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Five Year Capital Improvement Program

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LETTER OF INTRODUCTION FOR THE FIVE YEAR CAPITAL IMPROVEMENT PROGRAM

October 18, 2016

Honorable Mayor and Members of the Town Council,

Hereby submitted is the Five Year Capital Improvement Program (CIP) for the Town of Castle Rock, Colorado for the years 2017 through 2021. The 2017 Budget allows for \$55,103,100 in expenditures associated with the Capital Improvement Program. The Funding Source information in the following pages is intended to identify the revenue that is planned to pay for the capital projects included. While additional revenue is anticipated to be received each year, this information identifies only what is necessary to fund the Capital Improvement Program.

The CIP summarizes all major capital expenditures to be made over the next five years. This budget contains a summary of revenue sources and CIP costs by fund and year in which the revenues and costs are anticipated. In order to be included in the CIP, the project must meet the following guidelines:

- Costs are expected to be over \$25,000
- The resulting project has a useful life of more than one year
- The project results in the addition of a fixed asset, or extends the useful life of an existing asset or is a major software purchase

During the preparation process, staff identified what would be necessary to meet existing levels of service to the community and which projects could reasonably be accomplished within each year, within the financial and staff limitations of the Town. Contractual obligations and/or needs were considered in setting the priorities.

Capital improvements are funded through a variety of sources including the use of reserves, impact fees, debt financing, grants, building use taxes and operating revenues. All available current and future resources were considered when identifying funding sources for the identified capital improvements. For example, the estimated available reserve balance was calculated and shown as a funding source, as well as estimated impact fees, building use taxes, and other revenue sources. The CIP costs projected meet, but do not exceed, the limitations of those funding sources.

Sincerely,

A handwritten signature in black ink, appearing to read "David Corliss", written in a cursive style.

David Corliss
Town Manager

2017-2021 CAPITAL IMPROVEMENT PROGRAM SUMMARY - ALL FUNDS

TOTAL CIP EXPENDITURES BY FUND AND YEAR

Fund	2017	2018	2019	2020	2021	Total
General Fund	\$ 966,780	\$ 1,131,250	\$ 967,813	\$ 1,104,754	\$ 1,089,142	\$ 5,259,739
General Long Term Planning	770,000	216,000	295,000	295,000	-	1,576,000
Transportation Fund	6,049,500	4,700,000	4,180,000	3,570,000	470,000	18,969,500
Transportation Capital Fund	1,412,000	17,037,000	1,400,000	7,600,000	8,950,000	36,399,000
Conservation Trust Fund	48,000	168,000	343,000	173,000	278,000	1,010,000
Parks and Rec Capital Fund	300,000	1,850,000	-	200,000	2,500,000	4,850,000
Municipal Facilities Capital Fund	3,500,000	-	-	-	-	3,500,000
Fire Capital	4,762,155	289,282	-	-	-	5,051,437
Water Fund	5,378,920	2,673,000	4,182,641	7,490,934	2,344,000	22,069,495
Water Resource Fund	18,152,494	15,768,596	15,328,356	5,205,814	1,766,050	56,221,310
Stormwater Fund	2,180,160	2,409,296	2,446,202	3,084,732	2,107,842	12,228,232
Wastewater Fund	5,636,243	4,214,636	4,772,951	28,277,790	4,986,051	47,887,671
Community Center Fund	355,000	275,000	270,000	-	-	900,000
Fleet Fund	5,344,119	3,184,400	2,431,053	2,437,517	3,422,660	16,819,749
Golf Fund	247,729	-	334,135	-	416,825	998,689
Total by Year	\$ 55,103,100	\$ 53,916,460	\$ 36,951,151	\$ 59,439,541	\$ 28,330,570	\$ 233,740,822

FUNDING SOURCE SUMMARY

Funding Source information is intended to identify the revenue that is planned to pay for the capital projects included. While additional revenue is anticipated to be received each year, this information identifies only what is necessary to fund the Capital Improvement Program.

2016 Source	2017	2018	2019	2020	2021	Total
Sales Tax	\$ 1,321,780	\$ 1,356,250	\$ 1,237,813	\$ 1,104,754	\$ 1,089,142	\$ 6,109,739
Building Use Tax	4,985,500	7,051,000	4,695,000	10,285,000	8,240,000	35,256,500
Road and Bridge Tax	1,529,000	430,000	430,000	430,000	430,000	3,249,000
Federal Grant	1,602,000	1,447,000	-	-	-	3,049,000
Developer Contributions	185,000	-	-	-	-	185,000
Colorado Lottery Funds	48,000	168,000	343,000	173,000	278,000	1,010,000
Impact Fees	8,492,155	13,084,282	750,000	950,000	3,250,000	26,526,437
Metered Water Sales	2,320,000	1,970,000	2,229,000	2,723,000	2,344,000	11,586,000
System Development Fees	19,869,085	14,606,815	16,828,825	36,659,565	6,341,491	94,305,781
Water Resources Fees	7,225,971	6,307,438	5,880,166	1,899,563	706,420	22,019,559
Stormwater Charges	529,831	710,745	451,629	1,534,752	1,030,032	4,256,990
Wastewater Service Charges	1,402,930	1,470,530	1,340,530	1,242,390	782,000	6,238,378
Vehicle Repl. Contributions	3,194,176	2,745,633	2,092,094	2,276,754	3,203,017	13,511,674
Vehicle Salvage	245,351	187,597	153,250	160,763	219,643	966,604
Transfers from Other Funds	1,904,592	251,170	185,709	-	-	2,341,471
Revenue Bond Proceeds	150,000	-	-	-	-	150,000
User Fees	97,729	-	334,135	-	416,825	848,689
State Contribution	-	1,880,000	-	-	-	1,880,000
County Contribution	-	250,000	-	-	-	250,000
Total by Year	\$ 55,103,100	\$ 53,916,460	\$ 36,951,151	\$ 59,439,541	\$ 28,330,570	\$ 233,740,822

2017-2021 CAPITAL IMPROVEMENT PROGRAM

TOWNWIDE SUMMARY OF ESTIMATED ONGOING OPERATING COSTS BY FUND ⁽¹⁾

Department / Division	Project Name	2017	2018	2019	2020	2021
General Fund						
Fire Department						
	Adult and Pediatric Training Manikins	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500
Transportation Fund						
	Traffic Signal Program	5,200	2,600	2,600	2,600	2,600
Fire Capital Fund						
	Crystal Valley Ranch Fire Station ⁽²⁾	-	1,980,010	2,042,142	2,130,721	2,223,495
Transportation Capital Fund						
	Service Center Expansion ⁽³⁾	-	-	4,500	4,500	4,500
	Crowfoot Valley Road Widening	-	-	2,000	2,000	2,000
Parks and Recreation Capital Fund						
	Parks & Facility Maintenance Building ⁽²⁾	-	12,552	12,768	12,989	13,212
Water Fund						
	Pumping and Distribution System Upgrades	30,074	30,074	30,074	30,074	30,074
	Administration and Customer Service Bldg	12,119	12,119	12,119	12,119	12,119
Water Resources Fund						
	WISE Project	500,000	500,000	500,000	500,000	1,500,000
	Chatfield Reallocation Project	-	100,000	100,000	100,000	100,000
	Aquifer Storage and Recovery Pilot Program	4,000	4,000	4,000	4,000	4,000
	Plum Creek Diversion and Well Fields	125,000	125,000	125,000	125,000	125,000
	Plum Creek Water Purification Facility	-	1,200,000	1,200,000	1,200,000	1,200,000
	Administration and Customer Service Bldg	5,689	5,689	5,689	5,689	5,689
Stormwater Fund						
	Administration and Customer Service Bldg	5,510	5,510	5,510	5,510	5,510
Wastewater Fund						
	Administration and Customer Service Bldg	6,682	6,682	6,682	6,682	6,682
Total Ongoing Operating Expenditures by Year		\$ 694,774	\$ 3,984,736	\$ 4,053,584	\$ 4,142,384	\$ 5,235,381

NOTE: New vehicle additions to the fleet are incorporated and paid for in each individual department. Operating costs associated with a vehicle addition on average are \$986 for repair and maintenance and \$1,200 for fuel annually

(1) Existing Capital Improvement Programs included above reflect projects with known ongoing operating costs

(2) Initial project costs are funded from the Capital Fund. Ongoing operating costs will be funded from the General Fund

(3) Initial project costs are funded from the Capital Fund. Ongoing operating costs will be funded from the Transportation Capital Fund

2017-2021 CAPITAL IMPROVEMENT PROGRAM
GENERAL FUND

PROJECTS & FUNDING SOURCES BY DEPARTMENT

Project Expenditures	2017	2018	2019	2020	2021	Total
Police Department						
Property & Evidence Room Shelving	\$ -	\$ 40,000	\$ -	\$ -	\$ -	\$ 40,000
Fire Department						
Adult and Pediatric Training Manikins	50,000	-	-	-	-	50,000
Power Stretchers	225,000	-	-	-	-	225,000
Community Relations						
Mobile Application Upgrade	50,000	-	-	-	-	50,000
Division of Innovation and Technology						
IT Governance	85,000	200,000	90,000	200,000	90,000	665,000
Cisco Devices	169,400	288,000	210,000	245,000	287,000	1,199,400
Server Replacement	157,694	52,000	89,000	52,000	74,000	424,694
Parks Department						
Annual Trail Improvements	229,686	551,250	578,813	607,754	638,142	2,605,645
Total Expenditures by Year	\$ 966,780	\$ 1,131,250	\$ 967,813	\$ 1,104,754	\$ 1,089,142	\$ 5,259,739

Project Funding Sources	2017	2018	2019	2020	2021	Total
Sales Tax	\$ 966,780	\$ 1,131,250	\$ 967,813	\$ 1,104,754	\$ 1,089,142	\$ 5,259,739
Total Funding Sources by Year	\$ 966,780	\$ 1,131,250	\$ 967,813	\$ 1,104,754	\$ 1,089,142	\$ 5,259,739



Castle Rock Fire & Rescue Department Station #151

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Property & Evidence Room Shelving

Project Number: 70-20

Contact: Tim Gorman, Commander

Department: Police Department

Category: Equipment

Type: New

Useful Life: 5 Years

5 Year Historical Total \$ -

2017-2021 Total 40,000

CIP Project Total (2012-2021): \$ 40,000

Description and Justification

The Police Department requests an upgrade to the Property and Evidence room shelving in 2018 due to current limited space. There are approximately 9,800 items stored on the existing shelving in the property and evidence room. The shelving encompasses about 660 linear feet, with an unused area of 175 linear feet at the current time. The number of items being stored has doubled over the past year and half. Shelving demands are not constant and depend on: evidence and/or found property taken in, the disposition of court cases, the length of time required to maintain evidence, and man hours required to review and dispose of evidence. In addition, the outside property and evidence storage container is currently at maximum capacity.

Expenditures	2017	2018	2019	2020	2021	Total
Property & Evidence Room Shelving	\$ -	\$ 40,000	\$ -	\$ -	\$ -	\$ 40,000
Total Expenditures	\$ -	\$ 40,000	\$ -	\$ -	\$ -	\$ 40,000

Funding Sources	2017	2018	2019	2020	2021	Total
Sales Tax	\$ -	\$ 40,000	\$ -	\$ -	\$ -	\$ 40,000
Total Funding Sources	\$ -	\$ 40,000	\$ -	\$ -	\$ -	\$ 40,000

Operational Impact

No anticipated revenue and/or expenditure impact on annual operations.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Adult and Pediatric Training Manikins

Project Number: 70-30
 Contact: Norris Croom
 Department: Fire Department
 Category: Equipment
 Type: Replacement
 Useful Life: 7-10 Years

5 Year Historical Total	\$	-
2017-2021 Total		50,000
CIP Project Total (2012-2021):	\$	50,000

Description and Justification

The Fire and Rescue Department requests adult and pediatric training manikins to replace current 18 year old manikins as replacement parts can no longer be obtained. The Fire and Rescue Department is currently certified by the State as an authorized Emergency Medical Service (EMS) training site. This means that the department can conduct all of the required training to maintain EMS certifications without having to send personnel to outside classes. Due to the aggressive EMS training program, the department is able to save 30 percent of the individuals experiencing a cardiac arrest, which is three times better than the national average of nine percent. In order to provide this level of training, the department utilizes an adult and pediatric manikin that allows advanced procedures to be performed. Without this replacement equipment, there is risk of losing the ability to offer these courses in house due to not having appropriate equipment for training. It is imperative to conduct the required training in house in order to keep response units available and to maintain the level of service. The alternative would be to send personnel to an outside class for training which would remove response units from their availability, therefore adversely affecting service delivery and increasing overall costs in the long run. The adult manikin costs approximately \$30,000 and the pediatric manikin is approximately \$20,000, for a total one time cost of \$50,000.

Expenditures	2017	2018	2019	2020	2021	Total
Adult and Pediatric Training Manikins	\$ 50,000	\$ -	\$ -	\$ -	\$ -	50,000
Total Expenditures	\$ 50,000	\$ -	\$ -	\$ -	\$ -	50,000

Funding Sources	2017	2018	2019	2020	2021	Total
Sales Tax	\$ 50,000	\$ -	\$ -	\$ -	\$ -	50,000
Total Funding Sources	\$ 50,000	\$ -	\$ -	\$ -	\$ -	50,000

Operational Impact

Additional expenditures would include an annual maintenance and replacement parts at an estimated cost of \$500 per year. These expenditures are included in three year financial planning in the Fire and Rescue Department General Fund.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Power Stretchers

Project Number: 70-30

Contact: Norris Croom, Deputy Fire Chief

Department: Fire Department

Category: Equipment

Type: New

Useful Life: 7 Years

5 Year Historical Total \$ -

2017-2021 Total 225,000

CIP Project Total (2012-2021): \$ 225,000

Description and Justification

The Fire and Rescue Department requests the purchase of five Power Stretchers, one for each medic unit at a cost of approximately \$45,000 each, for a total project cost of \$225,000. The minimum life cycle of these devices is 7 years and the current non-powered stretchers end of life is 2017. Currently, the Fire Department's five medic units are manually operated to move patients from the scene to the medic and from the medic to the hospital. Manually operated means personnel have to physically lift the stretcher into and out of the medic units. As the population has continued to increase in weight, it is not uncommon for personnel to have to lift 300 pounds or more into and out of the medic units. This creates a significant risk to personnel and patients when trying to safely load and unload patients from the medic units. The Fire Department has mitigated this issue, to a degree, by ensuring a sufficient number of personnel on the scene of a call to assist in lifting and loading this amount of weight into the medic units. However, when the medic unit arrives at the hospital, the crew of two is now responsible for unloading a patient that may have required four people to load. Additionally, there are certain calls where the medic unit responds solo and does not have additional personnel to assist with loading patients. Lifting this amount of weight can pose a significant risk of back injuries to personnel, and considering that 65% of calls are for EMS, personnel are exposed to this risk several times a day. There are two documented cases of back injuries from lifting patients in the last three years. The average back injury costs a minimum of approximately \$20,000 (not including lost time), these two incidents almost equal the cost of one power stretcher. By implementing this project, the Town of Castle Rock will be reducing the risk of injuries for personnel while making it safer for patients with reduced risk of them being dropped or personnel not being able to lift them in and out of the medic units. The Fire and Rescue Department is also looking into the possibility of a lease/purchase option, similar to the Public Safety radio purchase, to minimize the initial cost impact and to spread it out over several years.

Expenditures	2017	2018	2019	2020	2021	Total
Power Stretchers	\$ 225,000	\$ -	\$ -	\$ -	\$ -	\$ 225,000

Total Expenditures	\$ 225,000	\$ -	\$ -	\$ -	\$ -	\$ 225,000
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Funding Sources	2017	2018	2019	2020	2021	Total
Sales Tax	\$ 225,000	\$ -	\$ -	\$ -	\$ -	\$ 225,000

Total Funding Sources	\$ 225,000	\$ -	\$ -	\$ -	\$ -	\$ 225,000
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Operational Impact

No additional operating expenditures are anticipated as a result of this project as all costs are included above.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Mobile Application Upgrade

Project Number: 70-73

Contact: Karen Carter, Community Relations Manager

Department: Deputy Town Manager

Category: Technology

Type: Upgrade

Useful Life: 5 Years

5 Year Historical Total \$ -

2017-2021 Total 50,000

CIP Project Total (2012-2021): \$ 50,000

Description and Justification

Expenditures are requested to enhance the existing mobile application for the Town of Castle Rock. Expected enhancements include different ways for residents to report concerns, possibly with photos; and to allow users to connect to local events, businesses and Town departments.

The Town's mobile application is an ever growing product and tool used to connect better to the community. Downloads from 2015 to 2016 have shown significant increases:

- Google Play: January 1, 2015; 28 downloads compared with 305 as of January 1, 2016
- iTunes: April 1, 2015; 6 downloads compared to 358 as of January 1, 2016

Expenditures	2017	2018	2019	2020	2021	Total
Mobile App	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ 50,000

Total Expenditures	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ 50,000
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Funding Sources	2017	2018	2019	2020	2021	Total
Sales Tax	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ 50,000

Total Funding Sources	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ 50,000
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Operational Impact

No additional operation impacts are anticipated as a result of this project.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

IT Governance

Project Number: 70-43

Contact: Jennifer Jaeger, Chief Technology Officer

Department: Division of Innovation and Technology

Category: Technology

Type: New

Useful Life: 5 Years

5 Year Historical Total \$ 243,422

2017-2021 Total 665,000

CIP Project Total (2012-2021): \$ 908,422

Description and Justification

Expenditures are requested in the General Fund for IT Governance projects that will support Town infrastructure and allow the Town to benefit from new technologies. Only projects classified as capital are included on this list of the identified 2017 IT Governance projects. Specific projects are proposed annually and estimated amounts are identified for outgoing years.

For 2017, \$57,000 is requested to purchase hardware related to the Town Wireless Ring project that is included in the General Long Term Planning Fund that will provide redundancy to the Town network. The additional hardware requested as part of IT Governance will result in additional improvements with public safety and traffic camera systems. The remaining IT Governance funds will be considered by the committee and will be utilized for other citizen, public safety, and/or Town-wide facing initiatives.

Expenditures	2017	2018	2019	2020	2021	Total
IT Governance	\$ 85,000	\$ 200,000	\$ 90,000	\$ 200,000	\$ 90,000	\$ 665,000

Total Expenditures	\$ 85,000	\$ 200,000	\$ 90,000	\$ 200,000	\$ 90,000	\$ 665,000
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Funding Sources	2017	2018	2019	2020	2021	Total
Sales Tax	\$ 85,000	\$ 200,000	\$ 90,000	\$ 200,000	\$ 90,000	\$ 665,000

Total Funding Sources	\$ 85,000	\$ 200,000	\$ 90,000	\$ 200,000	\$ 90,000	\$ 665,000
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Operational Impact

No additional operating impacts are anticipated as a result of this project.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Cisco Devices

Project Number: 76-80

Contact: Jenn Jaeger, Chief Technology Officer

Department: Division of Innovation and Technology

Category: Technology

Type: Replacement

Useful Life: 5 Years

5 Year Historical Total \$ 398,014

2017-2021 Total 1,199,400

CIP Project Total (2012-2021): \$ 1,597,414

Description and Justification

Expenditures are requested to replace a portion of our Cisco networking devices including any that are five years or older. Network devices are an essential requirement to deliver data between computers and servers. If a Cisco network device fails, data cannot be delivered, and employee productivity is impacted. Maintaining these devices is important for the daily work of almost every Town employee.

The Town is no longer able to buy support for some of these devices, and the likelihood of failure increases with age. Proactive replacement of the devices will avoid excessive downtime from an unscheduled failure while allowing staff to find and buy the best replacement option. Cisco devices grow at an annual rate of 17%. Replacement costs are estimated as follows, per year:

- 2017 based on 20% of 154 devices
- 2018 based on 20% of 180 devices
- 2019 based on 20% of 210 devices
- 2020 based on 20% of 245 devices
- 2021 based on 20% of 287 devices

The cost of devices vary, but average \$5,500 each. The Fortigate clusters that are used to operate the Town firewall must also be replaced in 2018 for a total of \$90,000.

Expenditures	2017	2018	2019	2020	2021	Total
Cisco Devices	\$ 169,400	\$ 288,000	\$ 210,000	\$ 245,000	\$ 287,000	\$ 1,199,400

Total Expenditures	\$ 169,400	\$ 288,000	\$ 210,000	\$ 245,000	\$ 287,000	\$ 1,199,400
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Funding Sources	2017	2018	2019	2020	2021	Total
Sales Tax	\$ 169,400	\$ 288,000	\$ 210,000	\$ 245,000	\$ 287,000	\$ 1,199,400

Total Funding Sources	\$ 169,400	\$ 288,000	\$ 210,000	\$ 245,000	\$ 287,000	\$ 1,199,400
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Operational Impact

No additional revenues or expenditures are anticipated as a result of this project.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Server Replacement

Project Number: 76-83

Contact: Jenn Jaeger, Chief Technology Officer

Department: Division of Innovation and Technology

Category: Technology

Type: Replacement

Useful Life: 5 Years

5 Year Historical Total \$ 214,450

2017-2021 Total 424,694

CIP Project Total (2012-2021): \$ 639,144

Description and Justification

Funding requested for this project will be used to replace a percentage of the ten physical servers in Town each year to make sure critical business operations continue to run without interruption. These ten physical servers house 121 virtual servers that contain Town data for every application used by Town employees. Just like computers on desktops, the backend servers get old and must be replaced before a critical hardware failure causes excessive downtime. If a physical server should fail, multiple departments would be affected, resulting in impacts to productivity and corresponding levels of service. Five year old servers need to be replaced or the Town risks failures, which could potentially result in major outages. A regular schedule will keep systems healthy and vendor support available. Four of the ten physical servers require replacement in 2017.

Expenditures	2017	2018	2019	2020	2021	Total
Server Equipment	\$ 147,710	\$ 37,000	\$ 74,000	\$ 37,000	\$ 74,000	\$ 369,710
UPS Remote Server	9,984	15,000	15,000	15,000	-	54,984
Total Expenditures	\$ 157,694	\$ 52,000	\$ 89,000	\$ 52,000	\$ 74,000	\$ 424,694

Funding Sources	2017	2018	2019	2020	2021	Total
Sales Tax	\$ 157,694	\$ 52,000	\$ 89,000	\$ 52,000	\$ 74,000	\$ 424,694
Total Funding Sources	\$ 157,694	\$ 52,000	\$ 89,000	\$ 52,000	\$ 74,000	\$ 424,694

Operational Impact

No additional revenues or expenditures are anticipated as a result of this project.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Annual Trail Improvements

Project Number:	75-14		
Contact:	Jeff Smullen, Assistant Director of Parks & Recreation	5 Year Historical Total	\$ 1,877,393
Department:	Parks & Recreation Department	2017-2021 Total	2,605,645
Category:	Parks and Trails	CIP Project Total (2012-2021):	\$ 4,483,038
Type:	New		
Useful Life:	50 Years		

Description and Justification

Expenditures are requested to extend the existing Plum Creek Trail in Castle Rock. The Plum Creek Trail extension completes the missing connection from downtown Castle Rock to Crystal Valley Ranch and completes the Town's portion of the Front Range Trail along East Plum Creek Trail. On an average monthly basis, both the Meadows Parkway and the Festival Park locations of the Plum Creek Trail see approximately 9,000 visitors each. There are approximately 300 visitors per day on an average during the summer months. The Lanterns Development will construct a trail section to Bell Mountain Ranch and Douglas County will complete a portion from Bell Mountain Ranch to Greenland Open Space. The Town's entire portion of the Front Range Trail along East Plum Creek Trail will be 8 miles when complete.

Annual Trail Improvements are funded by sales tax, a portion of which was enacted by voters to fund trail improvements throughout Castle Rock. As a result, the trails account receives an annual transfer from a portion of sales tax through the Town's Transportation Fund in addition to outside contributions, such as grant support when available. The Public Works and the Parks and Recreation Department have worked to evaluate potential projects and create a capital plan that addresses priorities for both side paths and trails. A portion of 2017 funds were used in 2015-16 for the construction of a pedestrian bridge over Wolfensberger Road that connects trails at Philip S. Miller Park and Ridgeline Open Space. Beginning in 2017, funds will be used for planning efforts for the East Plum Creek Trail. Construction of the East Plum Creek Trail heading south to Crystal Valley Parkway is expected to occur in 2018, 2019 and 2020.

Parks and Recreation has submitted a grant application with Great Outdoors Colorado (GOCO) requesting funds of \$1M to be used for this project. Grant awards will be announced on October 7, 2016.

Expenditures	2017	2018	2019	2020	2021	Total
Construction Contracts	\$ 229,686	\$ 551,250	\$ 578,813	\$ 607,754	\$ 638,142	\$ 2,605,645

Total Expenditures	\$ 229,686	\$ 551,250	\$ 578,813	\$ 607,754	\$ 638,142	\$ 2,605,645
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Funding Sources	2017	2018	2019	2020	2021	Total
Sales Tax	\$ 229,686	\$ 551,250	\$ 578,813	\$ 607,754	\$ 638,142	\$ 2,605,645

Total Funding Sources	\$ 229,686	\$ 551,250	\$ 578,813	\$ 607,754	\$ 638,142	\$ 2,605,645
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Operational Impact

Costs to maintain the addition to the trail will be minimal and can be accommodated within current budgeted resources.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

GENERAL LONG TERM PLANNING FUND

DEPUTY TOWN MANAGER

PROJECTS & FUNDING SOURCES BY DEPARTMENT

Project Expenditures	2017	2018	2019	2020	2021	Total
Wireless Ring	\$ 170,000	\$ -	\$ -	\$ -	\$ -	\$ 170,000
Fire Records Management System	600,000	-	-	-	-	600,000
Synthetic Turf Replacement	-	216,000	295,000	295,000	-	806,000
Total Expenditures by Year	\$ 770,000	\$ 216,000	\$ 295,000	\$ 295,000	\$ -	\$ 1,576,000

Project Funding Sources	2017	2018	2019	2020	2021	Total
Building Use Tax	\$ 770,000	\$ 216,000	\$ 295,000	\$ 295,000	\$ -	\$ 1,576,000
Total Funding Sources by Year	\$ 770,000	\$ 216,000	\$ 295,000	\$ 295,000	\$ -	\$ 1,576,000



Sunset in Castle Rock

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Wireless Ring

Project Number: 78-92

Contact: Jennifer Jaeger, Chief Technology Officer

Department: Division of Innovation and Technology

Category: Technology

Type: New

Useful Life: 10 Years

5 Year Historical Total \$ -

2017-2021 Total 170,000

CIP Project Total (2012-2021): \$ 170,000

Description and Justification

The Division of Innovation and Technology requests funding for a proposed Wireless ring that will be a one year extension to the fiber ring project, providing additional locations and infrastructure with redundant connectivity. Three years ago the Town decided to dedicate funding to a project to build a fiber ring that would serve main Town facilities with redundant connectivity for business continuity in case of a fiber cut. That project will be completed in 2016 for a total of approximately \$774,000 .

This project will result in redundant connectivity to locations that are not served by our fiber ring. This project will result in multiple improvements including providing:

- Security services (camera and access control) to reservoirs and other infrastructure
- Wi-Fi for camera uploads and network access sites within patrol districts
- Camera monitoring/traffic signal control and traffic camera uplinks in areas not served by fiber
- Redundant connectivity between remote Fire stations
- Connectivity for mobile devices and vehicles for staff in the field

Additionally, the design of a wireless ring and the advantages of Point-to-Point microwave rings include: faster network rollout with no trenching, boring or paving, Return on Investment due to low cost of ownership, increased network flexibility, low operating costs, better resilience to natural disasters and accidental cuts, proven success and rapid ROI for many local municipalities including Arvada and Durango. Town water tanks already have hardware in place and are prime locations for the ring network due to their altitude and direct site lines to other Town owned assets.

