

**CAPITAL IMPROVEMENT
BUDGET AND FIVE YEAR PLAN
2017-2021**

&

**CAPITAL EQUIPMENT BUDGET
AND THREE YEAR PLAN
2017-2019**



NOVEMBER 2016

City of Duluth, MN
2017-2021 Capital Improvement Plan

Table of Contents

Capital Improvement Section Page No.

Introduction and Summaries	1
2017 Program Funding Sources	3
2017 - 2021 Project Summary	4
Five Year Program by Funding Source	6
Capital Improvement Program	
Five Year Plan	7
Specific Project Detail	8-10
Parks and Trails	
Five Year Plan	11
Specific Project Detail	12-13
Street and Bridge Reconstruction & Preservation Program	
Five Year Plan Project Summary	14
Specific Project Detail	15-22
Capital Utility Projects	
Five Year Plan Project Summary	23
Specific Project Detail	24-28

Capital Equipment Section Page No.

Introduction and Summaries	29
2017 - 2019 Rolling Stock Bond Proposal	30
2017 - 2019 Non-Rolling Stock Bond Proposal	31
2017 - 2019 Utility Funds Proposal	32

CAPITAL BUDGET AND PLAN

The City of Duluth's Capital Budget and Plan addresses current and future improvements to the City's infrastructure, facilities, and properties by combining elements of both budgeting (current year needs) and planning (five-year plan). The purpose of the capital budget is two-fold: first, to prioritize and fund the most urgent needs in the coming year's budget; and secondly, to identify future capital needs with sufficient lead time so decisions may be made to our best advantage.

The City's capital budget includes capital improvement projects to City infrastructure, such as facility enhancements and expansion, upgrades to parks and trails, and improvements to streets and utilities. Also included in the capital budget are capital equipment rolling stock, such as public safety and maintenance vehicles, and non-rolling stock such as technology and public safety equipment. This section presents a summary of the 2017 capital improvement budget and the 2017 through 2021 capital improvement plans.

2017 Proposed Improvements

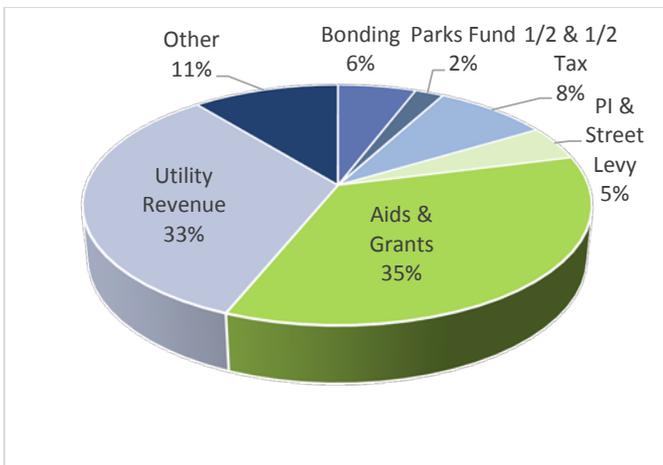
The 2017 capital improvement program outlines total proposed projects in the amount of \$27,629,851 funded through various sources including bonding, the Parks fund, the 1/2 and 1/2 tax, state and federal grants, the Permanent Improvement fund, the Street System Maintenance levy, and utilities revenue. Included in the capital improvement budget are projects for facilities, parks and trails, streets and bridges, and the Water, Gas, Sewer, Stormwater and Street Lighting utilities. The chart below shows the breakdown of funding for the 2017 program.

Capital improvements to city buildings and infrastructure will be funded by issuing a capital improvement bond in the amount of \$1,600,000.

Parks and trails are to be funded by federal grants totaling \$1,820,351; state grants totaling \$788,000; St Louis River Corridor bond proceeds (1/2 and 1/2 tax) of \$2,349,000; and the Parks fund contribution of \$585,000 for a combined program total of \$5,542,351.

The Street and Bridge Improvement and Preservation program for 2017 totals \$11,369,000. Funding sources include \$7,089,000 from aids and grants, \$280,000 from property tax dollars levied in the Permanent Improvement fund, \$1,000,000 from the Street System Maintenance levy, and \$3,000,000 from other sources.

2017 Capital Utility Projects total \$9,118,500 and will be funded with utility revenue.

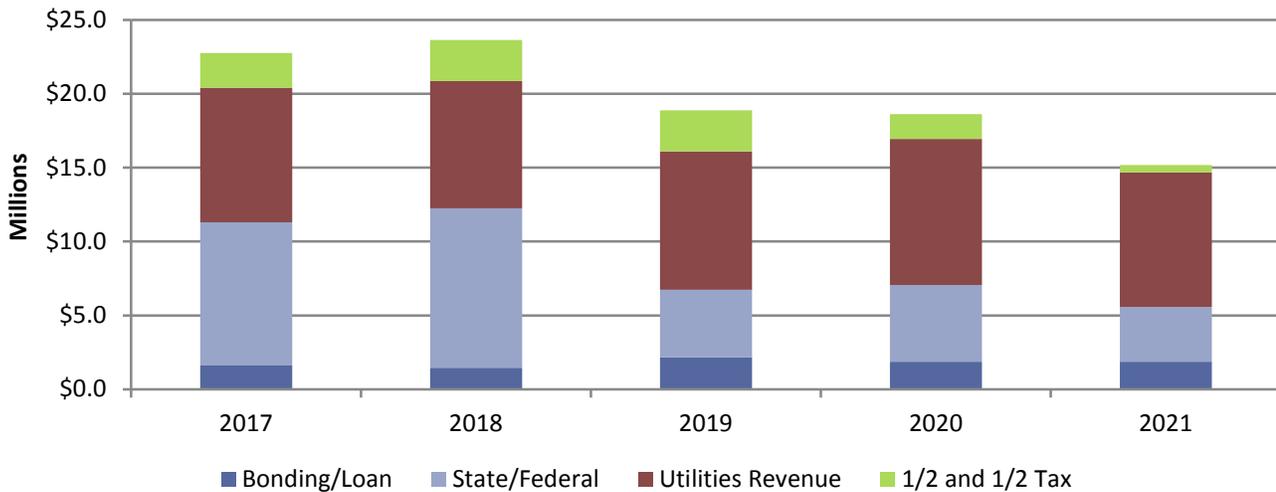


Bonding	\$1,600,000
Parks Fund	\$585,000
1/2 & 1/2 Tax	\$2,349,000
PI & Street Levy	\$1,280,000
Aids & Grants	\$9,697,351
Utility Revenue	\$9,118,500
Other	\$3,000,000
	<hr/>
	\$27,629,851

Five Year Improvement Plan Funding

The City has identified \$112.7 million in improvements along with funding sources over the course of the next five years. The City will bond for certain types of improvements as allowed in State Statute. For 2017, the City is proposing to bond for \$1.6 million in capital improvements. Future years of bonding include \$1.4 million in 2018, \$2.2 million in 2019, \$1.9 million in 2020, and \$1.9 million in 2021 for a combined five-year total of \$9 million. Also included in the five-year capital plan are park and trail projects totaling \$15.9 million; of which \$2.9 million will be funded out of the Parks Fund, \$2.2 million from Federal grants, \$10 million from the St Louis River Corridor bond proceeds (½ and ½ tax), and \$.8 million from state grants. The five-year plan for street and bridge projects includes \$41.7 million in projects with \$18.2 million in funding from Municipal State Aid. Additional funding sources for street and bridge projects include \$6.4 million from a state bridge bond, \$6.4 million from state and federal grants, \$1.4 million from property tax dollars levied in the Permanent Improvement fund, \$6.3 million from the Street System Maintenance levy, and \$3 million from other sources. Over the next five years, the Utility Funds will finance \$46 million in utility capital projects using operating revenues.

Shown in the chart below are the major funding sources by year for the plan.



