intersection of Hwy 85 & Liggett Rd is awaiting street light luminaire arms which will be delivered and installed by June 2021.
- Town staff are working with the contractor to complete final punchlist tasks including wiring tidiness and site cleanup.

**Budget:** \$588,000

**Construction Completion:** Spring 2021

**Rectangular Rapid Flashing Beacon (RRFB) 2021 Project** – This project completes about half of the requested pedestrian beacon crossing locations that staff received in 2019.

- There are 10 RRFB locations slated for implementation in 2021. Procurement activities for purchase are currently being analyzed and prepared.
- Staff evaluated the two existing systems, Carmanah and Lane Light, and determined that Carmanah would be the better product to select based on lowest life cycle cost and low downtime, with better operation reliability.
- Staff is preparing purchase order and contract documents to route through Town departments.
- Equipment will be procured and then installed by Signs and Markings team in summer 2021.

**Budget:** \$250,000

**Construction Completion:** Fall 2021

# Engineering Division

## 2021 Pavement Maintenance Program (PMP)

The 2021 PMP will focus its efforts in the Central/North PMP area with additional work taking place on primary streets (Meadows Blvd./Castleton Dr., Crystal Valley Pkwy., Front Street and Scott Blvd).

Sidewalk, curb and gutter repairs kicked off April 19. The residents & businesses within the North PMP area were notified via letters as well as the use of variable message boards, that repair

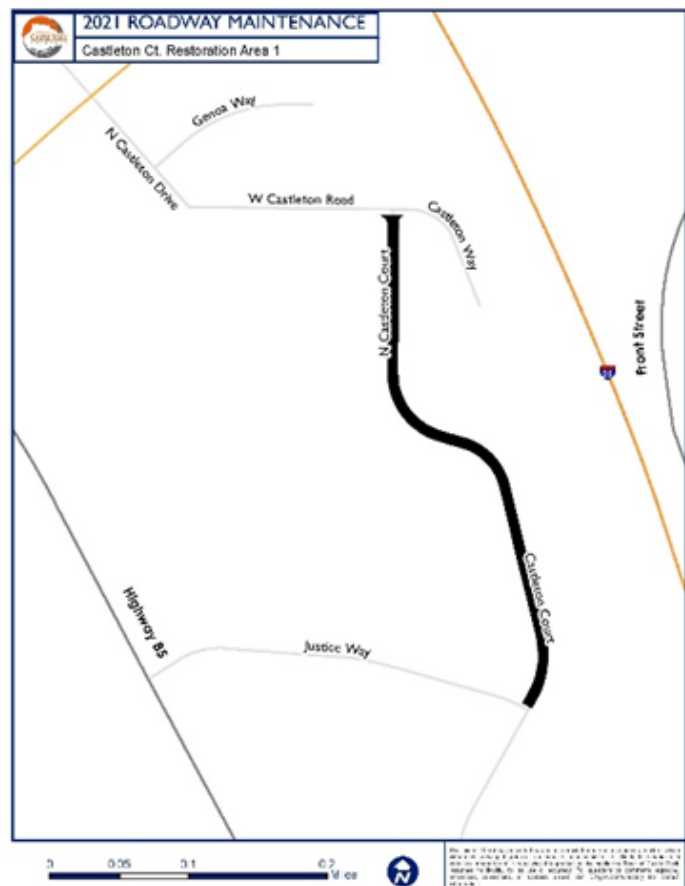
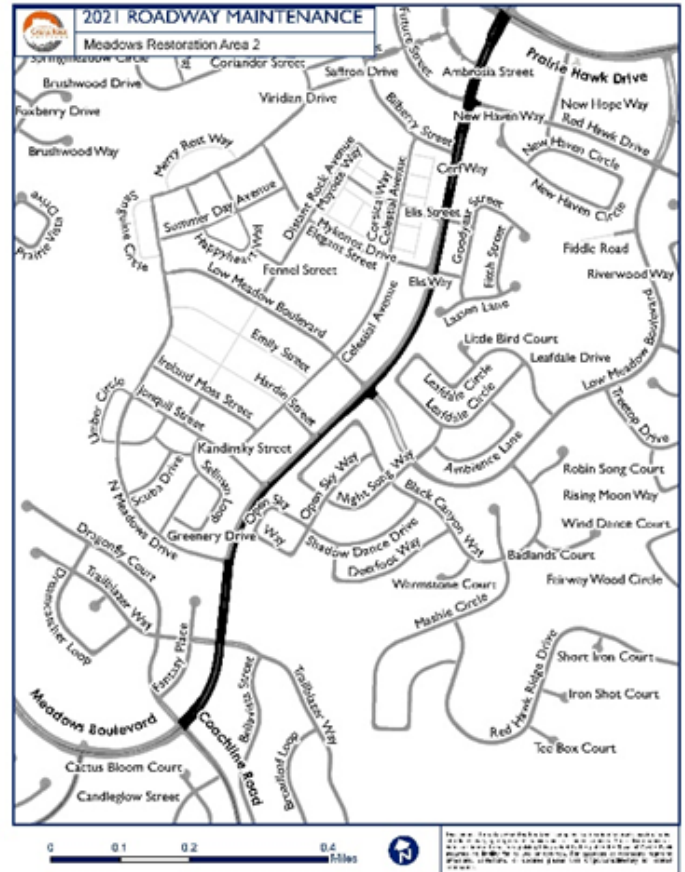


