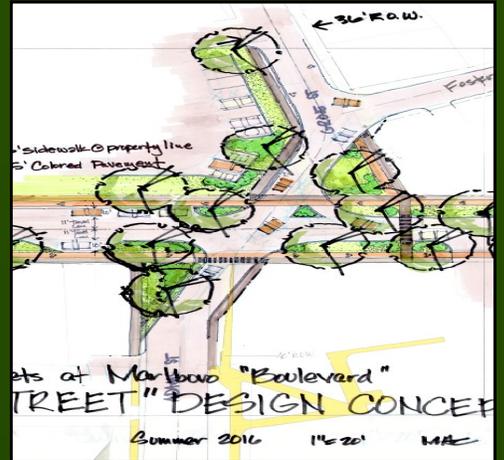




Building The Future



City of Keene, New Hampshire

2018-2023

Capital Improvement Program



City of Keene, New Hampshire

Capital Improvement Program

FY 2018-2023

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January 19, 2017

The Honorable Mayor Lane and members of the Keene City Council:

We are pleased to present this year's proposed Capital Improvement Plan (CIP) spanning the next six years, through June 30, 2023, including the proposed budget for FY 2018 capital projects. City staff and the City Council work very hard to produce a Capital Budget, and an Operating Budget, that meets both citizen and community needs and City Council Fiscal Policy. The Capital Improvement Program identifies and funds the Capital needs associated with the community identified by Citizens, the City Council and staff. Additionally, the plan supports the needs identified as part on the next year's program and future years for consistency with the adopted Master Plan and to continue Economic Development. To be able to develop and re-develop infrastructure has to be maintained and improved.

The budgeting process is on-going and can be arcane to the average citizen so, with the leadership of the City Finance Director and the support of the Administrative Portfolio, we have together taken steps to demystify the process and create greater clarity. One of the goals articulated by the City Manager and the City Council is to further the elevation of the budget to a Priority Based format. The structure of the draft CIP begins that process in showing where the organization stands around specific subjects to permit the City Council and the public to concentrate on direction. We hope during the upcoming cycles of CIP and annual operating budget presentations to continue the effort that supports the vision of the Comprehensive Master Plan of strong citizenship and proactive leadership. It is vital for the public, through their elected officials, to understand City budgetary processes, or tools, which adjust and direct priorities. The priorities articulated by the public, the City Council, and Comprehensive Master Plan clearly show an emphasis towards the city road and bridge systems, flood control, support for public safety services and a number of other initiatives (e.g. library, parks facilities).

City staff has been careful to see that all newly identified projects deemed important to the realization of the goals and objectives of the City of Keene, Comprehensive Master Plan and V.O.I.C.E. (internal priorities) are incorporated into this plan that guides our community's future. Such projects are highlighted in the narrative portion of this message under DISCUSSION AND FUTURE INITIATIVES. I am particularly pleased that the City staff once again has been able to find ways to meet both City priorities and fiscal objectives, while crafting this budget document.

The proposed CIP is modest when viewed in the context of actual use of property tax dollars and has been crafted with the Operating Budget in mind. With a reliance on grants, capital campaigns, and other revenue sources to offset city property taxes, much has been accomplished. These next few years with continued collaboration, and adherence to frugality, will provide opportunities for new projects and priorities to be advanced. Whether it is improvements to the Library, which will begin in 2017, a community conversation with regards to the future of the downtown core, improvements to utility and storm water systems, sidewalks and roads, airport obstruction clearing, or city parks; this year's CIP with continuing collaboration includes them all.

In a geocentric world, Keene competes for investment, jobs, and resultant tax base with the world. Quality of life is huge in helping the City to remain competitive. The right balance between expenditures and affordability ensure the City will remain an attractive place to live, learn, work, and play.

CAPITAL IMPROVEMENT PLAN

The focus of the CIP process is planning for our City's future. The guiding principle of this planning effort is to advance the vision of the Comprehensive Master Plan (CMP) including;

- ❖ A quality built environment,
- ❖ Unique natural environment,
- ❖ A vibrant economy,
- ❖ Strong citizenship and proactive leadership,
- ❖ A creative and learning culture, and
- ❖ A healthy community.

Guided by fiscal policy, the CMP, input from the community and actions of the City Council, each year anticipated capital expenditures are identified in a six-year Capital Improvement Program (CIP). The CIP includes projects with an estimated cost in excess of \$20,000, and anticipated useful life of at least five years. Individual project requests are consolidated into a capital program that includes revenue and operating cost projections to provide estimated property tax and rate impacts. The capital planning process provides a framework to consider projects, over the time frame of the CIP, in the context of the community's vision, values, and goals, along with impact on property taxes, utility and other user rates. Following review by the City Council and Planning Board and a public hearing, the adopted program's first year is included in the next operating budget proposal as the capital budget.

This CIP includes capital expenditures planned for the six-year period starting July 1, 2017, and ending June 30, 2023. This program is fluid and will change from CIP to CIP, and can also be amended from time to time upon action of the City Council. While the vast majority of capital activity advances through the CIP process, the CIP document is a planning tool. Occasionally projects are presented to and approved by the City Council outside of the formal CIP process, particularly when grant funding or community partnership becomes available. As a planning document, it also does not bind any public body to undertaking any project but serves the City Council as a tool to identify and schedule needed improvements, and to forecast and plan for the impact of those improvements.

The CIP reflects continuation of the philosophy of seeking opportunity for strategic investments that leverage other resources and partnerships to advance the goals of the CMP as reflected in the recent courthouse, ice rink, and ongoing Library Campus Development, and proposed skateboard park project. Through engagement with employers, the Chamber of Commerce, City/College Commission, social service agencies, other governmental partners and community groups, our organization, community, and City Council priorities advance. Building a Spirit of Place, a Community Development Program launched as part of the FY13 budget message continues to stimulate new partners in our effort to make our City the best in America. Through this program, the generous assistance of individual, organization, business and institutional partners, have enhanced our City adding to our sense of community.

DOWNTOWN INFRASTRUCTURE CAPITAL RESERVE - bookkeeping change

The Downtown Infrastructure Capital Reserve was created in 2008 to fund capital improvements within the downtown area. Funding is derived from the Wells Street Tax Increment Financing District (TIFD).

Originally established to fund the construction of the Wells Street Parking Deck, the TIFD has been expanded over the years and used to fund infrastructure improvements at the former railroad land property and also at 93rd and Norway. The TIFD has been used to help fund construction of the district courthouse, and the Library Campus Development project, due to begin in 2017.

Activity funded by the TIFD (basically debt service on completed projects, and capital reserve appropriations) are accounted for in the General Fund and the Parking Fund. For many years, all of this activity was accounted for in the Parking Fund (based upon the origin of the TIFD, discussed above).

Beginning with the FY 2017 operating budget, projected debt service for the Library Campus Development Project was included in the General Fund, as the project is a general governmental project rather than a parking related project. In keeping with this initiative, the Downtown Infrastructure Capital Reserve, funded by the TIFD, will also be accounted for in the General Fund. Moving forward, TIFD funded activity will be accounted for in the General Fund for general governmental activities, and in the Parking Fund for parking related activities.

FISCAL POLICY IMPACT

- A. Policy - The City of Keene will contain its General Fund debt service and current revenue capital outlay appropriations, on a five-year average, at or less than 15% of the General Fund operating budget.
 - 1. Discussion – The City has exceeded this cap by a small amount for several years due to the loss of state revenue sharing and other revenues sensitive to fluctuations during economic downturns which occurred after commitments had been made to fund or repay several large projects. As a ratio, this indicator is vulnerable to changes in operations budget growth assumptions, which are slightly lower than in previous years, as well as changes in debt service and capital spending. Recent years have seen increased spending on new programs, including Flood Management, that have increased this key ratio. The assumptions upon which projections are made are reviewed and adjusted annually.
 - 2. Projections based upon the proposed CIP indicate positive reductions in this critical ratio from 16.16% in FY 2017 to 15.30% in FY 2022 and 14.82% in FY 2023, the last year of the CIP. The ratio would decrease in each year covered by the CIP, and through FY 2026.
- B. Policy - Unassigned fund balance for the General Fund will be maintained at between 7% and 10% percent of the sum of the total of the General Fund annual operating budget and the property tax commitment for the school (both local and state) and the county.
 - 1. Discussion – projections based upon the proposed CIP and FY 17 budgets and projections, and tax commitments to the school and county, inflated by 3% per year, indicate that the City will remain in compliance with this policy throughout the life of the CIP (FY 2023) and through FY 2026. Over this period, unassigned fund balance is projected to range between 8.24% and 9.09%.

FUTURE INITIATIVES

Included in the Parks and Recreation project requests for FY 2018-2023 is a feasibility study to review various program opportunities, and options for space utilization, and possible renovation to the Recreation Center. Part of the study will focus on a potential partnership between the Parks, Recreation and Facilities Department and the Keene Senior Center. The partnership would focus on issues related the community's changing demographic and serving an aging population and future parks and recreation needs. Cost estimates for potential changes to the Recreation Center are not included in this CIP.

In FY 2014, an appropriation from the Downtown Infrastructure Capital Reserve was authorized to provide for the predesign costs for the construction of a parking facility in the downtown area. No further action has been undertaken on that project. In the future, should circumstances warrant it, the parking facility project may proceed, following approval by the City Council.

There have been discussions regarding the development of an Ashuelot River Greenspace Park expansion with major funding to come through private donations. Should that project come to pass, there may be the need to upgrade city drainage infrastructure crossing the property before the park is developed.

The concept of a Storm Water Management Utility has been raised as a discussion point. A storm water utility would have the purpose of managing the storm water and storm runoff infrastructure system. The

funding method would be user fees, in a manner similar to the existing water and sewer utility funds. The storm water drainage infrastructure system (managed by the Department of Public Works) is funded with property taxes.

Appendix A and B of this document contain supplemental information on various projects still in the planning or discussion stages, as noted in the following section.

FINANCIAL INFORMATION & PROJECT REQUESTS

The CIP document has been reorganized and expanded this year in an effort to develop a more user friendly and informative document. The document now contains the following sections:

- A. Letter of Introduction and City Managers' Message.
- B. Executive Summary – Several graphs and tables providing a broad overview of the proposed projects and funding included in the proposed CIP.
- C. Financial Section –
 1. FY 2018-2023 CIP Financial Discussion and Analysis – an analysis of the proposed CIP project and funding plans by fund. The analysis includes a specific look at revenue assumptions, tax and fee changes built into CIP projections, and outstanding debt.
 2. Fund basis financial information including a discussion of property tax, utility rate and fee projections, the impact of the proposed CIP on outstanding debt, and financial projections, for each fund, over the life of the CIP. Included are lists of individual project requests by fund, as well as detail on proposed funding source(s), and a summary debt service schedule providing information on existing and proposed levels of debt service through FY 2023 by fund.
- D. Capital Reserve Presentation – Includes a one page financial summary for each active capital reserve providing a projected balance at the beginning of FY 2018, proposed funding for each year of the CIP, and a list and schedule of projects to be funded from each reserve, and a projected ending balance of each reserve.
- E. Project Requests – In prior years, projects have been presented by fund, in department order. In the Proposed FY 2018-2023 CIP, the project requests have been reorganized in the following manner :
 1. Public Health and Safety – programs, activities, and projects which are intended to protect the health and safety of individuals and the community. The primary goal of these activities is the protection of the public from dangers affecting health and safety from crime, disaster, fire, and disease. Included in this section are the Police and Fire Departments from the General Fund, and the Sewer, Water and Solid Waste Funds (Department of Public Works or DPW).
 2. Transportation – programs, activities, and projects which are intended to facilitate the safe and efficient movement of people and things within the City, and to connect the local community with Monadnock Region, the state, and the world. The primary goal of these activities is to provide that roads, bridges, sidewalks, bike paths, and other transportation infrastructure are in good condition and meet the needs of the community. Included in this section are project requests developed by the DPW, Highway and Engineering Divisions (General Fund).
 3. Economic Development and Vitality – programs, activities, and projects which are intended to promote the retention and expansion of existing businesses and to encourage and attract new business development in the City of Keene. The primary goal of these activities is enhance overall quality of life and the sustainability of the community. Projects included in this section were developed by the Airport and DPW from the General Fund, as well as the Parking Fund.

4. Flood and Storm Water Management – programs, activities, and projects which are intended to prevent and remediate conditions leading to localized flooding due to more frequently occurring major precipitation events through preventative maintenance, drainage system improvements, and comprehensive storm water infrastructure planning. Projects in this section were developed by DPW Engineering Division and the Planning Department (General Fund).
 5. Community Development - programs, activities, and projects which are intended to add to or significantly expand the capacity of community infrastructure or facilities. The primary goal of these activities is to improve the quality of life in the community and to meet the needs of a changing community. Included projects were developed by the Parks and Recreation and Fire Departments (General Fund)
 6. General Operations Facilities and Infrastructure - programs, activities, and projects which are intended to maintain and provide facilities, infrastructure, and equipment necessary for the provision of basic governmental services. The primary goal of these activities is to maintain City operational assets in good working order in an environmentally friendly and economically efficient manner. Included projects were developed by the Equipment Fund Division of the DPW, the Assessor’s Office, the Facilities Division of Parks and Recreation, and the Information Technology Department, all within the General Fund.
- F. Appendix A – General Fund projects not included in the proposed FY 18-23 CIP which may appear in future CIP documents. These projects have not been included in the CIP for a variety of reasons, including limited resources and the need for additional project analysis and development.
- G. Appendix B – Water and Sewer Funds capital projects that are scheduled for FY 2024 and beyond. Also included is a brief discussion of recommendations for additional water main replacement funding. Due to the nature of aging utility infrastructure, and the scope of the proposed projects, this information is provided in an effort to better inform the long term discussion regarding utility fund infrastructure.
- H. Appendix C – Various projects by geographical distribution within the City.

Project requests are developed by City departments, after considering priorities identified in the Comprehensive Master Plan, department master plans, public demand for services or facilities, or by operational needs. Requests, in addition to articulating scope, justification, a financial plan and schedule, are aligned to a CMP focus area, strategy, and the values articulated by V.O.I.C.E., as follows:

- ❖ Value everyone
- ❖ Obtain public input
- ❖ Inform the public
- ❖ Continually assess facilities and infrastructure
- ❖ Establish priorities

When developing a project’s funding plan, the funding proposed (current revenue, debt, etc.) staff take into consideration the capacity of the fund, timing relative to other projects within the fund, and the impact upon property taxes and user rates over a given time period.

Projects funded by long-term debt are repaid at a term that considers the anticipated useful life of that project. An amount appearing in the “Prior” column of the Financial Plan section of a project request indicates amounts from appropriations or other sources that have been determined to be available for future years’ work. An estimate of the anticipated impact of a project on a department’s operating budget and project status is also part of each project request.

The remaining steps to be taken in the CIP process are:

- Thursday, January 19, 2017 Documents distributed to City Council, Planning Board
- Thursday, January 26, 2017 Finance, Organization & Personnel (FOP) Committee review
- Thursday, February 9, 2017 FOP Committee review
- Thursday, February 23, 2017 FOP Committee review
- Thursday, March 2, 2017 Public Hearing
- Thursday, March 9, 2017 FOP Committee develops recommendation
- Thursday, March 17, 2017 Council vote

The Planning Board will conduct its independent review at its February 2017 meeting, and will report the result of their review directly to the City Council.

An Executive Summary of the proposed FY 18-23 Capital Improvements Program follows this message.

Thank you for your careful consideration of this document and the various projects proposed to move toward a sustainable future for our community.

Respectfully Submitted,

A handwritten signature in black ink, consisting of the letters 'AK' in a stylized, cursive font.

Medard Kopczynski
City Manager

EXECUTIVE SUMMARY

FY 18 - 23 Proposed CIP, By Year, Fund, and Funding Source

FY17/18	Current Revenues	City Bonds	Federal	State	Other	Total	% of program
General Fund	\$ 1,161,984	\$ 2,738,104	\$ 4,556,500	\$ 975,250	\$ 745,784	\$ 10,177,622	70.07%
Parking Fund	60,000				25,000	85,000	0.59%
Solid Waste Fund	50,000	250,000	500,000			800,000	5.51%
Sewer Fund	733,826				196,625	930,451	6.41%
Water Fund	1,079,727				75,000	1,154,727	7.95%
Equipment Fund	645,000				731,752	1,376,752	9.48%
TOTAL	\$ 3,730,537	\$ 2,988,104	\$ 5,056,500	\$ 975,250	\$ 1,774,161	\$ 14,524,552	
% of program	25.68%	20.57%	34.81%	6.71%	12.21%	100.00%	

FY18/19	Current Revenues	City Bonds	Federal	State	Other	Total	% of program
General Fund	\$ 1,660,481	\$ 2,763,612	\$ 2,837,388	\$ 2,562,240	\$ 1,982,017	\$ 11,805,738	58.33%
Parking Fund	428,708					428,708	2.12%
Solid Waste Fund	50,000	166,750			327,224	543,974	2.69%
Sewer Fund	893,891	1,142,560			1,270,831	3,307,282	16.34%
Water Fund	1,119,318				1,504,952	2,624,270	12.97%
Equipment Fund	820,000				708,302	1,528,302	7.55%
TOTAL	\$ 4,972,398	\$ 4,072,922	\$ 2,837,388	\$ 2,562,240	\$ 5,793,326	\$ 20,238,274	
% of program	24.57%	20.12%	14.02%	12.66%	28.63%	100.00%	

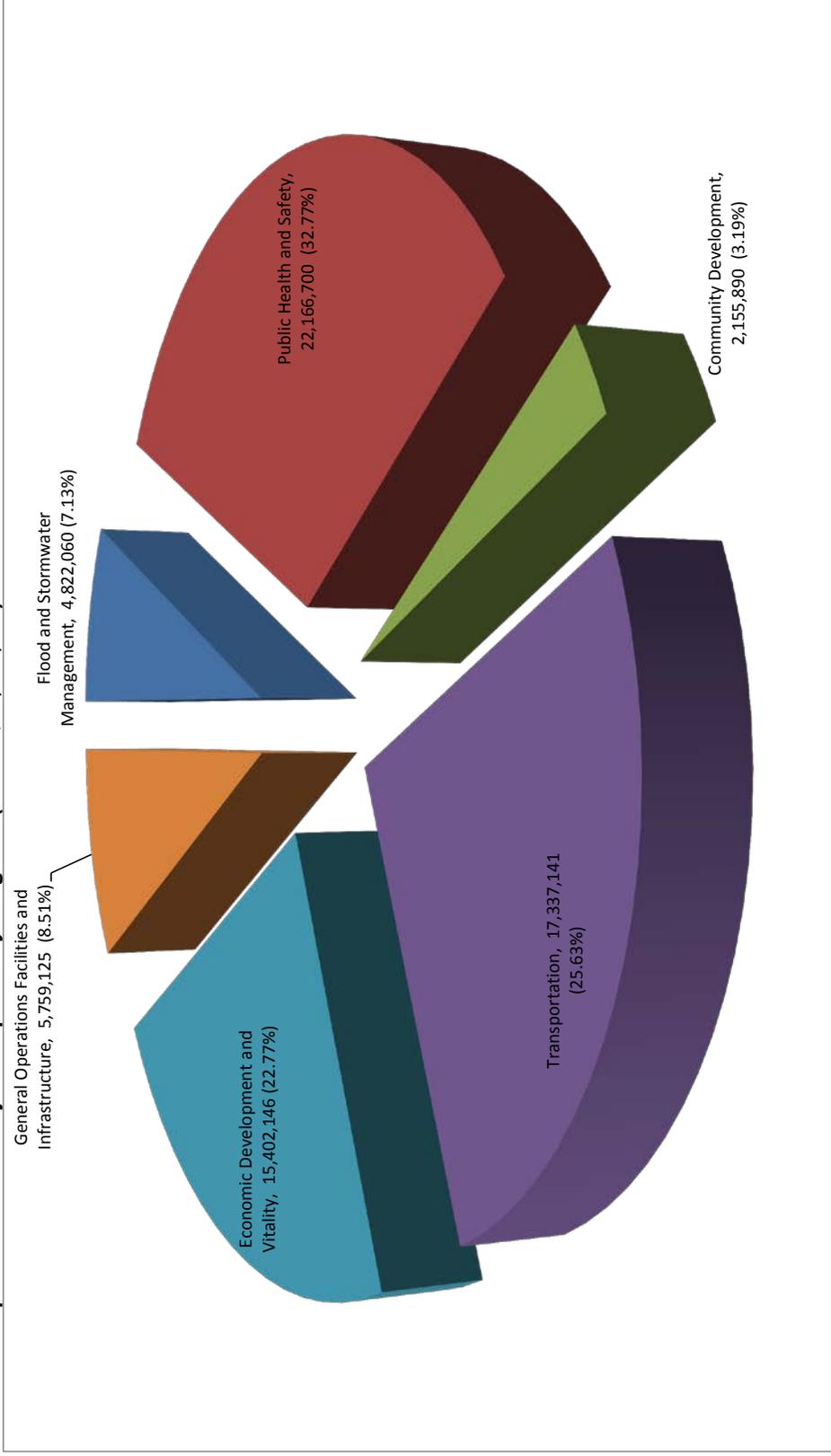
FY19/20	Current Revenues	City Bonds	Federal	State	Other	Total	% of program
General Fund	\$ 1,463,784	\$ 3,149,097	\$ 1,793,742	\$ 2,211,937	\$ 1,100,000	\$ 9,718,560	61.84%
Parking Fund	60,000				50,000	110,000	0.70%
Solid Waste Fund	45,000					45,000	0.29%
Sewer Fund	899,108				840,661	1,739,769	11.07%
Water Fund	1,099,198	1,022,025			474,399	2,595,622	16.52%
Equipment Fund	665,000				840,783	1,505,783	9.58%
TOTAL	\$ 4,232,090	\$ 4,171,122	\$ 1,793,742	\$ 2,211,937	\$ 3,305,843	\$ 15,714,734	
% of program	26.93%	26.54%	11.41%	14.08%	21.04%	100.00%	

FY20/21	Current Revenues	City Bonds	Federal	State	Other	Total	% of program
General Fund	\$ 1,355,158	\$ 2,789,213	\$ 44,800	\$ 631,720	\$ 201,530	\$ 5,022,421	45.83%
Parking Fund	60,000					60,000	0.55%
Solid Waste Fund	45,000					45,000	0.41%
Sewer Fund	1,004,481	1,455,512			439,187	2,899,180	26.45%
Water Fund	1,170,515				314,163	1,484,678	13.55%
Equipment Fund	700,000				747,836	1,447,836	13.21%
TOTAL	\$ 4,335,154	\$ 4,244,725	\$ 44,800	\$ 631,720	\$ 1,702,716	\$ 10,959,115	
% of program	39.56%	38.73%	0.41%	5.76%	15.54%	100.00%	

FY21/22	Current Revenues	City Bonds	Federal	State	Other	Total	% of program
General Fund	\$ 1,286,133	\$ 3,518,512	\$ 546,400	\$ 324,685	\$ 1,829,777	\$ 7,505,507	59.96%
Parking Fund	110,000				50,000	160,000	1.28%
Solid Waste Fund	45,000					45,000	0.36%
Sewer Fund	960,015				421,518	1,381,533	11.04%
Water Fund	1,171,436				816,689	1,988,125	15.88%
Equipment Fund	735,000				702,159	1,437,159	11.48%
TOTAL	\$ 4,307,584	\$ 3,518,512	\$ 546,400	\$ 324,685	\$ 3,820,143	\$ 12,517,324	
% of program	34.41%	28.11%	4.37%	2.59%	30.52%	100.00%	

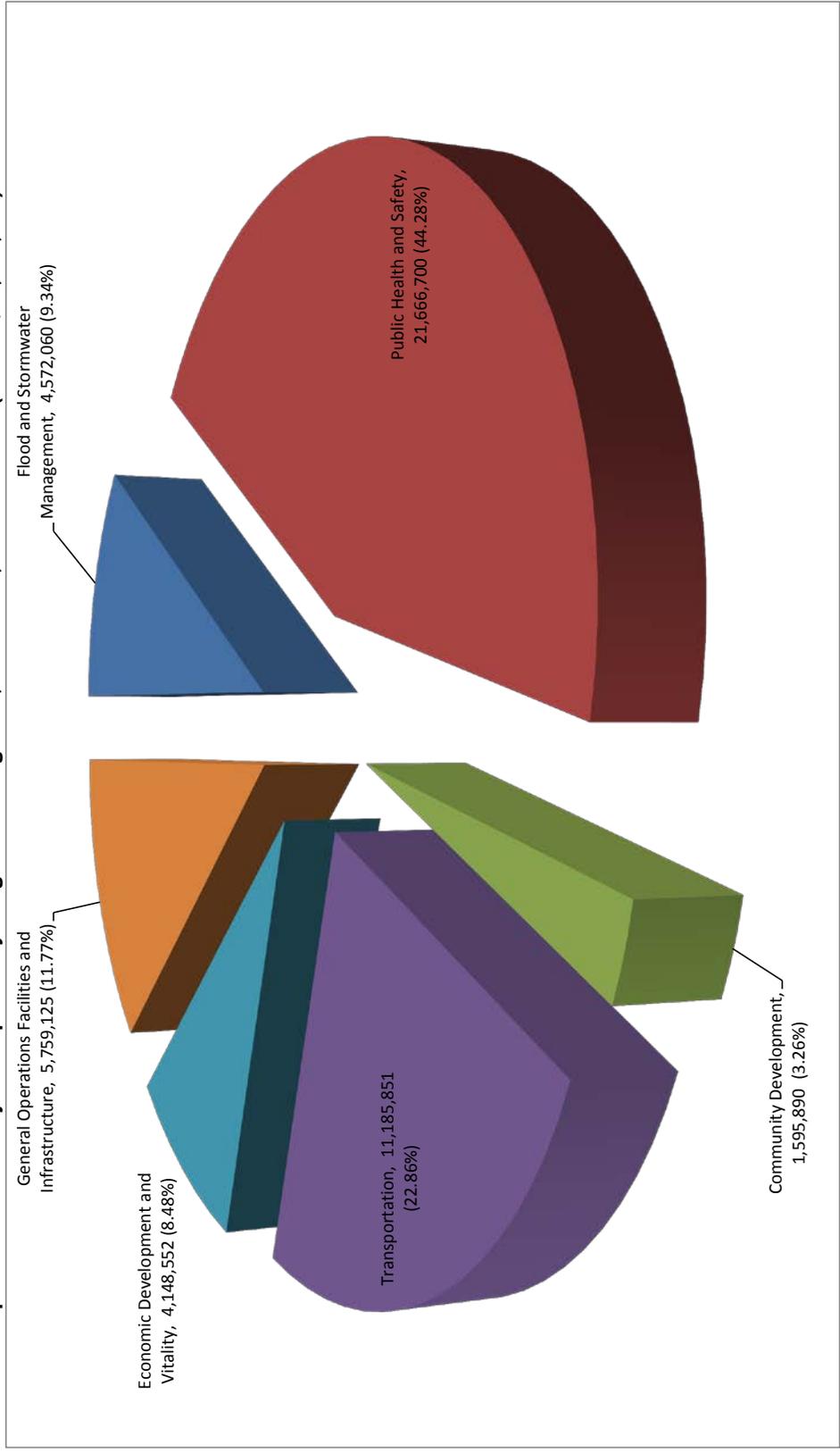
FY22/23	Current Revenues	City Bonds	Federal	State	Other	Total	% of program
General Fund	\$ 1,245,259	\$ 1,449,603	\$ 151,308	\$ 18,914	\$ 655,000	\$ 3,520,084	29.37%
Parking Fund	60,000					60,000	0.50%
Solid Waste Fund	45,000				169,000	214,000	1.79%
Sewer Fund	1,065,716				526,697	1,592,413	13.29%
Water Fund	1,266,868	2,275,882			1,757,003	5,299,753	44.22%
Equipment Fund	715,230				582,583	1,297,813	10.83%
TOTAL	\$ 4,398,073	\$ 3,725,485	\$ 151,308	\$ 18,914	\$ 3,690,283	\$ 11,984,063	
% of program	36.70%	31.09%	1.26%	0.16%	30.79%	100.00%	

FY 18-23 Proposed CIP: All Project Requests by Program (Total - \$67,643,062)



Does not include capital reserve appropriations totalling \$18,295,000.

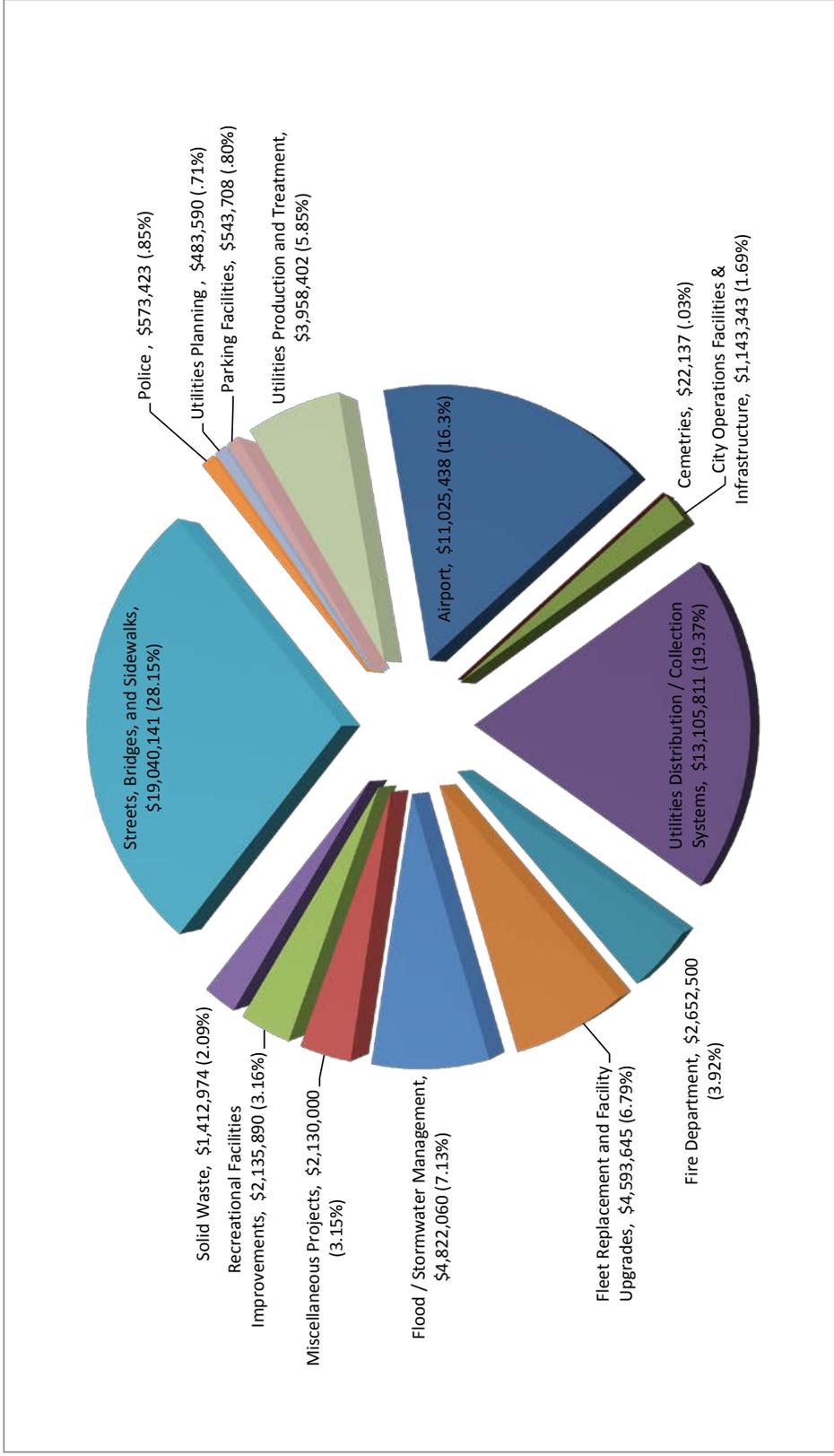
FY 18-23 Proposed CIP: All Project Requests by Program - less grants, donations, and land sale (Total - \$48,928,178)



Does not include capital reserve appropriations totalling \$18,295,000.

This chart demonstrates the proposed allocation of locally generated funding in the proposed CIP, including property taxes, rates, fees, and charges, and all other revenues and resources other than state and federal grants, donations, and the sale of 560 Main Street.

FY 18-23 Proposed CIP: All Project Requests by Type Detailed Analysis (Total - \$67,643,062)



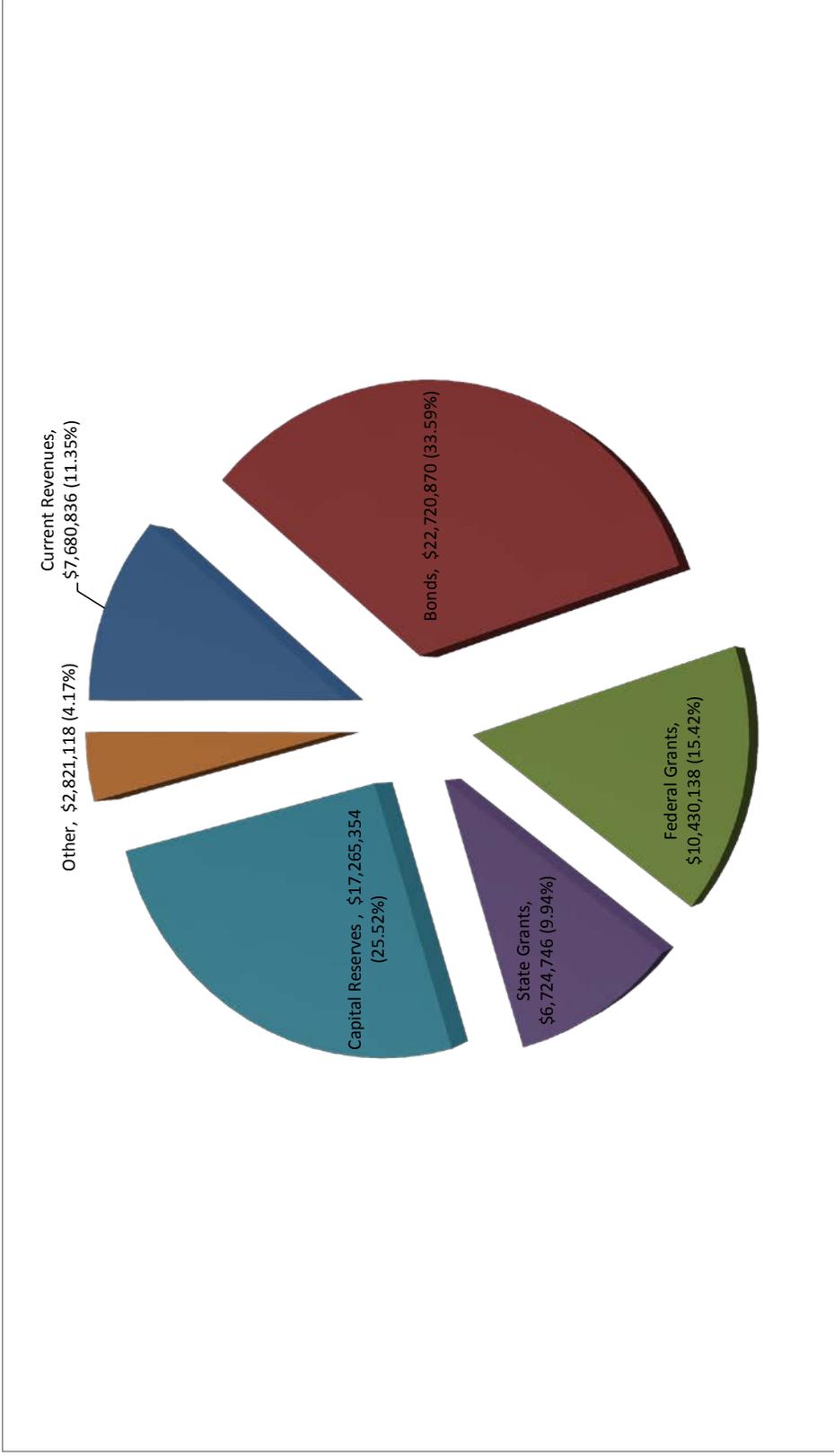
Does not include capital reserve appropriations totalling \$18,295,000.

Miscellaneous Projects:

Downtown Revitalization	1,130,000
560 Main Street Remediation	1,000,000
Total	2,130,000

This presentation provides a more detailed analysis of proposed projects by activity type.

FY 18-23 Proposed CIP: All Project Funding Sources by Type (Total - \$67,643,062)



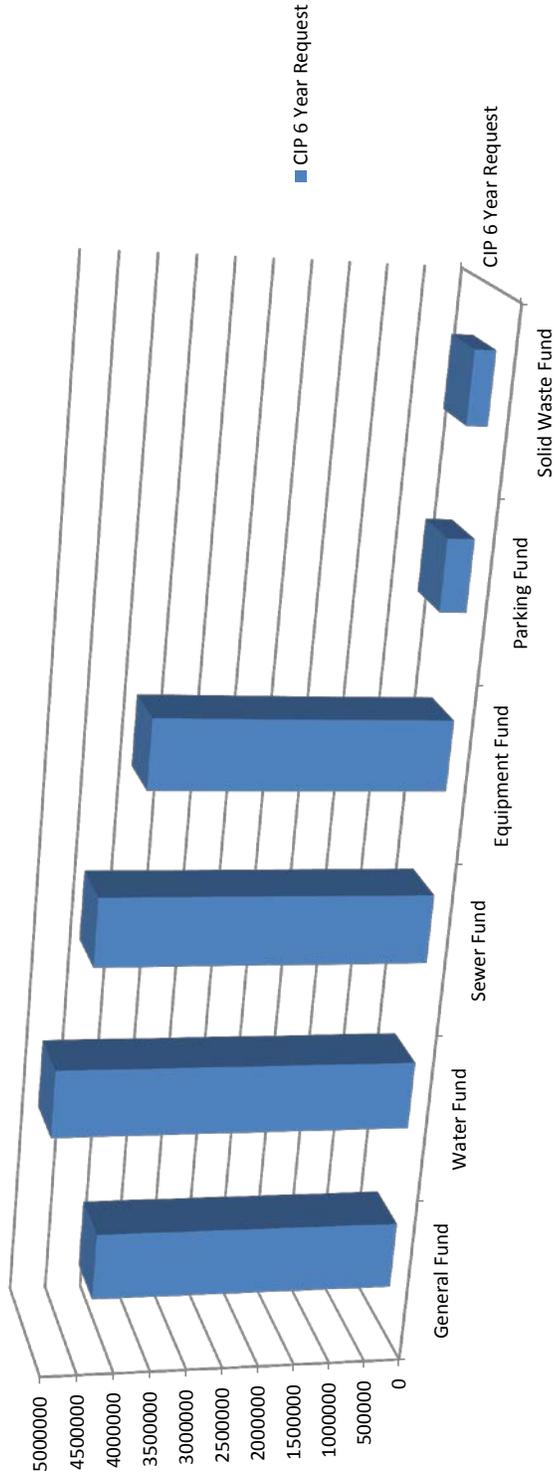
This funding presentation includes withdrawals from capital reserves to fund projects, but does not include appropriations into capital reserves, which are also included in the proposed CIP

Funding by Type - Additional Detail

"Other" Sources of Funding (\$2,821,118)

Skate Park	500,000	Capital campaign (donations)
Robin Hood Splash Pad	50,000	Grant or donation
560 Main Street Site Remediation	1,000,000	Proceeds from sale of 560 Main St
Community Center Feasibility Study	10,000	Senior Center match
Water Distribution (Main) Improvements	627,258	Use of Fund Balance - Water Fund
Blower Replacement - FY 2014	61,076	Reserve Appropriation Carried Forward
Reappropriation of Project Balances		
		Project Balance From :
Runway 14/32 Reconstruction	189,250	R-2016-03 - Runway 14/32 engineering
Network Equipment Replacement - IT	40,766	Digital Base Map Update
Defibrillator Replacement - Fire Department	31,768	Portable Radio Replacement - Fire Department
Pavement Maintenance - Airport	71,000	Obstruction Removal - Airport
Victoria Street Extension - DPW	30,359	Beaver Brook Hydrologic and Hydraulic Analysis - DPW
Flood Mitigation Measures - DPW	119,641	Beaver Brook Hydrologic and Hydraulic Analysis - DPW
Flood Mitigation Measures - DPW	50,000	Climate Adaptation Assessment - Planning
Community Room - Parks / Facilities	40,000	Facility Improvements - Parks / Facilities

FY 18-23 Capital Reserve Appropriation by Fund



Capital Reserves are used to smooth tax and rate changes generated as a result of the replacement of equipment and systems in the various funds. Capital Reserves also provide emergency funding in the case of equipment or system failure. All uses of capital reserves are approved by vote of the City Council, either through the operating budget process, or by Council vote on a separate resolution.

Capital Reserve Appropriations total \$18,295,000 over the life of the proposed CIP across all funds. These funds will be used to fund projects over the life of the CIP, and in future CIPs. Over that same period, \$17,265,354 of capital reserve funds are programmed in the proposed CIP to be spent on capital projects.

Capital Reserves are funded completely by current revenue by fund, either user rates, property taxes, or other revenue generated during each fiscal year.

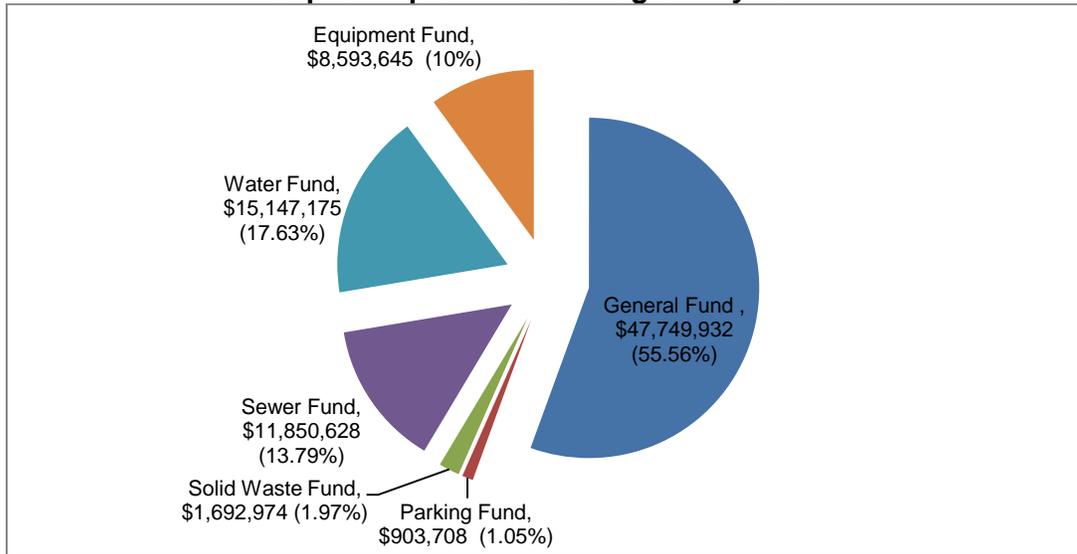
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FY 2018-2023 CIP – Fund Basis Financial Discussion and Summary

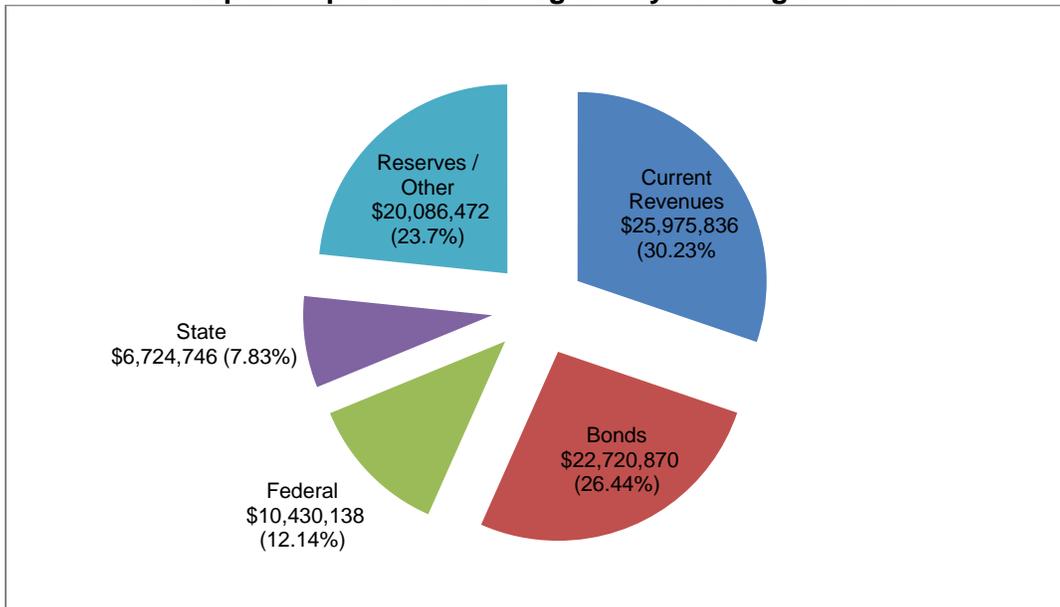
The following two graphs summarize the proposed capital improvements program (CIP) in two ways. The first graph allocates total appropriations (\$86 million, including appropriations into capital reserves) by fund for the program. It indicates that 87% of the six year program is directed towards activities in the General Fund and Water and Sewer Utility Funds.

The second graph summarizes the proposed funding sources for the FY 2018-2023 CIP. Three major sources of funding; current revenues (property taxes, other General Fund revenues, various fees and charges, utility rates), bonding, and capital reserves and other (donations, grants, and project balances). These sources fund 80% of the program.

Capital Improvements Program By Fund



Capital Improvements Program By Funding Source



The FY 2018-2023 proposed CIP invests \$86 million (m) in City infrastructure and equipment over next six years. The proposed CIP is approximately \$1m or 1.15% smaller than the FY 2017-2022 CIP.

NEW PROJECTS

Although many cost estimates, project schedules, new projects, and funding changes are reflected in every CIP, the following projects are new to the program:

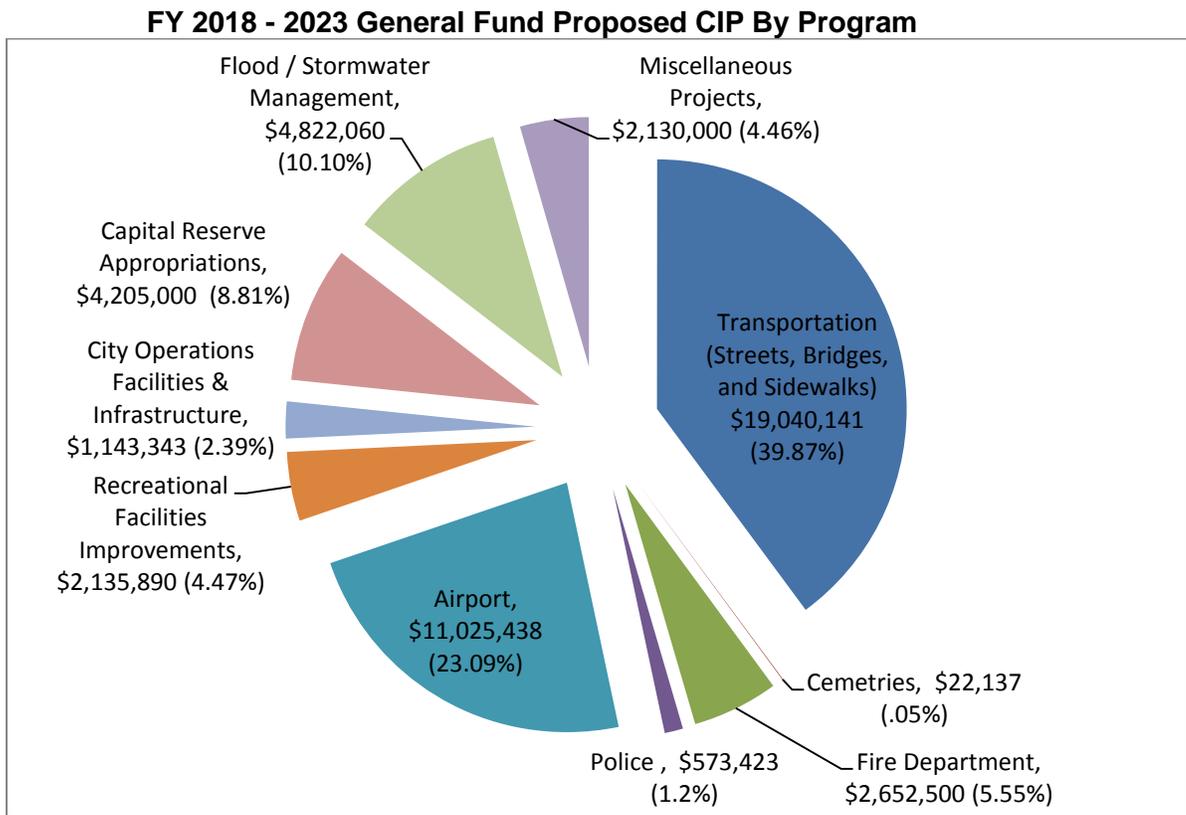
- a. Airport Terminal Improvements – updates restrooms and building access, as well as adds a pilot lounge. FY 2018 \$198,388.
- b. Guardrail Replacement – replaces nonfunctional guardrails throughout the City. FY 2018-2021 \$199,036.
- c. LED Streetlight Replacement – replaces current streetlight ballasts with energy efficient LED fixtures. FY 2018 \$346,500.
- d. Airport Snow Removal Equipment – FAA grant funded project to replace a 6 wheeled dump truck and Sweepster broom. FY 2022 \$555,556.
- e. Revaluation – funds the next city wide property revaluation, which is required every five years. FY 2021-2022 \$150,000.
- f. Solid Waste Fund – Biofuel Generator – following a technology review and feasibility analysis in Spring, 2017, selection of the best alternative for providing power for operations at the Transfer Station as landfill methane becomes less practical. This project provides a funding placeholder for the selected approach. FY 2018 \$750,000.
- g. Solid Waste Fund Scale Replacement – replaces transfer station scale. FY 2023 \$92,000.
- h. Transfer Station Interior Upgrades – upgrades office space and restrooms. FY 2023 \$77,000.
- i. Fleet Wash Bay – replaces truck wash. FY 2019 \$155,000.
- j. Fleet Fuel Island – replaces existing fuel island. FY 2022 \$35,000.
- k. Fleet Building Roof Replacement – FY 2023 \$90,230.
- l. Ductwork Insulation Replacement – at Martell Court and the Wastewater Treatment Plant (WWTP) – FY 2023 \$23,928 and \$35,892, respectively.
- m. Parking Fund – Smart Meter Technology is being evaluated for the replacement of some or all of the parking meters currently in use. Findings will be presented to the City Council along with a recommendation for replacement technology, if appropriate. FY 2019 \$250,000.
- n. Water Treatment Facility (WTF) Pavement Replacement – repaves the WTF parking lot. FY 2023 \$70,180.

PROJECT DISCUSSION BY FUND

The charts indicate that the General Fund and Water and Sewer Funds fund 87% of the proposed six year CIP. With that in mind, what follows is a discussion regarding these major components of the CIP, in both programmatic and departmental formats.

GENERAL FUND

The General Fund includes several departments with requests over the span of the CIP totaling nearly \$48m, or 55% of the proposed CIP. The General Fund is the City fund funded primarily by property taxes (approximately 51% in FY 2016-2017). Those requests, by program and activity, are highlighted in the following graph:



The graph summarizes the level of proposed spending on various activities and programs in the General Fund in the proposed CIP.

Transportation projects (streets, bridges and sidewalks) are the focus of 39.87% of activity, and Flood and Stormwater Management activity makes up another 10.10% of the proposed General Fund CIP. These two programs make up nearly 50% of the proposal.

Transportation Projects are a substantial investment (\$8.1m) in resurfacing and improving roads, along with \$800,000 for granite curbing and sidewalk repair. Also included in this group of projects are improvements to Marlboro Street, and the extension of Victoria Street to Marlboro Street.

The state by pass projects in the area of Winchester Street, Key Road, and Island Streets are also included, and total \$6m, including about \$4.8m in state grant funding.

Flood and Stormwater Management includes a series of projects which range from high level mapping and threat assessment (Climate Adaptation Vulnerability Assessment and Beaver Brook Hydrologic and Hydraulic Study), the rehabilitation of Goose Pond Dam, major drainage system expansion projects, and a series of drainage system maintenance and spot repair programs. Nearly \$4.8m is requested between FY 2018 and 2023 for these activities.

Airport Development projects make up about 23% of the proposed General Fund CIP. Of the ten project requests included in the CIP, nine (totalling \$10,827,050) have been approved for FAA and State Aeronautical Program funding which will cover 95% of the project costs. The City cost matching requirement for these projects will be about \$541,000. The tenth project is the Airport Terminal Improvements project previously discussed.

Capital Reserve Appropriations the proposed CIP includes capital reserve appropriation requests totalling \$4,205,000, representing about 8.8% of the program, between FY 2018 and FY 2023.

Capital reserves are used to level out the property tax impact of capital activity such as equipment replacement, emergency repairs, or even larger infrastructure projects. All uses of capital reserves are approved by vote of the City Council, either through the operating budget process, or by Council vote on a separate resolution.

The General Fund has five related capital reserves. Two of these fund the replacement of Fire Department ambulances and trucks. The remainder are the Transportation Improvements, Bridge Replacement, and Downtown Infrastructure Capital Reserve (previously accounted for in the Parking Fund).

Fire Department makes up about 5.55% of the program, with requested funding of about \$2.65m (*not including capital reserve appropriations*). The projects are largely the acquisition of fire apparatus and ambulances, along with radios and other small equipment.

Parks and Recreation Department requests include a major project to renovate Carpenter Field, add a splash pad at Robin Hood Park swimming pool, build a skate park, and conduct a feasibility study of the Recreation Center in conjunction with the Keene Senior Center to determine the best future uses of the facility. These projects total about \$2.135m (4.47%), of which \$560,000 is anticipated to be funded through grants and donations.

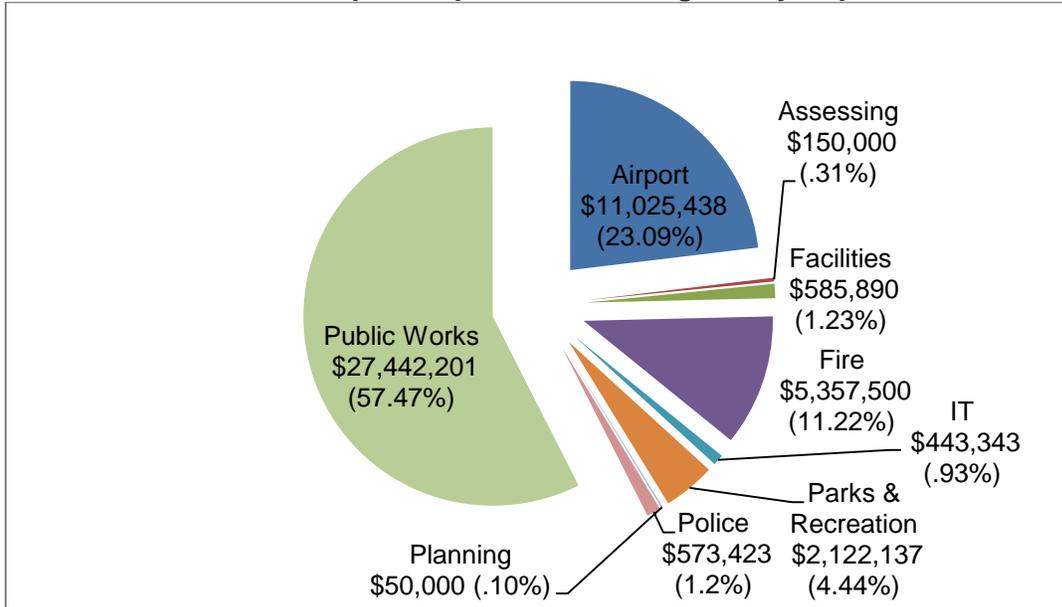
Miscellaneous Projects totalling \$2,130,00 are comprised of the 560 Main Street Landfill Site Remediation, Downtown Revitalization, and Infrastructure projects. The 560 Main Street project is expected to be funded through the sale of the property.

The balance of the General Fund proposed CIP includes project requests for Police Department communications equipment and replacement of equipment in the dispatch center as well as ongoing projects to fund computer network equipment upgrades and facilities maintenance projects.

