



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.

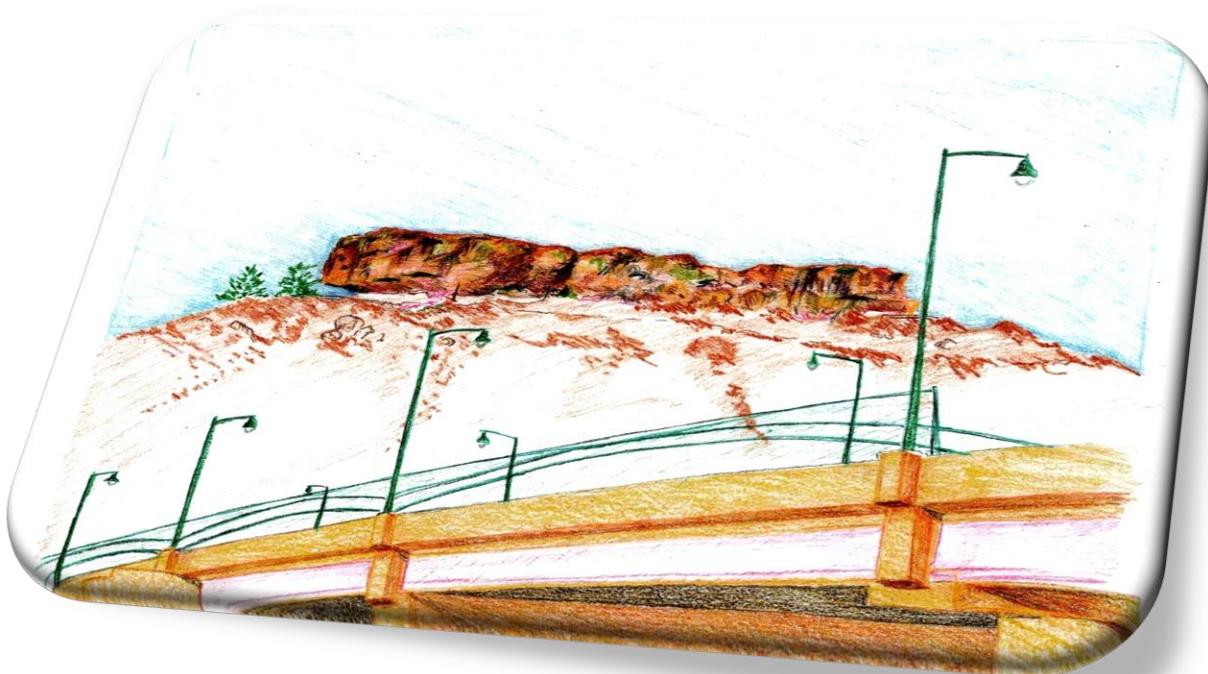
# PUBLIC WORKS DEPARTMENT



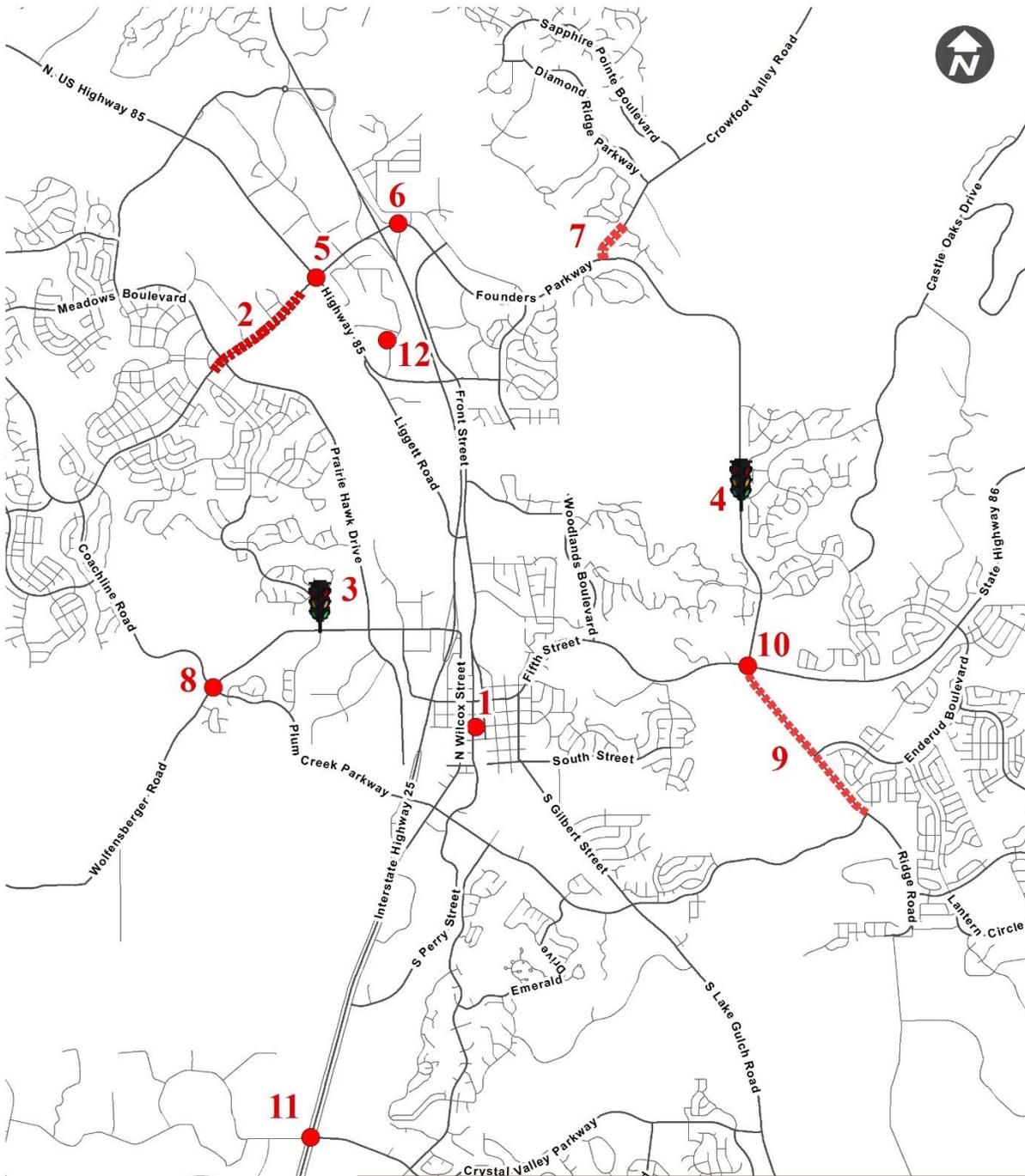
*Our Mission: To provide  
outstanding service, safety  
and support for  
transportation infrastructure  
and maintenance.*

**MONTHLY REPORT – OCTOBER 2017**

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# CAPITAL PROJECTS



1. Roundabout at Perry Street/Third Street
2. Meadows Parkway Reconstruction
3. Traffic Signal at Wolfensberger Road/Red Hawk Drive
4. Traffic Signal at Founders Pkwy/Rising Sun Drive
5. US 85/Meadows Pkwy Intersection Improvements
6. Founders Pkwy/Allen Way Intersection Project
7. Founders Pkwy/Crowfoot Valley Road Intersection Improvements
8. Roundabout at Wolfensberger Road/Plum Creek Pkwy
9. Ridge Road Widening (SH86 to Plum Creek Pkwy)
10. SH86/Fifth Street Intersection Improvements
11. Crystal Valley Interchange (Right-of-Way Acquisition)
12. Public Works Facility Expansion

**1. Perry Street and 3<sup>rd</sup> Street Roundabout Project** – This construction project will convert the existing four-legged, 2-way stop intersection into a single lane mini roundabout. This will improve intersection capacity and traffic operations that can accommodate current and projected traffic volumes through the intersection while also enhancing the pedestrian environment. **Phase: Construction** – *This project has been completed excluding the final light poles that are estimated to be installed the first part of December.* **Budget: Construction: \$877,000 Construction Completion: Completed**



**2. 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: Design** – *Felsburg, Holt and Ullevig is the design consultant for this project. Final submission has been submitted to CDOT. Project will be advertised in December and constructed in summer of 2018.* **Budget: \$112,385 Projected Design Completion: Fall 2017 Construction: 2018**

**3.& 4. Intersection Signalization Projects** – This project will complete the installation of two new traffic signals; one at the intersection of Wolfensberger Road/Red Hawk Drive; and one at the intersection of Founders Parkway/Rising Sun Drive. **Phase: Construction** – *Both traffic signals are in full operation. During October, inspections were completed at both intersections and the contractor worked to address the items on the inspection report. A final walk through of both intersections will occur in November with the close out of the project to follow shortly thereafter.* **Budget: \$460,000 Construction Completion: Completed**