Expenditures	2017	2018	2019	2020	2021	Total
Wireless Ring	\$ 170,000	\$ -	\$ -	\$ -	\$ -	\$ 170,000

Total Expenditures	\$ 170,000	\$ -	\$ -	\$ -	\$ -	\$ 170,000
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Funding Sources	2017	2018	2019	2020	2021	Total
Building Use Tax	\$ 170,000	\$ -	\$ -	\$ -	\$ -	\$ 170,000

Total Funding Sources	\$ 170,000	\$ -	\$ -	\$ -	\$ -	\$ 170,000
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Operational Impact

No additional revenues or expenditures are anticipated as a result of this project.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name Fire Records Management System

Project Number:	78-94	5 Year Historical Total	\$	-
Contact:	Art Morales, Fire Chief	2017-2021 Total		600,000
Department:	Fire Department	CIP Project Total (2012-2021):	\$	600,000
Category:	Technology			
Type:	New			
Useful Life:	Varies by software and vendor			

Description and Justification

The Fire and Rescue Department requests funds to purchase a Fire Records Management System. The department utilizes a Records Management System (RMS) to track and manage all aspects of department operational activities and records. This system is used to manage human resources (personnel, certifications, daily staffing), training records, daily schedule, incident reporting for all fire and EMS calls, life safety as it relates to business records, files, preplans, and inspections, and finally for mandatory reporting to both state and federal agencies as required by law. The current system was purchased in 2003 and has served the Department well. Unfortunately, the Department was advised on June 28, 2016 that the current vendor is going out of business and will no longer provide support or service as of December 2017. A new RMS will need to be purchased and implemented prior to December 2017. Without a records management system, the Department would be unable to document and track all of its activities, or meet the minimum reporting and documentation requirements demanded by agencies such as ISO, NFPA, CFAI, CDPS, NIFRS, HIPPA, and department personnel who manage department performance and level of service metrics. Invariably, this would result in a decrease in the level of service due to an inability to manage department records and performance. The Department is internationally accredited, and recently improved its Insurance Services Office (ISO) rating from a 5 to a 2. Without RMS documentation, the Department's accredited status would be in peril, as well as the ISO rating improvements. This could result in Town citizens paying higher homeowner insurance premiums. There are no other alternatives or potential solutions to this problem other than to purchase a new RMS. The Department will work closely with DoIT to acquire and implement the most effective solutions to this problem. A new RMS is estimated to cost approximately \$600,000. This is a conservative estimate due to the extremely recent notification from the current RMS provider. More analysis will be completed to quantify this cost estimate.

Expenditures	2017	2018	2019	2020	2021	Total
Fire Software System	\$ 600,000	\$ -	\$ -	\$ -	\$ -	600,000
Total Expenditures	\$ 600,000	\$ -	\$ -	\$ -	\$ -	600,000
Funding Sources	2017	2018	2019	2020	2021	Total
Building Use Tax	\$ 600,000	\$ -	\$ -	\$ -	\$ -	600,000
Total Funding Sources	\$ 600,000	\$ -	\$ -	\$ -	\$ -	600,000

Operational Impact

The operational impact due to annual maintenance expenses is expected to cost a net increased amount of approximately \$47,304 per year. This is included in the three year planning period in the General Fund within the Fire and Rescue Department.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Synthetic Turf Replacement

Project Number: 78-47

Contact: Jeff Smullen, Assistant Director of Parks & Recreation

Department: Parks & Recreation Department

Category: Parks/Trails

Type: Replacement

Useful Life: 10 Years

5 Year Historical Total \$ -

2017-2021 Total 806,000

CIP Project Total (2012-2021): \$ 806,000

Description and Justification

Parks and Recreation requests funding for synthetic turf replacement in 2018 for Butterfield Park, 2019 for Gemstone Park and 2020 for Matney Park. Turf on field sites is nearing the end of the expected life and will need to be replaced in order to maintain proper safety levels and to maintain the functional and aesthetic quality of these parks. The replacement of synthetic turf is regularly scheduled and is assessed as to necessity on an annual basis with safety as a top priority.

Expenditures	2017	2018	2019	2020	2021	Total
Labor and Materials for Turf Replacement	\$ -	\$ 216,000	\$ 295,000	\$ 295,000	\$ -	\$ 806,000

Total Expenditures	\$ -	\$ 216,000	\$ 295,000	\$ 295,000	\$ -	\$ 806,000
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Funding Sources	2017	2018	2019	2020	2021	Total
Building Use Tax	\$ -	\$ 216,000	\$ 295,000	\$ 295,000	\$ -	\$ 806,000

Total Funding Sources	\$ -	\$ 216,000	\$ 295,000	\$ 295,000	\$ -	\$ 806,000
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Operational Impact

No additional revenues or expenditures are anticipated as a result of this project.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

TRANSPORTATION FUND

PUBLIC WORKS DEPARTMENT

PROJECTS & FUNDING SOURCES BY DEPARTMENT

Project Expenditures	2017	2018	2019	2020	2021	Total
Miscellaneous Projects & Studies	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 375,000
Traffic Safety Improvements	50,000	50,000	50,000	50,000	50,000	250,000
Traffic Signal Program	860,000	230,000	230,000	230,000	230,000	1,780,000
Neighborhood Traffic Calming	25,000	25,000	25,000	25,000	25,000	125,000
Development Related Improvements Program	50,000	50,000	50,000	50,000	50,000	250,000
ADA Ramps	40,000	40,000	40,000	40,000	40,000	200,000
Meadows Parkway Reconstruction	1,987,000	-	-	-	-	1,987,000
Gordon Drive Reconstruction	31,000	310,000	-	-	-	341,000
Plum Creek Parkway	-	870,000	-	-	-	870,000
Prestwick Way	432,000	-	-	-	-	432,000
Emerald Drive	1,338,500	-	-	-	-	1,338,500
Wilcox Crosswalk Rehabilitation	161,000	-	-	-	-	161,000
3rd and Perry Roundabout	1,000,000	-	-	-	-	1,000,000
Street Reconstruction Projects	-	3,050,000	2,910,000	-	-	5,960,000
Craig & Gould N. Infrastructure Improvement	-	-	800,000	3,100,000	-	3,900,000
Total Expenditures by Year	\$ 6,049,500	\$ 4,700,000	\$ 4,180,000	\$ 3,570,000	\$ 470,000	\$ 18,969,500

Project Funding Sources	2017	2018	2019	2020	2021	Total
Road and Bridge Tax	\$ 1,529,000	\$ 430,000	\$ 430,000	\$ 430,000	\$ 430,000	\$ 3,249,000
Building Use Tax	3,002,500	4,270,000	3,750,000	3,140,000	40,000	14,202,500
Federal Grant	1,333,000	-	-	-	-	1,333,000
Developer Contributions	185,000	-	-	-	-	185,000
Total Funding Sources by Year	\$ 6,049,500	\$ 4,700,000	\$ 4,180,000	\$ 3,570,000	\$ 470,000	\$ 18,969,500

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Miscellaneous Projects & Studies

Project Number: 75-24

Contact: Carl Armijo, Project Manager

Department: Public Works Department

Category: Infrastructure

Type: Repair

Useful Life: Variable

5 Year Historical Total \$ 163,945

2017-2021 Total 375,000

CIP Project Total (2012-2021): \$ 538,945

Description and Justification

Small projects and studies are typically identified during the year that are currently unknown. Projects typically arise that were not accounted for or specifically identified in the annual budget process. The purpose of this miscellaneous projects fund is to have monies available when minor unexpected road projects are needed to be funded and constructed. Examples include miscellaneous projects such as repair of broken concrete sidewalks, minor drainage improvements, or subsurface investigations such as the Sixth Street alley wall failure and Castle Oaks east approach settlement issue. The ability to immediately implement small projects as they are identified provides for the best customer service for the public and maintains a level of service expected and provided by the Town.

Expenditures

	2017	2018	2019	2020	2021	Total
Design/Engineering/Construction	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 375,000
Total Expenditures	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 375,000

Funding Sources

	2017	2018	2019	2020	2021	Total
Road and Bridge Tax	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 375,000
Total Funding Sources	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 375,000

Operational Impact

Operational impacts are typically minimal as these small improvements to existing infrastructure fall under existing maintenance operations budgets.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Traffic Safety Improvements

Project Number:	75-25								
Contact:	Ryan Germeroth, Transp. Planning & Traffic Engineering Mgr.			5 Year Historical Total	\$		67,018		
Department:	Public Works Department			2017-2021 Total			250,000		
Category:	Infrastructure			CIP Project Total (2012-2021):	\$		317,018		
Type:	Repair								
Useful Life:	Variable								

Description and Justification

Small traffic safety studies or projects are typically identified during the year that are currently unknown. Examples include modifications to existing crosswalks or adding new crosswalks to improve pedestrian safety. This program is intended to pay for these items. The ability to immediately implement small projects as they are identified provides for the best customer service for the public and aids in improving safety.

Expenditures	2017	2018	2019	2020	2021	Total
Construction	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 250,000

Total Expenditures	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 250,000
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Funding Sources	2017	2018	2019	2020	2021	Total
Road and Bridge Tax	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 250,000

Total Funding Sources	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 250,000
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Operational Impact

Operational impacts are typically minimal as these small improvements to existing infrastructure fall under existing maintenance operations budgets.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Traffic Signal Program

Project Number: 75-26

Contact: Ryan Germeroth, Transp. Planning & Traffic Engineering Mgr.

5 Year Historical Total \$ 2,197,872

Department: Public Works Department

2017-2021 Total 1,780,000

Category: Infrastructure

CIP Project Total (2012-2021): \$ 3,977,872

Type: Upgrade

Useful Life: 15-20 years

Description and Justification

This program is utilized to construct new traffic signals that are identified through engineering evaluations, and to perform signal system changes recommended in the comprehensive townwide system analysis. For 2017, it is expected that two new traffic signals will be needed. Upon completion of the warrant studies in 2015, there were three intersections nearing signal warrants that are set to be studied again in 2016. One signal has been identified as needed at Meadows Boulevard and Butterfield Crossing and another has yet to be determined. The shifts in traffic due to the opening of the North Meadows Extension/Castle Rock Parkway may impact the need for signalization at some locations in the Meadows. \$400,000 is also included in 2017 to accomplish phase III of III of the traffic signal system upgrades. This project improves overall communications infrastructure as well as signal controller upgrades. 2017 will be the final year for completing these upgrades and will improve responses to maintenance needs as well as provide for the ability to take over the operations and maintenance of CDOT owned signals. For years 2018 through 2021, signal projects will be chosen based upon historical trends, judgment, and locations identified by engineering evaluations. Intersections that are close to needing a signal are evaluated annually. Installations improve traffic movement and safety of roadway users.

Expenditures	2017	2018	2019	2020	2021	Total
Construction/Engineering	\$ 860,000	\$ 230,000	\$ 230,000	\$ 230,000	\$ 230,000	\$ 1,780,000

Total Expenditures	\$ 860,000	\$ 230,000	\$ 230,000	\$ 230,000	\$ 230,000	\$ 1,780,000
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Funding Sources	2017	2018	2019	2020	2021	Total
Developer Contributions	\$ 185,000	\$ -	\$ -	\$ -	\$ -	\$ 185,000
Road and Bridge Tax	675,000	230,000	230,000	230,000	230,000	1,595,000

Total Funding Sources	\$ 860,000	\$ 230,000	\$ 230,000	\$ 230,000	\$ 230,000	\$ 1,780,000
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Operational Impact

The department currently contracts out the maintenance of traffic signal equipment as in-house specialization does not exist. In addition, electricity cost increases also exist with new signal installation. The average electricity and maintenance cost per signal is \$2,600 per year and is included in electricity costs within the Transportation Fund.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Neighborhood Traffic Calming

Project Number:	75-28								
Contact:	Ryan Germeroth, Transp. Planning & Traffic Engineering Mgr	5 Year Historical Total	\$	35,397					
Department:	Public Works Department	2017-2021 Total		125,000					
Category:	Infrastructure	CIP Project Total (2012-2021):	\$	160,397					
Type:	Upgrade								
Useful Life:	Variable								

Description and Justification

These projects are identified through the Town's Neighborhood Traffic Calming Program. This program is utilized to complete projects geared toward encouraging cars to adhere to the posted speed limit, or to reduce the amount of cut-through traffic on residential streets. Projects are identified through the current policy approved by Town Council and administered by staff. These projects are typically developed during the year as residents request them and certain criteria are met. Examples include the installation of speed cushions on residential streets.

Expenditures	2017	2018	2019	2020	2021	Total
Construction	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 125,000

Total Expenditures	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 125,000
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Funding Sources	2017	2018	2019	2020	2021	Total
Road and Bridge Tax	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 125,000

Total Funding Sources	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 125,000
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Operational Impact

The impact to operations is minor as these projects are small in scope and fairly infrequent. Speed cushions are constructed with asphalt material that is keyed in above existing asphalt, which can be maintained within existing operations just as the asphalt surface below.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name **Development Related Improvements Program**

Project Number:	75-32						
Contact:	Bob Goebel, Director of Public Works			5 Year Historical Total	\$	125,626	
Department:	Public Works Department			2017-2021 Total		250,000	
Category:	Infrastructure			CIP Project Total (2012-2021):	\$	375,626	
Type:	New						
Useful Life:	Variable						

Description and Justification

Opportunities exist for transportation improvements to be made in conjunction with various developments. Constructing improvements in conjunction with development improvements can be done at a reduced cost with less impact to the public. Projects are identified through the development review process and constructed as needed. Increased costs in 2017 include curb and gutter work on Jerry Street and milling and overlay work on Appleton Way. The Appleton Way project is an example where the Town committed (per SIA) to paving cost for street repairs above and beyond what was required for the development. The Town has recognized that opportunities exist for transportation improvements to be made in conjunction with developments. It is the Town's intent to construct these improvements during development, at a reduced cost and to continue to provide an adequate level of service.

Expenditures	2017	2018	2019	2020	2021	Total
Engineering/Construction	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 250,000
Total Expenditures	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 250,000

Funding Sources	2017	2018	2019	2020	2021	Total
Road and Bridge Tax	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 250,000
Total Funding Sources	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 250,000

Operational Impact

The operational impact of the program will depend on the specific projects constructed and will be incorporated at such time.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

ADA Ramps

Project Number: 76-78

Contact: Aaron Monks, Project Manager

Department: Public Works Department

Category: Infrastructure

Type: Replacement

Useful Life: Variable

5 Year Historical Total \$ 180,320

2017-2021 Total 200,000

CIP Project Total (2012-2021): \$ 380,320

Description and Justification

Town Council approved the ADA Prioritization Plans which identified \$40,000 per year to be allocated towards curb ramp upgrades based on priorities and funding. A contractor will be utilized to construct these upgrades. The goal of the Americans with Disabilities Act (ADA) Curb Ramps Prioritization Plan for the Town of Castle Rock is to ensure that the Town creates accessible paths of travel within the public right-of-way for people with disabilities. The ADA Prioritization Plan will be implemented with annual construction upgrades and retrofits for curb ramps for the purpose of becoming ADA compliant.

Expenditures	2017	2018	2019	2020	2021	Total
Construction	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 200,000

Total Expenditures	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 200,000
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Funding Sources	2017	2018	2019	2020	2021	Total
Building Use Tax	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 200,000

Total Funding Sources	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 200,000
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Operational Impact

Operational impacts are typically minimal as these small improvements to existing infrastructure fall under existing maintenance operations.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Meadows Parkway Reconstruction

Project Number: 78-40

Contact: Frank Main, Project Manager

Department: Public Works Department

Category: Infrastructure

Type: Replacement

Useful Life: 20 years

5 Year Historical Total \$ -

2017-2021 Total 1,987,000

CIP Project Total (2012-2021): \$ 1,987,000

Description and Justification

The concrete pavement within the stretch of Meadows Parkway between Prairie Hawk Drive and Highway US-85 has reached the end of its lifespan and requires a reconstruction of the pavement surface. This work will involve the removal of the existing concrete pavement and replacement with new pavement. The project was included as a future planning consideration in an attachment to the Strategic Planning considerations packet that was presented and approved at the January 27, 2015 meeting. Construction in 2017 has been identified for this work since the North Meadows Extension project will be completed in August 2016. Traffic volumes on Meadows Parkway will be less which will minimize disruption to the traveling public once this work is completed. The Denver Regional Council of Governments (DRCOG) has provided notification to the Town that the Town's request for federal funding to complete this project has been approved. The Town's funding portion is 20% of the project cost. The remaining 80% will be grant funding. This aligns with Town's 2020 Vision Statement of providing outstanding community services including police, fire, emergency medical, park, recreation, water, and transportation.

Expenditures	2017	2018	2019	2020	2021	Total
Construction	\$ 1,987,000	\$ -	\$ -	\$ -	\$ -	1,987,000
Total Expenditures	\$ 1,987,000	\$ -	\$ -	\$ -	\$ -	1,987,000
Funding Sources	2017	2018	2019	2020	2021	Total
Road and Bridge Tax	\$ 654,000	\$ -	\$ -	\$ -	\$ -	654,000
Federal Grant	1,333,000	-	-	-	-	1,333,000
Total Funding Sources	\$ 1,987,000	\$ -	\$ -	\$ -	\$ -	1,987,000

Operational Impact

Increases to maintenance operations are projected to be minor. Slight increases to the Pavement Management Program may be necessary within 5 years from construction completion to fit in with the current preventative maintenance strategy.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Gordon Drive Reconstruction

Project Number: 78-61
 Contact: Aaron Monks
 Department: Public Works Department
 Category: Infrastructure
 Type: Replacement
 Useful Life: 20 years

5 Year Historical Total	\$	-
2017-2021 Total		341,000
CIP Project Total (2012-2021):	\$	341,000

Description and Justification

The asphalt pavement within the stretch of Gordon Drive between Valley Drive and Johnson Drive has reached the end of its lifespan and requires a reconstruction of the pavement section. The Public Works and Utilities Departments are collaborating to make needed improvements for stormwater, sanitary sewer, and road improvements. This section of Gordon Drive has a reverse crown to convey stormwater from the pavement to an off site drainage swell. Utilities Stormwater division is planning to install a storm water system along this section of Gordon Drive to capture and convey the drainage. Utilities is also planning to upsize the existing sewer line along this section of Gordon Drive. With these improvements along this section of Gordon Drive, the new pavement section would have a typical crown cross section to convey storm water from the pavement surface. Public Works funding portion is for the pavement section design in 2017 and the new pavement and subgrade preparation in 2018.

Expenditures	2017	2018	2019	2020	2021	Total
Gordon Dr. Design	\$ 31,000	\$ -	\$ -	\$ -	\$ -	\$ 31,000
Gordon Dr. Construction		310,000	-	-	-	310,000
Total Expenditures	\$ 31,000	\$ 310,000	\$ -	\$ -	\$ -	\$ 341,000

Funding Sources	2017	2018	2019	2020	2021	Total
Building Use Tax	\$ 31,000	\$ 310,000	\$ -	\$ -	\$ -	\$ 341,000
Total Funding Sources	\$ 31,000	\$ 310,000	\$ -	\$ -	\$ -	\$ 341,000

Operational Impact

Decrease to maintenance operations are projected, however they are unknown at this time and will be incorporated when project completion is achieved and costs are quantified.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Plum Creek Parkway

Project Number: 78-62

Contact: Aaron Monks, Project Manager

Department: Public Works Department

Category: Infrastructure

Type: Replacement

Useful Life: 20 years

5 Year Historical Total \$ -

2017-2021 Total 870,000

CIP Project Total (2012-2021): \$ 870,000

Description and Justification

The concrete pavement within the stretch of Plum Creek Parkway between Gilbert and Eaton has reached the end of its lifespan and requires a reconstruction of the pavement section. The concrete pavement was constructed in the early eighties and is requiring more road maintenance to keep this segment serviceable to the traveling public. This work will involve the removal of the existing concrete pavement and replacement with new asphalt pavement. Since this road segment is part of the Town's ring road, an important series of highly traveled thoroughfares, it is necessary to reconstruct this segment at this time.

Expenditures	2017	2018	2019	2020	2021	Total
Construction	\$ -	\$ 861,500	\$ -	\$ -	\$ -	\$ 861,500
Subgrade Investigation	-	8,500	-	-	-	8,500
Total Expenditures	\$ -	\$ 870,000	\$ -	\$ -	\$ -	\$ 870,000

Funding Sources	2017	2018	2019	2020	2021	Total
Building Use Tax	\$ -	\$ 870,000	\$ -	\$ -	\$ -	\$ 870,000
Total Funding Sources	\$ -	\$ 870,000	\$ -	\$ -	\$ -	\$ 870,000

Operational Impact

Decrease to maintenance operations are projected, however they are unknown at this time and will be incorporated when project completion is achieved and costs are quantified.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Prestwick Way

Project Number: 78-63

Contact: Aaron Monks, Project Manager

Department: Public Works Department

Category: Infrastructure

Type: Replacement

Useful Life: 20 Years

5 Year Historical Total \$ -

2017-2021 Total 432,000

CIP Project Total (2012-2021): \$ 432,000

Description and Justification

The concrete pavement along Prestwick Way has reached the end of its lifespan and requires a reconstruction of the pavement section. Prestwick is located and joins Mount Royal Drive. This segment of road was constructed in the early eighties has reached the end of its design life. By reconstructing this segment, the Town will minimize its annual maintenance expenditures for crack sealing and pot hole repair. This work will involve the removal of the existing concrete pavement and replacing it with new asphalt pavement.

Expenditures	2017	2018	2019	2020	2021	Total
Construction	\$ 425,000	\$ -	\$ -	\$ -	\$ -	\$ 425,000
Subgrade Investigation	7,000	-	-	-	-	7,000
Total Expenditures	\$ 432,000	\$ -	\$ -	\$ -	\$ -	\$ 432,000

Funding Sources	2017	2018	2019	2020	2021	Total
Building Use Tax	\$ 432,000	\$ -	\$ -	\$ -	\$ -	\$ 432,000
Total Funding Sources	\$ 432,000	\$ -	\$ -	\$ -	\$ -	\$ 432,000

Operational Impact

Decrease to maintenance operations are projected, however they are unknown at this time and will be incorporated when project completion is achieved and costs are quantified.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Emerald Drive

Project Number: 78-64

Contact: Aaron Monks, Project Manager

Department: Public Works Department

Category: Infrastructure

Type: Replacement

Useful Life: 20 years

5 Year Historical Total \$ -

2017-2021 Total 1,338,500

CIP Project Total (2012-2021): \$ 1,338,500

Description and Justification

The concrete pavement along Emerald Drive has reached the end of its lifespan and requires a reconstruction of the pavement section. Emerald Drive is located between Plum Creek Parkway and Emerald Court. This segment of road was constructed in the early eighties has reached the end of its design life. By reconstructing this segment, the Town will minimize its annual maintenance expenditures for crack sealing and pot hole repair. This work will involve the removal of the existing concrete pavement and replacing it with new asphalt pavement. This project will continue to address the Town's priority of maintaining and improving surface transportation.

Expenditures	2017	2018	2019	2020	2021	Total
Construction	\$ 1,330,000	\$ -	\$ -	\$ -	\$ -	\$ 1,330,000
Subgrade Investigation	8,500	-	-	-	-	8,500
Total Expenditures	\$ 1,338,500	\$ -	\$ -	\$ -	\$ -	\$ 1,338,500

Funding Sources	2017	2018	2019	2020	2021	Total
Building Use Tax	\$ 1,338,500	\$ -	\$ -	\$ -	\$ -	\$ 1,338,500
Total Funding Sources	\$ 1,338,500	\$ -	\$ -	\$ -	\$ -	\$ 1,338,500

Operational Impact

Decrease to maintenance operations are projected, however they are unknown at this time and will be incorporated when project completion is achieved and costs are quantified.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Wilcox Crosswalk Rehabilitation

Project Number: 78-42

Contact: Aaron Monks, Project Manager

Department: Public Works Department

Category: Infrastructure

Type: Replacement

Useful Life: 20 years

5 Year Historical Total \$ 496,000

2017-2021 Total 161,000

CIP Project Total (2012-2021): \$ 657,000

Description and Justification

The pattern concrete crosswalks along Wilcox from 5th Street to 8th Street are not performing well and are in need of replacement. This work will involve the removal of the existing pattern concrete and replacement with new concrete pavement. In performing these improvements, the crosswalks will provide pedestrians a safe crosswalk to navigate from one side of the street to the other side. In addition, the crosswalks will align with sidewalks which makes crossing the streets more user friendly. These improvements align with the Town's 2020 Vision Statement of maintaining a vibrant downtown.

Expenditures	2017	2018	2019	2020	2021	Total
Construction	\$ 161,000	\$ -	\$ -	\$ -	\$ -	\$ 161,000
Total Expenditures	\$ 161,000	\$ -	\$ -	\$ -	\$ -	\$ 161,000

Funding Sources	2017	2018	2019	2020	2021	Total
Building Use Tax	\$ 161,000	\$ -	\$ -	\$ -	\$ -	\$ 161,000
Total Funding Sources	\$ 161,000	\$ -	\$ -	\$ -	\$ -	\$ 161,000

Operational Impact

Decrease to maintenance operations are projected, however they are unknown at this time and will be incorporated when project completion is achieved and costs are quantified.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

3rd and Perry Roundabout

Project Number: 78-65

Contact: Frank N. Main, Project Manager

Department: Public Works Department

Category: Infrastructure

Type: Upgrade

Useful Life: 20 year design life

5 Year Historical Total \$ -

2017-2021 Total 1,000,000

CIP Project Total (2012-2021): \$ 1,000,000

Description and Justification

A modification to the existing traffic control at 3rd and Perry is expected to be needed due to the Festival Park expansion planned for 2016. This project would accomplish the construction of a roundabout in place of the existing two-way stop at the intersection. Another potential option would be to construct a traffic signal which would cost less than a roundabout but not operate as efficiently nor provide the speed control benefit that a roundabout does. Design efforts are currently underway to confirm that a roundabout can function within the tight confines of this intersection, pending Council direction. This project is anticipated to help to reduce traffic congestion at this intersection while also helping to calm travel speeds in the downtown area. This would be a benefit both with regard to traffic operations and safety. Traffic congestion has been a key concern in the community survey so this project would help to address an identified community concern.

Expenditures	2017	2018	2019	2020	2021	Total
Construction	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -	1,000,000

Total Expenditures	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -	1,000,000
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Funding Sources	2017	2018	2019	2020	2021	Total
Building Use Tax	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -	1,000,000

Total Funding Sources	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -	1,000,000
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Operational Impact

There is no operational impact anticipated as a result of this project.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Street Reconstruction Projects

Project Number: 78-89
 Contact: Aaron Monks
 Department: Public Works Department
 Category: Infrastructure
 Type: Replacement
 Useful Life: 20 years

5 Year Historical Total	\$	-
2017-2021 Total		5,960,000
CIP Project Total (2012-2021):	\$	5,960,000

Description and Justification

This project includes multiple streets on which the pavement has reached the end of its lifespan and requires a reconstruction of the pavement section. Reconstructing these segment will minimize the annual maintenance expenditures for crack sealing and pot hole repair. This work will involve the removal of the existing pavement and replacing it with new pavement. 2018 reconstructions include Deckers Street, Tabor Drive, Lantern Trail and Wagon Wheel. 2019 reconstructions primarily consist of work on Butterfield Crossing.