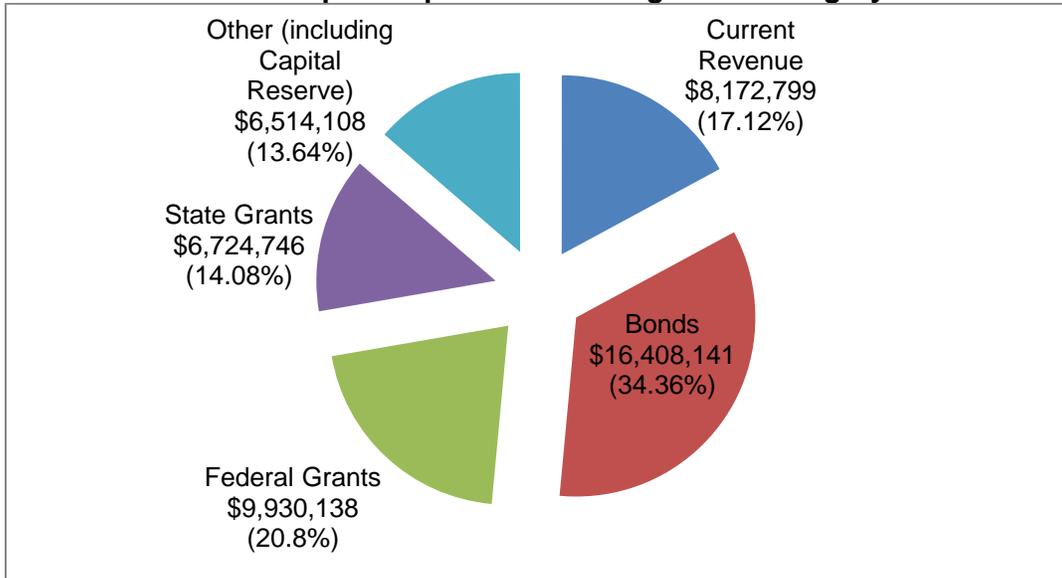
Additional General Fund Information

The General Fund CIP includes projects submitted by several departments. The following two graphs reflect the funding by department and funding source.

General Fund Capital Improvements Program By Department



General Fund Capital Improvements Program Funding By Source



WATER AND SEWER FUNDS

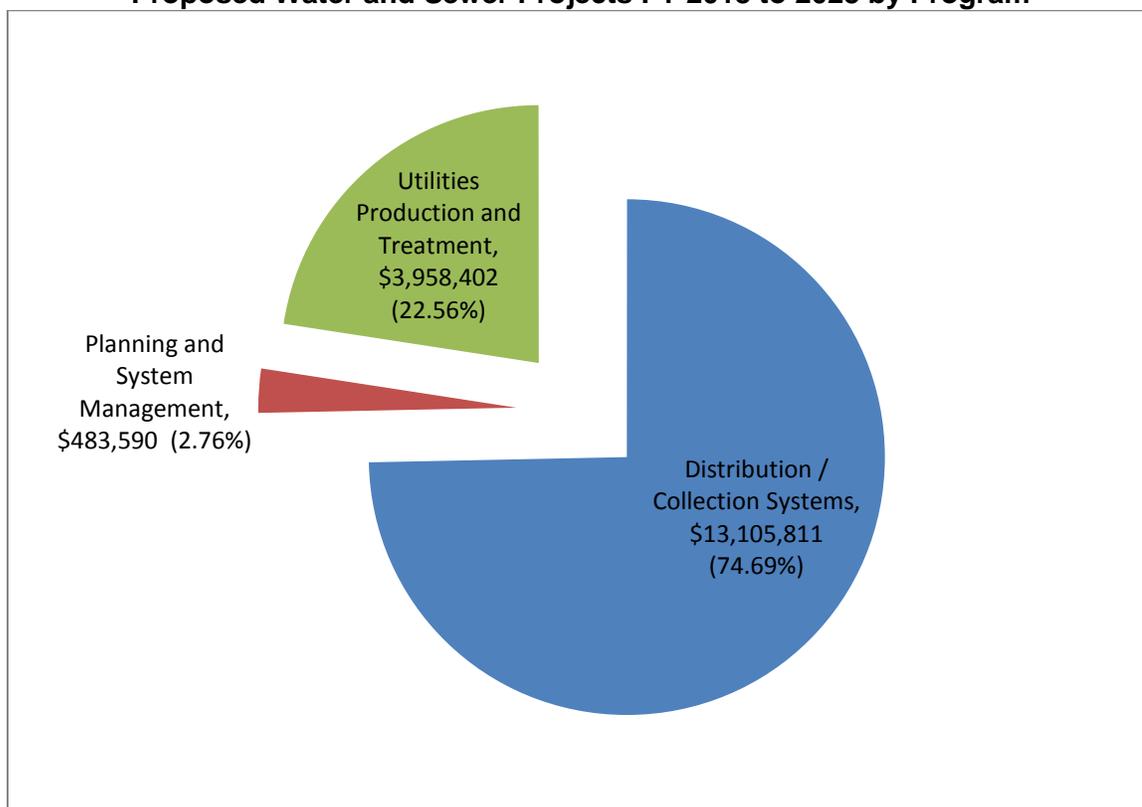
The Water and Sewer Funds combined CIP request totals approximately \$26,997,803 (31.42% of the proposed CIP). Of that, \$9,450,000, or 35% consists of appropriations to capital reserves. The capital reserves are used to help manage and smooth the impacts of large capital outlays through setting aside funds over time to pay for those projects, and as noted in the

General Fund discussion, all uses of capital reserves are approved by vote of the City Council, either through the operating budget process, or by Council vote on a separate resolution.

The balance of the Water and Sewer combined CIP (\$17,547,803) funds system improvements and equipment replacement as outlined in the proposed FY 2018-2023.

The following graphs and discussion provide consolidated information on major water and sewer utility projects by program, in terms of dollar value, and percent of the proposed program.

Proposed Water and Sewer Projects FY 2018 to 2023 by Program



Project Highlights By Activity and Fund

Water and Sewer Distribution and Collection Systems

Water and Sewer distribution and collection systems are a network of dams, reservoirs, wells, water tanks, pump and booster stations, and water and sewer mains (pipes) and related infrastructure. In the case of sewer, these systems collect and transport wastewater from throughout the City to the Wastewater Treatment Plant for treatment and disposal in a safe and environmentally healthy manner. In the case of water, these systems collect and transport water to the Water Treatment Facility (WTF) for treatment, and then transport clean and healthy drinking water throughout the City for use in homes and businesses.

Over six years, the combined project requests for the upgrades and maintenance of these systems totals \$13.1m, with approximately \$6.5m requested for sewer system projects, and \$6.6m for water system projects.

- A. Sewer System highlights
 - 1. Sewer Main replacement and cleaning and lining – the six year request for projects of this type total \$5.247m.
 - 2. Martell Court Headworks – scheduled for FY 2019 at a cost of \$1,142,560, this project installs new equipment at the Martell Court Pump Station to remove solids (rags, plastic bags, sticks, silt, etc.) from wastewater before it is pumped to the Wastewater Treatment Plant.
 - 3. Martell Court Pump Station improvements – a series of small projects including roof replacement, electrical systems upgrades, and insulation replacement at a cost of \$257,000.

- B. Water System highlights
 - 1. Water Main replacement and relining – the six year request for projects of this nature total \$4.455m.
 - 2. Water valve replacement – water valves provide the ability to stop or redirect water flows in the water distribution system. The requested six year funding is \$528,392.
 - 3. Woodward Dam Improvements – reservoir dam rehabilitation \$1.022m.
 - 4. System Upgrades - requested funding of \$453,000 for repairs and upgrades to booster stations, and the Drummer Hill, Chapman Road, and Black Brook water tanks.

Water and Sewer Production and Treatment Systems

Water production and treatment facilities include the Water Treatment Facility where water is treated for distribution to the public, and the nearby 1.5 and 3 million gallon (mg) water tanks. The sewer production and treatment facilities include the Wastewater Treatment Plant and related infrastructure and equipment, where wastewater is treated to remove bacteria, metals, and other pollutants providing for environmentally safe discharge into the Ashuelot River.

Over the life of the FY 2018-2023 CIP, these improvements total \$3.958m, with \$678,901 requested for Wastewater Treatment Plant improvements, and \$3.279m for improvements to the Water Treatment Facility and water tanks.

- A. Sewer System highlights
 - 1. Equipment Replacement - blowers, emergency generator, and nonpotable water system. \$642,901.
 - 2. HVAC ductwork insulation replacement - \$36,000

- B. Water System highlights
 - 1. Water Tank replacement or repair - \$2.679m
 - 2. Filter Media replacement - \$395,000
 - 3. Facilities and Equipment upgrades - pressure reduction valve, paving, and instrumentation - \$205,000

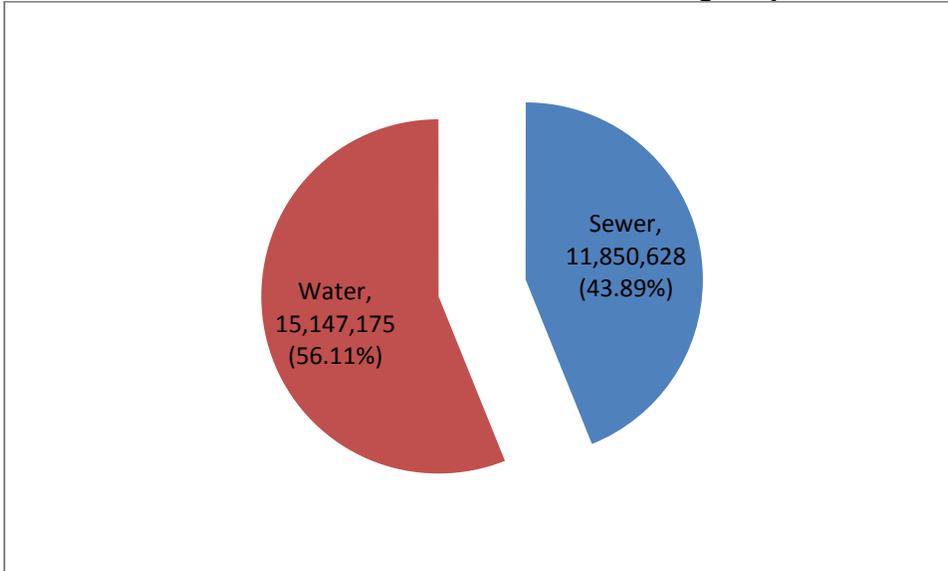
Water and Sewer Planning and System Management

In this category, there is one project requested in the FY 2018-2023 CIP. The project, with a requested budget of \$483,590 will evaluate the productivity and condition of the current well fields supplying water to the City's residents to determine whether current well fields should be rehabilitated, replaced, or supplemented with a new well field(s).

Additional Water and Sewer Fund Information

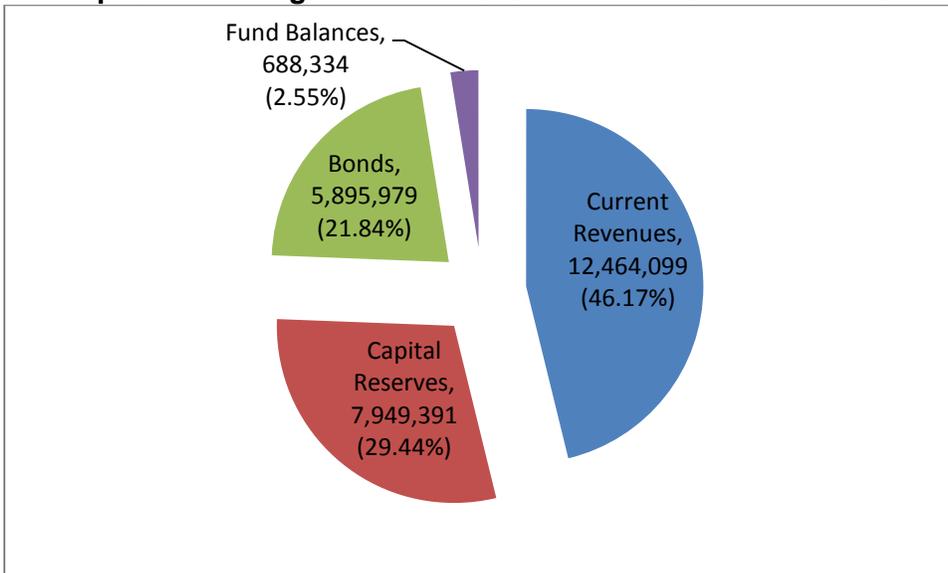
The following graph highlights the distribution of project requests between the Water and Sewer Funds:

Allocation of Water and Sewer CIP Funding Requests



The following graph provides information on the proposed funding of the Water and Sewer Funds FY 2018-2023 CIP:

Proposed Funding – FY 2018-2023 Water and Sewer Funds CIP



OTHER FUNDS

Equipment Fund activity represents approximately 10% of the program, and its purpose is to fund the replacement of worn out vehicles and accessories (police cars, dump trucks, sidewalk plows, staff vehicles, etc.). The proposed CIP also includes projects to replace the equipment

wash bay, reroof the shop building, and replace the fuel island. Funding for the Equipment Fund is predominantly derived from user fees charged to other departments.

The Parking Fund and Solid Waste Funds represent about 3% of the proposed CIP. Projects in these funds relate primarily to maintenance and improvement of facilities and the replacement of Parking and Solid waste infrastructure and equipment.

Discussion - Projected Impact on Property Taxes and User Fees

In addition to identifying capital projects needed to maintain or advance the community, determining the appropriate project scope and estimated project capital and operating costs, and identifying a method of paying for the project, the impact of the proposed CIP on property tax, and fee and rate payers are estimated and included in the CIP.

Each of the major funds has a primary funding source:

Fund	Primary Revenue	Fund	Primary Revenue
General Fund	Property Tax	Parking Fund	Meter Fees / Reserved Space Rents
Water Fund	Water User Fees	Solid Waste Fund	Landfill Tip Fee
Sewer Fund	Sewer User Fees	Equipment Fund	Fleet Rental Rates - internal charges

In order to project the impact of the proposed CIP on the budgets of future years, the annual direct costs of the proposed CIP are added to existing debt service obligations, and projections of operating costs such as payroll, utilities, supplies, and so on.

The current CIP includes operating budget projection factors ranging from 1% to 2.75%, depending on fund and department. Operating budget projection assumptions are reviewed and adjusted annually during CIP and operating budget development based upon historical trends, new information, Council and management initiatives, and results of operations.

Revenues other than the primary revenues for each fund are also reviewed and adjusted annually in the context of historical trends, new information, Council and management initiatives, and results of operations. Current non-primary revenue projection assumptions range from an annual growth rate of 0% to 1.8%.

These revenues are also projected over the life of the CIP, and form part of the funding picture in future years.

The primary revenue funding source for each fund typically funds the difference between expenditure need, and the amount of revenue projected to be generated by other revenues in each fund. The further refinement of budget projections for years included in the Capital Budget and Capital Plan will take place before the Operating Budget is presented in May 2017.

Projections are made for each fund (General Fund, Water Fund, Sewer Fund, Parking Fund, Solid Waste Fund, and Equipment Fund) for each of the six years included in the CIP, and include adjustments to property taxes, utility rates, and fees, which are detailed in the following table:

Revenue Assumptions FY 2018-2023 CIP						
	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
General Fund - Property Taxes						
Dollar change	372,566	725,973	762,937	767,726	713,111	686,358
Percent change	1.52%	2.91%	2.97%	2.91%	2.62%	2.46%
	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
Water and Sewer - Combined Utility Bill (full year)						
Dollar change	(3.68)	36.72	37.80	41.04	35.64	32.40
Percent change	-0.28%	2.84%	2.84%	3.00%	2.53%	2.24%
<i>Residential user, 27 hundred cubic feet consumption / quarter</i>						
	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
Parking Fund						
<i>Downtown meter / hr</i>	0.75					
Dollar change			0.04			0.02
Percent change			5%			2%
<i>Surface lot meter / hr</i>	0.30					
Dollar change			0.02			0.01
Percent change			5%			2%
<i>Surface lot / quarter</i>	130					
Dollar change			6.50			2.73
Percent change			5%			2%
<i>Covered lot / quarter</i>	155					
Dollar change			7.75			3.26
Percent change			5%			2%
<i>The reflected rate changes are not proposed rate, but are presented to provide a sense of the magnitude and timing of rate changes as reflected in projected revenues and operating results.</i>						
	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
Equipment Fund - Internal Service Charges						
Dollar change	93,015	96,968	101,089	105,386	109,864	107,796
Percent change	4.25%	4.25%	4.25%	4.25%	4.25%	4.00%
	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
Solid Waste Fund - Tip Fee per ton						
Dollar change	3	3	3	3	3	3
Percent change in tip fee	2.45%	2.39%	2.34%	2.29%	2.23%	2.19%
<i>Due to reduced out of town waste flow tonnage projections, and fluctuating transport and disposal costs (T&D) well as changing out of town tip fee rates, the % change in tip fee will not generate a net operating revenue increase that correlates with the change in fee per to. Projected revenues indicate a decrease in operating revenue due to various market changes at work locally and in the solid waste industry in general. The percent change in tip fee is based upon the blended tip fee rate, determined by the relative tonnages of different types of refuse delivered to the Transfer Station.</i>						

In the General, Water, Sewer, and Equipment Funds, the primary revenue source is reviewed and adjusted each year in the context of the capital and operations budgets adopted by the City Council. The Parking Fund primary revenue requirements are also reviewed each year in the context of the capital and operations budgets, and when necessary, revenue adjustments are brought to the City Council for review and adoption.

In the Solid Waste Fund, under Chapter 78, Section 5, tipping fees (the primary revenue) have been established by the Public Works Director administratively, and since 2010 have been raised only once.

Sec. 78-5. - Tipping fees; permit fees.

Tipping fees will be set by the operator. Waste that requires a tipping fee and the applicable fee will be determined by the operator on a yearly basis and will be effective beginning July 1 of each year. Tipping fees must be paid at the time of disposal unless prior agreement has been made upon such terms and conditions established by the public works director. Permit fees for private contractors will be set by the public works director beginning July 1 of each year. Permit fees shall be paid within 30 days of invoice. Permit fees shall not be prorated. (Ord. No. O-2010-13, 7-1-2010)

The recent history of the tip fees is as follows:

1999-2000	\$98/ton for MSW & C & D
2001-2004 this time)	\$117/ton for MSW & C & D (Waste Management ran the City's Transfer Station during
2004-2007	\$90/ton for MSW & C & D (Waste Management brought no waste to City- used Peterborough Transfer Station)
2007-2010	\$110/ton for MSW, \$115/ton for C & D (Waste Management contracted to transport and dispose of MSW & C & D)
2010-2016	\$120/ton for MSW, \$125/ton for C & D (Waste Management contracted to transport and dispose of MSW & C & D)
2016-present	\$121/ ton for MSW, \$126/ton for C & D (Waste Management contracted to transport and dispose of MSW & C & D)

Recent and ongoing changes in the solid waste market / industry regionally and nationally are leading to an understanding that our current business model is becoming less sustainable in the long term. City staff will be reviewing and analyzing alternatives and / or adjustments to the current business model to establish a sustainable solid waste handling and disposal operation.

Discussion - Projected Impact on Outstanding Debt

Long term borrowing is used to finance projects that have a significant cost and are of a lasting nature. While projects are often bundled together into one annual sale in order to minimize bond issuance costs, the time over which the bonds are repaid (the term) varies based on the financed improvement's expected useful life. The City's past practice to issue bonds with a term that is significantly less than the project's useful life in order to speed the payoff and to reduce interest cost is viewed favorably when the City goes to market.

The following two tables illustrate the impact of the proposed CIP on outstanding debt for all funds, or in other words, for the City as a whole.

	Debt Balance	Debt Balance	Net Change
	<u>6/30/2017</u>	<u>6/30/2023</u>	<u>in Outstanding Debt</u>
General Fund	27,732,076	21,316,039	(6,416,037)
Sewer Fund	11,351,059	5,450,915	(5,900,144)
Water Fund	1,770,583	3,724,603	1,954,020
Solid Waste Fund	232,796	287,283	54,487
Parking Fund	3,870,000	950,000	(2,920,000)
Totals	44,956,514	31,728,840	(13,227,674)

	New Debt	Maple Ave Bridge	Debt Service*	Net Change
	<u>FY 2018-2023</u>	<u>R-2014-14**</u>	<u>FY 2018-2023</u>	<u>in Outstanding Debt</u>
General Fund	16,408,141	135,000	(22,959,177)	(6,416,037)
Sewer Fund	2,598,072		(8,498,216)	(5,900,144)
Water Fund	3,297,907		(362,263)	2,935,644
Solid Waste Fund	416,750		(1,343,887)	(927,137)
Parking Fund			(2,920,000)	(2,920,000)
Totals	22,720,870	135,000	(36,083,543)	(13,227,674)
*Debt Service - Principal payments on outstanding debt				
**Authorized in FY 2015, but unissued until needed to match state bridge funding.				

As the above chart indicates, the proposed FY 2018-2023 CIP projects the issuance of \$22,720,870 in new bonded debt, and during that period, a previously authorized but unissued bond will be issued. Offsetting the newly issued debt would be projected debt service principal payments totaling \$36,083,543.

The projected impact on total outstanding debt from the end of FY 2017 through the end of FY 2023 would be a decrease of \$13,277,674 or 29.4%.

A detailed presentation of proposed new debt included in the FY 2018-2023 CIP is presented in the table on the following page.

Of note in this presentation is that the largest single source of new bonded debt over the six year life of the CIP (\$8,102,425 or 35.66% of total new debt and 49.4% of General Fund new debt) is Road Rehabilitation (repaving).

It is the recommendation of staff that the City Council consider, as funding permits and bearing in mind the impacts (both long and short term) on property tax payers, that this recurring project be slowly transitioned from debt as a funding source, to current revenue as a funding source.

Consolidated New Bond Schedule FY 2018 - 2023 Proposed Capital Improvement Program

	Program <u>Total</u>	Term	FY18	FY19	FY20	AMOUNT AND YEAR		
						FY21	FY22	FY23
<u>General Fund</u>								
Road Rehabilitation / Paving	8,102,425	10	1,231,496	1,262,876	1,409,105	1,289,213	1,460,132	1,449,603
Flood Management	2,338,760	15	900,000		861,380		577,380	
Sidewalk Repair	61,720	10	61,720					
Airport Terminal Improvements	198,388	7	198,388					
LED Streetlights	346,500	5	346,500					
Goose Pond Dam	879,400	20		879,400				
State Bypass Project	1,147,016	15		621,336	525,680			
Fixed Dispatch Infrastructure	352,932	7			352,932			
Carpenter Field	1,500,000	20				1,500,000		
Victoria Street Extension	1,481,000	20					1,481,000	
<u>Solid Waste Fund</u>								
Biofuel Generator	250,000	10	250,000					
Transfer Station Roof Repair	166,750	15		166,750				
<u>Sewer Fund</u>								
Martell Court Headworks Replacement	1,142,560	15		1,142,560				
Colony Court -Bloomer Swamp Main	1,455,512	15				1,455,512		
<u>Water Fund</u>								
Woodward Pond Dam	1,022,025	20			1,022,025			
3 MG Water Tank Replacement / Repair	2,275,882	20						2,275,882
Proposed Bond Issues FY 2018-2023	\$22,720,870		\$2,988,104	\$4,072,922	\$4,171,122	\$4,244,725	\$3,518,512	\$3,725,485

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**CITY OF KEENE, NEW HAMPSHIRE
CAPITAL IMPROVEMENT PROGRAM FY18 - FY23
General Fund Multi-Year Projections**

	ACTUAL FY 15/16	BUDGET FY 16/17	PROJECTED FY 17/18	PROJECTED FY 18/19	PROJECTED FY 19/20	PROJECTED FY 20/21	PROJECTED FY 21/22	PROJECTED FY 22/23
REVENUES								
Property Tax	\$24,352,010	\$24,552,112	\$24,924,678	\$25,650,651	\$26,413,588	\$27,181,314	\$27,894,425	\$28,580,783
Other Local Taxes	429,209	425,400	427,527	429,665	431,813	433,972	436,142	438,323
Tax Increment Financing	66,446	66,109	386,979	321,188	317,513	311,353	304,293	302,253
Licenses, Permits & Fees	3,601,619	3,423,280	3,557,513	3,593,088	3,629,019	3,665,309	3,701,982	3,738,982
Intergovernmental	2,524,610	2,699,243	2,712,739	2,726,303	2,739,934	2,753,634	2,767,402	2,781,239
Charges for Services	1,737,477	1,709,395	1,739,651	1,770,443	1,801,780	1,833,671	1,866,127	1,899,158
Fines & Forfeits	83,044	103,736	104,773	105,821	106,879	107,948	109,028	110,118
Miscellaneous	1,254,379	1,376,118	1,282,499	1,288,911	1,295,356	1,301,832	1,308,342	1,314,883
Other Financing Sources (net capital financing - not current)	2,075,181	9,485,754 (7,389,013)	2,355,289	2,664,373	2,528,715	2,319,887	2,357,005	2,394,717
Noncurrent revenue sources to fund capital								
Use of Fund Balance		825,000	815,000	825,000	825,000	425,000	800,000	500,000
Use of Fund Balance - appropriations carried forward		210,611	0	0	0	0	0	0
SUBTOTAL - current revenues	\$36,123,975	\$37,487,745	\$38,306,648	\$39,375,443	\$40,089,597	\$40,333,921	\$41,544,726	\$42,060,456
Sale of Bonds	\$1,933,000	3,638,000	\$2,738,104	\$2,763,612	\$3,149,097	\$2,789,213	\$3,518,182	\$1,449,603
TOTAL REVENUES & OTHER FIN SOURCES	\$38,056,975	\$41,125,745	\$41,044,752	\$42,139,055	\$43,238,694	\$43,123,134	\$45,062,908	\$43,510,059
EXPENDITURES								
ELECTED/APPOINTED OFFICIALS:								
Mayor & City Council	\$139,933	\$181,468	\$143,110	\$145,543	\$148,017	\$150,534	\$153,093	\$155,695
City Manager	234,728	270,472	275,070	279,746	284,502	289,338	294,257	299,260
City Clerk & Elections	551,363	571,285	565,996	575,618	585,404	595,355	605,476	615,770
City Attorney	283,152	334,697	340,387	346,173	352,058	358,043	364,130	370,320
Outside Agencies	239,000	253,000	253,000	253,000	253,000	253,000	253,000	253,000
Unclassified	61,873	68,608	69,774	70,960	72,167	73,394	74,641	75,910
Employee Benefits	579,046	674,091	1,004,854	773,531	923,531	940,155	1,140,155	1,160,678
Risk Management	273,319	295,471	300,494	305,602	310,798	316,081	321,455	326,919
Total Elected/Appointed Officials	\$2,362,413	\$2,649,091	\$2,952,685	\$2,750,173	\$2,929,477	\$2,975,900	\$3,206,207	\$3,257,552
ADMINISTRATIVE SERVICES:								
Assessment	\$426,060	\$438,347	\$446,018	\$453,823	\$461,765	\$469,846	\$478,068	\$486,435
Finance	1,493,064	1,545,952	1,562,233	1,589,572	1,617,389	1,645,694	1,674,493	1,703,797
Human Resources	311,829	321,837	322,382	328,023	333,764	339,605	345,548	351,595
Information Technology	1,103,899	1,263,271	1,241,762	1,263,493	1,285,604	1,308,102	1,330,994	1,354,286
Total Administrative Services	\$3,334,852	\$3,569,407	\$3,572,395	\$3,634,911	\$3,698,522	\$3,763,247	\$3,829,103	\$3,896,113
COMMUNITY SERVICES:								
Fire & Ambulance	\$6,255,436	\$6,514,125	\$6,692,442	\$6,876,485	\$7,065,588	\$7,259,892	\$7,459,539	\$7,664,676
Human Services	694,867	712,971	732,578	752,724	773,423	794,693	816,547	839,002
Library	1,314,055	1,359,267	1,396,647	1,435,055	1,474,519	1,515,068	1,556,732	1,599,542
Parks, Recreation & Facilities	2,832,663	2,960,067	2,986,735	3,068,870	3,153,264	3,239,979	3,329,078	3,420,628
Police	6,831,254	7,222,324	7,406,494	7,610,173	7,819,453	8,034,488	8,255,436	8,482,461
Youth Services	114,164	121,164	124,496	127,920	131,437	135,052	138,766	142,582
Total Community Services	\$18,042,439	\$18,889,918	\$19,339,392	\$19,871,227	\$20,417,684	\$20,979,172	\$21,556,098	\$22,148,891

**CITY OF KEENE, NEW HAMPSHIRE
CAPITAL IMPROVEMENT PROGRAM FY18 - FY23
General Fund Multi-Year Projections**

	ACTUAL FY 15/16	BUDGET FY 16/17	PROJECTED FY 17/18	PROJECTED FY 18/19	PROJECTED FY 19/20	PROJECTED FY 20/21	PROJECTED FY 21/22	PROJECTED FY 22/23
MUNICIPAL DEVELOPMENT SERVICES:								
Airport	\$579,707	\$604,004	\$614,503	\$628,636	\$643,095	\$657,886	\$673,018	\$688,497
Health & Code Enforcement	857,605	974,207	984,952	1,007,605	1,030,780	1,054,488	1,078,742	1,103,553
Planning	468,346	502,922	505,876	517,511	529,413	541,590	554,047	566,790
Public Works	3,734,483	4,284,316	4,325,885	4,425,381	4,527,165	4,631,289	4,737,809	4,846,779
Total Mun. Development Services	\$5,640,142	\$6,365,449	\$6,431,216	\$6,579,133	\$6,730,453	\$6,885,253	\$7,043,616	\$7,205,619
CAPITAL:								
Debt Service (including repayment of interfund loan)	5,139,006	4,634,196	4,848,976	4,879,517	4,849,676	4,375,191	4,623,570	4,307,024
CAPITAL PROJECTS (funded by current revenues)	1,191,402	1,379,683	1,161,984	1,660,481	1,463,784	1,355,158	1,286,133	1,245,259
Total Capital	\$6,330,408	\$6,013,879	\$6,010,960	\$6,539,998	\$6,313,460	\$5,730,349	\$5,909,703	\$5,552,283
SUBTOTAL - current expenditures	\$35,710,254	\$37,487,745	\$38,306,648	\$39,375,443	\$40,089,597	\$40,333,921	\$41,544,726	\$42,060,456
CAPITAL PROJECTS (funded by bonds)	\$1,933,000	\$3,638,000	\$2,738,104	\$2,763,612	\$3,149,097	\$2,789,213	\$3,518,182	\$1,449,603
TOTAL EXPENDITURES	\$37,643,254	\$41,125,745	\$41,044,752	\$42,139,055	\$43,238,694	\$43,123,134	\$45,062,908	\$43,510,059
CITY PROPERTY TAX REVENUE INCREASE			\$ 372,566	\$ 725,973	\$ 762,937	\$ 767,726	\$ 713,111	\$ 686,358
CITY PROPERTY TAX REVENUE INCREASE (%)			1.52%	2.91%	2.97%	2.91%	2.62%	2.46%
Assessments (trended 0% per year)			1,788,633.8	1,788,633.8	1,788,633.8	1,788,633.8	1,788,633.8	1,788,633.8
ADD: Overlay		\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000
ADD: War Service Credits		\$235,000	\$235,000	\$235,000	\$235,000	\$235,000	\$235,000	\$235,000
Property Tax Rate - City share		\$14.02	\$14.23	\$14.64	\$15.07	\$15.50	\$15.89	\$16.28
city tax rate increase (decrease)		1.50%	1.50%	2.88%	2.94%	2.85%	2.52%	2.45%
CAPITAL (current) & DEBT AS % OF BUDGET		16.00%	15.60%	16.60%	15.70%	14.20%	14.20%	13.20%
GENERAL FUND INCREASE (Excluding bonds)			2.2%	2.8%	1.8%	0.6%	3.0%	1.2%
GENERAL FUND INCREASE (Including bonds)			-0.2%	2.7%	2.6%	-0.3%	4.5%	-3.4%
Noncurrent Revenue Sources Used to Fund Capital FY 2016-2017								
Capital Reserves	175,000							
Trusts	6,800,000							
Project Balances - Wheelock Park Improvements	314,013							
Donations - Castle Court	100,000							
Total	7,389,013							

CITY OF KEENE, NEW HAMPSHIRE

General Fund 2018 - 2023 Capital Improvement Program Summary

Dept.	Project Name	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023	TOTAL
Airport	Fuel Farm	-	-	540,000	-	-	-	540,000
Airport	Obstruction Removal	1,000,000	500,000	-	-	-	-	1,500,000
Airport	Pavement Maintenance	-	52,000	54,000	56,000	58,000	60,000	280,000
Airport	Pavement Marking	-	114,736	118,178	-	-	129,136	362,050
Airport	Runway 14/32 Reconstruction	3,785,000	-	-	-	-	-	3,785,000
Airport	Runway 20 PAPI Replacement	-	60,000	-	-	-	-	60,000
Airport	Snow Removal Equipment	-	-	-	-	555,556	-	555,556
Airport	Taxiway A Relocation	-	2,444,444	-	-	-	-	2,444,444
Airport	Terminal Apron Expansion	-	-	1,300,000	-	-	-	1,300,000
Airport	Terminal Improvements	198,388	-	-	-	-	-	198,388
	TOTAL AIRPORT	\$ 4,983,388	\$ 3,171,180	\$ 2,012,178	\$ 56,000	\$ 613,556	\$ 189,136	\$ 11,025,438
Assessing	Revaluation	-	-	-	75,000	75,000	-	150,000
	TOTAL ASSESSING	\$ -	\$ -	\$ -	\$ 75,000	\$ 75,000	\$ -	\$ 150,000
Facilities	Community Center Feasibility Study	35,890	-	-	-	-	-	35,890
Facilities	Municipal Buildings Improvements	50,000	100,000	100,000	100,000	100,000	100,000	550,000
	TOTAL FACILITIES	\$ 85,890	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 585,890
Fire	Ambulance Replacement	-	240,000	-	-	260,000	-	500,000
Fire	Apparatus Replacement	-	-	1,100,000	45,000	725,000	105,000	1,975,000
Fire	Capital Reserve Ambulance Replacement	100,000	35,000	80,000	90,000	90,000	90,000	485,000
Fire	Capital Reserve Apparatus Replacement	300,000	400,000	400,000	385,000	385,000	350,000	2,220,000
Fire	Portable Radio Replacement	52,500	52,500	52,500	-	-	-	157,500
Fire	West Keene Fire Station Study	-	20,000	-	-	-	-	20,000
	TOTAL FIRE	\$ 452,500	\$ 747,500	\$ 1,632,500	\$ 520,000	\$ 1,460,000	\$ 545,000	\$ 5,357,500
IT	Database Software	-	-	-	-	-	80,000	80,000
IT	Network Equipment Replacement	64,000	26,500	5,000	31,000	6,500	-	133,000
IT	Server Replacement	23,000	54,343	30,000	12,000	3,000	3,000	125,343
IT	Storage Area Network	40,000	65,000	-	-	-	-	105,000
	TOTAL IMS	\$ 127,000	\$ 145,843	\$ 35,000	\$ 43,000	\$ 9,500	\$ 83,000	\$ 443,343
Parks & Rec.	Carpenter Field Improvements	-	-	-	1,500,000	-	-	1,500,000
Parks & Rec.	Cemetery Roads Repaving	22,137	-	-	-	-	-	22,137
Parks & Rec.	Robin Hood Splash Pad	-	100,000	-	-	-	-	100,000
Parks & Rec.	Skate Park	-	500,000	-	-	-	-	500,000
	TOTAL PARKS & RECREATION	\$ 22,137	\$ 600,000	\$ -	\$ 1,500,000	\$ -	\$ -	\$ 2,122,137
Planning	Climate Adaptation Vulnerability Assessment	50,000	-	-	-	-	-	50,000
	TOTAL PLANNING	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 50,000
Police	Fixed Communication System Replacement	-	-	352,932	-	-	-	352,932
Police	Mobile Radio Replacement	-	73,497	73,497	73,497	-	-	220,491
	TOTAL POLICE	\$ -	\$ 73,497	\$ 426,429	\$ 73,497	\$ -	\$ -	\$ 573,423
Public Works	Capital Reserve- Downtown Infrastructure	150,000	150,000	150,000	150,000	150,000	150,000	900,000
Public Works	Capital Reserve- Transportation Imp.	100,000	100,000	100,000	100,000	100,000	100,000	600,000
Public Works	560 Main Street Assessment	-	1,000,000	-	-	-	-	1,000,000
Public Works	Beaver Brook Hydrologic / Hydraulic Study	400,000	-	-	-	-	-	400,000
Public Works	Bridge Program	920,000	-	-	782,650	-	-	1,702,650
Public Works	Curb Installation	61,720	63,571	65,478	68,752	70,815	72,939	403,275
Public Works	Downtown Revitalization Study	30,000	-	-	-	550,000	550,000	1,130,000
Public Works	Flood Management	900,000	-	861,380	-	577,380	-	2,338,760
Public Works	Goose Pond Dam Improvements	-	879,400	-	-	-	-	879,400
Public Works	Guardrail Replacement	77,506	77,506	44,024	-	-	-	199,036
Public Works	LED Streetlights	346,500	-	-	-	-	-	346,500
Public Works	Marlboro Street Corridor Improvements	-	171,017	-	-	-	-	171,017
Public Works	Road Rehabilitation	1,231,496	1,262,876	1,409,105	1,289,213	1,460,132	1,449,603	8,102,425
Public Works	Sidewalks - New	-	-	-	-	-	-	-
Public Works	Sidewalks - Replacement/Repair	61,720	63,571	65,478	68,752	70,815	72,939	403,275
Public Works	State By-Pass Projects	-	3,016,680	2,628,399	-	363,884	-	6,008,963
Public Works	Storm Drainage Cleaning	63,000	64,890	66,836	68,841	70,907	73,034	407,508
Public Works	Stormwater Drainage Spot Repair Program	61,720	63,571	65,478	68,752	70,815	72,939	403,275
Public Works	Stormwater System Management	53,045	54,636	56,275	57,964	59,703	61,494	343,117
Public Works	Victoria Street Extension	-	-	-	-	1,703,000	-	1,703,000
	TOTAL PUBLIC WORKS	\$ 4,456,707	\$ 6,967,718	\$ 5,512,453	\$ 2,654,924	\$ 5,247,451	\$ 2,602,948	\$ 27,442,201
GRAND TOTAL - ALL GENERAL FUND PROJECTS		\$ 10,177,622	\$ 11,805,738	\$ 9,718,560	\$ 5,022,421	\$ 7,505,507	\$ 3,520,084	\$ 47,749,932

General Fund 2018 Capital Improvement Program Detail

Dept.	Project Name	cur rev	bonds	federal	state	other	2016/2017
Airport	Runway 14/32 Reconstruction			3,406,500	189,250	189,250	3,785,000
Airport	Runway 20 Obstruction Removal			900,000	50,000	50,000	1,000,000
Airport	Airport Terminal Improvements		198,388				198,388
Facilities	Municipal Buildings Improvements	10,000				40,000	50,000
Fire	Capital Reserve Ambulance Replacement	100,000					100,000
Fire	Capital Reserve Apparatus Replacement	300,000					300,000
Fire	Portable Radio Replacement	20,732				31,768	52,500
IT	Network Equipment Replacement	23,234				40,766	64,000
IT	Server Replacement	23,000					23,000
IT	Storage Area Network	40,000					40,000
Parks & Rec.	Cemetery Roads Repaving	22,137					22,137
Parks & Rec.	Community Center Feasibility Study	25,890				10,000	35,890
Planning	Climate Adaptation Vulnerability Assessment					50,000	50,000
Public Works	Capital Reserve - Downtown Infrastructure	150,000					150,000
Public Works	Capital Reserve - Transportation Imp.	100,000					100,000
Public Works	Bridge Program - Roxbury over Beaver Brk				736,000	184,000	920,000
Public Works	Beaver Brook Hydrologic / Hydraulic			250,000		150,000	400,000
Public Works	Curb Installation		61,720				61,720
Public Works	Downtown Revitalization Study	30,000					30,000
Public Works	Flood Management		900,000				900,000
Public Works	Guardrail Replacement	77,506					77,506
Public Works	LED Streetlights			346,500			346,500
Public Works	Road Rehabilitation		1,231,496				1,231,496
Public Works	Sidewalks - Replacement/Repair	61,720					61,720
Public Works	Storm Drainage Cleaning	63,000					63,000
Public Works	Stormwater Drainage Spot Repair Program	61,720					61,720
Public Works	Stormwater System Management	53,045					53,045
GRAND TOTAL - ALL GENERAL FUND PROJECTS		\$ 1,161,984	\$ 2,738,104	\$ 4,556,500	\$ 975,250	\$ 745,784	\$ 10,177,622

General Fund 2019 Capital Improvement Program Detail

Dept.	Project Name	cur rev	bonds	federal	state	other	2017/2018
Airport	Runway 20 Obstruction Removal	4,000		450,000	25,000	21,000	500,000
Airport	Runway 20 PAPI Replacement	3,000		54,000	3,000		60,000
Airport	Taxiway A Relocation	122,222		2,200,000	122,222		2,444,444
Airport	Pavement Maintenance	5,200		41,600	5,200		52,000
Airport	Pavement Marking	11,474		91,788	11,474		114,736
Facilities	Municipal Buildings Improvements	100,000					100,000
Fire	Capital Reserve Ambulance Replacement	35,000					35,000
Fire	Capital Reserve Apparatus Replacement	400,000					400,000
Fire	Ambulance Replacement					240,000	240,000
Fire	Portable Radio Replacement	52,500					52,500
Fire	West Keene Fire Station Study	20,000					20,000
IT	Network Equipment Replacement	26,500					26,500
IT	Storage Area Network	65,000					65,000
IT	Server Replacement	54,343					54,343
Parks & Rec.	Skate Park					500,000	500,000
Parks & Rec.	Robin Hood Park Splash Pad	50,000				50,000	100,000
Police	Mobile Radio Replacement	73,497					73,497
Public Works	Capital Reserve - Downtown Infrastructure	150,000					150,000
Public Works	Capital Reserve - Transportation Imp.	100,000					100,000
Public Works	Curb Installation	63,571					63,571
Public Works	Goose Pond Dam Improvements		879,400				879,400
Public Works	Guardrail Replacement	77,506					77,506
Public Works	Marlboro St Corridor Improvements					171,017	171,017
Public Works	560 Main Street Assessment					1,000,000	1,000,000
Public Works	Road Rehabilitation		1,262,876				1,262,876
Public Works	Sidewalks - Replacement/Repair	63,571					63,571
Public Works	State By-Pass Projects		621,336		2,395,344		3,016,680
Public Works	Storm Drainage Cleaning	64,890					64,890
Public Works	Stormwater Drainage Spot Repair Program	63,571					63,571
Public Works	Stormwater System Management	54,636					54,636
GRAND TOTAL - ALL GENERAL FUND PROJECTS		\$ 1,660,481	\$ 2,763,612	\$ 2,837,388	\$ 2,562,240	\$ 1,982,017	\$ 11,805,738

General Fund 2020 Capital Improvement Program Detail

Dept.	Project Name	cur rev	bonds	federal	state	other	TOTAL 2018/2019
Airport	Fuel Farm	27,000		486,000	27,000		540,000
Airport	Pavement Maintenance	5,400		43,200	5,400		54,000
Airport	Pavement Marking	11,818		94,542	11,818		118,178
Airport	Terminal Apron Expansion	65,000		1,170,000	65,000		1,300,000
Facilities	Municipal Buildings Improvements	100,000					100,000
Fire	Ladder 1 Replacement					1,100,000	1,100,000
Fire	Capital Reserve Ambulance Replacement	80,000					80,000
Fire	Capital Reserve Apparatus Replacement	400,000					400,000
Fire	Portable Radio Replacement	52,500					52,500
IT	Network Equipment Replacement	5,000					5,000
IT	Server Replacement	30,000					30,000
Police	Mobile Radio Replacement	73,497					73,497
Police	Fixed Communications System Repl.		352,932				352,932
Public Works	Capital Reserve - Downtown Infrastructure	150,000					150,000
Public Works	Capital Reserve - Transportation Imp.	100,000					100,000
Public Works	Curb Installation	65,478					65,478
Public Works	Flood Management		861,380				861,380
Public Works	Guardrail Replacement	44,024					44,024
Public Works	Road Rehabilitation		1,409,105				1,409,105
Public Works	Sidewalks - Replacement/Repair	65,478					65,478
Public Works	State By-Pass Projects		525,680		2,102,719		2,628,399
Public Works	Storm Drainage Cleaning	66,836					66,836
Public Works	Stormwater Drainage Spot Repair Program	65,478					65,478
Public Works	Stormwater System Management	56,275					56,275
GRAND TOTAL - ALL GENERAL FUND PROJECTS		\$ 1,463,784	\$ 3,149,097	\$ 1,793,742	\$ 2,211,937	\$ 1,100,000	\$ 9,718,560

General Fund 2021 Capital Improvement Program Detail

Dept.	Project Name	cur rev	bonds	federal	state	other	TOTAL 2019/2020
Airport	Pavement Maintenance	5,600		44,800	5,600		56,000
Assessing	Revaluation	75,000					75,000
Facilities	Municipal Buildings Improvements	100,000					100,000
Fire	Apparatus Replacement					45,000	45,000
Fire	Capital Reserve Ambulance Replacement	90,000					90,000
Fire	Capital Reserve Apparatus Replacement	385,000					385,000
IT	Network Equipment Replacement	31,000					31,000
IT	Server Replacement	12,000					12,000
Parks & Rec.	Carpenter Field Improvements		1,500,000				1,500,000
Police	Mobile Radio Replacement	73,497					73,497
Public Works	Bridge Program - George St over Beaver				626,120	156,530	782,650
Public Works	Capital Reserve - Downtown Infrastructure	150,000					150,000
Public Works	Capital Reserve - Transportation Imp.	100,000					100,000
Public Works	Curb Installation	68,752					68,752
Public Works	Road Rehabilitation		1,289,213				1,289,213
Public Works	Sidewalks - Replacement/Repair	68,752					68,752
Public Works	Storm Drainage Cleaning	68,841					68,841
Public Works	Stormwater Drainage Spot Repair Program	68,752					68,752
Public Works	Stormwater System Management	57,964					57,964
GRAND TOTAL - ALL GENERAL FUND PROJECTS		\$ 1,355,158	\$ 2,789,213	\$ 44,800	\$ 631,720	\$ 201,530	\$ 5,022,421

General Fund 2022 Capital Improvement Program Detail

<u>Dept.</u>	<u>Project Name</u>	<u>cur rev</u>	<u>bonds</u>	<u>federal</u>	<u>state</u>	<u>other</u>	<u>TOTAL</u> <u>2020/2021</u>
Airport	Pavement Maintenance	5,800		46,400	5,800		58,000
Airport	Snow Removal Equipment	27,778		500,000	27,778		555,556
Assessing	Revaluation	75,000					75,000
Facilities	Municipal Buildings Improvements	100,000					100,000
Fire	Capital Reserve Ambulance Replacement	90,000					90,000
Fire	Capital Reserve Apparatus Replacement	385,000					385,000
Fire	Ambulance Replacement					260,000	260,000
Fire	Apparatus Replacement					725,000	725,000
IT	Network Equipment Replacement	6,500					6,500
IT	Server Replacement	3,000					3,000
Public Works	Capital Reserve - Downtown Infrastructure	150,000					150,000
Public Works	Capital Reserve - Transportation Imp.	100,000					100,000
Public Works	Curb Installation	70,815					70,815
Public Works	Downtown Revitalization					550,000	550,000
Public Works	Flood Management		577,380				577,380
Public Works	Road Rehabilitation		1,460,132				1,460,132
Public Works	Sidewalks - Replacement/Repair	70,815					70,815
Public Works	State By-Pass Projects				291,107	72,777	363,884
Public Works	Storm Drainage Cleaning	70,907					70,907
Public Works	Stormwater Drainage Spot Repair Program	70,815					70,815
Public Works	Stormwater System Management	59,703					59,703
Public Works	Victoria St. Extension		1,481,000			222,000	1,703,000
GRAND TOTAL - ALL GENERAL FUND PROJECTS		\$ 1,286,133	\$ 3,518,512	\$ 546,400	\$ 324,685	\$ 1,829,777	\$ 7,505,507

General Fund 2023 Capital Improvement Program Detail

<u>Dept.</u>	<u>Project Name</u>	<u>cur rev</u>	<u>bonds</u>	<u>federal</u>	<u>state</u>	<u>other</u>	<u>TOTAL</u> <u>2021/2022</u>
Airport	Pavement Maintenance	6,000		48,000	6,000		60,000
Airport	Pavement Marking	12,914		103,308	12,914		129,136
Facilities	Municipal Buildings Improvements	100,000					100,000
Fire	Apparatus Replacement					105,000	105,000
Fire	Capital Reserve Ambulance Replacement	90,000					90,000
Fire	Capital Reserve Apparatus Replacement	350,000					350,000
IT	Database Software	80,000					80,000
IT	Server Replacement	3,000					3,000
Public Works	Capital Reserve - Downtown Infrastructure	150,000					150,000
Public Works	Capital Reserve - Transportation Imp.	100,000					100,000
Public Works	Curb Installation	72,939					72,939
Public Works	Downtown Revitalization					550,000	550,000
Public Works	Road Rehabilitation		1,449,603				1,449,603
Public Works	Sidewalks - Replacement/Repair	72,939					72,939
Public Works	Storm Drainage Cleaning	73,034					73,034
Public Works	Stormwater Drainage Spot Repair Program	72,939					72,939
Public Works	Stormwater System Management	61,494					61,494
GRAND TOTAL - ALL GENERAL FUND PROJECTS		\$ 1,245,259	\$ 1,449,603	\$ 151,308	\$ 18,914	\$ 655,000	\$ 3,520,084

General Fund 2018 - 2023 Capital Improvement Program Debt Summary

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Existing and Authorized Debt	\$27,732,076	\$26,553,331	\$25,339,485	\$24,651,048	\$23,648,198	\$23,380,726
New Issues Proposed	2,738,104	2,763,612	3,149,097	2,789,213	3,518,512	1,449,603
Maple Ave Bridge R-2014-14 -state aid match			135,000			
Principal Paid	(3,916,849)	(3,977,458)	(3,972,534)	(3,792,063)	(3,785,984)	(3,514,289)
Total Existing Debt & Issues Proposed	\$26,553,331	\$25,339,485	\$24,651,048	\$23,648,198	\$23,380,726	\$21,316,039

	<u>Issue</u>	<u>Term</u>	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Existing & Authorized Debt Service (P & I)			\$4,801,059	\$4,453,380	\$4,122,134	\$3,282,347	\$3,247,374	\$2,624,378
<u>Proposed Debt Service CIP FY18</u>								
Airport Terminal Improvements	198,388	7	3,472	34,789	33,797	32,805	31,813	30,821
Consolidated Infrastructure	1,293,216	10	22,631	172,321	167,795	163,269	158,742	154,216
Flood Management	900,000	15	15,750	90,450	88,350	86,250	84,150	82,050
LED Streetlights	346,500	5	6,064	80,215	77,790	75,364	72,938	70,513
<u>Proposed Debt Service CIP FY19</u>								
Consolidated Infrastructure	1,262,876	10		22,100	168,278	163,858	159,438	155,018
Goose Pond Dam	879,400	20		15,390	73,980	72,441	70,902	69,363
State Bypass Project	621,336	15		10,874	62,444	60,994	59,545	58,095
<u>Proposed Debt Service CIP FY20</u>								
Consolidated Infrastructure	1,409,105	10			24,659	187,763	182,831	177,900
Fixed Dispatch Infrastructure	352,932	7			6,176	61,889	60,124	58,360
Flood Management	861,380	15			15,074	86,569	84,559	82,549
State Bypass Project	525,680	15			9,199	52,831	51,604	50,378
<u>Proposed Debt Service CIP FY21</u>								
Consolidated Infrastructure	1,289,213	10				22,561	171,788	167,275
Carpenter Field	1,500,000	20				26,250	126,188	123,563
<u>Proposed Debt Service CIP FY22</u>								
Consolidated Infrastructure	1,460,132	10					25,552	194,563
Flood Management	577,380	15					10,104	58,027
Victoria Street Extension	1,481,000	20					25,918	124,589
<u>Proposed Debt Service CIP FY23</u>								
Consolidated Infrastructure	1,449,603	10						25,368
Total CIP 18-23 Debt Service Proposed			47,917	426,138	727,542	1,092,844	1,376,196	1,682,646
Total Projected Debt Service: General Fund			\$4,848,976	\$4,879,518	\$4,849,676	\$4,375,191	\$4,623,570	\$4,307,024

**CITY OF KEENE, NEW HAMPSHIRE
CAPITAL IMPROVEMENT PROGRAM FY18 - FY23
PARKING FUND MULTI-YEAR PROJECTIONS**

REVENUES	ACTUAL FY 14/15	ACTUAL FY 15/16	BUDGET FY 16/17	PROJECTED FY17/18	PROJECTED FY18/19	PROJECTED FY19/20	PROJECTED FY20/21	PROJECTED FY21/22	PROJECTED FY22/23
Taxes	\$1,048,290	\$1,167,250	\$1,146,740	\$1,039,377	\$863,650	\$859,589	\$604,975	\$589,975	\$214,700
Parking Meter Fees / Space Rentals	526,661	593,548	821,291	829,504	879,689	888,486	897,371	906,344	933,716
Fines & Forfeits	226,202	244,201	215,000	244,527	247,518	250,551	253,625	256,741	259,900
Miscellaneous	13,650	13,567	14,000	14,070	14,140	14,197	14,268	14,325	14,397
Capital reserve / Project Balances	28,926		36,632	25,000		50,000		50,000	
Use of (Addition to) surplus	42,500	42,500	42,500	42,500	42,500	42,500			
State courthouse payment									
Bond issue									
TOTAL REVENUES	\$1,886,228	\$2,061,066	\$2,276,163	\$2,194,977	\$2,047,498	\$2,105,323	\$1,770,239	\$1,817,386	\$1,422,713
EXPENDITURES									
Lots & Meters	\$678,450	\$698,982	\$689,460	\$713,591	\$738,567	\$769,417	\$796,346	\$824,218	\$853,066
Outside Services	215,419	193,286	194,225	\$201,508	209,065	216,905	225,039	233,478	242,233
City Hall Parking Facility	12,956	36,081	31,572	\$31,730	31,889	32,048	32,208	32,369	32,531
Wells Street Parking Facility	19,093	38,254	41,457	\$41,664	41,873	42,082	42,292	42,504	42,716
Capital	179,090	150,000	255,209	85,000	428,708	110,000	60,000	160,000	60,000
Property Taxes: Courthouse	250,044	255,463	263,127	267,127	274,900	283,064			
Debt Service-TAX INC. FIN. New	721,006	809,736	801,113	784,750	601,250	589,025	574,975	559,975	184,700
Debt Service-TAX INC. FIN. existing	\$2,076,059	\$2,181,802	\$2,276,163	\$2,125,370	\$2,326,251	\$2,042,541	\$1,730,861	\$1,852,544	\$1,415,247
TOTAL EXPENDITURES	(\$189,831)	(\$120,737)	\$0	\$69,607	(\$278,753)	\$62,782	\$39,378	(\$35,156)	\$7,466
Addition to (use of) Surplus									
CAPITAL & DEBT AS % OF BUDGET	55.4%	55.7%	58.0%	53.5%	56.1%	48.1%	36.7%	38.9%	17.3%
PARKING FUND INCREASE	19.3%	5.1%	4.3%	-6.6%	9.45%	-12.20%	-15.26%	7.03%	-23.61%

Projected fund balance at year end 338,307 371,282 301,675 92,528 155,311 194,689 159,530 166,996

Projected fund balance as a % of operating budget (total-capital) 14.93% 18.20% 14.93% 18.20% 18.20% 8.04% 11.65% 9.43% 12.32%

Note on Taxes: Wells Street Tax Increment Financing District (TIFD) revenues are raised to pay for the following TIFD expenditures in FY 2018:

Debt Service	\$	784,750	\$	601,250	\$	589,025	\$	574,975	\$	184,700
Wells Street Parking Facility Capital Reserve		30,000		30,000		30,000		30,000		30,000
District Courthouse - property tax		267,127		274,900		283,064		30,000		30,000
Offset - State of NH Courthouse rental payments		(42,500)		(42,500)		(42,500)				
TIFD Taxes to be Raised for Parking Fund	\$	1,039,377	\$	863,650	\$	859,589	\$	604,975	\$	214,700

Parking Meter Fees / Space Rentals include allowances in FY 18/19 (5%) and FY 22/23 (2.0%) for meter and parking space rental fees.