	2017	2018	2019	2020	2021	Total
Bonding/Loan	1,600,000	1,450,000	2,175,000	1,870,000	1,870,000	8,965,000
State/Federal	9,697,351	10,800,000	4,560,000	5,197,995	3,700,000	33,955,346
PI & Street Mtc Levy	1,280,000	1,280,000	1,580,000	1,780,000	1,780,000	7,700,000
Utilities Revenue	9,118,500	8,610,000	9,375,000	9,880,000	9,100,000	46,083,500
Parks Fund/Other	3,585,000	585,000	585,000	585,000	585,000	5,925,000
1/2 and 1/2 Tax	2,349,000	2,770,000	2,770,000	1,680,000	500,000	10,069,000
Total Plan	27,629,851	25,495,000	21,045,000	20,992,995	17,535,000	112,697,846

2017 CAPITAL IMPROVEMENTS PROGRAM FUNDING SOURCES

	Bond	Parks Fund	1/2 & 1/2 Tax	PI/ Prior Yr Pl	Aids/ Grants	Street Mtce Levy	Utility Revenue	Other	Total
Facilities									
Buildings City-Wide	840,000								840,000
Maintenance	130,000								130,000
Fire Department	630,000								630,000
	1,600,000	-	-	-	-	-	-	-	1,600,000
Parks and Trails									
Parks		257,500	1,143,000		200,000				1,600,500
Traverse Trail		100,000							100,000
Cross City Trail			397,000		1,722,951				2,119,951
Western Waterfront Renewal			100,000		150,000				250,000
Stewart Creek Bridge			329,000		200,000				529,000
Clyde Connector			150,000		150,000				300,000
All-Weather Mtn Biking Trail			155,000						155,000
Ely's Peak Loop Trail			75,000						75,000
Lakewalk		227,500			185,400				412,900
	-	585,000	2,349,000	-	2,608,351	-	-	-	5,542,351
Street & Bridge Reconstruction and Preservation Program									
Aerial Lift Bridge					750,000				750,000
Boundary Avenue						200,000			200,000
Congdon Blvd					2,853,600				2,853,600
Downtown Avenue Conversion				100,000					100,000
Misc. Annual Infrastructure				180,000					180,000
MN Slip Ped Bridge								3,000,000	3,000,000
Skyline Parkway Walls					1,535,400				1,535,400
Street Preservation					1,950,000	800,000			2,750,000
	-	-	-	280,000	7,089,000	1,000,000	-	3,000,000	11,369,000
Capital Utility Projects									
2nd Avenue for Mesaba							250,000		250,000
4th Street Reconstruction (County)							1,124,000		1,124,000
East Superior Water Main							70,000		70,000
Michigan Street							650,000		650,000
Lakewood Filter Anthracite							250,000		250,000
4th St, 18th Ave. E to Hawthorne							1,164,500		1,164,500
48th Avenue East							750,000		750,000
Gas Main Extensions & Services							1,500,000		1,500,000
London Road Gas Project							300,000		300,000
Meter Relocations							100,000		100,000
Lift Station Improvements							100,000		100,000
Sanitary Sewer Rehab/Reline							1,100,000		1,100,000
Superior Street Lining							750,000		750,000
Annual Street Projects							500,000		500,000
Commonwealth Ave. Reconstruction							85,000		85,000
Superior Street Reconstruction							50,000		50,000
Intersection Signal Replacements							275,000		275,000
Signals and Lights Ethernet							100,000		100,000
	-	-	-	-	-	-	9,118,500	-	9,118,500
	1,600,000	585,000	2,349,000	280,000	9,697,351	1,000,000	9,118,500	3,000,000	27,629,851

2017-2021 CAPITAL IMPROVEMENTS PROGRAM PROJECT SUMMARY

	2017	2018	2019	2020	2021	Total
Capital Improvement Program						
CIP eligible building improvements	790,000	595,000	1,625,000	1,160,000	1,675,000	5,845,000
Police Building	50,000					50,000
42nd tool house improvements	30,000		125,000			155,000
Facilities				125,000		125,000
Fleet building improvements	100,000			75,000		175,000
Firehall #1 improvements	70,000	55,000	200,000	100,000		425,000
Firehall #2 improvements	195,000	200,000		160,000		555,000
Firehall #4 improvements	175,000	100,000		150,000		425,000
Firehall #6 improvements	150,000					150,000
Firehall #7 improvements					195,000	195,000
Firehall #10 improvements		350,000	125,000			475,000
Firehall #11 improvements	40,000	150,000	100,000	100,000		390,000
Capital Improvement Program Total	1,600,000	1,450,000	2,175,000	1,870,000	1,870,000	8,965,000
Parks and Trails						
Playgrounds	90,500	100,000	100,000	100,000	100,000	490,500
Hartley Park	94,000					94,000
Brighton Beach	23,000	23,000	23,000	410,995		479,995
Chester Park	50,000					50,000
Chambers Grove	203,000					203,000
Signage & Wayfinding	220,000	50,000	50,000	50,000	50,000	420,000
SLRC Neighborhood Parks	270,000	270,000	270,000	180,000		990,000
Community Centers	100,000	100,000	100,000	100,000	100,000	500,000
Parks - Other	550,000	1,127,000	1,127,000	1,127,000	650,000	4,581,000
Traverse Trail	100,000	75,000	50,000	25,000		250,000
Cross City Trail	2,119,951					2,119,951
Western Waterfront Restoration	250,000					250,000
Stewart Creek Bridge	529,000					529,000
Clyde Connector	300,000					300,000
All-Weather Mtn Biking Trail	155,000					155,000
Ely's Peak Loop Trail	75,000					75,000
Lakewalk	412,900					412,900
Trails - Other		1,610,000	1,635,000	660,000	185,000	4,090,000
Parks and Trails Total	5,542,351	3,355,000	3,355,000	2,652,995	1,085,000	15,990,346
Street & Bridge Reconstruction and Preservation Program						
9th and 8th Street Reclamation			1,360,000			1,360,000
Aerial Lift Bridge	750,000	8,000,000				8,750,000
Boundary Avenue	200,000					200,000
Concrete Pavement Repairs					900,000	900,000
Congdon Blvd	2,853,600					2,853,600
Decker Road		1,400,000				1,400,000
Downtown Avenue Conversion	100,000					100,000
East 3rd Street Recondition				1,610,000		1,610,000
Misc. Annual Infrastructure	180,000	280,000	280,000	280,000	280,000	1,300,000
MN Slip Ped Bridge	3,000,000					3,000,000
Railroad Street					1,500,000	1,500,000
Skyline Parkway Walls	1,535,400					1,535,400
Street Preservation	2,750,000				1,500,000	4,250,000
Superior Street		2,400,000	4,500,000	4,700,000	1,300,000	12,900,000
Street, Bridge and Preservation Total	11,369,000	12,080,000	6,140,000	6,590,000	5,480,000	41,659,000