Expenditures	2017	2018	2019	2020	2021	Total
Construction	\$ -	\$ 3,050,000	\$ 2,910,000	\$ -	\$ -	\$ 5,960,000
Total Expenditures	\$ -	\$ 3,050,000	\$ 2,910,000	\$ -	\$ -	\$ 5,960,000

Funding Sources	2017	2018	2019	2020	2021	Total
Building Use Tax	\$ -	\$ 3,050,000	\$ 2,910,000	\$ -	\$ -	\$ 5,960,000
Total Funding Sources	\$ -	\$ 3,050,000	\$ 2,910,000	\$ -	\$ -	\$ 5,960,000

Operational Impact

Maintenance expenses are projected to decrease as a result of these reconstructions. Amounts will vary depending on the specific area reconstructed.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name **Craig & Gould N. Infrastructure Improvements**

Project Number:	77-62	5 Year Historical Total	\$	-
Contact:	Carl Armijo, CIP Engineering Manager	2017-2021 Total		3,900,000
Department:	Public Works Department	CIP Project Total (2012-2021):	\$	3,900,000
Category:	Infrastructure			
Type:	Replacement			
Useful Life:	30 years			

Description and Justification

The scope of the project includes reconstruction and replacement of existing utility and street infrastructure in a similar manner to what was completed in the Craig and Gould neighborhood south of Fifth Street. This includes reconstruction of existing pavement and the addition of curb, gutter, and sidewalk improvements. These modifications are expected to improve pedestrian safety and better define parking areas along the streets that currently do not have curbs or sidewalks. This project was included in the Public Works Five-Year Capital considerations presented to Council in 2014 and Strategic Planning considerations presented and approved in 2015. This infrastructure is beyond its design life, and needs to be replaced. Increased maintenance is required to keep service active, which is creating cost inefficiencies. This is a joint effort with the Utilities Department and timing of these improvements for design and construction years was closely coordinated between both departments.

Expenditures	2017	2018	2019	2020	2021	Total
Design	\$ -	\$ -	\$ 800,000	\$ -	\$ -	\$ 800,000
Construction		-	-	3,100,000	-	3,100,000
Total Expenditures	\$ -	\$ -	\$ 800,000	\$ 3,100,000	\$ -	\$ 3,900,000

Funding Sources	2017	2018	2019	2020	2021	Total
Building Use Tax	\$ -	\$ -	\$ 800,000	\$ 3,100,000	\$ -	\$ 3,900,000
Total Funding Sources	\$ -	\$ -	\$ 800,000	\$ 3,100,000	\$ -	\$ 3,900,000

Operational Impact

Increased operational impacts are not anticipated as this project is a replacement. A decrease in maintenance is expected as a result of the replacement infrastructure being "reset" to its original condition where normal preventative maintenance activities can resume.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

TRANSPORTATION CAPITAL FUND

PUBLIC WORKS DEPARTMENT

PROJECTS & FUNDING SOURCES BY DEPARTMENT

Project Expenditures	2017	2018	2019	2020	2021	Total
Service Center Expansion	\$ 220,000	\$ 1,980,000	\$ -	\$ -	\$ -	\$ 2,200,000
Improvements at Highway 86 & Allen Way	360,000	3,708,000	-	-	-	4,068,000
Improvements at Hwy 86 & Crowfoot Valley	-	2,384,000	-	-	-	2,384,000
Hwy 85 & Meadows Left Turn Lane	107,000	-	-	-	-	107,000
Plum Creek & Wolfensberger Roundabout	150,000	950,000	-	-	-	1,100,000
Ridge Road Widening	400,000	3,600,000	-	-	-	4,000,000
Hwy 86 and 5th St Improvements	175,000	3,165,000	-	-	-	3,340,000
5th Street Widening	-	-	500,000	5,000,000	-	5,500,000
Plum Creek and Gilbert Roundabout	-	-	150,000	950,000	-	1,100,000
Plum Creek Pkwy Widening (East): Gilbert St	-	-	-	600,000	5,500,000	6,100,000
Wolfensberger Widening	-	-	-	-	800,000	800,000
Wolfensberger and Red Hawk Roundabout	-	-	-	150,000	950,000	1,100,000
Coachline and Foothills Dr Roundabout	-	-	-	150,000	950,000	1,100,000
Crystal Valley Parkway Interchange	-	750,000	500,000	500,000	500,000	2,250,000
North Meadows Drive Widening	-	500,000	250,000	250,000	250,000	1,250,000
Total Expenditures by Year	\$ 1,412,000	\$17,037,000	\$ 1,400,000	\$ 7,600,000	\$ 8,950,000	\$ 36,399,000

Project Funding Sources	2017	2018	2019	2020	2021	Total
Building Use Tax	\$ 198,000	\$ 2,515,000	\$ 650,000	\$ 6,850,000	\$ 8,200,000	\$ 18,413,000
Federal Grant	269,000	1,447,000	-	-	-	1,716,000
State Contribution	-	1,880,000	-	-	-	1,880,000
County Contribution	-	250,000	-	-	-	250,000
Impact Fees	945,000	10,945,000	750,000	750,000	750,000	14,140,000
Total Funding Sources by Year	\$ 1,412,000	\$17,037,000	\$ 1,400,000	\$ 7,600,000	\$ 8,950,000	\$ 36,399,000



North Meadows Extension/Castle Rock Parkway Construction in 2016

Castle Rock
Parkway/North
Meadows Drive
opened to the public in
August 2016, after
three years of
construction

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Service Center Expansion

Project Number: 70-20

Contact: Bob Goebel, Public Works Director

Department: Public Works Department

Category: Building

Type: Upgrade

Useful Life: 40 years

5 Year Historical Total \$ -

2017-2021 Total 2,200,000

CIP Project Total (2012-2021): \$ 2,200,000

Description and Justification

This project includes a request to expand the existing Service Center building by constructing new office space and an additional vehicle service bay. In 2015 the Town completed a facilities master plan update to assess the next 10-15 year space needs for departments. This project implements recommendations for facilities expansion for the Public Works Department. This project is anticipated to occur over a two-year period to accommodate both design and construction phases. The Facilities Master Plan included an examination of the Public Works Department's employee growth projections in addition to current space allocations and evaluated several options to assess needs in order to maintain levels of service. Current available space will likely be insufficient to meet the needs of the department over the next 10 to 15 year period to sustain service levels as the Town grows. In order for Public Works staff to maintain existing levels of service, additional work space will be required.

Expenditures	2017	2018	2019	2020	2021	Total
Design	\$ 220,000	\$ -	\$ -	\$ -	\$ -	\$ 220,000
Construction	-	1,980,000	-	-	-	1,980,000
Total Expenditures	\$ 220,000	\$ 1,980,000	\$ -	\$ -	\$ -	\$ 2,200,000

Funding Sources	2017	2018	2019	2020	2021	Total
Impact Fees	\$ 220,000	\$ 1,980,000	\$ -	\$ -	\$ -	\$ 2,200,000
Total Funding Sources	\$ 220,000	\$ 1,980,000	\$ -	\$ -	\$ -	\$ 2,200,000

Operational Impact

Estimated ongoing utility costs for the addition, beginning in 2016 are approximately \$4,500 per year and are incorporated into the Transportation Fund within the 3 Year Balanced Financial Plan.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name **Improvements at Highway 86 & Allen Way**

Project Number:	78-38	5 Year Historical Total	\$ 400,000
Contact:	Carl Armijo, CIP Engineering Manager	2017-2021 Total	4,068,000
Department:	Public Works Department	CIP Project Total (2012-2021):	\$ 4,468,000
Category:	Infrastructure		
Type:	Upgrade		
Useful Life:	20 years		

Description and Justification

This requested project will allow for improvements to Highway 86 (Founders Parkway) to accommodate a second eastbound left turn lane, a dedicated westbound right turn lane and a two lane northbound on-ramp for I-25. The project will also accommodate the addition of a second southbound right turn lane at Founders and a second through lane at the Allen Way and Allen Street intersection. Improvements will also be made to the existing sidewalk.

This project was included in the Public Works Five-Year Capital considerations presented to Council on October 7, 2014 and Strategic Planning considerations presented and approved at the January 27, 2015 meeting. The close proximity of this intersection to the northbound on and off-ramps to I-25 make this intersection a challenge to operate efficiently. It is not uncommon for left turning traffic on Highway 86 in the eastbound direction to back up into the adjacent through lane. In addition, the volume often times makes it difficult for vehicles to progress that are waiting to make a turn within one cycle of the signal. This project helps to address increases in traffic and congestion, which has been identified as areas of concern in the 2015 Community Survey.

Expenditures	2017	2018	2019	2020	2021	Total
Right-of-way Acquisition	\$ 360,000	\$ -	\$ -	\$ -	\$ -	\$ 360,000
Construction	-	3,708,000	-	-	-	3,708,000
Total Expenditures	\$ 360,000	\$ 3,708,000	\$ -	\$ -	\$ -	\$ 4,068,000

Funding Sources	2017	2018	2019	2020	2021	Total
Building Use Tax	\$ 91,000	\$ 1,731,000	\$ -	\$ -	\$ -	\$ 1,822,000
Federal Grant	269,000	1,447,000	-	-	-	\$ 1,716,000
State Contribution	-	280,000	-	-	-	\$ 280,000
County Contribution	-	250,000	-	-	-	\$ 250,000
Total Funding Sources	\$ 360,000	\$ 3,708,000	\$ -	\$ -	\$ -	\$ 4,068,000

Operational Impact

Increases to maintenance operations are projected to be minor. Slight increases to the Pavement Maintenance Program may be necessary within 5-years from construction completion to fit in with the current preventative maintenance strategy.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name **Improvements at Hwy 86 & Crowfoot Valley**

Project Number:	78-39	5 Year Historical Total	\$ 650,000
Contact:	Carl Armijo, CIP Engineering Manager	2017-2021 Total	2,384,000
Department:	Public Works Department	CIP Project Total (2012-2021):	\$ 3,034,000
Category:	Infrastructure		
Type:	Upgrade		
Useful Life:	20 years		

Description and Justification

This requested project will accommodate the construction of an additional left turn lane on Highway 86 (Founders Parkway) at the intersection with Crowfoot Valley Road to allow for two dedicated left turn lanes for the eastbound direction. Additional work will include widening Crowfoot Valley Road at this intersection to allow for the additional left turn lane and right turn lane improvements on Crowfoot Valley Road at the intersection. The project was included in the Public Works Five-Year Capital considerations presented to Council on October 7, 2014 and Strategic Planning considerations presented and approved at the January 27, 2015 meeting.

In early 2016 the Town was notified by CDOT that they will commit funding to this project. Updated costs are supplied based on this participation. There is a significant amount of left turning traffic during certain peak hours of each day that is difficult to accommodate with a single left turn lane. It is not uncommon for queues of left turning traffic to be stacked up to a point that it blocks the adjacent through lane and hinders efficient operations.

Expenditures	2017	2018	2019	2020	2021	Total
Construction	\$ -	\$ 2,384,000	\$ -	\$ -	\$ -	\$ 2,384,000
Total Expenditures	\$ -	\$ 2,384,000	\$ -	\$ -	\$ -	\$ 2,384,000
Funding Sources	2017	2018	2019	2020	2021	Total
Building Use Tax	\$ -	\$ 784,000	\$ -	\$ -	\$ -	\$ 784,000
State Contribution	-	1,600,000	-	-	-	1,600,000
Total Funding Sources	\$ -	\$ 2,384,000	\$ -	\$ -	\$ -	\$ 2,384,000

Operational Impact

Increases to maintenance operations are projected to be minor. Slight increases to the Pavement Maintenance Program may be necessary within 5-years from construction completion to fit in with the current preventative maintenance strategy.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Hwy 85 & Meadows Left Turn Lane

Project Number: 78-66
 Contact: Frank N. Main
 Department: Public Works Department
 Category: Infrastructure
 Type: Upgrade
 Useful Life: 20 years

5 Year Historical Total	\$	-
2017-2021 Total		107,000
CIP Project Total (2012-2021):	\$	107,000

Description and Justification

This project will accomplish the construction of a second northbound to westbound left turn lane at the intersection of Highway 85 and Meadows Parkway. This lane would be added by utilizing space in the existing median to develop the second left turn pocket. A new traffic signal pole on the northeast corner will also likely be needed due to the widening. The need for this left turn lane has been identified in traffic impact analysis recently completed for the Promenade and Pine Canyon Projects. Currently, it is not uncommon for the vehicle queue in the existing left turn lane to spill back into through lanes during the afternoon rush hour. The project would help to reduce vehicle congestion which has been identified as a concern in past community surveys. The construction of the second left turn lane will help bring the operation of this movement back within the operational standards set by the Town. This aligns with Town's 2020 Vision Statement of providing outstanding community services including police, fire, emergency medical, park, recreation, water, and transportation. The Town's Strategic Plans identified six core priorities which included providing safe transportation system and minimizing traffic congestion. This was also identified in a 2015 community survey to Town residents.

Expenditures	2017	2018	2019	2020	2021	Total
Construction	\$ 107,000	\$ -	\$ -	\$ -	\$ -	\$ 107,000

Total Expenditures	\$ 107,000	\$ -	\$ -	\$ -	\$ -	\$ 107,000
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Funding Sources	2017	2018	2019	2020	2021	Total
Building Use Tax	\$ 107,000	\$ -	\$ -	\$ -	\$ -	\$ 107,000

Total Funding Sources	\$ 107,000	\$ -	\$ -	\$ -	\$ -	\$ 107,000
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Operational Impact

Increases to maintenance operations are projected to be minor. Slight increases to the Pavement Maintenance Program may be necessary within 5-years from construction completion to fit in with the current preventative maintenance strategy.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Plum Creek & Wolfensberger Roundabout

Project Number: 78-67

Contact: Carl Armijo

Department: Public Works Department

Category: Infrastructure

Type: Upgrade

Useful Life: 20 years

5 Year Historical Total \$ -

2017-2021 Total 1,100,000

CIP Project Total (2012-2021): \$ 1,100,000

Description and Justification

This intersection is currently controlled by stop signs in all four directions. As the traffic volumes increase, this existing traffic control will not be the most efficient and could contribute toward increased accidents. This project will accomplish the construction of a roundabout intersection, which will improve operations and minimize accident potential.

Expenditures	2017	2018	2019	2020	2021	Total
Design	\$ 150,000	\$ -	\$ -	\$ -	\$ -	\$ 150,000
Construction	-	950,000	-	-	-	950,000
Total Expenditures	\$ 150,000	\$ 950,000	\$ -	\$ -	\$ -	\$ 1,100,000

Funding Sources	2017	2018	2019	2020	2021	Total
Impact Fees	\$ 150,000	\$ 950,000	\$ -	\$ -	\$ -	\$ 1,100,000
Total Funding Sources	\$ 150,000	\$ 950,000	\$ -	\$ -	\$ -	\$ 1,100,000

Operational Impact

This project will add to increased operational and maintenance costs associated with additional lanes. Based on the pavement lifecycle, pavement maintenance needs will occur at approximately five years after installation. Pavement marking maintenance will occur annually.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Ridge Road Widening

Project Number: 78-84
 Contact: Carl Armijo
 Department: Public Works Department
 Category: Infrastructure
 Type: Upgrade
 Useful Life: 20 years

5 Year Historical Total	\$	-
2017-2021 Total	\$	4,000,000
CIP Project Total (2012-2021):	\$	4,000,000

Description and Justification

This requested project involves the widening of Ridge Road from the intersection of Highway 86 and Ridge Road to the intersection of Ridge Road and Plum Creek Parkway. The objective of this project is to improve congestion relief due to current and forecasted traffic volumes. Additionally, this project is located on the eastern portion of the Town which assists with the geographic distribution of projects proposed over the five year period to minimize the density and associated impacts of multiple projects in a certain geographic area.

Expenditures	2017	2018	2019	2020	2021	Total
Design	\$ 400,000	\$ -	\$ -	\$ -	\$ -	\$ 400,000
Construction	-	3,600,000	-	-	-	3,600,000
Total Expenditures	\$ 400,000	\$ 3,600,000	\$ -	\$ -	\$ -	\$ 4,000,000

Funding Sources	2017	2018	2019	2020	2021	Total
Impact Fees	\$ 400,000	\$ 3,600,000	\$ -	\$ -	\$ -	\$ 4,000,000
Total Funding Sources	\$ 400,000	\$ 3,600,000	\$ -	\$ -	\$ -	\$ 4,000,000

Operational Impact

This project will add to increased operational and maintenance costs associated with additional lanes. Based on the pavement lifecycle, pavement maintenance needs will occur at approximately five years after installation and will be incorporated at that time. Pavement marking maintenance will occur annually.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Hwy 86 and 5th St Improvements

Project Number: 78-69

Contact: Carl Armijo

Department: Public Works Department

Category: Infrastructure

Type: Upgrade

Useful Life: 20 years

5 Year Historical Total \$ -

2017-2021 Total 3,340,000

CIP Project Total (2012-2021): \$ 3,340,000

Description and Justification

This project is intended to accommodate capacity improvements at the intersection of Highway 86 and 5th Street in order to minimize congestion due to current and forecasted traffic volumes. The timing of this project is proposed to occur with the planned widening of Ridge Road in order to assist with minimizing disruption to the community.

Expenditures	2017	2018	2019	2020	2021	Total
Design	\$ 175,000	\$ -	\$ -	\$ -	\$ -	\$ 175,000
Construction	-	3,165,000	-	-	-	3,165,000
Total Expenditures	\$ 175,000	\$ 3,165,000	\$ -	\$ -	\$ -	\$ 3,340,000

Funding Sources	2017	2018	2019	2020	2021	Total
Impact Fees	\$ 175,000	\$ 3,165,000	\$ -	\$ -	\$ -	\$ 3,340,000
Total Funding Sources	\$ 175,000	\$ 3,165,000	\$ -	\$ -	\$ -	\$ 3,340,000

Operational Impact

The additional lanes will create increased operations and maintenance costs associated with programs such as snow and ice management, and pavement maintenance and will be determined upon project completion.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

5th Street Widening

Project Number: 78-85
 Contact: Carl Armijo
 Department: Public Works Department
 Category: Infrastructure
 Type: Upgrade
 Useful Life: 20 years

5 Year Historical Total	\$	-
2017-2021 Total	\$	5,500,000
CIP Project Total (2012-2021):	\$	5,500,000

Description and Justification

This project involves the widening of the eastbound lanes from the intersection of Woodlands Boulevard at Fifth Street to the intersection of Fifth Street and Ridge Road. The objective of this project is to reduce congestion from current and forecasted increased traffic volumes.

Additional pedestrian improvements will also be incorporated to improve safety between Woodlands Boulevard and Ridge Road. The timing of this project is proposed to occur with the intersection improvements at Fifth Street and Ridge Road in order to minimize disruption to transportation stakeholders.

Expenditures	2017	2018	2019	2020	2021	Total
Design	\$ -	\$ -	\$ 500,000	\$ -	\$ -	\$ 500,000
Construction		-	-	5,000,000	-	5,000,000
Total Expenditures	\$ -	\$ -	\$ 500,000	\$ 5,000,000	\$ -	\$ 5,500,000

Funding Sources	2017	2018	2019	2020	2021	Total
Building Use Tax	\$ -	\$ -	\$ 500,000	\$ 5,000,000	\$ -	\$ 5,500,000
Total Funding Sources	\$ -	\$ -	\$ 500,000	\$ 5,000,000	\$ -	\$ 5,500,000

Operational Impact

This project will add to increased operational and maintenance costs associated with additional lanes. Based on the pavement lifecycle, pavement maintenance needs will occur at approximately five years after installation and will be incorporated at that time. Pavement marking maintenance will occur annually.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Plum Creek and Gilbert Roundabout

Project Number: 78-82

Contact: Carl Armijo

Department: Public Works Department

Category: Infrastructure

Type: Upgrade

Useful Life: 20 years

5 Year Historical Total \$ -

2017-2021 Total 1,100,000

CIP Project Total (2012-2021): \$ 1,100,000

Description and Justification

This project is located at the intersection of Plum Creek Parkway and Gilbert Street. Proposed improvements include converting the existing temporary signalized intersection into a multi-lane roundabout. The proposed design for a roundabout will help to manage and improve traffic operational efficiencies and enhance community benefits such as vehicle and pedestrian safety and decreased delays. This project will additionally support future development in the east and south portions of Town. The roundabout will accommodate for future growth in traffic that is expected to increase.

Expenditures	2017	2018	2019	2020	2021	Total
Design	\$ -	\$ -	\$ 150,000	\$ -	\$ -	\$ 150,000
Construction		-	-	950,000	-	950,000
Total Expenditures	\$ -	\$ -	\$ 150,000	\$ 950,000	\$ -	\$ 1,100,000

Funding Sources	2017	2018	2019	2020	2021	Total
Building Use Tax	\$ -	\$ -	\$ 150,000	\$ 950,000	\$ -	\$ 1,100,000
Total Funding Sources	\$ -	\$ -	\$ 150,000	\$ 950,000	\$ -	\$ 1,100,000

Operational Impact

A reduction in signal operations and maintenance activities are expected with removal of the existing traffic signal. Minor increases to pavement maintenance may occur dependent on net change to impervious surface.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name **Plum Creek Pkwy Widening (East): Gilbert Street to Ridge Road**

Project Number: 77-05

Contact: Carl Armijo

Department: Public Works Department

Category: Infrastructure

Type: Upgrade

Useful Life: 20 years

5 Year Historical Total \$ -

2017-2021 Total 6,100,000

CIP Project Total (2012-2021): \$ 6,100,000

Description and Justification

This project will accommodate the addition of the remaining two lanes of the master planned four-lane roadway which was identified in the Transportation Master Plan. Construction of this project will support the continued development in the south and east area of the Town. This project will also improve access to the I-25/Plum Creek Parkway interchange from the eastern areas of Town. In addition, this project will include bicycle and pedestrian multi use lanes.

Expenditures	2017	2018	2019	2020	2021	Total
Design	\$ -	\$ -	\$ -	\$ 600,000	\$ -	\$ 600,000
Construction		-	-	-	5,500,000	5,500,000
Total Expenditures	\$ -	\$ -	\$ -	\$ 600,000	\$ 5,500,000	\$ 6,100,000

Funding Sources	2017	2018	2019	2020	2021	Total
Building Use Tax	\$ -	\$ -	\$ -	\$ 600,000	\$ 5,500,000	\$ 6,100,000
Total Funding Sources	\$ -	\$ -	\$ -	\$ 600,000	\$ 5,500,000	\$ 6,100,000

Operational Impact

Increases to future pavement maintenance will occur with the additional lane-miles of impervious surface added to the roadway network.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Wolfensberger Widening

Project Number: 77-08
 Contact: Carl Armijo
 Department: Public Works Department
 Category: Infrastructure
 Type: Upgrade
 Useful Life: 20 years

5 Year Historical Total	\$	-
2017-2021 Total		800,000
CIP Project Total (2012-2021):	\$	800,000

Description and Justification

This project accommodates the design of the remaining two lanes of the master planned four-lane roadway from the intersection of Red Hawk Drive to the future Philip S. Miller Regional Park entrance on Wolfensberger Road. This project will support the continued development of the north/south and west areas of the Town by improving access to the I-25 at Wolfensberger Road from the eastern areas of Town. This project will include bicycle and pedestrian multi use lanes. This project will also reduce congestion along Wolfensberger Road and provide needed pedestrian and bicycle connections between the downtown area and Coachline Road and supports proposed development along Wolfensberger.

Expenditures	2017	2018	2019	2020	2021	Total
Design	\$ -	\$ -	\$ -	\$ -	\$ 800,000	\$ 800,000
Total Expenditures	\$ -	\$ -	\$ -	\$ -	\$ 800,000	\$ 800,000

Funding Sources	2017	2018	2019	2020	2021	Total
Building Use Tax	\$ -	\$ -	\$ -	\$ -	\$ 800,000	\$ 800,000
Total Funding Sources	\$ -	\$ -	\$ -	\$ -	\$ 800,000	\$ 800,000

Operational Impact

No operational impacts are anticipated until the project is constructed in 2022.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Wolfensberger and Red Hawk Roundabout

Project Number: 77-09

Contact: Carl Armijo

Department: Public Works Department

Category: Infrastructure

Type: Upgrade

Useful Life: 20 years

5 Year Historical Total \$ -

2017-2021 Total 1,100,000

CIP Project Total (2012-2021): \$ 1,100,000

Description and Justification

This project accomodates the construction of a roundabout at the intersection of Wolfensberger Road with Red Hawk Drive. This project will improve the capacity of the intersection in order to assist with congestion relief as well as improved safety. A roundabout is also the most efficient traffic control throughout all hours of the day, as opposed to traffic signals, which are limited in efficiency to the peak hours of a day. The improved efficiency of a roundabout leads to increased societal benefits such as decreased delay, improved safety, and decreased environmental impacts. A temporary span wire signal is planned for 2017 to assist with improved operations and safety until such time that the roundabout can be constructed.

Expenditures	2017	2018	2019	2020	2021	Total
Design	\$ -	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000
Construction		-	-	-	950,000	950,000
Total Expenditures	\$ -	\$ -	\$ -	\$ 150,000	\$ 950,000	\$ 1,100,000

Funding Sources	2017	2018	2019	2020	2021	Total
Building Use Tax	\$ -	\$ -	\$ -	\$ 150,000	\$ 950,000	\$ 1,100,000
Total Funding Sources	\$ -	\$ -	\$ -	\$ 150,000	\$ 950,000	\$ 1,100,000

Operational Impact

Minor increases to pavement maintenance are anticipated, dependent on the overall net change to the roadway impervious area. Decreased signal maintenance costs will likely be realized.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Coachline and Foothills Dr Roundabout

Project Number: 77-07

Contact: Carl Armijo

Department: Public Works Department

Category: Infrastructure

Type: Upgrade

Useful Life: 20 years

5 Year Historical Total \$ -

2017-2021 Total 1,100,000

CIP Project Total (2012-2021): \$ 1,100,000

Description and Justification

This project will be located at the intersection of Coachline Road and Foothills Drive. The proposed improvements include converting the existing intersection into a multi-lane roundabout. This improvement will assist with managing an increase in traffic capacity at the intersection and improve pedestrian safety, especially with elementary aged pedestrians who use this intersection. This project will support future development in the west and north portions of the Town and will accommodate for future growth in traffic that is expected to increase at build out. Design, surveying, and construction of the Coachline Road and Foothills Drive roundabout will improve intersection capacity and traffic operations that can accommodate current and projected traffic volumes through the intersection while still maintaining a friendly walkable environment.

Expenditures	2017	2018	2019	2020	2021	Total
Design	\$ -	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000
Construction		-	-	-	950,000	950,000
Total Expenditures	\$ -	\$ -	\$ -	\$ 150,000	\$ 950,000	\$ 1,100,000

Funding Sources	2017	2018	2019	2020	2021	Total
Building Use Tax	\$ -	\$ -	\$ -	\$ 150,000	\$ 950,000	\$ 1,100,000
Total Funding Sources	\$ -	\$ -	\$ -	\$ 150,000	\$ 950,000	\$ 1,100,000

Operational Impact

Minimal increases to pavement maintenance is anticipated dependent on net change to roadway impervious surface, once completed.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name Crystal Valley Parkway Interchange

Project Number:	78-41	5 Year Historical Total	\$ -
Contact:	Carl Armijo, CIP Engineering Manager	2017-2021 Total	2,250,000
Department:	Public Works Department	CIP Project Total (2012-2021):	\$ 2,250,000
Category:	Infrastructure		
Type:	New		
Useful Life:	30 years		

Description and Justification

A new interchange is planned to be constructed at Interstate 25 in the southernmost part of Town. Located approximately 2.5 miles south of the Plum Creek Parkway interchange, the new interchange will connect Crystal Valley Parkway on the east side of I-25 and Territorial Road on the west side. The current five year effort is intended to achieve acquisition of remaining right-of-way and set aside future project funding to allow for potential funding partnerships to assist with advancing construction. Current estimates indicate that ultimate interchange construction will cost approximately \$44 million in today's dollars. The future interchange will provide access from south Castle Rock to the metropolitan areas of Denver and Colorado Springs. It will serve the area's expanding population and is centrally located between several existing and planned developments in south Castle Rock. The interchange will also:

- Improve safety by eliminating one at-grade railroad crossing
- Improve the local roadway network by providing a continuous east-west through route across I-25
- Provide direct access to I-25 for the growing population
- Reduce existing and future congestion at the Plum Creek Parkway interchange by re-distributing traffic to this new interchange

*This funding accumulation is included as a Capital Reserve within the Transportation Capital Fund, until project expenditures are needed.

