



**CITY OF NOVI**  
**Proposed**  
**Capital Improvement**  
**Program**  
**FISCAL YEARS**  
**2015-2021**

CIP Document for Planning Commission Meeting: Wednesday, March 25, 2015

**City of Novi**  
**Proposed Capital Improvement Program**  
**FY 2015 – 2021**



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## INTRODUCTION

The City of Novi's Capital Improvement Program (CIP) is a planning tool, with a goal to identify and schedule capital improvements over a six-year period between fiscal years 2015-2021. The CIP is an opportunity to formulate strategic long-term policy decisions that extend beyond the 2015-2016 fiscal year. Each year, the City of Novi invests significant time and resources to design, construct, and maintain the infrastructure and facilities needed to deliver municipal services to residents and businesses. Because of the high costs associated with building and maintaining capital assets, the City must carefully balance the need for such assets with our requirements to sustain a strong financial position.

Novi's CIP is a six year balanced plan that addresses projects that are needed, or will be needed, across a broad spectrum of areas. Annually, a significant amount of effort is expounded to update the CIP to ensure not only critical needs are being met, but also that the cost, scope and timing of all projects are coordinated throughout. Coordinating the timing of different projects in the same location is particularly important since it helps us to minimize service disruptions.

A capital improvement is defined as any new equipment, construction, acquisition or improvement to public lands, buildings or structures in excess of \$25,000 with a minimum life expectancy of five years. Maintenance-oriented, operational or continuous expenditures are not considered to be capital improvements. Capital projects include design and construction, as well as the acquisition of land and the purchase of capital assets.

Specifically, the purpose of the CIP is to:

- Identify and evaluate the needs for public facilities.
- Determine cost estimates for each capital project submitted.
- Determine if there will be future operating costs for such projects.
- Determine potential sources of funding for such projects.
- Adopt policies for implementing capital improvement construction.
- Anticipate and pre-plan projects with an emphasis on seizing opportunities for partnerships and alternative funding.

The projects identified in the CIP represent the City of Novi's plan to serve residents and anticipate the needs of a growing and dynamic community. The following documents were considered in preparation of the CIP:

- Master Plan for Land Use (adopted December 1, 2004, including amendments adopted August 25, 2010)
- 2014 Water System Master Plan
- 2014 Storm Water Master Plan
- 2014 Sanitary Sewer Capacity Management
- Strategic Community Recreation and Master Park Plan (2015-2019)
- Pathway and Sidewalk Prioritization Analysis and Process (adopted November 2012)
- Non-Motorized Master Plan (February 2011)
- Parking Lot Inventory and Maintenance Plan (2014)
- ADA Compliance and Transition Plan for City Owned Pathways (2011)
- ADA Compliance Transition Plan for City Owned Facilities (2014)
- Chip Seal Street Evaluation (2013)
- Novi and Wixom Transportation Improvement Plan—MDOT (2011)

### **Overview**

The CIP helps track multi-year projects that may require planning, design, land acquisition and construction.

### **Definition of a Capital Improvement**

The CIP allows for responsible and thoughtful planning of future major expenditures that are not necessarily financed or automatically included in the annual budgeting process. All capital projects, however, as they pertain to the definition of capital improvements above should be part of this CIP.

### **Impact of Capital Budget on the Operating Budget**

As new policies and programs are approved, both the operating and capital budgets are impacted. For example, an increase in service levels approved as part of the operating budget would have long-term effects on the Capital Improvements Program. Conversely, a restrictive change to the use of long-term debt would slow capital programs. Regardless of the difference between the operating and capital budgets, the two are interdependent. Budgetary policy states that all foreseeable operating costs related to capital projects be estimated and provided for as part of the review process associated with the Capital Improvements Program. In addition, departments are required to include costs associated with operating and maintaining capital projects that are requested for the upcoming year.