Founders Parkway/Rising Sun Drive

Wolfensberger Road/Red Hawk Drive



5. **US85/Meadows Parkway Intersection Improvements** - This project will construct a second northbound left turn lane at Meadows Parkway/US 85 and replace the traffic signal pole on the northeast corner of the intersection. Phase: Construction – CDOT has accepted the work and final payment has been advertised. Project will be closed out in November. Construction Budget: \$212,000 Construction Completion: Complete



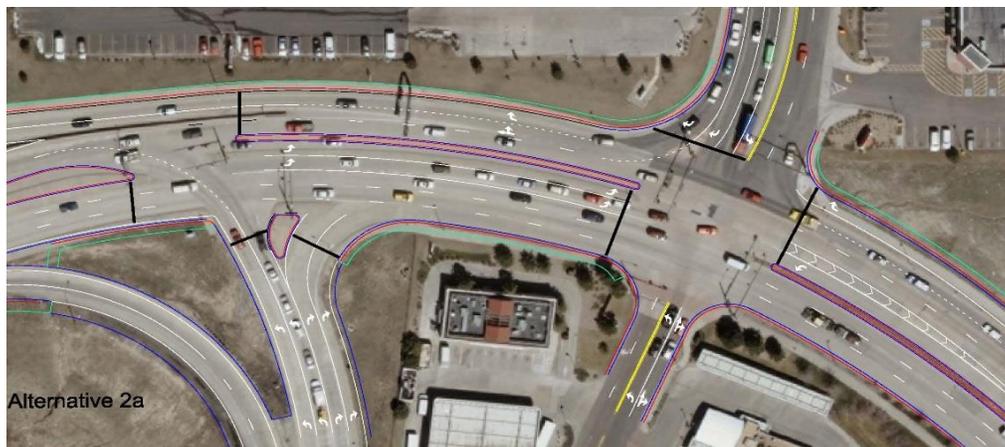
6. **Founders Pkwy/Allen Way Intersection Improvement Project** – This project will address the need for the following improvements:

- 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:

- Final design is underway.
- Minor Interchange Modification Review (MIMR) is underway with traffic counts received.
- Environmental Clearance/FHWA Concurrence for environmental analysis was received 10/30.
- Right-of-Way Plan Review (ROWPR) schedule has been requested from CDOT.
- Progress meeting was held with consultant and Town staff.

Budget: \$760,000 Projected Design & ROW Completion: Winter 2017



**Founders Parkway/Allen Way Proposed Intersection Layout**

**7. 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:*

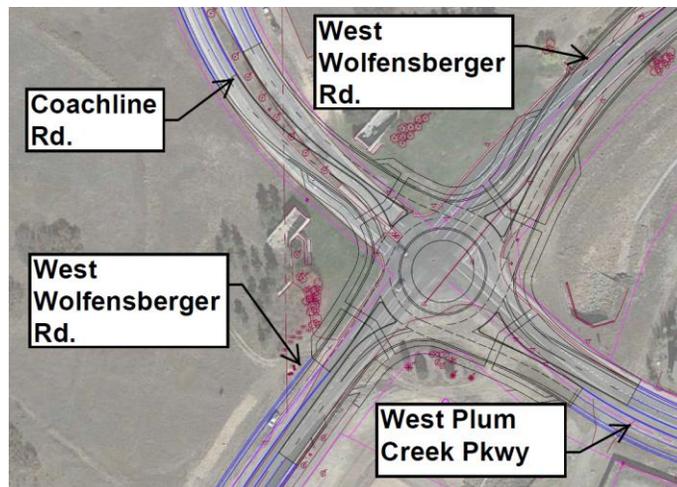
- ROWPR meeting to be held with CDOT in November
- Final Office Review (FOR) for 90% plans will be scheduled after the ROWPR meeting
- Staff is working with CDOT on right-of-way and clear zone concerns along Founders Parkway

**Budget:** \$650,000 (2016-17) **Projected Design & ROW Completion:** Winter 2017

**8. 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:** Design –*Short Elliott Hendrickson Inc. (SEH) is the consultant for design of this project. The following is a summary of the design activities performed this month:*

- Work has started on 90% plans
- Staff is reviewing right-of-way needs

**Budget:** \$150,000 **Projected Design Completion:** Winter 2017 **Construction:** 2018



**Proposed Roundabout Layout**

**9. 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. The following is a summary of the design activities performed this month:*

- Survey work has been completed.
- 30% plans are near completion. The Town is awaiting CDOT input for Founders/Fifth/ Ridge intersection to determine tie-in point near King Soopers.