2017-2021 CAPITAL IMPROVEMENTS PROGRAM PROJECT SUMMARY

	2017	2018	2019	2020	2021	Total
Capital Utility Projects						
2nd Avenue for Mesaba	250,000					250,000
4th Street Reconstruction (County)	1,124,000					1,124,000
42-inch Riveted Steel Inspection					550,000	550,000
Cathodic Protection System on 42-inch Steel Study/Construction		80,000			100,000	180,000
East Superior Water Main	70,000					70,000
Far East Superior Street Water Main Services off 42-inch				600,000	700,000	1,300,000
Gogebic Creek (MNDOT)					200,000	200,000
Hidden Valley Phase 2			1,050,000			1,050,000
McCuen Street (MNDOT)			225,000			225,000
Michigan Street	650,000					650,000
Middle Pump Station Design					200,000	200,000
Lakewood Filter Anthracite	250,000					250,000
Ramsey Street in Existing Casing		100,000				100,000
Superior Street & Mesaba (MNDOT)		550,000				550,000
Superior Street Reconstruction		1,400,000	1,600,000	2,000,000		5,000,000
US Steel Creek (MNDOT)					120,000	120,000
Water Plant Electrical Upgrades					1,500,000	1,500,000
3rd St, Vernon, 2nd Street Alley			200,000			200,000
4th St, 18th Ave. E to Hawthorne	1,164,500					1,164,500
20th & 23rd Ave. W, 10th Street				1,000,000		1,000,000
48th Avenue East	750,000					750,000
58th Avenue West			200,000			200,000
Building Shells for Reg Stations		60,000	60,000			120,000
Gas Main Extensions & Services	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	7,500,000
London Road Gas Project	300,000					300,000
Meter Relocations	100,000	200,000	300,000	200,000		800,000
Michigan Street Gas Project		120,000				120,000
Relocate Airpark/Martin Regs		150,000				150,000
Steel Main Replacements				500,000	500,000	1,000,000
Stora Enso Flow Meter			100,000			100,000
Woodland Ave. Gas Project		500,000				500,000
Lift Station Improvements	100,000	500,000	500,000	500,000	500,000	2,100,000
Sanitary Sewer Rehab/Reline	1,100,000	1,000,000	1,500,000	1,500,000	1,500,000	6,600,000
Superior Street Lining	750,000	500,000				1,250,000
Annual Street Projects	500,000	100,000	100,000	100,000	100,000	900,000
City-wide Driveway Culvert Project		75,000	75,000			150,000
Brewery Creek Tuckpointing		260,000	195,000			455,000
City-wide Down Drains				355,000		355,000
Clarkhouse Creek			75,000		200,000	275,000
Commonwealth Ave. Reconstruction	85,000					85,000
Gary New Duluth System		100,000	100,000	100,000	100,000	400,000
Greys Creek		75,000		200,000		275,000
Kenwood Ave. Box Culvert			125,000			125,000
Lower Coffee Creek		75,000			100,000	175,000
McCuen St (TH39) MNDOT			200,000			200,000
Norton Road & Thurber Road		40,000	25,000		555,000	620,000
Piedmont Heights System			20,000	100,000	100,000	220,000
Superior Street Reconstruction	50,000	300,000	300,000	300,000		950,000
Decorative Street Lights					200,000	200,000
Intersection Signal Replacements	275,000				275,000	550,000
Signals and Lights Ethernet	100,000	100,000	100,000	100,000	100,000	500,000
Superior Street		825,000	825,000	825,000		2,475,000
Capital Utility Projects Total	9,118,500	8,610,000	9,375,000	9,880,000	9,100,000	46,083,500
GRAND TOTAL	27,629,851	25,495,000	21,045,000	20,992,995	17,535,000	112,697,846

5 YEAR CAPITAL IMPROVEMENTS PROGRAM BY FUNDING SOURCE

	2017	2018	2019	2020	2021	Total
Bond	1,600,000	1,450,000	2,175,000	1,870,000	1,870,000	8,965,000
Parks Fund	585,000	585,000	585,000	585,000	585,000	2,925,000
1/2 & 1/2 Tax	2,349,000	2,770,000	2,770,000	1,680,000	500,000	10,069,000
Permanent Improvement Fund	280,000	280,000	280,000	280,000	280,000	1,400,000
Street System Maintenance Levy	1,000,000	1,000,000	1,300,000	1,500,000	1,500,000	6,300,000
Federal Grants	5,331,551	900,000	860,000	1,497,995	-	8,589,546
State Funding						
State Bridge Bond	-	6,400,000	-	-	-	6,400,000
MSA	3,577,800	3,500,000	3,700,000	3,700,000	3,700,000	18,177,800
DNR	438,000	-	-	-	-	438,000
Grants	350,000	-	-	-	-	350,000
Other Funding Sources	3,000,000	-	-	-	-	3,000,000
Utilities - Current Year Revenue						
Water	2,344,000	2,130,000	2,875,000	2,600,000	3,370,000	13,319,000
Gas	3,814,500	2,530,000	2,360,000	3,200,000	2,000,000	13,904,500
Sewer	1,950,000	2,000,000	2,000,000	2,000,000	2,000,000	9,950,000
Stormwater	635,000	1,025,000	1,215,000	1,155,000	1,155,000	5,185,000
Street Lighting	375,000	925,000	925,000	925,000	575,000	3,725,000
	9,118,500	8,610,000	9,375,000	9,880,000	9,100,000	46,083,500
TOTAL ALL FUNDING SOURCES	27,629,851	25,495,000	21,045,000	20,992,995	17,535,000	112,697,846

Capital Improvement Program Summary

Operating Cost Implications of Proposed Projects:

The Capital Improvement Program is the principal funding program the City uses to make large, planned improvements and corrections to its building inventory and infrastructure. It traditionally consists of issuing general obligation bonds for city hall, public safety facilities, libraries and public works facilities. The City maintains 148 structures with an average age of over 40 years. These structures require continued accessibility and code compliance efforts.

Projects	2017	2018	2019	2020	2021	Total
Buildings City-Wide	840,000	595,000	1,625,000	1,160,000	1,675,000	5,895,000
Maintenance Buildings	130,000	-	125,000	200,000	-	455,000
Fire Buildings	630,000	855,000	425,000	510,000	195,000	2,615,000
Total	1,600,000	1,450,000	2,175,000	1,870,000	1,870,000	8,965,000

Funding	2017	2018	2019	2020	2021	Total
Capital Improvement Bond	1,600,000	1,450,000	2,175,000	1,870,000	1,870,000	8,965,000

Buildings City-Wide

Description:

It is important to maintain a city-wide program of facility system replacements and accessibility compliance for structures. Many remote sites need masonry tuck pointing; this is our primary point of water migration into finished spaces. We have damaged window heads, sills and parapets which also need repairs. Additionally, many remote sites are being heated with boilers or furnaces which are 20 years old and beyond. Replacing these with modern, high efficient units with electronic controls can realize 15% annual energy savings over the continued life of the structure. All of these types of system replacements and facility upgrades are aimed at keeping these public buildings in the best state of repair and function possible with the funding available.

Project	2017	2018	2019	2020	2021	Total
CIP eligible building improvements	790,000	595,000	1,625,000	1,160,000	1,675,000	5,845,000
Police Building	50,000	-	-	-	-	50,000
Total	840,000	595,000	1,625,000	1,160,000	1,675,000	5,895,000

Funding	2017	2018	2019	2020	2021	Total
Capital Improvement Bond	840,000	595,000	1,625,000	1,160,000	1,675,000	5,895,000

Maintenance

Description:

As a group of CIP eligible facilities, the Maintenance buildings that support the activities of Property and Facilities Management and Maintenance Operations represent some of the most rapidly deteriorating CIP eligible facilities that the City currently owns. Each of these facilities have significant capital needs that are extremely critical to maintain facility integrity and to continue operations as viable assets housing core City services. The group of maintenance facilities represents many challenges and some opportunities. As part of a longer term strategy for this element of the portfolio, the reality that most of these facilities have capital improvement needs in excess of 50% of their replacement value has driven Property and Facilities Management to consider investments that are primarily aimed at maintaining the facility integrity and ensuring the safety and comfort of City staff working out of these facilities while not significantly improving the assets. As assets, this group of buildings have significant value for potential resale, as most are located on prime real estate, and should a longer term solution aimed at a total consolidation of maintenance activities into one newly constructed facility come to fruition, the focus of this part of the capital plan is on - primarily - maintaining the status quo in a manner that sufficiently meets the operational needs and protects the assets from significant deterioration over the next 5 years.

Project	2017	2018	2019	2020	2021	Total
42nd tool house improvements	30,000	-	125,000	-	-	155,000
Facilities	-	-	-	125,000	-	125,000
Fleet building improvements	100,000	-	-	75,000	-	175,000
Total	130,000	-	125,000	200,000	-	455,000

Funding	2017	2018	2019	2020	2021	Total
Capital Improvement Bond	130,000	-	125,000	200,000	-	455,000

Fire Department

Description:

Over the next five years, the City is proposing to invest \$2.6 million in capital maintenance projects at firehalls throughout the City. There are remodeling projects to accommodate staff reorganizations as part of the Fire Department consolidation plan. Energy improvements consist of installing new windows and overhead doors, and replacing furnaces and roofs. Repair and maintenance projects consist of masonry and brick repair, as well as resolving drainage issues and replacing driveways.