and maintenance work was to begin. Work began in the Cobblestone Ranch area and will continue within the area for the remainder of April.

In general, work will progress through the North PMP area in a clockwise manner, starting in an area off Pueblo Alto Drive, Blue Water Circle, etc. The Town's contractors will be preparing the streets to receive slurry seal, 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 will follow July 6, after the holiday.

Meadows Blvd/Castleton Court concrete restoration project is scheduled to begin on Monday, May 10. Initial work will focus on the removal and replacement of curb and gutter, concrete panels, diamond grinding and joint sealing along Meadows Blvd., between Coachline Rd. and Prairie Hawk Dr. Contractor will then move operations to Castleton Ct.

Maps for both Meadows Blvd., and N. Castleton Ct. are below.





Asphalt Overlay Project began construction with concrete repairs April 19 on Crystal Valley Parkway. Crews spent the week

doing concrete work to get out in front of the mill machine that was moving in on Friday, April 23 to begin milling for asphalt patching. Full 2" mill, on



east bound lanes, is scheduled to begin on Tuesday, May 4.

Full Depth Reclamation concrete repair work started on April 19.



The work started at W. Castlegate Drive in the Promenade area. Contractor removed and replaced damaged sections of sidewalk, curb and gutter. Reclamation began April 28, south to north on the

north bound lanes. Storm inlets were inspected prior to work starting.

## 2021 Facilities Parking Lot Improvements Program

This year's maintenance program will see needed improvements made to fourteen (14) parking lots from various Town Departments. These parking lots will see various improvements such as; curb, gutter & sidewalk replacement, asphalt mill and overlay, asphalt patching, slurry seal and seal coat.

Parking lots include the following:

- Service Center front & back (2 lots)
- Red Hawk Golf Course (North Half)
- Red Hawk Maintenance Shop
- Rhyolite Park
- Rec. Center
- 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

Work is schedule to begin in early September and be completed by October 29.

## 2021 Bridge Maintenance Program (BMP)

Bids for the 2021 Bridge Rehabilitation for S. Wilcox Bridge over E. Plum Creek will be submitted for competitive bids upon Colorado Department of Transportation's completion of environmental studies and the consultant submitting an estimation of costs.

This project is expected to start in September and be complete by the end of October 2021, pending weather.