## **Legal Basis of the Capital Improvements Program**

The Capital Improvements Program has been authorized by the Michigan Planning Enabling Act (Public Act 33 of 2008). This mandate gives responsibility for preparing a CIP to local Planning Commission bodies, and reads as follows: **125.3865 Capital improvements program of public structures and improvements; preparation; basis.** Section. 65:

*“(1) To further the desirable future development of the local unit of government under the master plan, a planning commission, after adoption of a master plan, shall annually prepare a capital improvements program of public structures and improvements, unless the planning commission is exempted from this requirement by charter or otherwise. If the planning commission is exempted, the legislative body either shall prepare and adopt a capital improvements program, separate from or as a part of the annual budget, or shall delegate the preparation of the capital improvements program to the chief elected official or a nonelected administrative official, subject to final approval by the legislative body. The capital improvements program shall show those public structures and improvements, in the general order of their priority that in the commission's judgment will be needed or desirable and can be undertaken within the ensuing 6-year period. The capital improvements program shall be based upon the requirements of the local unit of government for all types of public structures and improvements. Consequently, each agency or department of the local unit of government with authority for public structures or improvements shall upon request furnish the planning commission with lists, plans, and estimates of time and cost of those public structures and improvements.”*

## **Planning and Benefits of the Capital Improvements Program**

The CIP is first and foremost, a planning tool. It can be quite useful as a primary guide in implementing the Master Plan for Land Use. With thoughtful foresight and review as a result of a CIP, the many outstanding capital projects that communities are faced with implementing every year, can be viewed as one package, rather than as small, fragmented groups or lists, with no unified sense of focus and direction. When capital improvements begin with careful planning and study, the City of Novi's chances for receiving State and Federal grants are greatly enhanced. Some grants require the inclusion of a CIP with their application. Formulation of a CIP assists those involved to look at alternative funding mechanisms that might not have been considered before. Instead of relying on local revenue sources alone, the CIP allows the City to think more creatively to fulfill Master Plan for Land Use goals and policies. The CIP often avoids reactive planning, and instead replaces it with balanced growth initiatives.

## **CIP DEVELOPMENT PROCESS**

Capital improvement planning has proven to be a year-round process, with City departments continually re-evaluating and prioritizing their capital needs. However, the process is most involved from September through December. It is during this period that City staff identify and prioritize projects, estimate project costs, determine available resources, balance project requests within the available resources, and, ultimately, submit a recommended program/piece of infrastructure to the Capital Improvement Program sub-committee and ultimately to the City's Planning Commission. Collaboration between the City Manager's office, Engineering Division, Facilities Management Division, and the Finance Department coordinates the annual update of the six-year CIP as part of the annual budget process. Department staff also forecast revenues for the various funds used to finance capital projects, and set the financial parameters for the development of the CIP. Capital projects originate in the operating departments where subject matter experts identify needs based on master planning documents and other technical criteria. All requests are submitted and the financial parameters established and a preliminary plan is prepared for the review of the CIP Committee comprised of three City Council members and two members from the Planning Commission. The Committee recommends to the City's Planning Commission for ultimate approval prior to it being included in the City Manager's annual budget which is presented and considered by the City Council. The following is an overview of the CIP development process:

**August – September:** Operating departments identify projects, define project scopes, prepare cost estimates, and prioritize projects based on direction received from the City Manager and City Leadership Team. Department Directors review project requests before final submittal.

**October:** Capital project requests are submitted to the Engineering Division and Facilities Management Division for review and feedback.

**November:** Capital project requests are submitted to the Finance Department for review and inclusion to the CIP database.

**December:** The CIP is presented to the City Manager's office for evaluation and consideration making necessary adjustments as needed.

**February:** The CIP Sub-Committee receives the CIP and offers its recommendations during its annual meeting.

**March:** A public hearing takes place during a Planning Commission meeting. Following the public hearing the Commission approves the Capital Improvement Program. City Administration finalizes the recommended CIP for the consideration of the City Council.