Project	2017	2018	2019	2020	2021	Total
Firehall #1 improvements	70,000	55,000	200,000	100,000	-	425,000
Firehall #2 improvements	195,000	200,000	-	160,000	-	555,000
Firehall #4 improvements	175,000	100,000	-	150,000	-	425,000
Firehall #6 improvements	150,000				-	150,000
Firehall #7 improvements	-	-	-	-	195,000	195,000
Firehall #10 improvements	-	350,000	125,000	-	-	475,000
Firehall #11 improvements	40,000	150,000	100,000	100,000	-	390,000
Total	630,000	855,000	425,000	510,000	195,000	2,615,000

Funding	2017	2018	2019	2020	2021	Total
Capital Improvement Bond	630,000	855,000	425,000	510,000	195,000	2,615,000

Parks and Trails Summary

Description:

Park and trail capital projects are funded from three major sources: Parks Fund, 1/2 and 1/2 tax, and federal and state grants. The Parks Fund allocates monies each year for small park and trail capital projects (usually less than \$100,000 each). The 1/2 and 1/2 tax was authorized in 2014 to fund a total of \$18 million park, trail, and outdoor recreation projects in the St. Louis River Corridor. The 1/2 and 1/2 tax and the Parks Fund are used to leverage state and federal grants that increase the magnitude of park and trail capital improvements. Selection and design of capital projects is shaped by input and direction from the community, Parks Commission, and City Council.

Projects	2017	2018	2019	2020	2021	Total
Trails	3,941,851	1,685,000	1,685,000	685,000	185,000	8,181,851
Parks	1,600,500	1,670,000	1,670,000	1,967,995	900,000	7,808,495
Total	5,542,351	3,355,000	3,355,000	2,652,995	1,085,000	15,990,346

Funding	2017	2018	2019	2020	2021	Total
Federal Grant	1,820,351	-	-	387,995	-	2,208,346
State Grant	788,000	-	-	-	-	788,000
Parks Fund	585,000	585,000	585,000	585,000	585,000	2,925,000
1/2 and 1/2 Tax	2,349,000	2,770,000	2,770,000	1,680,000	500,000	10,069,000
Total	5,542,351	3,355,000	3,355,000	2,652,995	1,085,000	15,990,346

Assumptions

*No new grant awards for 2017-2021

City of Duluth 2017-2021 Capital Improvement Plan

Parks Detail

Project	2017	2018	2019	2020	2021	Total
Playgrounds	90,500	100,000	100,000	100,000	100,000	490,500
Hartley Park	94,000	-	-	-	-	94,000
Brighton Beach	23,000	23,000	23,000	410,995	-	479,995
Chester Park	50,000	-	-	-	-	50,000
Chambers Grove	203,000	-	-	-	-	203,000
Signage & Wayfinding	220,000	50,000	50,000	50,000	50,000	420,000
SLRC Neighborhood Parks	270,000	270,000	270,000	180,000	-	990,000
Community Centers	100,000	100,000	100,000	100,000	100,000	500,000
Parks - Other	550,000	1,127,000	1,127,000	1,127,000	650,000	4,581,000
Total	1,600,500	1,670,000	1,670,000	1,967,995	900,000	7,808,495

Funding	2017	2018	2019	2020	2021	Total
Federal Grant	200,000	-	-	387,995	-	587,995
State Grant	-	-	-	-	-	-
Parks Fund	257,500	400,000	400,000	400,000	400,000	1,857,500
1/2 and 1/2 Tax	1,143,000	1,270,000	1,270,000	1,180,000	500,000	5,363,000
Total	1,600,500	1,670,000	1,670,000	1,967,995	900,000	7,808,495

City of Duluth 2017-2021 Capital Improvement Plan

Trails Detail

Project	2017	2018	2019	2020	2021	Total
Traverse Trail	100,000	75,000	50,000	25,000	-	250,000
Cross City Trail	2,119,951					2,119,951
Western Waterfront Restoration	250,000	-	-	-	-	250,000
Stewart Creek Bridge	529,000	-	-	-	-	529,000
Clyde Connector	300,000	-	-	-	-	300,000
All-Weather Mtn Biking Trail	155,000	-	-	-	-	155,000
Ely's Peak Loop Trail	75,000	-	-	-	-	75,000
Lakewalk	412,900	-	-	-	-	412,900
Trails - Other		1,610,000	1,635,000	660,000	185,000	4,090,000
Total	3,941,851	1,685,000	1,685,000	685,000	185,000	8,181,851

Funding	2017	2018	2019	2020	2021	Total
Federal Grant	1,620,351	-	-	-	-	1,620,351
State Grant	788,000	-	-	-	-	788,000
Parks Fund	327,500	185,000	185,000	185,000	185,000	1,067,500
1/2 and 1/2 Tax	1,206,000	1,500,000	1,500,000	500,000		4,706,000
Total	3,941,851	1,685,000	1,685,000	685,000	185,000	8,181,851

Street Improvement & Bridge Projects Summary

Description:

These projects include street reconstruction, street preservation and bridge maintenance. Funding sources include municipal state aid, federal funds, grants, street system maintenance utility, St. Louis County, developer contributions, and utility revenue.

Operating Cost Implications of 2017 Approved Projects:

Operating costs for street maintenance will remain fairly constant as the same number of streets are overlaid or reconstructed annually.

Project	2017	2018	2019	2020	2021	Total
9th and 8th Street Reclamation			1,360,000			1,360,000
Aerial Lift Bridge	750,000	8,000,000				8,750,000
Boundary Avenue	200,000					200,000
Concrete Pavement Repairs					900,000	900,000
Congdon Blvd	2,853,600					2,853,600
Decker Road		1,400,000				1,400,000
Downtown Avenue Conversion	100,000					100,000
East 3rd Street Recondition				1,610,000		1,610,000
Misc. Annual Infrastructure	180,000	280,000	280,000	280,000	280,000	1,300,000
MN Slip Ped Bridge	3,000,000					3,000,000
Railroad Street					1,500,000	1,500,000
Skyline Parkway Walls	1,535,400					1,535,400
Street Preservation	2,750,000				1,500,000	4,250,000
Superior Street		2,400,000	4,500,000	4,700,000	1,300,000	12,900,000
Total	11,369,000	12,080,000	6,140,000	6,590,000	5,480,000	41,659,000

Funding	2017	2018	2019	2020	2021	Total
Federal	3,511,200	900,000	860,000	1,110,000	-	6,381,200
State	3,577,800	9,900,000	3,700,000	3,700,000	3,700,000	24,577,800
Street System Mtce Utility	1,000,000	1,000,000	1,300,000	1,500,000	1,500,000	6,300,000
Permanent Improvement	280,000	280,000	280,000	280,000	280,000	1,400,000
Other	3,000,000					3,000,000
Total	11,369,000	12,080,000	6,140,000	6,590,000	5,480,000	41,659,000

Miscellaneous Annual Infrastructure

Description:

Miscellaneous annual infrastructure projects include those that are funded by the permanent improvement property tax levy and limited use of special assessments to the affected property owner. Permanent improvement projects are generally limited to intersections, bridges, and other items that are not eligible for other funding sources. These projects include repair or replacement of the brick streets and sidewalks, a portion of the utility trench patch program, one way street conversions, retaining walls, and guard rail repair.