Expenditures	2017	2018	2019	2020	2021	Total
Funding Accumulation	\$ -	\$ 750,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 2,250,000

Total Expenditures	\$ -	\$ 750,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 2,250,000
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Funding Sources	2017	2018	2019	2020	2021	Total
Impact Fees	\$ -	\$ 750,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 2,250,000

Total Funding Sources	\$ -	\$ 750,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 2,250,000
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Operational Impact

No operational impacts are anticipated until the project is constructed.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

North Meadows Drive Widening

Project Number: 77-06
 Contact: Carl Armijo
 Department: Public Works Department
 Category: Infrastructure
 Type: Upgrade
 Useful Life: 20 years

5 Year Historical Total	\$	-
2017-2021 Total		1,250,000
CIP Project Total (2012-2021):	\$	1,250,000

Description and Justification

Expenditures included over the next five years include the accumulation of funds for future design and construction, which will occur at a later date beyond the 5 year planning period. This project accommodates the construction of the remaining two-lanes of the master planned four-lane section between the US-85 interchange and Butterfield Crossing Drive. This project will support the continued development of the north and west area of the Town by increasing capacity to the I-25/Castle Rock Parkway interchange from the western areas of Town. Additional enhancements include improvements to the bicycle and pedestrian environment with additional on-street shoulders and an additional multi-use sidewalk on the south side of the road. This project is intended to reduce congestion along North Meadows Drive as future development within the Meadows area increases. Funding partnerships will be explored in order to reduce the Town financial commitment.

*This funding accumulation is included as a Capital Reserve within the Transportation Capital Fund, until project expenditures are needed.

Expenditures	2017	2018	2019	2020	2021	Total
Funding Accumulation	\$ -	\$ 500,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 1,250,000

Total Expenditures	\$	-	\$ 500,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 1,250,000
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Funding Sources	2017	2018	2019	2020	2021	Total
Impact Fees	\$ -	\$ 500,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 1,250,000

Total Funding Sources	\$	-	\$ 500,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 1,250,000
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Operational Impact

No operational impacts are projected during this five year savings period.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

CONSERVATION TRUST FUND

PARKS & RECREATION DEPARTMENT

PROJECTS & FUNDING SOURCES BY DEPARTMENT

Project Expenditures	2017	2018	2019	2020	2021	Total
Park Improvements	\$ 48,000	\$ 168,000	\$ 343,000	\$ 173,000	\$ 278,000	\$ 1,010,000
Total Expenditures by Year	\$ 48,000	\$ 168,000	\$ 343,000	\$ 173,000	\$ 278,000	\$ 1,010,000

Project Funding Sources	2017	2018	2019	2020	2021	Total
Colorado Lottery Funds	\$ 48,000	\$ 168,000	\$ 343,000	\$ 173,000	\$ 278,000	\$ 1,010,000
Total Funding Sources by Year	\$ 48,000	\$ 168,000	\$ 343,000	\$ 173,000	\$ 278,000	\$ 1,010,000



Playground area at Paintbrush Park

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Park Improvements

Project Number:	75-18		
Contact:	Jeff Smullen, Assistant Director of Parks & Recreation	5 Year Historical Total	\$ 241,000
Department:	Parks & Recreation Department	2017-2021 Total	1,010,000
Category:	Parks/Trails	CIP Project Total (2012-2021):	\$ 1,251,000
Type:	Repair		
Useful Life:	Varies by Project		

Description and Justification

This line item is requested each year for life cycle repair and replacement projects which include items such as irrigation system updates, playground replacements, signs, game court, athletic field and pavilion improvements. These requested expenditures meet the Town Council supported strategic plan goal of providing safe, high quality facilities for residents through the implementation of an annual replacement program. For 2017, \$30k is requested for improvements at Paintbrush Park plus \$10k for POST Partners and \$8k for Arbor Day trees.

The upkeep of parks and open space requires continual investment to maintain high levels of service into perpetuity. Castle Rock is part of the Colorado Tree Coalition that leads statewide efforts to preserve, renew and enhance community forests in Colorado. Additionally, the Town has two certified Arborists on staff that monitor the health of Castle Rock trees and support the annual Arbor Day Celebration where local fifth grade students are invited to plant trees and learn about the importance of trees. Also, playground equipment and other amenities age with standard wear patterns and have an average life expectancy of 15-20 years. Lastly, POST Partners is a parks, open space, and trails related volunteer outreach program that helps fill a maintenance gap by providing trail maintenance, trash clean-up, site improvements through scout projects, environmental restoration through Earth Day activities, Colorado Bluebird Project and open space revegetation among other nature education programs and special events throughout the year. The location of various park improvement projects is shown below.

Expenditures	2017	2018	2019	2020	2021	Total
Butterfield Park Improvements	\$ -	\$ -	\$ 325,000	\$ -	\$ -	\$ 325,000
Paintbrush Park Improvements	30,000	-	-	-	-	30,000
Mitchell Gulch Park Improvements	-	150,000	-	155,000	-	305,000
Philip S. Miller Park Improvements	-	-	-	-	260,000	260,000
POST & Arbor Day Trees	18,000	18,000	18,000	18,000	18,000	90,000
Total Expenditures	\$ 48,000	\$ 168,000	\$ 343,000	\$ 173,000	\$ 278,000	\$ 1,010,000

Funding Sources	2017	2018	2019	2020	2021	Total
Colorado Lottery Funds	\$ 48,000	\$ 168,000	\$ 343,000	\$ 173,000	\$ 278,000	\$ 1,010,000
Total Funding Sources	\$ 48,000	\$ 168,000	\$ 343,000	\$ 173,000	\$ 278,000	\$ 1,010,000

Operational Impact

No additional revenues or expenditures are anticipated as a result of these projects.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

PARKS AND RECREATION CAPITAL FUND

PARKS & RECREATION DEPARTMENT

PROJECTS & FUNDING SOURCES BY DEPARTMENT

Project Expenditures	2017	2018	2019	2020	2021	Total
Philip S. Miller Park Improvements	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ 100,000
Future Park Planning	200,000	1,850,000	-	200,000	2,500,000	4,750,000
Total Expenditures by Year	\$ 300,000	\$ 1,850,000	\$ -	\$ 200,000	\$ 2,500,000	\$ 4,850,000

Project Funding Sources	2017	2018	2019	2020	2021	Total
Impact Fees	\$ 300,000	\$ 1,850,000	\$ -	\$ 200,000	\$ 2,500,000	\$ 4,850,000
Total Funding Sources by Year	\$ 300,000	\$ 1,850,000	\$ -	\$ 200,000	\$ 2,500,000	\$ 4,850,000



Amphitheater and Mill House located at Philip S. Miller Park

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Philip S. Miller Park Improvements

Project Number: 76-87

Contact: Jeff Smullen, Assistant Director of Parks & Recreation

Department: Parks & Recreation Department

Category: Parks/Trails

Type: New

Useful Life: 10 Years

5 Year Historical Total \$ 182,750

2017-2021 Total 100,000

CIP Project Total (2012-2021): \$ 282,750

Description and Justification

Parks and Recreation requests funds for several improvements to Philip S. Miller Park that will help to accommodate additional use at the park. This projected use of expenditures includes:

- Extension of irrigation and sod around the amphitheater and pond area which will increase seating capacity for \$15K
- Upgrade to electrical service in order to provide new service drops along the event pad and amphitheater area that will accommodate the needs of growing special events and vendors that serve these events for \$50K
- Trees will be planted and irrigation extended around the event pad to improve the landscape as we improve this previously undeveloped special events pad for \$5K
- Safety lighting will be added around the outer lawn seating of the amphitheater to provide illumination during evening concerts for \$20K

Actual projects and amounts may vary depending on actual needs at Philip S. Miller Park, but will not exceed \$100k for improvements.

Expenditures	2017	2018	2019	2020	2021	Total
Park Improvements	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ 100,000
Total Expenditures	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ 100,000

Funding Sources	2017	2018	2019	2020	2021	Total
Impact Fees	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ 100,000
Total Funding Sources	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ 100,000

Operational Impact

The operational costs of these improvements are expected to be minimal based on only small areas being affected by these improvements. It is expected that any additional costs can be accommodated in the existing General Fund budget for Parks and Recreation. If cost estimates increase based on project changes, funds will be requested in a future year to accommodate these needs.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Future Park Planning

Project Number: 75-21

Contact: Jeff Smullen, Assistant Director of Parks & Recreation

Department: Parks & Recreation Department

Category: Parks/Trails

Type: New

Useful Life: Unknown

5 Year Historical Total \$ -

2017-2021 Total 4,750,000

CIP Project Total (2012-2021): \$ 4,750,000

Description and Justification

Future Park planning includes new community and neighborhood parks to maintain current levels of service with population growth. Sites currently available include Meadows Filing #18, Cobblestone Ranch, Terrain, Crystal Valley Ranch, or Castlewood Ranch Filing #2. The cost of the project is speculative and will be constructed based on approved funding when the project arises. The public process for selecting the 2018 park site will begin in 2017 with costs estimated for an eight acre site. The public process will including community surveys, open house/neighborhood outreach and public meetings.

Wrangler Park was the last neighborhood park brought on line in 2012. Construction on Philip S. Miller Park occurred from 2013 - 2016 and serves all Town residents and visitors. As the Town of Castle Rock continues to grow, so will the need for additional neighborhood parks. Planning for a new neighborhood park is expected to begin in 2017 with construction taking place in 2018. Funding is also requested for construction of an additional neighborhood park in 2021, with planning to occur in 2020. The priority for the project site will be based on community needs and will be determined at a future date. Future Park construction cost estimates may be adjusted in the future, if warranted.

Expenditures	2017	2018	2019	2020	2021	Total
Park Design	\$ 200,000	\$ -	\$ -	\$ 200,000	\$ -	\$ 400,000
Park Construction	-	1,850,000	-	-	2,500,000	4,350,000
Total Expenditures	\$ 200,000	\$ 1,850,000	\$ -	\$ 200,000	\$ 2,500,000	\$ 4,750,000

Funding Sources	2017	2018	2019	2020	2021	Total
Impact Fees	\$ 200,000	\$ 1,850,000	\$ -	\$ 200,000	\$ 2,500,000	\$ 4,750,000
Total Funding Sources	\$ 200,000	\$ 1,850,000	\$ -	\$ 200,000	\$ 2,500,000	\$ 4,750,000

Operational Impact

Operational costs will increase after the completion of construction of each neighborhood park. Additional costs will be determined and incorporated into future planning in the General Fund once design of the park site is complete in order to more accurately account for irrigation, maintenance and other needs specific to the site.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

FACILITIES CAPITAL FUND

DEPUTY TOWN MANAGER

PROJECTS & FUNDING SOURCES BY DEPARTMENT

Project Expenditures	2017	2018	2019	2020	2021	Total
Parks & Facility Maintenance Building	\$ 3,500,000	\$ -	\$ -	\$ -	\$ -	\$ 3,500,000
Total Expenditures by Year	\$ 3,500,000	\$ -	\$ -	\$ -	\$ -	\$ 3,500,000

Project Funding Sources	2017	2018	2019	2020	2021	Total
Impact Fees	\$ 2,485,000	\$ -	\$ -	\$ -	\$ -	\$ 2,485,000
Building Use Tax	1,015,000	-	-	-	-	1,015,000
Total Funding Sources by Year	\$ 3,500,000	\$ -	\$ -	\$ -	\$ -	\$ 3,500,000



Modular office space for Parks Maintenance staff

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Parks & Facility Maintenance Building

Project Number: 78-88

Contact: Brian Peterson, Parks Planning & Construction Manager

Department: Town Manager

Category: Building

Type: New

Useful Life: 30 Years

5 Year Historical Total \$ -

2017-2021 Total 3,500,000

CIP Project Total (2012-2021): \$ 3,500,000

Description and Justification

Expenditures totaling \$3.5M are requested in order to construct a new Parks and Facility Maintenance Building. The need for this building was identified as part of a space study completed in 2014 in order to house staffing in the Parks and Facility Maintenance divisions. Based on growth estimates, the proposed 12,000 square foot building will support up to 27 Parks Maintenance staff, 16 Facility Maintenance staff plus additional seasonal staff support throughout the year. Currently, the Parks Maintenance staff share space with Public Works at the Service Center Building using modular temporary buildings and the Facility Maintenance staff are housed in an old fire station located in a residential section of Castle Rock. Existing facilities are not adequate to serve current or future staffing, as well as shop space needs, for these departments

Costs for this project will be shared among the Parks and Recreation Capital, General Long-Term Planning and Municipal Facilities Capital Funds. The location of this new building is yet to be determined, but is expected to be constructed on existing Town owned property. Design costs are likely to occur in 2016, with construction of the new facility taking place in 2017.

Expenditures	2017	2018	2019	2020	2021	Total
Building Construction	\$ 3,500,000	\$ -	\$ -	\$ -	\$ -	3,500,000

Total Expenditures	\$ 3,500,000	\$ -	\$ -	\$ -	\$ -	3,500,000
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Funding Sources	2017	2018	2019	2020	2021	Total
Impact Fees	\$ 2,485,000	\$ -	\$ -	\$ -	\$ -	2,485,000
Building Use Tax	1,015,000	-	-	-	-	1,015,000

Total Funding Sources	\$ 3,500,000	\$ -	\$ -	\$ -	\$ -	3,500,000
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Operational Impact

Operating costs for the new building are estimated to be \$28,560 beginning in 2018. However, the net increase is estimated to be roughly \$12,552 due to savings from relocating staff from existing buildings. This amount is budgeted in the General Fund, with 33% in the Facilities division and 67% in the Parks division.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

FIRE CAPITAL FUND

FIRE & RESCUE DEPARTMENT

PROJECTS & FUNDING SOURCES BY DEPARTMENT

Project Expenditures	2017	2018	2019	2020	2021	Total
Crystal Valley Ranch Fire Station	\$ 4,762,155	\$ 289,282	\$ -	\$ -	\$ -	\$ 5,051,437
Total Expenditures by Year	\$ 4,762,155	\$ 289,282	\$ -	\$ -	\$ -	\$ 5,051,437

Project Funding Sources	2017	2018	2019	2020	2021	Total
Impact Fees	\$ 4,762,155	\$ 289,282	\$ -	\$ -	\$ -	\$ 5,051,437
Total Funding Sources by Year	\$ 4,762,155	\$ 289,282	\$ -	\$ -	\$ -	\$ 5,051,437



A Town of Castle Rock Fire truck ready to go on the next call

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Crystal Valley Ranch Fire Station

Project Number: 78-18

Contact: Art Morales, Fire Chief

Department: Fire Department

Category: Building

Type: New

Useful Life: 50 Years

5 Year Historical Total \$ 435,864

2017-2021 Total 5,051,437

CIP Project Total (2012-2021): \$ 5,487,301

Description and Justification

Expenditures are requested for the Fire and Rescue Department to construct the Crystal Valley Fire Station. This fire station will provide service to Crystal Valley Ranch, the Lanterns, Heckendorf Ranch, Stone Canyon Ranch, Sellars Creek Ranch, Bell Mountain Ranch, a large portion of Plum Creek, and the South Lake Gulch Road corridor areas. The station will house a fire engine, a Type 3 brush truck, and will necessitate the hiring of 12 personnel for staffing. Planning began relative to the financial impacts of the station as presented and approved by Council at the October 21, 2014 Town Council meeting in the Fire Master Plan update as well as on January 27, 2015 within the approved additional Financial and Strategic Priorities. The station is planned to be financed by accrued Fire Capital Fund development impact fees and an internal loan from the General Fund. Repayment would occur from development impact fees collected in the Fire Capital Fund. Capital totals include station construction, furnishing, and vehicle acquisition along with the equipment for the vehicle. Vehicle acquisition will cost \$1,475,000 and vehicle equipment will be \$300,000. Ongoing operational costs are planned to be funded by the General Fund within the Fire and Rescue Department. This project is in complete alignment with Council's Strategic Priority to provide for quality Public Safety throughout the Town, and meets the primary community expectation identified in the community surveys of rapid response time. The construction timeline for the Crystal Valley Fire Station is as follows: 2016: Identify project architect and develop construction drawings for the new station in partnership with the Department Station Design Team, secure the final station site, complete appraisal, complete soil engineering studies, and finalize specifications for station apparatus. 2017: Order station apparatus, conduct hiring process for 12 station personnel and establish hiring list, begin site grading work, infrastructure development, foundation construction, conduct promotional exams for future station officers and engineers and send two personnel to Paramedic school. 2018: Begin station vertical construction by January 1, commence hiring process of station personnel in January and hire personnel, begin Fire Academy by March 1 and take delivery of equipment and station apparatus, station construction and outfitting is estimated to be complete in July with an August 2018 open date planned.

Expenditures	2017	2018	2019	2020	2021	Total
Land and Construction	\$ 4,762,155	\$ -	\$ -	\$ -	\$ -	\$ 4,762,155
Furnishings, radio, gym & office equipmt	-	289,282	-	-	-	289,282
Total Expenditures	\$ 4,762,155	\$ 289,282	\$ -	\$ -	\$ -	\$ 5,051,437
Funding Sources	2017	2018	2019	2020	2021	Total
Impact Fees	\$ 1,762,155	\$ 289,282	\$ -	\$ -	\$ -	\$ 2,051,437
Sales Tax	3,000,000	-	-	-	-	3,000,000
Total Funding Sources	\$ 4,762,155	\$ 289,282	\$ -	\$ -	\$ -	\$ 5,051,437

Operational Impact

Estimated ongoing operational costs including staffing of 12 personnel are \$1.5M, services including facility maintenance and all utilities for \$202k, supplies for \$243k, and vehicle replacement for a cost of \$126k are currently projected at approximately \$2M per year. This is included in the Three Year Financial Plan within the General Fund of the Fire and Rescue Department. There would be additional revenue in the General Fund from the Castle Rock Fire Protection District as the district pays 5.5% of the total annual operations budget, exclusive of capital expenditures, of the Castle Rock Fire Department annually.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

WATER FUND

UTILITIES DEPARTMENT

PROJECTS & FUNDING SOURCES BY DEPARTMENT

Project Expenditures	2017	2018	2019	2020	2021	Total
Water Supply Wells	\$ 3,475,000	\$ 725,000	\$ 725,000	\$ 725,000	\$ 725,000	\$ 6,375,000
Water Treatment Plant Upgrades & Equipment	150,000	150,000	150,000	255,000	150,000	855,000
Water Storage (Tank) Projects	360,000	210,000	150,000	3,475,609	50,000	4,245,609
Pumping and Distribution System Upgrades	660,000	460,000	850,000	375,000	375,000	2,720,000
Waterline Rehab/Replacement	301,000	853,000	574,000	884,000	794,000	3,406,000
Craig & Gould N. Improvements	-	-	55,000	480,000	-	535,000
Security and SCADA System Improvements	75,000	75,000	75,000	75,000	50,000	350,000
General Facility Upgrades & Replacements	200,000	200,000	200,000	200,000	200,000	1,000,000
Administration and Customer Service Building	-	-	1,403,641	-	-	1,403,641
Site Improvements at 175 Kellogg Court	157,920	-	-	1,021,325	-	1,179,245
Total Expenditures by Year	\$ 5,378,920	\$ 2,673,000	\$ 4,182,641	\$ 7,490,934	\$ 2,344,000	\$ 22,069,495

Project Funding Sources	2017	2018	2019	2020	2021	Total
Metered Water Sales	\$ 2,320,000	\$ 1,970,000	\$ 2,229,000	\$ 2,723,000	\$ 2,344,000	\$ 11,586,000
System Development Fees	3,058,920	703,000	1,953,641	4,767,934	-	10,483,495
Total Funding Sources by Year	\$ 5,378,920	\$ 2,673,000	\$ 4,182,641	\$ 7,490,934	\$ 2,344,000	\$ 22,069,495



Plum Creek Water Purification Facility

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Water Supply Wells

Project Number: Multiple

Contact: Jeanne Stevens, Engineering Manager

Department: Utilities Department

Category: Infrastructure

Type: Replacement

Useful Life: 25 years

5 Year Historical Total \$ 887,081

2017-2021 Total 6,375,000

CIP Project Total (2012-2021): \$ 7,262,081

Description and Justification

This project would rehabilitate or replace existing Town of Castle Rock wells as they reach the end of their useful lives. Well 9 is no longer an active well facility. Plans are to demolish the building, disconnect services (power, telephone, etc.) and restore the site. VFD (Variable Frequency Drive) replacement is intended to replace VFD's which are too old to get parts for, placing new VFD and other electrical components and controls outside of the building away from the wet water pipe. As existing wells deteriorate, they need to be rehabilitated or replaced. Replacement wells generally provide the same yield as a new well, but at a fraction of the cost.

The replacement schedule is based on an assumed 25-year life from each well and a replacement will be drilled at the end of the 25-year period. Unused facilities are a liability from an insurance standpoint. The Colorado Department of Public Health is also requiring that unused wells be formally abandoned. As existing wells deteriorate they need to be rehabilitated or replaced. Replacement wells generally provide the same yield as a new well, but at a fraction of the cost.

Expenditures	2017	2018	2019	2020	2021	Total
Well Rehab/Replacement	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 2,500,000
Well Equipment and Replacement	100,000	100,000	100,000	100,000	100,000	500,000
New Deep Groundwater Well & Waterline	2,750,000	-	-	-	-	2,750,000
VFD Replacement (Well/PS/Tmt Plant)	125,000	125,000	125,000	125,000	125,000	625,000
Total Expenditures	\$ 3,475,000	\$ 725,000	\$ 725,000	\$ 725,000	\$ 725,000	\$ 6,375,000

Funding Sources	2017	2018	2019	2020	2021	Total
Metered Water Sales	\$ 725,000	\$ 725,000	\$ 725,000	\$ 725,000	\$ 725,000	\$ 3,625,000
System Development Fees	2,750,000	-	-	-	-	2,750,000
Total Funding Sources	\$ 3,475,000	\$ 725,000	\$ 725,000	\$ 725,000	\$ 725,000	\$ 6,375,000

Operational Impact

Costs will vary for each well depending on the amount and type of rehabilitation, and the depth of the well and will be determined upon project completion and incorporated into operations budgets at that time.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name **Water Treatment Plant Upgrades & Equipment**

Project Number:	Multiple	5 Year Historical Total	\$	114,907
Contact:	Jeanne Stevens, Engineering Manager	2017-2021 Total		855,000
Department:	Utilities Department	CIP Project Total (2012-2021):	\$	969,907
Category:	Infrastructure			
Type:	Upgrade			
Useful Life:	50 years			

Description and Justification

This project will provide for miscellaneous improvements at existing Water Treatment Plants. There are four active water treatment plants. Examples of specific upgrades include pipe gallery painting, HVAC and cooling unit replacements, door repair and replacement, basins repairs, instrumentation and alarm upgrades and safety improvements. The equipment replacement project will replace existing electrical and/or mechanical equipment associated with water treatment facilities. These plants are necessary to filter deep aquifer groundwater and one facility for purifying alluvial well water. These facilities require periodic upgrades to instrumentation, controls and other small upgrades. Electrical and mechanical equipment needs to be replaced as equipment reaches the end of its useful life. A preventive maintenance program associated with asset management will be used to determine replacement schedules based on the type of equipment, service duty and operating conditions.

Expenditures	2017	2018	2019	2020	2021	Total
WTP Facility Upgrades	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 250,000
WTP Equip. Replace.	100,000	100,000	100,000	100,000	100,000	500,000
WTP Media Replacement	-	-	-	105,000	-	105,000
Total Expenditures	\$ 150,000	\$ 150,000	\$ 150,000	\$ 255,000	\$ 150,000	\$ 855,000

Funding Sources	2017	2018	2019	2020	2021	Total
Metered Water Sales	\$ 150,000	\$ 150,000	\$ 150,000	\$ 255,000	\$ 150,000	\$ 855,000
System Development Fees	-	-	-	-	-	-
Total Funding Sources	\$ 150,000	\$ 150,000	\$ 150,000	\$ 255,000	\$ 150,000	\$ 855,000

Operational Impact

The operational impact of this project will be determined after project completion.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Water Storage (Tank) Projects

Project Number:	Multiple	5 Year Historical Total	\$ 150,565
Contact:	Jeanne Stevens, Engineering Manager	2017-2021 Total	4,245,609
Department:	Utilities Department	CIP Project Total (2012-2021):	\$ 4,396,174
Category:	Infrastructure		
Type:	Repair		
Useful Life:	50 years		

Description and Justification

The tank rehabilitation project will facilitate structural and/or site modifications to existing tanks to ensure reliability and tank security. Known projects include adding stairs to tanks 3, 4, and 16A. The Liberty Village Yellow Zone Tank project includes the construction of a two million gallon tank to serve Liberty Village/Cobblestone Ranch Yellow Zone. As growth in the service area increases, demand will exceed the available storage in the Red Zone tanks that currently serve the area. This tank will be dedicated storage for maximum day demands and fire flow in the service area. The Tank 6B and 5 demolition project will include the demolition of two water tanks. Tank 6B has structural concrete issues and has been taken out of service. Plans are to demolish the tank so that it is not a safety risk. Tank 5 is no longer used and has reached the end of its useful life. Many of the Town's water storage tanks are greater than 20 feet tall and are only accessible by ladders. Employees frequent the tanks for water quality sampling and inspections. Stairs improve access to the tanks and reduce the chances of serious injury from a fall. The Electric Actuated Valves project is to add electric actuated valves to water storage tanks. Electric actuated valves can be remotely operated from a central SCADA location. Given the remote location of many of the tanks, this allows for quicker response to system upsets or vulnerabilities.

Expenditures	2017	2018	2019	2020	2021	Total
Tank Rehabilitation	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 250,000
Liberty Village Yellow Zone Tank	-	-	-	3,425,609	-	3,425,609
Tank Demolition	150,000	-	-	-	-	150,000
Electric Actuated Valves at Tanks	75,000	75,000	75,000	-	-	225,000
Tank Mixers	25,000	25,000	25,000	-	-	75,000
Add Stairs to Tanks	60,000	60,000	-	-	-	120,000
Total Expenditures	\$ 360,000	\$ 210,000	\$ 150,000	\$ 3,475,609	\$ 50,000	\$ 4,245,609

Funding Sources	2017	2018	2019	2020	2021	Total
Metered Water Sales	\$ 360,000	\$ 210,000	\$ 150,000	\$ 50,000	\$ 50,000	\$ 820,000
System Development Fees	-	-	-	3,425,609	-	3,425,609
Total Funding Sources	\$ 360,000	\$ 210,000	\$ 150,000	\$ 3,475,609	\$ 50,000	\$ 4,245,609

Operational Impact

Future repair and maintenance of tanks is ongoing and is included within currently budgeted maintenance and personnel costs.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name **Pumping and Distribution System Upgrades**

Project Number:	Multiple	5 Year Historical Total	\$ 480,710
Contact:	Jeanne Stevens, Engineering Manager	2017-2021 Total	2,720,000
Department:	Utilities Department	CIP Project Total (2012-2021):	\$ 3,200,710
Category:	Equipment		
Type:	Replacement		
Useful Life:	25 years		

Description and Justification

The Town has nine active pump stations that are all over 10 years old. Pump Stations are critical to providing water to customers and for moving water around Town. Although a pump station facility has an overall 50 year service life, the individual components (pumps, motors, flow meters, valves, etc.) need replacement at shorter intervals. WISE deliveries are expected to increase over time as more renewable water sources are added. Modeling indicates that to accommodate and deliver WISE water around Town, future pumping capacity in the Red Zone will have to be increased to move the water to distribution and storage. The Milestone Pump Station PRV project will upgrade a pressure reducing valve at the Milestone Pump Station. The Tacker Court project will accomplish a new pressure reducing valve (PRV) in downtown area. Blue and Purple pressure zones exist at Tacker Court to distribute water to upper and lower parts of the Young American area. A Pressure reducing valve vault would provide some redundancy to the distribution system and also improve water quality in this older part of Town. The distribution system upgrades project will accomplish future year water transmission and distribution facility upgrades. Valves, Pressure reducing valves and vaults, and other accessories often require repair and/or replacement before water main pipes do. Such items must be maintained in good operable condition to ensure reliable water transmission and distribution.