**April:** The CIP is included in the City Manager's proposed budget which is presented to the City Council and by City Charter needs to be approved by the second meeting in May.

## OPERATING BUDGET IMPACT

The Capital Improvement Program has direct and sometimes significant impacts on Novi's operating budget. Upon their completion, most capital projects require ongoing costs for operation and maintenance. New buildings require electricity, water and sewer service, and maintenance and repair. New roads require regular sweeping as well as periodic crack filling and sealing, patching, milling, minor resurfacing, and replacement of stripes and markings. New parks and landscaped rights-of-way (such as medians and streets shoulders) require irrigation, fertilizing, mowing, and trimming. Some projects, such as a recreation center, require additional employees.

Departments submitting capital projects estimate the operations and maintenance costs of each project based on cost guidelines that are updated each year. The departments also consider any additional revenues or savings the city can reasonably expect to recognize upon completion of the project. For example, membership fees from a new recreation center help to offset the increased operating costs. The net operating costs are included not only in the project request, but also in the long-range forecasts of the respective funds to ensure that we properly account for operating budget impacts of all capital projects.

		Fiscal Year 2015-16 Budget	Fiscal Year 2016-17 Projected	Fiscal Year 2017-18 Projected	Fiscal Year 2018-19 Forecast	Fiscal Year 2019-20 Forecast	Fiscal Year 2020-21 Forecast
Roads	Leveraged Funds	\$ 761,248	\$ 407,826	\$ -	\$ 3,126,889	\$ 800,000	\$ -
	City Costs	\$ 6,494,837	\$ 5,755,804	\$ 4,785,900	\$ 7,066,026	\$ 5,330,550	\$ 6,285,012
Intersections & Signals	Leveraged Funds	\$ -	\$ 3,300,000	\$ 337,000	\$ -	\$ -	\$ -
	City Costs	\$ -	\$ 300,000	\$ 82,394	\$ 1,315,750	\$ 260,000	\$ 175,000
Sidewalks & Pathways	Leveraged Funds	\$ -	\$ -	\$ -	\$ -	\$ 733,384	\$ -
	City Costs	\$ 342,612	\$ 250,587	\$ 459,085	\$ 2,096,867	\$ 5,838,746	\$ 1,333,746
Storm Sewer & Drainage	Leveraged Funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	City Costs	\$ 1,806,430	\$ 361,732	\$ 87,137	\$ 853,457	\$ 1,316,820	\$ -
Sanitary Sewer	Leveraged Funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	City Costs	\$ 555,600	\$ -	\$ 1,080,000	\$ -	\$ -	\$ -
Water Distribution	Leveraged Funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	City Costs	\$ 706,100	\$ 2,600,980	\$ 1,498,000	\$ 3,370,800	\$ -	\$ -
Parks, Recreation, & Cultural Services	Leveraged Funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	City Costs	\$ 306,010	\$ 120,000	\$ 370,630	\$ 4,076,635	\$ 1,019,317	\$ 840,160
Parking Lots	Leveraged Funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	City Costs	\$ 276,265	\$ 263,505	\$ 176,710	\$ 157,500	\$ 75,245	\$ 43,644
Technology	Leveraged Funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	City Costs	\$ 381,450	\$ 149,800	\$ -	\$ -	\$ -	\$ 63,000
Machinery & Equipment	Leveraged Funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	City Costs	\$ 353,000	\$ 1,291,410	\$ 1,279,700	\$ 1,113,610	\$ 1,729,603	\$ 1,500,850
Buildings & Property	Leveraged Funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	City Costs	\$ 658,483	\$ 421,100	\$ 40,100	\$ 1,560,600	\$ 88,900	\$ -
<b>TOTAL</b>		<b>\$ 12,642,035</b>	<b>\$ 15,222,744</b>	<b>\$ 10,196,656</b>	<b>\$ 24,738,134</b>	<b>\$ 17,192,565</b>	<b>\$ 10,241,412</b>

## PROGRAM FUNDING

There are multiple methods available to local governments for financing capital improvement projects. Since capital improvements require large outlays of capital for any given project, it is often necessary to pursue multiple creative solutions for financing projects.