CITY OF KEENE, NEW HAMPSHIRE
Parking Fund 2018 - 2023 Capital Improvement Program Summary

<u>Dept.</u>	<u>Project Name</u>	<u>2017/2018</u>	<u>2018/2019</u>	<u>2019/2020</u>	<u>2020/2021</u>	<u>2021/2022</u>	<u>2022/2023</u>	<u>TOTAL</u>
Public Works	Capital Reserve - City Hall Parking Facility	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 180,000
Public Works	Capital Reserve - Wells Street Parking Facility	30,000	30,000	30,000	30,000	30,000	30,000	180,000
Police	Parking Smart Meter Technology		250,000					250,000
Public Works	Parking Structure Maintenance	25,000	-	50,000	-	50,000		125,000
Public Works	Surface Parking Lot Maintenance	-	118,708	-	-	50,000		168,708
TOTAL CAPITAL PROGRAM		\$ 85,000	\$ 428,708	\$ 110,000	\$ 60,000	\$ 160,000	\$ 60,000	\$ 903,708

PROJECT FUNDING DETAIL

Reserve Funded Projects

Public Works	Parking Structure Maintenance	\$ 25,000	\$ -	\$ 50,000	\$ -	\$ 50,000	\$ -	\$ 125,000
Total: Reserve Funded Projects		\$ 25,000	\$ -	\$ 50,000	\$ -	\$ 50,000	\$ -	\$ 125,000

Projects Funded with Debt

Public Works	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total: Projects Funded with Debt		\$ -						

Capital Reserve Appropriations

Public Works	Capital Reserve - City Hall Parking Facility	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 180,000
Public Works	Capital Reserve - Wells Street Parking Facility	30,000	30,000	30,000	30,000	30,000	30,000	180,000
Total: Capital Reserve Appropriations		\$ 60,000	\$ 360,000					

Projects Funded with Cash

Public Works	Parking Smart Meter Technology		\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ 250,000
Public Works	Surface Parking Lot Maintenance	-	118,708	-	-	50,000	-	168,708
Total: Projects Funded with Cash		\$ -	\$ 368,708	\$ -	\$ -	\$ 50,000	\$ -	\$ 418,708

Subtotal: Uses of Cash

(Capital Reserve Appropriations plus Projects Funded with Cash)

TOTAL CAPITAL PROGRAM

\$ 85,000	\$ 428,708	\$ 110,000	\$ 60,000	\$ 160,000	\$ 60,000	\$ 903,708
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New cash Requirement FY 18-23: reconciliation

<i>Total: Uses of cash</i>	\$60,000	\$428,708	\$60,000	\$60,000	\$110,000	\$60,000	\$778,708
<i>New Funds needed</i>	\$ 60,000	\$ 428,708	\$ 60,000	\$ 60,000	\$110,000	\$60,000	\$778,708

Parking Fund 2018 - 2023 Capital Improvement Program Debt Summary

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Existing and Authorized Debt	\$3,870,000	\$3,185,000	\$2,665,000	\$2,145,000	\$1,625,000	\$1,105,000
New Issues Proposed	-	-	-	-	-	-
Principal Paid	(685,000)	(520,000)	(520,000)	(520,000)	(520,000)	(155,000)
Total Existing Debt & Issues Proposed	\$3,185,000	\$2,665,000	\$2,145,000	\$1,625,000	\$1,105,000	\$950,000

	<u>Issue</u>	<u>Term</u>	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Existing & Authorized Debt Service (P & I)			\$784,750	\$601,250	\$589,025	\$574,975	\$559,975	\$184,700
<u>Proposed Debt Service CIP FY18</u>								
N/A								
<u>Proposed Debt Service CIP FY19</u>								
N/A								
<u>Proposed Debt Service CIP FY20</u>								
N/A								
<u>Proposed Debt Service CIP FY21</u>								
N/A								
<u>Proposed Debt Service CIP FY22</u>								
N/A								
<u>Proposed Debt Service CIP FY23</u>								
N/A								
Total CIP 18-23 Debt Service Proposed			0	0	0	0	0	0
Total Projected Debt Service: Parking Fund			\$784,750	\$601,250	\$589,025	\$574,975	\$559,975	\$184,700

**CITY OF KEENE, NEW HAMPSHIRE
CAPITAL IMPROVEMENT PROGRAM FY18-FY23
SOLID WASTE FUND MULTI-YEAR PROJECTIONS**

	ACTUAL FY 14/15	ACTUAL FY 15/16	BUDGET FY 16/17	PROJECTED FY17/18	PROJECTED FY18/19	PROJECTED FY19/20	PROJECTED FY20/21	PROJECTED FY21/22	PROJECTED FY22/23
REVENUES									
Charges for Services	\$ 4,574,238	\$ 4,691,177	\$ 4,466,649	\$ 4,253,295	\$ 4,298,983	\$ 4,340,482	\$ 4,382,075	\$ 4,362,266	\$ 4,377,816
Other Financing Sources	57,657	46,789	40,758	37,053	33,348	29,642	25,937	22,232	18,527
Use of Surplus			(2,990)						
Bond Issue									
Capital Reserve									
Miscellaneous	53,173	30							
TOTAL REVENUES	\$ 4,685,069	\$ 4,737,996	\$ 4,504,418	\$ 4,290,348	\$ 4,332,331	\$ 4,370,124	\$ 4,408,012	\$ 4,384,498	\$ 4,396,343
EXPENDITURES									
Management/Admin.	613,956	627,291	614,849	636,978	661,565	688,950	719,518	753,708	792,020
Transfer/Recycling Facility	75,334	83,883	101,031	142,163	143,585	145,020	146,471	147,935	149,415
Landfill / Operations	\$ 2,989,784	\$ 3,012,246	\$ 2,766,418	2,775,098	2,783,819	2,792,580	2,801,383	2,810,226	2,819,111
Recycling	499,957	508,517	540,009	556,111	572,692	589,767	607,352	625,461	644,110
Household Hazardous Waste	24,994	27,462	96,034	40,000	40,000	40,200	40,401	40,603	40,806
Demolition Transfer/Disposal	121,982	139,042	140,755	101,283	101,537	101,790	102,045	102,300	102,556
Landfill Monitoring	26,877	10,321	66,364	35,000	35,350	35,704	36,061	36,421	36,785
Landfill Gas System	98,805	65,656	74,000	75,480	76,990	78,529	80,100	81,702	83,336
Debt Service - CURRENT	46,468	44,886	59,957	58,641	41,485	39,975	38,410	36,845	11,800
Debt Service - PROJECTED				4,375	36,231	49,196	47,932	46,668	45,404
SUBTOTAL	\$ 4,498,158	\$ 4,519,304	\$ 4,459,417	\$ 4,425,128	\$ 4,493,253	\$ 4,561,713	\$ 4,619,672	\$ 4,681,869	\$ 4,725,343
CAPITAL	40,000	45,000	45,000	50,000	50,000	45,000	45,000	45,000	45,000
TOTAL EXPENDITURES	\$ 4,538,158	\$ 4,564,304	\$ 4,504,417	\$ 4,475,128	\$ 4,543,253	\$ 4,606,713	\$ 4,664,672	\$ 4,726,869	\$ 4,770,343
NET REVENUE (EXPENSE)	\$ 146,911	\$ 173,692	\$ 0	\$ (184,780)	\$ (210,922)	\$ (236,589)	\$ (256,659)	\$ (342,372)	\$ (374,001)
SOLID WASTE FUND INCREASE	-0.47%	0.58%	-1.31%	-0.65%	1.52%	1.40%	1.26%	1.33%	0.92%

Principal repayment on interfund loan	\$	86,170	\$	86,170	\$	86,170	\$	86,170	\$	86,170	\$	86,170
Annual change in current resources(net rev + repmnt)	\$	(98,610)	\$	(124,752)	\$	(150,419)	\$	(170,489)	\$	(256,202)	\$	(287,831)
Projected current resources at fiscal year end	\$	1,212,847	\$	1,114,237	\$	989,486	\$	839,067	\$	668,577	\$	412,376
Current resources as a percentage of operating budget		27.20%		25.18%		22.02%		18.39%		14.47%		8.81%

Note on Revenue Estimates - Charges for Services projections anticipate a \$3 per ton tip fee increase each year from 2018 through 2023. The increase represents a 2.45% increase in the blended tip fee rate in 2018, and a six year increase of 12.27%. City staff will be reviewing the current operating model for the Solid Waste Operation over the next three fiscal years, and developing sustainable alternative operating and funding models for the consideration of the City Council.

CITY OF KEENE, NEW HAMPSHIRE
Solid Waste Fund 2018 - 2023 Capital Improvement Program Summary

<u>Dept.</u>	<u>Project Name</u>	<u>2017/2018</u>	<u>2018/2019</u>	<u>2019/2020</u>	<u>2020/2021</u>	<u>2021/2022</u>	<u>2022/2023</u>	<u>TOTAL</u>
Public Works	Capital Reserve - Recycling/Transfer Facility	\$ 50,000	\$ 50,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 280,000
Public Works	Recycling Equipment Replacement	-	327,224	-	-	-	-	327,224
Public Works	Scale System Replacement	-	-	-	-	-	92,000	92,000
Public Works	Transfer Station Interior Updates	-	-	-	-	-	77,000	77,000
Public Works	Biofuel Generator	750,000	-	-	-	-	-	750,000
Public Works	Transfer Station Roof Replacement	-	166,750	-	-	-	-	166,750
TOTAL CAPITAL PROGRAM		\$ 800,000	\$ 543,974	\$ 45,000	\$ 45,000	\$ 45,000	\$ 214,000	\$ 1,692,974

PROJECT FUNDING DETAIL

Reserve Funded Projects

Public Works	Recycling Equipment Replacement	\$ -	\$ 327,224	\$ -	\$ -	\$ -	\$ -	\$ 327,224
Public Works	Scale System Replacement	-	-	-	-	-	92,000	92,000
Public Works	Transfer Station Interior Updates	-	-	-	-	-	77,000	77,000
Total: Reserve Funded Projects		\$ -	\$ 327,224	\$ -	\$ -	\$ -	\$ 169,000	\$ 496,224

Projects Funded with Debt

Public Works	Biofuel Generator	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 250,000
Public Works	Transfer Station Roof Replacement	-	166,750	-	-	-	-	166,750
Total: Projects Funded with Debt		\$ 250,000	\$ 166,750	\$ -	\$ -	\$ -	\$ -	\$ 416,750

Capital Reserve Appropriations

Public Works	Capital Reserve - Recycling/Transfer Facility	\$ 50,000	\$ 50,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 280,000
Total: Capital Reserve Appropriations		\$ 50,000	\$ 50,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 280,000

Projects Funded with State Grant

Public Works	EPA Grant	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 500,000
Total: Projects Funded with State Grant		\$ 500,000	\$ -	\$ 500,000				

Projects Funded with Cash

Public Works	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total: Projects Funded with Cash		\$ -						

Subtotal: Uses of Cash

(Capital Reserve Appropriations plus Projects Funded with Cash)

TOTAL CAPITAL PROGRAM

\$ 800,000	\$ 543,974	\$ 45,000	\$ 45,000	\$ 45,000	\$ 214,000	\$ 1,692,974
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Solid Waste Fund 2018 - 2023 Capital Improvement Program Debt Summary

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Existing and Authorized Debt	\$232,796	\$434,000	\$542,250	\$472,633	\$403,017	\$333,400
New Issues Proposed	250,000	166,750	-	-	-	-
Principal Paid	(48,796)	(58,500)	(69,617)	(69,617)	(69,617)	(46,117)
Total Existing Debt & Issues Proposed	\$434,000	\$542,250	\$472,633	\$403,017	\$333,400	\$287,283

	<u>Issue</u>	<u>Term</u>	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Existing & Authorized Debt Service (P & I)			\$58,641	\$41,485	\$39,975	\$38,410	\$36,845	\$11,800
<u>Proposed Debt Service CIP FY18</u>								
Biofuel Generator	250,000	10	4,375	33,313	32,438	31,563	30,688	29,813
<u>Proposed Debt Service CIP FY19</u>								
Transfer Station Roof Repair	166,750	15		2,918	16,758	16,369	15,980	15,591
<u>Proposed Debt Service CIP FY20</u>								
N/A								
<u>Proposed Debt Service CIP FY21</u>								
N/A								
<u>Proposed Debt Service CIP FY22</u>								
N/A								
<u>Proposed Debt Service CIP FY23</u>								
N/A								
Total CIP 18-23 Debt Service Proposed			4,375	36,231	49,196	47,932	46,668	45,404
Total Projected Debt Service: Solid Waste Fund			\$63,016	\$77,716	\$89,171	\$86,342	\$83,513	\$57,204

**CITY OF KEENE, NEW HAMPSHIRE
CAPITAL IMPROVEMENT PROGRAM FY18-FY23
Sewer Fund Multi-Year Projections**

	ACTUAL FY 14/15	ACTUAL FY 15/16	BUDGET FY 16/17	PROJECTED FY17/18	PROJECTED FY18/19	PROJECTED FY19/20	PROJECTED FY20/21	PROJECTED FY21/22	PROJECTED FY22/23
REVENUES									
Taxes	\$41,777	\$38,582	\$38,841	\$36,518	119,777	120,675	121,580	122,492	123,411
Intergovernmental	137,450	141,082	118,000	118,885	6,374,071	6,496,372	6,634,011	6,725,211	6,837,316
Charges for Services	6,186,268	6,268,835	6,608,362	6,121,147	9,571	9,643	9,715	9,788	9,862
Miscellaneous	27,321	28,993	8,100	9,500					
Use of Surplus			(997,462)						
TOTAL REVENUES	\$6,392,816	\$6,477,490	\$5,775,841	\$6,286,050	\$6,503,419	\$6,626,690	\$6,765,306	\$6,857,491	\$6,970,589
EXPENSES									
Sewer Administration	\$669,876	\$697,019	\$624,172	\$624,173	\$631,725	\$639,369	\$647,106	\$654,936	\$662,860
Mains & Manholes	278,855	284,347	356,929	342,271	\$346,412	\$350,604	\$354,846	\$359,140	\$363,486
Services	16,424	(78,126)	10,036	10,037	\$10,159	\$10,281	\$10,406	\$10,532	\$10,659
Martell Court pump stn	123,236	114,502	146,040	140,222	\$141,919	\$143,636	\$145,374	\$147,133	\$148,913
Laboratory	194,775	209,937	218,670	217,351	\$219,981	\$222,643	\$225,337	\$228,063	\$230,823
Maintenance	97,346	99,772	139,286	137,962	\$139,632	\$141,321	\$143,031	\$144,762	\$146,513
WWTP	2,597,508	2,489,076	2,601,348	2,552,906	2,583,796	2,615,060	2,646,702	\$2,678,727	\$2,711,140
Depreciation Expense	814,858	1,150,667	1,378,451	1,378,181	1,405,745	1,433,860	1,462,537	1,491,787	\$1,521,623
Debt Service - CURRENT	321,652	331,338	300,908	267,966	238,104	208,982	180,388	\$151,935	\$123,144
Debt Service - PROJECTED					19,995	38,657	61,463	82,569	76,507
SUBTOTAL	5,114,529	5,298,532	5,775,841	5,671,069	5,737,468	5,804,413	5,877,190	5,949,584	5,995,668
MINOR CAPITAL	166,335	839,393	0	\$0	0	0	0	0	0
TOTAL EXPENSE	\$ 5,280,865	\$ 6,137,925	\$ 5,775,841	5,671,069	\$5,737,468	\$5,804,413	\$5,877,190	\$5,949,584	\$5,995,668
NET REVENUE (EXPENSE)	\$1,111,951	\$339,566	\$0	\$614,981	\$765,951	\$822,277	\$888,116	\$907,907	\$974,921

SEWER FUND INCREASE -3.26% 16.23% -0.058991313 -1.81% 1.17% 1.17% 1.25% 1.23% 0.77%

CITY OF KEENE, NEW HAMPSHIRE
CAPITAL IMPROVEMENT PROGRAM FY18-FY23
Sewer Fund Multi-Year Projections

This section adjusts Net Revenue (Expense) to include uses of cash not recorded as expense, and to exclude expenses that do not require the use of cash. The purpose of the adjustment is to reflect the projected uses of cash from FY 18 thru FY 23:

	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23
Add Back: Depreciation	\$1,378,181	\$1,405,745	\$1,433,860	\$1,462,537	\$1,491,787	\$1,521,623
State Aid Grant Principal Receipts	116,488	57,078	55,628	\$54,257	\$52,784	\$51,135
Subtract: Debt Svc Principal Current Debt (Note 3)	(1,375,824)	(1,334,883)	(1,336,486)	(1,324,258)	(1,319,258)	(1,308,758)
Principal: New Debt (Note 3)			(76,171)	(76,171)	(173,205)	(173,205)
Tfrrs to Capital Reserve (Note 2)	(625,000)	(720,000)	(720,000)	(820,000)	(770,000)	(870,000)
Capital Outlays Funded through Rates and Fund Resources (Note 2)	(108,826)	(173,891)	(179,108)	(184,481)	(190,015)	(195,716)
<i>Projected Annual Cash Surplus (Deficit)</i>	\$0	\$0	\$0	\$0	\$0	\$0

Note 1: Net Revenue (Expense) indicates the anticipated increase (decrease) in retained earnings at the end of the year.

Note 2: Net revenue is anticipated to pay for debt service and capital improvements.

Note 3: Debt Service principal, capital outlays, state aid grant principal receipts, and transfers to reserves are balance sheet transactions, and are not included in expenses.

Note 4: Budgeted revenues exclude Use of Surplus / Fund Balance.

Note 5: Additional revenue raised in FY 15-23 to cover capital outlays and debt service in FY 15-23 and future years.

Billing Projections

	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23
Combined Water and Sewer Utility Billing Projections: Residential property with a 5/8" connection and consumption of 27 HCF (hundred cubic feet) per quarter						
quarterly bill increase	\$ 323.02 \$	\$ 332.20 \$	\$ 341.65 \$	\$ 351.91 \$	\$ 360.82 \$	\$ 368.92
percent increase	(0.92) %	9.18 %	9.45 %	10.26 %	8.91 %	8.10 %
	-0.28%	2.84%	2.84%	3.00%	2.53%	2.24%
Sewer Utility Billing Projections: Residential property with a 5/8" connection and consumption of 27 HCF (hundred cubic feet) per quarter						
quarterly bill increase	\$ 192.55 \$	\$ 199.30 \$	\$ 205.51 \$	\$ 208.75 \$	\$ 215.77 \$	\$ 219.82
percent increase	(17.58) %	6.75 %	6.21 %	3.24 %	7.02 %	4.05 %
	-8.37%	3.51%	3.12%	1.58%	3.36%	1.88%

CITY OF KEENE, NEW HAMPSHIRE

Sewer Fund 2018 - 2023 Capital Improvement Program Summary

Dept.	Project Name	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023	TOTAL
Public Works	Capital Reserve: Martell Court	\$ -	\$ -	\$ -	\$ 50,000	\$ 50,000	\$ 150,000	\$ 250,000
Public Works	Capital Reserve: Sewer Infrastructure	475,000	600,000	600,000	600,000	550,000	550,000	3,375,000
Public Works	Capital Reserve: Wastewater Treatment Plant	150,000	120,000	120,000	170,000	170,000	170,000	900,000
Public Works	Martell Court Headworks Treatment	-	1,142,560	-	-	-	-	1,142,560
Public Works	Martell Court Phase 2	10,925	58,667	-	130,810	-	-	200,402
Public Works	Martell Court Force HVAC Ductwork Insulation	-	-	-	-	-	23,928	23,928
Public Works	Martell Court Roof	-	-	-	-	-	32,714	32,714
Public Works	Sewer Main - State Bypass project	-	360,291	-	-	-	-	360,291
Public Works	Sewer Main Improvements	145,700	653,101	661,301	1,455,512	421,518	434,163	3,771,295
Public Works	Sewer Mains - Bridges Improvements	40,000	43,500	-	-	-	-	83,500
Public Works	Sewer Structural Repairs & Lining	108,826	173,891	179,108	184,481	190,015	195,716	1,032,037
Public Works	WWTP Blower Replacement	-	68,741	179,360	184,741	-	-	432,842
Public Works	WWTP HVAC Ductwork Insulation	-	-	-	-	-	35,892	35,892
Public Works	WWTP Generator Replacement	-	21,131	-	123,636	-	-	144,767
Public Works	WWTP Non-Potable Water System	-	65,400	-	-	-	-	65,400
TOTAL CAPITAL PROGRAM		\$ 930,451	\$ 3,307,282	\$ 1,739,769	\$ 2,899,180	\$ 1,381,533	\$ 1,592,413	\$ 11,850,628

PROJECT FUNDING DETAIL

Reserve Funded Projects

Public Works	Martell Court Phase 2	10,925	58,667	-	130,810	-	-	200,402
Public Works	Martell Court Force HVAC Ductwork Insulation	-	-	-	-	-	23,928	23,928
Public Works	Martell Court Roof	-	-	-	-	-	32,714	32,714
Public Works	Sewer Main - State Bypass project	-	360,291	-	-	-	-	360,291
Public Works	Sewer Main Improvements	145,700	653,101	661,301	-	421,518	434,163	2,315,783
Public Works	Sewer Mains - Bridges Improvements	40,000	43,500	-	-	-	-	83,500
Public Works	WWTP Blower Replacement	-	7,665	179,360	184,741	-	-	371,766
Public Works	WWTP HVAC Ductwork Insulation	-	-	-	-	-	35,892	35,892
Public Works	WWTP Generator Replacement	-	21,131	-	123,636	-	-	144,767
Public Works	WWTP Non-Potable Water System	-	65,400	-	-	-	-	65,400
Total: Reserve Funded Projects		\$ 196,625	\$ 1,209,755	\$ 840,661	\$ 439,187	\$ 421,518	\$ 526,697	\$ 3,634,443

Projects Funded with Debt

Public Works	Martell Court Headworks Treatment	\$ -	\$ 1,142,560	\$ -	\$ -	\$ -	\$ -	\$ 1,142,560
Public Works	Sewer Main Improvements	-	-	-	1,455,512	-	-	1,455,512
Total: Projects Funded with Debt		\$ -	\$ 1,142,560	\$ -	\$ 1,455,512	\$ -	\$ -	\$ 2,598,072

Projects Funded with Grants

Public Works	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total: Projects Funded with State Grant		\$ -						

Capital Reserve Appropriations

Public Works	Capital Reserve: Martell Court	\$ -	\$ -	\$ -	\$ 50,000	\$ 50,000	\$ 150,000	\$ 250,000
Public Works	Capital Reserve: Sewer Infrastructure	475,000	600,000	600,000	600,000	550,000	550,000	3,375,000
Public Works	Capital Reserve: Wastewater Treatment Plant	150,000	120,000	120,000	170,000	170,000	170,000	900,000
Total: Capital Reserve Appropriations		\$ 625,000	\$ 720,000	\$ 720,000	\$ 820,000	\$ 770,000	\$ 870,000	\$ 4,525,000

CITY OF KEENE, NEW HAMPSHIRE
Sewer Fund 2018 - 2023 Capital Improvement Program Summary

<u>Dept.</u>	<u>Project Name</u>	<u>2017/2018</u>	<u>2018/2019</u>	<u>2019/2020</u>	<u>2020/2021</u>	<u>2021/2022</u>	<u>2022/2023</u>	<u>TOTAL</u>
<u>Projects Funded with Cash</u>								
Public Works	Sewer Structural Repairs & Lining	\$ 108,826	\$ 173,891	\$ 179,108	\$ 184,481	\$ 190,015	\$ 195,716	1,032,037
Public Works	WWTP Aeration Gate Replacement	-	-	-	-	-	-	-
Public Works	WWTP Blower Replacement	-	61,076	-	-	-	-	61,076
Public Works	WWTP NPDES Permitting	-	-	-	-	-	-	-
Total: Projects Funded with Cash		\$ 108,826	\$ 234,967	\$ 179,108	\$ 184,481	\$ 190,015	\$ 195,716	\$ 1,093,113
Subtotal: Uses of Current Cash		\$ 733,826	\$ 954,967	\$ 899,108	\$ 1,004,481	\$ 960,015	\$ 1,065,716	\$ 5,618,113
<i>(Capital Reserve Appropriations plus Projects Funded with Current Cash)</i>								
TOTAL: CAPITAL PROGRAM		\$ 930,451	\$ 3,307,282	\$ 1,739,769	\$ 2,899,180	\$ 1,381,533	\$ 1,592,413	\$ 11,850,628

New cash Requirement FY 18-23: reconciliation

<i>Total: Uses of cash</i>	<i>\$733,826</i>	<i>\$954,967</i>	<i>\$899,108</i>	<i>\$1,004,481</i>	<i>\$960,015</i>	<i>\$1,065,716</i>	<i>\$5,618,113</i>
<i>WWTP Blower Replace: FY 14 Authorization</i>		<i>(\$61,076)</i>	<i>-</i>				<i>(\$61,076)</i>
<i>New Funds needed</i>	<i>\$ 733,826</i>	<i>\$ 893,891</i>	<i>\$ 899,108</i>	<i>\$ 1,004,481</i>	<i>\$960,015</i>	<i>\$1,065,716</i>	<i>\$5,557,037</i>

Sewer Fund 2018 - 2023 Capital Improvement Program Debt Summary

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Existing and Authorized Debt	\$11,351,059	\$9,975,236	\$9,782,913	\$8,370,256	\$8,425,340	\$6,932,878
New Issues Proposed	-	1,142,560	-	1,455,512	-	-
Principal Paid	(1,375,824)	(1,334,883)	(1,412,657)	(1,400,428)	(1,492,462)	(1,481,962)
Total Existing Debt & Issues Proposed	\$9,975,236	\$9,782,913	\$8,370,256	\$8,425,340	\$6,932,878	\$5,450,915

	<u>Issue</u>	<u>Term</u>	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Existing & Authorized Debt Service (P & I)			\$1,643,790	\$1,572,987	\$1,545,468	\$1,504,646	\$1,471,192	\$1,431,901
<u>Proposed Debt Service CIP FY18</u>								
N/A								
<u>Proposed Debt Service CIP FY19</u>								
Martell Court Headworks Replacement	1,142,560	15		19,995	114,827	112,161	109,495	106,829
<u>Proposed Debt Service CIP FY20</u>								
N/A								
<u>Proposed Debt Service CIP FY21</u>								
Colony Court -Bloomer Swamp Main	1,455,512	15				25,471	146,279	142,883
<u>Proposed Debt Service CIP FY22</u>								
N/A								
<u>Proposed Debt Service CIP FY23</u>								
N/A								
Total CIP 18-23 Debt Service Proposed			0	19,995	114,827	137,633	255,774	249,712
Total Projected Debt Service: Sewer Fund			\$1,643,790	\$1,592,981	\$1,660,295	\$1,642,279	\$1,726,967	\$1,681,613

**CITY OF KEENE, NEW HAMPSHIRE
CAPITAL IMPROVEMENT PROGRAM FY18-FY23
WATER FUND MULTI-YEAR PROJECTIONS**

	ACTUAL FY 14/15	ACTUAL FY 15/16	BUDGET FY 16/17	PROJECTED FY17/18	PROJECTED FY18/19	PROJECTED FY19/20	PROJECTED FY20/21	PROJECTED FY21/22	PROJECTED FY22/23
REVENUES									
Taxes	\$118,367	\$109,315	\$106,600	100,228					
Intergovernmental									
Charges for Services	3,864,510	3,620,085	3,652,375	4,105,521	4,167,172	4,217,188	4,409,648	4,462,874	4,574,861
Miscellaneous	19,304	1,567,832	9,643	20,320	20,499	20,679	20,861	21,046	21,231
Use of Surplus			39,257						
TOTAL REVENUES	\$4,002,181	\$5,297,232	\$3,807,875	\$4,226,069	\$4,187,671	\$4,237,867	\$4,430,509	\$4,483,920	\$4,596,092
EXPENSES									
Public Works Water	\$802,569	\$780,954	\$784,367	779,289	\$794,095	\$809,183	\$824,558	\$840,224	\$856,189
Water Main & Trench Repairs	174,701	191,789	229,994	216,740	\$220,858	\$225,054	\$229,330	\$233,688	\$238,128
Water Supply	145,421	144,852	171,313	171,313	\$174,568	\$177,885	\$181,265	\$184,709	\$188,218
Hydrants	153,862	89,710	135,167	122,867	\$125,201	\$127,580	\$130,004	\$132,474	\$134,991
Meters	362,245	388,933	405,599	385,962	\$393,295	\$400,768	\$408,382	\$416,142	\$424,048
Water Services	54,604	55,013	46,338	46,338	\$47,218	\$48,116	\$49,030	\$49,961	\$50,911
Water Treatment Facility	636,872	638,268	736,363	707,758	\$721,205	\$734,908	\$748,872	\$763,100	\$777,599
Laboratory	182,353	202,805	237,844	230,664	\$235,047	\$239,513	\$244,063	\$248,700	\$253,426
Maintenance	121,059	115,463	128,503	128,503	\$130,945	\$133,433	\$135,968	\$138,551	\$141,184
Depreciation Expense	884,797	944,906	894,100	894,100	972,228	990,700	1,009,524	1,028,704	\$1,048,250
Debt Service - CURRENT	47,198	16,097	38,287	45,909	39,904	35,762	31,347	26,885	22,374
Debt Service - PROJECTED									
Subtotal	3,565,679	3,568,789	3,807,875	3,729,443	3,854,565	3,940,787	4,027,219	4,096,227	4,206,444
MINOR CAPITAL	147,173	290,898	0	0	0	0	0	0	0
TOTAL EXPENSES	\$3,712,852	\$3,859,686	3,807,875	3,729,443	\$3,854,565	\$3,940,787	\$4,027,219	\$4,096,227	\$4,206,444
NET REVENUE (EXPENSE)	\$ 289,329	\$ 1,437,546	\$ 0	\$ 496,626	\$ 333,106	\$ 297,081	\$ 403,289	\$ 387,693	\$ 389,648

WATER FUND INCREASE -9.72% 3.95% -1.34% -2.06% 3.35% 2.24% 2.19% 1.71% 2.69%

CITY OF KEENE, NEW HAMPSHIRE
CAPITAL IMPROVEMENT PROGRAM FY18-FY23
WATER FUND MULTI-YEAR PROJECTIONS

This section adjusts Net Revenue (Expense) to include uses of cash not recorded as expense, and to exclude expenses that do not require the use of cash. The purpose of the adjustment is to reflect the projected uses of cash from FY 18 thru FY 23.

Add Back: Depreciation	\$894,100	\$972,228	\$990,701	\$1,009,524	\$1,028,704	\$1,048,250
State Aid Grant Principal Receipts						
Subtract: Debt Svc Principal (current debt) (Note 3)	(310,999)	(186,016)	(188,583)	(191,197)	(193,860)	(119,929)
Debt Svc Principal (new debt) (Note 3)				(51,101)	(51,101)	(51,101)
Tfrs to Capital Reserve (Note 2)	(800,000)	(790,000)	(760,000)	(830,000)	(830,000)	(915,000)
Capital Outlays Funded through Rates and Fund Resources (Note 2)	(279,727)	(329,318)	(339,198)	(340,515)	(341,436)	(351,868)
Projected Annual Cash Surplus (Deficit)	\$0	\$0	\$0	\$0	\$0	\$0

Note 1: Net Revenue (Expense) indicates the anticipated increase (decrease) in retained earnings at the end of the year.

Note 2: Net revenue is anticipated to pay for operations and capital improvements in future and current years.

Note 3: Debt Service principal, capital outlays, state aid grant principal receipts, and transfers to reserves are balance sheet transactions, and are not included in expenses.

Note 4: Budgeted revenues exclude Use of Surplus / Fund Balance.

Note 5: Additional revenue raised in FY 15-23 to cover capital outlays and debt service in FY 15-23 and future years.

Note 6: In FY 2016, Miscellaneous revenue includes \$1,549,075 to recognize the addition of infrastructure assets funded through the Wells St TIFD in the Railroad Land and 93rd and Norway projects.

Billing Projections

	<u>FY 17/18</u>	<u>FY 18/19</u>	<u>FY 19/20</u>	<u>FY 20/21</u>	<u>FY 21/22</u>	<u>FY 22/23</u>
Combined Water and Sewer Utility Billing Projections: Residential property with a 5/8" connection and consumption of 27 HCF (hundred cubic feet) per quarter						
quarterly bill increase	\$ 323.02	\$ 332.20	\$ 341.65	\$ 351.91	\$ 360.82	\$ 368.92
percent increase	(0.92) %	9.18 %	9.45 %	10.26 %	8.91 %	8.10 %
	-0.28%	2.84%	2.84%	3.00%	2.53%	2.24%

Water Utility Billing Projections: Residential property with a 5/8" connection and consumption of 27 HCF (hundred cubic feet) per quarter						
quarterly bill increase	\$ 130.47	\$ 132.90	\$ 136.14	\$ 143.16	\$ 145.05	\$ 149.10
percent increase	16.66 %	2.43 %	3.24 %	7.02 %	1.89 %	4.05 %
	14.64%	1.86%	2.44%	5.16%	1.32%	2.79%

CITY OF KEENE, NEW HAMPSHIRE
Water Fund 2018 - 2023 Capital Improvement Program Summary

<u>Dept.</u>	<u>Project Name</u>	<u>2017/2018</u>	<u>2018/2019</u>	<u>2019/2020</u>	<u>2020/2021</u>	<u>2021/2022</u>	<u>2022/2023</u>	<u>TOTAL</u>
Public Works	Capital Reserve: Water Treatment Facility	\$ 150,000	\$ 115,000	\$ 85,000	\$ 155,000	\$ 155,000	\$ 240,000	\$ 900,000
Public Works	Capital Reserve: Water Infrastructure	650,000	675,000	675,000	675,000	675,000	675,000	4,025,000
Public Works	Black Brook Storage Tank Repairs	-	-	25,000	-	71,929	-	96,929
Public Works	Chapman Rd Water Tank Repairs	-	-	25,000	-	54,449	-	79,449
Public Works	Dam Improvements	-	-	1,022,025	-	-	-	1,022,025
Public Works	Drummer Hill Tank Replacement	-	-	25,000	-	208,959	-	233,959
Public Works	Fox Ave & Glenn Rd Pump Station Upgrade	-	-	42,892	-	-	-	42,892
Public Works	Water Distribution Improvements	-	1,127,258	-	314,163	-	1,278,233	2,719,654
Public Works	Water Main - Bridge Improvements	40,000	38,300	-	-	-	-	78,300
Public Works	Water Main - State Bypass Project	-	203,814	-	-	-	-	203,814
Public Works	Water Main Cleaning and Lining	231,855	238,810	245,975	244,495	242,535	250,000	1,453,670
Public Works	Water Valve Replacement	47,872	90,508	93,223	96,020	98,901	101,868	528,392
Public Works	Well Field Evaluation Plan	-	-	75,000	-	-	408,590	483,590
Public Works	WTF 1.5 MG Storage Tank repairs	-	-	90,041	-	278,226	-	368,267
Public Works	WTF 3 MG Storage Tank repairs	35,000	-	-	-	-	2,275,882	2,310,882
Public Works	WTF Filter Media Replacement	-	-	191,466	-	203,126	-	394,592
Public Works	WTF Instrumentation Upgrade	-	49,522	-	-	-	-	49,522
Public Works	WTF Pavement Replacement	-	-	-	-	-	70,180	70,180
Public Works	WTF Pressure Reduction Valve Upgrade	-	86,058	-	-	-	-	86,058
TOTAL CAPITAL PROGRAM		\$ 1,154,727	\$ 2,624,270	\$ 2,595,622	\$ 1,484,678	\$ 1,988,125	\$ 5,299,753	\$ 15,147,175

PROJECT FUNDING DETAIL

Reserve Funded Projects

Public Works	Dam Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Public Works	Black Brook Storage Tank Repairs	-	-	25,000	-	71,929	-	96,929
Public Works	Chapman Rd Water Tank Repairs	-	-	25,000	-	54,449	-	79,449
Public Works	Drummer Hill Tank Replacement	-	-	25,000	-	208,959	-	233,959
Public Works	Fox Ave & Glenn Rd Pump Station Upgrade	-	-	42,892	-	-	-	42,892
Public Works	Water Distribution Improvements	-	500,000	-	314,163	-	1,278,233	2,092,396
Public Works	Water Main - Bridge Improvements	40,000	38,300	-	-	-	-	78,300
Public Works	Water Main - State Bypass Project	-	203,814	-	-	-	-	203,814
Public Works	Well Field Evaluation Plan	-	-	75,000	-	-	408,590	483,590
Public Works	WTF 1.5 MG Storage Tank repairs	-	-	90,041	-	278,226	-	368,267
Public Works	WTF 3 MG Storage Tank repairs study	35,000	-	-	-	-	-	35,000
Public Works	WTF Filter Media Replacement	-	-	191,466	-	203,126	-	394,592
Public Works	WTF Instrumentation Upgrade	-	49,522	-	-	-	-	49,522
Public Works	WTF Pavement Replacement	-	-	-	-	-	70,180	70,180
Public Works	WTF Pressure Reduction Valve Upgrade	-	86,058	-	-	-	-	86,058
Total: Reserve Funded Projects		\$ 75,000	\$ 877,694	\$ 474,399	\$ 314,163	\$ 816,689	\$ 1,757,003	\$ 4,314,948

Projects Funded with Debt

Public Works	Dam Improvements	\$ -	\$ -	\$ 1,022,025	\$ -	\$ -	\$ -	\$ 1,022,025
Public Works	WTF 3 MG Storage Tank repairs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,275,882	\$ 2,275,882
Total: Projects Funded with Debt		\$ -	\$ -	\$ 1,022,025	\$ -	\$ -	\$ 2,275,882	\$ 3,297,907

Capital Reserve Appropriations

Public Works	Capital Reserve: Water Treatment Facility	\$ 150,000	\$ 115,000	\$ 85,000	\$ 155,000	\$ 155,000	\$ 240,000	\$ 900,000
Public Works	Capital Reserve: Water Infrastructure	650,000	675,000	675,000	675,000	675,000	675,000	4,025,000
Total: Capital Reserve Appropriations		\$ 800,000	\$ 790,000	\$ 760,000	\$ 830,000	\$ 830,000	\$ 915,000	\$ 4,925,000

Projects Funded with State Grant

Public Works	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total: Projects Funded with State Grant		\$ -						

Projects Funded with Cash

Public Works	Dam Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Public Works	Water Distribution Improvements	-	627,258	-	-	-	-	627,258
Public Works	Water Valve Replacement	47,872	90,508	93,223	96,020	98,901	101,868	528,392
Public Works	Water Main Cleaning and Lining	231,855	238,810	245,975	244,495	242,535	250,000	1,453,670
Total: Projects Funded with Cash		\$ 279,727	\$ 956,576	\$ 339,198	\$ 340,515	\$ 341,436	\$ 351,868	\$ 2,609,320

Subtotal: Uses of Cash

(Capital Reserve Appropriations plus Projects Funded with Cash)

TOTAL CAPITAL PROGRAM		\$ 1,154,727	\$ 2,624,270	\$ 2,595,622	\$ 1,484,678	\$ 1,988,125	\$ 5,299,753	\$ 15,147,175
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New cash Requirement FY 18-23: reconciliation

Total: Uses of cash	\$ 1,079,727	\$ 1,746,576	\$ 1,099,198	\$ 1,170,515	\$ 1,171,436	\$ 1,266,868	\$ 7,534,320
Use of Retained Earnings		(627,258)					(627,258)
New Funds needed	\$ 1,079,727	\$ 1,119,318	\$ 1,099,198	\$ 1,170,515	\$ 1,171,436	\$ 1,266,868	\$ 6,907,062

Water Fund 2018 - 2023 Capital Improvement Program Debt Summary

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Existing and Authorized Debt	\$1,770,583	\$1,459,584	\$1,273,568	\$2,107,011	\$1,864,712	\$1,619,751
New Issues Proposed	-	-	1,022,025	-	0	2,275,882
Principal Paid	(310,999)	(186,016)	(188,583)	(242,299)	(244,961)	(171,030)
Total Existing Debt & Issues Proposed	\$1,459,584	\$1,273,568	\$2,107,011	\$1,864,712	\$1,619,751	\$3,724,603

	<u>Issue</u>	<u>Term</u>	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Existing & Authorized Debt Service (P & I)			\$356,908	\$225,920	\$224,345	\$222,545	\$220,745	\$142,303
<u>Proposed Debt Service CIP FY18</u>								
N/A								
<u>Proposed Debt Service CIP FY19</u>								
N/A								
<u>Proposed Debt Service CIP FY20</u>								
Woodward Pond Dam	1,022,025	20			17,885	85,978	84,189	82,401
<u>Proposed Debt Service CIP FY21</u>								
N/A								
<u>Proposed Debt Service CIP FY22</u>								
N/A								
<u>Proposed Debt Service CIP FY23</u>								
3 MG Water Tank	2,275,882	20						39,828
Total CIP 18-23 Debt Service Proposed			0	0	17,885	85,978	84,189	122,229
Total Projected Debt Service: Water Fund			\$356,908	\$225,920	\$242,230	\$308,523	\$304,935	\$264,531

**CITY OF KEENE, NEW HAMPSHIRE
CAPITAL IMPROVEMENT PROGRAM FY18-FY23
EQUIPMENT FUND MULTI-YEAR PROJECTIONS**

	ACTUAL FY 14/15	ACTUAL FY 15/16	BUDGET FY 16/17	PROJECTED FY17/18	PROJECTED FY18/19	PROJECTED FY19/20	PROJECTED FY20/21	PROJECTED FY21/22	PROJECTED FY22/23
REVENUES									
Charges for Services	\$2,244,641	\$2,217,249	\$2,289,587	\$2,384,622	\$2,483,650	\$2,586,841	\$2,694,370	\$2,806,421	\$2,916,448
Miscellaneous	8,891	32,580	6,700	6,767	6,835	6,903	6,972	7,042	7,112
Use of (Addition to) Surplus			(69,268)						
Equipment Sales		2,175	3,500	3,535	3,571	3,606	3,642	3,679	3,716
TOTAL REVENUES	\$2,253,532	\$2,252,004	\$2,230,520	\$2,394,924	\$2,494,055	\$2,597,350	\$2,704,984	\$2,817,142	\$2,927,276
EXPENSES									
Personnel & Benefits	\$520,997	\$516,975	\$551,652	\$570,960	\$590,943	\$599,808	\$608,805	\$617,937	\$627,206
Operating Costs	1,279,357	1,130,812	1,283,868	\$1,294,318	\$1,310,545	\$1,342,828	\$1,391,209	\$1,445,731	\$1,481,439
Depreciation	383,954	373,283	395,000	395,000	415,000	420,000	420,000	420,000	430,000
SUBTOTAL	2,184,308	2,021,070	2,230,520	2,260,278	2,316,488	2,362,636	2,420,014	2,483,668	2,538,645
MINOR CAPITAL	18,275	0	0	0	0	0	0	0	0
TOTAL EXPENSE	\$2,202,583	\$2,021,070	\$2,230,520	\$2,260,278	\$2,316,488	\$2,362,636	\$2,420,014	\$2,483,668	\$2,538,645
NET REVENUE (EXPENSE)	\$50,949	\$230,934	\$0	\$134,646	\$177,567	\$234,715	\$284,971	\$333,474	\$388,631

EQUIPMENT FUND INCREASE (DEC) -0.92% -8.24% 10.36% 1.33% 2.49% 1.99% 2.43% 2.63% 2.21%

This section adjusts Net Revenue (Expense) to include uses of cash not recorded as expense, and to exclude expenses that do not require the use of cash. The purpose of the adjustment is to reflect the projected uses of cash from FY 18 thru FY 23:

Add: Depreciation	\$395,000	\$415,000	\$420,000	\$420,000	\$420,000	\$420,000	\$420,000	\$420,000	\$430,000
Subtract: Trfs to Capital Reserve (see Note 2)	(645,000)	(665,000)	(665,000)	(665,000)	(665,000)	(665,000)	(700,000)	(700,000)	(625,000)
Debt Service Principal (see Note 2)									
Capital Outlays (see Note 2)		(155,000)		(155,000)				(35,000)	(90,230)
Projected Annual Cash Surplus (Deficit)	(\$115,354)	(\$227,433)	(\$10,285)	\$4,971	\$4,971	\$4,971	\$4,971	\$18,474	\$103,401

Projected cash balance at year end \$ 445,946 \$ 330,592 \$ 103,159 \$ 92,874 \$ 97,845 \$ 116,318 \$ 219,719

Projected cash balance as a % of operations budget (total minus depreciation) 17.72% 5.43% 4.78% 4.89% 5.64% 10.42%

Projected percentage increase - internal fleet charges 4.25% 4.25% 4.25% 4.25% 4.25% 4.00%

Note 1: Net Revenue (Expense) indicates the anticipated increase (decrease) in retained earnings at the end of the year.

Note 2: Debt Service principal, capital outlays, and transfers to reserves are balance sheet transactions, and are not included in expenses.

Note 3: Budgeted revenues exclude Use of Surplus / Fund Balance in FY 18-23.

CITY OF KEENE, NEW HAMPSHIRE

Equipment Fund 2018 - 2023 Capital Improvement Program Summary

<u>Dept.</u>	<u>Project Name</u>	<u>2017/2018</u>	<u>2018/2019</u>	<u>2019/2020</u>	<u>2020/2021</u>	<u>2021/2022</u>	<u>2022/2023</u>	<u>TOTAL</u>
Public Works	Capital Reserve - Equipment Replacement	\$ 645,000	\$ 665,000	\$ 665,000	\$ 700,000	\$ 700,000	\$ 625,000	\$ 4,000,000
Public Works	Equipment Replacement	731,752	708,302	840,783	747,836	702,159	582,583	4,313,415
Public Works	Fleet Wash bay	-	155,000	-	-	-	-	155,000
Public Works	Fuel Island	-	-	-	-	35,000	-	35,000
Public Works	Roof Replacement	-	-	-	-	-	90,230	90,230
TOTAL CAPITAL PROGRAM		\$ 1,376,752	\$ 1,528,302	\$ 1,505,783	\$ 1,447,836	\$ 1,437,159	\$ 1,297,813	\$ 8,593,645

PROJECT FUNDING DETAIL

<u>Reserve Funded Projects</u>								
Public Works	Equipment Replacement	\$ 731,752	\$ 708,302	\$ 840,783	\$ 747,836	\$ 702,159	\$ 582,583	\$ 4,313,415
Total: Reserve Funded Projects		\$ 731,752	\$ 708,302	\$ 840,783	\$ 747,836	\$ 702,159	\$ 582,583	\$ 4,313,415
<u>Projects Funded with Debt</u>								
Public Works	n/a	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total: Projects Funded with Debt		\$ -						
<u>Capital Reserve Appropriations</u>								
Public Works	Capital Reserve - Equipment Replacement	\$ 645,000	\$ 665,000	\$ 665,000	\$ 700,000	\$ 700,000	\$ 625,000	\$ 4,000,000
Total: Capital Reserve Appropriations		\$ 645,000	\$ 665,000	\$ 665,000	\$ 700,000	\$ 700,000	\$ 625,000	\$ 4,000,000
<u>Projects Funded with State Grant</u>								
Public Works	n/a	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total: Projects Funded with State Grant		\$ -						
<u>Projects Funded with Cash</u>								
Public Works	n/a	\$ -	\$ 155,000	\$ -	\$ -	\$ 35,000	\$ 90,230	\$ 280,230
Total: Projects Funded with Cash		\$ -	\$ 155,000	\$ -	\$ -	\$ 35,000	\$ 90,230	\$ 280,230
Subtotal: Uses of Cash		\$ 645,000	\$ 820,000	\$ 665,000	\$ 700,000	\$ 735,000	\$ 715,230	\$ 4,280,230
(Capital Reserve Appropriations plus Projects Funded with Cash)								
TOTAL CAPITAL PROGRAM		\$ 1,376,752	\$ 1,528,302	\$ 1,505,783	\$ 1,447,836	\$ 1,437,159	\$ 1,297,813	\$ 8,593,645

CITY OF KEENE, NEW HAMPSHIRE
Wells Street Tax Increment Financing District (TIFD) Summary

FY 18 add annex value at designation \$751,100
 FY 19 add library as developed value \$8m (Note 3)
 FY 21 Court House taken out of developed \$6,500,000
 FY 25 Library taken out of developed \$8,000,000

	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26
value at designation	\$ 47,984,400	\$ 48,735,500	\$ 48,766,200	\$ 48,766,200	\$ 48,766,200	\$ 48,766,200	\$ 48,766,200	\$ 48,766,200	\$ 48,766,200	\$ 48,766,200
value, as developed	\$ 92,793,100	\$ 92,793,100	\$ 101,116,000	\$ 101,116,000	\$ 94,616,000	\$ 94,616,000	\$ 94,616,000	\$ 94,616,000	\$ 86,616,000	\$ 86,616,000
Captured Assessed Value - Total est available TIFD value increment	\$ 44,808,700	\$ 44,057,600	\$ 52,349,800	\$ 52,349,800	\$ 45,849,800	\$ 45,849,800	\$ 45,849,800	\$ 45,849,800	\$ 37,849,800	\$ 37,849,800

Sources Within TIFD

	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26
taxes generated by TIFD increment	\$ 1,630,589	\$ 1,603,256	\$ 1,905,009	\$ 1,905,009	\$ 1,668,474	\$ 1,668,474	\$ 1,668,474	\$ 1,668,474	\$ 1,377,354	\$ 1,377,354
additional revenue - district court rents paid by State of N.H.	\$ 42,500	\$ 42,500	\$ 42,500	\$ 21,500						
additional revenue - library refunded lease payment (bond interest)		\$ 66,188	\$ 62,513	\$ 62,513	\$ 58,353	\$ 54,293	\$ 50,253	\$ 46,173	\$ 42,113	
Total Sources Within TIFD	\$ 1,673,089	\$ 1,645,756	\$ 2,013,697	\$ 1,989,022	\$ 1,726,827	\$ 1,722,767	\$ 1,718,727	\$ 1,714,647	\$ 1,419,467	\$ 1,377,354

Uses Within TIFD (As of 2016)

Wells Street Parking Facility - debt service	\$ 168,813	\$ 168,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Railroad and Grove Streets, Cypress & Eagle Court - debt service	\$ 416,100	\$ 408,800	\$ 401,500	\$ 392,375	\$ 381,425	\$ 370,475	\$ -	\$ -	\$ -	\$ -
Courthouse - debt service	\$ 117,400	\$ 115,700	\$ 109,000	\$ 107,400	\$ 105,800	\$ 104,000	\$ 102,200	\$ 100,400	\$ 98,600	\$ 96,800
Courthouse Taxes (New Market Tax Credits - 7 years)	\$ 263,127	\$ 271,021	\$ 279,151	\$ 287,526	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Norway Avenue & 93rd Street - debt service	\$ 98,800	\$ 92,250	\$ 90,750	\$ 89,250	\$ 87,750	\$ 85,500	\$ 82,500	\$ 79,500	\$ 76,500	\$ -
Wells Street Parking Facility Capital Reserve	\$ 25,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 40,000
Downtown Public Infrastructure Capital Reserve	\$ 100,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 50,000	\$ 150,000
Total Uses Within TIFD	\$ 1,189,240	\$ 1,235,771	\$ 1,060,401	\$ 1,056,551	\$ 754,975	\$ 739,975	\$ 364,700	\$ 359,900	\$ 255,100	\$ 286,800

Available For Future Development \$ 483,849 \$ 409,985 \$ 953,295 \$ 932,471 \$ 971,852 \$ 982,792 \$ 1,354,027 \$ 1,354,747 \$ 1,164,367 \$ 1,090,554

Future Development within TIFD

<i>NEW - Library Connector and Library Annex Renovation (2017)</i>	\$ 34,941	\$ 174,823	\$ 171,188	\$ 167,513	\$ 161,353	\$ 154,293	\$ 152,253	\$ 148,173	\$ 143,113	\$ 139,073
<i>NEW - Library taxes (New Market tax Credits - 7 years)</i>	\$ -	\$ 27,333	\$ 291,120	\$ 298,398	\$ 305,858	\$ 313,504	\$ 321,342	\$ 329,376	\$ 337,610	\$ -
<i>NEW - Library Management Fee</i>			\$ 36,000	\$ 36,000	\$ 36,000	\$ 36,000	\$ 36,000	\$ 36,000	\$ 36,000	\$ 36,000
<i>NEW - new market tax credits audit fee</i>			\$ 12,500	\$ 12,500	\$ 12,500	\$ 12,500	\$ 12,500	\$ 12,500	\$ 12,500	\$ 12,500
<i>NEW - Payment for loan interest to be returned to City</i>			\$ 66,188	\$ 62,513	\$ 58,353	\$ 54,293	\$ 50,253	\$ 46,173	\$ 42,113	\$ 411,875
<i>NEW - parking facility (2024)</i>			\$ -	\$ -	\$ -	\$ -	\$ -	\$ 87,500	\$ 420,625	\$ 75,000
<i>NEW - parking facility (2026) - capital reserve</i>			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Future Uses Within TIFD	\$ 34,941	\$ 202,155	\$ 576,995	\$ 576,923	\$ 574,063	\$ 570,589	\$ 572,347	\$ 659,721	\$ 991,960	\$ 625,948

Excess Sources Within TIFD \$ 448,908 \$ 207,830 \$ 376,300 \$ 355,548 \$ 397,789 \$ 412,202 \$ 781,680 \$ 695,026 \$ 172,407 \$ 464,607

Unretained Assessed Value Within TIF District \$ 12,336,022 \$ 5,711,191 \$ 10,340,761 \$ 9,770,479 \$ 10,931,266 \$ 11,327,352 \$ 21,480,619 \$ 19,099,372 \$ 4,737,751 \$ 12,767,428

- Notes:**
- Projections assume no change in assessed value within the TIF District, and are effective with the 2016 Tax Year.
 - Taxes generated by TIFD increment utilize the Tax Year 2016 / Fiscal Year tax rate of \$36.39
 - Library as developed - set conservatively at \$8m for TIF tax revenue projections value
 - Projections and assumptions updated December 7, 2016.
 - TIFD as developed value before 2016 revaluation and results of 2016 revaluation.

	Value - 2015	Increase	% Increase
	93,116,000	\$ 322,900	0.35%
 - Library costs and the timing of those costs are estimated, as no development agreement has been finalized as of this writing.

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General Fund 2018 - 2023 Ambulance Capital Reserve

By way of R-2016-25-B Fiscal Policies the City confirms the establishment of Capital Reserves as identified under NH RSA 34. The purpose of the Ambulance Capital Reserve is for the aquisition or significant rehabilitation of ambulances.

Proposed Capital Reserve Activity Summary

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Projected Balance - beginning of year	\$106,277	\$206,793	\$2,397	\$82,603	\$173,035	\$3,693
Funding - Current Revenues	100,000	35,000	80,000	90,000	90,000	90,000
Investment Earnings	516	604	206	432	658	422
Proposed Expenditure	0	(240,000)	0	0	(260,000)	0
Projected Balance at End of Fiscal Year	\$206,793	\$2,397	\$82,603	\$173,035	\$3,693	\$94,115

Appropriation Total

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Proposed Capital Reserve Appropriation (raises resources for use in future projects)						
Current Revenues	485,000	100,000	35,000	80,000	90,000	90,000

Proposed Projects to Be Funded from the Ambulance Capital Reserve

Ambulance Replacement	240,000	240,000				
Ambulance Replacement	260,000				260,000	

Total Proposed Projects Funded	\$500,000	\$0	\$240,000	\$0	\$0	\$260,000	\$0
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General Fund 2018 - 2023 Fire Apparatus Capital Reserve

By way of R-2016-25-B Fiscal Policies the City confirms the establishment of Capital Reserves as identified under NH RSA 34. The purpose of the Fire Equipment Capital Reserve is for the acquisition or significant rehabilitation of fire apparatus.

Proposed Capital Reserve Activity Summary

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Projected Balance - beginning of year	\$0	\$300,750	\$702,502	\$5,258	\$346,234	\$8,062
Funding - Current Revenues	300,000	400,000	400,000	385,000	385,000	350,000
Investment Earnings	750	1,752	2,756	976	1,828	1,611
Proposed Expenditure	0	0	(1,100,000)	(45,000)	(725,000)	(105,000)
Projected Balance at End of Fiscal Year	\$300,750	\$702,502	\$5,258	\$346,234	\$8,062	\$254,673

Appropriation Total

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Proposed Capital Reserve Appropriation (raises resources for use in future projects)						
Current Revenues	300,000	400,000	400,000	385,000	385,000	350,000

Proposed Projects to Be Funded from the Fire Apparatus Capital Reserve

Ladder Truck	1,100,000		1,100,000			
Brush Truck	45,000			45,000		
Tanker Truck	725,000				725,000	
Brush Truck	45,000					45,000
Utility Truck	60,000					60,000
Total Proposed Projects Funded	\$1,975,000	\$0	\$0	\$1,100,000	\$45,000	\$725,000
	\$105,000					

General Fund 2018 - 2023 Downtown Infrastructure Capital Reserve

By way of R-2016-25-B Fiscal Policies the City confirms the establishment of Capital Reserves as identified under NH RSA 34. The purpose of the Downtown Infrastructure and Facility Improvement Capital Reserve is for infrastructure and facility improvements in the downtown.

Proposed Capital Reserve Activity Summary

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Projected Balance - beginning of year	\$344,187	\$497,102	\$650,400	\$804,081	\$958,146	\$562,596
Funding - Wells Street TIF District	150,000	150,000	150,000	150,000	150,000	150,000
Investment Earnings	2,915	3,298	3,681	4,065	4,450	3,461
Proposed Expenditure	0	0	0	0	(550,000)	(550,000)
Projected Balance at End of Fiscal Year	\$497,102	\$650,400	\$804,081	\$958,146	\$562,596	\$166,057

Note on FY 18 beginning balance - the beginning balance of \$344,187 excludes an appropriation (FY 2013-2014) in the amount of \$672,000 for the pre-design of a parking structure in the downtown area. There has been no activity on the project to date.

Appropriation

<u>Total</u>	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
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Proposed Capital Reserve Appropriation (raises resources for use in future projects)

Wells Street TIF District Appropriation	900,000	150,000	150,000	150,000	150,000	150,000	150,000
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Proposed Projects to Be Funded from the Downtown Infrastructure Capital Reserve

Downtown Revitalization	1,100,000				550,000	550,000
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Total Proposed Projects Funded	\$1,100,000	\$0	\$0	\$0	\$0	\$550,000	\$550,000
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General Fund 2018 - 2023 Transportation Improvements Capital Reserve

By way of R-2016-25-B Fiscal Policies the City confirms the establishment of Capital Reserves as identified under NH RSA 34. The purpose of the Transportation Improvements Capital reserve is to fund, wholly or in part, improvements in the transportation system including roads, bridges, bicycle and pedestrian facilities, and intermodal facilities, except for parking.