Expenditures	2017	2018	2019	2020	2021	Total
Pump Station Equipment Replacement	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 250,000
Red Zone Pumping Upsize	-	-	550,000	-	-	550,000
Milestone Pump Station PRV Valve	-	-	-	75,000	-	75,000
Distribution System Upgrades	250,000	250,000	250,000	250,000	250,000	1,250,000
Tacker Court PRV (Former Tank 2 Site)	200,000	-	-	-	-	200,000
Diamond Ridge Pmp Station Control Valve	-	-	-	-	75,000	75,000
Young American Valve Replacement Progr	160,000	160,000	-	-	-	320,000
Total Expenditures	\$ 660,000	\$ 460,000	\$ 850,000	\$ 375,000	\$ 375,000	\$ 2,720,000

Funding Sources	2017	2018	2019	2020	2021	Total
Metered Water Sales	\$ 660,000	\$ 460,000	\$ 300,000	\$ 375,000	\$ 375,000	\$ 2,170,000
System Development Fees	-	-	550,000	-	-	550,000
Total Funding Sources	\$ 660,000	\$ 460,000	\$ 850,000	\$ 375,000	\$ 375,000	\$ 2,720,000

Operational Impact

Future repair and maintenance of pump station equipment is ongoing and is included within the Pump Station Equipment Replacement project. A single pump or motor could exceed \$25,000. Red Zone Pumping Upsize Estimated operating costs are \$30,074 annually and is incorporated into the Water Fund Operations Budget.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name Waterline Rehab/Replacement

Project Number:	Multiple	5 Year Historical Total	\$ 242,919
Contact:	Jeanne Stevens, Engineering Manager	2017-2021 Total	3,406,000
Department:	Utilities Department	CIP Project Total (2012-2021):	\$ 3,648,919
Category:	Infrastructure		
Type:	Repair		
Useful Life:	50 years		

Description and Justification

This project will rehabilitate or replace existing Town of Castle Rock waterlines as they reach the end of their useful lives. The Glovers project is a phased approach to replace aging waterline in the Glovers neighborhood. Plans include the replacement of approximately 10,500 linear feet of 8 inch watermain. The Crowfoot project will replace approximately 725 linear feet of Purple Zone transmission line in Crowfoot Valley Road from Tower Rd to the Diamond Ridge Pump Station. The transmission line is undersized and must be upsized from 16 inch to 20 inch to move future WISE water supplies. The Highway 85 projects includes the construction of a transmission line at Highway 85 that is needed to move WISE/Dominion flows. The Tank 11 to Pine Canyon project constructs a water line from the tank to the development.

Expenditures	2017	2018	2019	2020	2021	Total
Waterline Rehab/Replacement	\$ 150,000	\$ 150,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 900,000
Glovers Waterline Replacement	-	-	374,000	363,000	594,000	1,331,000
Crowfoot Purple Line Upsize	151,000	-	-	-	-	151,000
Highway 85 Transmission	-	703,000	-	-	-	703,000
Tank 11 to Pine Canyon Water Line	-	-	-	321,000	-	321,000
Total Expenditures	\$ 301,000	\$ 853,000	\$ 574,000	\$ 884,000	\$ 794,000	\$ 3,406,000

Funding Sources	2017	2018	2019	2020	2021	Total
Metered Water Sales	\$ 150,000	\$ 150,000	\$ 574,000	\$ 563,000	\$ 794,000	\$ 2,231,000
System Development Fees	151,000	703,000	-	321,000	-	1,175,000
Total Funding Sources	\$ 301,000	\$ 853,000	\$ 574,000	\$ 884,000	\$ 794,000	\$ 3,406,000

Operational Impact

There are no additional future operating expenditures associated with rehabilitation/replacement.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Craig & Gould N. Improvements

Project Number: 76-51

Contact: Jeanne Stevens, Engineering Manager

Department: Utilities Department

Category: Infrastructure

Type: Upgrade

Useful Life: 20 years

5 Year Historical Total \$ -

2017-2021 Total 535,000

CIP Project Total (2012-2021): \$ 535,000

Description and Justification

This project would accomplish infrastructure improvements in Craig & Gould North neighborhood. Existing water lines are undersized and greater than 70 years old. This project will be coordinated with Public Works and Stormwater for a comprehensive infrastructure improvement. In-house resources will be used as much as possible to reduce the cost of this project.

Expenditures	2017	2018	2019	2020	2021	Total
Design	\$ -	\$ -	\$ 55,000	\$ -	\$ -	\$ 55,000
Construction	-	-	-	480,000	-	480,000
Total Expenditures	\$ -	\$ -	\$ 55,000	\$ 480,000	\$ -	\$ 535,000

Funding Sources	2017	2018	2019	2020	2021	Total
Metered Water Sales	\$ -	\$ -	\$ 55,000	\$ 480,000	\$ -	\$ 535,000
Total Funding Sources	\$ -	\$ -	\$ 55,000	\$ 480,000	\$ -	\$ 535,000

Operational Impact

The operational impact of this project will be determined after project completion.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name **Security and SCADA System Improvements**

Project Number:	Multiple	5 Year Historical Total	\$	206,851
Contact:	Tim Friday, Assistant Utilities Director	2017-2021 Total		350,000
Department:	Utilities Department	CIP Project Total (2012-2021):	\$	556,851
Category:	Building			
Type:	Upgrade			
Useful Life:	20 years			

Description and Justification

This project is intended to accomplish miscellaneous small projects to increase facilities security in accordance with the Facilities Vulnerability Assessment. This project will accomplish future year water transmission and distribution facility upgrades. Projects include electronic access control at all water facilities through installation of card readers or replacement of mechanical locks with electronic locks operated by programmable keys. Other projects include repair and replacement of fencing and installation of secure gates. Future year projects that are identified in the Water Master Plan will need to be implemented in order to ensure distribution system reliability and capacity to deliver water in growing areas. Planned improvements include the automation of several pressure reducing valve stations identified in the Water Master Plan. Most of this work will be performed by Utilities staff.

Expenditures	2017	2018	2019	2020	2021	Total
Security Improvements	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 25,000	\$ 225,000
SCADA System Improvements	25,000	25,000	25,000	25,000	25,000	125,000
Total Expenditures	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 50,000	\$ 350,000

Funding Sources	2017	2018	2019	2020	2021	Total
Metered Water Sales	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 50,000	\$ 350,000
Total Funding Sources	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 50,000	\$ 350,000

Operational Impact

The operational impact of this project will be determined after project completion.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name **General Facility Upgrades & Replacements**

Project Number:	Multiple	5 Year Historical Total	\$ 301,792
Contact:	Tim Friday, Assistant Utilities Director	2017-2021 Total	1,000,000
Department:	Utilities Department	CIP Project Total (2012-2021):	\$ 1,301,792
Category:	Equipment		
Type:	Upgrade		
Useful Life:	20 years		

Description and Justification

This project is intended to upgrade an existing booster pump station, pressure reducing valves and improvements to related water facilities. Facilities capital replacements project will facilitate maintaining building functionality by making needed updates and replacing portions of various facilities. The paving project will pave the access drives to pump stations/tanks/well sites and other facilities. The Town operates 5 water treatment plants, many pump stations, PRVs, buildings and office space. All of these facilities require maintenance and replacements of various items and equipment. This project also includes improvements to Well building 204 which include replacing outdated equipment and electrical components. Small projects to improve the functionality and/or appearance of Town facilities are necessary. These projects include drainage, landscaping, and site improvements at existing pump stations. As buildings age, components will require replacements. As a formal asset management program develops, capital replacements will become well defined. This project is created to accommodate that eventuality. The existing access to many of our sites is unimproved or gravel access that requires extension maintenance, particularly during the winter. Snowplowing and access, in general, will be improved by paving and otherwise improving site access.

Expenditures	2017	2018	2019	2020	2021	Total
General Facility Upgrades	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	375,000
Facilities Capital Replacements	75,000	75,000	75,000	75,000	75,000	375,000
Facilities Paving	50,000	50,000	50,000	50,000	50,000	250,000
Total Expenditures	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 1,000,000

Funding Sources	2017	2018	2019	2020	2021	Total
Metered Water Sales	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 1,000,000
Total Funding Sources	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 1,000,000

Operational Impact

There are no additional future operating expenditures associated with rehabilitation/replacement.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name **Administration and Customer Service Building**

Project Number:	77-57	5 Year Historical Total	\$ -
Contact:	Tim Friday, Assitant Utilities Director	2017-2021 Total	1,403,641
Department:	Utilities Department	CIP Project Total (2012-2021):	\$ 1,403,641
Category:	Building		
Type:	New		
Useful Life:	50 years		

Description and Justification

This project accomodates construction of a new Administration and Customer Service Building for the Utilities Department. The existing Kellogg Facility will be repurposed for staff currently housed in trailers. This building will accommodate the existing and future Administration and Customer Service staff within Utilities. The Admin/CS Team currently is short of space by approximately 3,000 square feet. The new facility will be designed and constructed to meet the needs of the department through buildout. A site assessment was conducted in the 1st quarter of 2013 that details existing and future conditions, and identifies space needs for the Utilities Department. Construction is targeted for 2019 with funding split across the four Utilities enterprise funds based upon staffing proportions. The Water Fund's portion of 2019 funding will be a drawdown of CIP Reserves accumulated in prior years through system development fees and rates revenues over a 5-year period (2015-2019).

Expenditures	2017	2018	2019	2020	2021	Total
Construction	\$ -	\$ -	\$ 1,403,641	\$ -	\$ -	\$ 1,403,641

Total Expenditures	\$ -	\$ -	\$ 1,403,641	\$ -	\$ -	\$ 1,403,641
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Funding Sources	2017	2018	2019	2020	2021	Total
System Development Fees	\$ -	\$ -	\$ 1,403,641	\$ -	\$ -	\$ 1,403,641

Total Funding Sources	\$ -	\$ -	\$ 1,403,641	\$ -	\$ -	\$ 1,403,641
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Operational Impact

There are general operations expenditures of approximately \$30,000 per year. The Water fund's portion is \$12,119 per year, the Water Resources fund portion is \$5,689 per year, the Stormwater fund's portion is \$5,510 per year, and the Wastewater fund portion is \$6,682 per year. These costs will be incorporated into operating budgets in the future.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Site Improvements at 175 Kellogg Court

Project Number: 70-10

Contact: Tim Friday, Assistant Utilities Director

Department: Utilities Department

Category: Building

Type: New

Useful Life: 30 years

5 Year Historical Total \$ -

2017-2021 Total 1,179,245

CIP Project Total (2012-2021): \$ 1,179,245

Description and Justification

This project is part of overall facilities planning for the Utilities Department and includes paving, landscaping, construction of a truck washing facility, and additional equipment storage upon completion of the Operations and Maintenance center and Administration and Customer Service buildings. Funds will be used for parking lot paving in 2017 following construction of the Operations and Maintenance Center and to help maintain, repair, and make improvements to the facilities at 175 Kellogg Court in 2020.

Expenditures

	2017	2018	2019	2020	2021	Total
Construction	\$ 157,920	\$ -	\$ -	\$ 1,021,325	\$ -	\$ 1,179,245

Total Expenditures	\$ 157,920	\$ -	\$ -	\$ 1,021,325	\$ -	\$ 1,179,245
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Funding Sources

	2017	2018	2019	2020	2021	Total
System Development Fees	\$ 157,920	\$ -	\$ -	\$ 1,021,325	\$ -	\$ 1,179,245

Total Funding Sources	\$ 157,920	\$ -	\$ -	\$ 1,021,325	\$ -	\$ 1,179,245
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Operational Impact

Improvements to existing facilities will likely result in an estimated reduction in maintenance expenditures.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

WATER RESOURCES FUND

UTILITIES DEPARTMENT

PROJECTS & FUNDING SOURCES BY DEPARTMENT

Project Expenditures	2017	2018	2019	2020	2021	Total
WISE Project	\$ 633,560	\$ 833,560	\$ 3,796,584	\$ 253,560	\$ 267,370	\$ 5,784,634
Chatfield Reallocation Project	1,198,680	1,198,680	1,198,680	1,198,680	1,198,680	5,993,400
Rehabilitation of Alluvial Well Fields	60,000	155,000	150,000	120,000	300,000	785,000
Aquifer Storage & Recovery Pilot Program	500,000	-	-	500,000	-	1,000,000
Future Pipelines & Pump Stations	5,655,300	-	-	-	-	5,655,300
Alternative Source of Supply Project	200,000	2,776,667	2,676,667	2,676,667	-	8,330,001
Plum Creek Diversion and Well Fields	9,817,388	-	-	-	-	9,817,388
Plum Creek Water Purification Facility	-	10,804,689	6,878,485	-	-	17,683,174
Administration & Customer Serv. Building	-	-	627,940	-	-	627,940
Site Improvements at 175 Kellogg Court	87,566	-	-	456,907	-	544,473
Total Expenditures by Year	\$ 18,152,494	\$ 15,768,596	\$ 15,328,356	\$ 5,205,814	\$ 1,766,050	\$ 56,221,310

Project Funding Sources	2017	2018	2019	2020	2021	Total
System Development Fees	\$ 10,926,523	\$ 9,461,158	\$ 9,448,190	\$ 3,306,251	\$ 1,059,630	\$ 34,201,751
Water Resources Fees	7,225,971	6,307,438	5,880,166	1,899,563	706,420	22,019,559
Total Funding Sources by Year	\$ 18,152,494	\$ 15,768,596	\$ 15,328,356	\$ 5,205,814	\$ 1,766,050	\$ 56,221,310

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

WISE Project

Project Number: 77-72

Contact: Matt Benak, Water Resources Manager

Department: Utilities Department

Category: Water Rights

Type: New

Useful Life: Perpetual/50 years

5 Year Historical Total \$ 24,665,104

2017-2021 Total 5,784,634

CIP Project Total (2012-2021): \$ 30,449,738

Description and Justification

This project is a part of the Town's Strategic goal to transition to a 75% renewable water supply for the future. This project includes securing 1,000 acre-feet (AF) of water on average from Denver and Aurora and will build infrastructure necessary to move water from the Peter Binney Water Purification Facility located at Aurora Reservoir to the Town of Castle Rock. This part of the project includes purchase and modifications to existing infrastructure as well as several miles of new pipelines, pump stations, operating facilities, a required operational reserve and the capital portion of the water delivery rate each year. This project also includes the purchase of up to 175 acre-feet of WISE Water supplies from other WISE members, if the Plum Creek Diversion Structure is not complete by high water demand season in 2017. The Town owns substantial Denver Basin groundwater supplies and a limited amount of surface water on Plum Creek. However as the demand for water increases along with the Town population, other supplies will need to be secured to meet that demand. Sustainable water supplies must be imported to the Town with a focus on proximity and feasibility.

Expenditures	2017	2018	2019	2020	2021	Total
ECCV Title Cleanup	\$ -	\$ -	\$ 143,024	\$ -	\$ -	\$ 143,024
Binney Connection	200,000	400,000	3,400,000	-	-	4,000,000
WISE Project Subscription Fees	150,000	150,000	150,000	150,000	163,810	763,810
WISE Project Operating Expenses	103,560	103,560	103,560	103,560	103,560	517,800
Operational Reserve	180,000	180,000	-	-	-	360,000
Total Expenditures	\$ 633,560	\$ 833,560	\$ 3,796,584	\$ 253,560	\$ 267,370	\$ 5,784,634

Funding Sources	2017	2018	2019	2020	2021	Total
System Development Fees	\$ 380,136	\$ 500,136	\$ 2,277,950	\$ 152,136	\$ 160,422	\$ 3,470,780
Water Resources Fees	253,424	333,424	1,518,634	101,424	106,948	2,313,854
Total Funding Sources	\$ 633,560	\$ 833,560	\$ 3,796,584	\$ 253,560	\$ 267,370	\$ 5,784,634

Operational Impact

Operating costs for the WISE project will be variable based on actual annual water purchased. Preliminary estimates suggest that O&M costs will be approximately \$1.5 million each year once the permanent delivery schedule begins in 2021. Water is set to be delivered to the Town in 2017 and operating costs will begin that year at an estimated \$500k and are incorporated into the Water Resources Fund 2017-2019 Balanced Financial Plan.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Chatfield Reallocation Project

Project Number: 77-29

Contact: Matt Benak, Water Resources Manager

Department: Utilities Department

Category: Water Rights

Type: New

Useful Life: Perpetual

5 Year Historical Total \$ 2,582,481

2017-2021 Total 5,993,400

CIP Project Total (2012-2021): \$ 8,575,881

Description and Justification

This project will fund the participation and maintenance costs of the Town's reserved storage space (200 acre-feet) in the expanded Chatfield Reservoir. The Town plans to increase its participation rate to 2,000 acre-feet over a 15 to 20 year period. This project has been identified as a critical component of the Town's Renewable Water Implementation Program, which includes maximizing the Town's existing supplies and finding the most efficient solutions to meet the Town's long term renewable water supply goals. Specifically, this storage space will allow enhanced management capabilities for the Town's Plum Creek Water rights, including treated return flows in the Plum Creek basin.

Expenditures	2017	2018	2019	2020	2021	Total
Additional Storage	\$ 1,198,680	\$ 1,198,680	\$ 1,198,680	\$ 1,198,680	\$ 1,198,680	\$ 5,993,400

Total Expenditures	\$ 1,198,680	\$ 1,198,680	\$ 1,198,680	\$ 1,198,680	\$ 1,198,680	\$ 5,993,400
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Funding Sources	2017	2018	2019	2020	2021	Total
System Development Fees	\$ 719,208	\$ 719,208	\$ 719,208	\$ 719,208	\$ 719,208	\$ 3,596,040
Water Resources Fees	479,472	479,472	479,472	479,472	479,472	2,397,360

Total Funding Sources	\$ 1,198,680	\$ 1,198,680	\$ 1,198,680	\$ 1,198,680	\$ 1,198,680	\$ 5,993,400
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Operational Impact

Future operating and maintenance expenses of the reservoir are anticipated to be approximately \$100,000 a year beginning in 2018 and are incorporated into the Water Resources Fund 2017-2019 Balanced Financial Plan.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Rehabilitation of Alluvial Well Fields

Project Number: 78-30

Contact: Matt Benak, Water Resources Manager

Department: Utilities Department

Category: Infrastructure

Type: Repair

Useful Life: 3 years

5 Year Historical Total \$ 162,856

2017-2021 Total 785,000

CIP Project Total (2012-2021): \$ 947,856

Description and Justification

The purpose of this project is to rehabilitate each alluvial well field over the course of three years. Alluvial wells are shallow and connected to surface streams. In 2015, significant accumulation of biological fouling such as algae of the alluvial wells was observed after being in operation for two years. The work entails pump removal, cleaning, video recording, pump re-installation, and permitting. The Town owns substantial Denver Basin groundwater supplies and a limited amount of surface water on Plum Creek. The future goal of the Town is to provide 75% renewable water supply annually to its customers. The alluvial wells capture the Town's renewable water rights in Plum Creek for treatment at Plum Creek Water Purification Facility.

Expenditures	2017	2018	2019	2020	2021	Total
Well Rehabilitation	\$ 60,000	\$ 155,000	\$ 150,000	\$ 120,000	\$ 300,000	\$ 785,000

Total Expenditures	\$ 60,000	\$ 155,000	\$ 150,000	\$ 120,000	\$ 300,000	\$ 785,000
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Funding Sources	2017	2018	2019	2020	2021	Total
System Development Fees	\$ 36,000	\$ 93,000	\$ 90,000	\$ 72,000	\$ 180,000	\$ 471,000
Water Resources Fees	24,000	62,000	60,000	48,000	120,000	314,000

Total Funding Sources	\$ 60,000	\$ 155,000	\$ 150,000	\$ 120,000	\$ 300,000	\$ 785,000
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Operational Impact

There is no operational impact anticipated as a result of this project.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name **Aquifer Storage & Recovery Pilot Program**

Project Number:	75-84		
Contact:	Matt Benak, Water Resources Manager	5 Year Historical Total	\$ 558,029
Department:	Utilities Department	2017-2021 Total	1,000,000
Category:	Infrastructure	CIP Project Total (2012-2021):	\$ 1,558,029
Type:	New		
Useful Life:	Perpetual		

Description and Justification

This project is intended to incrementally expand the Town's Aquifer Storage and Recovery (ASR) program. This project includes the retrofit of an existing well(s) to be operated as an injection well(s) and begin injecting potable renewable water for storage and recovery. An ASR program would benefit the Town's Renewable Water Implementation Program. This program has been successful in neighboring communities and would strengthen the Town's ability to manage its water resources.

Expenditures	2017	2018	2019	2020	2021	Total
Construction	\$ 500,000	\$ -	\$ -	\$ 500,000	\$ -	\$ 1,000,000
Total Expenditures	\$ 500,000	\$ -	\$ -	\$ 500,000	\$ -	\$ 1,000,000
Funding Sources	2017	2018	2019	2020	2021	Total
System Development Fees	\$ 300,000	\$ -	\$ -	\$ 300,000	\$ -	\$ 600,000
Water Resources Fees	200,000	-	-	200,000	-	400,000
Total Funding Sources	\$ 500,000	\$ -	\$ -	\$ 500,000	\$ -	\$ 1,000,000

Operational Impact

The estimated operating and maintenance expenses are estimated to be approximately \$4,000 a year for annual sampling costs for each new set of wells retrofitted. These costs are incorporated into the Water Resources fund's operations budget.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Future Pipelines & Pump Stations

Project Number:	Multiple	5 Year Historical Total	\$ 260,620
Contact:	Matt Benak, Water Resources Manager	2017-2021 Total	5,655,300
Department:	Utilities Department	CIP Project Total (2012-2021):	\$ 5,915,920
Category:	Infrastructure		
Type:	Planning/Design		
Useful Life:	50 years		

Description and Justification

This project studies the concept of moving South Platte water supplies from the foothills to Rueter-Hess Reservoir through the Plum Creek Diversion Structure. Additionally, a study is underway to move water from the Plum Creek Water Reclamation Authority to Rueter-Hess Reservoir through existing infrastructure and upgraded infrastructure in 2017. Likely, partnerships with area water providers will be necessary to make the construction of this project feasible. Once feasibility of all project components is determined, funds will be budgeted in the future for design and construction of the project. The Town owns substantial Denver Basin groundwater supplies and a limited amount of surface water on Plum Creek. However, as the demand for water increases along with the Town population, other supplies will need to be secured to meet that demand. Sustainable water supplies must be imported to the Town with a focus on proximity and feasibility.

Expenditures	2017	2018	2019	2020	2021	Total
Chatfield Pipeline and Pump Station	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ 100,000
Newlin Gulch Pipeline and Pump Station	2,555,300	-	-	-	-	2,555,300
PCWRA Upg. for Newlin Gulch Pipeline	3,000,000	-	-	-	-	3,000,000
Total Expenditures	\$ 5,655,300	\$ -	\$ -	\$ -	\$ -	\$ 5,655,300

Funding Sources	2017	2018	2019	2020	2021	Total
System Development Fees	\$ 3,393,180	\$ -	\$ -	\$ -	\$ -	\$ 3,393,180
Water Resources Fees	2,262,120	-	-	-	-	2,262,120
Total Funding Sources	\$ 5,655,300	\$ -	\$ -	\$ -	\$ -	\$ 5,655,300

Operational Impact

There is no operational impact associated with these studies and once full impacts are understood after implementation, costs will be budgeted in the future.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Alternative Source of Supply Project

Project Number: 77-30

Contact: Matt Benak, Water Resources Manager

Department: Utilities Department

Category: Water Rights

Type: New

Useful Life: 50 years

5 Year Historical Total \$ 10,555,875

2017-2021 Total 8,330,001

CIP Project Total (2012-2021): \$ 18,885,876

Description and Justification

This project entails importing an additional 2,500 acre-feet of renewable and fully consumable water from the South Platte River. This project includes the purchase of 2,500 acre-feet of renewable surface water on the South Platte River and all legal costs associated with enabling the water to be used in Castle Rock. It includes Box Elder property well fields due diligence and treatment necessary to move the water from Box Elder Creek to Castle Rock. This project also includes obtaining firm capacity in East Cherry Creek Valley (ECCV) Water & Sanitation District's Northern Pipeline and pump stations. The Town owns substantial Denver Basin groundwater supplies and a limited amount of surface water on Plum Creek. However, as the demand for water increases along with the Town population, other supplies will need to be secured to meet that demand. Sustainable water supplies must be imported to the Town with a focus on proximity and feasibility.

Expenditures	2017	2018	2019	2020	2021	Total
Box Elder Creek Properties Due Diligence	\$ 100,000	\$ 100,000	\$ -	\$ -	\$ -	\$ 200,000
Box Elder Alluvial Water Treatment	100,000	-	-	-	-	100,000
Water Rights	-	2,676,667	2,676,667	2,676,667	-	8,030,001
Total Expenditures	\$ 200,000	\$ 2,776,667	\$ 2,676,667	\$ 2,676,667	\$ -	\$ 8,330,001

Funding Sources	2017	2018	2019	2020	2021	Total
System Development Fees	\$ 120,000	\$ 1,666,000	\$ 1,606,000	\$ 1,606,000	\$ -	\$ 4,998,001
Water Resources Fees	80,000	1,110,667	1,070,667	1,070,667	-	3,332,000
Total Funding Sources	\$ 200,000	\$ 2,776,667	\$ 2,676,667	\$ 2,676,667	\$ -	\$ 8,330,001

Operational Impact

Operating costs are not currently estimated as infrastructure to move the water is not set to begin until year 2030.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Plum Creek Diversion and Well Fields

Project Number:	Multiple	5 Year Historical Total	\$ 10,279,322
Contact:	Matt Benak, Water Resources Manager	2017-2021 Total	9,817,388
Department:	Utilities Department	CIP Project Total (2012-2021):	\$ 20,096,710
Category:	Infrastructure		
Type:	New		
Useful Life:	50 years		

Description and Justification

The Town has more water rights along Plum Creek than it can currently capture through the existing alluvial well infrastructure. The Town has a goal of providing 75% renewable water to its customers at build-out. This project would allow the Town to continue towards the renewable water goal by capturing existing water rights on Plum Creek and taking full advantage of its junior water rights during times of high stream flow. This project will accomplish the installation of a surface diversion structure along Plum Creek downstream of the Plum Creek Water Reclamation Authority facility. This raw water pipeline will move the water collected from Plum Creek at the surface diversion structure south into Town to be treated at the Plum Creek Water Purification Facility (PCWPF). The length of the pipeline is dependent upon the exact location of the diversion structure. This project also includes retrofitting existing wells with lateral arms to help capture all of the Town's water rights that may otherwise be limited by Federal permitting issues.

Expenditures	2017	2018	2019	2020	2021	Total
Diversion Structure & Pump Station	\$ 3,065,007	\$ -	\$ -	\$ -	\$ -	\$ 3,065,007
Raw Water Pipeline	4,890,384	-	-	-	-	4,890,384
Pre-Sedimentation Basin	1,261,997	-	-	-	-	1,261,997
PC South Well Field Lateral Arms and Well	500,000	-	-	-	-	500,000
PC Diversion #2 Installation	100,000	-	-	-	-	100,000
Total Expenditures	\$ 9,817,388	\$ -	\$ -	\$ -	\$ -	\$ 9,817,388

Funding Sources	2017	2018	2019	2020	2021	Total
System Development Fees	\$ 5,890,433	\$ -	\$ -	\$ -	\$ -	\$ 5,890,433
Water Resources Fees	3,926,955	-	-	-	-	3,926,955
Total Funding Sources	\$ 9,817,388	\$ -	\$ -	\$ -	\$ -	\$ 9,817,388

Operational Impact

Future operating costs are estimated at \$125k per year beginning in 2017 and are incorporated into the Water Resources Fund 2017-2019 Balanced financial plan.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Plum Creek Water Purification Facility

Project Number: Multiple

Contact: Matt Benak, Water Resources Manager

Department: Utilities Department

Category: Infrastructure

Type: Upgrade

Useful Life: 50 years

5 Year Historical Total \$ 8,399,674

2017-2021 Total 17,683,174

CIP Project Total (2012-2021): \$ 26,082,848

Description and Justification

Advanced treatment processes are necessary for the effective treatment of the Town's Plum Creek surface water supplies. The future goal of the Town is to provide 75% renewable water supply annually to its customers and this project will be a key component to achieve that goal. This project will add advanced treatment processes to the Plum Creek Water Purification Facility (PCWPF), giving the Town the ability to adequately treat additional Plum Creek surface water supplies.