- Staff will hold an Open House in January 2018 to present all the planned improvement to the area to the public.

**Budget: \$400,000 Projected Design Completion: TBD Construction: 2021 (Tentative)**

**10. Founders Parkway (SH86)/Fifth Street Intersection Improvements** – 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** – Short Elliott Hendrickson, Inc. (SEH) is the design consultant for this project. The following is a summary of the activities performed this month:

- Staff will hold an Open House in January 2018 to present all the planned improvement to the area to the public.

**Budget: \$340,000 Project Design Completion: TBD Construction: 2021 (Tentative)**

**11. 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:** Town of Castle Rock entered into a service agreement with Woolpert, Inc. to provide land surveying services for the Crystal Valley Interchange east and west side Right-of-Way Plan Review (ROWPR). The following is a summary of the activities performed this month:

- East side ROWPR:
  - ✓ Continuing with on-line work review
- West side ROWPR:
  - ✓ Research complete
  - ✓ Field surveys completed and initialized
  - ✓ Reviewing title commitments

**Budget: Development Escrow**

**12. 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 the firm D2C performed during this month:

- Continue to work on 60% design

**Budget: \$220,000 Project Design Completion: Winter 2017**

**Traffic Signal System Upgrades - Phase 2** - In October, the final radio installations and fine tunings occurred at the signalized intersections yet to be added to the Town's central signal system. These intersections will be added to the central software system during the month of November. To date, this project has completed the installation of battery back-up units at all Town intersections, video detection equipment that sends live feeds back to the Service Center and radios to bring all of the Town's traffic signals onto the communication network. **Budget: \$400,000 Construction Completion: Fall 2017**

**TABOR Flashing Yellow Arrow Intersection Conversion Project** – In October, a contractor was brought on board to complete the conversion of 19 existing signalized intersections in Town to operate with flashing yellow arrows for left turn movements. In addition, the Town purchased all of the materials needed to complete the project. Installation work will begin in November.

National research has shown that these flashing yellow turn arrows can improve safety at an intersection due to the arrows reminding drivers to watch for oncoming cars before making a left turn at a signalized intersection which can reduce the number of broadside collisions at an intersection. This project is one of the TABOR funded projects and is expected to be complete late in December or early in January. Budget: \$228,000 Construction Completion: Winter 2017 / 2018

## **Engineering Division**

**2017 Pavement Maintenance Program (PMP)** – The 2017 Miscellaneous Concrete Replacement project began on October 30. This contract consists of repairing sidewalk trip hazards, broken curb, and installation of sidewalk chase drains.



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

**2018 Pavement Maintenance Program (PMP)** - The PMP team continues working on the field reconnaissance for the 2018 PMP. This consists of the East PMP area, and scheduled primary streets, which include: Woodlands Boulevard, Plum Creek Boulevard between Ebony Drive and Plum Creek Parkway, Wilcox Street from Wolfensberger to Plum Creek Parkway, and Meadows Boulevard from N. Meadows Drive to Cherokee. The purpose of the field reconnaissance is to quantify curb, gutter, and sidewalk as well as pavement areas which are in need of repair prior to the application of the final maintenance surface treatments such as slurry seal, asphalt overlay, or pavement reconstruction. Changes in the proposed streets may occur due to current evaluation taking place and/or actual bid pricing received that may require some modifications.

**2018 Facilities Parking Lot Improvements Program** - The PMP team has begun working on the field reconnaissance for the 2018 Facilities Parking Lot Improvements Program. This consists of the parking lots at the Metzler Park, Castle North Park, Rock Park, the parking lot at 4th Street and Jerry Street, and the parking lot at the Train Museum at 420 Elbert. Changes in the proposed facilities may occur due to current evaluation taking place and/or actual bid pricing received that may require some modifications.

**2017 Bridge Maintenance Program (BMP)** - The remaining work left for the 2017 Bridge Maintenance program is to mill and overlay the wearing surface of the Meadows Parkway bridges over Plum Creek. Staff is working with the contractor to get this work scheduled.