Proposed Capital Reserve Activity Summary

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Projected Balance - beginning of year	\$2,595	\$102,851	\$32,341	\$132,672	\$233,254	\$39,310
Funding - Motor Vehicle Registration Surcharge (\$5)	100,000	100,000	100,000	100,000	100,000	100,000
Investment Earnings	256	507	331	582	833	348
Proposed Expenditure	0	(171,017)	0	0	(294,777)	0
Projected Balance at End of Fiscal Year	\$102,851	\$32,341	\$132,672	\$233,254	\$39,310	\$139,658

Appropriation Total

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Proposed Capital Reserve Appropriation (raises resources for use in future projects)						
Motor Vehicle Registration Surcharge	600,000	100,000	100,000	100,000	100,000	100,000

Proposed Projects to Be Funded from the Transportation Improvements Capital Reserve

Marlboro Street Corridor Improvements	171,017	171,017				
Keene Bypass - Lower Winchester St.	72,777				72,777	
Victoria Street Extension	222,000				222,000	

Total Proposed Projects Funded	\$465,794	\$0	\$171,017	\$0	\$0	\$294,777	\$0
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General Fund 2018 - 2023 Bridge Capital Reserve

By way of R-2016-25-B Fiscal Policies the City confirms the establishment of Capital Reserves as identified under NH RSA 34. The purpose of the Bridge Capital Reserve is for the construction, reconstruction and rehabilitation of bridges.

Proposed Capital Reserve Activity Summary

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Projected Balance - beginning of year	\$728,903	\$546,265	\$547,630	\$392,078	\$393,058	\$394,041
Funding - Current Revenues	0	0	0	0	0	0
Investment Earnings	1,362	1,366	978	980	983	985
Proposed Expenditure	(184,000)	0	(156,530)	0	0	0
Projected Balance at End of Fiscal Year	\$546,265	\$547,630	\$392,078	\$393,058	\$394,041	\$395,026

Note on FY 18 beginning balance - the beginning balance of \$728,903 includes an appropriation (R-2014-14) in the amount of \$135,000 for the local match for the Maple Avenue bridge replacement project. The bond has not yet been issued pending state funding. Winchester Street (FY 2019 construction) capital reserve funding was authorized by R-2010-18 in 2010, and so is not reflected in the FY 2018-2023 Proposed CIP.

Appropriation

<u>Total</u>	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
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Proposed Capital Reserve Appropriation (raises resources for use in future projects)

Current Revenues	0	0	0	0	0	0
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Proposed Projects to Be Funded from the Bridge Capital Reserve

Roxbury Street over Beaver Brook	184,000	184,000				
George Street Over Beaver Brook	156,530		156,530			

Total Proposed Projects Funded	\$340,530	\$184,000	\$0	\$156,530	\$0	\$0	\$0
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Parking Fund 2018 - 2023 City Hall Parking Deck Capital Reserve

By way of R-2016-25-B Fiscal Policies the City confirms the establishment of Capital Reserves as identified under NH RSA 34. The purpose of the City Hall Parking Deck Capital Reserve is for the repair and replacement of existing infrastructure, systems and equipment.

Proposed Capital Reserve Activity Summary

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Projected Balance - beginning of year	\$77,786	\$95,555	\$125,869	\$118,759	\$149,131	\$167,079
Funding - Current Revenues	30,000	30,000	30,000	30,000	30,000	30,000
Investment Earnings	269	314	390	372	448	493
Proposed Expenditure	(12,500)	0	(37,500)	0	(12,500)	0
Projected Balance at End of Fiscal Year	\$95,555	\$125,869	\$118,759	\$149,131	\$167,079	\$197,572

**Appropriation
Total**

Proposed Capital Reserve Appropriation (raises resources for use in future projects)

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Current Revenues	30,000	30,000	30,000	30,000	30,000	30,000

Proposed Projects to Be Funded from the City Hall Parking Deck Capital Reserve

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Condition Assessment	12,500	12,500				
Condition Assessment	12,500		12,500			
Condition Assessment	12,500				12,500	
Structural Repairs	25,000		25,000			

Total Proposed Projects Funded	\$62,500	\$12,500	\$0	\$37,500	\$0	\$12,500	\$0
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Parking Fund 2018 - 2023 Wells Street Parking Deck Capital Reserve

By way of R-2016-25-B Fiscal Policies the City confirms the establishment of Capital Reserves as identified under NH RSA 34. The purpose of the Wells Street Parking Facility Capital Reserve is for the repair and replacement of existing infrastructure, systems and equipment.

Proposed Capital Reserve Activity Summary

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Projected Balance - beginning of year	\$213,992	\$232,102	\$262,757	\$280,989	\$311,766	\$305,120
Funding - Wells Street TIF District	30,000	30,000	30,000	30,000	30,000	30,000
Investment Earnings	610	655	732	777	854	838
Proposed Expenditure	(12,500)	0	(12,500)	0	(37,500)	0
Projected Balance at End of Fiscal Year	\$232,102	\$262,757	\$280,989	\$311,766	\$305,120	\$335,958

**Appropriation
Total**

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Proposed Capital Reserve Appropriation (raises resources for use in future projects)						
Current Revenues	180,000	30,000	30,000	30,000	30,000	30,000

Proposed Projects to Be Funded from the Wells Street Parking Deck Capital Reserve

Condition Assessment	12,500	12,500				
Condition Assessment	12,500		12,500			
Condition Assessment	12,500				12,500	
Structural Repairs	25,000				25,000	
Total Proposed Projects Funded	\$62,500	\$12,500	\$0	\$12,500	\$0	\$37,500

Solid Waste Fund 2018 - 2023 SW Facility Capital Reserve

By way of R-2016-25-B Fiscal Policies the City confirms the establishment of Capital Reserves as identified under NH RSA 34. The purpose of the Transfer/Recycling Center Capital Reserve is for the repair and replacement of existing infrastructure, systems and equipment.

Proposed Capital Reserve Activity Summary

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Projected Balance - beginning of year	\$246,556	\$297,297	\$20,941	\$66,106	\$111,384	\$156,775
Funding - Current Revenues	50,000	50,000	45,000	45,000	45,000	45,000
Investment Earnings	741	868	165	278	391	504
Proposed Expenditure	0	(327,224)	0	0		(169,000)
Projected Balance at End of Fiscal Year	\$297,297	\$20,941	\$66,106	\$111,384	\$156,775	\$33,279

Appropriation

<u>Total</u>	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
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Proposed Capital Reserve Appropriation (raises resources for use in future projects)

Current Revenues	280,000	50,000	50,000	45,000	45,000	45,000	45,000
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Proposed Projects to Be Funded from the Transfer Station Facility Capital Reserve

Recycling Equipment Replacement	327,224		327,224				
Scale System	92,000						92,000
Facility Interior Improvements	77,000						77,000

Total Proposed Projects Funded	\$496,224	\$0	\$327,224	\$0	\$0	\$0	\$169,000
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Sewer Fund 2018 - 2023 Wastewater Treatment Plant Capital Reserve

By way of R-2016-25-B Fiscal Policies the City confirms the establishment of Capital Reserves as identified under NH RSA 34. The purpose of the Wastewater Treatment Plant Capital Reserve is for the repair and replacement of major components of the plant, including equipment and building.

Proposed Capital Reserve Activity Summary

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Projected Balance - beginning of year	\$454,526	\$606,037	\$633,656	\$576,180	\$439,668	\$611,192
Funding - Current Revenues	150,000	120,000	120,000	170,000	170,000	170,000
Investment Earnings	1,511	1,815	1,884	1,865	1,524	1,953
Proposed Expenditure	0	(94,196)	(179,360)	(308,377)	0	(35,892)
Projected Balance at End of Fiscal Year	\$606,037	\$633,656	\$576,180	\$439,668	\$611,192	\$747,253

Appropriation Total

Proposed Capital Reserve Appropriation (raises resources for use in future projects)

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Current Revenues	900,000	150,000	120,000	120,000	170,000	170,000

Proposed Projects to Be Funded from the Wastewater Treatment Plant Capital Reserve

Nonpotable water System	65,400	65,400				
Generator Replacement	144,767	21,131		123,636		
Tunnel HVAC Insulation Replacement	35,892					35,892
Blower Replacement	371,766	7,665	179,360	184,741		

Total Proposed Projects Funded	\$617,825	\$0	\$94,196	\$179,360	\$308,377	\$0	\$35,892
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Sewer Fund 2018 - 2023 Martell Court Pump Station Capital Reserve

By way of R-2016-25-B Fiscal Policies the City confirms the establishment of Capital Reserves as identified under NH RSA 34. The purpose of the Martell Court Pumping Station Capital Reserve is for the repair and replacement of major components of the plant, including equipment and building.

Proposed Capital Reserve Activity Summary

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Projected Balance - beginning of year	\$473,804	\$464,064	\$406,557	\$407,573	\$327,907	\$378,852
Funding - Current Revenues	0	0	0	50,000	50,000	150,000
Investment Earnings	1,185	1,160	1,016	1,144	945	1,322
Proposed Expenditure	(10,925)	(58,667)	0	(130,810)	0	(56,642)
Projected Balance at End of Fiscal Year	\$464,064	\$406,557	\$407,573	\$327,907	\$378,852	\$473,532

Appropriation <u>Total</u>	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
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Proposed Capital Reserve Appropriation (raises resources for use in future projects)

Current Revenues	0	0	0	50,000	50,000	150,000
250,000						

Proposed Projects to Be Funded from the Martell Court Pump Station Capital Reserve

Martell Court Phase 3	10,925	58,667		130,810		
Roof Replacement	200,402					32,714
Ductwork Insulation Replacement	32,714					23,928
	23,928					

Total Proposed Projects Funded	\$10,925	\$58,667	\$0	\$130,810	\$0	\$56,642
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Sewer Fund 2018 - 2023 Sewer Infrastructure Capital Reserve

By way of R-2016-25-B Fiscal Policies the City confirms the establishment of Capital Reserves as identified under NH RSA 34. The purpose of the Sewer Infrastructure Capital Reserve is for the repair and replacement of existing infrastructure, systems and equipment including pump stations and the collection systems.

Proposed Capital Reserve Activity Summary

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Projected Balance - beginning of year	\$635,291	\$927,367	\$474,293	\$415,678	\$1,018,217	\$1,150,620
Funding - Current Revenues	475,000	600,000	600,000	600,000	550,000	550,000
Investment Earnings	2,776	3,818	2,686	2,539	3,921	4,252
Proposed Expenditure	(185,700)	(1,056,892)	(661,301)	0	(421,518)	(434,163)
Projected Balance at End of Fiscal Year	\$927,367	\$474,293	\$415,678	\$1,018,217	\$1,150,620	\$1,270,709

Appropriation Total

Proposed Capital Reserve Appropriation (raises resources for use in future projects)

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Current Revenues	3,375,000	475,000	600,000	600,000	600,000	550,000

Proposed Projects to Be Funded from the Sewer Infrastructure Capital Reserve

Sewer Main Improvements	2,315,783	145,700	653,101	661,301	0	421,518	434,163
Bridge Replacement Sewer Mains	83,500	40,000	43,500				
Winchester Street Bypass Sewer Main	360,291		360,291				

Total Proposed Projects Funded	\$2,759,574	\$185,700	\$1,056,892	\$661,301	\$0	\$421,518	\$434,163
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Water Fund 2018 - 2023 Water Infrastructure Capital Reserve

By way of R-2016-25-B Fiscal Policies the City confirms the establishment of Capital Reserves as identified under NH RSA 34. The purpose of the Water Infrastructure Capital Reserve is for the repair and replacement of major components of existing infrastructure, systems and equipment including wells, lift stations, tanks etc., and the distribution system.

Proposed Capital Reserve Activity Summary

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Projected Balance - beginning of year	\$873,726	\$1,452,535	\$1,390,740	\$1,787,971	\$2,154,965	\$2,223,477
Funding - Current Revenues	650,000	675,000	675,000	675,000	675,000	675,000
Investment Earnings	3,809	5,319	5,164	6,157	7,075	7,246
Proposed Expenditure	(75,000)	(742,114)	(282,933)	(314,163)	(613,563)	(1,686,823)
Projected Balance at End of Fiscal Year	\$1,452,535	\$1,390,740	\$1,787,971	\$2,154,965	\$2,223,477	\$1,218,900

Appropriation

<u>Total</u>	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
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Proposed Capital Reserve Appropriation (raises resources for use in future projects)

Current Revenues	4,025,000	650,000	675,000	675,000	675,000	675,000	675,000
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Proposed Projects to Be Funded from the Water Infrastructure Capital Reserve

Water Distribution (Main) Improvements	2,092,396		500,000		314,163		1,278,233
Bridge Replacement Water Mains	78,300	40,000	38,300				
Winchester Street Bypass Water Main	203,814		203,814				
Well Field Evaluation Plan	483,590			75,000			408,590
Black Brook Water Tank	96,929			25,000	71,929		
Fox Avenue Booster Station Upgrade	21,446			21,446			
Glenn Road Booster Station Upgrade	21,446			21,446			
Drummer Hill Water Tank	233,959			25,000		208,959	
Chapman Road Water Tank	79,449			25,000		54,449	
1.5 MG Water Tank Upgrade	368,267			90,041		278,226	
3.0 MG Water Tank Study	35,000	35,000					

Total Proposed Projects Funded	\$3,714,596	\$75,000	\$742,114	\$282,933	\$314,163	\$613,563	\$1,686,823
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Water Fund 2018 - 2023 Water Treatment Facility Infrastructure Capital Reserve

By way of R-2016-25-B Fiscal Policies the City confirms the establishment of Capital Reserves as identified under NH RSA 34. The purpose of the Water Treatment Facility Capital Reserve is for the repair and replacement of major components of facility including pumps, controls, chemical systems, etc., and, building components.

Proposed Capital Reserve Activity Summary

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Projected Balance - beginning of year	\$657,849	\$809,869	\$791,601	\$687,327	\$844,433	\$798,806
Funding - Current Revenues	150,000	115,000	85,000	155,000	155,000	240,000
Investment Earnings	2,020	2,312	2,192	2,106	2,499	2,597
Proposed Expenditure	0	(135,580)	(191,466)	0	(203,126)	(70,180)
Projected Balance at End of Fiscal Year	\$809,869	\$791,601	\$687,327	\$844,433	\$798,806	\$971,223

Appropriation Total

Proposed Capital Reserve Appropriation (raises resources for use in future projects)

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Current Revenues	900,000	150,000	115,000	85,000	155,000	155,000
						240,000

Proposed Projects to Be Funded from the Water Infrastructure Capital Reserve

Pressure Reduction Valve	86,058		86,058			
Instrumentation Upgrade	49,522		49,522			
Pavement Replacement	70,180					70,180
Filter Media Replacement	394,592			191,466	203,126	

Total Proposed Projects Funded	\$600,352	\$0	\$135,580	\$191,466	\$0	\$203,126	\$70,180
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Fleet Fund 2018 - 2023 Equipment Replacement Capital Reserve

By way of R-2016-25-B Fiscal Policies the City confirms the establishment of Capital Reserves as identified under NH RSA 34. The purpose of the Fleet Equipment Capital Reserve is for the replacement of vehicles and equipment under the management of Fleet Services.

Proposed Capital Reserve Activity Summary

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Projected Balance - beginning of year	\$476,213	\$390,045	\$347,264	\$171,738	\$124,088	\$122,112
Funding - Current Revenues	645,000	665,000	665,000	700,000	700,000	625,000
Investment Earnings	584	520	257	186	183	247
Proposed Expenditure	(731,752)	(708,302)	(840,783)	(747,836)	(702,159)	(582,583)
Projected Balance at End of Fiscal Year	\$390,045	\$347,264	\$171,738	\$124,088	\$122,112	\$164,775

Appropriation Total

	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>
Proposed Capital Reserve Appropriation (raises resources for use in future projects)						
Current Revenues	4,000,000	645,000	665,000	665,000	700,000	625,000

Proposed Projects to Be Funded from the Equipment Replacement Capital Reserve

Equipment Replacement	4,313,415	731,752	708,302	840,783	747,836	702,159	582,583
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Total Proposed Projects Funded	\$4,313,415	\$731,752	\$708,302	\$840,783	\$747,836	\$702,159	\$582,583
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Public Health and Safety – programs, activities, and projects which are intended to protect the health and safety of individuals and the community. The primary goal of these activities is the protection of the public from dangers affecting health and safety from crime, disaster, fire, and disease.

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FIRE & EMERGENCY MEDICAL SERVICE APPARATUS SCHEDULES

CITY OF KEENE AMBULANCE REPLACEMENT SCHEDULE										
2018 - 2023 Capital Improvement Program										
Vehicle #	Description	Year	Use	FY18	FY19	FY20	FY21	FY22	FY23	Later Years
19A3	Ambulance	2009	EMS		240,000					
19A2	Ambulance	2012	EMS					260,000		
			TOTAL	\$0	\$240,000	\$0	\$0	\$260,000	\$0	

Future CIP Programs: Anticipated Replacement Costs

FY25 Ambulance (19A1) \$275,000

CITY OF KEENE FIRE APPARATUS REPLACEMENT SCHEDULE										
2018 - 2023 Capital Improvement Program										
Vehicle #	Description	Year	Use	FY18	FY19	FY20	FY21	FY22	FY23	Later Years
19L1	Ladder Truck	1997	Fire			1,100,000				
19B1	Brush Truck	2002	Fire				45,000			
19B2	Brush Truck	2003	Fire						45,000	
19T1	Tanker	2005	Fire					725,000		
19U1	Utility	2006	Fire						60,000	
19R1	Rescue	2010	Fire							2025
19E2	Engine	2013	Fire							2028
			TOTAL	\$0	\$0	\$1,100,000	\$45,000	\$725,000	\$105,000	

Future CIP Programs: Anticipated Replacement Costs

FY25 Replacement of Rescue 1 \$756,396
 FY28 Replacement of Engine 2 \$738,386
 FY29 Fire Alarm Truck \$198,104
 FY31 Replacement Engine 1 \$856,000
 FY33 Quint 19L2 \$1,550,000



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Ambulance Replacement**
 Department: **Fire Department**
 Physical Location: **31 Vernon Street**
 Federal Mandate: **N/A**

State Regulation or Law: **Shall meet State Requirement for Licensing and DOT Inspections**
 Master Plan (CMP) Focus Area: **Healthy Community**

CMP Vision/Strategy: **Emergency Preparedness**

Council Initiative: **N/A**

V.O.I.C.E.: **Establish Priorities**

Departmental Objective: **Ensure safety and reliability to staff and community with our fleet of ambulances**



PROJECT DESCRIPTION/JUSTIFICATION

The Ambulance Capital Reserve Fund is designed to provide adequate resources for the replacement of ambulances in accordance with a schedule that calls for replacement of one of the City's three ambulances every three years. The replacement schedule is reviewed annually and replacements advanced considering equipment condition. The regular planned replacement of ambulances minimizes on-going maintenance costs, down-time, and a need to rely on other back-up services. Vehicle costs are projected to continue to increase as national and state standards for ambulance requirements are updated. The replacement schedule for units during this CIP cycle includes replacement of 19A3 in FY19 and 19A2 in FY22.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation								0
Property/Equip. Acquisition			240,000			260,000		500,000
TOTAL	\$0	\$0	\$240,000	\$0	\$0	\$260,000	\$0	\$500,000
FUNDING								
Current Revenue								-
Capital Reserve			240,000			260,000		500,000
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$240,000	\$0	\$0	\$260,000	\$0	\$500,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Reduce - will reduce operating costs
Multi-year

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Apparatus Replacement**
 Department: **Fire Department**
 Physical Location: **31 Vernon Street**
 Federal Mandate: **Annual Certifications**
 State Regulation or Law: **Annual DOT Inspections**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Emergency Preparedness**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Establish Priorities**
 Departmental Objective: **Ensure Safety and Reliability to Staff and Community**



PROJECT DESCRIPTION/JUSTIFICATION

The Fire Equipment Reserve is designed to provide adequate funds to replace or rebuild fire apparatus as scheduled in the replacement plan. The fund can also be used periodically for major repairs to fire apparatus including the replacement of engines and transmissions. This fund has been used successfully for many years to ensure the availability of funds when the purchase of fire apparatus is required. Current and proposed funding rates will provide resources sufficient for all purchases including the replacement of Ladder 1 currently scheduled for FY20.

Fire service responsibilities and equipment carried to meet our mission continue to evolve. To ensure a timely replacement of fire apparatus the current schedule was developed. The replacement schedule allows for new safety technology, ergonomics, structural integrity of vehicles, compliance with NFPA standards, and new innovations to be incorporated into the apparatus. This schedule also assures reliability to provide the best service to the community and the safety of our personnel. The need for reliable apparatus is a critical component of fire protection within the City. This reserve provides funding that will allow the City to replace all apparatus at the appropriate time assuring a reliable fleet.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation								0
Property/Equip. Acquisition				1,100,000	45,000	725,000	105,000	1,975,000
TOTAL	\$0	\$0	\$0	\$1,100,000	\$45,000	\$725,000	\$105,000	\$1,975,000
FUNDING								
Current Revenue								-
Capital Reserve				1,100,000	45,000	725,000	105,000	1,975,000
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$0	\$1,100,000	\$45,000	\$725,000	\$105,000	\$1,975,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Reduce - will reduce operating costs
Multi-year

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Portable Radio Replacement**
 Department: **Fire Department**
 Physical Location: **31 Vernon Street**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Emergency Preparedness**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Establish Priorities**
 Departmental Objective: **Emergency Preparedness and Personnel Safety**



PROJECT DESCRIPTION/JUSTIFICATION

This portable radio communications project will replace portable radios that are used daily by Fire/EMS personnel during emergency and non-emergency operations to manage incidents, communicate with other City departments, request needed resources, and provide accountability and safety for our personnel and the public. The project for replacement of all units started in FY17 and will continue through FY18-FY20.

As part of the New Hampshire Radio Interoperability Program all portable radios were replaced by grant funded radios in 2006. The units for Keene were delivered in 2006. This replacement program would allow us to maintain emergency preparedness and personnel safety by having units that are reliable and serviceable as needed for at least the next ten years. The Department currently operates and maintains sixty-five portable radios. The goal is be to replace all units over a four year period unless grants or other funding becomes available to accelerate replacement. FY 18 funding anticipates the reappropriation of the unexpended balance of the Defibrillator Replacement project.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation								0
Property/Equip. Acquisition		52,500	52,500	52,500				157,500
TOTAL	\$0	\$52,500	\$52,500	\$52,500	\$0	\$0	\$0	\$157,500
FUNDING								
Current Revenue		20,732	52,500	52,500				125,732
Capital Reserve								0
Debt Funded	31,768							31,768
Federal or State Grants								0
Other Sources								0
TOTAL	\$31,768	\$20,732	\$52,500	\$52,500	\$0	\$0	\$0	\$157,500

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Create efficiencies
Multi-year

PROJECT STATUS: Ongoing CIP

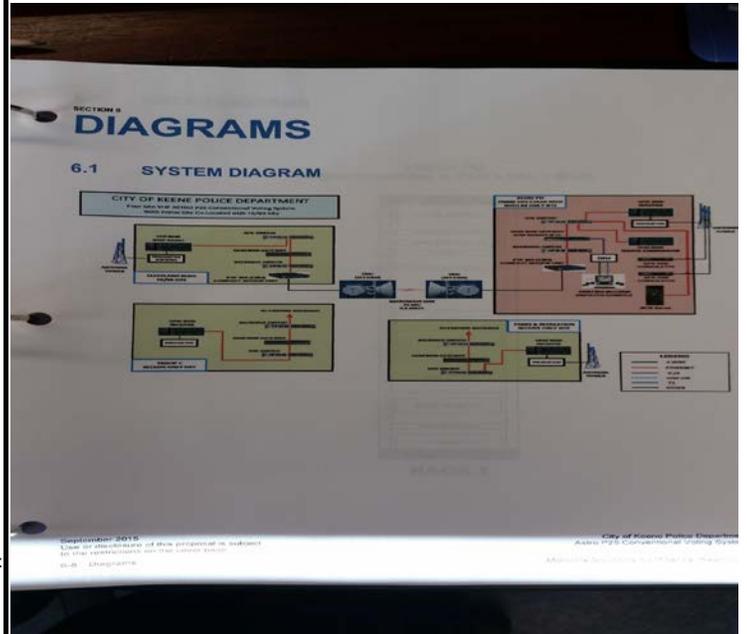


CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Communications System Replacement**
 Department: **Police**
 Physical Location: **400 Marlboro Street (Main site)**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Strong Citizenship and Proactive Leadership**
 CMP Vision/Strategy: **Emergency Preparedness**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **To upgrade the Police Department's entire fixed network communications system to current technology, and to provide appropriate backup communications systems; while meeting present and future FCC requirements.**



PROJECT DESCRIPTION/JUSTIFICATION

The Police Department's current communications system was installed in 2005 and has reached the end of its natural expected life cycle. While still operational many parts needed for repair are no longer manufactured and, at times, are obtained from unorthodox sources such as Ebay. Reliable communications are both an essential and foundational component to any emergency management operation. This project will bring the Police Department's communication technology to the latest in public safety communications, meeting present and future FCC requirements. It also provides a new "hot-standby" microwave link between police headquarters and our prime transmitter site that will be located at the Cleveland building. Additional sub-station sites will be located at the Troop 'C' New Hampshire State Police barracks and the Parks and Recreational building located at Monadnock View Cemetery.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation								0
Property/Equip. Acquisition				352,932				352,932
TOTAL	\$0	\$0	\$0	\$352,932	\$0	\$0	\$0	\$352,932
FUNDING								
Current Revenue								0
Capital Reserve								0
Debt Funded				352,932				352,932
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$0	\$352,932	\$0	\$0	\$0	\$352,932

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Create efficiencies Ongoing

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Portable Radios**
 Department: **Police**
 Physical Location: **400 Marlboro Street**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Strong Citizenship and Proactive Leadership**
 CMP Vision/Strategy: **Emergency Preparedness**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **This communications portable radio project would replace portable radios that are used daily by Police personnel during emergency and non-emergency operations to manage incidents, request needed resources, and provide accountability and safety for our first responders.**



PROJECT DESCRIPTION/JUSTIFICATION

As part of the New Hampshire Radio Interoperability Program all portable radios were replaced by grant funded radios in 2006. The units for Keene were delivered in 2006. This replacement program would allow us to maintain emergency preparedness and personnel safety by having units that are reliable and serviceable as needed for at least the next ten years. The Department currently operates and maintains sixty-three (63) portable radios. The goal would be to replace all units over a three year period unless grants or other funding becomes available to accelerate replacement.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation								0
Property/Equip. Acquisition			73,497	73,497	73,497			220,491
TOTAL	\$0	\$0	\$73,497	\$73,497	\$73,497	\$0	\$0	\$220,491
FUNDING								
Current Revenue			73,497	73,497	73,497			220,491
Capital Reserve								0
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$73,497	\$73,497	\$73,497	\$0	\$0	\$220,491

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT:

Multi-year

PROJECT STATUS:

Ongoing CIP

Solid Waste

The Keene Solid Waste Division is focused on protection of human health and the environment through the activities and actions required to manage waste from its inception to its final disposal. This includes collection, transport, treatment and disposal of waste together with monitoring and regulation. Proper management of waste prevents the spread of disease and reduces air and water pollution associated with disposal of waste material.

The City of Keene Solid Waste Division operates under a public/private partnership. The Solid Waste Division employs 7 full time and 4 part-time employees to manage the operations of the Transfer Station and Recycling Center. The Solid Waste Division sub-contracts the transportation and disposal of refuse from the Transfer Station and transportation of commodities from Recycling Center. Residential collection service is performed by private contractors under a permit system administered by the City. Commercial collection service is performed by private contractors, but the City does not have a permit system for commercial collection.

The City of Keene Solid Waste Division is structured as a special revenue fund where fees for services and revenue from the sale of commodities cover the majority of the expenses. No property tax revenue supports the Solid Waste Division. The Solid Waste Division operates 8 cost centers with revenues and expenses in excess of \$4.1M.

The Keene Transfer Station processes over 30,000 tons of solid waste and the Keene Recycling Center sorts over 6,000 tons of recyclable material per year. The mission of the City of Keene Solid Waste Division is to provide solid waste facilities that maximize diversion of the waste stream in an efficient, economical and environmentally sensitive manner. To support that mission, City Council adopted resolution R-94-14 which accepted a hierarchy of disposal practices to guide future solid waste operations in Keene:

1. Source Reduction
2. Reuse
3. Recycling
4. Composting
5. Landfilling or Incineration
6. Refuse disposal to be paid for by the generator in direct proportion to the waste generated
7. Establish a percentage recycling goal
8. Establish an aggressive educational program
9. Compost leaf and yard waste and consideration given to future composting of all organics
10. Recycling is to be subsidized by refuse disposal fees

The Solid Waste Division operations supports a quality built environment for our future by fostering renewable energy and efficient use of resources through reduction, reuse, recycling, and composting as well as promoting recycling services for both commercial and residential users. The City's waste diversion efforts also support a unique natural environment by being a leader in promoting and supporting initiatives that work toward community sustainability through reducing community greenhouse gas emissions to meet climate action plan targets, and moving towards a carbon neutral community.



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Recycling Equipment Replacement**
 Department: **Public Works**
 Physical Location: **55 Old Summit Road**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Quality Built Environment**
 CMP Vision/Strategy: **Renewable Energy and Efficient Use of Resources**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Allows for continued diversion of waste stream through recycling**



PROJECT DESCRIPTION/JUSTIFICATION

In 2016 the Keene Recycling Center will be 22 years old and each piece of original equipment will have over 24,516 hours of use. All of the original equipment has a manufacturer expected life span of 10 years. The Solid Waste Division currently contracts scheduled/preventative maintenance on all equipment to extend the life of the equipment where possible. Only equipment that no longer functions properly, affects facility efficiency, or represents a safety hazard would be replaced. Equipment expected to be replaced over the next several years includes the eddy current separator (for aluminum cans) and cross belt magnet (for steel cans), and horizontal baler.

The following equipment will be replaced in 2019 the cost listed includes installation: eddy current separator \$34,873, cross belt magnet \$42,351, and horizontal baler \$250,000. The Solid Waste Division will conduct an annual assessment of equipment to determine if the replacement can be delayed. An established capital reserve account funds the repair/replacement of major pieces of equipment at the Recycling Center.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation								0
Property/Equip. Acquisition			327,224					327,224
TOTAL	\$0	\$0	\$327,224	\$0	\$0	\$0	\$0	\$327,224
FUNDING								
Current Revenue								0
Capital Reserve			327,224					327,224
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$327,224	\$0	\$0	\$0	\$0	\$327,224

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001
Multi-year

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Weight Scale Replacement**
 Department: **PUBLIC WORKS**
 Physical Location: **55 Old Summit Road**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Quality Built Environment**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Accurately weigh inbound and outbound material to ensure cost of services are properly accounted**



PROJECT DESCRIPTION/JUSTIFICATION

A properly functioning scale is critical to the Solid Waste Division operation. The existing in-ground weight scale will have over 20 years of service in 2023. While the scale is regularly serviced there are components that simply wear out over time. All inbound and outbound material is weighed including waste and recycling. It is these weights that determine the revenue the City receives from customers as well as the expenses the City pays to vendors. The State of New Hampshire Bureau of Weights and Measures provides the City its certifications that the scale is operating properly and is consistently calibrated to ensure accuracy. Replacement of the scale will ensure continued certification and accuracy in weighing material.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design							5,000	5,000
Construction/Implementation							87,000	87,000
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$0	\$0	\$0	\$0	\$92,000	\$92,000
FUNDING								
Current Revenue								0
Capital Reserve							92,000	92,000
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$0	\$0	\$0	\$0	\$92,000	\$92,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Minimal \$5,001 to \$25,000
One time

PROJECT STATUS: New Project



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Refurbish Interior Facility**
 Department: **PUBLIC WORKS**
 Physical Location: **55 Old Summit Road**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Quality Built Environment**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Provide clean, safe facilities for employees to perform their duties**



PROJECT DESCRIPTION/JUSTIFICATION

The Keene Recycling Center was built in 1994. During its 30 year existence there have been no interior updates. The facility is in need of flooring replacement, along with updates to the entire office layout, sanitary facilities, locker rooms, and break rooms to include the installation of shower facilities for staff. The operations control center located above the existing balers also needs to be re-worked to reflect the administrative services required.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY12	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design							7,000	7,000
Construction/Implementation							70,000	70,000
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$0	\$0	\$0	\$0	\$77,000	\$77,000
FUNDING								
Current Revenue								0
Capital Reserve							77,000	77,000
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$0	\$0	\$0	\$0	\$77,000	\$77,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001
One time

PROJECT STATUS: New Project



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Biofuel Generator**
 Department: **Public Works**
 Physical Location: **55 Old Summit Road**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Quality Built Environment**
 CMP Vision/Strategy: **Renewable Energy and Efficient Use of Resources**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Allows for continued diversion of waste stream through recycling, processing solid waste**



PROJECT DESCRIPTION/JUSTIFICATION

The Solid Waste facility currently runs on landfill gas generated power. In the past year the pattern has been 90% up time in warmer months, 50% uptime in colder months forcing the operation to rely more heavily on the diesel backup generator. It is evident that as the decomposition of refuse diminishes the gas generation is no longer sufficient to provide a reliable power source for the Solid Waste facility. A Solid Waste Energy Options Report was presented to City Council in November 2016 and the Council indicated a preference to pursue a biofuel option for the Solid Waste Division's energy needs going forward.

An engineering study to validate the biofuel energy option will be completed by early 2017, and if confirmed to be the preferred option, the \$500,000 EPA Climate Showcase Communities grant will be transitioned from the Keene Energy Agriculture Project to the biofuel project with completion prior to the end of calendar year 2017. The biofuel project could include installing fuel tanks at the Solid Waste Facility and in return supply biofuel to other city facilities that currently burn #2 fuel oil for building heating needs. The EPA grant will require a 50% match by the City. It is anticipated that the total project will be in the \$750,000 range which would require a \$250,000 contribution by the City.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation		750,000						750,000
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$750,000
FUNDING								
Current Revenue								0
Capital Reserve								0
Debt Funded		250,000						250,000
Federal or State Grants	500,000							500,000
Other Sources								0
TOTAL	\$500,000	\$250,000	\$0	\$0	\$0	\$0	\$0	\$750,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Minimal \$5,001 to \$25,000
Multi-year

PROJECT STATUS: New Project



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Transfer Station Roof Repair**
 Department: **PUBLIC WORKS**
 Physical Location: **55 Old Summit Road**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Quality Built Environment**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Maintain recycling facility to enable continued processing of recyclables**



PROJECT DESCRIPTION/JUSTIFICATION

The Solid Waste Facility was built in 1994. The Solid Waste Division, through CMA Engineers, the original designers of the facility, conducted an evaluation of the site in 2013 to review drainage systems, building condition, and road systems. The evaluation resulted in recommendations for short and long term capital needs to maintain the facility. The facility has undergone some short term improvements recommended including reinforcement of the upper portion of the push wall at the Transfer Station to prevent damage to the siding and replacement of damaged siding. One of the pressing long term capital needs is a replacement of the roof on the solid waste facility building. Small leaks are beginning to appear in the roof which are patched as necessary, but the overall integrity of the roof, which was designed to last 20 years, is starting to become compromised in the 22 year old facility. The roof will be evaluated every year to determine if the project needs to be accelerated or can be deferred.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation			166,750					166,750
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$166,750	\$0	\$0	\$0	\$0	\$166,750
FUNDING								
Current Revenue								0
Capital Reserve								0
Debt Funded			166,750					166,750
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$166,750	\$0	\$0	\$0	\$0	\$166,750

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001
One time

PROJECT STATUS: Ongoing CIP

Water Fund

The residents, businesses and industries in Keene use an average of 2 million gallons of clean, potable water every day for everything from tooth brushing, washing, food preparation, cleaning, fire protection, landscape watering, commercial uses and industrial processes. In the summer that volume almost doubles.

To meet this water demand, the City's has three separate water supplies – none of which alone can meet the City's daily needs. Combined though, the supplies are adequate for current demand under the current climate conditions. The reservoirs, located in Roxbury, can store 600 million gallons of water and the City owns approximately 2,400 acres of their watershed land. The wellfields on West and Court Streets have more than 300 square miles of watershed area to replace the groundwater that is pumped out.

Previous CIP budgets included funding for major rehabilitation to the 1931-era dam at Babbidge Reservoir that is expected to begin in 2017 and this CIP includes funds to improve the 1910-era Woodward dam. A failure of one or both of these dams would cause a significant water shortage in the community because the wells alone cannot meet the City's water needs.

Although the raw water from all of the City's sources is very clean, public water supplies require treatment to destroy illness-causing bacteria and to make them less acidic to prevent lead and copper from leaching out of Users' pipes. Because the well buildings were constructed in an era with fewer treatment requirements, they are undersized which limits treatment options. The buildings are in need of repair, and this CIP includes an evaluation of the buildings and equipment at both wellfields to recommend improvements that will improve their future reliability and flexibility as the City adapts to existing water quality regulations and plans for the likelihood of frequent periods of regional drought as the result of climate change. Future CIP programs will include upgrades and replacements to the well infrastructure as identified through this evaluation process.

The City's "new" Drinking Water Treatment Facility turns 25 in 2018 and this CIP includes some routine filter media changes, pavement repair, and equipment replacement. Changes in water quality regulations have forced changes in treatment techniques that results in more costly process operations and future CIP will include an evaluation of upgrades at the Facility.

Although the water sources are separate and each received onsite chemical treatment, they all enter one large water distribution system where they become intermingled – more than 100 miles of water main delivers the water to homes and businesses. The water mains range in age from brand new (less than a year old) to more than 100 years old.

In 2016 the Public Works Department developed an asset management plan for its water mains that rate each section of main based on its criticality, history of breaks, and environmental impact. This plan highlights the mains that need rehabilitation or replacement, and sets out a 100-year plan to keep pace with the aging infrastructure. The current CIP is funded by Water rate payers and includes water main improvement projects supported by this plan and coordinates with other City projects, including Marlboro Street improvements.

When a water main reaches the end of its useful life it is more likely to crack or break and their capacity is reduced through accumulation of hard mineral deposits inside the main. When a main breaks, customers' water pressure is affected and large volumes of clean water are

wasted into the ground, entire neighborhoods are suddenly without water, including hydrants for fire protection, and if it goes undetected for some time, the excess water can undermine roads, flood basements, and create hazards. It is the goal of the water main rehabilitation and replacement project to minimize the occurrence of these scenarios and to improve customers' water quality and pressure by systematically and cost effectively address the most critical water mains. The 6-year CIP includes new water mains on Marlboro Street and a section of Main Street, and it also includes cleaning and lining mains on Carpenter Street, Kingsbury Street, Hooper Street, Speaker Street, Cady Lane, Cobb Street, and Meadow Road as well as sections of Roxbury Street and West Street. Through these projects, the customers' water services are also often replaced between the main and the property line, improving their water quality, pressure and reliability.

To facilitate operation and maintenance of water mains, the City has more than 2,500 gate valves – some more than 100 years old. This CIP includes funding for the ongoing gate valve replacement project. Without properly operating gate valves, isolating a section of water main for repair or due to contamination can affect a large number of customers and limits the City's ability to supply water to critical assets in an emergency.

The City's water supply is also used for fire protection, and to meet that need, our mains and storage tanks are oversized compared to the community's daily demand for water and the system is peppered with more than 750 fire hydrants. Previous CIP programs included funding to bring most of the hydrants up to current standards and stragglers continue to be replaced through ongoing water main projects and with in-house personnel using operating budget funds.

Storing more than 5 million gallons of water for drinking and fire protection, there are six water storage tanks in the distribution system. The two largest tanks with a combined capacity of 4.5 million gallons are located on Beech Hill – one was built in 1924 the other in 1962. They've had routine repairs and painting over the years, but they don't meet current standards and both are in need of maintenance. Because the tanks provide water pressure and fire protection for most of the community, preserving their reliable function is a priority. If one or both become unusable due to physical condition or begins to leak, the community's water supply and fire protection capability security become uncertain. This CIP funds an evaluation of both tanks, will fix some deficiencies, and will include options for future repair or replacement of the tanks.

The current CIP includes funding for projects at three of the other storage tanks, including a significant evaluation and future recommendation report for the Drummer Hill tank and repairs at the Black Brook and Chapman Road storage tanks.

The City's water assets have an estimated value of more than \$115 million and an ongoing investment into their maintenance, repair, and replacement will assure that future generations enjoy safe, high quality drinking water.



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Black Brook Storage Tank Repairs**
 Department: **Public Works - Water Fund**
 Physical Location: **Black Brook Storage Tank**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Make repairs and improvements in accordance with current standards for water storage tanks.**



PROJECT DESCRIPTION/JUSTIFICATION

This 380,000 gallon, pre-cast concrete water storage tank, constructed in 1996, provides water for fire suppression and helps maintain stable water pressure in the Black Brook pressure zone. This project includes tank repairs identified by the November 2013 "Water Facilities Evaluation" performed by Tighe and Bond including sealing the roof panel joints, repairing failed seals at tank penetrations, providing new above grade electrical equipment, pressure washing the tank, and sealing cracks. It is recommended the existing vault be discontinued and all underground utilities be re-located above ground. In addition to providing a drier environment for the electrical and analytical equipment, an above ground station would allow a single staff member to check critical components without the assistance and equipment required for a regulated confined space entry.

FY20 funds a detailed evaluation of the tank, development of repair specifications and electrical upgrade design. FY22 funds the tank repairs and electrical work. This work has been scheduled for this time period because the 2013 Tighe and Bond evaluation recommended the deficiencies be corrected by 2019 or within 6 years of the evaluation. This project coincides with the Chapman tank and Drummer Hill tank evaluations and repairs. The design and evaluation for the 3 tanks along with the repairs at Blackbrook and Chapman will be advertised and packaged together to take advantage of the potential cost savings associated with having one larger project versus several smaller projects and streamline the administrative processes.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design				25,000				25,000
Construction/Implementation						71,929		71,929
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$0	\$25,000	\$0	\$71,929	\$0	\$96,929
FUNDING								
Current Revenue								0
Capital Reserve				25,000		71,929		96,929
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$0	\$25,000	\$0	\$71,929	\$0	\$96,929

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001
One time

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Chapman Water Tank repairs**
 Department: **Public Works - Water Fund**
 Physical Location: **Chapman Water Tank**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Make repairs and improvements in accordance with current standards for water storage tanks.**



PROJECT DESCRIPTION/JUSTIFICATION

This 200,000 gallon, pre-cast concrete water storage tank was constructed in 1993. This project includes tank repairs identified in the November 2013 Tighe and Bond "Water Facilities Evaluation" including pressure washing the tank roof, sealing the roof panel joints, installing sealant between the access hatch, and mounting flange and moving the electrical equipment above ground in a new building. This tank is equipped with a below grade, precast concrete vault that houses an electrical panel board and level instrumentation for the tank. It is recommended the existing vault be discontinued and all underground utilities be re-located above ground. In addition to providing a drier environment for the electrical and analytical equipment, an above ground station would allow a single staff member to check critical components without the assistance and equipment required for a regulated confined space entry.

FY20 funds a detailed evaluation of the tank, development of repair specifications and electrical upgrade design. FY22 funds the tank repairs and electrical work. This work has been scheduled for this time period because the 2013 Tighe and Bond evaluation recommended the deficiencies be corrected by 2019 or within 6 years of the evaluation. This project coincides with the Blackbrook tank and Drummer Hill tank evaluations and repairs. The design and evaluation for the 3 tanks along with the repairs at Blackbrook and Chapman will be advertised and packaged together to take advantage of the potential cost savings associated with having one larger project versus several smaller projects and streamline the administrative processes.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design				25,000				25,000
Construction/Implementation						54,449		54,449
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$0	\$25,000	\$0	\$54,449	\$0	\$79,449
FUNDING								
Current Revenue								0
Capital Reserve				25,000		54,449		79,449
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$0	\$25,000	\$0	\$54,449	\$0	\$79,449

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001
One time

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Dam Improvements**
 Department: **Public Works - Water Fund**
 Physical Location: **Various**
 Federal Mandate: **No**
 State Regulation or Law: **Yes - letter of deficiency (admin rule)**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Protection of the City's main water supply and compliance with the DES letter of deficiency.**



PROJECT DESCRIPTION/JUSTIFICATION

The Dam Master Plan for the 1910-era Woodward Dam and the 1931-era Babbidge Dam was completed in FY12. It addressed Letters of Deficiency (LOD) from NH Department of Environmental Services citing concerns for potential failure of the dams in a 100-year flood event. The Master Plan also included discussion about the importance of the dams as the City's primary water supplies. The LOD required the City to address deficiencies including stabilization of the dams and an increase in storage capacity. Both dams are classified as "high hazard" indicating that their failure could result in the loss of life downstream. Between them, the dams store more than 600 million gallons of water, equivalent to a 6-month supply for the City. The failure of one or both of these dams would cause a significant impact to the City's water supply because the existing wells cannot meet the City's entire water demand.

FY17 programmed funds for construction of improvements to the 84 year old Babbidge Dam. The improvements will armor the existing structure to withstand the impact of a breach of the upper dam at Woodward Pond. In FY16 the Council approved the use of interlocking blocks, similar to those used at Robin Hood Dam, to improve the Babbidge Dam's physical structure and address the LOD deficiencies. FY17 also programmed funds for the design of the FY20 improvements at the 105 year old Woodward dam.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation				1,022,025				1,022,025
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$0	\$1,022,025	\$0	\$0	\$0	\$1,022,025
FUNDING								
Current Revenue								0
Capital Reserve								0
Debt Funded				1,022,025				1,022,025
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$0	\$1,022,025	\$0	\$0	\$0	\$1,022,025

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: High \$50,001 or more
One time

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Drummer Hill Tank Replacement**
 Department: **Public Works - Water Fund**
 Physical Location: **Drummer Hill Tank**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Improve water quality and provide improved water pressure and volume for fire suppression**



PROJECT DESCRIPTION/JUSTIFICATION

FY20 of this project funds an evaluation of the repair/replacement options for the Drummer Hill water tank with a new, above ground tank that meets current standards. This 100,000 gallon, pre-cast concrete water storage tank with an interior liner and aluminum dome roof was constructed in 1987 to provide fire suppression and potable water for residential customers. This tank was evaluated by Tighe and Bond in the November 2013 "Water Facilities Evaluation" and Underwood Engineers in the June 2013 "Low Pressure Zone Study". These studies indicate the tank should be upgraded to improve pressure and address the significant number of improvements needed to bring the tank into compliance with public health standards, including the 10 State Standards guidelines for water storage tanks.

The tank's deficiencies include: leaking seals, lack of intrusion protection, a gap of approximately 1 inch between the walls and the domed roof, the presence of seams, absence of a watertight gasketed cover, and lack of a sample site. In addition, the tank is partially buried, and it is recommended that seamed tanks be located above grade to allow regular sanitary inspections. The tank does not provide the recommended 35 psi minimum static pressure to existing customers because the tank overflow elevation is too low and the tank itself is smaller than recommended for fire suppression by the Insurance Services Office. The replacement of the tank is scheduled for FY24 at an estimated cost of \$614,764.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design				25,000		208,959		233,959
Construction/Implementation								0
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$0	\$25,000	\$0	\$208,959	\$0	\$233,959
FUNDING								
Current Revenue								0
Capital Reserve				25,000		208,959		233,959
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$0	\$25,000	\$0	\$208,959	\$0	\$233,959

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001
One time

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Water Booster Stations**
 Department: **Public Works - Water Fund**
 Physical Location: **Fox Ave & Glen Road**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **To maintain water quality monitoring capability and replace aging electrical components.**



PROJECT DESCRIPTION/JUSTIFICATION

The Fox Avenue and Glen Road water booster stations were constructed in 1983 and are below grade, pre-cast concrete, water pumping stations. The stations are equipped with online monitoring instrumentation that continuously monitor and trend water quality parameters using the plant's Supervisory Control and Data Acquisition System (SCADA). This project funds the FY20 replacement of the turbidity, chlorine, and pH online analyzers in both stations. This project was moved from FY18 to FY20 to allow the evaluation of the 3 million gallon storage tank to be moved from FY20 to FY18. The equipment is in fair condition and some parts are still available. The total project cost was adjusted by 3% per year from \$40,430 in FY18 to \$42,892 in FY20.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation								0
Property/Equip. Acquisition				42,892				42,892
TOTAL	\$0	\$0	\$0	\$42,892	\$0	\$0	\$0	\$42,892
FUNDING								
Current Revenue								0
Capital Reserve				42,892				42,892
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$0	\$42,892	\$0	\$0	\$0	\$42,892

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001
One time

PROJECT STATUS: Ongoing CIP

Water and Sewer Improvements

The City's strategy for identifying and prioritizing water and sewer improvements in conjunction with roadwork for this Capital Improvement Program is the Road Overlay Program. It has evolved from its "Dig the Road Once" philosophy as the City's obligation under the 2004 Administrative Order requiring the replacement of specific sewers is complete.

A 2012 assessment of the City's paved streets used the pavement condition and traffic volume to develop a numeric rating. This rating was used to prioritize streets for overlay and streets were grouped into neighborhoods to gain efficiency in construction services and to improve the overall aesthetics of an area.

Before a street is overlaid, its water, sewer, and drain infrastructure is evaluated and repairs/improvements are planned for the year before the overlay is scheduled to avoid digging up a freshly paved road. The water, sewer, and drain evaluations are performed in different ways.

- *Sewers are evaluated according to their condition and capacity.*
 - Condition ratings were generated as part of the Priority Inspection Program that was performed between FY06 and FY11. The results of these inspections have been cataloged and deficiencies that require spot repair, short length lining, or complete lining have been identified.
 - Capacity issues have been identified using the computer model of the collection system. Inflow and infiltration is being evaluated in FY14 and will become an additional factor in future evaluations.

- *Water main evaluations are based on age, pressure/volume, and repair frequency.*
 - While no video is available that shows the condition of the water mains, the age and material are often used as clues to their conditions. As an example, mains that were constructed between 1930 and the 1970's were made of bituminous cast iron pipe (universal pipe) and are prone to leaks. Mains that do not have a cement lining can build up a hard layer of minerals that cannot be removed through the normal flushing programs.
 - The Department operational records are used to identify mains that have experienced a number of breaks.
 - The volume of water the main can transport, and what the relationship is of a given section of main to the rest of the system is evaluated using the water distribution model. If a section does not provide the anticipated volume or pressure, a piece can be cut out and visually inspected to determine the amount of material buildup.

- *The capacity of storm drains is evaluated by the contributing storm drainage area.*
 - If capacity is not adequate the drains are upsized by excavating and replacing the drain with a larger size pipe.
 - A storm drain model that will assist the evaluation of capacity is currently being developed.

Separate programs for the replacement of mainline water valves and the repair of sewers that are not associated with other road work have been created to keep the focus on this catch-up repair work.

WATER DISTRIBUTION IMPROVEMENTS

In 2015 The City hired Underwood Engineers to prepare a Water Mains Asset Management Plan. The City received the final Plan in June of 2016. The Plan outlines an informed process to identify water mains that should be replaced or rehabilitated over the next century. Each length of water main throughout the City was evaluated for both probability and consequence of failure. Criteria to identify probability of failure include age, material, and break history. Criteria for consequence of failure include regulatory compliance, social cost, collateral damage, and environmental cost. A weighted calculation was used to combine these ratings into a risk score for each water main throughout the City. Mains with the highest risk score are prioritized for replacement or rehabilitation in the CIP. Mains with lower risk scores will be identified for replacement or rehabilitation in future years.

Street	Scope of work	Length (feet)	2016 estimated cost**	Funding year	Construction year	Inflation adjust.	Construction year estimated cost**
-	No work planned to allow adequate funding for FY19 project	-	-	2018	-	-	-
Marlboro Street	Replace 14" cast iron pipe with 14" ductile iron pipe from Dartmouth Street to Baker Street	790	\$320,750	2019	2019	\$29,742	\$350,492
Marlboro Street	Replace 6" cast iron pipe with 8" ductile iron pipe from the bridge over Beaver Brook to Tiffin Street	2,031	\$710,850			\$65,915	\$776,765
-	No work planned to allow adequate funding for FY19 project	-	-	2020	-	-	-
Main Street	Replace 10" cast iron pipe with 10" ductile iron pipe from Proctor Court to Roundabout	717	\$271,000	2021	2021	\$43,163	\$314,163
-	No work planned to allow adequate funding for FY23 project	-	-	2022	-	-	-
Court Street	Replace 10" cast iron pipe with 10" ductile iron pipe from East Surry Road to Maple Avenue	2,832	\$1,070,500	2023	2023	\$207,733	\$1,278,233

** All costs include 10% for construction contingencies, 10% for engineering design, 10% for construction administration, and 1% for supervision



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Water Distribution Improvements**
 Department: **Public Works - Water Fund**
 Physical Location: **Various**
 Federal Mandate: **No**
 State Regulation or Law: **No**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **Policy**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Yes**



PROJECT DESCRIPTION/JUSTIFICATION

In 2015 The City hired Underwood Engineers to prepare a Water Mains Asset Management Plan. The City received the final Plan in June of 2016. The Plan outlines an informed process to identify water mains that should be replaced or rehabilitated over the next century. Each length of water main throughout the City was evaluated for both probability and consequence of failure. Criteria to identify probability of failure include age, material, and break history. Criteria for consequence of failure include regulatory compliance, social cost, collateral damage, and environmental cost. A weighted calculation was used to combine these ratings into a risk score for each water main throughout the City. Mains with the highest risk score are prioritized for replacement or rehabilitation in the CIP. Mains with lower risk scores will be identified for replacement or rehabilitation in future years.

FY 19 funds water main replacement work on Marlboro Street.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design			169,089		47,124		191,735	407,948
Construction/Implementation			958,169		267,039		1,086,498	2,311,706
Property/Equip. Acquisition								0
TOTAL			\$1,127,258		\$314,163		\$1,278,233	\$2,719,654
FUNDING								
Current Revenue								0
Capital Reserve			500,000		314,163		1,278,233	2,092,396
Debt Funded								0
Federal or State Grants								0
Use of Surplus / Retained Earnings			627,258					627,258
wi	\$0	\$0	\$1,127,258	\$0	\$314,163	\$0	\$1,278,233	\$2,719,654

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT:

N/A

PROJECT STATUS:

Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Water Utility Work - Bridges**
 Department: **Public Works - Water Fund**
 Physical Location: **Various**
 Federal Mandate: **No**
 State Regulation or Law: **No**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **Policy**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Yes**



PROJECT DESCRIPTION/JUSTIFICATION

The work funded by this project includes the replacement of water mains that are affected by the City's Bridge Replacement program. The State of NH Department of Transportation's bridge program does not provide funds for water utilities that are damaged or need to be replaced due to a bridge project. This project funds the time and materials required for the water main replacement and does not include road or surface replacement because that portion is covered by the corresponding bridge project.