## **General Obligation (G.O.) Bonds**

These types of bonds are especially useful for financing large municipal projects such as infrastructure improvements. They require voter approval and usually are used for projects that will benefit the residents of the entire community.

When the City sells G.O. Bonds, the purchaser is basically lending money to the City. The amount of the bond, plus interest is repaid through property taxes that the City, as the issuing authority, has the power to levy at the level necessary and within State guidelines to retire the debt.

A variation of the G.O. Bonds is the G.O. Limited Tax Bonds which can be repaid through tax millage. The interest rate for this type if issue is slightly higher than for the G.O. Bonds, and though voter approval is not required, a referendum period is afforded to the citizenry to challenge the proposed bond resolution.

## **Revenue Bonds**

These bonds are generally sold as a means for constructing revenue-producing facilities such as water and sewer systems, and other such facilities that produce tolls, fees, rental charges, etc. (i.e. Novi Ice Arena, and Meadowbrook Commons). Security for and payment of revenue bonds are typically based upon the revenue-producing facility or activity rather than the economic or taxpaying base.

## **Federal Grants**

Funding is made available to cities through Federal grants and programs. Grants are usually subject-specific, and require application by the local government for consideration. Amounts of grants vary, and are determined by the grantor through criteria-based processes. The availability of grants is usually a competitive process, so creative and effective grant writing is crucial to receiving funding for capital improvement projects.

## **Building Authority**

The City of Novi has a Building Authority that functions as a mechanism to facilitate the selling of bonds to finance public improvements. These bonds can be used as funding for buildings and recreational uses. Though voter approval is not required, a referendum period is afforded to the citizenry to challenge the proposed bond resolution. This is the mechanism used in the construction of the ice arena and the older adult housing facility.

## **Enterprise Funds**

Enterprise funds are typically established for services such as water, sewer, recreation, and housing. Revenues are generated primarily through user charges and connection fees from those who benefit from the improvements.



## **Developer Contributions**

Developers, as part of subdivision and site planning requirements, may provide infrastructure, open space and recreational facilities. Developers may contribute a share of funds to the government entity, or install the facilities themselves as local need arises, and/or during the construction process. Once completed, the local government entity may agree to maintain the facilities.

## **Special Assessments**

Special assessment financing allows local government to collect special taxes from owners of property directly benefiting from capital improvements. These types of improvements often include streets and sidewalks, sanitary sewer, storm drainage, and water distribution systems.

## **Gas and Weight Tax**

The City of Novi receives a formula-rated share of motor fuel and highway usage taxes from the State of Michigan to be utilized for transportation and maintenance-related projects.

## **Millage**

Property taxes are based upon the local millage rate. Revenue received from property taxes may be used for capital improvements as part of the General Fund, but such improvements are usually smaller scale and less expensive.

## **General Fund**

The General Fund for the City of Novi may be used for capital improvements; however, it is not the intent of the CIP to earmark these funds for projects. Instead, smaller scale, less expensive capital projects with a high priority could be funded as line items.

## **State Shared Revenue**

In addition to the Gas and Weight Taxes above which are shared revenue, the City receives its share of various taxes and fees from programs and requirements by the State of Michigan.

## **Public/Private Partnership**

This type of financing has become increasingly popular in areas where creative financing is fostered. In many communities the local revenue share may not support some types of public improvements. In contrast, private developers may avoid taking on a project where the infrastructure cost far exceeds profitability. This method of funding brings both the public sector and private contributor together to share in the costs of a project, or a part of a project, which inevitably lessens the overall financial burden falling onto a single source.

## **Miscellaneous Funding**

There are additional methods that are suitable for funding capital improvements. Examples of alternative funding methods are Tax Increment Financing (TIF), Impact Fees, Facility User Fees, etc. Current State legislation does not permit some of these funding methods, which have been used successfully in other states. Changes in legislation could see these and other innovative methods permitted in the future.