**2018 Bridge Maintenance Program (BMP)** - Staff has identified the following locations for the 2018 BMP:

Bridge Repair

- Castle Oaks Bridge at Rocky View Road
  - ✓ Girder repairs
- 5<sup>th</sup> 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

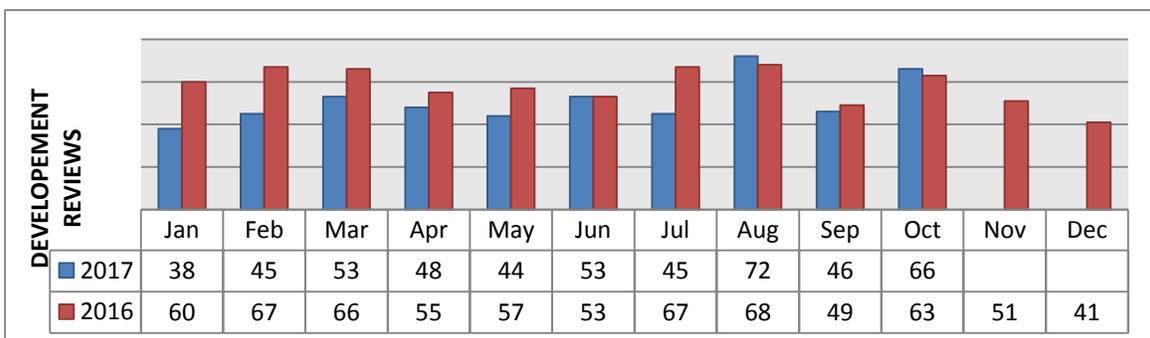
- Front Street Flyover
  - ✓ Mill and overlay wearing surface

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

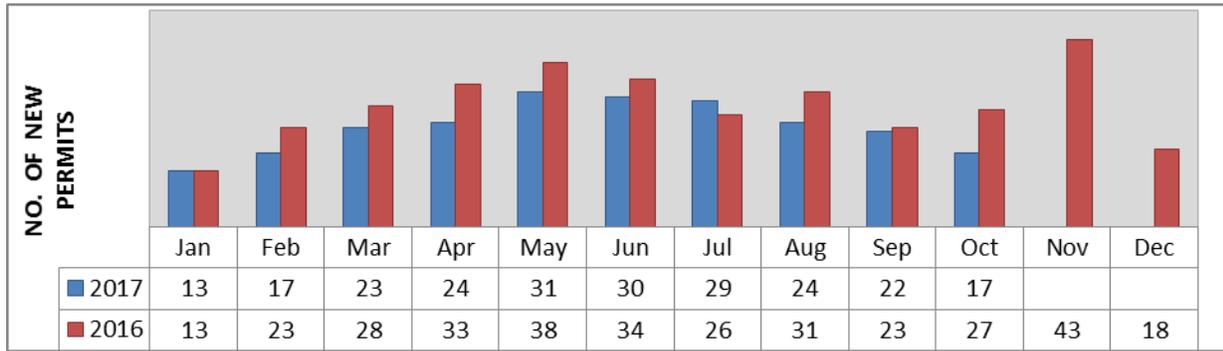
**Skyward Subsurface Edge Drain Project** - The work to be performed under this contract will include the installation of “ELJEN” drainage system along the back of sidewalk on Skyward Way to capture groundwater and nuisance flows across residential lots. This will also include the connection to an existing storm inlet, the removal and placement of concrete driveways, and the removal and restoration of existing landscaping including existing irrigation systems. Work began on October 23.

**Development Review and Permitting**

**Development Review** - Included in the 66 submittals are 26 first time applications with three pre-applications. All reviews were completed on or before the due date assigned by the Development Services Project Manager.