Project	2017	2018	2019	2020	2021	Total
Permanent Improvements	200,000	200,000	200,000	200,000	200,000	1,000,000
Patch & Sidewalks	80,000	80,000	80,000	80,000	80,000	400,000
Total	280,000	280,000	280,000	280,000	280,000	1,400,000

Funding	2017	2018	2019	2020	2021	Total
PI Fund	280,000	280,000	280,000	280,000	280,000	1,400,000

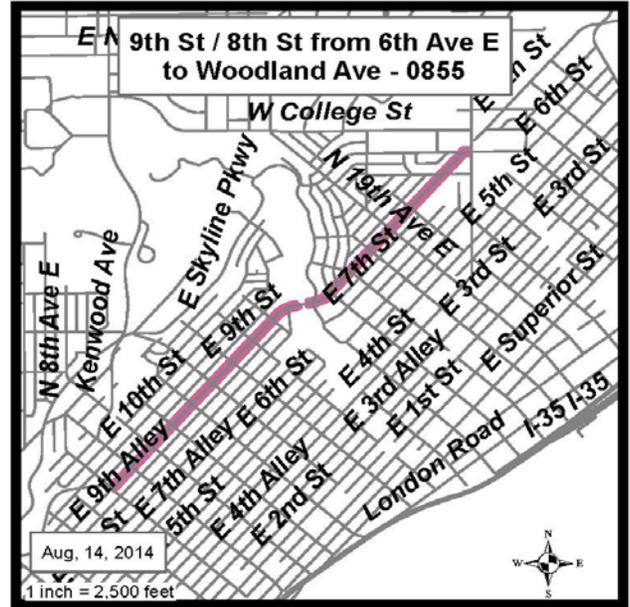
Street Improvement & Bridge Projects

Project Title:

9th Street/8th Street Reclamation
6th Ave E to Woodland Ave

Funding Source:

	FY 2019
Federal/ATP	860,000
MSA	500,000
PROJECT TOTAL:	\$1,360,000

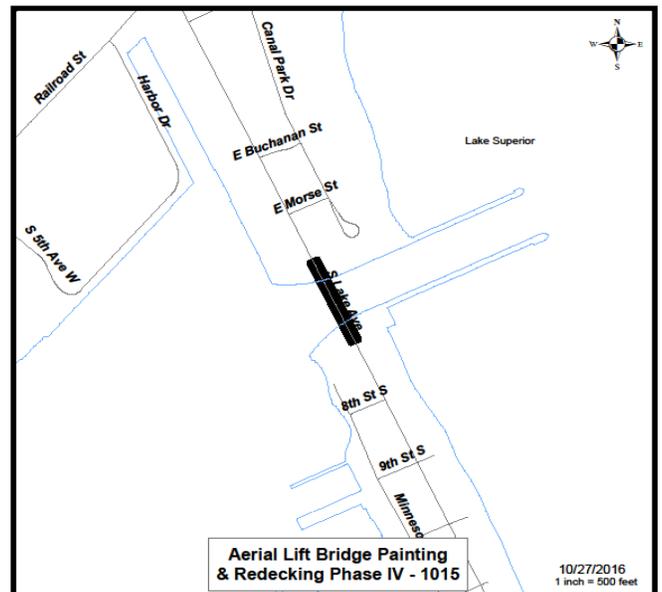


Project Title:

Aerial Lift Bridge
Painting and Misc. Structural Repairs

Funding Source:

	FY 2017-2018
MSA	2,350,000
State Bridge Bond	6,400,000
PROJECT TOTAL:	\$8,750,000



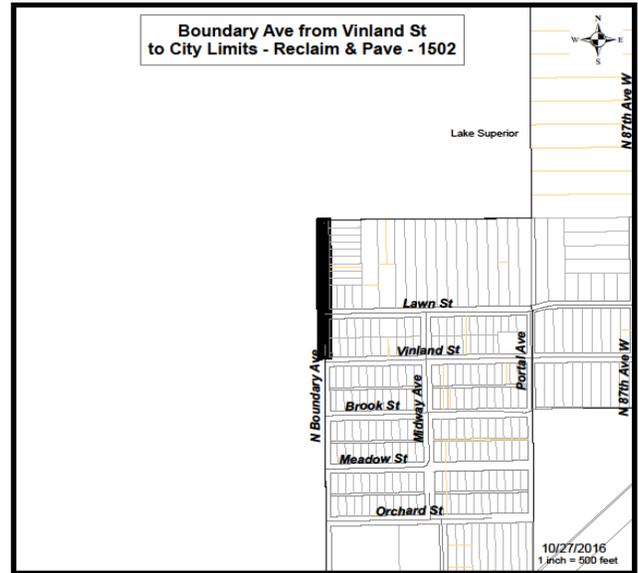
Street Improvement & Bridge Projects

Project Title:

Boundary Avenue
 Vinland to City Limits - Reclaim and Pave

Funding Source:

	FY 2017
Street System Mtce Utility	200,000
PROJECT TOTAL:	\$200,000



Project Title:

Concrete Pavement Repairs
 Various Locations

NO MAP AVAILABLE

Funding Source:

	FY 2021
MSA	900,000
PROJECT TOTAL:	\$900,000

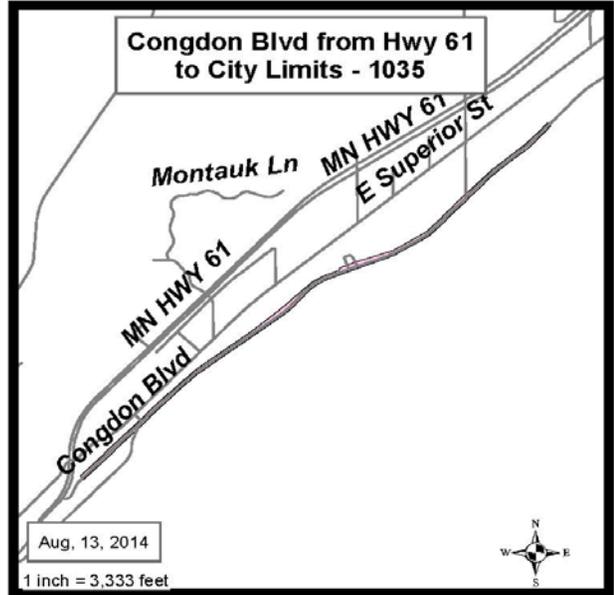
Street Improvement & Bridge Projects

Project Title:

Congdon Boulevard
Widening, Reclamation, Guardrail

Funding Source:

	FY 2017
Federal/ATP	2,282,900
MSA	570,700
	\$2,853,600
PROJECT TOTAL:	

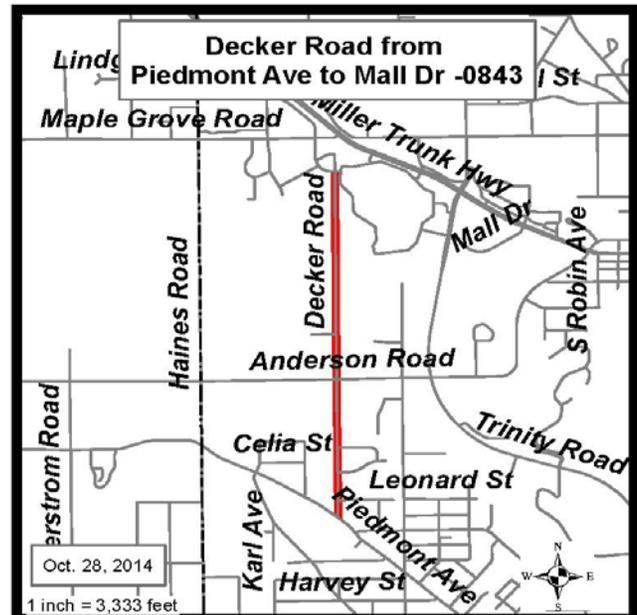


Project Title:

Decker Road Mill and Overlay
Piedmont Avenue to Mall Drive

Funding Source:

	FY 2018
Federal/ATP	900,000
MSA	500,000
Street Improvement Subtotal	1,400,000
Water	12,500
Utility Projects Subtotal	12,500
PROJECT TOTAL:	\$1,412,500



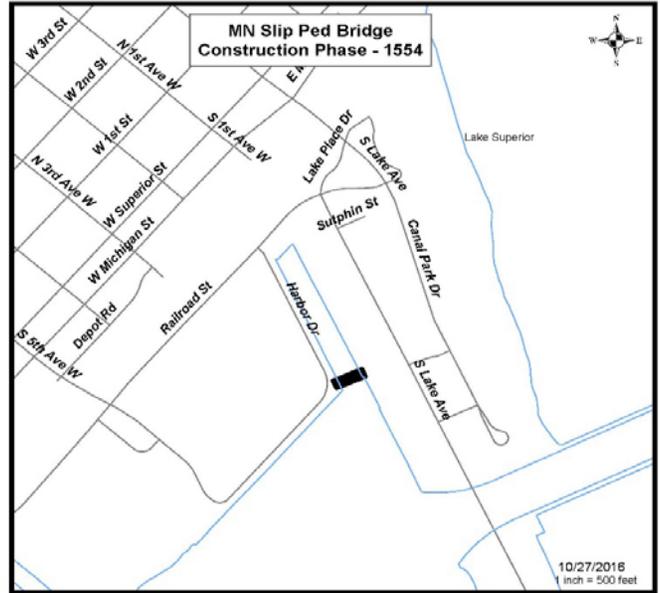
Street Improvement & Bridge Projects

Project Title:

MN Slip Ped Bridge
Construction Phase

Funding Source:

	<u>FY 2017</u>
Other	3,000,000
PROJECT TOTAL:	\$3,000,000



Project Title:

Railroad Street
Lake Avenue to Garfield Avenue

Funding Source:

	<u>FY 2021</u>
MSA	1,500,000
PROJECT TOTAL:	\$1,500,000



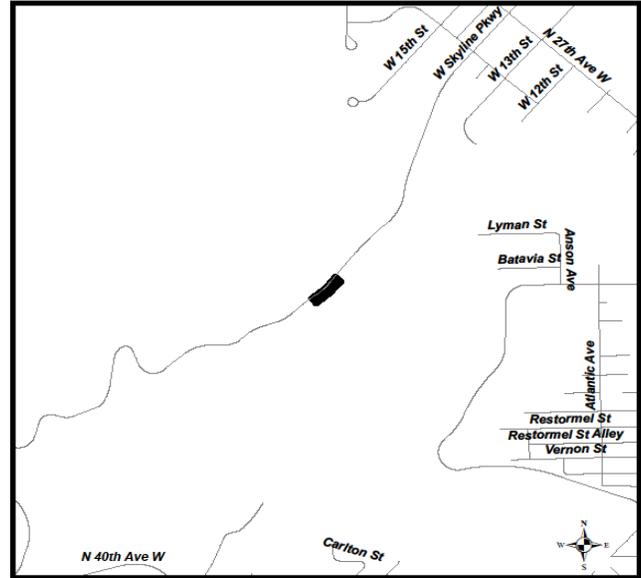
Street Improvement & Bridge Projects

Project Title:

Skyline Parkway Retaining Wall
Construction Phase

Funding Source:

	<u>FY 2017</u>
Federal/ATP	1,228,300
MSA	307,100
PROJECT TOTAL:	\$1,535,400



W Skyline Pkwy between
40th Ave W & 27th Ave W - 1432

Project Title:

Street Preservation Projects
Various Locations

NO MAP AVAILABLE

Funding Source:

	<u>FY 2017 & 2021</u>
MSA	1,950,000
Street System Mtce Utility	2,300,000
PROJECT TOTAL:	\$4,250,000

Street Improvement & Bridge Projects

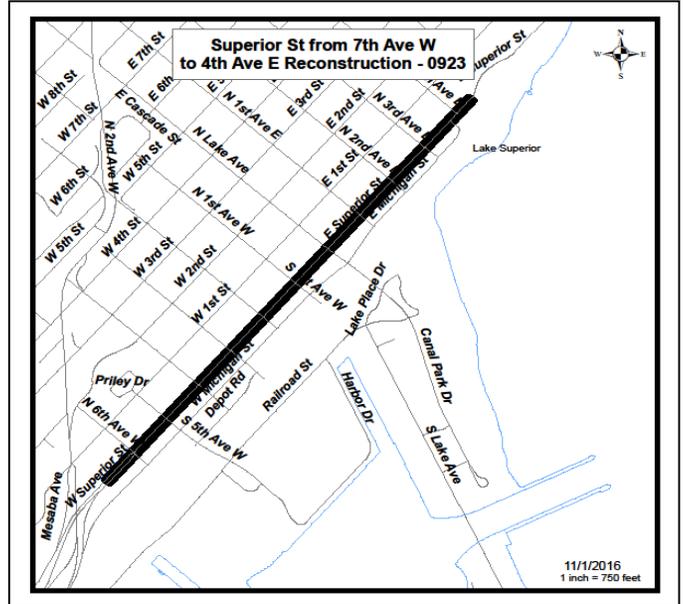
Project Title:

Superior Street Reconstruction

Funding Source:

	<u>FY 2017-2021</u>
MSA	9,100,000
Street System Mtce Utility	3,800,000
<u>Street Improvement Subtotal</u>	<u>12,900,000</u>
Water	5,000,000
Storm	950,000
<u>Utility Projects Subtotal</u>	<u>5,950,000</u>

PROJECT TOTAL: \$18,850,000



Capital Utility Projects Summary

Utility projects within the five year capital improvement plan primarily focus on the continued rehabilitation and replacement of aging infrastructure, as well as the continued extension of the city's natural gas system.

Operating Cost Implications of 2017 Approved Projects:

The Water Fund projects are for replacement and rehabilitation of the water system to increase system reliability and will have no operating expense impact. The Gas Fund projects will have very little operating expense impact with the exception of the gas main extensions, which will have minimal maintenance and corrosion protection costs offset by new customer account revenue. Sanitary Sewer projects for rehabilitation and relining will provide future savings to sanitary sewer treatment costs through a reduction of inflow and infiltration flows. Stormwater projects will result in indirect savings through cost avoidance of surface water damage. Street Lighting's replacement of a signal system provides cost avoidance of maintenance on temporary fixtures.

Projects	2017	2018	2019	2020	2021	Total
Water	2,344,000	2,130,000	2,875,000	2,600,000	3,370,000	13,319,000
Gas	3,814,500	2,530,000	2,360,000	3,200,000	2,000,000	13,904,500
Sewer	1,950,000	2,000,000	2,000,000	2,000,000	2,000,000	9,950,000
Stormwater	635,000	1,025,000	1,215,000	1,155,000	1,155,000	5,185,000
Street Lighting	375,000	925,000	925,000	925,000	575,000	3,725,000
Total	9,118,500	8,610,000	9,375,000	9,880,000	9,100,000	46,083,500

Funding	2017	2018	2019	2020	2021	Total
Water - Current Revenue	2,344,000	2,130,000	2,875,000	2,600,000	3,370,000	13,319,000
Gas - Current Revenue	3,814,500	2,530,000	2,360,000	3,200,000	2,000,000	13,904,500
Sewer - Current Revenue	1,950,000	2,000,000	2,000,000	2,000,000	2,000,000	9,950,000
Stormwater - Current Revenue	635,000	1,025,000	1,215,000	1,155,000	1,155,000	5,185,000
Street Lighting - Current Revenue	375,000	925,000	925,000	925,000	575,000	3,725,000
Total	9,118,500	8,610,000	9,375,000	9,880,000	9,100,000	46,083,500

Capital Utility Projects

Description: **Water Capital Projects**

The proposed water projects over the next five years include updating the aging infrastructure by replacing those distribution mains with a high number of recurring leaks. Rehabilitation of primary transmission lines and pump station upgrades will increase system reliability to meet water demand. Significant facility improvements are required at the Lakewood Water Treatment Plant. Built in 1975, this facility is aging and requires renovation of electrical systems as well as structural repairs to both the treatment plant and pump building. Considerable funds will be spent during years 2018-2020 on the reconstruction of water mains for the Downtown Superior Street project.

Project	2017	2018	2019	2020	2021	Total
2nd Avenue for Mesaba	250,000					250,000
4th Street Reconstruction (County)	1,124,000					1,124,000
42-inch Riveted Steel Inspection Cathodic Protection System on 42-inch Steel Study/Construction					550,000	550,000
East Superior Water Main	70,000	80,000			100,000	180,000
Far East Superior Street Water Main Services off 42-inch				600,000	700,000	1,300,000
Gogebic Creek (MNDOT)					200,000	200,000
Hidden Valley Phase 2			1,050,000			1,050,000
McCuen Street (MNDOT)			225,000			225,000
Michigan Street	650,000					650,000
Middle Pump Station Design					200,000	200,000
Lakewood Filter Anthracite	250,000					250,000
Ramsey Street in Existing Casing		100,000				100,000
Superior Street & Mesaba (MNDOT)		550,000				550,000
Superior Street Reconstruction		1,400,000	1,600,000	2,000,000		5,000,000
US Steel Creek (MNDOT)					120,000	120,000
Water Plant Electrical Upgrades					1,500,000	1,500,000
Total	2,344,000	2,130,000	2,875,000	2,600,000	3,370,000	13,319,000

Funding	2017	2018	2019	2020	2021	Total
Water - Current Revenue	2,344,000	2,130,000	2,875,000	2,600,000	3,370,000	13,319,000

Capital Utility Projects

Description: **Natural Gas Capital Projects**

The proposed gas projects over the next five years include the continued extension of the system into unserved areas and the relocation of gas meters due to code requirements. Other significant costs include projects to replace existing thin wall plastic mains and older steel mains where leaks occur.