## PROJECT SUMMARY

The following tables include project summaries with estimated costs over the six-year period. The first column identifies an item number and the tables are followed by a numeric Project Description. Following the Project Descriptions section is the estimated future operating and maintenance cost schedule.

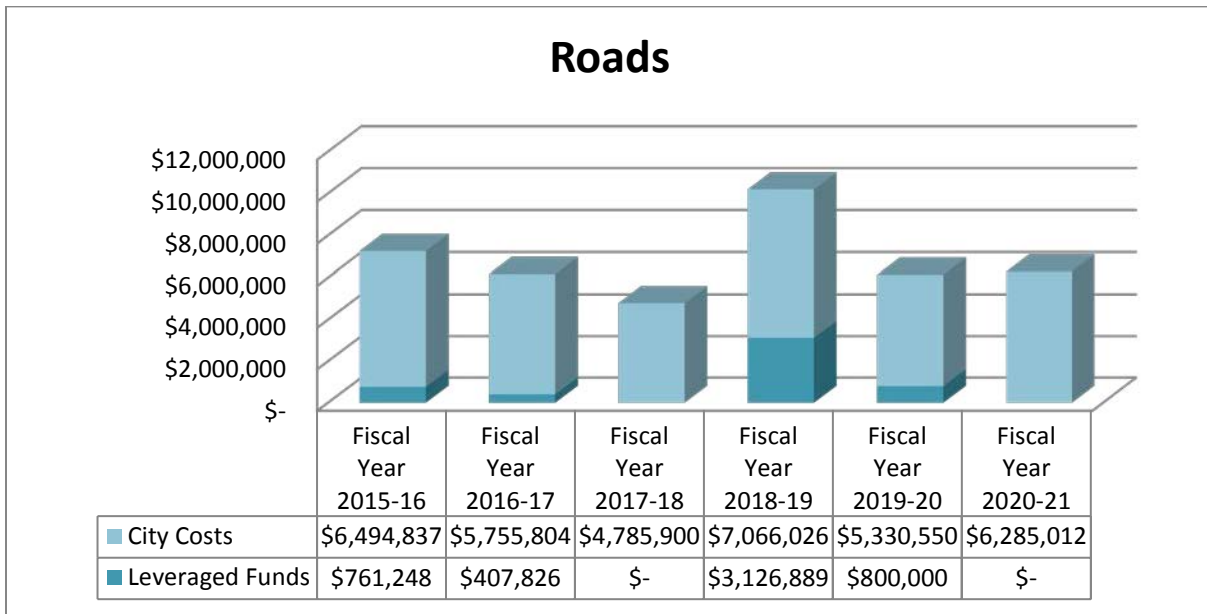
Category	Capital Improvements by Fund					
	Budget	Projected		Forecast		
	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
101-General	1,250,198	1,564,415	1,018,210	2,647,210	1,482,100	1,163,850
202-Major Road	4,404,837	3,255,804	1,898,294	4,460,611	2,146,550	175,000
203-Local Road	2,090,000	2,500,000	2,970,000	3,068,585	2,970,000	3,866,400
204-Municipal Street	342,612	550,587	459,085	2,949,447	6,312,746	3,752,358
208-Parks, Recreation, & Cultural Services	306,010	120,000	404,230	4,234,135	1,019,317	883,804
210-Drain	1,806,430	361,732	87,137	853,457	1,616,820	400,000
402-Gun Range Facility	0	401,400	254,700	0	0	0
590-Ice Arena	164,000	160,000	190,000	27,000	0	0
592-Water & Sewer	1,516,700	2,600,980	2,578,000	3,370,800	0	0
594-Senior Housing	0	0	0	0	111,648	0
<b>TOTAL</b>	<b>\$11,880,787</b>	<b>\$11,514,918</b>	<b>\$9,859,656</b>	<b>\$21,611,245</b>	<b>\$15,659,181</b>	<b>\$10,241,412</b>

## Roads

Transportation-related issues are a high priority for the City of Novi. The Capital Improvement Program addresses traffic congestion by constructing new roadways, adding lanes to existing roadways, widening intersections, and enhancing traffic management systems. The maintenance and preservation of roadways is an important component of the program, which provides the necessary resources for scheduled pavement maintenance applications throughout the City.