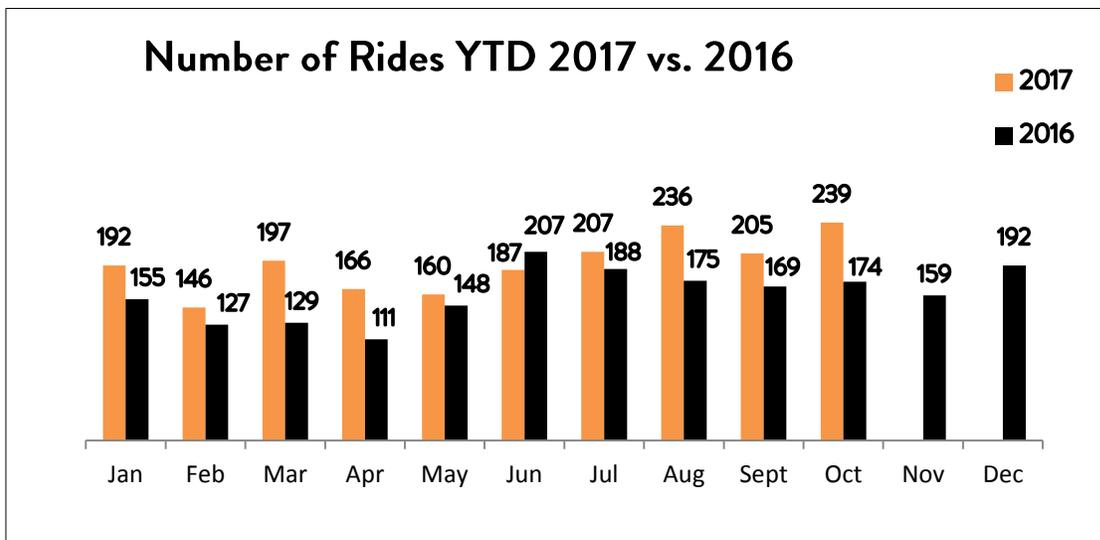


**Permitting** - Included in the 17 permits are: one commercial (Promenade Block 5, Lot 1, Les Schwab Tire); and 16 permits for work within the public right-of-way, four of which were necessary for chase drain installations.

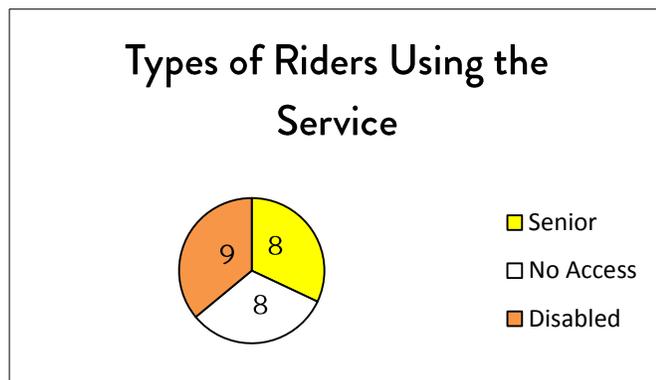
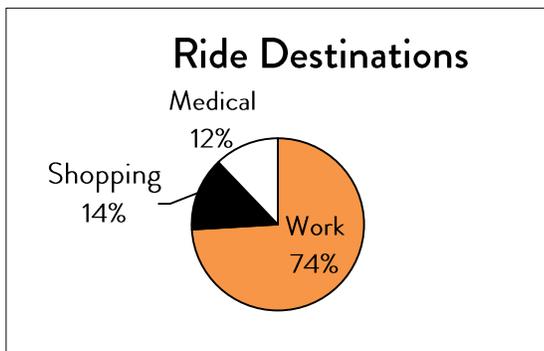


## Transportation Division

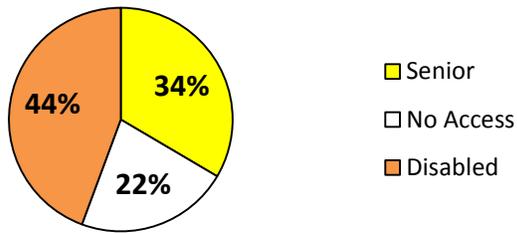
**Taxi Voucher** – For the month of October, the Taxi Voucher Program funded 239 rides, this was a 37% increase from last October’s total of 174 rides.



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.

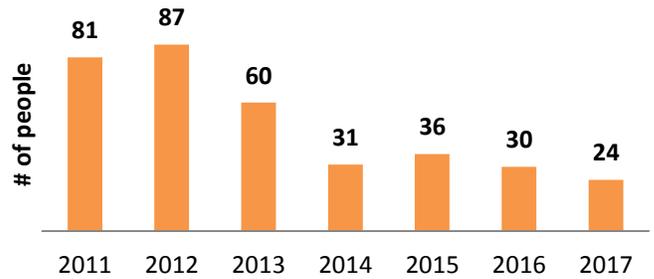


### Percentage of the Total Rides (239) by Each Rider Type

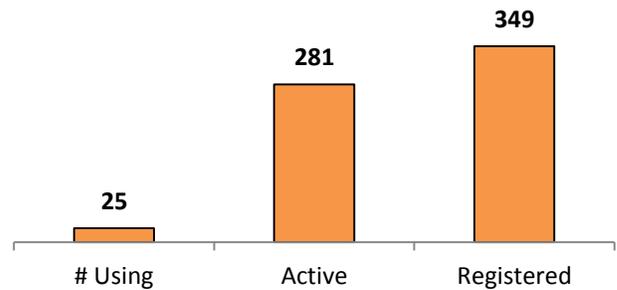


There was one new registrant for the Taxi program this month. Since its inception, a total of 349 people have registered for the Town of Castle Rock Taxi Voucher Program. Currently 68 of these past registrants are inactive or have dropped out of the program.