FY18: Roxbury Street bridge over Beaver Brook.
 FY19: Winchester Street bridge over Ash Swamp Brook.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation		40,000	38,300					78,300
Property/Equip. Acquisition								0
TOTAL	\$0	\$40,000	\$38,300	\$0	\$0	\$0	\$0	\$78,300
FUNDING								
Current Revenue								0
Capital Reserve		40,000	38,300					78,300
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$40,000	\$38,300	\$0	\$0	\$0	\$0	\$78,300

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT:

N/A

PROJECT STATUS:

Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **State Bypass Utilities**
 Department: **Public Works - Water Fund**
 Physical Location: **Various**
 Federal Mandate: **No**
 State Regulation or Law: **No**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **Policy**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Yes**



PROJECT DESCRIPTION/JUSTIFICATION

This project funds the replacement of water mains that are affected by the NH Department of Transportation's construction on Winchester Street between Island Street and the roundabout. The NH Department of Transportation's project does not include funds for water utilities that are damaged or need to be replaced due to a state road project. This project funds the time and materials required for the water main replacement and does not include road or surface replacement because that work is covered by the corresponding State road project.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation			203,814					203,814
Property/Equip. Acquisition								0
TOTAL		\$0	\$203,814	\$0	\$0	\$0	\$0	\$203,814
FUNDING								
Current Revenue								0
Capital Reserve			203,814					203,814
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL		\$0	\$203,814	\$0	\$0	\$0	\$0	\$203,814

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT:

N/A

PROJECT STATUS:

Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Water Main Cleaning and Lining**
 Department: **Public Works - Water Fund**
 Physical Location: **Various**
 Federal Mandate: **No**
 State Regulation or Law: **No**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Yes**



PROJECT DESCRIPTION/JUSTIFICATION

This project will renew water mains through cleaning and lining to extend their life and improve water quality. Lining is a rehabilitation process that is often more cost effective than traditional excavation and replacement. Cleaning restores the interior condition of the pipe. Lining provides protection against future deterioration and may also improve structural integrity. Lining allows improvements to the main while avoiding disruption to the street surface, traffic, and customer services. These disruptions can lead to increased cost and inconvenience for residents and visitors. The City owns a number of water mains that are sufficient in size for their location, but have reduced capacity due to mineral deposits. This project compliments the Water Distribution Improvements Program. It will occur in areas where water mains need attention, but the other utilities do not require replacement. It is also generally performed where the roadway will be paved the following year. These projects will be designed by in-house staff. Costs below are based on 2014 bid unit prices and are adjusted 3% per year for inflation. Projects may include but are not limited to:

- FY18: Carpenter Street (1,130 LF of 6" main); Kingsbury St (525 LF of 6"main)
- FY19: West St (from Symonds Place to the railroad/Multi-Use trail crossing - 2,100 LF of 12"main)
- FY20: Roxbury St (Reservoir St to Oak St - 1,000 LF of 12"main); Hooper St (315 LF of 6"main); Speaker St (220 LF of 6"main); Cady Lane (200 LF of 6"main); Cobb St (300 LF of 6"main)
- FY21 and FY 22: Meadow Rd (1,320 LF of 6" & 1,320 LF of 12"main)

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation		231,855	238,810	245,975	244,495	242,535	250,000	1,453,670
Property/Equip. Acquisition								0
TOTAL		\$231,855	\$238,810	\$245,975	\$244,495	\$242,535	\$250,000	\$1,453,670
FUNDING								
Current Revenue		231,855	238,810	245,975	244,495	242,535	250,000	1,453,670
Capital Reserve								0
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL		\$231,855	\$238,810	\$245,975	\$244,495	\$242,535	\$250,000	\$1,453,670

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001
Ongoing

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Water Gate Valve Replacement**
 Department: **Public Works - Water Fund**
 Physical Location: **Various**
 Federal Mandate: **No**
 State Regulation or Law: **No**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Water system maintenance**



PROJECT DESCRIPTION/JUSTIFICATION

This project replaces gate valves in water mains that are not scheduled for replacement through other infrastructure improvement projects. Properly functioning gate valves are required to isolate water mains in the event of a break, routine repair, or contamination. The 2003 infrastructure study cites the state of NH requirement for a routine valve turning program for system maintenance. More than one third of the City valves are sixty years old or older and are difficult to open, close, or cannot be operated. These valves present maintenance issues. Problems include leaky valve packing and/or complete valve failure. This project will be designed by in-house engineering staff and includes funds for an outside contractor to complete the work.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation		47,872	90,508	93,223	96,020	98,901	101,868	528,392
Property/Equip. Acquisition								0
TOTAL		\$47,872	\$90,508	\$93,223	\$96,020	\$98,901	\$101,868	\$528,392
FUNDING								
Current Revenue		47,872	90,508	93,223	96,020	98,901	101,868	528,392
Capital Reserve								0
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL		\$47,872	\$90,508	\$93,223	\$96,020	\$98,901	\$101,868	\$528,392

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT:

Ongoing

PROJECT STATUS:

Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Well Field Upgrades**
 Department: **Public Works - Water Fund**
 Physical Location: **West and Court St Well Facilities**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Continually support and maintain infrastructure.**



PROJECT DESCRIPTION/JUSTIFICATION

The City's surface water supply is supplemented by 4 groundwater wells located on West and Court Streets. The West Street and Court Street well facilities include three well buildings that were constructed in the mid 1960's, one well building that was constructed in 1977, and two corrosion control buildings that house chemical feed equipment that were constructed in 1988. The November 2013 "Water Facilities Evaluation" performed by Tighe and Bond cited many action items for both facilities including replacement of chemical storage tanks, chemical feed pumps, well pumps, electrical circuit breakers and panel boards, Parco valves, building heaters, structural improvements and addition of electrical generators to provide emergency power.

This project funds a more in-depth detailed evaluation of these facilities in FY20. The proposed evaluation will provide recommendations for repair/replace/relocation of the City's groundwater facilities and will assist the City in determining the best approach to addressing the deficiencies identified in the Tighe and Bond report. The evaluation will also consider the City's current and future water demands and provide financially-based recommendations for the rehabilitation of current facilities compared to the development and construction of a new groundwater supply. The design work for the West Street corrosion control upgrade is funded in FY23.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design				75,000			408,590	483,590
Construction/Implementation								0
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$0	\$75,000	\$0	\$0	\$408,590	\$483,590
FUNDING								
Current Revenue								0
Capital Reserve				75,000			408,590	483,590
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$0	\$75,000	\$0	\$0	\$408,590	\$483,590

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001
Multi-year

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **1.5 MG Storage Tank Repairs**
 Department: **Public Works - Water Fund**
 Physical Location: **Roxbury Street**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Continually support and maintain infrastructure.**



Tank is underground, inside the fence line

PROJECT DESCRIPTION/JUSTIFICATION

The 1.5 million gallon water storage tank located on Roxbury Street is a buried, cast-in-place concrete tank that was built in 1924, and is in generally good condition. Improvements recommended by the November 2013 Tighe and Bond "Water Facilities Evaluation" report will extend its useful life and bring it up to current water storage tank standards. This project funds design to correct deficiencies including a new membrane roof cover, re-grading the soil over the tank, and installing a separate vent.

This tank is covered by approximately 6 inches of topsoil with several low areas that allow water to pond on the tank's flat roof. Tighe and Bond recommended that the buried tank should be equipped with an impermeable membrane roof cover and that the topsoil be graded to divert water away from the tank roof. The report also indicated the existing tank overflow currently acts as both an overflow and a vent for the tank, which does not conform with current standards for water storage tanks.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design				90,041				90,041
Construction/Implementation						278,226		278,226
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$0	\$90,041	\$0	\$278,226	\$0	\$368,267
FUNDING								
Current Revenue								0
Capital Reserve				90,041		278,226		368,267
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$0	\$90,041	\$0	\$278,226	\$0	\$368,267

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001
One time

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: 3 MG Water Storage Tank Repairs
Department: Public Works - Water Fund
Physical Location: Roxbury Street
Federal Mandate: N/A
State Regulation or Law: N/A
Master Plan (CMP) Focus Area: Healthy Community
CMP Vision/Strategy: Infrastructure
Council Initiative: N/A
V.O.I.C.E.: Continually Assess Facilities and Infrastructure
Departmental Objective: Extend the useful life of the water storage tank through repairs and maintenance.



PROJECT DESCRIPTION/JUSTIFICATION

The City's 3.0 million gallon water storage tank is an above grade welded steel tank that was constructed in 1962. The November 2013 " Water Facilities Evaluation" performed by Tighe and Bond included an interior and exterior inspection that noted several deficiencies. FY18 funds a more detailed evaluation of current and future water storage requirements and will help the City determine whether it is more economical to construct a new tank or perform the necessary tank repairs.

The deficiencies noted by Tighe and Bond include failure of isolated areas of the interior and exterior coating systems and corrosion on the tank wall, interior rust nodules on the floor of the tank and holes and delamination on the roof of the tank, visible signs of corrosion on the ladder rails and replacement of the tank vent. Tighe and Bond also recommend installing cathodic protection and a guard rail at the top of the tank for safe walking along the dome. Structural concerns noted include the joint sealant between the tank flange and the top of the concrete is discontinuous and should be replaced with new sealant and exposed surfaces of concrete foundation should also be repaired. Preliminary costs for tank repairs and painting have been estimated at \$2.3 million and is scheduled for FY23.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design		35,000						35,000
Construction/Implementation							2,275,882	2,275,882
Property/Equip. Acquisition								0
TOTAL	\$0	\$35,000	\$0	\$0	\$0	\$0	\$2,275,882	\$2,310,882
FUNDING								
Current Revenue								0
Capital Reserve		35,000						35,000
Debt Funded							2,275,882	2,275,882
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$35,000	\$0	\$0	\$0	\$0	\$2,275,882	\$2,310,882

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: No impact Ongoing

PROJECT STATUS: Ongoing CIP

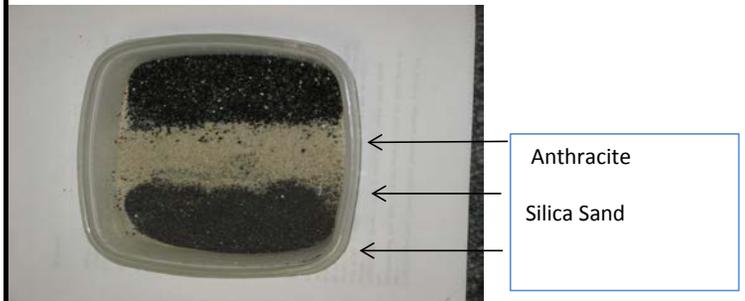


CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: WTF Filter Media and Underdrain Replacement
Department: Public Works - Water Fund
Physical Location: WTF
Federal Mandate: N/A
State Regulation or Law: N/A
Master Plan (CMP) Focus Area: Healthy Community
CMP Vision/Strategy: Infrastructure
Council Initiative: N/A
V.O.I.C.E.: Continually Assess Facilities and Infrastructure
Departmental Objective: Maintain compliance with drinking water standards through filter maintenance.



PROJECT DESCRIPTION/JUSTIFICATION

The City's water treatment facility has three treatment units that each have three different layers of filter media that has been renewed, but not replaced since its installation in 1993. The City contracted with Tighe and Bond Consulting Engineers in 2013 to perform an evaluation of the filters and media. The visible parts of the filter units were found to be in good repair but the underdrain components cannot be inspected while the units are filled with media. The evaluation also found the anthracite media does not meet specifications and its replacement will improve filter performance and efficiency by extending filter run times and having more effective cleaning cycles. Tighe and Bond recommend removing all three media layers to complete the underdrain evaluation and repair and to replace all 3 layers of media when the underdrain work is complete.

This project funds the inspection and repair and/or replacement of the underdrain system and filter media for each unit -- one unit every two years. Due to the operational downtime associated with this project, the City is recommending a phased approach. Work on the first filter unit is proposed for FY20; the remaining two units are funded in FY22 and FY24 respectively. The cost for FY24 is estimated to be \$215,496.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design/construction oversight				17,575				17,575
Construction/Implementation				173,891		203,126		377,017
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$0	\$191,466	\$0	\$203,126	\$0	\$394,592
FUNDING								
Current Revenue								0
Capital Reserve				191,466		203,126	0	394,592
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$0	\$191,466	\$0	\$203,126	\$0	\$394,592

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001
One time

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: Instrumentation Upgrade WTF
Department: Public Works - Water Fund
Physical Location: 555 Roxbury Road
Federal Mandate: No
State Regulation or Law: No
Master Plan (CMP) Focus Area: Healthy Community
CMP Vision/Strategy: Infrastructure
Council Initiative: N/A
V.O.I.C.E.: Continually Assess Facilities and Infrastructure
Departmental Objective: Monitor plant performance and make process changes to optimize water quality.



PROJECT DESCRIPTION/JUSTIFICATION

The Water Treatment Facility (WTF) is equipped with continuously online monitoring equipment that allows the operations staff the ability to monitor and trend the performance of the WTF through the plant's Supervisory Control and Data Acquisition System (SCADA). The analytical data generated allows staff the ability to make process changes and optimize the water treatment process. This project included the replacement of 8 online turbidity analyzers in FY14 and the replacement of an online total organic carbon (TOC) analyzer in FY15. FY19 includes the replacement of a chlorine analyzer and 6 level transmitters at the filter units, clear well, and waste tanks. Installation of the equipment is performed by in-house personnel.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation								0
Property/Equip. Acquisition			49,522					49,522
TOTAL	\$0	\$0	\$49,522	\$0	\$0	\$0	\$0	\$49,522
FUNDING								
Current Revenue								0
Capital Reserve			49,522					49,522
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$49,522	\$0	\$0	\$0	\$0	\$49,522

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001
 N/A

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **WTF Pavement Replacement**
 Department: **Public Works - Water Fund**
 Physical Location: **555 Roxbury Road**
 Federal Mandate: **No**
 State Regulation or Law: **No**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Maintain Infrastructure**



PROJECT DESCRIPTION/JUSTIFICATION

The Water Treatment Facility (WTF) became operational in 1993 and will be 30 years old in 2023. Since 1993 the City has performed repairs on the access road and parking lot areas to maintain and extend the useful life of the pavement. The November 2013 "Water Facilities Evaluation" performed by Tighe and Bond describes the bituminous pavement of having a lifespan of 20 years. The report noted that the access road and parking area were in fair condition, but many spider cracks, longitudinal cracks and spalled areas were observed. Due to the condition and type of cracking observed, crack sealing is not a viable option. This project funds complete repaving of the access road and parking areas including adjustments to manhole covers, rims and catch basin frames and grates. This work has been scheduled for this time period because the 2013 Tighe and Bond evaluation recommended the deficiencies be corrected by 2019 or within 6 years of the evaluation. The work is scheduled to be completed in FY23 or 10 years after the Tighe and Bond evaluation. If the work is not completed additional repairs will have to be completed to prevent further degradation of the pavement. Further degradation of the pavement surface will result in a more extensive and expensive replacement in the future. The result of this project will be an access road and parking areas that with proper maintenance will have a useful life of 20 to 30 years.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation							70,180	70,180
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$0	\$0	\$0	\$0	\$70,180	\$70,180
FUNDING								
Current Revenue								0
Capital Reserve							70,180	70,180
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$0	\$0	\$0	\$0	\$70,180	\$70,180

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001
N/A

PROJECT STATUS: New Project



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **WTF Pressure Reducing Valve**
 Department: **Public Works - Water Fund**
 Physical Location: **Water Treatment Facility**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Energy Efficiency**
 Council Initiative: **Policy**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Improve flow balance between the hydro-turbines and the process filters.**



PROJECT DESCRIPTION/JUSTIFICATION

The existing pressure reducing valve (PRV) was installed when the Water Treatment Facility was constructed in 1993 and is recommended for replacement in 2020 by the November 2013 " Water Facilities Evaluation" performed by Tighe and Bond. However, because of operational issues, staff recommends the project be moved to FY19. The PRV works in conjunction with the hydro turbine system by handling any water that does not pass through the turbines when there is flow fluctuation. Operational issues are created because the overflow volume is much smaller than the design point of the PRV. The resulting water surges created by the oversized PRV results in increased water turbidity and affects the operation of the turbines. Staff has made recommended modifications from the manufacturers representatives with minimal results due to the existing valve being too large and unable to react as needed.

The proposed system would consist of two PRVs sized to match the turbines' design flows. They will operate in parallel, with a smaller valve to handle the transition for lower flows and a larger valve for higher flows. FY17 funded an evaluation and design for the new system with construction in FY19.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation			17,100					17,100
Property/Equip. Acquisition			68,958					68,958
TOTAL	\$0	\$0	\$86,058	\$0	\$0	\$0	\$0	\$86,058
FUNDING								
Current Revenue								0
Capital Reserve			86,058					86,058
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$86,058	\$0	\$0	\$0	\$0	\$86,058

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Create efficiencies
One time

PROJECT STATUS: Ongoing CIP

Sewer Fund

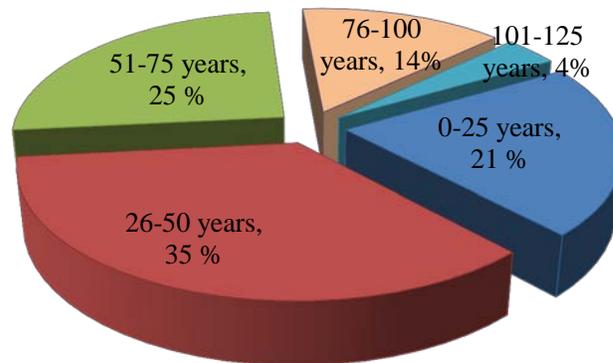
The City of Keene transports and treats about 3 million gallons of sewage every day. Sewage is water from homes, businesses, and industries that is drained from sinks, toilets, showers, washers, and industrial processes. The City's sewer system is not intended to collect and treat rain or groundwater, but because the WWTP treats an average of a million more gallons a day than it produces at the drinking water treatment plant, it clearly includes that groundwater infiltrates through small openings in mains and from illegal roof drain and sump pump connections.

Whatever its source, all of the City's wastewater drains through about 90 miles of sewer mains and must pass through the City's main pump station located on Martell Court before it reaches the wastewater treatment plant, located on Airport Road in Swanzey. The WWTP removes more than 99% of the pollutants from the wastewater before discharging it to the Ashuelot River.

Like any asset, Keene's system requires maintenance, upgrade, and replacement to keep it functioning properly and in compliance with environmental regulations. This CIP contains projects funded by the Sewer rate payers that are designed to keep the wastewater flowing reliably and treated properly.

Collection System: sewer mains and manholes

The City's oldest sewer mains date back to the late 1800's – when the community first decided to install a set of pipes to collect and remove sewage. Over time, mains were installed as the community grew and reflect a variety of different materials, most intended to last 50-75 years. A snapshot of the age of sewer mains shows that just about half are more than 50 years old. When a main reaches the end of its useful life it can break, collapse, allow roots to grow inside



and create a blockage, develop holes or voids that allow the earth above it to enter and create a sinkhole, or just leak – groundwater in or sewage out. When that happens, sewage backs up into homes and businesses and spills out on to the ground.

In response to an EPA Order in 2004, the City increased its sewer main repair and replacement program, and has seen a decrease in the amount of groundwater entering the sewers and also a decrease in the number of sewer main failures and emergency repairs. This CIP contains funds to continue to replace, repair, and rehabilitate the old mains and the more than 2,100 access points called manholes. Sewer improvements included in this CIP are on Baker and

Marlboro Street in coordination with the Marlboro Street improvements initiative, and on Blossom Street and Colony Court. A smaller sewer replacement project in conjunction with State of NH infrastructure projects on the bypass and at the Roxbury and Winchester Street bridges are also included.

The CIP program continues to fund the ongoing project to repair deficiencies identified through a video inspection of the sewer system funded in earlier CIP. Deficiencies in sewer mains can allow solids to build up and create a blockage or allow so much groundwater in that the capacity of the main is reduced – both issues lead to sewage overflowing into the street and may result in sewage backing up in homes or businesses. Since the City has increased its sewer main repair and maintenance investment in both the capital and operating budgets, the number of sewage overflows has decreased dramatically from a high of 16 per year in 2007 to one in 2015.

After the sewage is transported through the mains in the street, it may pass through one of the three smaller pump stations, but it all ultimately passes through the main pump station located at the end of Martell Court on the bank of the Ashuelot River. This building houses 4 large pumps, 3 used in the maximum capacity of the station and one as backup that pump the wastewater almost 2 miles to the wastewater treatment plant.

The average flow at Martell Court pump station is about 2,100 gallons per minute, with peaks up to 7,000 gallons per minute in severe storm events. If the station failed, it wouldn't take long for sewage to back up in the mains, in the streets and in homes and businesses, then would spill out on the streets and ultimately flow out of the building and into the Ashuelot River.

Previous CIP replaced the four obsolete, inefficient pumps with new energy efficient pumps and new controls that assure equipment reliability. This CIP funds several projects that continue to increase the reliability of this most critical step of the sewage transportation process, including a new backup emergency generator and a screen to remove items that clog pumps and pipes. The CIP also includes general maintenance on the 33 year old building – a new roof and repairs to interior ductwork.

The final chapter in the story of sewage in Keene takes place at the WWTP located at the end of Airport Road in Swanzey. Advanced chemical and biological treatment techniques are used to remove materials that are harmful to the environment. Built in the early 1980's, and subject to stringent EPA regulations and permits that have changed several times over the past 30 years, the WWTP completed its first major upgrade in 2015.

The upgrade included two new chemical buildings that allow the Plant to meet strict effluent limits for phosphorus and copper by using a cost-effective and novel technique developed and fine-tuned by City staff. It also included replacement of the existing and under-sized clarifier scum boxes and disinfection system with new equipment that can treat the WWTP's design flow of 10 million gallons a day and are not subject to flooding when the river level rises during major flooding events. The upgrade also replaced five of the Plant's ten 30- year old sludge pumps and upgraded the electrical system to accommodate the new equipment and remove the electric room from the corrosive atmosphere in the sludge dewatering room.

To support the equipment added as part of the major upgrade in 2014, this CIP includes an upgrade/upsize to the emergency generator, replacing ductwork insulation, and replacement of blowers and plant water systems.



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Head Works Treatment**
 Department: **Public Works - Sewer Fund**
 Physical Location: **176 Martell Court**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **N/A**
 Departmental Objective: **Protect downstream equipment from damage by removing rags, wipes, and plastics from the waste stream**



Example of screening equipment

PROJECT DESCRIPTION/JUSTIFICATION

More than 3 million gallons of raw wastewater are pumped through the Martell Court Pump Station every day. Solids, including plastics, wipes, and other non-degradable materials currently pass through a grinder. Doing this project in 2019 will have it operational in 2020 as the existing grinding equipment will no longer be supported by the manufacturer. It is expected that staff will be able to keep the existing equipment operational until then. The current grinding technology results in material that recombines at the WWTP and creates pump and process pipe blockages, mats of trash, and winds around rotating equipment where it must be removed by hand creating many hours of manual labor. New screening technology is available that can screen, wash, and compact these solids at the pump station before they cause maintenance issues at the WWTP.

Technology selection and engineering design for replacement of the grinding equipment at the Martell Court Pump Station will be completed in FY17. Construction is funded in FY19.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation			1,142,560					1,142,560
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$1,142,560	\$0	\$0	\$0	\$0	\$1,142,560
FUNDING								
Current Revenue								
Capital Reserve								0
Debt Funded			1,142,560					1,142,560
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$1,142,560	\$0	\$0	\$0	\$0	\$1,142,560

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Create efficiencies
One time

PROJECT STATUS: Re-introduced



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: Martell Court Upgrade Phase 2
Department: Public Works - Sewer Fund
Physical Location: 176 Martell Court
Federal Mandate: The City's NPDES permit requires the City to have back up power.
State Regulation or Law: No
Master Plan (CMP) Focus Area: Healthy Community
CMP Vision/Strategy: Infrastructure
Council Initiative: N/A
V.O.I.C.E.: Continually Assess Facilities and Infrastructure
Departmental Objective: Reliable operation of the City's main sewage pumping station during power outages



PROJECT DESCRIPTION/JUSTIFICATION

Phase 2 of the Martell Court Pump Station upgrade consists of the replacement of the transformer and generator that were installed when the Station was built in 1985. The transformer converts high voltage power to secondary 480 volt power that is used to operate the station when line power is not available. The generator provides power to keep the station's four large raw sewage pumps operating when line power is interrupted. A generator failure would result in the the pump station flooding, sewage backing up into buildings/basements, Beaver Brook, the Ashuelot River and into City streets within several hours of losing line power.

In FY19, the transformer will be 34 years old and approaching the end of its reliable life. FY18 funds the design of the 15 KVA transformer replacement and FY19 funds the purchase and installation of a new transformer. FY19 also funds the design for the replacement of the station's generator. FY21 funds the purchase and installation of the generator equipment. By FY21 the generator will be 36 years old and replacement parts will be difficult to procure. Phase 1 of the Pump Station upgrade was completed in FY14 and included the replacement of four raw sewage pumps, seven gates, and their associated controls.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design		10,925	21,131					32,056
Construction/Implementation			37,536		130,810			168,346
Property/Equip. Acquisition								0
TOTAL	\$0	\$10,925	\$58,667	\$0	\$130,810	\$0	\$0	\$200,402
FUNDING								
Current Revenue								0
Capital Reserve		10,925	58,667		130,810			200,402
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$10,925	\$58,667	\$0	\$130,810	\$0	\$0	\$200,402

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001
One time

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE 2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: Duct Insulation Replacement
Department: Public Works - Sewer Fund
Physical Location: Martell Court Pump Station
Federal Mandate: N/A
State Regulation or Law: N/A
Master Plan (CMP) Focus Area: Healthy Community
CMP Vision/Strategy: Infrastructure
Council Initiative: N/A
V.O.I.C.E.: N/A
Departmental Objective: Refurbish old equipment to maintain current level of operation and defer replacement cost



PROJECT DESCRIPTION/JUSTIFICATION

This project will replace the heating, ventilation, and air conditioning (HVAC) duct insulation at the Martell Court Pump Station (MCPS). This ductwork is important for fresh air exchanges for equipment and personnel safety when entering this area. It is located directly above the incoming raw influent wastewater and is exposed to a corrosive atmosphere containing hydrogen sulfide gas that promotes rapid deterioration. The ductwork insulation will be 38 years old at the time of replacement.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation							23,928	23,928
Property/Equip. Acquisition								0
TOTAL	\$0	\$0		\$0	\$0	\$0	\$23,928	\$23,928
FUNDING								
Current Revenue								
Capital Reserve							23,928	23,928
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$0	\$0	\$0	\$0	\$23,928	\$23,928

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Create efficiencies
One time

PROJECT STATUS: New Project



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Martell Court Roof Replacement**
 Department: **Public Works - Sewer Fund**
 Physical Location: **420 Airport Road**
 Federal Mandate: **No**
 State Regulation or Law: **No**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Prevent costly repairs to roof surface in the future**



PROJECT DESCRIPTION/JUSTIFICATION

This project replaces the original asphalt roof at the Martell Court Pump Station. A local roofing contractor evaluated the roof and determined that it may last another 5 years, or longer. Because asphalt roofs are no longer an industry-accepted roof material, the roof will be replaced with a rubber membrane. The integrity of the roof will be evaluated each year to determine if this project needs to be accelerated.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation							32,714	32,714
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$0	\$0	\$0	\$0	\$32,714	\$32,714
FUNDING								
Current Revenue								0
Capital Reserve							32,714	32,714
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$0	\$0	\$0	\$0	\$32,714	\$32,714

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT:

N/A

PROJECT STATUS:

New Project

Water and Sewer Improvements

The City's strategy for identifying and prioritizing water and sewer improvements in conjunction with roadwork for this Capital Improvement Program is a combination of the sewer condition and the Road Overlay Program. It has evolved from its "Dig the Road Once" philosophy as the City's obligation under the 2004 Administrative Order requiring the replacement of specific sewers is complete. Sewer improvements in FY16-19 reflect condition-driven projects and are not associated with road rehabilitation projects.

A 2012 assessment of the City's paved streets used the pavement condition and traffic volume to develop a numeric rating. This rating was used to prioritize streets for overlay and streets were grouped into neighborhoods to gain efficiency in construction services and to improve the overall aesthetics of an area.

Before a street is overlaid, its water, sewer, and drain infrastructure are evaluated and repairs/improvements are planned for the year before the overlay is scheduled to avoid digging up a freshly paved road. The water, sewer, and drain evaluations are performed in different ways.

- *Sewers are evaluated according to their condition and capacity.*
 - Condition ratings were generated as part of the Priority Inspection Program that was performed between FY06 and FY11. The results of these inspections have been cataloged and deficiencies that require spot repair, short length lining, or complete lining have been identified.
 - Capacity issues have been identified using the computer model of the collection system. Inflow and infiltration was evaluated in FY14 and is an additional factor in evaluations.

- *Water main evaluations are based on age, pressure/volume, and repair frequency.*
 - While no video is available that shows the condition of the water mains, the age and material are often used as clues to their conditions. As an example, mains that were constructed between 1930 and the 1970's were made of bituminous cast iron pipe (universal pipe) and are prone to leaks. Mains that do not have a cement lining can build up a hard layer of minerals that cannot be removed through the normal flushing programs.
 - The Department's operational records are used to identify mains that have experienced a number of breaks.
 - The volume of water a main can transport and what the relationship is of a given section of main to the rest of the system is evaluated using the water distribution model. If a section does not provide the anticipated volume or pressure, a piece can be cut out and visually inspected to determine the amount of material buildup.

- *The capacity of storm drains is evaluated by the contributing storm drainage area.*
 - If capacity is not adequate the drains are upsized by excavating and replacing the drain with a larger size pipe.
 - A storm drain model that will assist the evaluation of capacity is currently being developed.



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **State Bypass Utilities**
 Department: **Public Works - Sewer Fund**
 Physical Location: **Various**
 Federal Mandate: **No**
 State Regulation or Law: **No**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **Policy**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Yes**



PROJECT DESCRIPTION/JUSTIFICATION

This project funds the replacement of sewer mains that are affected by the NH Department of Transportation's construction on Winchester Street between Island Street and the roundabout. The NH Department of Transportation's project does not include funds for sewer utilities that are damaged or need to be replaced due to a State road project. This project funds the time and materials required for the sewer main replacement and does not include road or surface replacement because that work is covered by the corresponding State road project.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation			360,291					360,291
Property/Equip. Acquisition								0
TOTAL		\$0	\$360,291	\$0	\$0	\$0	\$0	\$360,291
FUNDING								
Current Revenue								0
Capital Reserve			360,291					360,291
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL		\$0	\$360,291	\$0	\$0	\$0	\$0	\$360,291

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT:

N/A

PROJECT STATUS:

Ongoing CIP

SEWER IMPROVEMENTS

In 2014 the City hired a Consultant, Hazen and Sawyer, to develop an Inflow and Infiltration Study (I&I) for the City's sewer network. Inflow is extraneous flow that enters a sewer system through direct connections such as catch basins and roof leaders. Infiltration is groundwater that enters the sewer system through joints, cracks, and other defects in pipes and manholes. Both I&I contribute to unnecessary costs for the City's wastewater treatment plant to treat non-sanitary flows. I&I also increases the risk of combined sewer overflows when stormwater combined with sanitary flows overwhelms the capacity of sewers. Phase 1 of this study involved the installation of flow meters in select locations to identify areas with the greatest observed I&I. The first component of Phase 2 involved a refinement of the flow meter locations and study areas. The second component of Phase 2 involves smoke testing to accurately locate pipe and manhole defects that may need to be repaired. A report will be prepared that summarizes the results of the testing and priority locations for sewer repairs. Implementation is scheduled for the FY19-24 CIP.

Street	Scope of work	2014 estimated cost**	Funding year	Construction year	Inflation adjust.	Construction year estimated cost**
Baker Street	Improve sewer alignment and access. Replace existing 6-inch mains with 8-inch pipe.	\$129,453	2018	2018	\$16,247	\$145,700
Marlboro Street	Remove small diameter sewer sub-mains to improve flow characteristics and reduce maintenance costs. Project costs include removal of existing concrete roadway base.	\$563,371	2019	2019	\$89,730	\$653,101
Blossom Street	Reconstruct a shallow 10-inch sewer main to improve flow characteristics.	\$553,829	2020	2020	\$107,472	\$661,301
Colony Court	Replace sewer with adverse slope that causes backups. Costs include reconstruction of roadway and sidewalk.	\$1,183,465	2021	2021	\$272,048	\$1,455,513
-	Work to be determined following results of Phase 2 I&I Study.	\$332,750	2022	2022	\$88,768	\$421,518
-		\$332,750	2023	2023	\$101,413	\$434,163

** All costs include 10% for construction contingencies, 10% for engineering design, 10% for construction administration, and 1% for supervision



CITY OF KEENE, NEW HAMPSHIRE 2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Sewer Improvements**
 Department: **Public Works - Sewer Fund**
 Physical Location: **Various**
 Federal Mandate: **No**
 State Regulation or Law: **No**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **Policy**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Improvement in collection system carrying capacity and reliable operation through upgrade of existing mains and elimination of infiltration**



PROJECT DESCRIPTION/JUSTIFICATION

This project represents the ongoing repair or replacement of sewer mains as determined by an evaluation of their condition. Repairs are scheduled the year before a road is overlaid or reconstructed to streamline the paving project. Work on this project corrects substantial deficiencies that cannot be addressed using spot repair.

In 2014 the City hired a Consultant, Hazen and Sawyer, to develop an Inflow and Infiltration Study (I&I) for the City's sewer network. Inflow is extraneous flow that enters a sewer system through direct connections such as catch basins and roof leaders. Infiltration is groundwater that enters the sewer system through joints, cracks, and other defects in pipes and manholes. Both I&I contribute to unnecessary costs for the City's wastewater treatment plant to treat non-sanitary flows. I&I also increases the risk of combined sewer overflows when stormwater combined with sanitary flows overwhelms the capacity of sewers. Phase 1 of this study involved the installation of flow meters in select locations to identify areas with the greatest observed I&I. The first component of Phase 2 involved a refinement of the flow meter locations and study areas. The second component of Phase 2 involves smoke testing to accurately locate pipe and manhole defects that may need to be repaired. A report will be prepared that summarizes the results of the testing and priority locations for sewer repairs. Implementation is scheduled for the FY19-24 CIP.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design		22,467	46,560	45,771	205,395	63,228	65,124	448,545
Construction/Implementation		123,233	606,541	615,530	1,250,117	358,290	369,039	3,322,750
Property/Equip. Acquisition								0
TOTAL	\$0	\$145,700	\$653,101	\$661,301	\$1,455,512	\$421,518	\$434,163	\$3,771,295
FUNDING								
Current Revenue								0
Capital Reserve		145,700	653,101	661,301		421,518	434,163	2,315,783
Debt Funded					1,455,512			1,455,512
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$145,700	\$653,101	\$661,301	\$1,455,512	\$421,518	\$434,163	\$3,771,295

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT:

Multi-year

PROJECT STATUS:

Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Sewer Utility Work - Bridges**
 Department: **Public Works - Sewer Fund**
 Physical Location: **Various**
 Federal Mandate: **No**
 State Regulation or Law: **No**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **Policy**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Yes**



PROJECT DESCRIPTION/JUSTIFICATION

The work funded by this project includes the replacement of sewer mains that are affected by the City's Bridge Replacement program. The State of NH Department of Transportation's bridge program does not provide funds for sewer utilities that are damaged or need to be replaced due to a bridge project. This project funds the time and materials required for the sewer main replacement and does not include road or surface replacement because that portion is covered by the corresponding bridge project.

FY18: Roxbury Street Bridge over Beaver Brook.
 FY19: Winchester Street Bridge over Ash Swamp Brook.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation		40,000	43,500					83,500
Property/Equip. Acquisition								0
TOTAL	\$0	\$40,000	\$43,500	\$0	\$0	\$0	\$0	\$83,500
FUNDING								
Current Revenue								0
Capital Reserve		40,000	43,500	0				83,500
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL		\$40,000	\$43,500	\$0	\$0	\$0	\$0	\$83,500

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT:

N/A

PROJECT STATUS:

Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: Sewer Structural Repair/Lining
Department: Public Works - Sewer Fund
Physical Location: Various
Federal Mandate: Clean Water Act; NPDES permit
State Regulation or Law: RSA 485-A:13
Master Plan (CMP) Focus Area: Healthy Community
CMP Vision/Strategy: Infrastructure
Council Initiative: N/A
V.O.I.C.E.: Continually Assess Facilities and Infrastructure
Departmental Objective: Improvement in collection system carrying capacity and reliable operation through small repairs to existing mains and elimination of infiltration and deferring the complete main replacement



PROJECT DESCRIPTION/JUSTIFICATION

This project funds an outside contractor to make more than 200 spot repairs to sewer mains to correct deficiencies that were identified through the Priority Inspection Program (PIP). Each type of deficiency has been evaluated and a cost was estimated based on the 2011 repair bid. The cost to repair each deficiency ranges from \$2,500 to \$10,500 depending on the location, complexity, and type of repair required. Engineering will be performed in-house and locations are based on the PIP ranking system. The project includes funds for engineering, construction, and inspection of the construction. In addition to the spot repairs, this project also funds lining in locations on roads that have very old sewers and are scheduled to be overlaid.

Hundreds of sewer main structural deficiencies have been identified through the PIP. The deficiencies found in these mains include offset joints, holes, or large cracks that can be corrected through a small spot repair, lining, or the replacement of a short portion of the main. This project funds the repair of deficiencies that were identified in sewer mains that do not require complete replacement, or where the street is scheduled for overlay and instead of reconstruction. A smaller repair is appropriate. The spot sewer main repairs program will be performed by an outside contractor.

The City will utilize the results of the Phase 2 Inflow and Infiltration study (in progress) by Hazen and Sawyer to prioritize sewer structural repair / lining projects beginning with the FY19-24 CIP.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation		108,826	173,891	179,108	184,481	190,015	195,716	1,032,037
Property/Equip. Acquisition								0
TOTAL	\$0	\$108,826	\$173,891	\$179,108	\$184,481	\$190,015	\$195,716	\$1,032,037
FUNDING								
Current Revenue		108,826	173,891	179,108	184,481	190,015	195,716	1,032,037
Capital Reserve								0
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$108,826	\$173,891	\$179,108	\$184,481	\$190,015	\$195,716	\$1,032,037

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001 Ongoing
 PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Blower Replacement**
 Department: **Public Works - Sewer Fund**
 Physical Location: **420 Airport Road**
 Federal Mandate: **No**
 State Regulation or Law: **No**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Community Sustainability**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Appropriately timed replacement of obsolete equipment with energy efficient models**



PROJECT DESCRIPTION/JUSTIFICATION

This project includes the replacement of four blowers, originally installed in 1985, with more energy efficient equipment. The replacement of the two largest blowers was funded in FY13 and their installation was completed in FY15. These four blowers include two 75 horse power (HP) blowers (pictured above) that aerate the septage holding tanks, grit chamber, and final effluent and two 40 HP blowers that aerate the sludge storage tank.

FY20 funds the replacement of the two 40HP blowers and FY21 funds the replacement of the two 75 HP blowers. The replacement blowers are expected to be more energy efficient than the existing equipment. Installing more efficient equipment is in line with the City's Vision Focus Areas, specifically Focus Area 1 "Fostering Renewable Energy and Efficient use of Resources". The blowers had been scheduled for replacement in FY15 and FY16, but were pushed out because they are in good repair as preventative maintenance has been diligently performed and motor and control upgrades done in previous years. It is expected the blower condition will dictate their replacement in FY20 and FY21.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design			68,741					68,741
Construction/Implementation				179,360	184,741			364,101
Property/Equip. Acquisition								
TOTAL	\$0	\$0	\$68,741	\$179,360	\$184,741	\$0	\$0	\$432,842
FUNDING								
Current Revenue								
Capital Reserve	61,076		7,665	179,360	184,741			432,842
Debt Funded								
Federal or State Grants								
Other Sources								
TOTAL	\$61,076	\$0	\$7,665	\$179,360	\$184,741	\$0	\$0	\$432,842

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Reduce - will reduce operating costs Ongoing
PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Duct Insulation Replacement**
 Department: **Public Works - Sewer Fund**
 Physical Location: **Wastewater Plant**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **N/A**
 Departmental Objective: **Refurbish old equipment to maintain current level of operation and defer replacement cost**



PROJECT DESCRIPTION/JUSTIFICATION

This project will replace the heating, ventilation, and air conditioning (HVAC) ductwork insulation at the Wastewater Treatment Plant (WWTP). The ductwork is important for fresh air exchange for equipment and personnel safety when entering this area. It is located directly over the raw wastewater that is coming into the head works of the plant. There is limited means of access for repair or cleaning and is exposed to a corrosive atmosphere containing hydrogen sulfide gas that promotes rapid deterioration. The ductwork insulation will be 38 years old at the time of replacement.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation							35,892	35,892
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$0	\$0	\$0	\$0	\$35,892	\$35,892
FUNDING								
Current Revenue								
Capital Reserve							35,892	35,892
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$0	\$0	\$0	\$0	\$35,892	\$35,892

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Create efficiencies
One time

PROJECT STATUS: New Project



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **WWTP Generator Replacement**
 Department: **Public Works - Sewer Fund**
 Physical Location: **420 Airport Road**
 Federal Mandate: **The City's NPDES permit requires back up power be available.**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Emergency Preparedness**
 Council Initiative: **N/A**
 V.O.I.C.E.: **N/A**
 Departmental Objective: **To have a reliable supply of emergency power that will allow the treatment process to remain in operation when there is a power outage. Backup power is required by the City's NPDES permit**



PROJECT DESCRIPTION/JUSTIFICATION

This project replaces the WWTP's standby generator that was installed in 1985. The generator was designed to provide backup power to the Plant's critical equipment so that treatment is able to continue when line power is interrupted. Replacement is recommended in FY20 when the system is 35 years old because its reliability may be compromised as replacement parts become harder to procure. With the recent treatment plant upgrade it was found that the present generator cannot handle full loads and some equipment must be either turned off or turned down to have enough capacity. The Wastewater Plant operates under extremely tight parameters set by the EPA and in the event of a power failure and the generator failed, the plant could lose its biological process and also not be able to disinfect the effluent going to the river. In that event, the plant would not meet its limits set by the EPA and the City would be fined. FY19 funds the design and FY21 funds the purchase and installation of the new generator.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design			21,131					21,131
Construction/Implementation					123,636			123,636
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$21,131	\$0	\$123,636	\$0	\$0	\$144,767
FUNDING								
Current Revenue								0
Capital Reserve			21,131		123,636			144,767
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$21,131	\$0	\$123,636	\$0	\$0	\$144,767

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001
One time

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Nonpotable Water System**
 Department: **Public Works - Sewer Fund**
 Physical Location: **420 Airport Road**
 Federal Mandate: **No**
 State Regulation or Law: **No**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Refurbish old equipment to maintain current level of operation and defer replacement costs**



PROJECT DESCRIPTION/JUSTIFICATION

Non-potable service water is wastewater that has received complete treatment and is suitable for discharge into the river, but not suitable for drinking. To conserve resources, treated water is filtered then recycled for use in applications when drinking quality water is not required. In addition, heat from the treated water is recovered through heat pumps that were installed as part of the 2014 WWTP Upgrade. The recovered energy is used to heat the UV disinfection and septage buildings. This project refurbishes the non-potable service water system at the Wastewater Treatment Plant and defers a \$131K replacement that had been scheduled for FY17. The pumps will require replacement after FY26 or when the replacement parts are no longer available.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation			65,400					65,400
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$65,400	\$0	\$0	\$0	\$0	\$65,400
FUNDING								
Current Revenue								0
Capital Reserve			65,400					65,400
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$65,400	\$0	\$0	\$0	\$0	\$65,400

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT:

N/A

PROJECT STATUS:

Ongoing CIP

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Transportation – programs, activities, and projects which are intended to facilitate the safe and efficient movement of people and things within the City, and to connect the local community with Monadnock Region, the state, and the world. The primary goal of these activities is to provide that roads, bridges, sidewalks, bike paths, and other transportation infrastructure are in good condition and meet the needs of the community.

Project Name	Page
Consolidated Infrastructure- All Years	124-126
Bridge Repair/Replacement	128
Curb Repair / Replacement	129
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LED Street Lights	134
Priority of New Sidewalks	135
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Sidewalk Repair/Replacement	139
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Transportation

The City's transportation system is comprised of 126 centerline miles of streets, 32 bridges, over 52 miles of sidewalks, 14,900 linear feet of guard rail, and over 10 miles of multi-use trails. The transportation system provides critical links within the City, to the region, to the State, and ultimately to the world. The transportation system is how people get to work and school, buy groceries, and access recreational activities. For businesses it is their lifeline to receive and provide goods and services. A strong transportation system will set a positive tone and drives a community to success and a failing or struggling system will retard a community's ability flourish and compete.

The assets of the City's transportation system have been in place from the founding of the City, the 1750's, up to current times. This has resulted in components that were design and built for very different needs, horse drawn carriages and wagons, but are expected to meet the demands of today, multi-generational pedestrians, vehicle, and bicycle operators; multi-passenger vehicles, tractor trailer trucks and electric cars.

The City invests in its transportation system through different ways. The City works to maintain and keep components functioning through its maintenance and repair projects. Through the Capital Improvement Program this is accomplished through the Bridge Replacement, Road Rehabilitation, Curbing, Sidewalk and Guard Rail Repair Projects. To determine the needs for these projects the Public Works Department performs inventory and condition surveys of the various assets. The survey collects information on the condition (how much cracking, potholing, deterioration to components), on use (vehicle trips), and types of uses (is it a school route, residential collector or pathway to commercial centers). This information is reviewed to determine the types and methods of repair strategies, priority, and timing. Also layered into the review is the timing and need for work on other infrastructure components (water and sewer), work by private utilities, and larger developments within the community.

The City also invests in its transportation system through projects that improve functionality and/or capacity to meet increased demands or changes in function. Through the Capital Improvement Program this is accomplished through the Street Reconstruction Program, State-By-Pass –Winchester Street Reconstruction, Marlboro Street Corridor Improvements, and the New Sidewalks programs. These projects are identified through various avenues including the City's Comprehensive Master Plan, special commissions or review committees, development changes, and evaluation of data collected during the street survey.

Overall the City works to balance the need to maintain the functionality and operations of its transportation system and the cost of the system to the property owners.

CONSOLIDATED INFRASTRUCTURE REPORT								FY18	
STREET	Year	Rehab	Re-construct	Curbing	Sidewalk	Drainage	Sewer	Water	Total
FY 18 Detail									
Armory Street (North to end)	2018	61,700							61,700
Baker Street	2018	144,000							144,000
Crossfield Street	2018	20,000							20,000
Dunbar Street	2018	72,000							72,000
Harrison Street	2018	61,500							61,500
Jordan Road	2018	277,000							277,000
Wyman Road	2018	281,150							281,150
Willow Court	2018	17,000							17,000
Willow Street	2018	50,500							50,500
Curb Installation	2018			41,200					41,200
Sidewalk Replacement	2018				41,200				41,200
Stormwater Spot Repairs	2018					41,200			41,200
Sewer Replacement - Baker Street	2018						97,260		97,260
Water Replacement - No work this year to balance funding with projects	2018							-	-
Detail: FY 2018 Projects		984,850	-	41,200	41,200	41,200	97,260	-	1,205,710
Contingency: - 10%		98,485	-	4,120	4,120	4,120	9,726	-	120,571
Subtotal		\$ 1,083,335	\$ -	\$ 45,320	\$ 45,320	\$ 45,320	\$ 106,986	\$ -	\$ 1,326,281
Design: - 10%		-	-	4,532	4,532	4,532	10,699	-	24,295
Construction Administration: - 10%		-	-	4,532	4,532	4,532	10,699	-	24,295
Supervision & Overhead: - 1%		10,833	-	453	453	453	1,070	-	13,263
Subtotal		\$ 10,833	\$ -	\$ 9,517	\$ 9,517	\$ 9,517	\$ 22,467	\$ -	\$ 61,852
Project Total		\$ 1,094,168	\$ -	\$ 54,837	\$ 54,837	\$ 54,837	\$ 129,453	\$ -	\$ 1,388,133
Inflation adjustment									
(4 years x 3% x project total)		\$ 137,328	\$ -	\$ 6,883	\$ 6,883	\$ 6,883	\$ 16,247	\$ -	\$ 174,223
Not Programmed (use of project balance)									
Program Funding Request: 2018		\$ 1,231,496	\$ -	\$ 61,720	\$ 61,720	\$ 61,720	\$ 145,700	\$ -	\$ 1,562,355

CONSOLIDATED INFRASTRUCTURE REPORT								FY19	
STREET	Year	Rehab	Re-construct	Curbing	Sidewalk	Drainage	Sewer	Water	Total
FY 19 Detail									
Bridge Court	2019	\$ 10,146							\$ 10,146
Carpenter Street	2019	44,054							44,054
Ellis Court (Wright to Woodbury)	2019	27,000							27,000
Fowler Street	2019	23,789							23,789
Gilsum Street (North to end)	2019	125,000							125,000
Gunn Road	2019	193,854							193,854
Harmony Lane	2019	13,752							13,752
Kingsbury Street	2019	20,250							20,250
North Street (Elm to Gilsum)	2019	93,000							93,000
Perham Street	2019	11,200							11,200
Red Oak Drive	2019	83,000							83,000
Richardson Court	2019	10,986							10,986
Valley Street	2019	48,459							48,459
Village Drive	2019	56,121							56,121
Woodburn Street	2019	27,918							27,918
Woodbury Street	2019	164,000							164,000
Wright Street	2019	28,000							28,000
Curb Installation	2019			41,200					41,200
Sidewalk Replacement	2019				41,200				41,200
Stormwater Spot Repairs	2019					41,200			41,200
Sewer Replacement - Marlboro Street	2019						423,269		423,269
Water Replacement - Marlboro Street	2019							730,565	730,565
Detail: FY 2019 Projects		980,529	-	41,200	41,200	41,200	423,269	730,565	2,257,963
Contingency: - 10%		98,053	-	4,120	4,120	4,120	42,327	73,057	225,796
Subtotal		\$ 1,078,582	\$ -	\$ 45,320	\$ 45,320	\$ 45,320	\$ 465,596	\$ 803,622	\$ 2,483,759
Design: - 10%		-	-	4,532	4,532	4,532	46,560	80,362	140,518
Construction Administration: - 10%		-	-	4,532	4,532	4,532	46,560	80,362	140,518
Supervision & Overhead: - 1%		10,786	-	453	453	453	4,656	8,036	24,838
Subtotal		\$ 10,786	\$ -	\$ 9,517	\$ 9,517	\$ 9,517	\$ 97,775	\$ 168,761	\$ 305,873
Project Total		\$ 1,089,367	\$ -	\$ 54,837	\$ 54,837	\$ 54,837	\$ 563,371	\$ 972,383	\$ 2,789,633
Inflation adjustment									
(5 years x 3% x project total)		\$ 173,508	\$ -	\$ 8,734	\$ 8,734	\$ 8,734	\$ 89,730	\$ 154,875	\$ 444,316
Not Programmed (use of project balance)									
Program Funding Request: 2019		\$ 1,262,875	\$ -	\$ 63,571	\$ 63,571	\$ 63,571	\$ 653,101	\$ 1,127,258	\$ 3,233,949

CONSOLIDATED INFRASTRUCTURE REPORT								FY20	
STREET	Year	Rehab	Re-construct	Curbing	Sidewalk	Drainage	Sewer	Water	Total
FY 20 Detail									
Adams Court	2020	\$ 9,321							\$ 9,321
Adams Street	2020	68,492							68,492
Avalon Place	2020	15,450							15,450
Elliot Street	2020	29,307							29,307
Gates Street	2020	21,946							21,946
Main Street (Route 101 to Marlborough St)	2020	412,000							412,000
Moore Farm Road	2020	30,900							30,900
No Name Road	2020	15,450							15,450
Proctor Court	2020	20,600							20,600
South Street	2020	25,103							25,103
Arch Street - (Park to Hurricane)	2020	257,500							257,500
Sullivan Road (Route 9 to town line)	2020	89,237							89,237
River Street	2020	66,893							66,893
Curb Installation	2020			41,200					41,200
Sidewalk Replacement	2020				41,200				41,200
Stormwater Spot Repairs	2020					41,200			41,200
Sewer Replacement - Blossom Street	2020						416,100		416,100
Water Replacement - No work this year to balance funding with projects	2020							-	-
Detail: FY 2020 Projects		1,062,199	-	41,200	41,200	41,200	416,100	-	1,601,899
Contingency: - 10%		106,220	-	4,120	4,120	4,120	41,610	-	160,190
Subtotal		\$ 1,168,419	\$ -	\$ 45,320	\$ 45,320	\$ 45,320	\$ 457,710	\$ -	\$ 1,762,089
Design: - 10%		-	-	4,532	4,532	4,532	45,771	-	59,367
Construction Administration: - 10%		-	-	4,532	4,532	4,532	45,771	-	59,367
Supervision & Overhead: - 1%		11,684	-	453	453	453	4,577	-	17,621
Subtotal		\$ 11,684	\$ -	\$ 9,517	\$ 9,517	\$ 9,517	\$ 96,119	\$ -	\$ 136,355
Project Total		\$ 1,180,103	\$ -	\$ 54,837	\$ 54,837	\$ 54,837	\$ 553,829	\$ -	\$ 1,898,444
Inflation adjustment (6 years x 3% x project total)		\$ 229,002	\$ -	\$ 10,641	\$ 10,641	\$ 10,641	\$ 107,472	\$ -	\$ 368,397
Not Programmed (use of project balance)									
Program Funding Request: 2020		\$ 1,409,105	\$ -	\$ 65,478	\$ 65,478	\$ 65,478	\$ 661,301	\$ -	\$ 2,266,841

CONSOLIDATED INFRASTRUCTURE REPORT								FY21	
STREET	Year	Rehab	Re-construct	Curbing	Sidewalk	Drainage	Sewer	Water	Total
FY 21 Detail									
Cady Street	2021	\$ 25,750							\$ 25,750
Cobb Street	2021	15,450							15,450.00
Concord Road	2021	258,530							258,530.00
Hooper Street	2021	26,533							26,532.80
Lamson Street	2021	26,790							26,790.30
Martin Street	2021	33,086							33,085.66
Park Avenue	2021	389,340							389,340.00
Salisbury Road	2021	54,739							54,739.35
School Street (West to Emerald)	2021	46,350							46,350.00
Speaker Street	2021	20,600							20,600.00
St. James Street	2021	46,350							46,350.00
Curb Installation	2021			42,000					42,000.00
Sidewalk Replacement	2021				42,000				42,000.00
Stormwater Spot Repairs	2021					42,000			42,000.00
Sewer Replacement - Colony Court	2021						889,155		889,154.65
Water Replacement - Main Street	2021							191,918	191,918.31
Detail: FY 2021 Projects		943,518	-	42,000	42,000	42,000	889,155	191,918	2,150,591
Contingency: - 10%		94,352	-	4,200	4,200	4,200	88,915	19,192	215,059
Subtotal		\$ 1,037,870	\$ -	\$ 46,200	\$ 46,200	\$ 46,200	\$ 978,070	\$ 211,110	\$ 2,365,650
Design: - 10%		-	-	4,620	4,620	4,620	97,807	21,111	132,778
Construction Administration: - 10%		-	-	4,620	4,620	4,620	97,807	21,111	132,778
Supervision & Overhead: - 1%		10,379	-	462	462	462	9,781	2,111	23,657
Subtotal		\$ 10,379	\$ -	\$ 9,702	\$ 9,702	\$ 9,702	\$ 205,395	\$ 44,333	\$ 289,213
Project Total		\$ 1,048,249	\$ -	\$ 55,902	\$ 55,902	\$ 55,902	\$ 1,183,465	\$ 255,443	\$ 2,654,863
Inflation adjustment (7 years x 3% x project total)		\$ 240,965	\$ -	\$ 12,850	\$ 12,850	\$ 12,850	\$ 272,048	\$ 58,720	\$ 610,284
Not Programmed (use of project balance)									
Program Funding Request: 2021		\$ 1,289,214	\$ -	\$ 68,752	\$ 68,752	\$ 68,752	\$ 1,455,512	\$ 314,163	\$ 3,265,146

CONSOLIDATED INFRASTRUCTURE REPORT								FY22	
STREET	Year	Rehab	Re-construct	Curbing	Sidewalk	Drainage	Sewer	Water	Total
FY 22 Detail									
Chapman Road	2022	\$ 97,462							\$ 97,462
Old Walpole Road	2022	92,416							92,416
Darling Road	2022	151,128							151,128
Dickinson Road	2022	124,137							124,137
Meetinghouse Road	2022	91,473							91,473
Timberlane Drive	2022	130,865							130,865
TBD	2022	350,000							350,000
Curb Installation	2022			42,000					42,000
Sidewalk Replacement	2022				42,000				42,000
Stormwater Spot Repairs	2022					42,000			42,000
Sewer Replacement - To Be Determined	2022						250,000		250,000
Water Replacement - No work this year to balance funding with projects	2022							-	-
Detail: FY 2022 Projects		1,037,480	-	42,000	42,000	42,000	250,000	-	1,413,480
Contingency: - 10%		103,748	-	4,200	4,200	4,200	25,000	-	141,348
Subtotal		\$ 1,141,228	\$ -	\$ 46,200	\$ 46,200	\$ 46,200	\$ 275,000	\$ -	\$ 1,554,828
Design: - 10%		-	-	4,620	4,620	4,620	27,500	-	41,360
Construction Administration: - 10%		-	-	4,620	4,620	4,620	27,500	-	41,360
Supervision & Overhead: - 1%		11,412	-	462	462	462	2,750	-	15,548
Subtotal		\$ 11,412	\$ -	\$ 9,702	\$ 9,702	\$ 9,702	\$ 57,750	\$ -	\$ 98,268
Project Total		\$ 1,152,640	\$ -	\$ 55,902	\$ 55,902	\$ 55,902	\$ 332,750	\$ -	\$ 1,653,096
Inflation adjustment (8 years x 3% x project total)		\$ 307,490	\$ -	\$ 14,913	\$ 14,913	\$ 14,913	\$ 88,768	\$ -	\$ 440,997
Not Programmed (use of project balance)									
Program Funding Request: 2019		\$ 1,460,130	\$ -	\$ 70,815	\$ 70,815	\$ 70,815	\$ 421,518	\$ -	\$ 2,094,092

CONSOLIDATED INFRASTRUCTURE REPORT								FY23	
STREET	Year	Rehab	Re-construct	Curbing	Sidewalk	Drainage	Sewer	Water	Total
FY 23 Detail									
Roadway rehabilitation - to be determined	2023	\$ 1,000,000							\$ 1,000,000
Curb Installation	2023			42,000					42,000
Sidewalk Replacement	2023				42,000				42,000
Stormwater Spot Repairs	2023					42,000			42,000
Sewer Replacement - To Be Determined	2023						250,000		250,000
Water Replacement - Court Street	2023							736,032	736,032
Detail: FY 2022 Projects		1,000,000	-	42,000	42,000	42,000	250,000	736,032	2,112,032
Contingency: - 10%		100,000	-	4,200	4,200	4,200	25,000	73,603	211,203
Subtotal		\$ 1,100,000	\$ -	\$ 46,200	\$ 46,200	\$ 46,200	\$ 275,000	\$ 809,636	\$ 2,323,236
Design: - 10%		-	-	4,620	4,620	4,620	27,500	80,964	122,324
Construction Administration: - 10%		-	-	4,620	4,620	4,620	27,500	80,964	122,324
Supervision & Overhead: - 1%		11,000	-	462	462	462	2,750	8,096	23,232
Subtotal		\$ 11,000	\$ -	\$ 9,702	\$ 9,702	\$ 9,702	\$ 57,750	\$ 170,023	\$ 267,879
Project Total		\$ 1,111,000	\$ -	\$ 55,902	\$ 55,902	\$ 55,902	\$ 332,750	\$ 979,659	\$ 2,591,115
Inflation adjustment (9 years x 3% x project total)		\$ 338,603	\$ -	\$ 17,037	\$ 17,037	\$ 17,037	\$ 101,413	\$ 298,574	\$ 789,702
Not Programmed (use of project balance)									
Program Funding Request: 2019		\$ 1,449,603	\$ -	\$ 72,939	\$ 72,939	\$ 72,939	\$ 434,163	\$ 1,278,233	\$ 3,380,818

Bridge Rehabilitation and Replacement Program

The City is responsible for thirty-two (32) active bridges which provide critical transportation links through out the City. The bridges range in age from 2 to 93 years old. The New Hampshire Department of Transportation (NH DOT) inspects these bridges on a bi-annual basis. Bridges are broken down and each bridge subsystem (deck, superstructure, substructure, railing, approaches, etc.) are reviewed and their condition is rated. The ratings ranges from 9 – Excellent Condition to 1 – Imminent Failure. Bridges that are identified with significant deficiencies (ratings of 5 or less) are classified as “Red Listed” and inspected annually. The type of deficiencies on City bridges include insufficient lane width and deterioration of deck surfaces and supporting members. The City has 14 bridges that are on the State’s Red List. They are the following:

Baker Street over Beaver Brook	Winchester Street/Rte.10 over Ash Swamp Brook
Main Street/Rte. 12 over Beaver Brook	Maple Avenue over Black Brook
Roxbury Street over Beaver Brook	Beaver Street over Beaver Brook
Island Street over Ashuelot River	Church Street over Beaver Brook
George Street over Beaver Brook	Whitcomb Mills Road over White Brook
Spring Street over Beaver Brook	Ferry Brook Road over Ferry Brook
Summit Road over Black Brook	

**City Council, on February 18, 2010, voted to close the Harrison Street Bridge when Railroad Street was discontinued.

City bridge projects are eligible to participate in the State’s Municipal Bridge Aid Program. This program shares the cost of bridge repair/replacement between the community and the State with 80% of the funding from the State and 20% from the City. To be considered for funding the City must prove that it has appropriated its 20% share.