The City of Novi contains both public and private roadways. Public roads (I-96, I-275 and M-5) are owned and operated by the Michigan Department of Transportation (MDOT), the Road Commission of Oakland County (RCOC), and the City of Novi. Private roads are owned and operated by private developments and homeowner groups. The City currently maintains approximately 185 miles of major roads and Neighborhood Streets. In order to define priorities and establish a course of action for the local street and major road rehabilitation programs, the City has a formal asset management program that categorizes roads based on their Pavement Surface Evaluation and Rating (PASER). Roads in poor condition would be candidates for reconstruction or rehabilitation. Those in fair condition would receive capital preventive maintenance, while roads in good condition would be candidates for routine maintenance work. The lowest rated roads in each of these categories would generally be addressed first.

Road projects in the city's six year plan are funded from a dedicated road millage that was approved by voters to provide 1.5 mills, generating between \$2.1 and \$3.1 million dollars per year for neighborhood road rehabilitation and construction.



**Meadowbrook Road Reconstruction, I-96 to 12 Mile**

**Project Number:** 1

**CIP Number:** 112-02

**Description:**

Reconstruction of approximately 0.7 miles of Meadowbrook Road between the I-96 Bridge and 12 Mile Road. The project will rehabilitate the existing pavement and provide paved shoulders for non-motorized connectivity.

**Justification:**

The road has a PASER rating of 2 and requires extensive rehabilitation.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	202-202.00-805.165	\$70,000	\$120,795					\$190,795
Construction	202-202.00-865.165		\$885,834					\$885,834
ROW	202-202.00-805.165	\$75,000						\$75,000
Other								
<b>TOTAL BUDGET</b>		<b>\$145,000</b>	<b>\$1,006,629</b>					<b>\$1,151,629</b>

**Catherine Industrial Cul-de-Sac Reconstruction**

**Project Number:** 2

**CIP Number:** 142-22

**Description:**

The engineering for the project was funded in FY14-15, but funding for the construction was not provided at that time. The cul-de-sac at the north end of Catherine Industrial is in very poor/impassable condition and requires reconstruction (see attached motion sheet for additional info and photos.)

**Justification:**

The existing roadway is impassable and limits access to businesses in the area, and future development.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	202-202.00-805.166	\$25,000						\$25,000
Construction	202-202.00-865.166	\$145,000						\$145,000
ROW								
Other								
<b>TOTAL BUDGET</b>		<b>\$170,000</b>						<b>\$170,000</b>

**Beck Road (8 Mile to 9 Mile) Reconstruction**

**Project Number:** 3

**CIP Number:** 132-01

**Description:**

Rehabilitation of Beck Road between 8 Mile Road and 9 Mile Road. The existing road surface is in poor condition in some locations and requires rehabilitation. An application for federal grant funding has been submitted. The eastern half of the southern half mile is under the jurisdiction of the City of Northville and will be asked to participate in the cost of the project. The project includes continuous bike lanes and other non-motorized improvements. This project has been awarded federal funding for construction in 2017.

**Justification:**

The road is rated a PASER 2 and requires rehabilitation to prevent future deterioration.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	202-202.00-805.160	\$175,300	\$120,565					\$295,865
Construction	202-202.00-865.160		\$975,485					\$975,485
ROW								
Other								
<b>TOTAL BUDGET</b>		<b>\$175,300</b>	<b>\$1,096,050</b>					<b>\$1,271,350</b>

**9 Mile Road Meadowbrook to Novi Road Rehabilitation**

**Project Number:** 4

**CIP Number:** 122-65

**Description:**

Rehabilitation and partial reconstruction of 1.0 miles of 9 Mile Road between Novi Road and Meadowbrook Road. The project has been awarded federal funds for construction in 2016.