Project	2017	2018	2019	2020	2021	Total
3rd St, Vernon, 2nd Street Alley			200,000			200,000
4th St, 18th Ave. E to Hawthorne	1,164,500					1,164,500
20th & 23rd Ave. W, 10th Street				1,000,000		1,000,000
48th Avenue East	750,000					750,000
58th Avenue West			200,000			200,000
Building Shells for Reg Stations		60,000	60,000			120,000
Gas Main Extensions & Services	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	7,500,000
London Road Gas Project	300,000					300,000
Meter Relocations	100,000	200,000	300,000	200,000		800,000
Michigan Street Gas Project		120,000				120,000
Relocate Airpark/Martin Regs		150,000				150,000
Steel Main Replacements				500,000	500,000	1,000,000
Stora Enso Flow Meter			100,000			100,000
Woodland Ave. Gas Project		500,000				500,000
Total	3,814,500	2,530,000	2,360,000	3,200,000	2,000,000	13,904,500

Funding	2017	2018	2019	2020	2021	Total
Gas - Current Revenue	3,814,500	2,530,000	2,360,000	3,200,000	2,000,000	13,904,500

Capital Utility Projects

Description: **Stormwater Capital Projects**

The proposed stormwater projects over the next five years include continued replacement of failing storm sewer lines and large culverts. Reconstruction of Brewery and Greys Creek is planned to repair deteriorated public infrastructure. Significant future costs will occur in the repair and replacement of storm sewer in steep slope areas that discharge into streams located throughout the city. Downtown Superior Street reconstruction will occur during years 2017-2020.

Project	2017	2018	2019	2020	2021	Total
Annual Street Projects	500,000	100,000	100,000	100,000	100,000	900,000
City-wide Driveway Culvert Project		75,000	75,000			150,000
Brewery Creek Tuckpointing		260,000	195,000			455,000
City-wide Down Drains				355,000		355,000
Clarkhouse Creek			75,000		200,000	275,000
Commonwealth Ave. Reconstruction	85,000					85,000
Gary New Duluth System		100,000	100,000	100,000	100,000	400,000
Greys Creek		75,000		200,000		275,000
Kenwood Ave. Box Culvert			125,000			125,000
Lower Coffee Creek		75,000			100,000	175,000
McCuen St (TH39) MNDOT			200,000			200,000
Norton Road & Thurber Road		40,000	25,000		555,000	620,000
Piedmont Heights System			20,000	100,000	100,000	220,000
Superior Street Reconstruction	50,000	300,000	300,000	300,000		950,000
Total	635,000	1,025,000	1,215,000	1,155,000	1,155,000	5,185,000

Funding	2017	2018	2019	2020	2021	Total
Stormwater - Current Revenue	635,000	1,025,000	1,215,000	1,155,000	1,155,000	5,185,000

Capital Utility Projects

Description: **Street Lighting Capital Projects**

The proposed street lighting capital plan over the next five years will utilize most resources on the replacement of signal and lighting systems for the Downtown Superior Street project. It also includes funding to provide city-wide communications connectivity to signals and lighting systems, as well as replacements of temporary signal systems at specific intersections.

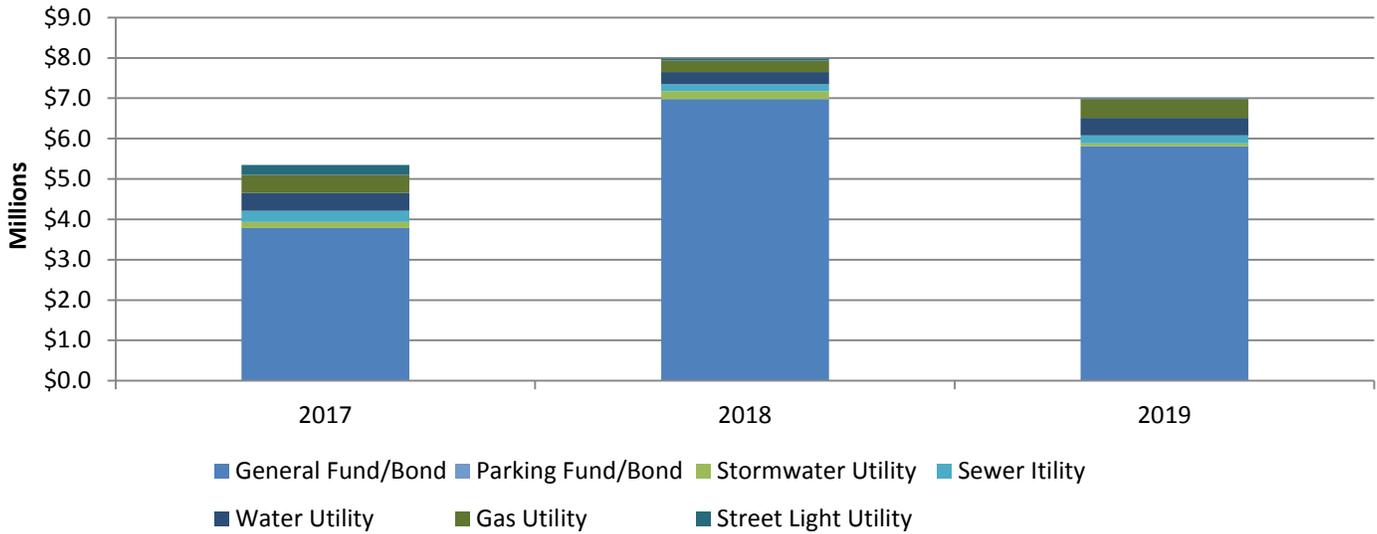
Project	2017	2018	2019	2020	2021	Total
Decorative Street Lights					200,000	200,000
Intersection Signal Replacement	275,000				275,000	550,000
Signals and Lights Ethernet Superior Street	100,000	100,000	100,000	100,000	100,000	500,000
Total	375,000	925,000	925,000	925,000	575,000	3,725,000

Funding	2017	2018	2019	2020	2021	Total
Street Lighting - Current	375,000	925,000	925,000	925,000	575,000	3,725,000

CAPITAL EQUIPMENT BUDGET AND PLAN

Three Year Equipment Plan

The objective of the City's three-year equipment plan is to maintain city equipment by budgeting an adequate dollar amount annually for replacement on a timely basis. \$20.3 million is proposed in this plan for the period of 2017 through 2019. Of that total, equipment for the General Fund is \$16.6 million to be financed with bonds. The balance of \$3.7 million is proposed for the combined enterprise funds of Water, Gas, Stormwater, Sewer, and Street Lighting. Shown in the chart below are the various funding sources by year for the plan.



	2017	2018	2019	Total
General Fund/Bond	3,788,404	6,980,050	5,813,050	16,581,504
Stormwater	147,000	196,425	70,500	413,925
Sewer	278,700	172,875	193,500	645,075
Water	439,750	301,675	440,275	1,181,700
Gas	448,550	284,525	453,725	1,186,800
Street Light	244,000	45,000	18,000	307,000
Total Plan	5,346,404	7,980,550	6,989,050	20,316,004

2017 Proposed Equipment

The City is proposing a total of \$5.3 million in capital equipment expenditures for 2017. This includes equipment for General Fund operating departments and the utility funds named above. The General Fund portion is \$3.8 million to be financed with bonds and the utility portion is \$1.5 million to be paid for out of current year revenues.

