



Completed by: Joseph Puhr
 Department Head Review: Dan Hartman

Responsible Department: Public Works
 Fund: Capital Programs #6

Project Name:		Street Improvement Program			
Brief Description:		The Street Improvement Program is responsible for replacement of asphalt streets for the City Roadway Network			
Funding Source	Existing Grant Funds Identified for Project	Potential Grant Funds Identified	Funds Identified From Capital Project Fund	Funds Identified From Other Fund (Name)	No Identified Funding
New/Additional Revenue Generated	Significant Ongoing Revenue Source	Small Ongoing Revenue Source	One-Time Revenue Generated	No New/Additional Revenue Generated	
Legally Mandated	Court Decision	Regulatory Requirement	Pending Legal Action	Potential Legal Action	Normal Liability
Public Health & Safety	Existing Severe Hazard	Existing Minor Hazard	Potential Severe Hazard	Potential Minor Hazard	No Health or Safety Issue
Operating Budget Impact	Decreases Operating and/or Personnel Costs	Minimal or No Impact on Operating and/or Personnel Costs	Slight Increase to Operating and/or Personnel Costs	Significant Increase to Operating and/or Personnel Costs	
Environment and Sustainability	Enhances Environment and/or Sustainability	Benefits Environment and/or Sustainability	No Environmental Impact	Minor or Negative Environmental Impact	Diminishes Environment
% Of Population Served	100% of Population Served by Project	Majority of Population Served	Approximately 50% of Population Served	Less than 50% of the Population Served	
Preservation of Facility	Loss of Facility Imminent without Project Completion	Additional Damage Likely without Project Completion	Project Constitutes Normal Major Maintenance	Project Constitutes Normal Minor Maintenance	New Facility/ Safety Issue
Project Useful Life	20+ Years With Little/No Maintenance	20+ Years With Normal Maintenance	10-20 Years With Normal Maintenance	5-9 Years with Normal Maintenance	1-4 Years with Normal Maintenance
Conformity to Strategic Plans & Department Goals	Critical to accomplishing Established Plans / Goals	Assists in Accomplishing Established Plans / Goals	Will Not Assist or Will Hinder Accomplishing Plans / Goals	Recommended by City Council	Recommended by Staff
Recreational or Aesthetic Value	Major Value	Moderate value	No Value	Possibly Detrimental	
Estimated Frequency of Use	Every Day	Several Times per Week	Several Times per Month	Once per Month or Less	

Vision 2030 Guiding Principles Priority - (Choose One Best Fit)

(A) Safe and Reliable Public Infrastructure
 (B) Economic Vitality and Community Amenities that Improve Quality of Life
 (C) Public Safety
 (D) Other

Category of Capital Expenditures - (Choose One Best Fit)

Land Improvement
 Building Improvement
 Equipment
 Vehicle
 Technology
 Infrastructure

Financial Impact - Expenses												
	Life-To-Date*	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
Project Costs		1,800,000	1,908,000	2,022,480	2,143,829	2,408,806	1,500,000	1,590,000	1,685,400	1,786,524	1,893,715	18,738,754
On-Going Maintenance												-
Total Project Costs	-	1,800,000	1,908,000	2,022,480	2,143,829	4,962,140	1,500,000	1,590,000	1,685,400	1,786,524	1,893,715	18,738,754

*Life-to-date includes any actual expenditures from start of project through July 2017 and estimates for the remainder of FY 2017

Basis for Project Cost Estimate

Formal Proposal
 Contractor/Engineer Estimate
 State Purchasing Co-Op
 Staff Estimate

Financial Impact - Revenues												
	Life-To-Date*	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
Revenue Estimate												-

*Life-to-date includes any actual revenue generated from start of project through July 2017 and estimates for the remainder of FY 2017

Project Name:

Street Improvement Program

Please provide details for the following:

1. Project Description
2. Justification
3. Measure of Success
4. Description of Revenue Generated (if applicable)

The City's Roadway Network consists of all the streets in the City to allow for the safe and efficient passage of automobiles and bicycles. The vast majority of that network is comprised of asphalt streets. The Street Improvement Program is responsible for the replacement of those asphalt streets. The average life of the asphalt streets is 15 years with proper maintenance. While this program and the replacement of asphalt will temporarily reduce the maintenance costs for the specific streets that are repaired it will not impact the overall maintenance costs for the entire roadway network as there will always be streets that degrade to the point of requiring preventive maintenance. Deferring the costs of asphalt replacement, however, would greatly increase the ongoing maintenance costs.

The Budget numbers were calculated by taking the total square footage of asphalt within the City, both streets and parking lots, that the Program is responsible for and dividing by the 15 year estimated lifespan for asphalt. Then assuming 20% reconstruction and 80% Mill and Overlay project split. Then multiplying by the costs for each project type. See below for the general procedure. Total Asphalt Pavement Area in City of Golden = 14,043,093 SF. Annual replacement area to maintain asphalt condition. Assume 15 year life. $14,043,093 \text{ SF} / 15 \text{ Year} = 936,206 \text{ SF}$ to be replaced annually to maintain the street network.