**Justification:**

The road was rated a PASER 3 in 2014 and is in need of rehabilitation to extend the serviceable life of the pavement.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	202-202.00-805.162	\$55,517						\$55,517
Construction	202-202.00-865.162	\$370,000						\$370,000
ROW								
Other								
<b>TOTAL BUDGET</b>		<b>\$425,517</b>						<b>\$425,517</b>

**Novi Road from 12 Mile Road to 13 Mile Road Rehabilitation**

**Project Number:** 5

**CIP Number:** 102-03

**Description:**

Rehabilitation of Novi Road from 12 Mile Road to 13 Mile Road (6,700 feet) to provide a smooth asphalt surface and extend the life of the road. Novi Rd. is the main thoroughfare linking the north and south ends of Novi. This project was awarded federal funding for construction in 2016.

**Justification:**

The road is currently rated a PASER 2 and 3 and should be rehabilitated to keep the road in serviceable condition.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	202-202.00-805.161	\$90,295						\$90,295
Construction	202-000.00-865.161	\$384,940						\$384,940
ROW								
Other								
<b>TOTAL BUDGET</b>		<b>\$475,235</b>						<b>\$475,235</b>

**Karim Blvd. Rehabilitation**

**Project Number:** 6

**CIP Number:** 082-18

**Description:**

Reconstruction of Karim Blvd between 10 Mile Road and Grand River Avenue (1,771 feet). The pavement is in poor condition (PASER 2 in 2012) and the road lacks sufficient drainage, requiring reconstruction of the road. The project will include the construction of all existing sidewalk gaps.

**Justification:**

This road had a PASER rating of 2 in 2014 and is no longer serviceable using normal maintenance. Fifteen (15) businesses are located on Karim Blvd. The companies are willing to disclose the number of employees housed on Karim Blvd, reported at the minimum 15 staff members.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	202-202.00-805.163	\$209,000						\$209,000
Construction	202-202.00-865.163	\$1,006,000						\$1,006,000
ROW								
Other								
<b>TOTAL BUDGET</b>		<b>\$1,215,000</b>						<b>\$1,215,000</b>

**Crescent Blvd, Novi Road to Town Center Drive Rehabilitation**

**Project Number:** 7

**CIP Number:** 082-10

**Description:**

Rehabilitation and partial reconstruction of Crescent Blvd from Novi Road to Town Center Drive (1,800 feet) provides a new smooth pavement surface in asphalt and to preserve the life of the road. The road is currently rated a PASER 2 between Novi Road and Ingersol Drive and PASER 3 between Ingersol and Town Center Drive.

**Justification:**

The road has a PASER rating of 2 to 3, which is among one of the worst rated concrete roads in the City.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	202-202.00-805.164	\$310,135						\$310,135
Construction	202-202.00-865.164	\$1,488,650						\$1,488,650
ROW								
Other								
<b>TOTAL BUDGET</b>		<b>\$1,798,785</b>						<b>\$1,798,785</b>

**Neighborhood Road Rehabilitation, Repaving and Reconstruction Program**

**Project Number:** 8

**CIP Number:** 102-01

**Description:**

The selection of streets is determined using the PASER surveys conducted annually. A mix of fixes (rehabilitation, repair, and reconstruction) will be applied to optimize the funds used to improve the overall condition of local roads as reflected by an increase in the overall PASER rating for the City.