Expenditures	2017	2018	2019	2020	2021	Total
Dewatering Facility at PCWPF (Phase 1)	\$ -	\$ 2,000,000	\$ -	\$ -	\$ -	\$ 2,000,000
Advanced Treatment Facility (Phase 1)	-	6,878,485	6,878,485	-	-	13,756,970
PCWPF Membrane Expansion (Phase 1)	-	1,028,904	-	-	-	1,028,904
Generator at PCWPF	-	897,300	-	-	-	897,300
Total Expenditures	\$ -	\$10,804,689	\$6,878,485	\$ -	\$ -	\$ 17,683,174

Funding Sources	2017	2018	2019	2020	2021	Total
System Development Fees	\$ -	\$ 6,482,813	\$ 4,127,091	\$ -	\$ -	\$ 10,609,904
Water Resources Fees	-	4,321,876	2,751,394	-	-	7,073,270
Total Funding Sources	\$ -	\$10,804,689	\$6,878,485	\$ -	\$ -	\$ 17,683,174

Operational Impact

Estimated O&M costs for advanced treatment processes are estimated at \$1.2 million each year beginning in 2018 and are incorporated in the Water Resources fund's operations budget.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name **Administration & Customer Serv. Building**

Project Number: 77-57

Contact: Tim Friday, Assistant Utilities Director

Department: Utilities Department

Category: Building

Type: New

Useful Life: 50 years

5 Year Historical Total \$ -

2017-2021 Total 627,940

CIP Project Total (2012-2021): \$ 627,940

Description and Justification

This project accommodates construction of a new Administration and Customer Service Building for the Utilities Department. The existing Kellogg Facility will be repurposed for staff currently housed in trailers. This building will accommodate the existing and future Administration and Customer Service staff within Utilities. The Admin/CS Team currently is short of space by approximately 3,000 square feet. The new facility will be designed and constructed to meet the needs of the department through buildout. A site assessment was conducted in the 1st quarter of 2013 that details existing and future conditions, and identifies space needs for the Utilities Department. Construction is targeted for 2019 with funding split across the four Utilities enterprise funds based upon staffing proportions. The Water Resources Fund's portion of 2019 funding will be a drawdown of CIP Reserves accumulated in prior years and departmentally designated plus system development fees and rates revenues accumulated over a 5-year period (2015-2019).

Expenditures	2017	2018	2019	2020	2021	Total
Construction	\$ -	\$ -	\$ 627,940	\$ -	\$ -	\$ 627,940

Total Expenditures	\$ -	\$ -	\$ 627,940	\$ -	\$ -	\$ 627,940
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Funding Sources	2017	2018	2019	2020	2021	Total
System Development Fees	\$ -	\$ -	\$ 627,940	\$ -	\$ -	\$ 627,940

Total Funding Sources	\$ -	\$ -	\$ 627,940	\$ -	\$ -	\$ 627,940
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Operational Impact

There are general operations expenditures of approximately \$30,000 per year. The Water fund's portion is \$12,119 per year, the Water Resources fund portion is \$5,689 per year, the Stormwater fund's portion is \$5,510 per year, and the Wastewater fund portion is \$6,682 per year.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Site Improvements at 175 Kellogg Court

Project Number: 70-10

Contact: Tim Friday, Assistant Utilities Director

Department: Utilities Department

Category: Building

Type: New

Useful Life: 30 years

5 Year Historical Total \$ -

2017-2021 Total 544,473

CIP Project Total (2012-2021): \$ 544,473

Description and Justification

This project is part of overall facilities planning for the Utilities Department. Projects include paving, landscaping, construction of a truck washing facility, and additional equipment storage upon completion of the Operations and Maintenance center and Administration and Customer Service buildings. Funds are needed for parking lot paving in 2017 following construction of the Operations and Maintenance Center and funds are needed to help maintain, repair, and make improvements to the facilities at 175 Kellogg Court in 2020.

Expenditures	2017	2018	2019	2020	2021	Total
Construction	\$ 87,566	\$ -	\$ -	\$ 456,907	\$ -	\$ 544,473

Total Expenditures	\$ 87,566	\$ -	\$ -	\$ 456,907	\$ -	\$ 544,473
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Funding Sources	2017	2018	2019	2020	2021	Total
System Development Fees	\$ 87,566	\$ -	\$ -	\$ 456,907	\$ -	\$ 544,473

\$ 87,566	\$ -	\$ -	\$ 456,907	\$ -	\$ 544,473
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Operational Impact

Improvements to existing facilities will likely result in an estimated reduction in maintenance expenditures which will be quantified and incorporated upon project completion.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

STORMWATER FUND

UTILITIES DEPARTMENT

PROJECTS & FUNDING SOURCES BY DEPARTMENT

Project Expenditures	2017	2018	2019	2020	2021	Total
Minor Drainageway Stabilization	\$ 58,178	\$ 58,178	\$ 58,178	\$ 58,178	\$ 221,986	\$ 454,698
Stream Stabilization	2,005,583	1,895,118	1,610,675	1,496,179	1,345,856	8,353,411
Young American Storm Sewer - Gordon Drive	44,000	456,000	-	-	-	500,000
Craig & Gould N. Infrastructure Improvement	-	-	133,625	1,066,375	-	1,200,000
Detention Ponds Retrofits	-	-	-	-	50,000	50,000
CMP Rehabilitation	-	-	-	-	240,000	240,000
Watershed MP Updates	-	-	-	-	250,000	250,000
Administration and Customer Service Building	-	-	643,724	-	-	643,724
Site Improvements at 175 Kellogg Court	72,399	-	-	464,000	-	536,399
Total Expenditures by Year	\$ 2,180,160	\$ 2,409,296	\$ 2,446,202	\$ 3,084,732	\$ 2,107,842	\$ 12,228,232

Project Funding Sources	2017	2018	2019	2020	2021	Total
Stormwater Charges	\$ 529,831	\$ 710,745	\$ 451,629	\$ 1,534,752	\$ 1,030,032	\$ 4,256,990
System Development Fees	1,650,329	1,698,551	1,994,573	1,549,980	1,077,810	7,971,242
Total Funding Sources by Year	\$ 2,180,160	\$ 2,409,296	\$ 2,446,202	\$ 3,084,732	\$ 2,107,842	\$ 12,228,232



Tributary Stabilization Project in Progress

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Minor Drainageway Stabilization

Project Number: 78-02

Contact: David Van Dellen, Stormwater Manager

Department: Utilities Department

Category: Infrastructure

Type: New

Useful Life: 50 years

5 Year Historical Total \$ 50,000

2017-2021 Total 454,698

CIP Project Total (2012-2021): \$ 504,698

Description and Justification

This project includes new infrastructure on small channel systems downstream of development to correct erosion where the minor drainageway system is incomplete. Improvements are required for the minor drainageway system downstream of development and connecting to the major drainageway system. Minor drainageways are natural or engineered conveyance systems with an upstream drainage area less than 130 acres. If improvements are not made, these systems pose a potential public safety hazard and flood risk. These projects will provide improvements for adequate capacity based on growth and stabilization. Projects are divided between the Plum Creek Basin (PC) and the Cherry Creek Basin (CC).

Expenditures	2017	2018	2019	2020	2021	Total
Minor Drainage Way Stab PC	\$ 27,097	\$ 27,097	\$ 27,097	\$ 27,097	\$ 129,324	\$ 237,712
Minor Drainage Way Stab CC	31,081	31,081	31,081	31,081	92,662	216,986
Total Expenditures	\$ 58,178	\$ 58,178	\$ 58,178	\$ 58,178	\$ 221,986	\$ 454,698

Funding Sources	2017	2018	2019	2020	2021	Total
Stormwater Charges	\$ 35,831	\$ 35,831	\$ 35,831	\$ 35,831	\$ 139,831	\$ 283,156
System Development Fees	22,347	22,347	22,347	22,347	82,155	171,542
Total Funding Sources	\$ 58,178	\$ 58,178	\$ 58,178	\$ 58,178	\$ 221,986	\$ 454,698

Operational Impact

No additional operating expenditures or revenues are anticipated as a result of this project.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Stream Stabilization

Project Number: Multiple

Contact: David Van Dellen, Stormwater Manager

Department: Utilities Department

Category: Infrastructure

Type: New

Useful Life: 50 years

5 Year Historical Total \$ 1,870,452

2017-2021 Total 8,353,411

CIP Project Total (2012-2021): \$ 10,223,863

Description and Justification

This project includes stream channel stabilization throughout Castle Rock. The Tributaries are part of the major drainageway networks that include watersheds with an upstream area greater than 130 acres, also known as the 100-year floodplain. These projects have been identified in the Stormwater Master Plan as a scheduled activity. Stream improvements generally include natural or engineered segments of vegetated stream between engineered hard points that reduce channel slope and erosive velocities. Improvements also ensure adequate flood capacity in the channel to reduce flood potential for adjacent properties. Improvements to the natural drainageway are required to mitigate for development impacts that accelerate erosion and pose a potential public safety hazard if left unattended over time. This project will restore a sustainable channel system for water quality and flood control. The improvements will reduce channel erosion and protect adjacent property from loss during flooding. Projects are divided between the Plum Creek Basin (PC) and the Cherry Creek Basin (CC).

Expenditures	2017	2018	2019	2020	2021	Total
Total Drainage Way Stabilization - PC	\$ 2,005,583	\$ 1,350,938	\$ 1,610,675	\$ 1,343,160	\$ 579,171	\$ 6,889,527
Total Drainage Way Stabilization - CC	-	544,180	-	153,019	766,685	1,463,884
Total Expenditures	\$ 2,005,583	\$ 1,895,118	\$ 1,610,675	\$ 1,496,179	\$ 1,345,856	\$ 8,353,411

Funding Sources	2017	2018	2019	2020	2021	Total
Stormwater Charges	\$ 450,000	\$ 218,914	\$ 282,173	\$ 432,546	\$ 474,800	\$ 1,858,433
System Development Fees	1,555,583	1,676,204	1,328,502	1,063,633	871,056	6,494,978
Total Funding Sources	\$ 2,005,583	\$ 1,895,118	\$ 1,610,675	\$ 1,496,179	\$ 1,345,856	\$ 8,353,411

Operational Impact

No additional operating expenditures or revenues are anticipated as a result of this project.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name **Young American Storm Sewer - Gordon Drive**

Project Number:	77-61	5 Year Historical Total	\$	-
Contact:	David Van Dellen, Stormwater Manager	2017-2021 Total		500,000
Department:	Utilities Department	CIP Project Total (2012-2021):	\$	500,000
Category:	Infrastructure			
Type:	Upgrade			
Useful Life:	50 years			

Description and Justification

This project includes storm sewer improvements in the Young American Subdivision in partnership with Public Works and Utilities. Currently, there is no storm drain system in the area. This project will add storm drains to capture flow and reduce flood risk for this historic neighborhood. This project will provide storm drainage infrastructure to reduce flood hazards in the right-of-way. This project will also increase emergency accessibility to residents in the event of a flood.

Expenditures	2017	2018	2019	2020	2021	Total
Design	\$ 44,000	\$ -	\$ -	\$ -	\$ -	\$ 44,000
Construction	-	456,000	-	-	-	456,000
Total Expenditures	\$ 44,000	\$ 456,000	\$ -	\$ -	\$ -	\$ 500,000

Funding Sources	2017	2018	2019	2020	2021	Total
Stormwater Charges	\$ 44,000	\$ 456,000	\$ -	\$ -	\$ -	\$ 500,000
Total Funding Sources	\$ 44,000	\$ 456,000	\$ -	\$ -	\$ -	\$ 500,000

Operational Impact

There is a possible reduction in repair and maintenance costs, which won't be known until the project is complete and will be incorporated at that time.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name **Craig & Gould N. Infrastructure Improvements**

Project Number:	76-51	5 Year Historical Total	\$	-
Contact:	David Van Dellen, Stormwater Manager	2017-2021 Total		1,200,000
Department:	Utilities Department	CIP Project Total (2012-2021):	\$	1,200,000
Category:	Infrastructure			
Type:	Upgrade			
Useful Life:	50 years			

Description and Justification

This project includes storm sewer improvements in the Craig and Gould North subdivision in partnership with the Public Works department for the revitalization of this downtown area. Currently, there is no storm drain system in the area. This project will add storm drains to capture flow and reduce flood risk for this historic neighborhood. This project will provide storm drainage infrastructure to reduce street flooding and meet current criteria for residential land use. These improvements will reduce flooding hazards on the streets and for the existing private property in the neighborhood.

Expenditures	2017	2018	2019	2020	2021	Total
Design	\$ -	\$ -	\$ 133,625	\$ -	\$ -	\$ 133,625
Construction	-	-	-	1,066,375	-	1,066,375
Total Expenditures	\$ -	\$ -	\$ 133,625	\$ 1,066,375	\$ -	\$ 1,200,000

Funding Sources	2017	2018	2019	2020	2021	Total
Stormwater charges	\$ -	\$ -	\$ 133,625	\$ 1,066,375	\$ -	\$ 1,200,000
Total Funding Sources	\$ -	\$ -	\$ 133,625	\$ 1,066,375	\$ -	\$ 1,200,000

Operational Impact

There is a possible reduction in repair and maintenance costs, which won't be known until the project is complete and will be incorporated at that time.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Detention Ponds Retrofits

Project Number: 77-18

Contact: David Van Dellen, Stormwater Manager

Department: Utilities Department

Category: Infrastructure

Type: Upgrade

Useful Life: 50-years

5 Year Historical Total \$ 99,765

2017-2021 Total 50,000

CIP Project Total (2012-2021): \$ 149,765

Description and Justification

This project includes regional detention pond retrofits to facilities that demonstrate an excessive operation and maintenance burden on the program. Generally, older water quality and detention facilities require upgrades to the outlet works and other pond features to improve runoff circulation through the facility and reduce clogging potential.

Expenditures	2017	2018	2019	2020	2021	Total
Detention Ponds Retrofits	\$ -	\$ -	\$ -	\$ -	\$ 50,000	\$ 50,000

Total Expenditures	\$ -	\$ -	\$ -	\$ -	\$ 50,000	\$ 50,000
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Funding Sources	2017	2018	2019	2020	2021	Total
Stormwater Charges	\$ -	\$ -	\$ -	\$ -	\$ 50,000	\$ 50,000

Total Funding Sources	\$ -	\$ -	\$ -	\$ -	\$ 50,000	\$ 50,000
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Operational Impact

No additional operating expenditures or revenues are anticipated as a result of this project.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

CMP Rehabilitation

Project Number: 78-73

Contact: David Van Dellen, Stormwater Manager

Department: Utilities Department

Category: Infrastructure

Type: Repair

Useful Life: 20-50 Years

5 Year Historical Total \$ -

2017-2021 Total 240,000

CIP Project Total (2012-2021): \$ 240,000

Description and Justification

This program is required to address aging stormwater infrastructure. Older corrugated metal pipe (CMP) has an average life expectancy of 30 years. Failure of pipe generally includes invert corrosion and deterioration resulting in subgrade failure. This program will help ensure rehabilitation to existing CMP pipe systems prior to infrastructure failure and prolong the life of the system by 20 to 50 years.

Expenditures	2017	2018	2019	2020	2021	Total
CMP Rehabilitation	\$ -	\$ -	\$ -	\$ -	\$ 240,000	\$ 240,000

Total Expenditures	\$ -	\$ -	\$ -	\$ -	\$ 240,000	\$ 240,000
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Funding Sources	2017	2018	2019	2020	2021	Total
Stormwater Charges	\$ -	\$ -	\$ -	\$ -	\$ 240,000	\$ 240,000

Total Funding Sources	\$ -	\$ -	\$ -	\$ -	\$ 240,000	\$ 240,000
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Operational Impact

No additional operating expenditures or revenues are anticipated as a result of this project.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Watershed MP Updates

Project Number: New

Contact: David Van Dellen, Stormwater Manager

Department: Utilities Department

Category: Infrastructure

Type: Planning/Design

Useful Life:

5 Year Historical Total \$ -

2017-2021 Total 250,000

CIP Project Total (2012-2021): \$ 250,000

Description and Justification

The Stormwater Capital Program includes 19 Major Drainageway Master Plans covering over 55 miles of floodplain system. Periodic updates to these plans are required to account for changes in watershed hydrology, stream stability assessment and capital plan prioritization. It is estimated that approximately four plans will be updated annually over a five year period.

Expenditures	2017	2018	2019	2020	2021	Total
Master Plan GIS Database Tool	\$ -	\$ -	\$ -	\$ -	\$ 50,000	\$ 50,000
Watershed MP Updates - Plum Creek	-	-	-	-	200,000	200,000
Total Expenditures	\$ -	\$ -	\$ -	\$ -	\$ 250,000	\$ 250,000

Funding Sources	2017	2018	2019	2020	2021	Total
Stormwater Charges	\$ -	\$ -	\$ -	\$ -	\$ 125,401	\$ 125,401
System Development Fees	-	-	-	-	124,599	124,599
Total Funding Sources	\$ -	\$ -	\$ -	\$ -	\$ 250,000	\$ 250,000

Operational Impact

No additional operating expenditures or revenues are anticipated as a result of this project.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name **Administration and Customer Service Building**

Project Number:	77-57	5 Year Historical Total	\$	-
Contact:	Tim Friday, Assistant Utilities Director	2017-2021 Total		643,724
Department:	Utilities Department	CIP Project Total (2012-2021):	\$	643,724
Category:	Building			
Type:	New			
Useful Life:	50 years			

Description and Justification

This project accommodates construction of a new Administration and Customer Service Building for the Utilities Department. The existing Kellogg Facility will be repurposed for staff currently housed in trailers. This building will accommodate the existing and future Administration and Customer Service staff within Utilities. The Admin/CS Team currently is short of space by approximately 3,000 square feet. The new facility will be designed and constructed to meet the needs of the department through buildout. A site assessment was conducted in the 1st quarter of 2013 that details existing and future conditions, and identifies space needs for the Utilities Department. Construction is targeted for 2019 with funding split across the four Utilities enterprise funds based upon staffing proportions. The Stormwater Fund's portion of 2019 funding will be a drawdown of CIP Reserves accumulated in prior years through system development fees and rates revenues over a 5-year period (2015-2019).

Expenditures	2017	2018	2019	2020	2021	Total
Construction	\$ -	\$ -	\$ 643,724	\$ -	\$ -	\$ 643,724

Total Expenditures	\$ -	\$ -	\$ 643,724	\$ -	\$ -	\$ 643,724
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Funding Sources	2017	2018	2019	2020	2021	Total
System Development Fees	\$ -	\$ -	\$ 643,724	\$ -	\$ -	\$ 643,724

Total Funding Sources	\$ -	\$ -	\$ 643,724	\$ -	\$ -	\$ 643,724
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Operational Impact

There are general operations expenditures of approximately \$30,000 per year. The Water fund's portion is \$12,119 per year, the Water Resources fund portion is \$5,689 per year, the Stormwater fund's portion is \$5,510 per year, and the Wastewater fund portion is \$6,682 per year.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Site Improvements at 175 Kellogg Court

Project Number: 70-10

Contact: Tim Friday, Assistant Utilities Director

Department: Utilities Department

Category: Building

Type: New

Useful Life: 30 years

5 Year Historical Total \$ -

2017-2021 Total 536,399

CIP Project Total (2012-2021): \$ 536,399

Description and Justification

This project is part of overall facilities planning for the Utilities Department and includes paving, landscaping, construction of a truck washing facility, and additional equipment storage upon completion of the Operations and Maintenance center and Administration and Customer Service buildings. Funds will be used for parking lot paving in 2017 following construction of the Operations and Maintenance Center and to help maintain, repair, and make improvements to the facilities at 175 Kellogg Court in 2020.

Expenditures

	2017	2018	2019	2020	2021	Total
Construction	\$ 72,399	\$ -	\$ -	\$ 464,000	\$ -	\$ 536,399

Total Expenditures	\$ 72,399	\$ -	\$ -	\$ 464,000	\$ -	\$ 536,399
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Funding Sources

	2017	2018	2019	2020	2021	Total
System Development Fees	\$ 72,399	\$ -	\$ -	\$ 464,000	\$ -	\$ 536,399

Total Funding Sources	\$ 72,399	\$ -	\$ -	\$ 464,000	\$ -	\$ 536,399
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Operational Impact

Improvements to existing facilities will likely result in an estimated reduction in maintenance expenditures.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

WASTEWATER FUND

UTILITIES DEPARTMENT

PROJECTS & FUNDING SOURCES BY DEPARTMENT

Project Expenditures	2017	2018	2019	2020	2021	Total
Lift Station Upgrades	\$ 494,400	\$ 207,000	\$ 217,000	\$ 217,000	\$ 217,000	\$ 1,352,400
Sewer Line Rehabilitation	385,000	740,000	350,000	350,000	350,000	2,175,000
Security and SCADA System Improvements	50,000	50,000	50,000	50,000	50,000	250,000
PCWRA Projects	4,621,476	3,217,636	3,317,643	26,992,650	2,252,051	40,401,456
Craig & Gould N. Improvements	-	-	250,000	105,000	-	355,000
Kinner Street Bottleneck	-	-	-	-	2,117,000	2,117,000
Admin. and Customer Service Building	-	-	588,308	-	-	588,308
Site Improvements at 175 Kellogg Court	85,367	-	-	563,140	-	648,507
Total Expenditures by Year	\$ 5,636,243	\$ 4,214,636	\$ 4,772,951	\$ 28,277,790	\$ 4,986,051	\$ 47,887,671
Project Funding Sources	2017	2018	2019	2020	2021	Total
System Development Fees	\$ 4,233,313	\$ 2,744,106	\$ 3,432,421	\$ 27,035,400	\$ 4,204,051	\$ 41,649,293
Wastewater Service Charges	1,402,930	1,470,530	1,340,530	1,242,390	782,000	6,238,378
Total Funding Sources by Year	\$ 5,636,243	\$ 4,214,636	\$ 4,772,951	\$ 28,277,790	\$ 4,986,051	\$ 47,887,671

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Lift Station Upgrades

Project Number:	Multiple	5 Year Historical Total	\$ 127,562
Contact:	Jeanne Stevens, Engineering Manager	2017-2021 Total	1,352,400
Department:	Utilities Department	CIP Project Total (2012-2021):	\$ 1,479,962
Category:	Equipment		
Type:	Replacement		
Useful Life:	20 years		

Description and Justification

The Lift Station Upgrades project is intended to accommodate multiple improvements to the Town's lift stations. The purpose of the pump and motor replacement project is to plan for the capital replacement of pumps and/or motors at Wastewater lift stations. The lift stations transport wastewater to the Plum Creek Wastewater Reclamation Authority for treatment. Pump and motor replacements are identified annually or on an emergency basis. The paving program improves access to Wastewater lift stations that may currently only be accessible along unimproved, unpaved access drives. The facilities must be accessible at all times. Paving the access roads will improve accessibility. Current planned improvements include paving access roads at the Meadows 17, Castlewood No. 1 & 2, and Maher Lift Stations. Pumps and motors at wastewater lift stations have a finite service life and replacement must be planned on an ongoing basis. Employee safety and year round access to the lift station are accommodated through this project. Lift stations are typically checked multiple times per week.

Expenditures	2017	2018	2019	2020	2021	Total
LS Rehab/Replacement	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 125,000
Lift Station Pump & Motor Replacement	35,000	40,000	50,000	50,000	50,000	225,000
Lift Station Mixing Improvements	32,000	32,000	32,000	32,000	32,000	160,000
Castle Oaks Lift Station Improvements	200,000	-	-	-	-	200,000
Meadows 17 LS Access Road Paving	65,400	-	-	-	-	65,400
Castlewood LS #2 Access Road Paving	27,000	-	-	-	-	27,000
WW Facility VFD Replacements	110,000	110,000	110,000	110,000	110,000	550,000
Total Expenditures	\$ 494,400	\$ 207,000	\$ 217,000	\$ 217,000	\$ 217,000	\$ 1,352,400

Funding Sources	2017	2018	2019	2020	2021	Total
Wastewater Service Charges	\$ 494,400	\$ 207,000	\$ 217,000	\$ 217,000	\$ 217,000	\$ 1,352,400
Total Funding Sources	\$ 494,400	\$ 207,000	\$ 217,000	\$ 217,000	\$ 217,000	\$ 1,352,400

Operational Impact

Improvements and replacements to equipment typically result in reduced maintenance costs, which are unknown until project implementation and will be incorporated at that time.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Sewer Line Rehabilitation

Project Number: 75-62

Contact: Jeanne Stevens, Engineering Manager

Department: Utilities Department

Category: Infrastructure

Type: Repair

Useful Life: 50 years

5 Year Historical Total \$ 1,195,541

2017-2021 Total 2,175,000

CIP Project Total (2012-2021): \$ 3,370,541

Description and Justification

This project is intended to rehabilitate or replace existing sewer lines due to age or failing infrastructure. This is an ongoing program and focus areas are identified annually. The Engineering division will work with the Operations division to identify areas that need sewer improvements and coordinate with the Public Works department to complete projects ahead of the Pavement Maintenance Program to minimize the impact of Townwide roadwork. This project funds the replacement and rehabilitation of old, undersized and/or deteriorated sewer lines. The Sewer Rehabilitation Program will address the requirements of Environmental Protection Agency's (EPA) Capacity, Management, Operation and Maintenance (CMOM) programs. Additional funds are included in 2017 and 2018 for sewer line improvements along Gordon Drive. This work is being coordinated with additional street improvements planned by the Public Works Department.

Expenditures	2017	2018	2019	2020	2021	Total
Repair	\$ 350,000	\$ 350,000	\$ 350,000	\$ 350,000	\$ 350,000	\$ 1,750,000
Gordon Dr. Sewer Improvements	35,000	390,000	-	-	-	425,000
Total Expenditures	\$ 385,000	\$ 740,000	\$ 350,000	\$ 350,000	\$ 350,000	\$ 2,175,000

Funding Sources	2017	2018	2019	2020	2021	Total
Wastewater Service Charges	\$ 385,000	\$ 740,000	\$ 350,000	\$ 350,000	\$ 350,000	\$ 2,175,000
Total Funding Sources	\$ 385,000	\$ 740,000	\$ 350,000	\$ 350,000	\$ 350,000	\$ 2,175,000

Operational Impact

The operational impact of this project is unknown at this time.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name **Security and SCADA System Improvements**

Project Number:	Multiple	5 Year Historical Total	\$	55,980
Contact:	Tim Friday, Assistant Utilities Director	2017-2021 Total		250,000
Department:	Utilities Department	CIP Project Total (2012-2021):	\$	305,980
Category:	Building			
Type:	Upgrade			
Useful Life:	20 years			

Description and Justification

These miscellaneous small projects are needed to increase security at wastewater facilities in accordance with the vulnerability assessment. The vulnerability assessment identifies security and system integrity needs that may present a risk to public health and safety. Examples of improvements are fences, gates, cameras and alarms. The System Control and Data Acquisition (SCADA) system components are in need of system improvements, which are provided for in this project. SCADA system components are required to transmit data such as alarms, flow, temperature, and other information to the Utilities Department's control facilities. Planned improvements include the automation of several pressure reducing valve stations identified in the Water Master Plan. Most of this work will be performed by Utilities staff. These various projects include installing or replacing electronic access control, locks, and surveillance as needed at all wastewater facilities. Security at all Town of Castle Rock facilities is important for safeguarding investments in infrastructure and ensuring employee safety. Future year projects that are identified in the Water Master Plan will need to be implemented in order to ensure distribution system reliability and capacity to deliver water in growing areas. SCADA components also need to be replaced regularly due to changing technology and obsolescence of parts.