## Development Division

### Review and Permitting

**Development Review** - All 39 reviews were completed on or before the due date by the PW Development Services Team.

**Permitting & Inspection** – 36 right-of-way permits were issued.

## Transportation Planning &

## Traffic Engineering Division

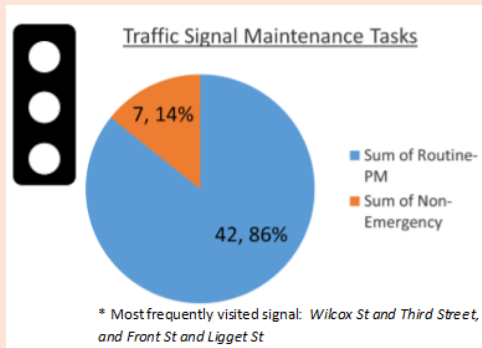
### Taxi Voucher Program

For the month of April, the Taxi Voucher Program funded 153 rides; which is a 38% increase to last year's April total of 111 rides and a 3% increase from last month's total rides (148). 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 Taxi service. Of those individuals, 75% of the rides were for work, 22% for shopping trips, and 3% for medical appointments. Sixty-six rides were provided for people without access to a vehicle, 41 rides to seniors, and 46 rides to disabled riders.

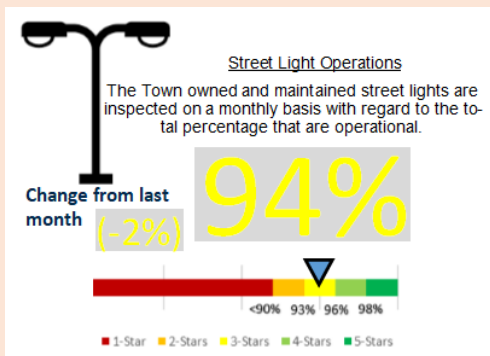
The Castle Rock Senior Center provided a total of 629 rides in April.

## Traffic Engineering and Operations

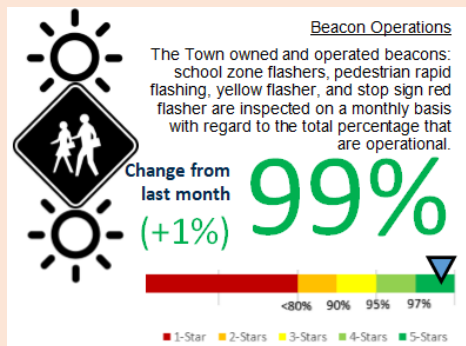
### Traffic Signal Operations and Maintenance



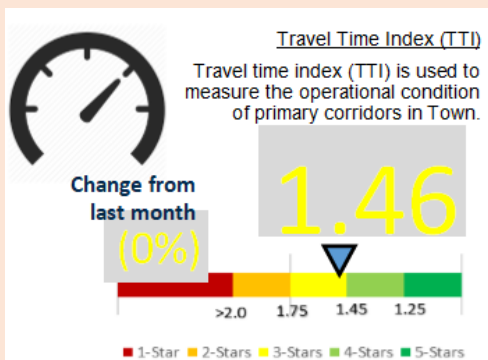
### Street Light Operations



### Beacon



### Operations



## Street Signs and Pavement Marking Maintenance

For the month of April, the crew accomplished 1074 tasks. Of these tasks, 386 of them were sign work activities related to fabrication, install, repairs, replacements, inspections and investigations. Fifty-eight were related to signs and markings projects. We had 158 RRFB related tasks, including windshield inspections, repair tasks and investigations. We completed 388 thermo-plastic marking inspections, 11 other tasks related to marking activities, and 18 locate tasks. In April, we finished the North PMP area sign inspection repairs which totaled 294 signs', and completed 220 blue street name sign installations that replaced non-standard, green street name signs.

## Transportation Planning

### Neighborhood Traffic Calming Program (NTCP):

Town staff will mail homeowners on Rising Moon Way in the Meadows a letter discussing the upcoming plan to convert the mini circle to a raised speed hump. The conversion is expected to occur late this summer. Staff also received NTCP inquiries for two new streets, Riverwood Way & Tree Top Drive. Support petitions have been received and speed studies will be scheduled for May.