To prioritize the City’s Red Listed Bridges the City uses the condition assessment, the type of deficiencies, the amount of traffic that uses the bridge, the impacts if weight restrictions or closure occurs, and if there is a reasonable way around the bridge. The Main Street / Route 12 and Winchester Street / Route 10 bridges both have over 20,000 vehicles per day crossing them with no easy detours. If weight restriction or closure occurs on either of these bridges, there would be significant economic and social impacts to the City and the region. For these reasons these two bridges are at the top for repair/replacement. The next priority bridges include the Island Street Bridge over the Ashuelot River; Roxbury Street, George Street, and Beaver Street over Beaver Brook, and the Maple Avenue bridge .

Roadway	Waterway	Description	Design Year	Anticipated Construction Year	Construction Cost Estimate
Main Street / Route 12	Beaver Brook	Design is underway for the replacement structure.	2015	2017	\$1,900,000
Winchester Street / Route 10	Ash Swamp Brook	Design is underway for the replacement structure.	2015	2019	\$580,000
Roxbury Street	Beaver Brook	The estimated bridge replacement cost is \$920,000 requiring a local match of \$184,000. The City has previously appropriated \$134,000. This bridge is programmed in the States' proposed 2017-2026 TIP for FY18. To have sufficient funds for the implementation available in FY18 funds designated for the East Surry Road Bridge will be reprogrammed. The East Surry Road Bridge was reconstructed as part of the City's May 2012 flood response receiving FEMA funds. Design and Construction expected in FY18.	2018	2018	\$920,000
George Street	Beaver Brook	The State has accepted this bridge into the NH DOT Ten Year Transportation Improvement Plan, June 2016.	2021	2021	\$782,651
Island Street	Ashuelot River	The bridge is scheduled to be replaced as part of the Winchester Street Upgrade Project (10309B) programmed for construction in FY19 and FY20.	2017	2019 - 2020	*See costs for State Bypass Program
Maple Avenue	Black Brook	City Council authorized \$130K in FY15 for the City's 20% match which will allow the City to request consideration for State Municipal Bridge Aid for this project in the 2019-2028 Transportation Improvement Plan.	-	-	\$650,000
Beaver Street	Beaver Brook	The estimated replacement cost is \$460K. The City previously appropriated \$92K for the City's 20% match which will allow the City to request consideration for State Municipal Bridge Aid for this project in the 2019-2028 TIP. .	-	-	\$460,000



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Bridge Repair/Replacement**
 Department: **Public Works - General Fund**
 Physical Location: **Various**
 Federal Mandate: **NO**
 State Regulation or Law: **NO**
 Master Plan (CMP) Focus Area: **Quality Built Environment**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **Policy**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **YES**



PROJECT DESCRIPTION/JUSTIFICATION

This project provides funding for the City to rehabilitate and replace red-listed bridges. The City participates in the Municipal Bridge Aid Program through the New Hampshire Department of Transportation (NHDOT). The program provides 80% State funding with a local 20% match. For consideration in the program the City must prove that it has appropriated the local match.

Construction funding for the Roxbury Street Bridge has been accelerated to FY 18 to align with funds availability from the State DOT Bridge Program.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design		154,560			130,442			285,002
Construction/Implementation		750,720			646,537			1,397,257
Property/Equip. Acquisition		14,720			5,671			20,391
TOTAL	\$0	\$920,000	\$0	\$0	\$782,650	\$0	\$0	\$1,702,650
FUNDING								
Current Revenue								0
Capital Reserve		184,000			156,530			340,530
Debt Funded								0
Federal or State Grants		736,000			626,120			1,362,120
Other Sources								0
TOTAL	\$0	\$920,000	\$0	\$0	\$782,650	\$0	\$0	\$1,702,650

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT:

Reduce - will reduce operating costs
Ongoing

PROJECT STATUS:

Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Curb Repair / Replacement**
 Department: **Public Works - General Fund**
 Physical Location: **Various**
 Federal Mandate: **NO**
 State Regulation or Law: **NO**
 Master Plan (CMP) Focus Area: **Quality Built Environment**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **Policy**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **YES**



PROJECT DESCRIPTION/JUSTIFICATION

This project provides funds for repair or replacement of curb throughout the City. The City coordinates this work with roadway rehabilitation projects. Projects are designed by in-house staff when appropriate. The 2014 cost to install approximately 1,800 linear feet of curb with a 10% contingency is \$45,320. To determine actual expected costs, the estimate adds 10% for engineering design, 10% for construction engineering, and 1% for overhead. Costs are then adjusted 3% per year for inflation to the date of construction.

Granite curb will be installed for complete street reconstruction projects. The City adopted granite as the standard material for all new curbs. Section 70-126 of the City Code states that granite type A curbs shall be required on the public ways of all new developments and in conjunction with the replacement of existing sidewalks and curbs in the commerce, central business, industrial, and medium and high density residential zones. Granite curb is more costly than asphalt but has a longer life expectancy. Bituminous curb will be installed on roadway rehabilitation projects where existing bituminous curb has deteriorated and requires replacement. The Public Works Department anticipates that the FY 18 funding will be used primarily for the replacement of deteriorated curbing along Baker Street.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation		61,720	63,571	65,478	68,752	70,815	72,939	403,275
Property/Equip. Acquisition								0
TOTAL	\$0	\$61,720	\$63,571	\$65,478	\$68,752	\$70,815	\$72,939	\$403,275
FUNDING								
Current Revenue			63,571	65,478	68,752	70,815	72,939	341,555
Capital Reserve								0
Debt Funded		61,720						61,720
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$61,720	\$63,571	\$65,478	\$68,752	\$70,815	\$72,939	\$403,275

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: No impact
N/A

PROJECT STATUS: Ongoing CIP

ROAD OVERLAY & RECONSTRUCTION LIST

2018

2019

2020

REHABILITATION	EST. COST
Armory Street (North to end)	\$ 61,700
Baker Street	144,000
Crossfield Street	20,000
Dunbar Street	72,000
Harrison Street	61,500
Jordan Road	277,000
Wyman Road	281,150
Willow Court	17,000
Willow Street	50,500
Subtotal	\$ 984,850
10% Contingency	\$ 98,485
Construction Total	\$ 1,083,335
Design, Construction, S&OH	\$ 10,833
2014 Total Overlay Cost	\$ 1,094,168
Inflation adjustment (4 years x 3% x project total)	\$ 137,328
Total Rehabilitation Cost	\$ 1,231,496

REHABILITATION	EST. COST
Bridge Court	\$ 10,146
Carpenter Street	44,054
Ellis Court (Wright to Woodbury)	27,000
Fowler Street	23,789
Gilsum Street (North to end)	125,000
Gunn Road	193,854
Harmony Lane	13,752
Kingsbury Street	20,250
North Street (Elm to Gilsum)	93,000
Perham Street	11,200
Red Oak Drive	83,000
Richardson Court	10,986
Valley Street	48,459
Village Drive	56,121
Woodburn Street	27,918
Woodbury Street	164,000
Wright Street	28,000
Subtotal	\$ 980,529
10% Contingency	\$ 98,053
Construction Total	\$ 1,078,582
Design, Construction, S&OH	\$ 10,786
2014 Total Overlay Cost	\$ 1,089,368
Inflation adjustment (5 years x 3% x project total)	\$ 173,508
Total Rehabilitation Cost	\$ 1,262,876

REHABILITATION	EST. COST
Adams Court	\$ 9,321
Adams Street	68,492
Avalon Place	15,450
Elliot Street	29,307
Gates Street	21,946
Main Street (Route 101 to Marlborough St)	412,000
Moore Farm Road	30,900
No Name Road	15,450
Proctor Court	20,600
South Street	25,103
Arch Street - (Park to Hurricane)	257,500
Sullivan Road (Route 9 to town line)	89,237
River Street	66,893
Subtotal	\$ 1,062,199
10% Contingency	\$ 106,220
Construction Total	\$ 1,168,419
Design, Construction, S&OH	\$ 11,684
2014 Total Overlay Cost	\$ 1,180,103
Inflation adjustment (6 years x 3% x project total)	\$ 229,002
Total Rehabilitation Cost	\$ 1,409,105

2018

2019

2020

RECONSTRUCT	EST. COST
Subtotal	\$0
10% Contingency	\$0
Construction Total	\$0
Design, Construction, S&OH	\$0
2014 Total Overlay Cost	\$0
Inflation adjustment (4 years x 3% x project total)	\$ -
Total Reconstruction Cost	\$0

RECONSTRUCT	EST. COST
Subtotal	\$0
10% Contingency	\$0
Construction Total	\$0
Design, Construction, S&OH	\$0
2014 Total Overlay Cost	\$0
Inflation adjustment (5 years x 3% x project total)	\$ -
Total Reconstruction Cost	\$0

RECONSTRUCT	EST. COST
Subtotal	\$0
10% Contingency	\$0
Construction Total	\$0
Design, Construction, S&OH	\$0
2014 Total Overlay Cost	\$0
Inflation adjustment (6 years x 3% x project total)	\$ -
Total Reconstruction Cost	\$0

Note: The Road Rehabilitation program for FY20 through FY22 will be reevaluated in light of the roadway condition survey performed in the summer of 2016.

ROAD OVERLAY & RECONSTRUCTION LIST

<u>2021</u>		<u>2022</u>		<u>2023</u>	
OVERLAY	EST. COST	OVERLAY	EST. COST	OVERLAY	EST. COST
Cady Street	\$ 25,750	Chapman Road	\$ 97,462	To be determined	\$ 1,000,000
Cobb Street	15,450	Old Walpole Road	92,416		
Concord Road	258,530	Darling Road	151,128		
Hooper Street	26,533	Dickinson Road	124,137		
Lamson Street	26,790	Meetinghouse Road	91,473		
Martin Street	33,086	Timberlane Drive	130,865		
Park Avenue	389,340	To be determined	350,000		
Salisbury Road	54,739				
School Street (West to Emerald)	46,350				
Speaker Street	20,600				
St. James Street	46,350				
Subtotal	\$ 943,518	Subtotal	\$ 1,037,481	Subtotal	\$ 1,000,000
10% Contingency	\$ 94,352	10% Contingency	\$ 103,748	10% Contingency	\$ 100,000
Construction Total	\$ 1,037,870	Construction Total	\$ 1,141,229	Construction Total	\$ 1,100,000
Design, Construction, S&OH	\$ 10,379	Design, Construction, S&OH	\$ 11,412	Design, Construction, S&OH	\$ 11,000
2014 Total Overlay Cost	\$ 1,048,248	2014 Total Overlay Cost	\$ 1,152,641	2014 Total Overlay Cost	\$ 1,111,000
Inflation adjustment (7 years x 3% x project total)	\$ 240,965	Inflation adjustment (8 years x 3% x project total)	\$ 307,490	Inflation adjustment (9 years x 3% x project total)	\$ 338,603
Total Overlay Cost	\$ 1,289,213	Total Overlay Cost	\$ 1,460,132	Total Overlay Cost	\$ 1,449,603

<u>2021</u>		<u>2022</u>		<u>2023</u>	
RECONSTRUCT	EST. COST	RECONSTRUCT	EST. COST	RECONSTRUCT	EST. COST
Subtotal	\$0	Subtotal	\$0	Subtotal	\$0
10% Contingency	\$0	10% Contingency	\$0	10% Contingency	\$0
Construction Total	\$0	Construction Total	\$0	Construction Total	\$0
Design, Construction, S&OH	\$0	Design, Construction, S&OH	\$0	Design, Construction, S&OH	\$0
2014 Total Overlay Cost	\$0	2014 Total Overlay Cost	\$0	2014 Total Overlay Cost	\$0
Inflation adjustment (7 years x 3% x project total)	\$ -	Inflation adjustment (8 years x 3% x project total)	\$ -	Inflation adjustment (9 years x 3% x project total)	\$ -
Total Reconstruction Cost	\$0	Total Reconstruction Cost	\$0	Total Reconstruction Cost	\$0



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Roadway Rehabilitation / Reconstruction**
 Department: **Public Works - General Fund**
 Physical Location: **City Roadways**
 Federal Mandate: **NO**
 State Regulation or Law: **NO**
 Master Plan (CMP) Focus Area: **Quality Built Environment**
 CMP Vision/Strategy: **Maintaining a Safe Community**
 Council Initiative: **Policy**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Yes**



PROJECT DESCRIPTION/JUSTIFICATION

The City maintains 127 miles of roads, of which 125 miles are paved. These roads are in various states of repair. Based on an assessment of roadway conditions and traffic volumes the roadways were ranked on conditions from good to poor. Roadway conditions include cracks, potholes, delamination of pavement, and roughness. Roadways scheduled for improvements are selected based upon roadway condition. Other scheduled infrastructure improvements such as drainage, water, and sewer, and general location are coordinated to take advantage of Contractor mobilization costs. Once again the proposed road program for FY18-23 CIP cycle focuses on roadway rehabilitation. This includes traditional rehabilitation methods (e.g., mill/shim/overlay) as well as some lower-cost innovative approaches (e.g., in-place recycling, ultra-thin wearing surfaces, etc.). No complete reconstruction projects are proposed during the FY18-23 CIP. The average costs for roadway rehabilitation and reconstruction options (per mile, in 2014 dollars) are as follows:

- Shim and stone chip seal: \$188,000
- Shim and 1" pavement overlay with adjustment of structures \$265,000
- Reclamation and 4" pavement with adjustment of structures \$615,000
- Road reconstruction, gravel and 5" pavement, not including utilities, curbing, or concrete sidewalk: \$2,150,000
- Road reconstruction with granite curb and sidewalks on both sides of a road: \$3,200,000

In 2016 the City performed a comprehensive roadway condition survey. This survey includes details regarding the type and severity of defects on each road segment. The Public Works Department expects to reevaluate the Rehabilitation program in light of the new data.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design				40,000			40,000	80,000
Construction/Implementation		1,231,496	1,262,876	1,369,105	1,289,213	1,460,132	1,409,603	8,022,425
Property/Equip. Acquisition								0
TOTAL	\$0	\$1,231,496	\$1,262,876	\$1,409,105	\$1,289,213	\$1,460,132	\$1,449,603	\$8,102,425
FUNDING								
Current Revenue								0
Capital Reserve								0
Debt Funded		1,231,496	1,262,876	1,409,105	1,289,213	1,460,132	1,449,603	8,102,425
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$1,231,496	\$1,262,876	\$1,409,105	\$1,289,213	\$1,460,132	\$1,449,603	\$8,102,425

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001
Ongoing

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Guardrail Replacement**
 Department: **Public Works - General Fund**
 Physical Location: **City Roadways**
 Federal Mandate: **NO**
 State Regulation or Law: **NO**
 Master Plan (CMP) Focus Area: **Quality Built Environment**
 CMP Vision/Strategy: **Maintaining a Safe Community**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Yes**



PROJECT DESCRIPTION/JUSTIFICATION

The City owns and maintains approximately 14,900 linear feet of guardrail along its roadways. Guardrail is used to protect traveling vehicles from obstacles such as utility poles, streams, drainage structures, and steep slopes. Over time wet weather, erosion, and vehicular impacts compromise the ability of the guardrail to function and protect as intended. In 2016 the Highway Division conducted a survey of the guardrails throughout the City to determine their condition. Approximately 33% of the guardrail is in poor condition, 38% in fair condition, and 29% in good condition.

This project provides funding for the Highway Division to replace all guardrail in poor condition in FY18 and FY19. In FY20 the Division will begin to replace guardrail in fair condition. The 2016 estimated cost of replacement is approximately \$18.50 per linear foot. A crash attenuator is required on the ends of most guardrails to further protect vehicles. These cost approximately \$1,850 per unit. Costs are inflated 3% per year to the date of construction.

Once all City guardrails are rated in good condition, maintenance will shift to the operating budget.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation		77,506	77,506	44,024				199,036
Property/Equip. Acquisition								0
TOTAL	\$0	\$77,506	\$77,506	\$44,024	\$0	\$0	\$0	\$199,036
FUNDING								
Current Revenue		77,506	77,506	44,024				199,036
Capital Reserve								0
Debt Funded							0	0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$77,506	\$77,506	\$44,024	\$0	\$0	\$0	\$199,036

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001
Ongoing

PROJECT STATUS: New Project



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **LED Streetlights**
 Department: **PUBLIC WORKS**
 Physical Location: **Various**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Quality Built Environment**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Maintain transportation network, improve transportation safety, reduce costs.**



PROJECT DESCRIPTION/JUSTIFICATION

The City of Keene has approximately 1,155 High Pressure Sodium (HPS) streetlights (excluding the downtown area). The streetlights are not metered, but are billed based on the wattage of the fixture by the City's utility service, Eversource. Eversource has developed a rate for light emitting diodes (LED) which would dramatically lower the per fixture cost for streetlights that are converted from HPS to LED. Currently, Eversource has a grant program that provides up to fifty thousand dollars (\$50,000) to communities to upgrade existing HPS streetlights to LED. The City will apply for Eversource grant funding for 2017. This project proposes a retrofit of all streetlights in the City of Keene as well as some HPS lights on access roads, parking facilities and recreation facilities. Seventy two percent (72%) of the existing fixtures in the City are 65 watt HPS lamps which can be converted to 25 watt LED lamps. Currently the City of Keene budgets \$165,000 for the electrical cost of streetlights (all streetlights except those in the downtown area which are billed to a separate cost center), per year. The City of Keene would apply for the \$50,000 LED streetlight conversion grant from Eversource to help with the estimated \$346,500 (vendor estimate), cost of converting the existing 1,155 streetlights which including installation will have a payback in the 3.7 year range.

Eversource grants are in the form of rebates, after completion of the project. Debt issued to fund this project will have a five year payback schedule. The Public Works operating budget line item for electricity will be reduced to cover the debt service, making the project revenue neutral, with cost savings in electricity and maintenance beyond the payback period.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation		346,500						346,500
Property/Equip. Acquisition								0
TOTAL	\$0	\$346,500	\$0	\$0	\$0	\$0	\$0	\$346,500
FUNDING								
Current Revenue								0
Capital Reserve								0
Debt Funded		346,500						346,500
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$346,500	\$0	\$0	\$0	\$0	\$0	\$346,500

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Reduce - will reduce operating costs Ongoing **PROJECT STATUS:** New Project

Criteria Used to Determine Priority of New Sidewalks

With the challenges of limited resources for new sidewalk construction the Department looked at a way to incorporate ideas of walkability, community generators and attractors to assist in prioritization. The following are the community criteria that were identified:

Schools Walking Zones **½ mile**
 (Includes public / private elementary, secondary, and post-secondary)

Major Community Generator/Attractor Zone **½ mile**
 (Includes Daycares / Cultural / Parks / Human Service / Municipal)

Commercial Clusters **½ mile**
 (Includes Downtown / Key Rd / West St / CVS Plaza / etc.)

Concentrated Housing Developments **½ mile**
 (Includes Bennett Block / CitySide Housing / Harmony Lane / etc.)

Concentric circles were then plotted on a map of the City. The more the circles intersected, the higher probability of/or potential of pedestrian traffic. An investment in sidewalks in these areas would provide a higher impact. This information would impact the Pedestrian Traffic rating, the more concentric circles the higher the rating.

A matrix was developed with a number of criteria. These criteria were also weighted with higher emphasis on pedestrian traffic and safety. The matrix criteria are as follows.

Factor	Rating		Weight
Pedestrian Factor	1	Low	.30
	3	Medium	
	5	High	
Vehicle Traffic	1	Low/Local	.25
	3	Med/Collector	
	5	High/Arterial	
Existing Sidewalk	1	Yes	.15
	3	Partial	
	5	No	
Increase Safety	1	Low	.30
	3	Med	
	5	High	

New Sidewalk Project List

LOCATION	PED TRAFFIC		VEHICLE TRAFFIC		EXISTING WALK ON STREET		INCREASE SAFETY		TOTAL	LENGTH	FISCAL YEAR	TOTAL COST
WEST SURRY RD - ROUTE 12A	1	0	5	1.3	5	0.8	5	2	3.8	2,708		\$449,068
BRADFORD RD	1	0	3	0.8	5	0.8	5	2	3.3	3,400		\$563,822
NORTH LINCOLN ST - Beaver St to George St	1	0	3	0.8	5	0.8	5	2	3.3	2,100		\$348,243
PAKO AVE	3	1	3	0.8	5	0.8	3	1	3.3	3,520		\$583,722
PAKO AVE	3	1	3	0.8	5	0.8	3	1	3.3	2,370		\$393,017
ROXBURY ST - Reservoir St to Water St	3	1	3	0.8	5	0.8	3	1	3.3	900		\$149,247
BLOSSOM ST - Robbins Rd to West St	3	1	3	0.8	3	0.5	3	1	3.0	1900		\$315,077
AMERICAN AVE - Kennedy Drive to Old Walpole Rd	3	1	1	0.3	5	0.8	3	1	2.8	1,400		\$232,162
PERHAM ST	3	1	1	0.3	5	0.8	3	1	2.8	300		\$49,749
RIVER ST - North of Mayflower	4	1	1	0.3	3	0.5	3	1	2.8	500		\$82,915
ROYAL AVE	3	1	1	0.3	5	0.8	3	1	2.8	1,400		\$232,162
WAKEFIELD ST	3	1	1	0.3	5	0.8	3	1	2.8	750		\$124,373
WOODBURN ST - Portland to Linden St.	3	1	1	0.3	5	0.8	3	1	2.8	450		\$74,624
PORTLAND ST	3	1	1	0.3	3	0.5	3	1	2.5	600		\$99,498
ROBBINS RD	3	1	1	0.3	3	0.5	3	1	2.5	730		\$121,056
KENDALL RD	1	0	1	0.3	5	0.8	3	1	2.2	1,700		\$281,911
HARRISON ST	5	2	1	0.3	1	0.2	1	0	2.2	700		\$116,081
WOODBURY ST	3	1	1	0.3	3	0.5	1	0	1.9	1,600		\$265,328
Note: The sidewalk listed below was requested via the Citizen Request Form on the City Website. It has not yet been evaluated by Council for official consideration.												
STONEHOUSE LANE	3	1	1	0.3	5	0.8	3	1	2.8	1,210		\$200,654
TOTAL												\$4,482,053

Factor	Weight
Pedestrian Traffic	30%
Vehicle Traffic	25%
Existing Sidewalk	15%
Increase Safety	30%

Notes:

Sidewalks listed for construction beyond FY 15 are projected using FY15 dollars plus 3% per year

2014 installed unit costs

concrete sidewalk \$161 per linear foot

includes granite curbing, 10% contingencies, 10% engineering design, 10% construction administration, 1% overhead costs, and 3% inflation per year

NEW SIDEWALK LIST

2018

LOCATION	LENGTH	TYPE WORK	EST. COST
Subtotal			\$0
Construction Contingency: 10%			\$0
Construction Totals			\$0
Design: 10%			\$0
Construction Administration: 10%			\$0
SUPV. & Overhead: 1%			\$0
Project Total			\$0
Inflation Factor: 3% / yr. x 3 yrs.			\$0
Total Sidewalks			\$0

2019

LOCATION	LENGTH	TYPE WORK	EST. COST
Subtotal			\$0
Construction Contingency: 10%			\$0
Construction Totals			\$0
Design: 10%			\$0
Construction Administration: 10%			\$0
SUPV. & Overhead: 1%			\$0
Project Total			\$0
Inflation Factor: 3% / yr. x 3 yrs.			\$0
Total Sidewalks			\$0

2020

LOCATION	LENGTH	TYPE WORK	EST. COST
Subtotal			\$0
Construction Contingency: 10%			\$0
Construction Totals			\$0
Design: 10%			\$0
Construction Administration: 10%			\$0
SUPV. & Overhead: 1%			\$0
Project Total			\$0
Inflation Factor: 3% / yr. x 4 yrs.			\$0
Total Sidewalks			\$0

2021

LOCATION	LENGTH	TYPE WORK	EST. COST
Subtotal			\$0
Construction Contingency: 10%			\$0
Construction Totals			\$0
Design: 10%			\$0
Construction Administration: 10%			\$0
SUPV. & Overhead: 1%			\$0
Project Total			\$0
Inflation Factor: 3% / yr. x 5 yrs.			\$0
Total Sidewalks			\$0

2022

LOCATION	LENGTH	TYPE WORK	EST. COST
Subtotal			\$0
Construction Contingency: 10%			\$0
Construction Totals			\$0
Design: 10%			\$0
Construction Administration: 10%			\$0
SUPV. & Overhead: 1%			\$0
Project Total			\$0
Inflation Factor: 3% / yr. x 6 yrs.			\$0
Total Sidewalks			\$0

2023

LOCATION	LENGTH	TYPE WORK	EST. COST
Subtotal			\$0
Construction Contingency: 10%			\$0
Construction Totals			\$0
Design: 10%			\$0
Construction Administration: 10%			\$0
SUPV. & Overhead: 1%			\$0
Project Total			\$0
Inflation Factor: 3% / yr. x 7 yrs.			\$0
Total Sidewalks			\$0



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Sidewalks New**
 Department: **Public Works - General Fund**
 Physical Location: **Various**
 Federal Mandate: **NO**
 State Regulation or Law: **NO**
 Master Plan (CMP) Focus Area: **Quality Built Environment**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **Policy**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **YES**



PROJECT DESCRIPTION/JUSTIFICATION

This project provides funds for design and construction of new sidewalks throughout the City. The need for new sidewalks exceeds the available resources. The majority of the proposed new sidewalk locations are the result of requests from individuals and neighborhoods. These requests are evaluated by a variety of criteria to develop new sidewalk priorities. The criteria includes pedestrian traffic, vehicular traffic, current sidewalk on one side, and the anticipated safety benefit from sidewalk construction.

In 2017 the City plans to develop a new sidewalk evaluation program. It is anticipated that all streets will be evaluated based on the criteria outlined above. This will allow the City to make better decisions about priorities and options for new sidewalks. Implementation is scheduled for the FY19-24 CIP.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation								0
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
FUNDING								
Current Revenue								0
Capital Reserve								0
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001
Multi-year

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Sidewalk Repair / Replacement**
 Department: **Public Works - General Fund**
 Physical Location: **Various**
 Federal Mandate: **NO**
 State Regulation or Law: **NO**
 Master Plan (CMP) Focus Area: **Quality Built Environment**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **Policy**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **YES**



PROJECT DESCRIPTION/JUSTIFICATION

This project provides funds for repair or replacement of sidewalks throughout the City. The City generally coordinates this work with roadway rehabilitation projects. Projects are designed by in-house staff when appropriate. The need for maintaining and replacing existing sidewalks exceeds available resources.

For repair projects, concrete sidewalks will be installed where there are existing concrete sidewalks. Asphalt sidewalks will be installed where there are existing asphalt sidewalks. Work includes complete replacement of the concrete sidewalk, or milling the existing asphalt and providing an asphalt overlay. The 2014 cost to install approximately 1,000 linear feet of concrete sidewalk or approximately 3,200 linear feet of asphalt sidewalk with a 10% contingency is \$45,320. To determine actual expected costs, the estimate adds 10% for engineering design, 10% for construction engineering, and 1% for overhead. Costs are then adjusted 3% per year for inflation to the date of construction.

FY 18 provides for sidewalk rehabilitation or replacement on roadway rehabilitation projects that involve sidewalk.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation		61,720	63,571	65,478	68,752	70,815	72,939	403,275
Property/Equip. Acquisition								0
TOTAL	\$0	\$61,720	\$63,571	\$65,478	\$68,752	\$70,815	\$72,939	\$403,275
FUNDING								
Current Revenue		61,720	63,571	65,478	68,752	70,815	72,939	403,275
Capital Reserve								0
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$61,720	\$63,571	\$65,478	\$68,752	\$70,815	\$72,939	\$403,275

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: No impact
Ongoing

PROJECT STATUS: Ongoing CIP

KEENE/SWANZEY BY-PASS IMPROVEMENT PROGRAM SCHEDULE

This project includes the reconstruction of Winchester Street from the NH route 101 roundabout to the bridge over the Ashuelot River. It includes reconstruction of the Winchester Street intersections with Key Road, Pearl Street, Island Street, and replacement of the red-listed Island Street Bridge. The City entered into an Local Public Agency project agreement with NHDOT in 2014 to begin the design process for this complicated project. This project is in the NHDOT June 2016 proposed 2017-2026 Ten Year Plan. Preliminary Engineering is underway, with construction scheduled for FY19 and FY20. A new City project, reconstruction of Lower Winchester Street from the NH route 101 Roundabout to the Swanzey Town line is also in the NHDOT Ten Year Plan. Preliminary Engineering is scheduled for FY22, Right-of-Way acquisition for FY24, and Construction for FY25. Both projects require a 20% cost match from the City.

Description	Phase	Amount	Program Year (FY)
Reconstruction of Winchester Street from NH route 101 to the bridge over the Ashuelot River. Includes reconstruction of the Winchester Street intersections with Key Road, Pearl Street, Island Street, and replacement of the Island Street Bridge.	R	\$368,500	2014
	P	\$261,800	2017
	C	\$5,645,080	2019-2020
Reconstruction of Winchester Street from NH route 101 to the Swanzey Town Line	P	\$363,884	2022
	R	\$193,773	2024
	C	\$3,399,549	2025

Phase: C = Construction P = Preliminary Engineering R = Right-of-Way Acquisition



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **State Bypass Improvement Program**
 Department: **Public Works - General Fund**
 Physical Location: **Various**
 Federal Mandate: **NO**
 State Regulation or Law: **NO**
 Master Plan (CMP) Focus Area: **Quality Built Environment**
 CMP Vision/Strategy: **Transportation**
 Council Initiative: **Resolution**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Yes**



PROJECT DESCRIPTION/JUSTIFICATION

A traffic analysis performed by the State identified the need to alleviate increased traffic congestion at key intersections along the Keene-Swanzey bypass. These projects will allow traffic to flow smoothly into and out of the City, minimizing the impacts of through traffic on the local street network. There were a number of projects identified to improve capacity and efficiency along the State bypass network (NH 9/10/12/101). The State has completed a number of interim improvements including the widening of NH Route 9 from the T-intersection to Base Hill Road, widening of NH Route 9/10/12 at the T-intersection, and the construction of a multi-lane roundabout at Winchester Street and NH Route 101.

In the State's proposed 2017-2026 TIP, the Winchester Street Reconstruction Project is being pushed to FY19 and FY 20 for construction from FY17 and FY18. The project begins at the State NH Route 101 roundabout and extends up Winchester Street to the Winchester Street Bridge over the Ashuelot River. This project will involve the reconstruction of Winchester Street and two critical intersections; Key Road and Island St/Pearl Street. It will also replace the red-listed Island Street Bridge. This is a locally-managed project through the Local Public Agency Program which has a 20% local match. Funding for design of this project was approved and appropriated in FY14 with funding for construction in FY19 and FY20. The second component of the Keene-Swanzey bypass project is the reconstruction of Lower Winchester Street from NH Route 101 Roundabout to the Swanzey Town Line. This project appears in FY22 for Engineering, FY24 for Right-of-Way, and Construction in FY25.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation			3,016,680	2,628,399		363,884		6,008,963
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$3,016,680	\$2,628,399	\$0	\$363,884	\$0	\$6,008,963
FUNDING								
Current Revenue								0
Capital Reserve						72,777		72,777
Debt Funded			621,336	525,680				1,147,016
Federal or State Grants			2,395,344	2,102,719		291,107		4,789,170
Other Sources								0
TOTAL	\$0	\$0	\$3,016,680	\$2,628,399	\$0	\$363,884	\$0	\$6,008,963

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Minimal \$5,001 to \$50,000 Ongoing
PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Marlboro Street Corridor Improvements**
 Department: **Planning**
 Physical Location: **Marlboro Street**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Quality Built Environment**
 CMP Vision/Strategy: **Maintaining Neighborhoods**
 Council Initiative: **Policy**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective:



Aerial
Study Area

PROJECT DESCRIPTION/JUSTIFICATION

In 2015 the City completed the Marlboro Street Zoning and Land Use Study. This study explored innovative approaches to encourage redevelopment along Marlboro Street and Southeast Keene. The study recommended changes to zoning and other regulations that will promote redevelopment of underutilized properties, improve stormwater management practices, preserve residential neighborhoods, and strengthen the area as a vibrant, walkable, mixed-use district. It identified improvements to Marlboro Street and adjacent neighborhoods to improve connectivity, walkability, pedestrian use, traffic flow, and enhance the appearance of the street.

This project provides funds to construct the interim Complete Streets concepts outlined in the 2015 Study. These concepts are tailored to three distinct segments of Marlboro Street based on street width and adjacent uses. The interim design calls for painted lane markings, crosswalks, and landscaping. FY17 provided funds to develop construction documents for the interim improvements, including several public meetings. FY 19 provides funds for the construction of the proposed interim work. Once this work is completed the operating budget will be adjusted to maintain the pavement markings and other improvements.

It should be noted that the City applied for a NHDOT Transportation Alternatives Program (TAP) grant in the summer of 2016. The grant application proposes leveraging the funds requested under this CIP initiative as a 20% local match for a project with an expanded scope. If the City's application is accepted, the requested funds will be combined with the grant funds for a total project budget of approximately \$980,000. The grant application included conceptual plans for streetscape improvements at selected nodes along Marlboro Street, as well as consistent complete street treatments between the nodes.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design			171,017					171,017
Construction/Implementation								0
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$171,017	\$0	\$0	\$0	\$0	\$171,017
FUNDING								
Current Revenue								0
Capital Reserve			171,017					171,017
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$171,017	\$0	\$0	\$0	\$0	\$171,017

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Minimal \$5,001 to \$50,000 Ongoing

PROJECT STATUS: Ongoing CIP

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Economic Development and Vitality – programs, activities, and projects which are intended to promote the retention and expansion of existing businesses and to encourage and attract new business development in the City of Keene. The primary goal of these activities is enhance overall quality of life and sustainability of the community.

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CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Downtown Revitalization**
 Department: **Public Works - General Fund**
 Physical Location: **560 Main Street**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Quality Built Environment**
 CMP Vision/Strategy: **Economic Development**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective:



PROJECT DESCRIPTION/JUSTIFICATION

The downtown area is an economic engine for the community and represents the spirit and place of Keene. To keep the downtown relevant and vibrant, it is important to continue investment. The last major downtown revitalization occurred in 1988. Downtown has expanded into the Railroad Square area and is projected to expand into Roxbury Street and Gilbo Avenue as well. The features that give the downtown its unique spirit need to be considered in the expanding downtown areas. This project provides funding to hire a consultant to assess function, aesthetics, and infrastructure needs for the downtown area. This will provide community decision makers with options and alternatives to meet the needs of the citizens and visitors to Keene. The consultant will meet with City staff to review these options. They will also hold several public forums to obtain input on the issues that will need to be considered prior to performing detailed design.

Funding is included to implement improvements recommended by the study in FY 22. This will allow the implementation to be completed concurrently with the proposed flood management project in Central Square. The estimated cost for improvements will be adjusted based on the outcome of the planning study.

Funding in FY 23 is planned to begin implementing the improvements beyond Central Square. This may include improvements to existing treatments along Main Street or expanding the "Downtown Aesthetic" into new areas, as well as infrastructure replacement and improvements. The specific scope and cost of these improvements will be determined through the Downtown Revitalization

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design		30,000				50,000	50,000	130,000
Construction/Implementation						500,000	500,000	1,000,000
Property/Equip. Acquisition								0
TOTAL	\$0	\$30,000	\$0	\$0	\$0	\$550,000	\$550,000	\$1,130,000
FUNDING								
Current Revenue		30,000						30,000
Capital Reserve						550,000	550,000	1,100,000
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$30,000	\$0	\$0	\$0	\$550,000	\$550,000	\$1,130,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Minimal \$5,001 to \$50,000 Ongoing

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2022 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **560 Main Street Assessment**
 Department: **Public Works - General Fund**
 Physical Location: **560 Main Street**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **N/A**
 CMP Vision/Strategy: **Economic Development**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective:



PROJECT DESCRIPTION/JUSTIFICATION

The 560 Main Street was the site of a number of waste disposal activities for the City until 1976. The presence of polychlorinated biphenyl compounds (PCBs) and chlorinated solvents in the soil at the liquid disposal area defines this area as a hazardous waste site. Work performed in 2012 and 2013 delineated the three dimensional footprint of soil contamination. The prior year project funds provided for the creation of a remedial action plan (RAP). This included a preliminary cost estimate for the remediation of approximately 100,000 tons of material. The final cost of remediation will be determined once the RAP is complete and City Council determines an ultimate goal for the site. Funds previously appropriated evaluated the limits and concentration of the soil contamination. This can be used to reduce the remediation area and its associated cost. The FY19 estimate is based on the treatment and removal of approximately 100,000 tons of soil.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design	65,000							65,000
Construction/Implementation			1,000,000					1,000,000
Property/Equip. Acquisition								0
TOTAL	\$65,000	\$0	\$1,000,000	\$0	\$0	\$0	\$0	\$1,065,000
FUNDING								
Current Revenue	65,000							65,000
Capital Reserve								0
Debt Funded								0
Federal or State Grants								0
Other Sources			1,000,000					1,000,000
TOTAL	\$65,000	\$0	\$1,000,000	\$0	\$0	\$0	\$0	\$1,065,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: No impact
One time

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Victoria Street Extension**
 Department: **PUBLIC WORKS**
 Physical Location: **Marlboro St/Victoria St**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Vibrant Economy**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **Policy**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective:



PROJECT DESCRIPTION/JUSTIFICATION

This project proposes to extend Victoria Street south from Water Street to connect to Marlboro Street. Work will include property acquisition, engineering design, and construction of approximately 1,200 linear feet of roadway. The 2004 Traffic Committee reviewed various traffic improvements throughout the City. The committee identified extension of Victoria Street as a critical piece of the Marlboro Street Zoning/Redevelopment evaluation that was completed in 2014. This extension will open up a large parcel for redevelopment. It will also improve access for truck traffic to the businesses located on Victoria Street. This will reduce the amount of truck traffic in residential neighborhoods.

In 2008 a total of \$163,000 was allocated for preliminary design. The project was suspended after spending limited funds for topographic survey. In 2016, Council voted to reallocate \$155,755 of bond funds previously issued for this project. This project seeks to re-establish design funds in FY22.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design						222,000		222,000
Construction/Implementation						1,481,000		1,481,000
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$0	\$0	\$0	\$1,703,000	\$0	\$1,703,000
FUNDING								
Current Revenue								0
Capital Reserve						222,000		222,000
Debt Funded						1,481,000		1,481,000
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$0	\$0	\$0	\$1,703,000	\$0	\$1,703,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Minimal \$5,001 to \$50,000 Ongoing

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Surface Parking Lot Maintenance**
 Department: **Public Works - Parking Fund**
 Physical Location: **Various**
 Federal Mandate: **No**
 State Regulation or Law: **No**
 Master Plan (CMP) Focus Area: **Vibrant Economy**
 CMP Vision/Strategy: **Vibrant Downtown**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Investing maintenance funds and providing adequate maintenance on City parking facilities.**



PROJECT DESCRIPTION/JUSTIFICATION

The City of Keene owns five surface parking lots. These are located at Gilbo Avenue (East and West), Wells Street, Commercial Street, and the Library Annex. These lots are continually assessed for their condition. This project provides rehabilitation of these lots to maintain their function. The Gilbo East lot is scheduled for FY19. Work for the lot will include the following:

- Mill, shim, and overlay pavement to restore the surface
- Adjust drainage and utility structures to the proper elevation
- Re-establish pavement markings and striping
- Replace existing sidewalk with concrete sidewalk
- Replace existing curb with granite curb
- Construct concrete islands to separate parking lanes trees with grates will be incorporated into the island.
- Add four new parking spaces along the street

No specific project is identified for FY22, but it is anticipated that ongoing maintenance efforts are needed.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation			118,708			50,000		168,708
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$118,708	\$0	\$0	\$50,000	\$0	\$168,708
FUNDING								
Current Revenue			118,708			50,000		168,708
Capital Reserve								0
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$118,708	\$0	\$0	\$50,000	\$0	\$168,708

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001
Multi-year

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Parking Structure Maintenance**
 Department: **Public Works - Parking Fund**
 Physical Location: **Various**
 Federal Mandate: **No**
 State Regulation or Law: **No**
 Master Plan (CMP) Focus Area: **Vibrant Economy**
 CMP Vision/Strategy: **Vibrant Downtown**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Investing maintenance funds and providing adequate maintenance on City parking facilities**



PROJECT DESCRIPTION/JUSTIFICATION

The City of Keene owns two parking structures, the Wells Street structure and the City Hall structure. Experience over time has shown that capital improvements beyond normal maintenance are required approximately every four years in order to maintain the structures in good condition. This project provides periodic maintenance to extend the life of the parking structures. The City will hire a structural engineer every two years starting in FY18 to assess and evaluate both structures. The engineer will make recommendations for capital repair work, if needed. FY18 will include any work to be performed for the City Hall structure. The anticipated repairs may include protective re-surfacing and crack and joint repair. The City anticipates a similar scope of work in FY20 for the Wells Street structure. No specific project is identified for FY22, but it is anticipated that ongoing maintenance efforts are needed.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation		25,000		50,000		50,000		125,000
Property/Equip. Acquisition								0
TOTAL	\$0	\$25,000	\$0	\$50,000	\$0	\$50,000	\$0	\$125,000
FUNDING								
Current Revenue								0
Capital Reserve		25,000		50,000		50,000		125,000
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$25,000	\$0	\$50,000	\$0	\$50,000	\$0	\$125,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001
Multi-year

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018- 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Smart Meters**
 Department: **Public Works - Parking Fund**
 Physical Location: **Various**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Quality Built Environment**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **N/A**
 Departmental Objective: **Investing maintenance funds in City parking facilities**



PROJECT DESCRIPTION/JUSTIFICATION

Technology combined with convenience and efficiency is rapidly changing the way municipalities conduct business. In FY19 the replacement of coin only parking with smart parking meters will allow the public to use either credit cards or coin to pay for parking. Advanced technology through wireless communication will report each meter activity to a central back office terminal providing the City with financial information by meter as well as sending alerts for meter malfunctions minimizing meter repair down time and lost revenue. The projected cost of replacing the estimated 470 coin fed meters with smart meters is between \$225,000 and \$250,000 with increase in credit card use to be over 50%. The next parking meter rate increase is will be forwarded to City Council for consideration in FY19. Taking into consideration this project with the next rate increase the city will be able to anticipate the costs and plan accordingly to avoid revenue shortfalls.

At the present time, City staff is investigating various technologies to determine what type of smart meter will fit the needs of the City. Once staff has completed their research, the results will be brought forward to the City Council for consideration.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								
Construction/Implementation								
Property/Equip. Acquisition			250,000					250,000
TOTAL	\$0	\$0	\$250,000	\$0	\$0	\$0	\$0	\$250,000
FUNDING								
Current Revenue			250,000					250,000
Capital Reserve								
Debt Funded								
Federal or State Grants								
Other Sources								
TOTAL	\$0	\$0	\$250,000	\$0	\$0	\$0	\$0	\$250,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: No impact
N/A

PROJECT STATUS: New Project

Airport

The Dillant-Hopkins Airport was dedicated on October 31, 1943 and had its first jet land in 1948. In 1963, instrument landing systems were installed as well as other airplane guidance systems and today, the airport is home to 80 aircraft and more than 28,000 aircraft operations annually; from small aircraft to corporate and charter jets. Keene airport has the third longest runway in the state (Pease International and Manchester-Boston Regional are first and second in runway length, respectively) and through landing fees, services, land leases and airplane hangar rentals raises approximately \$500,000 in revenue for the City. The airport is required by federal regulation to be open at all times, day or night. Keene is one of two airports defined by the government as a National airport in the future airport system that provides the highest level of air access for aviation users. The airport is a key transportation facility for the City of Keene and the region.

Marketing and developing the airport has been a part of the City of Keene Comprehensive Master Plan for more than a decade. As a result of new management and new broad public and political support, there is significant potential at the airport to improve the tax base for the Town of Swanzey as well as provide revenue for the City of Keene from land leases, utilities and perhaps other services. Under development is a \$10 million/multi-year plan to develop the 30 acres of airport property for both airside and landside development, including a new Tax Increment Finance District (TIF) and a regional transportation center. If all of the projects come to fruition over the coming years, it will represent a total increase of \$272,600 in property taxes and \$300,000 in revenue to the City of Keene. This development effort will be dovetailed with a new marketing plan to advance the attributes of the airport to a variety of companies and institutions.

In 2015, the NH Department of Transportation estimated that between the direct and indirect airport-related activities, the Keene airport creates total of 132 jobs that reach \$7.3 million in regional payroll. This employment base is made up of City employees, restaurant workers, airplane mechanics, private corporate pilots and aviation support staff and others. We have 80 planes based in Keene and virtually all owners reside or work in this area, making the greater Keene area a fundamentally attractive place to work and live because of the airport. Many plane owners here are self-employed and employ hundreds of local citizens. Some companies choose to come to Keene because of the airport for either corporate or personal reasons.

The airport is a resource just waiting to be developed. Evidence of this can be easily seen. Within just the first 8 months of new management: airport private jet and charter flight activity has increased 15% over last year, Monadnock Aviation has increased staff and a restaurant has opened all of which has increased airport visitors from around 100 per week to more than 1,000. It is not unusual to have 30 planes fly in to eat at the airport restaurant as it is one of only three general aviation airports in the state to have a full service restaurant. Thomas Transportation plans of using the terminal building much more often for their travel customers, adding even more visitors to the airport.

All this increased activity at the airport has prompted new capital plans to renovate the 50-year old bathrooms, to make the building ADA compliant and to undertake airport improvements that will improve the competitive profile of the airport to meet expectations of the paying and visiting public.



CITY OF KEENE, NEW HAMPSHIRE 2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Fuel Farm Replacement**
 Department: **Airport**
 Physical Location: **Keene Dillant-Hopkins Airport**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Vibrant Economy**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **To maintain compliance with underground fuel storage tank regulations and to provide services required by the flying public.**



Jet-A System



100 Low Lead System

PROJECT DESCRIPTION/JUSTIFICATION

The current aviation fuel facility consists of two 10,000 gallon underground storage tanks with associated pipes, pumps, and dispensers. One tank is for Jet-A aviation fuel and the other for 100 Low Lead aviation fuel. The City acquired the fuel farm from the Town of Swanzey in 1999 when it took ownership from a former tenant. Since that time the City has improved the system to be in compliance with all Federal and State regulations. The tanks were installed in 1988. They are double-walled and have an interstitial leak monitoring and corrosion protection system. There is no history of these tanks leaking. It is appropriate to plan for replacement to avoid any environmental liability.

Stringent underground storage tank regulations result in increased costs. Due to these costs, it is more prudent to replace the entire system because a retrofit will be more expensive. The project includes the installation of two new 10,000 gallon tanks and related pumping and dispensing equipment. The new system will be above-ground. This will provide better maintenance access and reduce the potential for large-scale contamination. Subject to the City adequately addressing other safety-related projects at the airport, there may be an opportunity to secure Federal Aviation Administration (FAA) and New Hampshire Department Of Transportation (NHDOT) grants for a large portion of this project. Staff will continue to develop this opportunity.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design				40,000				40,000
Construction/Implementation				500,000				500,000
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$0	\$540,000	\$0	\$0	\$0	\$540,000
FUNDING								
Current Revenue				27,000				27,000
Capital Reserve								0
Debt Funded								0
Federal or State Grants				513,000				513,000
Other Sources								0
TOTAL	\$0	\$0	\$0	\$540,000	\$0	\$0	\$0	\$540,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible < \$5,001
One time

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Obstruction Removal**
 Department: **Airport**
 Physical Location: **Dillant-Hopkins Airport**
 Federal Mandate: **Title 49, US Code, Subtitle VII**
 State Regulation or Law: **Title XXXI, RSA Chapter 424:2**
 Master Plan (CMP) Focus Area: **Vibrant Economy**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **To remove hazards affecting the approach to Runway 20 and improve airport safety.**

Runway 20 Approach Obstructions



PROJECT DESCRIPTION/JUSTIFICATION

As sponsor of the Dillant-Hopkins Airport, the City is obligated to operate the facility in compliance with all applicable safety regulations. This includes maintaining aerial approaches that are clear of obstructions that constitute hazards to air navigation. For the past 5-7 years, we have been working toward removing the obstructions to the approach to Runway 20, both on and off City property. This project provides funds for the engineering, design, administrative services, and removal of the obstructing trees. The clearing effort will be coordinated with the environmental assessment currently underway. For Airport property it is the City's intent to return the area affected as quickly as possible to a forested state with lower-growing trees. A ten-year forest management plan has been developed to prevent future issues and to maintain the Edgewood area as a forested area in accordance with the terms of the deed to the City from the Edgewood Association. Under a separate project, the City will work to acquire the necessary easements from private property owners to allow for the removal of trees on private property. Completion of this project is, to some extent, subject to obtaining the necessary property rights. It is also subject to receipt of grants from the FAA and the NHDOT Bureau of Aeronautics. These are equal to 90% and 5% of its costs, respectively. The final 5% of funding will be the responsibility of the City. Based on the methodology used in the removal process, all project costs may not be eligible under the terms of the grants. Any ineligible expenses will be presented to City Council for its consideration. Prior year funding for the project represents the reappropriation of FY 15 and FY 16 Pavement Maintenance appropriations, which were not used due to the rebuilding of a runway.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design		130,000	50,000					180,000
Construction/Implementation		870,000	450,000					1,320,000
Property/Equip. Acquisition								0
TOTAL	\$0	\$1,000,000	\$500,000	\$0	\$0	\$0	\$0	\$1,500,000
FUNDING								
Current Revenue	71,000		4,000					75,000
Capital Reserve								0
Debt Funded								0
Federal or State Grants		950,000	475,000					1,425,000
Other Sources								0
TOTAL	\$71,000	\$950,000	\$479,000	\$0	\$0	\$0	\$0	\$1,500,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible < \$5,001
One time

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE 2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Pavement Maintenance**
 Department: **Airport**
 Physical Location: **Keene Dillant-Hopkins Airport**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Vibrant Economy**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **To maintain the integrity and safety of the facilities for the good of the airport users.**



PROJECT DESCRIPTION/JUSTIFICATION

Nearly all pavement at the airport was constructed with the assistance of various federal grant programs. These grants historically provided up to 95% of the cost of construction. The City agreed to maintain the pavement to Federal standards for safety as a condition of accepting these grants. Through regular pavement maintenance the City can assure maximum pavement life. Maintenance includes the routine repair of defective, deteriorated, or otherwise failing pavement on aircraft movement areas. Defects include cracks of varying widths. Estimated costs (2016) are provided below. Costs are adjusted 3% per year for inflation.

Small cracks between 1/4" and 3/4" wide can be filled with sealant. Estimated costs are \$0.30 per linear foot (LF).

Cracks larger than 3/4" wide can be filled with backing rod or sealant, or filled with a mixture of emulsified asphalt and aggregate. Estimated costs are \$3 per LF.

For larger cracks or areas of pavement failure, the existing pavement must be saw-cut and removed. The pavement is reconstructed to the full depth along the length of the crack or failure. Estimated costs are \$30 per LF.

This project is eligible for FAA and NH DOT funding pursuant to 49 USC § 47102(3)(H).

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation			52,000	54,000	56,000	58,000	60,000	280,000
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$52,000	\$54,000	\$56,000	\$58,000	\$60,000	\$280,000
FUNDING								
Current Revenue			5,200	5,400	5,600	5,800	6,000	28,000
Capital Reserve								0
Debt Funded								0
Federal or State Grants			46,800	48,600	50,400	52,200	54,000	252,000
Other Sources								0
TOTAL	\$0	\$0	\$52,000	\$54,000	\$56,000	\$58,000	\$60,000	\$280,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible < \$5,001 Ongoing

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Pavement Marking**
 Department: **Airport**
 Physical Location: **Keene Dillant-Hopkins Airport**
 Federal Mandate: **Title 49, US Code, Subtitle VII**
 State Regulation or Law: **FAA AC 150/5340-1J**
 Master Plan (CMP) Focus Area: **Vibrant Economy**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **To maintain the integrity and safety of the facilities for the good of the airport users.**



PROJECT DESCRIPTION/JUSTIFICATION

Airports are used in all weather conditions, at all times of the day, and at all times of the year. Pavement markings communicate important information to a pilot using the airport. Over time these markings become obliterated due to weather fading, failing paint, and rubber debris from landing aircraft tires. Routine repainting of these markings is essential for safety. It is recommended that the Airport perform this maintenance every four years.

This project includes the repainting of airfield paved surfaces. This includes touch down points, runway and taxiway centerlines, aircraft hold position lines, aircraft parking areas, runway threshold bars, and other critical pavement markings. In total there are approximately 75,000 square feet of pavement markings. Estimated costs per square foot (SF) for 2016 are provided below. Costs are adjusted 3% per year for inflation.

- Scrub rubber and debris from existing pavement markings to prepare surface for painting: \$1.60 per SF
- Paint new pavement markings to meet FAA guidelines: \$1.20 per SF
- Total estimated cost = \$2.80 per SF.

This project is eligible for FAA and NH DOT funding pursuant to 49 USC § 47102(3)(H).