Expenditures	2017	2018	2019	2020	2021	Total
Security Improvements	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 125,000
SCADA System Improvements	25,000	25,000	25,000	25,000	25,000	125,000
Total Expenditures	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 250,000

Funding Sources	2017	2018	2019	2020	2021	Total
Wastewater Service Charges	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 250,000
Total Funding Sources	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 250,000

Operational Impact

No additional operating expenditures or revenues are anticipated as a result of this project.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

PCWRA Projects

Project Number:	Multiple	5 Year Historical Total	\$ 9,769,290
Contact:	Jeanne Stevens, Engineering Manager	2017-2021 Total	40,401,456
Department:	Utilities Department	CIP Project Total (2012-2021):	\$ 50,170,746
Category:	Infrastructure		
Type:	New		
Useful Life:	50 years		

Description and Justification

The Plum Creek Water Reclamation Authority (PCWRA) is a regional reclamation facility that serves the Town of Castle Rock, Castle Pines, and Castle Pines North. The Capital Buy-In project accommodates the Town of Castle Rock share of PCWRA debt which include two Colorado Water Resources and Power Development Authority (2001 and 2002) loans and Clean Water Revenue Bonds Series 2005 for capacity expansion and treatment. This project also provides funding for capital repair and replacement including replacement of pumps, motors, and blowers, and general facilities maintenance. The Town of Castle Rock does not perform wastewater treatment. The Ditch Three project will equip Oxidation Ditch Three at the wastewater reclamation facility, which was not originally equipped, to accommodate future wastewater flows associated with planned development and future growth. An oxidation ditch is a concrete channel that funnels wastewater into the treatment plant. The ditch is the first phase of wastewater treatment using biological agents. Pumps, blowers, and motors are required to equip the ditch for operation. The Manganese Control project accomplishes facility improvements to control dissolved manganese in order to meet future EPA regulatory requirements.

Expenditures	2017	2018	2019	2020	2021	Total
Capital Buy-In	\$ 2,404,007	\$ 2,500,167	\$ 2,600,174	\$ 2,704,181	\$ 2,002,051	\$ 12,210,580
Ditch Three at PCWRA	233,469	233,469	233,469	233,469	-	933,876
Manganese Control at PCWRA	200,000	200,000	200,000	200,000	-	800,000
PCWRA Rehab/Replacement	284,000	284,000	284,000	355,000	250,000	1,457,000
PCWRA Capacity Expansion	1,500,000	-	-	23,500,000	-	25,000,000
Total Expenditures	\$ 4,621,476	\$ 3,217,636	\$ 3,317,643	\$ 26,992,650	\$ 2,252,051	\$ 40,401,456

Funding Sources	2017	2018	2019	2020	2021	Total
System Development Fees	\$ 4,147,946	\$ 2,744,106	\$ 2,844,113	\$ 26,472,260	\$ 2,087,051	\$ 38,295,478
Wastewater Service Charges	473,530	473,530	473,530	520,390	165,000	2,105,978
Total Funding Sources	\$ 4,621,476	\$ 3,217,636	\$ 3,317,643	\$ 26,992,650	\$ 2,252,051	\$ 40,401,456

Operational Impact

Operating Expenditures for PCWRA are included in the capital buy-in payments displayed above.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Craig & Gould N. Improvements

Project Number: 76-51

Contact: Jeanne Stevens, Engineering Manager

Department: Utilities Department

Category: Infrastructure

Type: Replacement

Useful Life: 50 years

5 Year Historical Total \$ -

2017-2021 Total 355,000

CIP Project Total (2012-2021): \$ 355,000

Description and Justification

This project will accomplish infrastructure improvements in the Craig & Gould neighborhood. Aging and undersized sewers will be replaced and deteriorated manholes will be replaced or rehabilitated. Existing sewer lines are greater than 70 years old and need to be replaced. This project will be coordinated with the Public Works department to coincide with the annual Pavement Maintenance Program in order to minimize the construction impact on the community.

Expenditures	2017	2018	2019	2020	2021	Total
Construction	\$ -	\$ -	\$ 250,000	\$ 105,000	\$ -	\$ 355,000

Total Expenditures	\$ -	\$ -	\$ 250,000	\$ 105,000	\$ -	\$ 355,000
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Funding Sources	2017	2018	2019	2020	2021	Total
Wastewater Service Charges	\$ -	\$ -	\$ 250,000	\$ 105,000	\$ -	\$ 355,000

Total Funding Sources	\$ -	\$ -	\$ 250,000	\$ 105,000	\$ -	\$ 355,000
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Operational Impact

The rehabilitation of aging equipment will likely result in reduced maintenance expenditures, which will not be known until project completion.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Kinner Street Bottleneck

Project Number: 75-81

Contact: Jeanne Stevens, Engineering Manager

Department: Utilities Department

Category: Infrastructure

Type: Repair

Useful Life: 50 years

5 Year Historical Total \$ -

2017-2021 Total 2,117,000

CIP Project Total (2012-2021): \$ 2,117,000

Description and Justification

This project is intended to upsize nearly 3,000 linear feet of existing 18 and 21-inch sanitary sewer main to 21 and 24 inches respectively. This project involves construction which will cross I-25, Plum Creek, and Wolfensberger Road. The most recent hydraulic modeling indicated that this project might not be needed, but it is being identified as a future project to review with each master planning effort. Development in and around Kinner Street and Wolfensberger Road could dictate that this project be completed sooner than anticipated

Expenditures	2017	2018	2019	2020	2021	Total
Kinner St. Bottleneck	\$ -	\$ -	\$ -	\$ -	\$ 2,117,000	\$ 2,117,000

Total Expenditures	\$ -	\$ -	\$ -	\$ -	\$ 2,117,000	\$ 2,117,000
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Funding Sources	2017	2018	2019	2020	2021	Total
System Development Fees	\$ -	\$ -	\$ -	\$ -	\$ 2,117,000	\$ 2,117,000

Total Funding Sources	\$ -	\$ -	\$ -	\$ -	\$ 2,117,000	\$ 2,117,000
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Operational Impact

Improvements and replacements to equipment typically result in reduced maintenance costs, which will not be known until project completion.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Admin. and Customer Service Building

Project Number: 77-57

Contact: Tim Friday, Assistant Utilities Director

Department: Utilities Department

Category: Building

Type: New

Useful Life: 50 years

5 Year Historical Total \$ -

2017-2021 Total 588,308

CIP Project Total (2012-2021): \$ 588,308

Description and Justification

This project accommodates construction of a new Administration and Customer Service Building for the Utilities Department. The existing Kellogg Facility will be repurposed for staff currently housed in trailers. This building will accommodate the existing and future Administration and Customer Service staff within Utilities. The Admin/CS Team currently is short of space by approximately 3,000 square feet. The new facility will be designed and constructed to meet the needs of the department through buildout. A site assessment was conducted in the 1st quarter of 2013 that details existing and future conditions, and identifies space needs for the Utilities Department. Construction is targeted for 2019 with funding split across the four Utilities enterprise funds based upon staffing proportions. The Wastewater Fund's portion of 2019 funding will be a drawdown of CIP Reserves accumulated in prior years and departmentally designated plus system development fees and rates revenues accumulated over a 5-year period (2015-2019).

Expenditures	2017	2018	2019	2020	2021	Total
Construction	\$ -	\$ -	\$ 588,308	\$ -	\$ -	\$ 588,308

Total Expenditures	\$ -	\$ -	\$ 588,308	\$ -	\$ -	\$ 588,308
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Funding Sources	2017	2018	2019	2020	2021	Total
System Development Fees	\$ -	\$ -	\$ 588,308	\$ -	\$ -	\$ 588,308

Total Funding Sources	\$ -	\$ -	\$ 588,308	\$ -	\$ -	\$ 588,308
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Operational Impact

There are general operations expenditures of approximately \$30,000 per year. The Water fund's portion is \$12,119 per year, the Water Resources fund portion is \$5,689 per year, the Stormwater fund's portion is \$5,510 per year, and the Wastewater fund portion is \$6,682 per year.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Site Improvements at 175 Kellogg Court

Project Number: 70-10

Contact: Tim Friday, Assistant Utilities Director

Department: Utilities Department

Category: Building

Type: New

Useful Life: 30 years

5 Year Historical Total \$ -

2017-2021 Total 648,507

CIP Project Total (2012-2021): \$ 648,507

Description and Justification

This project is part of overall facilities planning for the Utilities Department and includes paving, landscaping, construction of a truck washing facility, and additional equipment storage upon completion of the Operations and Maintenance center and Administration and Customer Service buildings. Funds will be used for parking lot paving in 2017 following construction of the Operations and Maintenance Center and to help maintain, repair, and make improvements to the facilities at 175 Kellogg Court in 2020.

Expenditures

	2017	2018	2019	2020	2021	Total
Construction	\$ 85,367	\$ -	\$ -	\$ 563,140	\$ -	\$ 648,507

Total Expenditures	\$ 85,367	\$ -	\$ -	\$ 563,140	\$ -	\$ 648,507
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Funding Sources

	2017	2018	2019	2020	2021	Total
System Development Fees	\$ 85,367	\$ -	\$ -	\$ 563,140	\$ -	\$ 648,507

Total Funding Sources	\$ 85,367	\$ -	\$ -	\$ 563,140	\$ -	\$ 648,507
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Operational Impact

Improvements to existing facilities will likely result in an estimated reduction in maintenance expenditures.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

COMMUNITY CENTER FUND

PARKS & RECREATION DEPARTMENT

PROJECTS & FUNDING SOURCES BY DEPARTMENT

Project Expenditures	2017	2018	2019	2020	2021	Total
Fitness Equipment Replacement	\$ 75,000	\$ -	\$ 270,000	\$ -	\$ -	\$ 345,000
MAC Wall Improvement	50,000	-	-	-	-	50,000
Chiller & Condenser Replacement	200,000	-	-	-	-	200,000
Handicap Ramp for Rec. Center Modular	30,000	-	-	-	-	30,000
Boiler Replacements	-	210,000	-	-	-	210,000
Lap Pool Pumps Replacement	-	30,000	-	-	-	30,000
Addition of Spin Room Air Handling Unit	-	35,000	-	-	-	35,000
Total Expenditures by Year	\$ 355,000	\$ 275,000	\$ 270,000	\$ -	\$ -	\$ 900,000

Project Funding Sources	2017	2018	2019	2020	2021	Total
Sales Tax	\$ 355,000	\$ 225,000	\$ 270,000	\$ -	\$ -	\$ 850,000
Building Use Tax	-	50,000	-	-	-	50,000
Total Funding Sources by Year	\$ 355,000	\$ 275,000	\$ 270,000	\$ -	\$ -	\$ 900,000



Splash pad amenity, new in 2016, located just outside of the Miller Activity Center at Philip S. Miller Park

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name Fitness Equipment Replacement

Project Number:	70-30				
Contact:	Mike Kilman, Recreation Manager	5 Year Historical Total	\$	565,948	
Department:	Parks & Recreation Department	2017-2021 Total		345,000	
Category:	Equipment	CIP Project Total (2012-2021):	\$	910,948	
Type:	Replacement				
Useful Life:	Varies by Equipment Type				

Description and Justification

This request includes the replacement of free weight equipment in 2017 and cardio equipment in 2019 at the Recreation Center. Although the fitness equipment replacement is budgeted as a purchase for each year, the decision to lease or purchase will be made in each year to determine the best option for the Community Center Fund at that time.

The free weight equipment has a life expectancy of 10 years and will need to be replaced in 2017 with updated models. The cardio equipment is scheduled for replacement in August 2016 and will be three years old at the scheduled time of replacement in 2019 according to recommended industry standards. Equipment replacement is necessary in order to maintain safety and functionality for Recreation Center users.

Expenditures	2017	2018	2019	2020	2021	Total
Free Weight Equipment	\$ 75,000	\$ -	\$ -	\$ -	\$ -	\$ 75,000
Cardio Equipment	-	-	270,000	-	-	270,000
Total Expenditures	\$ 75,000	\$ -	\$ 270,000	\$ -	\$ -	\$ 345,000

Funding Sources	2017	2018	2019	2020	2021	Total
Sales Tax	\$ 75,000	\$ -	\$ 270,000	\$ -	\$ -	\$ 345,000
Total Funding Sources	\$ 75,000	\$ -	\$ 270,000	\$ -	\$ -	\$ 345,000

Operational Impact

No future expenditures are anticipated as a result of this project. General improvements to the facility may attract additional patronage.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

MAC Wall Improvement

Project Number: 70-20

Contact: Mike Kilman, Recreation Manager

Department: Parks & Recreation Department

Category: Building

Type: Upgrade

Useful Life: 15 Years

5 Year Historical Total \$ -

2017-2021 Total 50,000

CIP Project Total (2012-2021): \$ 50,000

Description and Justification

This request is for installation of a sport resistant wall material (panel or plywood) for the three walls surrounding the half turf area at the Miller Activity Complex.

Due to the amount of lacrosse and soccer programming in the area, there is significant wear and tear to the walls. Continued use will provide further damage to the walls and require that new material be installed.

Expenditures	2017	2018	2019	2020	2021	Total
Building Improvements	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ 50,000
Total Expenditures	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ 50,000

Funding Sources	2017	2018	2019	2020	2021	Total
Sales Tax	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ 50,000
Total Funding Sources	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ 50,000

Operational Impact

No future expenditures are anticipated as a result of this project. General improvements to the facility may attract additional patronage.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Chiller & Condenser Replacement

Project Number: 70-30

Contact: Mike Kilman, Recreation Manager

Department: Parks & Recreation Department

Category: Building

Type: Replacement

Useful Life: 20 Years

5 Year Historical Total \$ -

2017-2021 Total 200,000

CIP Project Total (2012-2021): \$ 200,000

Description and Justification

The replacement of an existing chiller and condenser at the Recreation Center is requested. This equipment will be added to the building automation system during installation.

The chiller and condenser unit in Air Handling Unit #5 cools the entire north end of the building. During recent summers the unit has not been working properly causing the Senior Center along with the rest of the building to become too warm. The chiller and condenser are the original equipment installed in 1997. Replacement is required in order to keep up with customer needs and to continue to offer recreational programming in the fitness studio and cardio area.

Expenditures	2017	2018	2019	2020	2021	Total
Building Improvements	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ 200,000
Total Expenditures	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ 200,000

Funding Sources	2017	2018	2019	2020	2021	Total
Sales Tax	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ 200,000
Total Funding Sources	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ 200,000

Operational Impact

No future expenditures are anticipated as a result of this project. General improvements to the facility may attract additional patronage.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name **Handicap Ramp for Rec. Center Modular**

Project Number: 70-30

Contact: Mike Kilman, Recreation Manager

Department: Parks & Recreation Department

Category: Building

Type: New

Useful Life: 30 Years

5 Year Historical Total \$ -

2017-2021 Total 30,000

CIP Project Total (2012-2021): \$ 30,000

Description and Justification

The installation of a handicap accessible ramp is requested at a modular building located at the Recreation Center. The modular is currently without this accommodation and installation of this ramp is required in order to meet ADA state regulations.

Expenditures	2017	2018	2019	2020	2021	Total
Building Improvements	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ 30,000
Total Expenditures	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ 30,000

Funding Sources	2017	2018	2019	2020	2021	Total
Sales Tax	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ 30,000
Total Funding Sources	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ 30,000

Operational Impact

No future expenditures are anticipated as a result of this project. General improvements to the facility may attract additional patronage.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Boiler Replacements

Project Number: 70-30
 Contact: Mike Kilman, Recreation Manager
 Department: Parks & Recreation Department
 Category: Building
 Type: Replacement
 Useful Life: 10 Years

5 Year Historical Total	\$	-
2017-2021 Total		210,000
CIP Project Total (2012-2021):	\$	210,000

Description and Justification

Expenditures are requested in the Community Center Fund to replace the existing Spa boiler at the Recreation Center and the Butterfield Pool boiler.

The current Spa boiler at the Recreation Center stops working intermittently and requires continuous repairs by an outside contractor. Individual repair costs will eventually be more than replacing the existing boiler over the next few years. The new boiler will be added to the building automation system during installation. The existing boiler will be 12 years old; the average life expectancy for this type of equipment is only 10 years. Without replacement the Hot Tub and Steam Room will eventually be unavailable to Recreation Center customers. Equipment replacement is necessary in order to maintain safety and functionality for Recreation Center users.

Similarly, the boiler at Butterfield Pool, located within Butterfield Park, is 11 years old and is due for replacement. This unit is set up without gas staging, meaning that the boiler is either on or off and is not efficient. The more efficient boilers are staged so that the burners will come on in stages and not all at once. This boiler only runs during the times the pool is open and full, usually four months out of the year, the rest of the time the boiler sits inactive. This period of inactivity is hard on the boiler, being inactive makes it more susceptible to rust and corrosion since there is no heat to burn off moisture. Rust is starting to develop internally which is dropping the efficiency of the boiler. The cost for this boiler will be shared between the Community Center Fund and the General Long Term Planning Fund.

Expenditures	2017	2018	2019	2020	2021	Total
Spa Boiler	\$ -	\$ 110,000	\$ -	\$ -	\$ -	\$ 110,000
Butterfield Pool Boiler	-	100,000	-	-	-	100,000
Total Expenditures	\$ -	\$ 210,000	\$ -	\$ -	\$ -	\$ 210,000

Funding Sources	2017	2018	2019	2020	2021	Total
Sales Tax	\$ -	\$ 160,000	\$ -	\$ -	\$ -	\$ 160,000
Building Use Tax	-	50,000	-	-	-	50,000
Total Funding Sources	\$ -	\$ 210,000	\$ -	\$ -	\$ -	\$ 210,000

Operational Impact

No future expenditures are anticipated as a result of this project. General improvements to the facility may attract additional patronage.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name Lap Pool Pumps Replacement

Project Number:	70-30	5 Year Historical Total	\$	-
Contact:	Mike Kilman, Recreation Manager	2017-2021 Total		30,000
Department:	Parks & Recreation Department	CIP Project Total (2012-2021):	\$	30,000
Category:	Building			
Type:	Replacement			
Useful Life:	20 Years			

Description and Justification

The replacement of existing lap pool pumps at the Recreation Center is requested. The current pumps have deteriorated and are in need of replacement within the next two years.

The existing lap pool pumps will be 20 years old by 2018; this will bring them to their maximum life expectancy. These pumps are in continuous use 24 hours per day and without them, the lap pool would not be available for use to our customers due to Colorado State Regulations. Equipment replacement is necessary in order to maintain safety and functionality for Recreation Center users.

Expenditures	2017	2018	2019	2020	2021	Total
Building Improvements	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ 30,000
Total Expenditures	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ 30,000

Funding Sources	2017	2018	2019	2020	2021	Total
Sales Tax	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ 30,000
Total Funding Sources	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ 30,000

Operational Impact

No future expenditures are anticipated as a result of this project. General improvements to the facility may attract additional patronage.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name Addition of Spin Room Air Handling Unit

Project Number:	70-30	5 Year Historical Total	\$	-
Contact:	Mike Kilman, Recreation Manager	2017-2021 Total		35,000
Department:	Parks & Recreation Department	CIP Project Total (2012-2021):	\$	35,000
Category:	Building			
Type:	New			
Useful Life:	20 Years			

Description and Justification

Expenditures are requested in the Recreation Center fund to add an air handling unit (AHU) to the existing spin room at the Recreation Center. The new AHU will be added to the building automation system during installation.

The spin room was added several years ago to the Recreation Center. It requires extremely cool temperatures due to the nature of the fitness programming which utilizes the area. At the time of the addition the area was added to the existing air handling unit which controls the Senior Center, cardio area, Panorama Hall, north lobby, studio, pottery room and Tykes Toyland. Unfortunately, the existing unit has not been able to keep up with the increased volume of customers and fitness class requirements. External fans have been installed to help with cooling the room but this option has not been ideal with many complaints received by our customers.

Expenditures	2017	2018	2019	2020	2021	Total
Building Improvements	\$ -	\$ 35,000	\$ -	\$ -	\$ -	\$ 35,000
Total Expenditures	\$ -	\$ 35,000	\$ -	\$ -	\$ -	\$ 35,000

Funding Sources	2017	2018	2019	2020	2021	Total
Sales Tax	\$ -	\$ 35,000	\$ -	\$ -	\$ -	\$ 35,000
Total Funding Sources	\$ -	\$ 35,000	\$ -	\$ -	\$ -	\$ 35,000

Operational Impact

No future expenditures are anticipated as a result of this project. General improvements to the facility may attract additional patronage.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

FLEET SERVICES FUND

PUBLIC WORKS DEPARTMENT

PROJECTS & FUNDING SOURCES BY DEPARTMENT

Project Expenditures	2017	2018	2019	2020	2021	Total
Vehicles and Equipment	\$ 5,344,119	\$ 3,184,400	\$ 2,431,053	\$ 2,437,517	\$ 3,422,660	\$ 16,819,749
Total Expenditures by Year	\$ 5,344,119	\$ 3,184,400	\$ 2,431,053	\$ 2,437,517	\$ 3,422,660	\$ 16,819,749

Project Funding Sources	2017	2018	2019	2020	2021	Total
Vehicle Replacement Contributions	\$ 3,194,176	\$ 2,745,633	\$ 2,092,094	\$ 2,276,754	\$ 3,203,017	\$ 13,511,674
Vehicle Salvage	245,351	187,597	153,250	160,763	219,643	966,604
Transfers from Other Funds	1,904,592	251,170	185,709	-	-	2,341,471
Total Funding Sources by Year	\$ 5,344,119	\$ 3,184,400	\$ 2,431,053	\$ 2,437,517	\$ 3,422,660	\$ 16,819,749

Summary of 2017 Vehicle Additions			
Department	Make & Model	Estimated Cost	Justification
DoIT	Ford Escape	\$ 32,000	Staff requires additional transportation to maintain levels of service. Salvage vehicles have been used previously.
DoIT	Ford Escape	32,000	Staff requires additional transportation to maintain levels of service. Salvage vehicles have been used previously.
Police	Ford Explorer	58,350	One new vehicle is needed to accommodate the hiring of two additional police officers in 2017
Fire/Development Services	Ford F-150	53,962	This vehicle is needed to accommodate the addition of a Fire Prevention Officer
Fire	Ford F-550	340,000	This vehicle is needed for the new fire station planned for construction in 2017 in Crystal Valley Ranch
Fire	HME Quint	1,150,000	This vehicle is needed for the new fire station planned for construction in 2017 in Crystal Valley Ranch
Development Services	Ford Escape	31,034	This vehicle is needed to accommodate the addition of a Combo Building Inspector
Development Services	Ford Escape	30,278	This vehicle is needed to accommodate the addition of a Neighborhood Services Liaison
Public Works	Ford F-150	30,511	This vehicle is needed to accommodate two additional seasonal personnel in Traffic Engineering
Public Works	Ford F-350	146,457	This vehicle is needed to accommodate the addition of a Traffic Signal Technician
Total		\$ 1,904,592	

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Vehicles and Equipment

Project Number: 70-40

Contact: Paul Colell, Fleet Manager

Department: Public Works Department

Category: Vehicles

Type: Replacement

Useful Life: 4-15 years

5 Year Historical Total \$ 11,640,147

2017-2021 Total 16,819,749

CIP Project Total (2012-2021): \$ 28,459,896

Description and Justification

The vehicle replacement program is funded through departmental contributions made to the Fleet Fund, which is an internal service fund intended for replacement of Town vehicles and equipment. Departments that operate vehicles and equipment enrolled in the Vehicle Replacement Program budget Vehicle Replacement Contributions annually for the purpose of replacing existing units. The units in the following pages include vehicles scheduled for replacement. However, vehicles and equipment lives may be extended or replaced earlier if necessary. The inflation rate assumed for future vehicle purchases varies by vehicle type, with an average of about 3%. In accordance with the Town's Vehicle Replacement Policy, unit age, usage, and historical maintenance costs are used to determine the replacement timing of vehicles and equipment in the program. The Town uses the Best Practice method recommended by the American Public Works Association. Other factors include type of use, operating weather conditions, and operating terrain. Once a vehicle has met the replacement criteria, there is a thorough review process by Fleet management, the operating department, and the Fleet Advisory Committee to determine if the vehicle should be replaced, retained for limited use, or extend the vehicles life cycle. Because vehicles may be equipped with different equipment based upon their usage, the cost for similar vehicles will vary.

The following pages detail the requested replacements and additions to the Town's fleet by department.

Expenditures	2017	2018	2019	2020	2021	Total
Vehicles & Equipment	\$ 5,344,119	\$ 3,184,400	\$ 2,431,053	\$ 2,437,517	\$ 3,422,660	\$ 16,819,749
Total Expenditures	\$ 5,344,119	\$ 3,184,400	\$ 2,431,053	\$ 2,437,517	\$ 3,422,660	\$ 16,819,749

Funding Sources	2017	2018	2019	2020	2021	Total
Vehicle Replacement Contributions	\$ 3,194,176	\$ 2,745,633	\$ 2,092,094	\$ 2,276,754	\$ 3,203,017	\$ 13,511,674
Vehicle Salvage	245,351	187,597	153,250	160,763	219,643	966,604
Transfers from Other Funds	1,904,592	251,170	185,709	-	-	2,341,471
Total Funding Sources	\$ 5,344,119	\$ 3,184,400	\$ 2,431,053	\$ 2,437,517	\$ 3,422,660	\$ 16,819,749

Operational Impact

Increases in operational expenditures, including gasoline and maintenance for 2017 are primarily related to vehicle additions, and are estimated to be approximately \$12,000. Additional amounts are included for operational needs in the department budgets in which contributions occur from.