### Castle Rock Downtown Alley Master Plan:

Town staff kicked off the project in April. Information is currently being shared with the project consultant. The next step in the project will be to conduct a walking audit of the Downtown alleys to capture existing conditions and begin evaluating alleys to determine if they are good candidates for the shared alley concept.

## Fleet Services

*Keeping Castle Rock on the Move*



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 is proud to announce that our Fleet Services Division is being recognized as one of the 100 Best Fleets among all the public fleets in North America. To put this achievement in perspective, there are over 38,000 public fleets in North America and we were rated # 97. Very proud of the fleet team and all the hard work they have put in the last very tough year.

April was another very busy and productive month. Revenue from repair & maintenance of Town vehicles was \$100,000 and technician productivity was high at 76.6%. Those two outcomes were both higher than our anticipated objective.

All four of the Fleet Technicians attended an training class for Ford engine performance and received manuals and certification. Fleet staff continues to work on ordering new vehicles and equipment for 2021, so far \$2.1M in new vehicles have been ordered.

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

**Outcome:** Fleet team completed 75.6% 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. This benchmark number is above our monthly objective.

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

**Outcome:** Town vehicles and equipment were available 96.3% 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:** Technician productivity was 76.6%. This productivity



*Full shop keeping Castle Rock on the move!*

number was a very good increase considering the difficulty in getting some parts and some larger jobs that were completed.

Overall we completed 139 work orders and processed \$100,500 in parts and labor and another \$45,000 in fuel transactions. This production was well above levels of April 2020.

## Street Operations & Maintenance Division

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

\*Roadway Inspection  
\*Sweeping  
\*Equipment Maintenance

\*Pothole Repair  
\*Snow and Ice Control  
\*Crack Seal

### Inspection for Potholes

During April, Streets Division personnel inspected 94.10 lane miles of Town roadway for potholes and other damage. This proactive approach helps to identify areas of need prior to them becoming large and potentially damaging, as well as allows for determination of hazard, prioritizing, and timely scheduling of repair operations.

### Pothole repair Asphalt Patching

In April, crews used over 9 tons of hot mix asphalt to execute repairs on utility roadway cuts and damaged portions of roadway. Crews also used 2,910 pounds of Perma Patch cold asphalt mix to repair 124 potholes.

### Sweeping

In April, crews worked diligently to sweep the roadways within Town. The crew swept a total 674 lane miles of Town roadways removing 266 cubic yards of material. A total of 380 tons of material swept off the roadways were appropriately disposed of in a sanitary landfill. Crews also worked to prepare for the Spring sweep by clearing off 187 miles of sidewalks. All of these operations serve to keep the Town clean, attractive, and enhance the overall environment in Town.

### Snow and Ice Control

The month of April brought 2 snow events that required a plow response, with a snowfall total of 10.5 inches. Crews spent 201.5 labor hours plowing snow and applying deicers. Crews used 41 tons of granular deicers. The majority of the snow for April melted on contact but smaller deployments were warranted for deicing operations.

### Equipment Maintenance

With the heavy spring snows of March and April being another historically heavy snow month, Crews worked hard to maintain the plows and other pieces of equipment to maximize the ability to respond to these notoriously unpredictable snow storms. In

total crews devoted 189.5 labor hours in April to keep the equipment ready to respond when needed.

### **Crack Seal**

During the month of April, the crews completed crack seal maintenance operations on more than 19.8 miles of roadway. This operation seeks to prolong roadway lifespan by preventing the infiltration of water into the roadway. During these operations the crew applied 23,250 pounds of rubberized crack seal material.

### **Looking Ahead**

In May, crews will continue the Spring sweep of the entire Town with the intent of giving every road in Town a good “spring clean”. Crews will also be spraying weeds in areas that cannot be mowed. Mowing operations are likely to begin as the recent moisture will spur vegetation growth. Crack Seal operations will continue as well. Crews will be maintaining vigilance for snow as it is still possible this time of year.