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation			114,736	118,178			129,136	362,050
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$114,736	\$118,178	\$0	\$0	\$129,136	\$362,050
FUNDING								
Current Revenue			11,474	11,818			12,914	36,205
Capital Reserve								0
Debt Funded								0
Federal or State Grants			103,262	106,360			116,222	325,845
Other Sources								0
TOTAL	\$0	\$0	\$114,736	\$118,178	\$0	\$0	\$129,136	\$362,050

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001 Ongoing

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Runway 14/32 Reconstruction**
 Department: **Airport**
 Physical Location: **Keene Dillant-Hopkins Airport**
 Federal Mandate: **Title 49, US Code, Subtitle VII**
 State Regulation or Law: **FAA AC 150/5340-1J**
 Master Plan (CMP) Focus Area: **Vibrant Economy**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **To maintain the integrity and safety of the facilities for the good of the airport users.**



Runway 14/32

PROJECT DESCRIPTION/JUSTIFICATION

Portions of Runway 14/32 are over 40 years old. As with any paved surface, materials break down over time and need to be replaced. Due to the project type and location, an environmental assessment may be required prior to the construction. This study determines the various environmental permits which may be required. The current runway is 150 feet wide. The reconstructed runway will most likely be reduced in width, pending the outcome of the Airport Master Plan Update, which will examine the pavement needs relative to current Federal Aviation Administration criteria. Existing runway lights will also be relocated to the new runway edge. Completion of this project is subject to receipt of grants from the Federal Aviation Administration and the New Hampshire Department of Transportation Bureau of Aeronautics. These are equal to 90% and 5%, respectively. The final 5% of funding is the responsibility of the City. Prior Year funding represents the balance of R-2016-03 (February, 2016) appropriating General Fund fund balance to fund project engineering costs.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation		3,785,000						3,785,000
Property/Equip. Acquisition								0
TOTAL	\$0	\$3,785,000	\$0	\$0	\$0	\$0	\$0	\$3,785,000
FUNDING								
Current Revenue (FY 2016)	189,250							189,250
Capital Reserve								0
Debt Funded								0
Federal or State Grants		3,595,750						3,595,750
Other Sources								0
TOTAL	\$189,250	\$3,595,750	\$0	\$0	\$0	\$0	\$0	\$3,785,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001 Ongoing

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Runway 20 PAPI Replacement**
 Department: **Airport**
 Physical Location: **Keene Dillant-Hopkins Airport**
 Federal Mandate: **Title 49, US Code, Subtitle VII**
 State Regulation or Law: **Title XXXI, RSA Chapter 424:2**
 Master Plan (CMP) Focus Area: **Vibrant Economy**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **To provide a precision landing aid to those using the Runway 20 approach, improving airport safety.**

Precision Approach Path Indicator Runway 20 Navigational Aid



PROJECT DESCRIPTION/JUSTIFICATION

This project includes the replacement of the Precision Approach Path Indicator (PAPI) system at the end of Runway 20 (similar to the Runway 2 installation pictured above). This equipment is used by pilots to help them stay on the correct approach angle as they land on Runway 20. The existing system is more than 24 years old and in need of replacement. Completion of this project is subject to receipt of grants from the FAA and the NHDOT Bureau of Aeronautics equal to 90% and 5% respectively. The final 5% of the project will be the responsibility of the City.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design			20,000					20,000
Construction/Implementation								0
Property/Equip. Acquisition			40,000					40,000
TOTAL	\$0	\$0	\$60,000	\$0	\$0	\$0	\$0	\$60,000
FUNDING								
Current Revenue			3,000					3,000
Capital Reserve								0
Debt Funded								0
Federal or State Grants			57,000					57,000
Other Sources								0
TOTAL	\$0	\$0	\$60,000	\$0	\$0	\$0	\$0	\$60,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT:

N/A

PROJECT STATUS:

Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Snow Removal Equipment**
 Department: **Airport**
 Physical Location: **Dillant-Hopkins Airport**
 Federal Mandate: **Title 49, US Code, Subtitle VII**
 State Regulation or Law: **FAA AC-5200-30C**
 Master Plan (CMP) Focus Area: **Vibrant Economy**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **To keep the Airport operational and safe during winter operations.**



← Truck-mounted engine for

← Sweepster broom

← 6-wheeled

PROJECT DESCRIPTION/JUSTIFICATION

The Dillant-Hopkins Airport is part of the National Plan of Integrated Airport Systems. As such, the City of Keene receives Federal and State assistance for use in maintaining the safety, security, and operational readiness of the Airport. This includes the winter maintenance of the runways, taxiways, and aprons. The equipment used at the Airport for snow and ice removal is specialized for large surfaces and operational considerations. This project includes replacement of "AP 4", the Airport's 6-wheeled dump truck. It is 21 years old and overdue for replacement. In 2022 it will be 27 years old. The Airport's 1995 Sweepster broom with attachments is also overdue for replacement.

Completion of this project is subject to receipt of grants from the FAA and the NHDOT Bureau of Aeronautics. These are equal to 90% and 5%, respectively. The final 5% of funding will be the responsibility of the City.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design/Administration								0
Construction/Implementation								0
Property/Equip. Acquisition						555,556		555,556
TOTAL	\$0	\$0	\$0	\$0	\$0	\$555,556	\$0	\$555,556
FUNDING								
Current Revenue						27,778		27,778
Capital Reserve								0
Debt Funded								0
Federal or State Grants						527,778		527,778
Other Sources								0
TOTAL	\$0	\$0	\$0	\$0	\$0	\$555,556	\$0	\$555,556

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT:

N/A

PROJECT STATUS:

New Project



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Taxiway A Reconstruction/Extension**
 Department: **Airport**
 Physical Location: **Keene Dillant-Hopkins Airport**
 Federal Mandate: **Title 49, US Code, Subtitle VII**
 State Regulation or Law: **FAA AC 150/5380-6B**
 Master Plan (CMP) Focus Area: **Vibrant Economy**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **To replace deteriorating pavement, improve airport safety and to comply with FAA runway/taxiway separation requirements.**



PROJECT DESCRIPTION/JUSTIFICATION

This project includes the engineering, design, and construction of a new, longer Taxiway A. It will be approximately 3,500 feet long and 60 feet wide. The extension will add approximately 1,390 feet. Taxiway A serves the airport's primary runway 2/20. The current taxiway was constructed in 1989. The Airport performed routine maintenance and repair over the years, but it has deteriorated and needs to be replaced. The new taxiway can remain in the same location or be moved 110 feet closer to the runway to better align with FAA guidelines. The extension of this taxiway will provide a path to the end of runway 2. It will eliminate the dangerous practice of planes backing up in order to take off. Completion of this project is subject to the receipt of grants from the FAA and the NHDOT. These are equal to 90% and 5%, respectively. The final 5% of funding is the responsibility of the City.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design			300,000					300,000
Construction/Implementation			2,144,444					2,144,444
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$2,444,444	\$0	\$0	\$0	\$0	\$2,444,444
FUNDING								
Current Revenue			122,222					122,222
Capital Reserve								0
Debt Funded								0
Federal or State Grants			2,322,222					2,322,222
Other Sources								0
TOTAL	\$0	\$0	\$2,444,444	\$0	\$0	\$0	\$0	\$2,444,444

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT:

N/A

PROJECT STATUS:

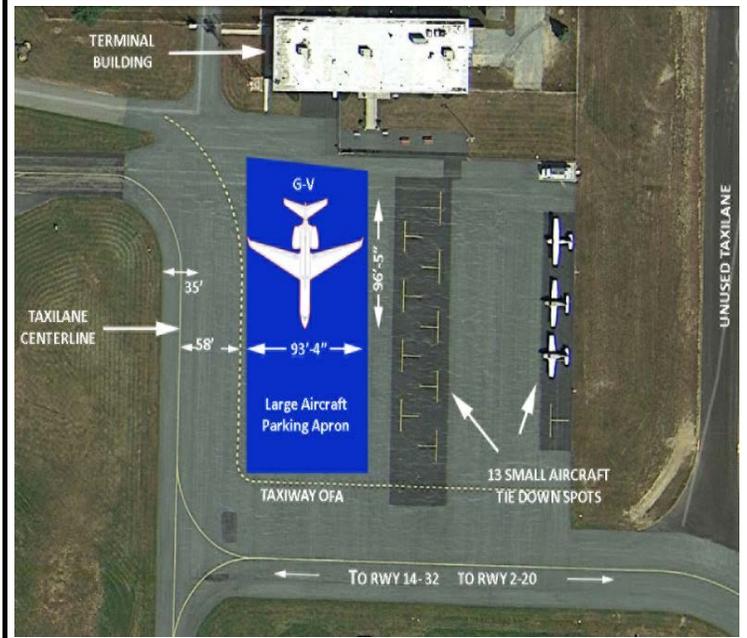
Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE 2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Terminal Apron Expansion**
 Department: **Airport**
 Physical Location: **Keene Dillant-Hopkins Airport**
 Federal Mandate: **Title 49, US Code, Subtitle VII**
 State Regulation or Law:
 Master Plan (CMP) Focus Area: **Vibrant Economy**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **To expand airside capacity at the airport terminal**



PROJECT DESCRIPTION/JUSTIFICATION

The Airport terminal parking apron covers an area of approximately 8,200 square yards. It has the capacity to hold between 15 and 19 aircraft, depending on aircraft size. The area that is used to park and service larger aircraft has a limited capacity. Large aircraft, such as a the Gulfstream V (96 feet long by 93 feet wide), are difficult to maneuver and park. It becomes a challenge for pilots and the fixed base operator (FBO). This area is frequently congested and is projected to get more congested as air traffic increases due to airport marketing efforts. The airport owns ample space to expand the apron by adding pavement and tie downs in the area between the current apron and the unused taxi lane. This expansion will double the area available for use. Completion of this project is subject to receipt of grants from the FAA and the NHDOT Bureau of Aeronautics. These are equal to 90% and 5%, respectively. The final 5% of funding will be the responsibility of the City.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation				1,300,000				1,300,000
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$0	\$1,300,000	\$0	\$0	\$0	\$1,300,000
FUNDING								
Current Revenue				65,000				65,000
Capital Reserve								0
Debt Funded								0
Federal or State Grants				1,235,000				1,235,000
Other Sources								0
TOTAL	\$0	\$0	\$0	\$1,300,000	\$0	\$0	\$0	\$1,300,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001 Ongoing

PROJECT STATUS: New Project



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Terminal Improvements**
 Department: **Airport**
 Physical Location: **Keene Dillant-Hopkins Airport**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Vibrant Economy**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Provide for accessible restroom facilities at the airport terminal building.**



PROJECT DESCRIPTION/JUSTIFICATION

The terminal building at the Dillant-Hopkins Airport is nearly 50 years old. In 2015 the City hired Stantec Consultants to update the 2003 Airport Master Plan for the Airport. The plan predicts that service expansion will occur in the upcoming years. A new restaurant that opened in 2016 is drawing more visitors to the Airport. Over 1,000 people per week are visiting the Airport for a variety of purposes. The restrooms at the terminal building are outdated and need to be rehabilitated. In order to provide restrooms that are accessible, meet public expectations, and meet the projected increased demand, the restrooms will be reconstructed in FY18. This project will also construct a new private bathroom with shower for visiting pilots. This is a need identified by the Airport Advisory Commission and visiting pilots and crew within the pilot's lounge. The bathrooms will be reconstructed to meet American Disabilities Act (ADA) criteria. The exterior stairs and ramp will be reconstructed to provide an accessible entrance to the terminal consistent with ADA requirements today.

Replacement of exterior concrete stairs and landing-East Entry \$35,693
 Replacement of exterior concrete stairs and ramp-West Entry \$59,017
 Renovation of two restrooms \$56,846
 Lounge Area \$35,444
 Contingency and permitting \$11,356

New

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design		19,839						19,839
Construction/Implementation		178,549						178,549
Property/Equip. Acquisition								0
TOTAL	\$0	\$198,388	\$0	\$0	\$0	\$0	\$0	\$198,388
FUNDING								
Current Revenue								-
Capital Reserve								0
Debt Funded		198,388						198,388
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$198,388	\$0	\$0	\$0	\$0	\$0	\$198,388

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT:

N/A

PROJECT STATUS:

New Project

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Flood and Stormwater Management – programs, activities, and projects which are intended to prevent and remediate conditions leading to localized flooding due to more frequently occurring major precipitation events through preventative maintenance, drainage system improvements, and comprehensive storm water infrastructure planning.

Project Name	Page
Beaver Brook Hydrologic and Hydraulic Analysis	165
Flood Management Project List	166
Flood Management Projects	167
Goose Pond Dam Improvements	168
Drainage Cleaning	169
Stormwater Spot Repairs	170
Stormwater Management System	171
Climate Adaptation Vulnerability	172

Flood and Stormwater Management

The City of Keene sits on the valley floor at the bottom of a glacial lakebed. There are five (5) watersheds and numerous brooks and streams that flow through the City. These bodies of water are used by the community to receive stormwater from City streets and private properties. The City has been attempting to manage stormwater and flood waters since the mid 1800's. As the City developed, open ditches were first constructed to convey this stormwater and over time these open ditches were enclosed and additional receptors and pipes were installed creating a complex network of pipes and open ditches that merge with streams to move stormwater through the City. Today this equates to over 5,000 stormwater basins, over 80 miles of stormwater mains and lines, over 10 miles of open ditches and the maintenance and management of three (3) high hazard dams. The community has modified numerous waterways (Ash Swamp Brook, Beaver Brook, and Black Brook) to improve the drainage characteristics of these streams to allow for additional use and development of land. The City and State of New Hampshire has been subject to changing weather patterns. Intense wet weather events are occurring at higher frequency with higher amounts of precipitation. This has stressed the City's 175+ year old stormwater system.

The City approaches the management of the stormwater system and flooding through the maintenance, the evaluation, and improvement of existing components and the construction of new components to provide increased capacity and functionality. To maintain the functionality and capacity of the existing components this is accomplished through the Capital Improvement Program by the Stormwater Drainage Cleaning Project, the Stormwater Spot Repairs, the Stormwater System Management and Flood Management Projects. These projects address the maintenance of the catch basins and storm lines to ensure that the system is operating as best it can along with projects that review problem areas and develop localized solutions to flood and stormwater manager issues.

The City also develops projects that review and develop option to increase capacity and functionality to address stormwater and flooding problems. Through the Capital Improvement Program this is accomplished through Beaver Brook Hydrologic and Hydraulic, Climate Adaption Vulnerability Assessment Study, and Goose Pond Dam Improvement Projects which provide analysis of and direction for changes in the City's stormwater system.

Priority for projects is based on the review of impacts, goals within the City's Comprehensive Master Plan, and input from the Community. Overall the City works to balance the need to maintain the function and operations of the existing stormwater system, review and address problem areas, develop future solutions to address flooding and the cost.

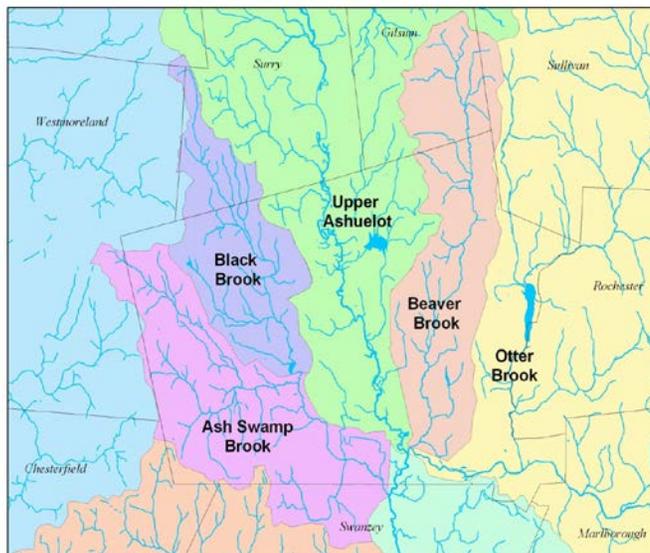


CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Beaver Brook Hydrologic and Hydraulic Analysis**
 Department: **Public Works - General Fund**
 Physical Location: **Various**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Quality Built Environment**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Yes**



PROJECT DESCRIPTION/JUSTIFICATION

The Beaver Brook flows along the east side of the City through residential neighborhoods. It then empties into the Ashuelot River near the intersection of Main Street and Route 101. This brook has a history of overflowing its banks and causing significant flood damage. In 2005, 2012, and 2013 large areas of the City along the brook were impacted by flood waters. The City also experiences impacts from climate change with more intense and more frequent rain events. This project will perform a hydrologic and hydraulic analysis of the Beaver Brook watershed for various storm events (5, 10, 50, 100, and 500 year). The City will use the latest rain data to perform this analysis. This project will allow the City to develop a flood management master plan for Beaver Brook. Strategies within this plan may include the creation of flood water storage areas, identification of obstructions that need to be removed, and upgrade of properties that could be considered for flood proofing or removal to address flooding. This will also support a number of high-priority projects in the City's 2013 Hazard Mitigation Plan.

In 2016, City staff met with the Army Corps of Engineers to discuss a collaborative project. Under this arrangement, the USACE will perform this analysis with the City being responsible for a 50% match after the first \$100,000 in consulting fees. The City will benefit from a more detailed analysis and recommendations for future flood mitigation projects. **Prior Year funding represents the reappropriation of the remaining balance of the Victoria Street Extension project (\$30,359) and additional funding from the Flood Mitigation Measures project (\$119,641).**

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design		400,000						400,000
Construction/Implementation								0
Property/Equip. Acquisition								0
TOTAL	\$0	\$400,000	\$0	\$0	\$0	\$0	\$0	\$400,000
FUNDING								
Current Revenue	150,000	0						150,000
Capital Reserve								0
Debt Funded								0
Federal or State Grants		250,000						250,000
Other Sources								0
TOTAL	\$150,000	\$250,000	\$0	\$0	\$0	\$0	\$0	\$400,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: No impact Ongoing
 PROJECT STATUS: Ongoing CIP

Flood Management Projects

PROJECT	DESCRIPTION	OBJECTIVE	FY	CONSTRUCTION ESTIMATE
Winchester Street -Madison-Ashuelot	Construct new outfall from the intersection of Winchester Street and Ralston Street to the Ashuelot River	Managed increase flow, reduce localized flooding	18	\$900,000
Roxbury Street	Construct 60" drain line from Beaver Brook to existing 48" drain. Construct 36" drain from existing 48" drain to Town Brook outlet. Replaces the existing 36" brick arch on Roxbury Street	Manage increased flow and reduce localized street flooding in the Vernon Street / Elm Street area	20	\$861,380
Church Street	Construct 48" drain line from Church Street to Beaver Brook. Supplements existing 30" tile drain	Manage increased flow in system and reduce localized street flooding in the Church St., Roxbury St. area. Phase 1 of several phases in this area.	22	\$259,325
Central Square	Construct 30" drain from Court Street thru Central Square, down Roxbury Street to the Town Brook outlet Replaces existing 12" tile drain	Manage increased runoff, improve flows, and reduce localized street flooding on Court Street and side Streets from Central Square to Mechanic Street.	22	\$191,455
Main Street	Construct 24" drain on Main Street from Eagle Court to Water Street Replaces existing 8" tile drain	Manage increased runoff, improve flows, and reduce localized street flooding of Main Street	22	\$126,600
Church Street / Probate Street	Construct 36" drain line, Church Street from Carpenter Street to Probate Street, Probate Street to Roxbury Street Replaces existing 12" tile line	Manage increased runoff, improve flows, and to reduce localized street flooding in the Church Street, Roxbury Street area Phase 2 of several phases in this area	24	\$712,500
Edwards Street	Construct 30" drain line form Church Street to Roxbury Street Replaces existing 12" tile drain	Manage increased runoff, improve flows, and reduce localized street flooding in the Church Street, Roxbury Street area. Phase 3 of several phases in this area	26	\$300,000
Charles Street	Extend drainage line from George Street to low area on Charles Street	To reduce drainage issues to properties west and down gradient, of Charles Street	26	\$100,000
Key Road	Replace existing 48" CMP drain pipe crossing Key Road	Replace existing deteriorated and failing pipe	26	\$120,000
Colonial Drive	Replace exisitng 15"-24" CMP drain pipes from Colonial Drive to outfall near Tenant Swamp	Reduce repetative local flooding	28	\$350,000
CONSTRUCTION ESTIMATE TOTAL				\$3,921,260



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Flood Management Projects**
 Department: **Public Works - General Fund**
 Physical Location: **Various**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Quality Built Environment**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Yes**



PROJECT DESCRIPTION/JUSTIFICATION

The City is experiencing changes in its weather patterns. Severe weather events are occurring at a higher frequency Keene is experiencing rainfall events that are of short duration and high intensity. The storm water system was constructed over the last 100 years with different design standards. As a result of these more intense rain events, the City's storm water system cannot handle the resulting flows. This causes localized street flooding that impacts the community and individual properties. The City is addressing the changing patterns and its impacts through a series of short-term and long-term goals. These include ongoing maintenance and inspection of the storm water system, identification of small improvements, and watershed analysis. The City has identified areas that have repetitive localized flooding issues.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design		135,000		129,207		115,476		379,683
Construction/Implementation		765,000		732,173		461,904		1,959,077
Property/Equip. Acquisition								0
TOTAL	\$0	\$900,000	\$0	\$861,380	\$0	\$577,380	\$0	\$2,338,760
FUNDING								
Current Revenue								0
Capital Reserve								0
Debt Funded		900,000		861,380		577,380	0	2,338,760
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$900,000	\$0	\$861,380	\$0	\$577,380	\$0	\$2,338,760

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: No impact
Multi-year

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Goose Pond Dam Improvements**
 Department: **Public Works - General Fund**
 Physical Location: **Goose Pond**
 Federal Mandate: **NO**
 State Regulation or Law: **YES**
 Master Plan (CMP) Focus Area: **Quality Built Environment**
 CMP Vision/Strategy: **Healthy Living**
 Council Initiative: **Policy**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **YES**



PROJECT DESCRIPTION/JUSTIFICATION

This project began in FY11 with funds to complete a Dam Master Plan for all City dams including the 1868 Goose Pond Dam and Berm. The Dam Master Plan addresses concerns expressed in Letters of Deficiencies (LOD) from NH Department of Environmental Services related to this dam's inoperable outlet drain and embankments (berm) requiring the City to submit a plan to address these deficiencies. The Goose Pond Dam structure, which includes its berm, are classified as "high hazard" indicating that their failure could result in the loss of life downstream. Because the dam and berm provide a recreation benefit, it is in the City's interest to strengthen them.

FY17 allocated funds for evaluation, design, and permitting of improvements. Construction is proposed for FY19. To respond to the LOD, the estimated 2012 cost of improvements recommended in the FY11 Dam Master Plan is \$715,000. These costs are adjusted 3% per year for inflation to the date projected for construction.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation			879,400					879,400
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$879,400	\$0	\$0	\$0	\$0	\$879,400
FUNDING								
Current Revenue								0
Capital Reserve								0
Debt Funded			879,400					879,400
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$879,400	\$0	\$0	\$0	\$0	\$879,400

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001
Ongoing

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Drainage Cleaning**
 Department: **PUBLIC WORKS**
 Physical Location: **Various**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Quality Built Environment**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Maintain transportation network, manage storm water to reduce potential for flooding.**



PROJECT DESCRIPTION/JUSTIFICATION

The capturing, removal, and treatment of stormwater is critical to maintaining the condition of the City's streets and other impervious systems. The Highway Division oversees an ongoing drain cleaning program. The daily average for cleaning catch basin sumps (using a private contractor) is 30 per day. This ongoing program will maintain the 5,000 basins located in the City. Approximately 1,250 catch basin sumps are maintained per year. A private contractor will also provide services for drain line cleaning/flushing on the City's 80 mile network of drain lines. Funding levels provide for approximately 16 miles of drain lines to be inspected each year resulting in all drain lines being inspected and cleaned as necessary every 3 years. Design costs include 10 days each year to record video and identify areas where blockages are backing up the system or to identify areas needing spot repair (costs for spot repair are on a separate CIP page). Note: Costs have been inflated 3% per year.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design		15,000	15,450	15,913	16,390	16,882	17,389	97,024
Construction/Implementation		48,000	49,440	50,923	52,451	54,025	55,645	310,484
Property/Equip. Acquisition								0
TOTAL	\$0	\$63,000	\$64,890	\$66,836	\$68,841	\$70,907	\$73,034	\$407,508
FUNDING								
Current Revenue		63,000	64,890	66,836	68,841	70,907	73,034	407,508
Capital Reserve								0
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$63,000	\$64,890	\$66,836	\$68,841	\$70,907	\$73,034	\$407,508

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Reduce - will reduce operating costs Ongoing
PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Stormwater Spot Repairs**
 Department: **PUBLIC WORKS**
 Physical Location: **Various**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Quality Built Environment**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Maintain transportation network, manage storm water to reduce potential for flooding.**



PROJECT DESCRIPTION/JUSTIFICATION

The Public Works Department uses a multi-pronged approach to sustaining the City's stormwater drainage system. The capturing, removal, and treatment of stormwater is critical to maintaining the condition of the City's streets and other impervious systems. The City maintains over 80 miles of storm drains and over 5,000 catch basins. This project sets aside funding for spot repairs to the storm water system based, in part, from the camera inspection program funded in the drainage cleaning CIP page. This includes removing blockages and addressing deficiencies to ensure the system works at capacity. This program will also be used to improve and address flood capacity issues which are encountered during roadway rehabilitation projects.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation		61,720	63,571	65,478	68,752	70,815	72,939	403,275
Property/Equip. Acquisition								0
TOTAL	\$0	\$61,720	\$63,571	\$65,478	\$68,752	\$70,815	\$72,939	\$403,275
FUNDING								
Current Revenue		61,720	63,571	65,478	68,752	70,815	72,939	403,275
Capital Reserve								0
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$61,720	\$63,571	\$65,478	\$68,752	\$70,815	\$72,939	\$403,275

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001
Ongoing

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: Stormwater Management System Analysis
Department: PUBLIC WORKS
Physical Location: Various
Federal Mandate: N/A
State Regulation or Law: N/A
Master Plan (CMP) Focus Area: Quality Built Environment
CMP Vision/Strategy: Infrastructure
Council Initiative: N/A
V.O.I.C.E.: Continually Assess Facilities and Infrastructure
Departmental Objective:



PROJECT DESCRIPTION/JUSTIFICATION

This project provides funds to perform hydraulic analysis of the various watersheds throughout the City. It also provides funding for analysis of flood-prone areas. The analysis will provide information to help identify potential mitigation projects. It is proposed to start reviews within the Beaver Brook watershed. A component of this project is to review areas that are prone to street flooding (Roxbury and Gurnsey Streets, Church and Carpenter Streets, Winchester and Ralston Streets, etc.) to determine if there are low impact, low cost changes or improvements that can be completed to relieve the flooding. Results from this work will be incorporated into future CIP requests for operating budgets depending on the scope of the improvement.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation		53,045	54,636	56,275	57,964	59,703	61,494	343,117
Property/Equip. Acquisition								0
TOTAL	\$0	\$53,045	\$54,636	\$56,275	\$57,964	\$59,703	\$61,494	\$343,117
FUNDING								
Current Revenue		53,045	54,636	56,275	57,964	59,703	61,494	343,117
Capital Reserve								0
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$53,045	\$54,636	\$56,275	\$57,964	\$59,703	\$61,494	\$343,117

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: No impact
N/A

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: Climate Adaptation Vulnerability Assessment
Department: Planning
Physical Location: 3 Washington St
Federal Mandate: N/A
State Regulation or Law: N/A
Master Plan (CMP) Focus Area: Strong Citizenship and Proactive Leadership
CMP Vision/Strategy: Quality Built Environment
Council Initiative: Adapting to Climate Change
V.O.I.C.E.: N/A
Departmental Objective: Establish Priorities
 Establish Priorities for Climate Change Adaptation



PROJECT DESCRIPTION/JUSTIFICATION

Recent precipitation patterns and flooding events have highlighted the need for better infrastructure planning, especially in locations where flooding and stormwater present significant threats. Projects managed through the Public Works Department have begun by upsizing and replacing culverts to increase our stormwater management system's capacity for handling large rain events. A vulnerability assessment should be completed to determine what improvements are needed to protect our most valuable assets from weather related phenomenon. This assessment should also include what happens if no protective action is taken. A report can be generated using available GIS and other spatical data and assistance from modeling software to be publicaly presented for discussion of the financial implications of taking no further adaptation action.

The second step would be possible adaptation actions with the community through facilitated public discussions. After identifying the key strategies for Keene, the modeling software would be restructured to report out which actions make the most financial sense over time. The two final products would be a cost benefit analysis of identified adaptation strategies and a final report describing what these results might suggest for policy and financial decisions for the City. As stated on pages 66-67 of the Comprehensive Master Plan, "Adapting to climate change is about making choices today to be prepared for the potential changes of tomorrow, and maintaining or improving the community's ability to withstand those changes. It includes making existing infrastructure and policies more resilient to climate impacts." **Prior Year Funding represents a re-appropriation of funds from the Flood Mitigation Measures project.**

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design		20,000						20,000
Construction/Implementation		30,000						30,000
Property/Equip. Acquisition								0
TOTAL	\$0	\$50,000	\$0	\$0	\$0	\$0	\$0	\$50,000
FUNDING								
Current Revenue	50,000							50,000
Capital Reserve								0
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$50,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT:

N/A

PROJECT STATUS:

Ongoing CIP

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Community Development - programs, activities, and projects which are intended to add to or significantly expand the capacity of community infrastructure or facilities. The primary goal of these activities is to improve the quality of life in the community and to meet the needs of a changing community.

Project Name	Page
Carpenter Field	175
Robin Hood Splash Pad	176
Skate Park	177
Community Center Feasibility Study	178
W. Keene Fire Station Study	179



CITY OF KEENE, NEW HAMPSHIRE 2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Carpenter Field**
 Department: **Parks & Recreation**
 Physical Location: **Carpenter Street**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Quality Built Environment**
 CMP Vision/Strategy: **Healthy Living**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Master Plan Recommendation #3 Determine the best and most appropriate uses of each park and whether they should be repurposed or reconfigured to maximize their service to the community**

FINAL DESIGN: A DESTINATION FOR ALL

Carpenter Street Field is a valuable asset for the East Side Neighborhood, the Downtown Core District, and all of Keene. Active and passive recreational features draw new visitors to the park to engage in a healthy outdoor lifestyle. Seating, lighting, shade, and other amenities create a pleasant atmosphere while parents watch their children climbing up rope structures, hopping from one boulder to another, or watching the salamanders sun bathe. An improved universally-accessible path in the northwest corner passes along the brook connecting the park to Harrison Street and downtown. On the southwestern edge a 10' wide pedestrian bridge spans the brook welcoming visitors from the Cheshire Rail Trail, basketball courts, and neighborhoods from the south.

FORMALIZING THE INFORMAL
A universally-accessible path connects to downtown. (For details see Sheet 16)

PLAY AND FITNESS FOR ALL
Play structures, bocce court, workout zone, and pavilion serve a broader range of users. (For details see Sheet 15)

VEGETATED RIPARIAN BUFFER
A densely vegetated brook edge provides ecological services and aesthetics. (For details see Sheet 15)

MEANDERING STREAM
A new path for Beaver Brook is a place to explore, habitat for wildlife, and floodwater storage. (For details see Sheet 15)

EXPANDING CONNECTIONS
A pedestrian bridge crosses Beaver Brook adding a new and exciting connection to Carpenter Street Field from downtown and beyond. (For details see Sheet 16)

Sanctioned and Sustainable Parking
Delineated parking spots provide clarity and reduce competition on tree roots. (For details see Sheet 17)

ATHLETIC FIELD
The centerpiece of Carpenter Street Field is evenly graded for effective drainage and comfortable use. (For details see Sheet 14)

WALKING CIRCUIT
A safe and universally accessible bike path loops around the field. (For details see Sheet 16)

CLIENT (CITY OF KEENE) GOALS

- Create additional uses while maintaining existing uses
- Develop multi-generational attractions and uses
- Improve access from downtown
- Improve the aesthetics of the field
- Create a more vibrant presence within the neighborhood
- Explore flood storage potential
- Improve drainage for the playing field

PUBLIC GOALS

- Create a walking circuit
- Provide easier and safer access from downtown and Cheshire Rail Trail
- Install barbecues
- Improve seating
- Acquire adjacent vacant properties
- Provide for universal accessibility
- Provide lighting
- Increase vegetation
- Improve the playground
- Designate a parking area

CLIENT (CITY OF KEENE) GOALS

- Create additional uses while maintaining existing uses
- Develop multi-generational attractions and uses
- Improve access from downtown
- Improve the aesthetics of the field
- Create a more vibrant presence within the neighborhood
- Explore flood storage potential
- Improve drainage for the playing field

PUBLIC GOALS

- Create a walking circuit
- Provide easier and safer access from downtown and Cheshire Rail Trail
- Install barbecues
- Improve seating
- Acquire adjacent vacant properties
- Provide for universal accessibility
- Provide lighting
- Increase vegetation
- Improve the playground
- Designate a parking area

CLIENT (CITY OF KEENE) GOALS

- Create additional uses while maintaining existing uses
- Develop multi-generational attractions and uses
- Improve access from downtown
- Improve the aesthetics of the field
- Create a more vibrant presence within the neighborhood
- Explore flood storage potential
- Improve drainage for the playing field

PUBLIC GOALS

- Create a walking circuit
- Provide easier and safer access from downtown and Cheshire Rail Trail
- Install barbecues
- Improve seating
- Acquire adjacent vacant properties
- Provide for universal accessibility
- Provide lighting
- Increase vegetation
- Improve the playground
- Designate a parking area

PROJECT DESCRIPTION/JUSTIFICATION

Carpenter Street Field located outside the downtown footprint along Beaver Brook and the Cheshire Rail Trail, plays a significant role in restoring recreational opportunities to the east side of the City. Through a public process of meetings and online discussion boards with the Conway School of Landscape Design, a definitive statement from the community highlighted that the park needs to be developed for multi-generational use to create a safe place for recreation. Specific design elements were to include a playground, multiple seating opportunities, walking trail, parking, pavilion, vegetated buffer along the brook, connection to the rail trail, and an athletic field. The field would remain the centerpiece of the park, which would require a delineated pitch to improve the storm drainage back to Beaver Brook. These enhancements to the field will provide a quality turf experience for the multiple user groups that currently utilize the field.

The vision for this project will create a valuable asset for the east side and the entire community, in addition to City support, funding through grants will be sought utilizing the Building a Spirit of Place initiative.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation					1,500,000			1,500,000
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$0	\$0	\$1,500,000	\$0	\$0	\$1,500,000
FUNDING								
Current Revenue								0
Capital Reserve								0
Debt Funded					1,500,000			1,500,000
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$0	\$0	\$1,500,000	\$0	\$0	\$1,500,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible < \$5,001 Ongoing **PROJECT STATUS:** Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Robin Hood Splash Pad**
 Department: **Parks & Recreation**
 Physical Location: **Robin Hood Park**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Maintaining Neighborhoods**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Master Plan Recommendation #11 Provide equal access and adequate mix of facilities, trails and open space throughout the City.**



PROJECT DESCRIPTION/JUSTIFICATION

The City has two outdoor summer facilities: Robin Hood Park Pool, located on the east side, and Wheelock Park Pool on the west side. Both pools were installed in 1967 as a gift from the Keene Lions Club. Through the years diving boards and slides were added for additional enjoyment by pool patrons. For insurance reasons, these devices were removed and the pools no longer have an interactive water play experience. In 2013, the City installed a Splash Pad at Wheelock Pool. The additional development of a splash pad to Robin Hood Park on the east side is a focus on social equity and facility improvements. The purpose of the splash pad is to introduce water play to younger children and individuals with special needs for an interactive experience. The splash pad area will be 20' x 30'. Our intent is to submit for a future Land Water and Conservation Fund (LWCF) grant with the Department of Resources and Economic Development which would require a 50 percent match, or if necessary seek alternative funding.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design			13,000					13,000
Construction/Implementation			87,000					87,000
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$100,000	\$0	\$0	\$0	\$0	\$100,000
FUNDING								
Current Revenue			50,000					50,000
Capital Reserve								0
Debt Funded								0
Federal or State Grants								0
Other Sources			50,000					50,000
TOTAL	\$0	\$0	\$100,000	\$0	\$0	\$0	\$0	\$100,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001 Ongoing

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE 2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Skate Park**
 Department: **Parks & Recreation**
 Physical Location: **Wheelock Park**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Collaborative Community Planning**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Master Plan Recommendation # 4 - Develop a comprehensive capital equipment and park asset replacement plan**



PROJECT DESCRIPTION/JUSTIFICATION

In 2015, the City matched a community fundraising effort to hire a company to develop a conceptual design and cost estimate for the proposed skate park in Wheelock Park. Spohn Ranch Skateparks delivered a proposal in collaboration with two public meetings and was able to design and refine the various elements of a successful park to meet the needs of our community. A 12,000 square foot concrete facility was developed as a park for users of every age and ability, and to create a destination for generations to come. The recommendations of the Ad-Hoc Skateboard Park Relocation Committee were considered in conjunction with those advanced by the Active and Passive Recreation Management Plan throughout the design process. Advocates for the new facility will begin a capital campaign with anticipation for construction in 2019.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation			500,000					500,000
Property/Equip. Acquisition								0
TOTAL	\$0		\$500,000	\$0	\$0	\$0	\$0	\$500,000
FUNDING								
Current Revenue								0
Capital Reserve								0
Debt Funded								0
Federal or State Grants								0
Other Sources			500,000					500,000
TOTAL	\$0	\$0	\$500,000	\$0	\$0	\$0	\$0	\$500,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001 Ongoing

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: Community Center Feasibility Study
Department: Parks & Recreation
Physical Location: 312 Washington Street
Federal Mandate: N/A

State Regulation or Law: N/A
Master Plan (CMP) Focus Area: Healthy Community
CMP Vision/Strategy: Healthy Living
Council Initiative: N/A
V.O.I.C.E.: Continually Assess Facilities and Infrastructure
Departmental Objective: Master Plan Recommendation #3
 Determine the best and most appropriate uses of each park and whether they should be repurposed or reconfigured to maximize their service to the community



PROJECT DESCRIPTION/JUSTIFICATION

The City of Keene currently has a 31,000 square foot Recreation Center built in 1987 that is used for various community purposes serving all ages. The facility includes a gymnasium, multi-purpose room, several large and small meeting rooms, an activity room, and administrative offices for the Parks, Recreation, and Cemeteries Divisions. In addition space in the basement is utilized for a non-profit thrift store. The project will look to expand the scope of services to include the Facilities Division, Youth Services, and the Keene Senior Center. The Keene Senior Center is currently located on Court Street and is a separate nonprofit organization serving the community for various senior services and activities.

As part of the 2010 Comprehensive Master Plan, a vision was set forth for the City identifying six focus areas. A Healthy Community was brought forward as focus area #6, this looks to consider the community and individual health and well-being. Achieving this focus area considers the aging demographic that is challenging the city and state (17% 2014 Census 65 and over). This senior population is projected by the US Census reach 30% in 2030. The quality of place we call Keene, incorporates all ages. The importance of work, life, and play continues through this project thus impacting and enhancing every segment of the City's population. The feasibility study will provide a direction of program opportunities, space utilization, and renovation to the existing Recreation Center. The last feasibility study was completed in 1979.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design		35,890						35,890
Construction/Implementation								0
Property/Equip. Acquisition								0
TOTAL	\$0	\$35,890	\$0	\$0	\$0	\$0	\$0	\$35,890
FUNDING								
Current Revenue		25,890						25,890
Capital Reserve								0
Debt Funded								0
Federal or State Grants								0
Other Sources		10,000						10,000
TOTAL	\$0	\$35,890	\$0	\$0	\$0	\$0	\$0	\$35,890

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001
One time

PROJECT STATUS: New Project



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **W Keene Fire Station Study**
 Department: **Fire Department**
 Physical Location: **110 Hastings Avenue**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Healthy Community**
 CMP Vision/Strategy: **Emergency Preparedness**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Provide Emergency Response**



PROJECT DESCRIPTION/JUSTIFICATION

The West Keene Fire Station is currently located at 110 Hastings Avenue. The building is owned by the State of NH and supports a National Guard unit operating from the same facility. The City currently has a two year agreement, commencing August 1, 2015, with one renewal term of two years remaining. The City of Keene and NH National Guard have continued to discuss the long term use of the facility by both parties along with the possibility of the City acquiring the facility. Acquisition would allow the Fire Department to remain at the facility providing opportunity for the possibility for co-location of a fire training facility. In the event the City were to acquire this facility some renovations to improve functionality would need to be considered. Funds requested would support a study of the facility for future use.

In the event the City was no longer able to operate from this facility, evaluation of other locations would be required to maintain current Fire, EMS, and Rescue services responding from West Keene.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design			20,000					20,000
Construction/Implementation								0
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$20,000	\$0	\$0	\$0	\$0	\$20,000
FUNDING								
Current Revenue			20,000					20,000
Capital Reserve								0
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$20,000	\$0	\$0	\$0	\$0	\$20,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT:

N/A

PROJECT STATUS:

Ongoing CIP

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General Operations Facilities and Infrastructure - programs, activities, and projects which are intended to maintain and provide facilities, infrastructure, and equipment necessary for the provision of basic governmental services. The primary goal of these activities is to maintain City operational assets in good working order in an environmentally friendly and economically efficient manner.

Project Name	Page
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MUNICIPAL BUILDING IMPROVEMENTS

In 2013 The City hired EMG Corporation to perform a survey of all City facilities. The survey provides an organized management tool for the City to maintain and improve its facilities. The report reflects the present condition and the expected life of various system components. The City prioritized the following projects for the current CIP cycle:

Year	Location	Scope of Work	Estimated Cost	Total Cost for Fiscal Year
2018	Parks and Recreation Center	Update heating, ventilation, and air conditioning (HVAC) controls. The current controls are obsolete. Replacement parts are not available.	\$15,000	\$50,000
	Airport Terminal Building	Replace rooftop HVAC unit.	\$11,500	
	Public Works & Police Department	Replace ventilation fans.	\$7,500	
	Fleet Services Building	Seal walls and paint at car wash bay.	\$5,000	
	-	Held in reserve for new priorities.	\$11,000	
2019	Airport Terminal Building	Replace rooftop HVAC unit above center of building.	\$11,500	\$100,000
	Police Department Building	Update heating, ventilation, and air conditioning (HVAC) controls. The current controls are obsolete. Replacement parts are not available.	\$18,500	
	Parks and Recreation Center	Paint multi-purpose room.	\$8,000	
	Airport Terminal Building	Perform concrete repairs at the front entrance.	\$12,000	
	Public Works Building	Prep and paint exterior of building.	\$22,500	
	-	Held in reserve for new priorities.	\$27,500	
2020	Multiple Facilities	Replace carpet and flooring.	\$20,000	\$100,000
	City Hall	Replace wall-mounted HVAC units.	\$10,000	
		Replace obsolete fire alarm panels.	\$5,000	
		Upgrade elevator.	\$20,000	
	Public Works Building	Replace obsolete fire alarm panels.	\$5,000	
	Parks and Recreation Center	Bathroom renovations.	\$10,000	
	-	Held in reserve for new priorities.	\$30,000	
2021	Multiple Facilities	Replace carpet and flooring.	\$20,000	\$100,000
	City Hall	Bathroom renovations.	\$20,000	
		Prep and paint exterior of building.	\$20,000	
	-	Held in reserve for new priorities.	\$40,000	
2022	Multiple Facilities	Replace carpet and flooring.	\$20,000	\$100,000
	Central Fire station	Overhead garage door overhaul	\$30,000	
	Parks and Recreation Center	Replace generator	\$20,000	
	Public works- Police Department	Overhead garage door door overhauls	\$10,000	
	-	Held in reserve for new priorities.	\$20,000	
2023	Public Works	Replace EPDM roofing over Admin area	\$66,000	\$100,000
	Police Department Building	Replace Hot water distribuion pumps	\$17,000	
	-	Held in reserve for new priorities.	\$17,000	



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Municipal Building Improvements**
 Department: **Facilities**
 Physical Location: **Administration**
 Federal Mandate: **Some**
 State Regulation or Law: **Some**
 Master Plan (CMP) Focus Area: **Quality Built Environment**
 CMP Vision/Strategy: **Community Sustainability**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Maintain safe buildings**



PROJECT DESCRIPTION/JUSTIFICATION

In FY 2018 the priority will be the repointing of the exterior walls at City Hall and the Recreation Center. The Facilities Survey conducted by EMG Corporation in 2013 has provided an organized management tool for the division to utilize in an effort to maintain and address principal systems. The report reflects the present condition and the expected life of the systems components.

Through an annual review of the process of the EMG report, the identification of the project life cycles can be resolved. The process will constantly alter and reprioritize the improvements among all City facilities. Projects already identified at City Hall, the Municipal Services Complex, the Recreation Center, and the Police Department will focus on updates that improve efficiencies in the energy and heating consumption. In the future the Municipal Services Complex will need heat pumps replaced and the Recreation Center will need a new boiler system. Prior year funding represents the reappropriation of the balance from the Michael E.J. Blastos Community Room project.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation		50,000	100,000	100,000	100,000	100,000	100,000	550,000
Property/Equip. Acquisition								0
TOTAL	\$0	\$50,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$550,000
FUNDING								
Current Revenue	40,000	10,000	100,000	100,000	100,000	100,000	100,000	550,000
Capital Reserve								0
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$40,000	\$10,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$550,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT:

Ongoing

PROJECT STATUS:

Ongoing CIP

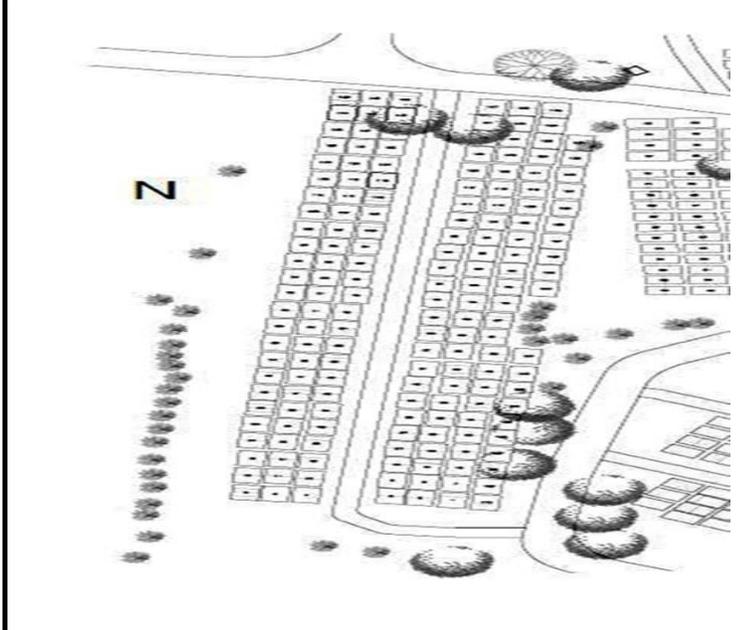


CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Cemetery Paving**
 Department: **Parks & Recreation**
 Physical Location: **Cemeteries**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **Quality Built Environment**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Master Plan Recommendation # 4 - Develop a comprehensive capital equipment and park asset replacement plan**



PROJECT DESCRIPTION/JUSTIFICATION

The project completes a repaving program to the primary cemetery roads. In FY18, the improvements in Monadnock View Cemetery include paving 590 feet of road in Cemetery Section N (shown above) with grading, additional gravel (approximately 100 cubic yards), and 175 tons of pavement at \$95.00 per ton.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation		22,137						22,137
Property/Equip. Acquisition								0
TOTAL	\$0	\$22,137	\$0	\$0	\$0	\$0	\$0	\$22,137
FUNDING								
Current Revenue		22,137						22,137
Capital Reserve								0
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$22,137	\$0	\$0	\$0	\$0	\$0	\$22,137

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT:

N/A

PROJECT STATUS:

Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Revaluation**
 Department: **Assessing**
 Physical Location:
 Federal Mandate: **N/A**
 State Regulation or Law: **RSA 75:8-a**
 Master Plan (CMP) Focus Area: **Vibrant Economy**
 CMP Vision/Strategy: **Municipal Governance & Financial Stability**
 Council Initiative: **N/A**
 V.O.I.C.E.: **N/A**
 Departmental Objective: **To ensure the fair and equitable taxation of all property within the City of Keene in accordance with New Hampshire law.**



PROJECT DESCRIPTION/JUSTIFICATION

A revaluation of all property in the City is required by State law at least once every five years. The City was last revalued in 2016 and will be completed again in 2021. The project will begin in 2020 and will be completed by the fall of 2021. As a result of this project the new values will be used to determine the final tax bills.

A revaluation involves a number of steps and processes in order to develop valuation models and assessed values. These include, but are not limited, to extensive market research, reviewing and analyzing property transactions, reviewing building construction costs, and reviewing all property data on file. Additionally, for income producing properties, research and analysis is done on rental income, typical expenses, and investment rates. Upon completion many valuation variables will be developed, calibrated, and applied to all properties before finalizing the valuation process. The new assessed values will be statistically tested for accuracy and equity.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Revaluation					75,000	75,000		150,000
Construction/Implementation								0
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$0	\$0	\$75,000	\$75,000	\$0	\$150,000
FUNDING								
Current Revenue					75,000	75,000		150,000
Capital Reserve								0
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$0	\$0	\$75,000	\$75,000	\$0	\$150,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT:

N/A

PROJECT STATUS:

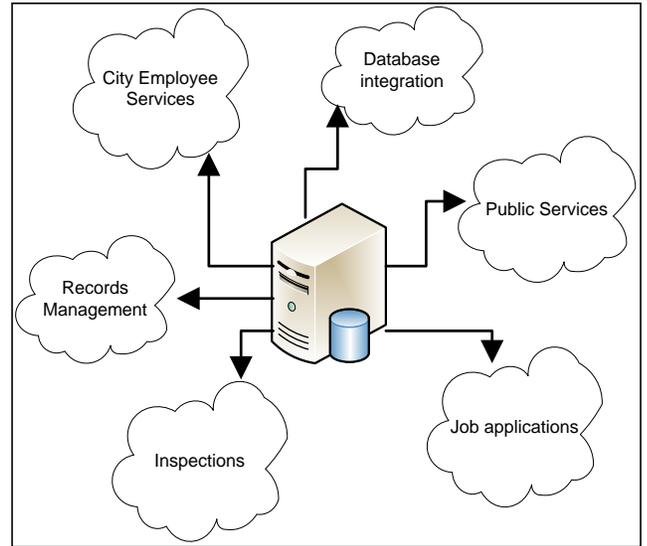
Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE 2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Database Software**
 Department: **IT**
 Physical Location: **IT Data Center**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **N/A**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Required to maintain database integration, integrity, and availability in accordance with department mission.**



PROJECT DESCRIPTION/JUSTIFICATION

As we move from our Oracle Environment to a less costly more manageable database architecture over the next several years database applications will need to be replaced and upgraded. Asset management, work order tracking, dog licensing, and permitting are some of the services provided by this environment.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation							5,000	5,000
Property/Equip. Acquisition							75,000	75,000
TOTAL	\$0	\$0	\$0	\$0	\$0	\$0	\$80,000	\$80,000
FUNDING								
Current Revenue								-
Capital Reserve							80,000	80,000
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$0	\$0	\$0	\$0	\$80,000	\$80,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001 Ongoing

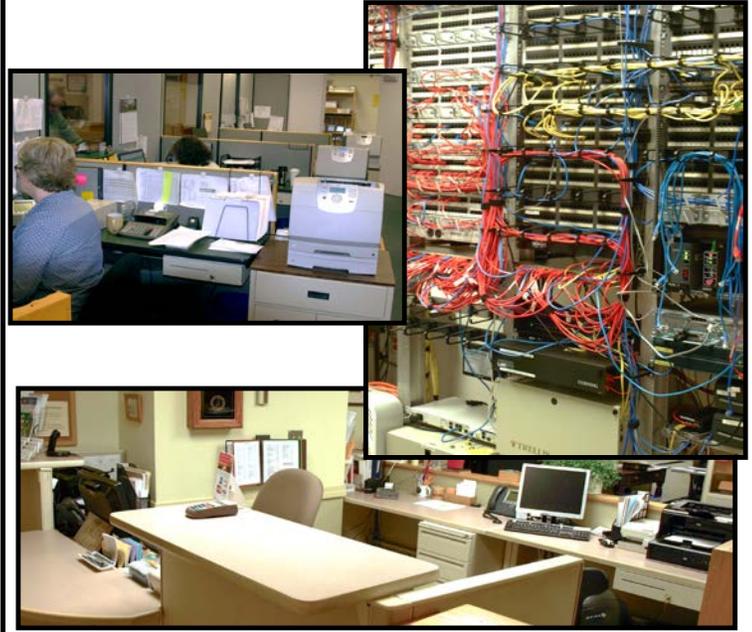
PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE 2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Network Equipment Replacement**
 Department: **IT**
 Physical Location: **Multiple Facilities**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **N/A**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Required to provide network, phone, and computing services for all City departments.**



PROJECT DESCRIPTION/JUSTIFICATION

The network infrastructure presently enables City information systems to be centralized to maximize security and accessibility and minimize maintenance efforts. This involves cabling and switches within each building, core equipment in the IT datacenters, and firewalls that secure traffic in and out of the City network. This equipment has a limited useful life. It is important that a plan be in place for the replacement of the equipment to ensure reliable operation and security. This plan calls for the replacement of the network equipment in the year the manufacturer will no longer provide maintenance and support services which typically ranges from five to ten years after purchase.

The City computer information systems are a mission critical asset supporting essential business operations. The availability of these systems including our phone system, depends upon reliable network availability and performance. In addition, the network must be protected for the purposes of confidentiality and intrusion prevention. In order to meet the evolving requirements of the organizational use of information systems, the network equipment will require replacement when it reaches the manufacturer's end-of-service schedule. This will provide current security and control features that are necessary to keep up with minimum industry standards, and will minimize costly down-time in the case of equipment failure. **FY18 funding anticipates the reappropriation of the project balance of the Digital Base Map Update project.**

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation								0
Property/Equip. Acquisition		64,000	26,500	5,000	31,000	6,500	0	133,000
TOTAL	\$0	\$64,000	\$26,500	\$5,000	\$31,000	\$6,500	\$0	\$133,000
FUNDING								
Current Revenue		23,234	26,500	5,000	31,000	6,500		92,234
Capital Reserve								0
Debt Funded	40,766							40,766
Federal or State Grants								0
Other Sources								0
TOTAL	\$40,766	\$23,234	\$26,500	\$5,000	\$31,000	\$6,500	\$0	\$133,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001
N/A

PROJECT STATUS: Ongoing CIP

Schedule of Network Equipment Replacement

Building	End of life(sale)	End of Maintenance	End of Support	Replacement Cost	FY Subtotal
Police	Jan-14	Jan-16	Jan-18	\$7,500	FY18 \$64,000
Police	Jan-14	Jan-16	Jan-18	\$7,500	
Police	Jan-14	Jan-16	Jan-18	\$7,500	
Police	Jan-14	Jan-16	Jan-18	\$7,500	
Police	Jan-14	Jan-16	Jan-18	\$7,500	
City Hall 4th Floor	Jan-14	Jan-16	Jan-18	\$7,500	
City Hall	Jan-12	Jan-14	Jan-18	\$9,500	
City Hall	Jan-12	Jan-14	Jan-18	\$9,500	
City Hall	Sep-13	Sep-14	Sep-18	\$8,000	FY19
City Hall	Sep-13	Sep-14	Sep-18	\$8,000	
Library	Jul-13	Jul-14	Jul-18	\$2,500	
Police	Sep-13	Sep-14	Sep-18	\$8,000	\$26,500
Fire	Oct-12	Jul-15	Oct-19	\$2,500	FY20
Library	Oct-12	Jul-15	Oct-19	\$2,500	\$5,000
Airport	Oct-12	Jul-15	Oct-19	\$3,500	FY21 \$31,000
Fire	Jan-13	Oct-14	N/A	\$2,500	
Library	Oct-12	Jul-15	Oct-19	\$3,500	
Library	Oct-12	Jul-15	Oct-19	\$3,500	
Parks and Rec	Oct-12	Jul-15	Oct-19	\$3,500	
Public Works	Oct-12	Jul-15	Oct-19	\$2,500	
Public Works	Oct-12	Jul-15	Oct-19	\$2,500	
Public Works	Oct-12	Jul-15	Oct-19	\$2,500	
Public Works	Oct-12	Jul-15	Oct-19	\$3,500	
Public Works	Oct-12	Jul-15	Oct-19	\$3,500	
Public Works	Jan-13	Oct-14	N/A	\$6,500	FY22
Library	Jan-13	Oct-14	N/A	N/A	FY23 TBD
Parks and Rec	Jan-13	Oct-14	N/A	N/A	
Police	Jan-13	Oct-14	N/A	N/A	
Fire Central	Oct-12	Jul-15	N/A	N/A	
Airport	Jan-13	Oct-14	N/A	N/A	
City Hall	Jan-13	Oct-14	N/A	N/A	
Fire	Jan-13	Oct-14	N/A	N/A	
Public Works	Jan-13	Oct-14	N/A	N/A	
Public Works	Jan-13	Oct-14	N/A	N/A	
Public Works	Oct-12	Jul-15	N/A	N/A	
Public Works	N/A	N/A	N/A	N/A	
Public Works	N/A	N/A	N/A	N/A	
Police	N/A	N/A	N/A	N/A	
Fire	N/A	N/A	N/A	N/A	
Public Works	N/A	N/A	N/A	N/A	
Public Works	N/A	N/A	N/A	N/A	
City Hall	N/A	N/A	N/A	N/A	
City Hall	N/A	N/A	N/A	N/A	
City Hall	N/A	N/A	N/A	N/A	
City Hall	N/A	N/A	N/A	N/A	
Public Works	N/A	N/A	N/A	N/A	
City Hall	N/A	N/A	N/A	N/A	

\$133,000



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Server Replacement**
 Department: **IT**
 Physical Location: **City Hall & Remote Data Center**
 Federal Mandate: **N/A**
 State Regulation or Law: **N/A**
 Master Plan (CMP) Focus Area: **N/A**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Required to provide software and computing services for all departments.**



PROJECT DESCRIPTION/JUSTIFICATION

Information systems are utilized by every City department in the process of providing services to the public. From email and phone systems to database and GIS systems, all require that core server equipment run reliably. This project provides funding for the replacement of existing host servers every three to five years, an upgrade to the Microsoft Exchange Server platform, server operating system upgrades and required Client Access License (CAL) upgrades. This replacement schedule ensures that the processing capabilities of the server hardware and software are sufficient to support City operations.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation								0
Property/Equip. Acquisition		23,000	54,343	30,000	12,000	3,000	3,000	125,343
TOTAL	\$0	\$23,000	\$54,343	\$30,000	\$12,000	\$3,000	\$3,000	\$125,343
FUNDING								
Current Revenue		23,000	54,343	30,000	12,000	3,000	3,000	125,343
Capital Reserve								0
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$23,000	\$54,343	\$30,000	\$12,000	\$3,000	\$3,000	\$125,343

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001 Ongoing

PROJECT STATUS: Ongoing CIP

Server Replacement Costs

Server Function	1st Replacement Date	Fiscal Year	Replacement Cost
Virtual Server-Phone System	7/1/2017	FY18	\$22,000
Server OS & Client Licensing	7/1/2018	FY19	\$51,343
Virtual Server	7/1/2019	FY20	\$9,000
Virtual Server	7/1/2019	FY20	\$9,000
Virtual Server	7/1/2019	FY20	\$9,000

\$100,343

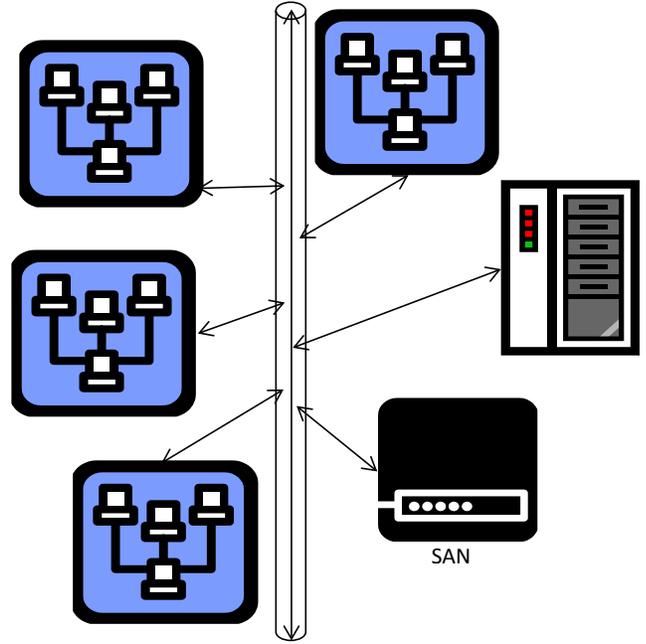
**Add \$3,000 annually to cover the cost of server OS upgrades.*



CITY OF KEENE, NEW HAMPSHIRE 2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: Storage Area Network
Department: IT
Physical Location: IT Data Center
Federal Mandate: N/A
State Regulation or Law: N/A
Master Plan (CMP) Focus Area: N/A
CMP Vision/Strategy: Infrastructure
Council Initiative: N/A
V.O.I.C.E.: Continually Assess Facilities and Infrastructure
Departmental Objective: Provide reliable file storage solution for all City departments.