The area to be replaced annually is then split 80% for Mill and Overlay and 20% Reconstruction. The areas are then multiplied by the average cost per Square foot to perform the specific replacement type. Those being \$2.63 for reconstruction and \$1.58 for Mill and Overlay. These prices are the average costs associated with pricing in recent years, there is potential for the reconstruction costs to vary if unsuitable subgrade is encountered which necessitates export of bad material and import of suitable road base. $936,206 \text{ SF} \times .8 \times \$1.69/\text{SF} = \$1,265,750$ for Mill and Overlay and $936,206 \text{ SF} \times .2 \times \$2.82/\text{SF} = \$528,020$ for reconstructions. The total amount of \$1,793,770.00 rounded to \$1,800,000.00 is requested.

The assumption of asphalt life @ 15 years is slightly less than the industry standard of 20 years. City Engineering staff has documented the average life of 15 and feel confident in the assumption. Engineering staff attributes this shortened lifespan mainly to the frequent freeze thaw cycles that we experience in the colder months.

The costs listed in future years assumes a 6% annual increase in costs which is typical of recent construction and materials cost increases in Colorado. It should be noted that the ratio of Reconstructions to Mill and Overlay streets continues to trend toward more Mill and Overlay which lowers costs.

List any obstacles for implementation

Finance Use Only

Date

Received by Finance Department	
Reviewed by City Manager:	



Completed by:
 Department Head Review:

Responsible Department:
 Fund:

Project Name:	Adaptive Traffic Signals				
Brief Description:	This project will modify our traffic signals to adaptive technology.				
Funding Source	Existing Grant Funds Identified for Project	Potential Grant Funds Identified	Funds Identified From Capital Project Fund	Funds Identified From Other Fund (Name)	No Identified Funding
New/Additional Revenue Generated	Significant Ongoing Revenue Source	Small Ongoing Revenue Source	One-Time Revenue Generated	No New/Additional Revenue Generated	X
Legally Mandated	Court Decision	Regulatory Requirement	Pending Legal Action	Potential Legal Action	Normal Liability
Public Health & Safety	Existing Severe Hazard	Existing Minor Hazard	Potential Severe Hazard	Potential Minor Hazard	No Health or Safety Issue
Operating Budget Impact	Decreases Operating and/or Personnel Costs	Minimal or No Impact on Operating and/or Personnel Costs	Slight Increase to Operating and/or Personnel Costs	Significant Increase to Operating and/or Personnel Costs	X
Environment and Sustainability	Enhances Environment and/or Sustainability	Benefits Environment and/or Sustainability	No Environmental Impact	Minor or Negative Environmental Impact	Diminishes Environment
% Of Population Served	100% of Population Served by Project	Majority of Population Served	Approximately 50% of Population Served	Less than 50% of the Population Served	X
Preservation of Facility	Loss of Facility Imminent without Project Completion	Additional Damage Likely without Project Completion	Project Constitutes Normal Major Maintenance	Project Constitutes Normal Minor Maintenance	New Facility/ Safety Issue
Project Useful Life	20+ Years With Little/No Maintenance	20+ Years With Normal Maintenance	10-20 Years With Normal Maintenance	5-9 Years with Normal Maintenance	1-4 Years with Normal Maintenance
Conformity to Strategic Plans & Department Goals	Critical to accomplishing Established Plans / Goals	Assists in Accomplishing Established Plans / Goals	Will Not Assist or Will Hinder Accomplishing Plans / Goals	Recommended by City Council	Recommended by Staff
Recreational or Aesthetic Value	Major Value	Moderate value	No Value	Possibly Detrimental	X
Estimated Frequency of Use	Every Day	Several Times per Week	Several Times per Month	Once per Month or Less	X

Vision 2030 Guiding Principles Priority - (Choose One Best Fit)

(A) Safe and Reliable Public Infrastructure
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 (D) Other

Category of Capital Expenditures - (Choose One Best Fit)

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Financial Impact - Expenses												
	Life-To-Date*	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
Project Costs		150,000										150,000
On-Going Maintenance			10,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	82,000
Total Project Costs	-	150,000	10,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	232,000

*Life-to-date includes any actual expenditures from start of project through July 2017 and estimates for the remainder of FY 2017

Basis for Project Cost Estimate

Formal Proposal
 Contractor/Engineer Estimate
 State Purchasing Co-Op
 Staff Estimate

Financial Impact - Revenues												
	Life-To-Date*	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
Revenue Estimate												-

*Life-to-date includes any actual revenue generated from start of project through July 2017 and estimates for the remainder of FY 2017

Project Name:

Adaptive Traffic Signals

Please provide details for the following:

1. Project Description
2. Justification
3. Measure of Success
4. Description of Revenue Generated
(if applicable)

This project would provide software and equipment to convert the existing traffic signals along Ford Street from 13th to 10th Streets (3 signals total) to an adaptive signal platform. The existing controllers on this corridor are old and nearing the end of useful life. Additionally the Ford Street corridor experiences high volumes of pedestrian traffic in the summer months which causes the corridor to operate inefficiently resulting in traffic backups. An adaptive system on this corridor will better handle the pedestrian and vehicle traffic. This improvement would improve both vehicular and pedestrian level of service.

List any obstacles for implementation

Funding and choosing a software and equipment are the largest obstacles in this endeavor.

Finance Use Only

	Date
Received by Finance Department	
Reviewed by City Manager:	