For General Fund departments, the City is proposing the purchase of \$2.2 million in rolling stock vehicles comprised of Maintenance Operations vehicles totaling \$1 million; Fire vehicles totaling \$.6 million; police vehicles totaling \$.55 million; and Construction Services vehicles totaling \$.05 million. The non-rolling stock equipment plan of \$1.5 million proposed by the City for 2017 is for technology improvements and replacements, as well as police and fire equipment.

The breakdown of equipment for the utility funds in 2017 includes \$.1 million for non-rolling stock equipment and \$1.4 million for rolling stock vehicles for a total of \$1.5 million in 2017.

City of Duluth 2017 - 2019 Capital Equipment Program

General Fund Rolling Stock Vehicles

	2017	2018	2019	Total
Fire Department				
Fire Trucks/Apparatus	550,000	550,000	1,200,000	2,300,000
Vehicle Replacements	40,000	75,000	-	115,000
Subtotal Fire Department	590,000	625,000	1,200,000	2,415,000
Construction Services				
Inspector Vehicles	50,000	50,000	-	100,000
Subtotal Constructive Services	50,000	50,000	-	100,000
Police Department				
Police Vehicles	559,900	846,350	751,350	2,157,600
Subtotal Police Department	559,900	846,350	751,350	2,157,600
Facilities Management				
1 Ton w/Service Body	-	60,000	60,000	120,000
1 Ton Cargo Van	-	40,000	40,000	80,000
Subtotal Facilities Management	-	100,000	100,000	200,000
Maintenance Operations				
Street Maintenance				
Sweeper	225,000	240,000	300,000	765,000
4 x 4 Pickup	-	90,000	-	90,000
3/4 ton pickup w/plow	-	-	143,000	143,000
Tandem	-	-	325,000	325,000
Plow truck w/wing	240,000	-	-	240,000
Paint truck	-	-	500,000	500,000
Loader	-	225,000	250,000	475,000
Highway mower	-	115,000	-	115,000
Retro - RDS body truck w/plow	340,000	340,000	340,000	1,020,000
Subtotal Street Maintenance	805,000	1,010,000	1,858,000	3,673,000
Park Maintenance				
Log truck loader	100,000	-	-	100,000
4x4 dump/chipper truck	-	58,000	-	58,000
4x4 Truck	71,000	42,000	48,000	161,000
Mower	75,000	75,000	72,000	222,000
Skidsteer	-	62,000	-	62,000
Trailer	-	42,000	-	42,000
Sidewalk cleaner	-	-	150,000	150,000
Subtotal Park Maintenance	246,000	279,000	270,000	795,000
Subtotal Maintenance Operations	1,051,000	1,289,000	2,128,000	4,468,000
Public Works				
Engineering Vehicles	-	-	46,000	46,000
Subtotal Transportation Engineering	-	-	46,000	46,000
Rolling Stock Bond Total	2,250,900	2,910,350	4,225,350	9,386,600

City of Duluth 2017 - 2019 Capital Equipment Program

General Fund Non-Rolling Stock Equipment

	2017	2018	2019	Total
IT				
Communications systems enhancements	50,000	200,000	200,000	450,000
PC / Peripheral adds	15,000	-	-	15,000
Microfilm reader/printer/scanner	12,000	-	-	12,000
Microsoft license true-up	100,000	50,000	50,000	200,000
Document management	250,000	100,000	100,000	450,000
Enterprise wide PC/laptop replacements	150,000	250,000	250,000	650,000
Network equipment replacements	155,000	300,000	300,000	755,000
PCI security requirements	50,000	50,000	50,000	150,000
Conference room technology needs	50,000	50,000	50,000	150,000
Building controls	85,000	-	-	85,000
Clerks microfilm conversion	20,000	-	-	20,000
Sign inventory conversion	10,000	-	-	10,000
Lighting controls	150,000	-	-	150,000
Digital media conversion	150,000	1,000,000	-	1,150,000
Library system	15,000	35,000	-	50,000
Parking ticket system	25,000	-	-	25,000
MIS asset/inventory mgt software	-	100,000	-	100,000
Time & attendance system	-	1,000,000	-	1,000,000
Police mobile technology	-	25,000	-	25,000
eLicensing	-	15,000	-	15,000
Pictometry imagery	-	35,000	-	35,000
Desktop re-cabling project	-	100,000	100,000	200,000
Security card access door additions	-	100,000	100,000	200,000
BCA security regulations	-	50,000	50,000	100,000
ITSC project planning	-	300,000	300,000	600,000
Total Proposed IT Non-Rolling Stock	1,287,000	3,760,000	1,550,000	6,597,000
Fire				
Bail-out kits	60,000	-	-	60,000
Turnout gear, hose, helmet, SCBA	31,000	273,700	1,700	306,400
Thermal imaging camera	-	36,000	36,000	72,000
Total Proposed Fire Non-Rolling Stock	91,000	309,700	37,700	438,400
Police				
TRT equipment	19,000	-	-	19,000
Taser	82,760	-	-	82,760
Shotgun improvements	27,744	-	-	27,744
Permanent camera at fire house flats	30,000	-	-	30,000
Total Proposed Police Non-Rolling Stock	159,504	-	-	159,504
Non-Rolling Stock Bond Total	\$ 1,537,504	\$ 4,069,700	\$ 1,587,700	\$ 7,194,904
TOTAL GENERAL FUND EQUIPMENT BOND PROPOSAL	\$3,788,404	\$6,980,050	\$5,813,050	\$16,581,504

City of Duluth 2017 - 2019 Capital Equipment Program

Utility Funds Equipment

	2017	2018	2019	Total
Water Fund				
Cars/Pick-ups	70,300	32,250	54,000	156,550
Trucks/Vans	78,500	160,000	163,900	402,400
Dump Trucks	0	54,250	147,250	201,500
Backhoe/Loader	78,750	17,150	0	95,900
Excavator/Vactor	147,000	0	52,500	199,500
Other Rolling Stock	35,200	23,025	7,625	65,850
Non-Rolling Capital Equipt.	30,000	15,000	15,000	60,000
Subtotal Water Fund	439,750	301,675	440,275	1,181,700
Gas Fund				
Cars/Pick-ups	120,000	79,750	61,000	260,750
Trucks/Vans	165,500	133,000	162,100	460,600
Dump Trucks	0	38,750	162,750	201,500
Backhoe/Loader	26,250	12,250	0	38,500
Excavator/Vactor	105,000	0	37,500	142,500
Other Rolling Stock	4,800	5,775	15,375	25,950
Non-Rolling Capital Equipt.	27,000	15,000	15,000	57,000
Subtotal Gas Fund	448,550	284,525	453,725	1,186,800
Sewer Fund				
Cars/Pick-ups	8,700	0	0	8,700
Trucks/Vans	0	0	0	0
Dump Trucks	0	38,750	0	38,750
Backhoe/Loader	0	117,250	0	117,250
Excavator/Vactor	255,000	0	37,500	292,500
Other Rolling Stock	4,000	6,875	146,000	156,875
Non-Rolling Capital Equipt.	11,000	10,000	10,000	31,000
Subtotal Sewer Fund	278,700	172,875	193,500	645,075
Stormwater Fund				
Cars/Pick-ups	0	0	38,000	38,000
Trucks/Vans	54,000	0	0	54,000
Dump Trucks	0	178,250	0	178,250
Backhoe/Loader	0	7,350	0	7,350
Excavator/Vactor	63,000	0	22,500	85,500
Other Rolling Stock	19,000	825	0	19,825
Non-Rolling Capital Equipt.	11,000	10,000	10,000	31,000
Subtotal Stormwater Fund	147,000	196,425	70,500	413,925
Street Lighting				
Cars/Pick-ups	36,000	27,000	0	63,000
Aerial Bucket Truck	190,000	0	0	190,000
Non-Rolling Capital Equipt.	18,000	18,000	18,000	54,000
Subtotal Street Lighting Fund	244,000	45,000	18,000	307,000
Utility Funds Grand Total	\$ 1,558,000	\$ 1,000,500	\$ 1,176,000	\$3,734,500