PROJECT DESCRIPTION/JUSTIFICATION

The network utilized by City staff across all departments provides a path between the end users (computer users) and the databases on the servers. These databases and other electronic files such as documents, maps, and system backups are stored on storage area network (SAN) devices. The SANs enable more than one server to access a single system of physical disks, allowing allocation of space to each server as needed, thus reducing the total cost of server equipment. They are integral to our virtual environment and provide high availability and disaster recovery for all production servers we currently run. The typical life of a storage area network solution is about five years.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation			5,000					5,000
Property/Equip. Acquisition		40,000	60,000					100,000
TOTAL	\$0	\$40,000	\$65,000	\$0	\$0	\$0	\$0	\$105,000
FUNDING								
Current Revenue		40,000	65,000					105,000
Capital Reserve								0
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$40,000	\$65,000	\$0	\$0	\$0	\$0	\$105,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible < \$5,001 Ongoing

PROJECT STATUS: Ongoing CIP

Fleet Services

Like so many things in modern life, the ability to travel from point A to point B is something we often take for granted. Without the basic ability to transport people and equipment there would be no ambulance service, police response, streets plowed, water and sewer services and most every other city service. Because the City has a Fleet Services Division City personnel are able to respond to the variety of needs of the citizens in an efficient and effective manner with appropriate vehicles and equipment.

The Fleet Services Division, located at 330 Marlboro Street, maintains all City vehicles and equipment including Police, Fire and Rescue, Public Works, Parks and Recreation, Cemetery as well as the City of Keene Airport. There are 157 vehicles in the City's replacement program serviced by the Fleet Division along with an additional 99 vehicles/equipment serviced by the Fleet Division, which are not part of the capital replacement program. The Fleet Services team includes an Operations Manager, Administrative Coordinator and four Mechanics.

When vehicles or equipment are scheduled to be replaced every purchase is evaluated by the Fleet Services Division and recommendations are made to the City's Equipment and Vehicle Committee. The goal of the equipment replacement program is to provide city personnel with the most efficient and functional vehicle or equipment at the lowest cost.

In addition, the Fleet Services Division maintains a diesel fuel station as well as a vehicle wash bay to help preserve the life of vehicles and equipment by reducing the corrosive effects of salt.



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Equipment Replacement**
 Department: **PUBLIC WORKS**
 Physical Location: **330 Marlboro St.**
 Federal Mandate: **No**
 State Regulation or Law: **No**
 Master Plan (CMP) Focus Area: **Strong Citizenship and Proactive Leadership**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Invest resources to maintain City fleet operations**



PROJECT DESCRIPTION/JUSTIFICATION

The City of Keene Fleet has 137 vehicles and pieces of equipment in the replacement program. The age of the fleet ranges from one year to more than 15 years. This project sets aside funds for the orderly and timely replacement of vehicles and equipment when they reach the end of their useful life which is determined through a complete evaluation process. Operating vehicles beyond their service life results in increased maintenance costs, poor customer service, and lost production time due to a vehicle or equipment being out of service for extensive repairs. The replacement program is based on equipment age, condition, trade-in value, and operational needs of the user. When practical, emphasis is put on purchasing fuel efficient "green" vehicles as replacements are being evaluated. This replacement program list is reviewed extensively by the Fleet Services Administrative Review Committee before any piece of equipment is replaced. Vehicles are not replaced just because they are on the schedule.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation								0
Property/Equip. Acquisition		731,752	708,302	840,783	747,836	702,159	582,583	4,313,415
TOTAL	\$0	\$731,752	\$708,302	\$840,783	\$747,836	\$702,159	\$582,583	\$4,313,415
FUNDING								
Current Revenue								0
Capital Reserve		731,752	708,302	840,783	747,836	702,159	582,583	4,313,415
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$731,752	\$708,302	\$840,783	\$747,836	\$702,159	\$582,583	\$4,313,415

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001
Ongoing

PROJECT STATUS: Ongoing CIP



CITY OF KEENE, NEW HAMPSHIRE 2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Fleet Services Wash Bay**
 Department: **PUBLIC WORKS**
 Physical Location: **330 Marlboro St.**
 Federal Mandate: **No**
 State Regulation or Law: **No**
 Master Plan (CMP) Focus Area: **Strong Citizenship and Proactive Leadership**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Invest resources to maintain City fleet operations**



PROJECT DESCRIPTION/JUSTIFICATION

The equipment on the wash bay is outdated and ineffective. A refurbished wash bay will result a in more efficient brushless cleaning system providing longer service life to vehicles as a result of a lower incident of rust.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation			155,000					155,000
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$155,000	\$0	\$0	\$0	\$0	\$155,000
FUNDING								
Current Revenue			155,000					155,000
Capital Reserve								0
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$155,000	\$0	\$0	\$0	\$0	\$155,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001 Ongoing

PROJECT STATUS: New Project



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Fleet Services Fuel Island**
 Department: **PUBLIC WORKS**
 Physical Location: **330 Marlboro St.**
 Federal Mandate: **No**
 State Regulation or Law: **No**
 Master Plan (CMP) Focus Area: **Strong Citizenship and Proactive Leadership**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Invest resources to maintain City fleet operations**



PROJECT DESCRIPTION/JUSTIFICATION

The entire diesel fuel island needs to be updated to include refurbishing the canopy, replacing the fire extinguishing system, island lighting, and replacement of the fuel pumps.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation						35,000		35,000
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$0	\$0	\$0	\$35,000	\$0	\$35,000
FUNDING								
Current Revenue						35,000		35,000
Capital Reserve								0
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$0	\$0	\$0	\$35,000	\$0	\$35,000

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001 Ongoing

PROJECT STATUS: New Project



CITY OF KEENE, NEW HAMPSHIRE

2018 - 2023 Capital Project Funding Request

GENERAL PROJECT DATA

Project Name: **Fleet Services Roof Replacement**
 Department: **PUBLIC WORKS**
 Physical Location: **330 Marlboro St.**
 Federal Mandate: **No**
 State Regulation or Law: **No**
 Master Plan (CMP) Focus Area: **Quality Built Environment**
 CMP Vision/Strategy: **Infrastructure**
 Council Initiative: **N/A**
 V.O.I.C.E.: **Continually Assess Facilities and Infrastructure**
 Departmental Objective: **Invest resources to maintain City fleet operations**



PROJECT DESCRIPTION/JUSTIFICATION

One of the pressing long term capital needs is a replacement of the roof on the Fleet Services facility building. Small leaks are beginning to appear in the roof which are patched as necessary. The overall integrity of the roof over 20 year old facility is starting to become compromised. The roof will be evaluated every year to determine if the project needs to be accelerated or can be deferred.

FINANCIAL PLAN & PROJECT SCHEDULE

	PRIOR YR	FY18	FY19	FY20	FY21	FY22	FY23	TOTAL
EXPENDITURES								
Design								0
Construction/Implementation							90,230	90,230
Property/Equip. Acquisition								0
TOTAL	\$0	\$0	\$0	\$0	\$0	\$0	\$90,230	\$90,230
FUNDING								
Current Revenue							90,230	90,230
Capital Reserve								0
Debt Funded								0
Federal or State Grants								0
Other Sources								0
TOTAL	\$0	\$0	\$0	\$0	\$0	\$0	\$90,230	\$90,230

ANNUAL DEPARTMENT OPERATING BUDGET IMPACT: Negligible<\$5,001 Ongoing

PROJECT STATUS: New Project

VEHICLE AND EQUIPMENT 6 YEAR REPLACEMENT SCHEDULE

VEHICLE NUMBER	MODEL YEAR	PURCHASE PRICE	DESCRIPTION	VEHICLE DEPT. NO	USING DEPT/DIV	FY 2017/2018	FY 2018/2019	FY 2019/2020	FY 2020/2021	FY 2021/2022	FY 2022/2023
STAFF CARS											
			REPLACE AT 7Yrs./60,000								
0901	2009	\$23,080	Honda Civic Hybrid	P3	Pool car			\$28,765			
0903	2009	\$23,080	Honda Civic Hybrid	P1	Pool Car			\$28,765			
1702	2017	\$22,995	Ford Fusion	P2	Pool car						
2110	2012	\$16,585	Ford Focus	110	Assessing				\$21,560		
3118	2014	\$18,559	Ford Fusion	118							
1001	2009	\$29,879	Ford Escape Hybrid	1	PW					\$38,842	
7114	2017	\$22,995	Ford Fusion	114	Code						
19C2	2009	\$37,336	Suburban	19C2	Fire				\$28,000		
19C1	2009	\$21,927	Explorer	19C1	Fire						
0606	2006	\$35,132	Suburban	19C3	Fire						\$51,304
19U3	2012	\$34,970	Ford Interceptor		Fire					\$45,461	
0973	2009	\$29,879	Ford Escape	57	Engineering					\$38,842	
0014	2000	Rental	Ford Taurus		Fleet						
1144	2011	\$18,989	Ford Transit connect	21	Wastewater						
1243	2012	\$22,374	Ford Transit Connect	1143	PD Parking						
0037	2000	\$2,900	Lexus 300 ES	0037	Fleet						
VANS											
			REPLACE AT 10 YEARS/70,000 (8 YEARS/70,000 old)								
1370	2013	\$16,353	Ford E150	70	Water Meter						\$22,610
1108	2011	\$17,392	Ford E150	8	Water Meter					\$22,610	
1258	2012	\$16,491	Ford E150	58	Engineering					\$30,000	
0907	2009	\$22,232	Ford E-250	101	Parks & Rec			\$28,902			
1545	2015	\$16,807	GMC Savannah	1145	PD Parking						
0908	2009	\$22,232	Ford E-250	102	Parks & Rec		\$28,902				
1259	2012	\$16,491	Ford E-150	59	WWTP				\$29,000		
0313	2003	\$14,250	Ford E-250	125	Records						\$32,227
AMBULANCE											
(Funding by separate Fire Department Capital Reserve Program)											
1601	2016		Ford	19A1	Fire						
19A2	2013		International	19A2	Fire						
19A3	2009		C4500 Chevy	19A3	Fire						
MARKED POLICE											
			REPLACE AT 60,000/3YEARS								
1436	2014	\$34,970	Ford Interceptor	1136	Cruiser						\$84,358
1537	2015	\$34,970	Ford Interceptor	1137	Cruiser					\$122,850	
1333	2013	\$34,970	Ford Interceptor	1133	Cruiser						
1334	2013	\$34,970	Ford Interceptor	1134	Cruiser						
1435	2014	\$34,970	Ford Interceptor	1135	Cruiser						
1640	2016	\$34,970	Ford Interceptor	1140	Cruiser						
1630	2016	\$34,970	Ford Interceptor	1130	Cruiser						
1538	2015	\$34,970	Ford Interceptor	1138	Cruiser						
1439	2014	\$34,970	Ford Interceptor	1139	Cruiser						

VEHICLE AND EQUIPMENT 6 YEAR REPLACEMENT SCHEDULE

VEHICLE NUMBER	MODEL YEAR	PURCHASE PRICE	DESCRIPTION	VEHICLE DEPT. NO	USING DEPT/DIV	FY 2017/2018	FY 2018/2019	FY 2019/2020	FY 2020/2021	FY 2021/2022	FY 2022/2023
PD UNMARKED/ STAFF CARS											
4121	2014	\$20,595	REPLACE AT 80,000/ 6 YEARS Ford Fusion	1121	Unmarked						
2111	2012	\$27,570	Ford Interceptor Util.	1129	Unmarked		\$35,558				
0929	2010	\$41,000	Tahoe	1111	Shift Commander						
0637	2006	\$2,900	Lexus 300 ES	1120	PD Staff						
1110	2012	\$26,423	Ford Taurus	1110	PD Staff		\$20,895				
0923	2009	\$17,859	VW Jetta	1123	PD Staff						
1222	2012	\$20,528	Dodge Caravan	1122	PD Staff		\$24,465				
0924	2009	\$20,910	Dodge Caravan	1124	PD Staff						
DUMP TRUCKS 35/48/50 GVW											
0202	2002	\$112,143	REPLACE AT 17 YEARS Freightliner	6	Highway			\$192,857			
0526	2005	\$133,600	Ford Dump (big)	26	Highway						
0527	2005	\$133,600	Freightliner	27	Water						\$146,000
0965	2009	\$151,000	Freightliner	65	Highway						
9406	1994	\$80,463	Inter: Dump	3	Highway						
1405	2014	\$80,463	Inter: Dump	5	Highway						
9508	1995	\$80,463	Inter: Dump	AP5	Airport						
1412	2014	\$80,463	Inter: Dump	12	Highway						
1607	2016	\$142,000	Inter: Dump	7	Highway				\$198,642		
0312	2003	\$120,000	Freightliner	2	Highway						
9901	1999	\$88,000	Inter: Dump	4	Highway						
9906	1999	\$88,000	Inter: Dump	10	Highway	\$187,240					
0201	2002	\$112,143	Freightliner	22	Highway			\$192,857			
09AP8	2009	Grant	Freightliner	AP8	Airport						
0001	2001	\$76,644	Sterling	72	Highway						
1 TON TRUCKS 10,000 GVW											
0611	2006	\$44,888	REPLACE AT 60,000/10 YEARS Ford Dump (sml)	11	Highway						
0724	2007	\$44,888	Ford F450	24	Highway						
1113	2011	\$23,967	Ford F350 Dump	13	Water						
0874	2008	\$44,888	Ford F450	74	Highway	\$58,354					
0823	2008	\$29,956	Ford F350	23	WWTP		\$38,943				
4134	2014	\$33,562	GMC K3500	134	Cemetery					\$43,631	
0105	2001	\$25,000	Ford E350	54	Water						\$49,148
1445	2013	\$37,806	Dodge 3500	45	Highway						
1275	2012	\$49,681	Ford F450	75	Highway			\$64,585			
4107	2014	\$26,411	Ford F350	107	Parks & Rec					\$41,110	
1214	2012	\$31,623	Ford F350	14	Water						
0815	2008	\$29,956	Ford F350	15	Water	\$38,943					
9820	1998	\$52,000	Ford F350	20	Fleet					\$67,600	
0205	2002	\$25,749	Ford F350	19B1	Fire					\$33,474	
0308	2003	\$25,749	Ford F250	19B2	Fire						
1119	2011	\$27,659	Ford F 350	19	Fleet					\$31,200	

VEHICLE AND EQUIPMENT 6 YEAR REPLACEMENT SCHEDULE

VEHICLE NUMBER	MODEL YEAR	PURCHASE PRICE	DESCRIPTION	VEHICLE DEPT. NO	USING DEPT/DIV	FY 2017/2018	FY 2018/2019	FY 2019/2020	FY 2020/2021	FY 2021/2022	FY 2022/2023
3/4 TON TRUCKS											
			REPLACE AT								
			80,000/10 YEARS								
6130	2016	\$30,000	Ford F250	130	Parks	\$30,000					
9821	1998	\$21,805	Ford F250	131	Parks						\$28,347
1301	2000	\$22,232	GMC 2500	AP1	Airport						
0103	2001	\$23,597	Ford F250	32	Parks	\$16,000					
06AP3	2006	\$22,232	Ford F250	AP3	Airport				\$42,480		
0904	2009	\$22,232	Ford F250	104	Parks					\$33,902	
1116	2011	\$20,483	Ford F250	16	Water						
1/2 TON TRUCKS											
			REPLACE AT								
			70,000/10 YEARS								
4103	2014	\$31,348	GMC 1500 Crew	103	Parks						
0818	2008	\$36,000	Ford F150	18	Highway		\$24,000				
1425	2014	\$19,828	GMC 1500	25	Highway						
1/4 TON TRUCKS											
			REPLACE AT								
			70,000/10 YEARS								
0314	2003	\$15,496	Ford Ranger	112	Code						\$20,145
0502	2005	\$14,707	Ford Ranger	120	Inspections						
SIDE WALK PLOWS											
			REPLACE AT								
			10 YEARS								
1350	2013	\$54,000	Wacker WL 30	50	Highway						
1551	2015	\$63,159	Bocat Toolcat	51	Highway						
0653	1999	\$52,000	Trackless (sidewalk plow)	53	Highway						\$25,960
0752	2007	\$82,357	Trackless (sidewalk plow)	52	Highway						\$25,960
0649	2006	\$110,000	Trackless (sidewalk plow)	49	Highway						
BACKHOE											
			REPLACE AT								
			12 YEARS								
1541	2015	\$76,000	John Deere 310SK	41	Highway						
9608	1996	\$81,100	John Deere 710D	39	Water						
PAYLOADERS											
			REPLACE AT								
			15 YEARS								
0115	2001	\$148,964	John Deere Payloader	17	Transfer Station			\$140,000			
0634	2006	\$126,667	Komatsu	34	Highway				\$150,000		\$36,600
1431	2014	\$142,000	SDLG Payloader	33	Highway						
0306	2003	\$161,802	Case Payloader	AP5	Airport						
0607	2006	\$61,595	409 Loader	JCB	Recycle				\$60,000		\$18,000
TRACTORS											
			REPLACE AT								
			10 YEARS								
0407	2004	\$106,472	Ford Versatile Tractor	40	Highway				\$80,000		
066AP	2006	\$106,472	Ford Versatile Tractor	60	Airport	\$135,000					
0905	2009	\$31,000	New Holland Tractor	105	Parks & Rec			\$40,300			
0932	2009	\$20,125	Cub Cadet	132	Cemetery		\$26,163				

VEHICLE AND EQUIPMENT 6 YEAR REPLACEMENT SCHEDULE

VEHICLE NUMBER	MODEL YEAR	PURCHASE PRICE	DESCRIPTION	VEHICLE DEPT. NO	USING DEPT/DIV	FY 2017/2018	FY 2018/2019	FY 2019/2020	FY 2020/2021	FY 2021/2022	FY 2022/2023
1429	2014	\$61,000	Kubota Tractor	29	WWTP						
1410	2014	\$23,400	Toyota Forklift		Recycle						
0513	2005	\$6,190	John Deere 1300	113	Parks & Rec	\$12,900					
0909	2009	\$8,000	John Deere X700	109	Parks & Rec		\$10,400				
1117	2011	\$32,250	Volvo MC115C	Skidsteer	Highway						\$41,925
0108	2001	\$33,020	NewHolland LS190	Skidsteer	Solid Waste	\$42,926					
0706	2007	\$70,588	Toro Mower	Mower	Cemetery				\$80,000		
6135	2016	\$10,600	Kubota Tractor	135	Cemetery						
SPECIALTY EQUIPMENT											
1528	2015	\$307,000	Freightliner VacCon	28	Water/Sewer	\$65,000	\$65,000				
0317	2003	\$204,638	Sterling VacCon	36	Highway			\$24,000			
9408	1994		Oshkosh Snow Blower	AP4	Airport						
AIR COMPRESSORS											
9503	1990	\$10,000	Ingersoll Compressor	133	Cemetery						
9714	1997	\$10,000	Lindsay Compressor	88	Highway						
1586	2015	\$13,730	Atlas Compressor	86	Water						
0589	2000	\$10,000	Air Compressor	89	Highway						
CONSTRUCTION EQUIPMENT											
0704	2007	\$4,499	Graco Painter	80	Highway						
9012	1990	\$6,000	Snow Blower attach	80	Highway			\$7,800			
9823	1998	\$10,000	Chipper		Highway	\$18,849					
0912	2009	\$1,788	Woods Brush Hog		Highway						
9912	2000	\$7,155	Rosco Roller		Highway	\$9,302					
9410	1994	\$18,700	Forklift		Fleet Services						
9818	1998	\$3,000	Trailer for Cemetery		Cemetery			\$3,900			
9924	1999	\$8,200	Hydro Tek Steamer		Highway			\$10,660			
0113	2001	\$21,208	Asphalt Reclaimer		Highway					\$53,530	
9301	1993	\$21,208	Asphalt Reclaimer		Highway					\$53,530	
8210	1982	\$20,000	Trailer		Highway						
0010	2000	\$5,800	Miller Curber		Highway	\$7,540					
0022	2000	\$33,000	Cimline Crack Sealer		Highway						
0520	2005	\$9,260	Welder/Generator on Trailer		Fleet Services						
0408	2004	\$38,000	USA Mower Attach		Highway						
0011	2000	\$5,225	Stowe Roller		Parks & Rec						
9014	1990	\$20,000	Sno-go Blower		Highway						
0663AP	2006		Salsco/Chipper		Airport						
0409	2004		Prontovost Snowblower		Highway						
0036	2000	\$9,995	Vibromax Roller		Highway						
						\$731,752	\$708,302	\$840,783	\$747,836	\$702,159	\$582,583
						Total					

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APPENDIX A

This appendix includes General Fund projects that are NOT included in the proposed FY 2018-2023 CIP but may appear in future CIP documents. These projects have not been included in the CIP for a variety of reasons, including limited resources and the need for additional project analysis and development.

AIRPORT (ECONOMIC DEVELOPMENT AND VITALITY)

Airport Sewer

In 2015 the City hired Stantec Consultants to update the 2003 Airport Master Plan for the Dillant-Hopkins Airport. The plan predicts that service expansion will occur in the upcoming years. The terminal building and private hangars at the airport are currently served by three (3) individual septic systems. There are additional parcels along Airport Road that can be developed. This project will extend the sewer main from the airport driveway entrance along Airport Road to create a municipal sewer line to service the airport. This will also create the infrastructure needed to develop adjacent city-owned property. Due to the flat grades throughout the airport property, a pump station is needed to convey sewer service to the airport driveway entrance. This pump will be outfitted with supervisory control and data acquisition (SCADA) software and hardware. This will be used to maintain operation of the pump and alert City staff should there be a problem with operation of the pump.

Airport Water

In 2015 the City hired Stantec Consultants to update the 2003 Airport Master Plan for the Dillant-Hopkins Airport. The plan predicts that service expansion will occur in the upcoming years. The terminal building and private hangars at the airport are currently served by a 6-inch water main that extends from Greenwood Avenue. There are additional parcels along Airport Road that can be developed. This project proposes extending the 6-inch main from the airport driveway entrance along Airport Road. It will be connected to the existing 6-inch water main within Route 32. This will create a service loop for the airport. The American Water Works Association recommends that water mains be looped to provide for improved flow capacity, water quality, and resiliency. The new main will be 8-inches to account for potential replacement of the existing 6-inch mains in the future.

CITY CLERK (GENERAL OPERATIONS FACILITIES AND INFRASTRUCTURE)

Voting Booths

The current registered voter population continues to trend upwards. This will require that the City of Keene purchase new voting booths to meet the statutory ratio of booths to registered voters. In addition, recent voter statistics indicate that voter participation is increasing for State and National elections. The City of Keene currently uses antique voting booths manufactured in the 1940-1950's era made of heavy gauged steel with an aluminum shelf in each booth. These booths are very cumbersome to transport and set up. Some of the voting booth metal frames have twisted over time and are now difficult to lock into place. They do not stand correctly and are not stable. Many of the shelves are damaged due to forcing the necessary rivets through the receptacle keyhole. This requires on-going maintenance during voting operations.

The State of New Hampshire recently approved a new style voting booth that complies with State requirements as to dimensions. The problems identified with the current booths would be resolved by purchasing these new style booths, which are made of lighter plastic materials and are self-contained with one piece construction. These new booths are designed for easier transportation and setup and would reduce storage requirements.

Estimated Costs = \$56,439

CITY MANAGER (ECONOMIC DEVELOPMENT AND VITALITY)

Broadband

Keene is equipped with all of the modern day, standard utilities required for business operations. Broadband is no exception, however, there are still some last-mile challenges that must be overcome to make fiber based services readily available throughout the city ubiquitously at reasonable costs. In addition, growth in provider competition will be required to push broadband service prices down.

New Hampshire FastRoads has built a sophisticated, gigabit-capable fiber network in Keene and made it available to all providers in accordance with its "open network" model. This proven model makes the network available for providers to sell high speed Internet services to any customers along the network route, thereby eliminating a major hurdle for those providers not interested in building their own independent networks. The lack of State of New Hampshire support in the development of competitive broadband networks relative to other states, however, creates a challenge for New Hampshire communities. Further development of the FastRoads network must continue to avail the high speed Internet services required for businesses to compete in the local, national and global marketplace, particularly in targeted development areas at a bare minimum.

The City should partner with other local organizations such as the Chamber of Commerce, the Monadnock Economic Development Corporation, NH FastRoads and other providers and local businesses to 1) raise awareness of this challenge and push for State support at the legislative level, 2) actively seek funding sources to bring the FastRoads fiber to the doorstep of every Keene business, and 3) increase provider competition for business and residential broadband services.

Dig Once Policy

According to the Federal Highway Administration, "90 percent of the cost of deploying broadband is when the work requires significant excavation of the roadway." Access to State and City rights of way are vital to the deployment of the fiber optic infrastructure required to bring better broadband services. When excavation is permitted in the right of way for any purpose, the City has the opportunity to require installation of fiber-ready conduit or, perhaps, allow access by broadband service providers during excavation. This could be accompanied by minimum bandwidth requirements. It is recommended that the City of Keene adopt a Dig Once ordinance to take advantage of future conduit installation opportunities.

Planning Board Review

Broadband plays a key role in the community planning process. Modern day broadband is a top criteria for businesses seeking entrepreneurial and expansion opportunities and for residents looking to build and buy homes. The purpose of the City of Keene Planning Board is "To develop long-range goals in order to harmonize the City's community standards with maximum opportunities for each individual and encourage and coordinate community efforts to provide a sound economic base for the City. The Board shall encourage the establishment of a balanced economy of diversified manufacturing, commercial and service industries sufficiently vigorous and dynamic to allow the accomplishment of the community goals." Broadband is vital to this purpose. It is recommended that the Planning Board review process

include a mechanism to require or incentivize extensions of fiber from existing networks into new and redeveloped business facilities to enable competitive, gigabit capable broadband services.

Legislation

New Hampshire municipalities are at an economic development disadvantage relative to other states that provide both financial support as well as legislative resources to enable the deployment of broadband networks. In New Hampshire the restrictions on municipal bonding for broadband do not enable the construction of effective, complete networks. When incumbent providers limit their investment in broadband infrastructure or charge uncompetitive rates for their broadband services Keene loses businesses and residents so vital to the local economy. New Hampshire municipalities should have the option to use public funds for the construction of broadband networks that meet modern day needs. It is recommended that the City partner with local businesses and organizations such as Monadnock Economic Development Corporation, the Southwest New Hampshire Regional Planning Commission and the Keene Chamber of Commerce to build a case for State of New Hampshire financial and legislative support for the development of long overdue modern broadband solutions in Keene.

Next Century City

According to Next Century Cities, "Across the country, innovative municipalities are already recognizing the importance of leveraging gigabit level Internet to attract new businesses and create jobs, improve health care and education, and connect residents to new opportunities. Next Century Cities is committed to celebrating these successes, demonstrating their value, and helping other cities to realize the full power of truly high-speed, affordable, and accessible broadband." This organization provides case studies, best practices, rights of way management resources, helpful information, training, events and guidance for communities like Keene who are interested in expanding local broadband opportunities. There are presently 154 member cities across the country. It is recommended that Keene become the first Next Century City in New Hampshire to both take advantage of this wealth of resources and put Keene on the map.

Conduct a Study

In order to better serve the broadband needs of the Keene community and develop specific plans we need to better understand at a detailed level the current environment. This includes measuring demand, identifying current services, analyzing current telecommunications legislation and identifying feasible broadband deployment opportunities. It is recommended that the City conduct a study to determine the potential uses and effective models for fiber and wireless broadband services in Keene.

LIBRARY (GENERAL OPERATIONS FACILITIES AND INFRASTRUCTURE)

Catalog Software

A major operational component of the library is Keene-Link, the partnership with the Keene State College library, which provides a shared catalog (Keene-Link) and reciprocal borrowing privileges. Keene-Link currently uses the Innovative Interfaces software called Millennium which is no longer being upgraded and for which support will not continue after two years. A committee made up of public and college library staff is in the process of reviewing what options are available for a next generation library system to replace Millennium.

PARKS & RECREATION AND FACILITIES (GENERAL OPERATIONS FACILITIES AND INFRASTRUCTURE)

City Hall Generator

The City Hall emergency backup generator is approximately 27 years old with a lifespan of 25 years. City Hall is home to the Emergency Operating Center and the City Data Center; both are required to have a backup power source. The EMG report identified the need and recommends replacement of the unit. Further evaluations agreed with the report findings and the overall condition of the emergency backup generator. The backup generator is at best in fair condition and should be replaced. The recommended lifespan is 20-30 years on emergency backup generator. Given this is a critical location, Facilities recommends upgrading immediately. It is also recommended to replace the automatic transfer switch at this time. The switch is also in functional condition, but is showing its age and it would be cost effective to be replaced along with the generator.

Estimated Cost = \$35,000

Municipal Building Improvements

The current condition of the Heating, Ventilation and Air Conditioning (HVAC) units at the Marlboro Street municipal complex have been observed as being past their useful life. As the Facilities staff continues to observe system failures, the cost of maintaining and repairing the units continues to increase as the necessary parts become obsolete. Replacing the existing units, technologies have changed to create higher energy efficiencies reducing cost and greenhouse gas emissions. Utilizing the EMG report, these units are past their useful life and should be replaced as these units are now 12-16 years old in 2016. The ASHRAE (ASHRAE is the industry origination that set standards and guidelines for HVAC equipment) life expectancy of these units is 15 years. In addition to the HVAC units, there are 4 Make up Air units located in the equipment bay of Public Works; they are in functional condition, but will be past useful life in the immediate future and should be replaced. They are recommended for replacement by the EMG report in FY2019. An engineering study is recommended to determine the proper replacement needs which could potentially reduce cost through energy saving incentives.

Estimated Costs

- 2- 3 ton HVAC systems for Server room KPD \$5,000 each unit total \$10,000 (redundant system)
- 2-7.5 ton HVAC units at \$11,000 each total \$22,000
- 1- 20 ton package gas heating –cooling unit \$32,750
- Engineering study for make-up air units located in equipment garage DPW \$3,500
- Replacement of 4 Make up air units \$38,540 each or \$154,160

Paving of Parking Lots

The City of Keene owns many facilities and associated parking lots used by various departments. Over the years a combination of vehicular use, cold and wet weather, and snow plows have deteriorated the condition of the lots. The damages are accelerated once moisture is able to enter the pavement base through cracks and freeze. In order to improve the function of the lots and reduce the long-term maintenance costs for patching and crack-sealing, rehabilitation is necessary. Rehabilitation of the lots will include milling the existing asphalt surface, performing spot repairs as needed, leveling low points, overlaying with new asphalt, and re-striping. Existing granite curbs that are damaged or out of alignment will be repaired or replaced. Existing bituminous curb will be replaced. The existing sidewalks will be evaluated and rehabilitated in kind.

Recreation Center Boilers

Installed in 1987, the Recreation Center boilers have been well maintained; however, they have served their useful life and are approximately 81% efficient at best. New technologies will bring energy and fuel efficient boilers to an improved 97% rating. To better understand the efficiency rating, this would represent 2200 gallons of propane savings. Translate the current cost of propane (city contract is \$1.155 per gallon) that represents \$2,500 per year savings in energy cost, and in addition this will eliminate approximately 27,940 pounds of CO2 per year. Recent boiler replacement projects have demonstrated the City's ability to potentially reduce the purchase cost through energy saving incentives should they still be available through local energy providers.

Estimated Cost = \$100,000

Recreation Center Multipurpose Floor

The multipurpose room at the Recreation Center is the most used floor in the building. A VCT tile floor was installed over the existing gym floor when the remodel occurred in 1987. The floor has been replaced in various sections, but due to the nature of the degrees of use, the floor has become brittle and deteriorated to a point that it can no longer be properly maintained and needs to be replaced with an alternative flooring material that will move with the existing floors. Existing tiles are no longer able to be matched and currently there are several different types of tile within the surface area.

Estimated Cost = \$45,000

Robin Hood Playground Building

Built in the 1960's, a small cement block building used for the summer playground with a seasonal restroom facility. Additionally, the building also hosts an oil fueled furnace to maintain warm temperatures in the winter for ice making operations and to keep the hoses from freezing. The 8 week summer program host about 90 children who enjoy the many activities the department has to offer. With a new building to accommodate the program, the department could create a revenue stream similar to the Wheelock playground building.

Estimated Cost = \$150,000

Swimming Pool

In fiscal years 2011 and 2012, both Robin Hood and Wheelock Pool were resurfaced respectively. The surface for each pool needs to be completed every 10 years in an effort to maintain a quality pool surface. Overtime, small chips and cracks occur and leaks can go undetected. Proper maintenance will keep the pools in operation for future generations to come.

Estimated Cost = \$90,000

Wheelock Park Lights

Working with the City Engineering Department, and reviewing the Active and Passive Recreation Management Plan, recreation lighting in Wheelock Park will need to be addressed. Current electric and pole infrastructure is failing on O'Neal and Durling fields, horseshoe pits, tennis courts, and skating rink as they were all installed in the early to mid-1980's. The youth ball fields were installed as recently as the early 2000's. Technologies have changed with LED's and creating a greener footprint and reduce energy bill is a mission of the City. Working with the department, park user groups will collaborate to create a capital campaign, seek grants, utilize alternative revenue sources, such as crowdfunding, and partner with local energy providers to fund this project.

Estimated Cost = \$1,471,667

PLANNING
(GENERAL OPERATIONS FACILITIES AND INFRASTRUCTURE)

Aerial Imagery Update

Aerial Imagery is the keystone of any effective GIS system. It is common practice for municipalities that aerial data is updated within five (5) year intervals and associated data is recommended to be updated at least every 10 years.

Estimated Cost = \$25,000

Aerial Wetland Identification and Mapping

Using 2015 aerial imagery consultant will be selected to interpret high precision wetland information as well as additional land cover data. This project will have specific bearing in assisting with the Surface Water Protection ordinance and making better data available to both the City and the public.

Estimated Cost = \$30,000

PLANNING
(COMMUNITY DEVELOPMENT)

Cheshire Rail Trail (V)

This CIP is a design and construction project to complete a segment of Rail Trail from Eastern Ave to Route 101 at the old abutments of the Old Stone Arch Bridge with a pocket park. The proposal is to apply for matching funds through the Recreational Trails Grant offered through NH Parks to supplement costs.

Estimated Cost = \$100,000

APPENDIX B

This appendix includes the Water and Sewer Funds (PUBLIC HEALTH AND SAFETY) capital projects that are scheduled for FY 2024 and beyond. Also included is a brief discussion of water main replacement funding. Due to the nature of aging utility infrastructure, and the scope of the proposed projects, this information is provided in an effort to better inform the long term discussion regarding utility fund infrastructure.

SEWER AND WATER INFRASTRUCTURE

Sewer Main Infrastructure

Although an Asset Management Plan has not been developed for a prioritized replacement of sewer mains, the recently funded inflow and infiltration work is providing the data needed to complete a rating similar to the risk and consequence analysis performed for water mains. This plan should be complete in 2017. This CIP includes replacing sewers in conjunction with Marlboro Street improvements and sewers on Blossom Street and Colony Court that have capacity deficiencies. The average cost of these projects is \$729,000 and represents a sewer main replacement rate of 1,650/feet per year. With more than 90 miles of sewer main, this rate of work sees replacement of the entire sewer system over 288 years. Sewer mains have an expected life of 50-100 years depending on the material and the risks of operating a main past its expected life include collapse, blockage, and overflows – all of which lead to unexpected disruption of customer service. The Administrative Order and associated fine levied to the City in 2004 by the federal Environmental Protection Agency was focused on the functionality, operation, and maintenance of the sewer system. The City responded by replacing and upgrading many of the oldest mains, but extending the replacement/rehabilitation of the remainder of the sewer mains may lead to increased failures over time.

Water Main Infrastructure

During development of the Capital Improvement Program (CIP), Public Works identified four high-priority water infrastructure improvements and spaced them out over the 6-year CIP. The prioritization is based on main criticality, repair history, and the level of potential health or environmental impacts that will occur when the main fails. Water main repair or replacement is also considered in conjunction with other major road work to preempt repairs under a newly paved roadway.

In 2016 a Water Mains Asset Management Plan was developed to provide a qualitative roadmap for prioritizing the replacement or rehabilitation of the City's drinking water mains. Based on the probability and consequences of failure, the four highest ranking mains are scheduled for replacement over the 6 years in this CIP. Due to budget constraints, the recommended annual work is planned for alternate years, FY 2019, 2021 and 2023. The City owns more than 100 miles of water mains and, over the 6 years of the current CIP, is scheduled to replace approximately 1.2 miles. While this pace maintains level funding, it does not keep pace with the recommended rehabilitation/replacement rate. At the rate of replacement reflected in the current CIP, the City's water mains will be replaced in approximately 500 years.

The Water Mains Asset Management Plan as presented to City Council in May of 2016 recommends an average annual funding cost of approximately \$830,000 (in 2016 dollars) to replace 3,280 feet per year between 2017 and 2069. Thereafter, the recommended spending is \$1.57 million (in 2016 dollars) to replace 5,707 feet per year through 2120. This level of spending replaces most of the City's water mains over 110 years.

While failure to replace water mains at this rate doesn't guarantee there will be catastrophic main breaks and severe consequences it certainly increases that risk. It is recommended the City use the pace of replacement in the Asset Management Plan as a guide for water main infrastructure improvements while understanding the potential risks associated with underfunding as it strikes a balance between project funding, operating budgets, competing projects, reliable and predictable water service and supply, and water rates.

Water Main Replacement/Rehabilitation

	FY2018 through FY2023 – proposed spending	Water Main Asset Management Plan Recommendation through 2069 (2016 dollars)
Average feet per year	1,056'	3,280'
Average funding per year	\$453,275	\$830,000

Public Works recommends the rate of replacement be increased to approximately \$934,000 per year in FY 2024, 2025 and 2026 to replace the next highest ranking water mains on Main, Island, Harrison, Church, Gilbo, and the Main Street end of Marlboro Street.

SEWER

WWTP Grit Removal System

This project replaces the grit removal equipment at the Wastewater Treatment Plant which came online in 1985. The grit system consists of two 40,000 gallon chambers intended to remove sand and other inorganic material as part of the treatment process. It is equipped with a clamshell style bucket, mounted to an overhead hoist in the grit chamber. This system is original to the plant and was designed to have an employee operate the crane one scoop at a time to remove the grit and inorganics that settles into the two chambers. It has a low level of functionality as the operator cannot see what is going on below the water surface and operates the clamshell blindly. The process takes a few days to clean one chamber and once the material is removed, it carries high odors and disposal costs because it contains organic material and water. The upgraded system will automatically remove the material daily and wash out the organic material, and dry it for disposal while creating little odor.

This project was originally budgeted in the FY17 CIP at an estimated cost of \$1.9 million, but was moved out because the Advanced Treatment Upgrade became priority and capital project funds were limited. A newer and more functional system for removing grit remains a valid project, but in recognition of budget limitations and competing projects, this project has been moved out approximately 13 years when the system will be approximately 45 years old.

Evaluation

Estimated Cost = \$25,000

Estimated Year = FY 2025

Design

Estimated Cost = \$190,016

Estimated Year = FY 2027

Construction

Estimated Cost = \$2,423,931

Estimated Year = FY 2030

WWTP Service Water System

This project replaces the original 1985 non-potable service water system at the Wastewater Treatment Plant. Non-potable service water is wastewater that has received complete treatment and can be discharge into the river, but is not suitable for drinking. To conserve resources, treated water is filtered then recycled for use in applications when drinking quality water is not required. Originally scheduled for replacement in FY17, budgetary restrictions have required the work and schedule to be changed. The controls, motors, and filters will be refurbished in FY19 to extend their use and to defer total replacement by at least 8 years. The eventual replacement should be considered for FY 2026 when the system is 41 years old, or when the replacement parts are no longer available. Technology for replacement equipment includes energy efficient, vertical multi-stage pumps with variable frequency drives, and a filter backwash system for removing fine particles, resulting in lower electric use and a cleaner product.

Estimated Cost = \$159,884

Estimated Year = FY 2026

WWTP Sludge Pump Replacement

In 1985, the WWTP's original equipment included five piston and bucket pumps for pumping the sludge that settles out of the primary clarifiers, scum wells and RV pump station. These systems were designed to run on a timer or by mechanical/human interface. Based on age and technology, these pumps were scheduled for replacement in FY18, but due to budgetary restrictions they are being refurbished with new parts in FY17 to extend their operational abilities to FY 2026. The pumps should be replaced by 2026 when they are 41 years old. The new system will be enclosed, will not create a corrosive atmosphere and will be fully automated into the plant SCADA system.

Estimated Cost = \$772,426

Estimated Year = FY 2026

WATER

Blowers and Backwash Pump Replacement – Water Treatment Facility

The Water Treatment Facility (WTF) became operational in 1993 and most of the process equipment is original to the plant. The November 2013 "Water Facilities Evaluation" performed by Tighe and Bond describes the average lifespan for this type of equipment being approximately 20 to 30 years.

The existing blowers that provide air for filters cleanings are original equipment and were re-built in 2003. The backwash pumps provide water for the filter cleanings and are also original equipment. The equipment is in good condition and has been properly maintained however based on the age of the equipment Tighe and Bond recommends they be replaced within 12 to 16 years of their evaluation, or when they are about 32 years old. Newer equipment will be more energy efficient and designed to minimize impact on water quality.

Estimated Cost = \$407,594

Estimated Year = FY 2025

Booster Station Electrical Equipment Upgrade - Glenn Road

The Glenn Road Pump Station is a below grade precast concrete pump station that was constructed in 1983. The pump station has three pumps ranging in size from 25 gallons per minute (gpm) to 100 gpm. The majority of the equipment was upgraded in 2002 and is in good condition. However, the electrical equipment including the electrical distribution system that consists of a 240 volt main disconnect switch, manual transfer switch, generator plug and load center are original and according to the 2013 Tighe and Bond evaluation have reached the end of their useful life and should be replaced to avoid unexpected service interruptions. The electrical equipment will be 41 years old at the time of replacement.

Estimated Cost = \$20,159

Estimated Year = FY 2024

Chlorine Injection Stations – Drummer Hill and Blackbrook

To maintain water quality in water storage tanks, operators strike a balance between the residual chlorine concentration and the level of disinfection byproducts that are created as water is stored. Because the water tanks are sized for fire protection, water can remain in the tank for several days before it is used and during this time the residual chlorine can dissipate or form regulated byproducts. Today, in order to increase the chlorine concentration, water treatment operators scale the tank and drop in chlorine tablets. This results in an uneven chlorine dose and residual; higher after the tablets are first dropped in and lower as they dissolve. Chlorine injection stations would result in a more consistent dose and predictable water quality.

This project included a study performed by Underwood Engineers in 2014 that evaluated the water quality impacts, risks, and benefits of injecting chlorine directly into the water storage tanks. The construction of these booster stations were scheduled for FY 2016 and FY 2017, but were moved back due to tank and booster station replacement/improvements at Drummer Hill.

The injection stations would include a small building that houses a chlorine tank, pump, electrical equipment and online monitoring equipment that would be tied into the SCADA system. This system would allow the water operator to be able to meter and trend the residual chlorine levels on SCADA and remotely increase or decrease the chlorine dose to respond to water quality issues.

Drummer Hill

Estimated Cost = \$152,225

Estimated Year = FY 2024

Black Brook

Estimated Cost = \$157,842

Estimated Year = FY 2025

Filter Media Replacement and Underdrain Systems – Water Treatment Facility

The City's water treatment facility has three treatment units; each has three different layers of filter media that has been renewed, but not replaced since its installation in 1993. The City contracted with Tighe and Bond Consulting Engineers in 2013 to perform an evaluation of the filters and media. The visible parts of the filter units were found to be in good repair but the underdrain components cannot be inspected while the units are filled with media. The evaluation also found the anthracite media does not meet specifications and its replacement will improve filter performance and efficiency by extending filter run times and having more effective cleaning cycles. More frequent cleaning cycles cause more wasted water, more electric use, and high sewer bills. Tighe and Bond recommend removing all three media layers to complete the underdrain evaluation and repair and to replace all 3 layers of media when the underdrain work is complete.

This project funds the inspection and repair and/or replacement of the underdrain system and filter media for each unit -- one unit every two years. Due to the operational downtime associated with this project and the budgetary impact, a phased approach is used:

Estimated Cost = \$191,466
Estimated Year = FY 2020

Estimated Cost = \$203,126
Estimated Year = FY 2022

Estimated Cost = \$215,496
Estimated Year = FY 2024

Generator and Switchgear – Water Treatment Facility

The Water Treatment Facility's 250 KW Generator was installed in 1997 to provide backup power to the Plant's critical equipment so that treatment is able to continue when line power is interrupted. A Facilities evaluation done in 2013 by Tighe and Bond Engineers recommended replacing the generator in FY 2024 when it will be 27 years old. Due to its age, reliability may be compromised as replacement parts for the generator and switch gear become harder to procure. If the generator does not operate correctly when the Plant loses line power, the Plant's ability to provide clean, safe drinking water and fire protection for the City would be impacted.

Estimated Cost = \$327,900
Estimated Year = FY 2024

Liquid Propane Tank Replacement – Water Treatment Facility

The Water Treatment Facility went on line in 1993, and its present two 1000 gallon liquid propane tanks that provide fuel for heating are buried underground on site. A Facilities evaluation performed in 2013 by Tighe and Bond Engineers, recommends replacement of the tanks in FY 2024, they will be 31 years old. Over time and normal aging, corrosion creates pits or holes in the tank and lines. Leaking propane increases the potential for fires or explosions resulting in personal injuries and property damage.

Estimated Cost = \$85,476
Estimated Year = FY 2024

Total Organic Carbon Analyzer - Water Treatment Facility

The Water Treatment Facility (WTF) is equipped with continuously online monitoring equipment that is relied on to provide accurate and reliable data for the Plant's Supervisory Control and Data Acquisition System (SCADA) to allow the Plant to operate autonomously and to allow trending, electronic record-keeping and lets staff make process changes to optimize water treatment. Over time this equipment requires replacement due to condition, the ability of the manufacturer to provide support, or simple obsolescence.

The online TOC analyzer continuously measures levels of organic carbon in the raw and treated water which vary according to season, water level, temperature, or rainfall. Compliance with the stage 2, disinfection by-product rule requires changes to chemical dosing and treatment strategies in response to changing TOC level changes – so the data provided by the TOC analyzer is an important part of the feedback system for chemical dosing and operations. The current TOC analyzer was installed in FY 2015 and has a useful life of approximately 10 years.

Estimated Cost = \$36,337

Estimated Year = FY 2025

Water Booster Station Upgrade - Drummer Hill

The Drummer Hill Booster Station is a small below grade pre-cast concrete pump station that was constructed in 1987. The pump station includes two 47 gallon per minute pumps that pump water to the Drummer Hill tank. The 2013 “Low pressure Zone Solutions Study” prepared by Underwood Engineers recommends replacing the underground station with an above ground station with larger pumps that can potentially supply the Fox Avenue area.

The 2013 Tighe and Bond evaluation also recommends replacing the underground station with an above ground station to allow for adequate space for the equipment and eliminate the need for staff to perform confined space entries. The electrical equipment including control panels and the transfer switch is original and is also below grade and should be replaced and moved above ground. The two pumps are original to the pump station, have been re-built several times and are approaching the end of their useful life. This pumping station is not equipped with an emergency power. Tighe and Bond recommend installing a generator and automatic transfer switch to provide continuous operation during a power outage.

An evaluation of this station is scheduled for FY 2024 to help staff determine the best course of action for addressing the deficiencies at this station and allows replacement when it is 40 years old.

Evaluation

Estimated Cost = \$25,000

Estimated Year = FY 2024

Design

Estimated Cost = \$236,490

Estimated Year = FY 2025

Construction

Estimated Cost = \$709,471

Estimated Year = FY 2027

Water Storage Tank Replacement – Drummer Hill

An evaluation of the repair/replacement options for the Drummer Hill water tank with a new, above ground tank that meets current standards are proposed in FY 2020 of the current CIP. This 100,000 gallon, pre-cast concrete water storage tank with an interior liner and aluminum dome roof was constructed in 1987 to provide fire suppression and potable water for residential customers. This tank was evaluated by Tighe and Bond in the November 2013 "Water Facilities Evaluation" and Underwood Engineers in the June 2013 "Low Pressure Zone Study". These studies indicate the tank should be upgraded to improve pressure and address the significant number of improvements needed to bring the tank into compliance with public health standards, including the 10 State Standards guidelines for water storage tanks. The tank's deficiencies include: leaking seals, lack of intrusion protection, a gap of approximately 1 inch between the walls and the domed roof, the presence of seams, absence of a watertight gasketed cover, and lack of a sample site. In addition, the tank is partially buried, and it is recommended that seamed tanks be located above grade to allow regular sanitary inspections and reduce the likelihood of rodent incursion. The tank does not provide the recommended 35 psi minimum static pressure to existing customers because the its overflow elevation is too low and the tank itself is smaller than recommended for fire suppression by the Insurance Services Office.

Evaluation

Estimated Cost = \$20,000

Estimated Year = FY 2020

Design

Estimated Cost = \$208,959

Estimated Year = FY 2022

Purchase and Installation

Estimated Cost = \$614,764

Estimated Year = FY 2024

Well Field and Corrosion Control Upgrades – West and Court Street Well Fields

The City's surface water supply is supplemented by 4 groundwater wells located on West and Court Streets. The FY 2020 evaluation will consider the City's current and future water demands and provide financially-based recommendations for the rehabilitation of current facilities compared to the development and construction of a new groundwater supply.

The West Street and Court Street well facilities include three well buildings that were constructed in the mid 1960's, one well building that was constructed in 1977 and two corrosion control buildings that house chemical feed equipment that were constructed in 1988. The November 2013 "Water Facilities Evaluation" performed by Tighe and Bond included many action items for both facilities. The current FY 2020 project funds a more in-depth detailed evaluation of these facilities.

The proposed evaluation will provide recommendations for repair/replace/relocation of the City's groundwater facilities and will assist the City in determining the best approach to addressing the deficiencies identified in the Tighe and Bond report. The study will evaluate the process, mechanical, civil, electrical, structural and architectural components of the system.

Court Street

Design

Estimated Cost = \$446,478

Estimated Year = FY 2027

Construction

Estimated Cost = \$2.2 million

Estimated Year = FY 2027

West Street

Design

Funded FY 2023

Construction

Estimated Cost = \$1.2 million

Estimated Year = FY 2025

APPENDIX C

This appendix is a grouping of FY2018 – 2023 CIP projects by geographical distribution within the City. Projects identified are related to Parks, Recreations, & Cemetery, Parking, and Public Works.

EAST

FY18

- Beaver Brook Hydrologic and Hydraulic Analysis
- Bridge Repair and Replacement Program – Roxbury Street
- Community Center Feasibility Study (Parks and Recreation Building)
- Flood Management Project – Winchester Street, Ralston Street, Madison Street area
- Road Rehabilitation -Baker Street, Crossfield Street, Dunbar Street, Harrison Street, Jordan Road, Willow, Court, Willow Street
- Sewer Improvements – Baker Street
- Water Main Cleaning and Lining – Carpenter Street, Kingsbury Street

FY19

- 560 Main Street Assessment
- Marlboro Street Corridor Improvements
- Parking Structure Maintenance – City Hall
- Road Rehabilitation - Carpenter Street, Ellis Court, Fowler Street, Kingsbury Street, Road Oak Drive, Valley Street, Village Drive, Woodbury Street, Wright Street
- Robin Hood Park Splash Pad
- Sewer Improvements – Marlboro Street
- Water Distribution Improvements – Marlboro Street
- Water Treatment Facility Instrumentation Upgrade
- Water Treatment Facility Pressure Reducing Valve Replacement

FY20

- Chapman Road Tank Repairs
- Flood Management Project – Roxbury Street
- Main Street (Rte. 101 to Marlboro Street), Proctor Court, South Street
- Parking Structure Maintenance – Wells Street
- Road Rehabilitation - Adams Street, Adams Court, Avalon Place, Elliot Street, Gates Street, Moore Farm Road, No Name Road, Sullivan Road (Rte. 9 to town line)
- Water Booster Station Repair – Fox Circle
- Water Main Cleaning and Lining – Roxbury Street (Reservoir Street to Oak Drive)
- Water Treatment Facility Media and Filter Replacement

FY21

- Bridge Repair and Replacement Program – George Street
- Carpenter Field Improvements
- Road Rehabilitation – Concord, Road, Martin Street
- Sewer Main Replacement – Colony Court
- Water Distribution Improvements – Main Street, Proctor Court to roundabout
- Water Treatment Facility Media and Filter Replacement

FY22

- 1.5 MG Storage Tank Repairs
- Chapman Road Repairs
- Flood Management Project – Church Street, Main Street
- Road Rehabilitation – Chapman Road
- Victoria Street Extension

FY23

- 3 MG Storage Tank Repairs
- Reconstruction Winchester Street from NH Rte.101 to Swanzey town line
- Water Treatment Facility Pavement Repair

CENTRAL

FY18

- Downtown Revitalization Study
- Road Rehabilitation – Armory Street, Baker Street

FY19

- Goose Pond Repair Project
- Road Rehabilitation - Gilsum Street, Gunn Road, North Street (Elm to Gilsum)

FY20

- Drummer Hill Tank Repair
- Water Booster Stations Repairs – Glen Road

FY21

- Sewer Improvements – Colony Court

FY22

- Downtown Revitalization Improvements
- Drummer Hill Tank Repair
- Flood Management Project – Central Square
- Road Rehabilitation - Darling Road, Meetinghouse Road, Timberlane Drive

FY23

- Downtown Revitalization Improvements
- Water Distribution Improvements – Court Street (East Surry Road to Maple Avenue)
- Well Field Upgrades – Court Street

WEST

FY18

- Cemetery Road Paving – Monadnock View Cemetery
- Flood Management Project – Winchester Street, Ralston Street, Madison Street area
- Road Rehabilitation - Wyman Road

FY19

- Road Rehabilitation – Bridge Court, Harmony Lane, Perham Street, Richardson Court, Woodburn Street
- Surface Parking Lot Maintenance – Gilbo East Parking Lot
- Winchester Street Reconstruction (Rte. 101 to Ashuelot River) and Island Street Bridge Replacement
- Water Main Cleaning and Lining – West Street (Symonds Place to Mutli-Use Trail Crossing)

FY20

- Black Brook Tank Repairs
- Road Rehabilitation – Arch Street (Park to Hurricane), River Street
- Sewer Improvements – Blossom Street
- Water Main Cleaning and Lining – Cady Street, Cobb Street, Hooper Street

FY21

- Road Rehabilitation - Cady Street, Cobb Street, Hooper Street, Lamson Street, Park Avenue, Salisbury Road, School Street (West to Emerald), Speaker Street, St. James Street
- Water Main Cleaning and Lining – Meadow Road

FY22

- Black Brook Tank Repairs
- Road Rehabilitation – Dickinson Road, Old Walpole Road
- Water Main Cleaning and Lining – Meadow Road

FY23

- Well Field Upgrades – West Street