### Number of People Registering for Program Each Year



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



**Town Trolley** - The Trolley drove for a few events in October which included two Senior Activity Center Town Tours and the Castle Rock Water’s Citizen Academy Event.

**Senior Center Shuttle** - The Senior Center provided 753 rides in the month of October which was an increase of 9% from last month’s rides of 693. The volunteer driver program provides service Monday through Friday from 9 am to 3 pm.



# Traffic Engineering & Operations

**Traffic Signal Operations and Maintenance** - For the month of October, there were a total of ten non-routine traffic signal maintenance visits completed by either Town staff or the Town's signal maintenance contractor. Most of these visits were related to vehicle detection problems, battery change-outs or radio installations. Other repairs completed were associated with LED change-outs for vehicle signal heads.



In addition, the fourth quarter preventative maintenance work began at each of the signalized intersections. These checks are important to assure that each signal is in good working condition. About half of the 36 Town signals were visited in October with the others to be done in November.

**Street Signs and Pavement Marking Maintenance** - The month of October was busy with 2,142 tasks completed in 312 hours of work. Of this total, 145 of these were sign related tasks along with the straightening or replacement of 44 posts. In addition, the crew inspected 1035 signs for quality control. The Town has just over 14,000 signs existing in the field. The crew also fabricated 23 new signs for use in the flashing yellow arrow conversion project.



In addition, the two sign technicians painted nine symbols while also supplying traffic control devices for six special events. Staff is almost done painting for the year and will continue on with other projects.

## Transportation Planning

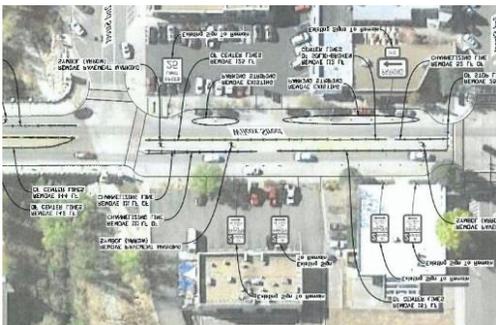
### Neighborhood Traffic Calming Program (NTCP)

- **Grady Circle:** The homeowner has not returned the completed support petition.
- **Woodlands and Escavera:** The Applause Award was shared with staff members working to complete the project on time and under budget.

**Transportation Master Plan (TMP) Update** - The Transportation Master Plan was adopted by Town Council on October 3. Final deliverables were provided by the consultant and the document will be shared with various departments and placed on the Town's web site in November.

### Development Review

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



**Downtown Striping Plan** - The downtown parking striping for Perry Street was completed in October. The restriping for Wilcox Street is expected to occur early in November and be coordinated with the Festival Park work and Riverwalk development.



# 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.

We are proud to announce that Paul Colell, Fleet Services Manager, was selected to the 2017-2019 Governmental Fleet Advisory Board. This advisory board was created to help guide Government Fleet's strategy and content and consists of industry leaders across the country representing diverse fleets as well as select industry suppliers. **Congrats Paul!!**

In the month of October, fleet technicians worked on 79 Town vehicles and equipment and billed out over \$62,000 worth of parts and labor. This number was a little down from our average due to having a vacant position open for most of the month. That being said, we are excited to announce that we have filled our open position with a very experienced technician, **Rodney Claassen**, who comes to us from Land Rover of Denver and is an ASE Master Certified technician for over twenty years. Rodney started late in the month so we are expecting to catch up with some overdue work during this next month.



The Fleet Services Division is also excited to start the process of upgrading our fleet software system to a web based version, this new version of our software will provide many new features to our work process and will increase productivity.

PUBLIC WORKS DEPARTMENT



Fleet Services continues to receive new vehicles and we are working hard to get them equipped and ready for service. This month we put into service one F250 truck for the Parks Department.