2017 Schedule of Vehicle & Equipment Purchase			
Department and Vehicle Use	Vehicle Make/Model	Estimated Salvage Value	Estimated Cost *
DoIT Department			
Vehicle Additions; SUV, General Purpose, Light Duty	Ford Escape	\$ -	\$ 32,000
Vehicle Additions; SUV, General Purpose, Light Duty	Ford Escape	-	32,000
Total DoIT Department	2	\$ -	\$ 64,000
Facilities Department			
Trucks, Light Duty	Ford F-150	1,967	26,340
Total Facilities Department	1	\$ 1,967	\$ 26,340
Police Department			
Sedan, Patrol	Ford Interceptor AWD	4,313	57,202
Sedan, Patrol	Ford Interceptor AWD	4,313	57,202
SUV, Police Patrol	Ford Expedition	3,889	51,576
Vehicle Additions; SUV, Police Patrol	Ford Explorer	-	58,350
Total Police Department	4	\$ 12,515	\$ 224,330
Fire Department			
Fire Response, Brush Trucks, Hazmat	Ford F-550	14,807	196,363
Fire, Response, Ambulance	Ford F-450	14,916	206,110
Fire, Response, Ambulance	Ford F-450	14,916	206,110
Fire Response, Pumps, Quints, Rescue	HME	88,000	1,166,990
Vehicle Additions; Trucks, Light Duty (1/2 Split with Development Services)	Ford F-150	-	53,962
Vehicle Additions; Fire Response, Brush Trucks, Hazmat	Ford F-550	-	340,000
Vehicle Additions; Fire Response, Pumps, Quints, Rescue	HME	-	1,150,000
Total Fire Department	7	\$ 132,639	\$ 3,319,535
Development Services Department			
Trucks, Light Duty	Chevrolet Colorado	1,845	24,470
Vehicle Additions; SUV, General Purpose, Light Duty	Ford Escape SE	-	31,034
Vehicle Additions; SUV, General Purpose, Light Duty	Ford Escape SE	-	30,278
Total Development Services Department	3	\$ 1,845	\$ 85,782
Transportation Fund			
Equipment, Off-Road, Loaders, Tractors, Graders	Crafco SS125	3,247	43,062
Equipment, Off-Road, Loaders, Tractors, Graders	Graco LL 3900	506	6,713
Equipment, Off-Road, Loaders, Tractors, Graders	Fairmount F20	698	9,261
Heavy Equipment Off-Road, Loaders, Tractors, Graders	John Deere 544G	16,229	217,305
Sweepers	Elgin Pelican	20,839	279,038
Trucks, Medium Duty	Ford F-250 SD	3,854	51,607
Vehicle Additions; Trucks, Light Duty	Ford F-150	-	30,511
Vehicle Addition; Trucks, Medium Duty	Ford F-350	-	146,457
Total Transportation Fund	8	\$ 45,373	\$ 783,954

* Estimated cost is for a planned vehicle, actual cost may be adjusted according to requirements determined by the department

2017 Schedule of Vehicle & Equipment Purchase (Continued)				
Department and Vehicle Use	Vehicle Make/Model	Estimated Salvage Value	Estimated Cost *	
Parks & Recreation Department				
Equipment, Off-Road, Light duty, Mowers, Carts, Skid Steers, Plows	Bobcat S160N	\$ 2,894	\$	39,124
Equipment, Off-Road, Light duty, Mowers, Carts, Skid Steers, Plows	Bobcat 2120	1,016		13,731
SUV, General Purpose, Light Duty	Ford Explorer	2,168		28,749
Trailers Medium, Light	Vermeer BC1400XL	3,102		41,133
Trucks, Light Duty	Chevrolet Colorado	1,932		25,870
Trucks, Medium Duty	Dodge 2500 ST	2,552		33,847
Trucks, Medium Duty	Dodge Ram 3500	3,583		47,512
Trucks, Medium Duty	Ford F-250 SD	2,780		36,865
Trucks, Medium Duty	Ford F-250 SD	2,785		36,937
Trailers Medium, Light	Superior 2PT6M	585		7,906
Total Parks & Recreation Department	10	\$ 23,397	\$	311,674
Utilities Department				
Heavy Equipment Off-Road, Loaders, Tractors, Graders	Bobcat T300	5,068		78,572
Heavy Equipment Off-Road, Loaders, Tractors, Graders	Bobcat 337	6,094		76,798
Trucks, Light Duty	Ford F-150	2,265		29,746
Trucks, Light Duty	Ford F-150	1,864		24,474
Trucks, Light Duty	Ford F-150	1,727		22,900
Trucks, Light Duty	Ford F-150	2,401		31,531
Trucks, Medium Duty	Dodge 2500 ST	2,447		32,444
Trucks, Medium Duty	Ford F-250	2,684		35,587
Trucks, Medium Duty	Ford F-250 SD	2,304		30,252
Trailers Medium, Light	Butler LT1016	763		10,546
Total Utilities Department	10	\$ 27,615	\$	372,850
Total - All Departments		\$ 245,351	\$	5,188,465
3% Contingency				155,654
2017 Vehicle & Equipment Replacement Total	45	\$ 245,351	\$	5,344,119

* Estimated cost is for a planned vehicle, actual cost may be adjusted according to requirements determined by the department

2018 Schedule of Vehicle & Equipment Purchase				
Department and Vehicle Use	Vehicle Make/Model	Estimated Salvage Value	Estimated Cost *	
Police Department				
Sedan, Patrol	Ford Interceptor AWD	\$ 3,809	\$ 52,032	
Sedan, Patrol	Ford Interceptor AWD	3,809	52,023	
SUV, Police Patrol	Ford Utility AWD	3,775	51,575	
SUV, Police Patrol	Ford Utility AWD	3,775	51,561	
SUV, Police Patrol	Ford Utility AWD	3,775	51,554	
SUV, Police Patrol	Ford Expedition XLT	4,208	57,474	
SUV, Police Patrol	Ford Expedition XLT	4,208	57,474	
SUV, Police Patrol	Ford Expedition XLT	4,412	61,146	
Vehicle Additions; SUV, Police Patrol	Ford Utility AWD	-	60,100	
Vehicle Additions; SUV, Police Patrol	Ford Utility AWD	-	60,127	
Vehicle Additions; SUV, Police Patrol	Ford Utility AWD	-	45,943	
Vehicle Additions; Equipment, Off-Road	Segway	-	15,000	
Vehicle Additions; Equipment, Off-Road	Segway	-	15,000	
Total Police Department	13	\$ 31,771	\$ 631,009	
Fire Department				
Fire, Response, Ambulance	Dodge Ram 4500	14,090	216,704	
Fire Response, Brush Trucks, Hazmat	International	28,515	450,236	
Fire Response, Pumps, Quints, Rescue	HME	47,200	723,665	
Fire Response, Pumps, Quints, Rescue	HME	44,800	723,665	
Total Fire Department	4	\$ 134,605	\$ 2,114,270	
Transportation Fund				
Equipment, Off-Road, Loaders, Tractors, Graders	Coleman Ultra 2500	60	820	
Trucks, Medium Duty	Dodge Ram 3500	3,710	51,420	
Equipment, Off-Road, Loaders, Tractors, Graders	Leeboy L250	1,200	16,385	
Total Transportation Fund	3	\$ 4,970	\$ 68,625	

* Estimated cost is for a planned vehicle, actual cost may be adjusted according to requirements determined by the department

2018 Schedule of Vehicle & Equipment Purchase (Continued)

Department and Vehicle Use	Vehicle Make/Model	Estimated Salvage Value	Estimated Cost *
Parks & Recreation Department			
Trucks, Light Duty	Chevrolet Colorado	\$ 1,932	\$ 26,776
Trucks, Light Duty	Chevrolet Colorado	1,932	26,776
Trucks, Medium Duty	Ford F-250 SD	2,479	33,859
Total Parks & Recreation Department	3	\$ 6,343	\$ 87,411
Community Center Fund			
Vehicle Additions; Vans < 10K GVWR Passenger/Cargo	Ford Transit	-	55,000
Total Community Center Department	1	\$ -	\$ 55,000
Utilities Department			
Equipment, Off-Road, Loaders, Tractors, Graders	Fairmount F20	517	7,058
SUV, General Purpose, Light Duty	Ford Escape Hybrid	2,535	34,621
Trucks, Light Duty	Chevrolet Colorado	1,918	26,203
Trucks, Light Duty	Chevrolet Colorado	1,918	26,203
Trucks, Med Duty	Chevrolet 3500 HD	2,881	39,350
Equipment, Off-Road, Loaders, Tractors, Graders	Briggs & Stratton Vang.	139	1,900
Total Utilities Department	6	\$ 9,908	\$ 135,335
Total - All Departments		\$ 187,597	\$ 3,091,650
3% Contingency			92,750
2018 Vehicle & Equipment Replacement Total	29	\$ 187,597	\$ 3,184,400

* Estimated cost is for a planned vehicle, actual cost may be adjusted according to requirements determined by the department

2019 Schedule of Vehicle & Equipment Purchase				
Department and Vehicle Use	Vehicle Make/Model	Estimated Salvage Value	Estimated Cost *	
Facilities Department				
Vans < 10K GVWR Passenger/Cargo	Ford E250	\$ 2,651	\$	38,022
Total Facilities Department	1	\$ 2,651	\$	38,022
Police Department				
SUV, Police Patrol	Ford Utility AWD	3,889		54,717
SUV, Police Patrol	Ford Utility AWD	3,889		54,717
SUV, Police Patrol	Ford Utility AWD	3,889		54,717
SUV, Police Patrol	Ford Utility AWD	3,813		54,693
SUV, Police Patrol	Ford Expedition XLT	4,544		63,935
SUV, Police Patrol	Ford Expedition XLT	4,002		56,310
SUV, Police Patrol	Ford Utility AWD	3,889		54,717
SUV, Public Safety, Police, Fire	Ford Expedition XLT	3,503		49,280
Vehicle Additions; SUV, Police Patrol	Ford Utility AWD	-		61,903
Vehicle Additions; SUV, Police Patrol	Ford Utility AWD	-		61,903
Vehicle Additions; SUV, Police Patrol	Ford Utility AWD	-		61,903
Total Police Department	8	\$ 31,419	\$	504,989
Fire Department				
SUV, Public Safety, Police, Fire	Ford Expedition	3,874		54,507
SUV, Public Safety, Police, Fire	Ford Expedition	3,874		54,507
Trucks, Light Duty	Ford F-150	3,835		53,955
Total Fire Department	3	\$ 11,584	\$	162,969
Development Services Department				
SUV, General Purpose, Light Duty	Ford Escape XLS	1,931		27,170
Total Development Services Department	1	\$ 1,931	\$	27,170
Transportation Fund				
Equipment, Off-Road, Loaders, Tractors, Graders	Hyster H60XL	2,202		32,198
Sweepers	Elgin NP Pelican	16,781		240,704
Trucks Heavy Duty, Snow Removal, Construction Dumps	International 7400	14,436		207,076
Trucks Heavy Duty, Snow Removal, Construction Dumps	International 7400	14,436		207,076
Trucks, Light Duty	Ford F-150	1,962		27,597
Trailers Medium, Light	Wanco WVTM	1,682		23,667
Trailers Medium, Light	Wanco WTMMB	1,875		26,376
Total Transportation Fund	4	\$ 53,374	\$	764,694

* Estimated cost is for a planned vehicle, actual cost may be adjusted according to requirements determined by the department

2019 Schedule of Vehicle & Equipment Purchase (Continued)				
Department and Vehicle Use	Vehicle Make/Model	Estimated Salvage Value	Estimated Cost *	
Fleet Department				
Trucks, Light Duty	Ford F-150	\$ 1,947	\$ 27,395	
Total Fleet Department	1	\$ 1,947	\$ 27,395	
Parks & Recreation Department				
Equipment, Off-Road, Light duty, Mowers, Carts, Skid Steers, Plows	Toro 4100-D	4,768	69,718	
Heavy Equipment Off-Road, Loaders, Tractors, Graders	John Deere 4300	2,412	33,933	
Trucks, Light Duty	Ford F-150	1,932	27,181	
Trucks, Light Duty	Ford F-150	1,932	27,181	
Trucks, Light Duty	Ford F-150	1,932	27,181	
Trucks, Med Duty	Dodge Ram 3500	2,993	42,103	
Trucks, Med Duty	Ford F-350 SD	2,564	36,070	
Trucks, Med Duty	Ford F-250 SD	2,300	32,358	
Trucks, Med Duty	Ford F-350 SD	2,522	35,483	
Trailers Medium, Light	Superior Tandem Axle	508	7,430	
Total Parks & Recreation Department	10	\$ 23,862	\$ 338,638	
Utilities Department				
Trucks, Light Duty	Chevrolet Colorado	2,049	28,832	
Trucks, Light Duty	Chevrolet Colorado	1,918	26,989	
Trucks, Light Duty	Chevrolet Colorado	1,918	26,989	
Trucks, Light Duty	Chevrolet Colorado	1,918	26,989	
Trucks, Light Duty	Ford F-150	1,931	27,170	
Trucks, Light Duty	Ford F-150	2,499	35,153	
Trucks, Light Duty	Ford F-150	1,931	27,170	
Trucks, Med Duty	Ford F-250 SD	2,117	29,784	
Trucks, Med Duty	Ford F-350 SD	3,714	52,258	
Trucks, Med Duty	Dodge Ram 3500	3,887	54,684	
Trucks, Med Duty	Ford F-250	2,411	33,926	
Trailers Heavy	J.W. Tandem Axle	186	2,619	
Total Utilities Department	12	\$ 26,481	\$ 372,563	
Total - All Departments		153,250	2,360,246	
3% Contingency			70,807	
2019 Vehicle & Equipment Replacement Total	38	\$ 153,250	\$ 2,431,053	

* Estimated cost is for a planned vehicle, actual cost may be adjusted according to requirements determined by the department

2020 Schedule of Vehicle & Equipment Purchase				
Department and Vehicle Use	Vehicle Make/Model	Estimated Salvage Value	Estimated Cost *	
DoIT Department				
SUV, General Purpose, Light Duty	Ford Escape Hybrid	\$ 2,396	\$ 34,723	
Total DoIT Department	1	\$ 2,396	\$ 34,723	
Facilities Department				
Trucks, Medium Duty	Ford F-350 Super Duty	3,211	46,534	
Total Facilities Department	1	\$ 3,211	\$ 46,534	
Police Department				
Equipment, Off-Road, Loaders, Tractors, Graders	Polaris Ranger 800	1,465	21,749	
Sedan General Purpose	Ford Interceptor AWD	2,855	41,373	
SUV, Police Patrol	Ford Utility AWD	3,836	55,588	
SUV, Police Patrol	Ford Utility AWD	3,889	56,358	
SUV, Police Patrol	Ford Utility AWD	3,756	54,422	
SUV, Police Patrol	Ford Utility AWD	3,889	56,358	
SUV, Police Patrol	Ford Utility AWD	3,776	54,717	
SUV, Police Patrol	Ford Utility AWD	4,200	60,862	
SUV, Police Patrol	Ford Utility AWD	4,200	60,862	
SUV, Police Patrol	Ford Expedition XLT	4,406	63,848	
SUV, Public Safety, Police, Fire	Ford Expedition XLT	3,710	53,765	
SUV, Public Safety, Police, Fire	Ford Utility AWD	3,277	47,490	
Trucks, Light Duty	Ford F-150	2,782	40,311	
Trailers Medium, Light	Wells Cargo RF6101	288	4,180	
Total Police Department	14	\$ 46,330	\$ 671,883	
Fire Department				
Fire Response, Brush Trucks, Hazmat	Dodge Ram 5500	14,807	219,830	
Fire Response, Brush Trucks, Hazmat	Dodge Ram 5500	14,807	219,830	
Fire, Response, Ambulance	Dodge Ram 4500	14,836	226,622	
SUV, Public Safety, Police, Fire	Ford Expedition XLT	3,874	56,142	
Total Fire Department	4	\$ 48,325	\$ 722,424	
Development Services Department				
SUV, General Purpose, Light Duty	Jeep Liberty	1,931	27,985	
Total Development Services Department	1	\$ 1,931	\$ 27,985	

* Estimated cost is for a planned vehicle, actual cost may be adjusted according to requirements determined by the department

2020 Schedule of Vehicle & Equipment Purchase (Continued)

Department and Vehicle Use	Vehicle Make/Model	Estimated Salvage Value	Estimated Cost *
Transportation Fund			
Equipment, Off-Road, Loaders, Tractors, Graders	Caterpillar CB334D	\$ 6,714	\$ 102,106
Equipment, Off-Road, Loaders, Tractors, Graders	Graco LL 3900	925	13,402
Heavy Equipment Off-Road, Loaders, Tractors, Graders	Volvo L90D	18,270	271,234
Trailers Medium, Light	Ray-Tech Mini Combo	3,650	52,898
Total Transportation Fund	4	\$ 29,559	\$ 439,640
Fleet Department			
Trucks, Med Duty	Chevrolet 3500HD	3,600	52,167
Total Fleet Department	1	\$ 3,600	\$ 52,167
Parks & Recreation Department			
Equipment, Off-Road, Loaders, Tractors, Graders	Kromer Field Commander	1,711	24,791
Total Parks & Recreation Department	1	\$ 1,711	\$ 24,791
Community Center Fund			
Vans < 10K GVWR Passenger/Cargo	Ford E-350 SD	2,700	39,122
Vans < 10K GVWR Passenger/Cargo	Ford E-350 SD	2,700	39,122
Total Community Center Fund	2	\$ 5,400	\$ 78,244
Utilities Department			
SUV, General Purpose, Light Duty	Jeep Liberty	2,160	31,300
Trailers Medium, Light	Wacker LTC 4L	814	11,801
Trucks Heavy Duty, Snow Removal, Construction Dumps	International 7400	8,292	123,110
Trucks, Med Duty	Chevrolet C-5500	7,033	101,919
Total Utilities Department	4	\$ 18,300	\$ 268,130
Total - All Departments		\$ 160,763	\$ 2,366,521
3% Contingency			70,996
2020 Vehicle & Equipment Replacement Total	31	\$ 160,763	\$ 2,437,517

* Estimated cost is for a planned vehicle, actual cost may be adjusted according to requirements determined by the department

2021 Schedule of Vehicle & Equipment Purchase			
Department and Vehicle Use	Vehicle Make/Model	Estimated Salvage Value	Estimated Cost *
Facilities Department			
Trucks, Med Duty	Ford F-350 SD	\$ 3,064	\$ 45,738
Vans < 10K GVWR Passenger/Cargo	Ford E250	2,651	40,730
Total Facilities Department	1	\$ 5,715	\$ 86,468
Police Department			
Sedan, Patrol	Ford Crown Victoria	3,776	54,716
Sedan, Patrol	Ford Crown Victoria	3,776	54,716
Sedan, Patrol	Ford Crown Victoria	3,776	54,716
SUV, Public Safety, Police, Fire	Ford Utility AWD	3,277	48,914
SUV, Public Safety, Police, Fire	Ford Utility AWD	3,277	48,914
SUV, Public Safety, Police, Fire	Ford Utility AWD	3,277	48,914
SUV, Public Safety, Police, Fire	Ford Utility AWD	3,277	48,914
SUV, Public Safety, Police, Fire	Ford Utility AWD	3,330	49,695
SUV, Public Safety, Police, Fire	Ford Utility AWD	3,939	63,040
SUV, Public Safety, Police, Fire	Ford Utility AWD	3,939	63,040
SUV, Public Safety, Police, Fire	Ford Utility AWD	3,011	48,190
SUV, Public Safety, Police, Fire	Ford Utility AWD	3,939	63,040
Total Police Department	12	\$ 42,593	\$ 646,809
Fire Department			
Fire, Response, Ambulance	Ford F450	16,489	251,866
Fire, Response, Ambulance	Ford F450	16,489	251,866
SUV, Public Safety, Police, Fire, Batt Chief	Ford Expedition EL	5,078	75,785
SUV, Public Safety, Police, Fire	Ford Expedition	3,835	57,240
Trucks, Light Duty	Ford F-150 SSV	3,835	57,240
Trucks, Med Duty	Chevrolet Silverado 3500	3,874	57,827
Total Fire Department	6	\$ 49,600	\$ 751,824
Transportation Fund			
Heavy Equipment Off-Road, Loaders, Tractors, Graders	John Deere 4720	4,320	66,383
Trucks Heavy Duty, Snow Removal, Construction Dumps	International 7400	14,862	228,365
Trucks, Light Duty	Ford F-150	2,358	35,190
Trucks, Light Duty	Ford F-150	2,064	30,807
Trucks, Med Duty	Ford F-350SD	3,854	59,221
Trucks, Med Duty	Ford F-350SD	3,854	59,221
Trucks, Med Duty	Ford F-350SD	3,854	59,221
Sweepers	Schwarze A7000	17,365	268,114
Trailers Medium, Light	Dun-Rite 2LT7M	569	8,489
Total Transportation Fund	9	\$ 53,099	\$ 815,011

* Estimated cost is for a planned vehicle, actual cost may be adjusted according to requirements determined by the department

2021 Schedule of Vehicle & Equipment Purchase (Continued)			
Department and Vehicle Use	Vehicle Make/Model	Estimated Salvage Value	Estimated Cost *
Parks & Recreation Department			
Equipment, Off-Road, Loaders, Tractors, Graders	Bobcat 5600	\$ 4,142	\$ 65,507
Trucks, Light Duty	Ford F-150	1,932	28,836
Trucks, Light Duty	Ford F-150	1,932	28,836
Trailers Medium, Light	Big Tex 70CH-18	236	3,739
Trailers Medium, Light	Big Tex 70CH-18	236	3,739
Total Parks & Recreation Department	5	\$ 8,478	\$ 130,657
Community Center Fund			
Vans < 10K GVWR Passenger/Cargo	Ford E-350 SD	2,700	40,304
Total Community Center Fund	1	\$ 2,700	\$ 40,304
Utilities Department			
Equipment, Off-Road, Loaders, Tractors, Graders	Wachs 77-000-36	5,570	80,737
Heavy Equipment Off-Road, Loaders, Tractors, Graders	Caterpillar 930H	14,953	223,177
SUV, General Purpose, Light Duty	Chevrolet Equinox	1,809	26,229
Trailers Medium, Light	Cornell 3HC-RP-EM16	5,990	89,402
Trucks Heavy Duty, Snow Removal, Construction Dumps	International 5600I	18,889	281,924
Trucks, Light Duty	Ford F-150 SSV	2,601	38,826
Trucks, Light Duty	Ford F-150	1,772	26,451
Trucks, Light Duty	Ford F-150 SSV	2,660	38,566
Trucks, Med Duty	Ford F-350 SD	3,214	46,586
Total Utilities Department	9	\$ 57,457	\$ 851,898
Total - All Departments		\$ 219,643	\$ 3,322,971
3% Contingency			99,689
2021 Vehicle & Equipment Replacement Total	43	\$ 219,643	\$ 3,422,660

* Estimated cost is for a planned vehicle, actual cost may be adjusted according to requirements determined by the department

2017-2021 CAPITAL IMPROVEMENT PROGRAM

GOLF FUND

PARKS & RECREATION DEPARTMENT

PROJECTS & FUNDING SOURCES BY DEPARTMENT

Project Expenditures	2017	2018	2019	2020	2021	Total
Golf Improvements	\$ 150,000	\$ -	\$ -	\$ -	\$ -	\$ 150,000
Golf Maintenance Equipment Repl	97,729	-	-	-	416,825	514,554
Golf Cart Lease	-	-	334,135	-	-	334,135
Total Expenditures by Year	\$ 247,729	\$ -	\$ 334,135	\$ -	\$ 416,825	\$ 998,689

Project Funding Sources	2017	2018	2019	2020	2021	Total
Revenue Bond Proceeds	\$ 150,000	\$ -	\$ -	\$ -	\$ -	\$ 150,000
User Fees	97,729	-	334,135	-	416,825	848,689
Total Funding Sources by Year	\$ 247,729	\$ -	\$ 334,135	\$ -	\$ 416,825	\$ 998,689



The Golf Fund is an enterprise fund, meaning that only user fees are used to pay expenditures related to golf operations, management and improvements

Improvements in 2016 at Red Hawk Ridge Golf Course included the addition of a range ball dispensing building, permanent restrooms and concrete cart paths



2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Golf Improvements

Project Number: 70-10

Contact: Bob Persichetti, Head Golf Professional

Department: Golf

Category: Land

Type: Upgrade

Useful Life: 12-15 Years

5 Year Historical Total \$ 650,000

2017-2021 Total 150,000

CIP Project Total (2012-2021): \$ 800,000

Description and Justification

Capital improvements for the Red Hawk Ridge Golf Course began in 2016 with several clubhouse improvements such as restroom renovation, new entry doors, new walk-in cooler, wind screens on the deck, paving cart paths, the addition of two on-course restroom facilities, practice facility improvements and the start of the bunker renovation project. Depending upon the amount of work that is able to be completed in 2016, the balance of the work is planned for 2017.

At this time, the 2017 projects are planned to include the completion of the cart path paving project and the completion of the bunker renovation project. All projects will allow the golf course to maintain the current level of service and product quality that the golfers have come to expect. Cart path paving enhances the golfer's experience and saves on the wear-and-tear on golf carts and maintenance equipment. Paved cart paths do not erode or wash out onto the fairways which will save the maintenance staff time and money spent on clean-up efforts following rain events. The bunker renovation is about 5 years overdue as renovation is recommended every 12 years, while Red Hawk Ridge is 17 years old. The bunker renovation process will include new drainage in all bunkers, bunker liners and new sand. The playing characteristics of the bunkers will improve and the new drainage will reduce time that maintenance staff time spends on pumping efforts following rain events. Overall, all proposed capital projects will allow staff to maintain, and in some cases increase, the levels of service.

Expenditures	2017	2018	2019	2020	2021	Total
Bunker Renovation	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 40,000
Cart Path Improvement	110,000	-	-	-	-	110,000
Total Expenditures	\$ 150,000	\$ -	\$ -	\$ -	\$ -	\$ 150,000
Funding Sources	2017	2018	2019	2020	2021	Total
Revenue Bond Proceeds	\$ 150,000	\$ -	\$ -	\$ -	\$ -	\$ 150,000
Total Funding Sources	\$ 150,000	\$ -	\$ -	\$ -	\$ -	\$ 150,000

Operational Impact

Costs incurred due to weather related incidents vary by year based on the number and intensity of the weather incident, so exact cost savings are unknown, but minimal savings are anticipated.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name Golf Maintenance Equipment Repl

Project Number:	70-30		
Contact:	Jon Holland, Golf Maintenance Supt.	5 Year Historical Total	\$ 320,341
Department:	Golf	2017-2021 Total	514,554
Category:	Equipment	CIP Project Total (2012-2021):	\$ 834,895
Type:	Replacement		
Useful Life:	5-10 Years		

Description and Justification

In 2017, the Red Hawk Ridge Golf Course is requesting to purchase one new tractor and two new sand-pro units which are used to groom bunkers around the course. The lease-purchase that began in 2016 will expire at the end of 2020 - at that time, the golf course will engage in a new lease-purchase agreement in 2021 that will account for the necessary replacement of the existing equipment. Once the sand-pro units and the tractor are purchased, staff is confident that the equipment will be adequate until the expiration of the existing lease. This plan will avoid having multiple lease payments in the same year.

The equipment replacement in 2017 is budgeted as a full purchase. The amount in 2021 is included as a lease-to-own purchase with payments taking place over a five year period. The amount reflected below represents the full value of the equipment that is planned to be replaced. This option will be reviewed on an annual basis to determine the most financially appropriate approach for the Golf Fund.

Golf course maintenance equipment should be replaced as scheduled in order to maintain high levels of service at the course and to reduce repair costs for equipment. Most golf course equipment is manufactured to last approximately 3,000 to 4,000 hours. Everyday use equipment needs to be replaced before maintenance expenses and down time begin to impact the product and the operating budget, typically about every five years. Less frequently used equipment can last up to 10 years before it reaches the critical hour usage threshold.

Expenditures	2017	2018	2019	2020	2021	Total
Equipment Replacement	\$ 97,729	\$ -	\$ -	\$ -	\$ 416,825	\$ 514,554
Total Expenditures	\$ 97,729	\$ -	\$ -	\$ -	\$ 416,825	\$ 514,554
Funding Sources	2017	2018	2019	2020	2021	Total
User Fees	\$ 97,729	\$ -	\$ -	\$ -	\$ 416,825	\$ 514,554
Total Funding Sources	\$ 97,729	\$ -	\$ -	\$ -	\$ 416,825	\$ 514,554

Operational Impact

No additional operational impacts are expected as a result of this project.

2017-2021 CAPITAL IMPROVEMENT PROGRAM

Project Name

Golf Cart Lease

Project Number: 70-30

Contact: Bob Persichetti, Head Golf Professional

Department: Golf

Category: Equipment

Type: Replacement

Useful Life: 4 Years

5 Year Historical Total \$ 316,613

2017-2021 Total 334,135

CIP Project Total (2012-2021): \$ 650,748

Description and Justification

The current golf cart fleet has been in use since 2015 and is requested to be replaced as scheduled in 2019. Aging carts require increased levels of service including battery and tire replacement. Maintaining an updated and reliable fleet is necessary to deliver a quality experience to golfers at Red Hawk Ridge. The functionality of the current fleet will continue to be monitored and the timing of this lease could vary depending upon actual financial performance in the future.

This expenditure request initiates a new lease to replace the current golf cart fleet. The fleet will consist of 80 golf carts, four marshal carts, one range picker and two beverage carts. This is an estimated amount that will be finalized in 2018 when vendor selection occurs. This lease will begin in January 2019 and will have a four-year term in which lease payments will occur.

Expenditures	2017	2018	2019	2020	2021	Total
Golf Cart Lease	\$ -	\$ -	\$ 334,135	\$ -	\$ -	\$ 334,135

Total Expenditures	\$ -	\$ -	\$ 334,135	\$ -	\$ -	\$ 334,135
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Funding Sources	2017	2018	2019	2020	2021	Total
User Fees	\$ -	\$ -	\$ 334,135	\$ -	\$ -	\$ 334,135

Total Funding Sources	\$ -	\$ -	\$ 334,135	\$ -	\$ -	\$ 334,135
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Operational Impact

No additional operational impacts are expected as a result of this project.