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

**Outcome:** Fleet team completed 73.2% of the work orders within 24-hours of opening repair requests or service requests. This was a little below our benchmark due to being short one technician.

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

**Outcome:** Town vehicles and equipment were available 97.5% of the time. This high number of availability 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 71.9% which is above our benchmark.

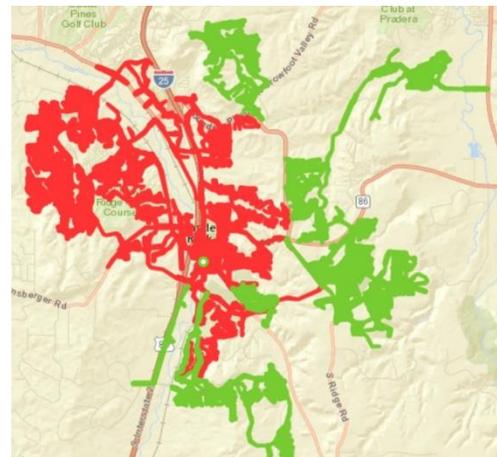
## Street Operations & Maintenance Division

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

- Street Sweeping
- Road Shoulder Maintenance
- Pothole Patching
- Snow & Ice Control
- Equipment Maintenance
- Special Operations
- Training

### Street Sweeping

Staff started our annual Fall Sweeping Program for the entire Town. Our goal is sweeping all 663 lane miles of roads. To date, staff has swept **264 Lane miles** of roadway removing **79 tons** of materials. In the photo on the right all the roadways in **green** have been completed and all the roadways in **red** still need to be swept. Additionally, the staff met their goal of sweeping the business areas once this month. These operations not only help to keep our Town vibrant and beautiful, they also help to keep our waterways and the air we breathe a little cleaner.



### Road Shoulder Maintenance

Staff has started our annual fall road shoulder mowing and trimming operations with a goal of completing **93 edge line miles**. To date, staff has completed **32 edge line miles** on the following roadways and areas; the Promenade, Factory Shops, along the entire Founders Parkway corridor, Crowfoot Valley Road, the Woodlands, Cobblestone Ranch, and Terrain. Additionally, during the month a few staff members spent time in the Founders area trimming tree branches that have grown into the roadway along the main roads. These operations are essential at protecting vehicles from receiving damages from branches that become weighted down with snow over the winter season. During these operations the staff removed **104 yards** of materials.

### Pothole Patching

SO&MD received two requests for pothole repairs during the month and completed these repairs in less than two days, well ahead of our 10 day service level. In total, staff has proactively repaired **18 potholes** during the month. The potholes were repaired in the following areas or on the following roadways; Cobblestone Ranch, Terrain, Crowfoot Valley Road, and Meadows Parkway.



### Snow & Ice Control

October gave us a reminder that winter is coming by giving us three (3) snowfall events. The staff geared up for each event and was prepared to plow snow, however, due to the warm pavement temperatures, plowing was never needed. In total for all three events, the Town did receive approximately eight (8) inches on snow.



### Equipment Maintenance

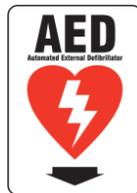
Continuing with the preparations for the upcoming winter season, staff worked on truck sanders, liquid deicing sprayers, advanced vehicle locating systems, and one of our ice breakers (fabricating a new loader attachment mount). In total, staff completed **69 work requests** helping to ensure the equipment is working at optimum performance and reliability.

### Special Operations

Staff responded to two (2) separate requests for special operations over the last month. One request was to pick up trash bags as part of the Road Ranger program along 5<sup>th</sup> Street and along Plum Creek Parkway. Staff retrieved and disposed of **14 large bags** which took two truckloads to haul off. The other request was to remove some graffiti that was painted in the roadway on Neon Way in the Sapphire Point subdivision.

### Training

Staff members completed a significant amount of workplace training over the last month. All of the division staff members completed the annual snow plow driver training which included 60 plus other staff members from three other departments.



Some staff members also completed training in the following areas; AED, LTap Snow & Ice Operations, and a host of FEMA Emergency Management courses (IS-100, 200, 700, and 800).

### Looking Ahead

During the month of **November**, the SO&MD staff will continue mowing and trimming with the goal of completing the **62 edge line miles** remaining, and will continue on our annual Fall Sweeping program with the goal of completing the remaining **399 lane miles**.