**Justification:**

The project is to be completed as part of an overall asset management philosophy for infrastructure to improve the overall PASER rating for the City. See budget narrative for additional background.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	203-203.00-805.436	\$290,000	\$350,000	\$370,000	\$370,000	\$370,000	\$370,000	\$2,040,000
Construction	203-203.00-865.436	\$1,800,000	\$2,150,000	\$2,600,000	\$2,600,000	\$2,600,000	\$2,600,000	\$13,550,000
ROW								
Other								
<b>TOTAL BUDGET</b>		<b>\$2,090,000</b>	<b>\$2,500,000</b>	<b>\$2,970,000</b>	<b>\$2,970,000</b>	<b>\$2,970,000</b>	<b>\$2,970,000</b>	<b>\$16,470,000</b>

**Taft Road Rehab (9 Mile Road to 10 Mile Road)**

**Project Number: 9**

**CIP Number: 102-05**

**Description:**

Rehabilitation of 5,280 feet of Taft Road from 9 Mile Road to 10 Mile Road to provide a smooth asphalt surface and extend the life of the road. The project would add bike lanes along Taft Road as recommended by the non-motorized master plan to improve non-motorized connectivity. Staff has attempted to acquire federal funding for this project several times, but it does not score high enough for consideration.

**Justification:**

The road is currently rated a PASER 4 and should be rehabilitated to improve the road so it will remain serviceable.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	202-202.00-805.000		\$230,625					\$230,625
Construction	202-202.00-865.000		\$922,500					\$922,500
ROW								
Other								
<b>TOTAL BUDGET</b>			<b>\$1,153,125</b>					<b>\$1,153,125</b>

**Meadowbrook Road (southbound at 11 Mile Rd)—Add right turn lane**

**Project Number: 10**

**CIP Number: 132-05**

**Description:**

The southbound lane of Meadowbrook Road at 11 Mile Road is 18-foot wide (wider than a normal 12-foot wide lane) but is not quite wide enough to safely act as a dedicated right turn lane. The project would relocate an existing telephone pole and widen the roadway 5 feet to provide a dedicated right turn lane for southbound Meadowbrook Road to 11 Mile Road.

**Justification:**

Recommended by Town Center Area traffic study in 2012.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	202-202.00-805.000			\$22,200				\$22,200
Construction	202-202.00-865.000			\$108,900				\$108,900
ROW								
Other								
<b>TOTAL BUDGET</b>				<b>\$131,100</b>				<b>\$131,100</b>



**Meadowbrook Road (north of 12 Mile Road)—major repair**

**Project Number: 11**

**CIP Number: 132-03**

**Description:**

There is a portion of Meadowbrook Road between 12 Mile and 13 Mile Road (just south of Burroughs) that has noticeable pavement deflection due to a structural issue with the underlying soils. This project would implement the recommendations of the geotechnical report, which includes the removal of the pavement and poor soils and replacement with engineered backfill and lighter weight expanded polystyrene blocks to prevent future settling. The pathway in this area is also exhibiting similar structural issues and will be addressed as part of the project.

**Justification:**

Without reconstruction of this area the road and pathway will continue to settle requiring additional maintenance and more costly repairs over time.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	202-202.00-805.173			\$99,100				\$99,100
Construction	202-202.00-865.173			\$485,700				\$485,700
ROW								
Other								
<b>TOTAL BUDGET</b>				<b>\$584,800</b>				<b>\$584,800</b>

**Beck Road Rehab (9 Mile Rd to 10 Mile Rd)**

**Project Number: 12**

**CIP Number: 142-01**

**Description:**

Rehabilitation of just under one mile of Beck Road between Beckenham and Ten Mile Road. The road is currently rated a PASER 3 and 4 and requires rehabilitation to remain serviceable. This project will be submitted in 2015 for potential federal funding in 2018.

**Justification:**

The project is currently rated a PASER 3 and 4 and requires rehabilitation to extend the life of the road.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	202-202.00-805.171			\$175,000				\$175,000
Construction	202-202.00-865.171			\$925,000				\$925,000
ROW								
Other								
<b>TOTAL BUDGET</b>				<b>\$1,100,000</b>				<b>\$1,100,000</b>

**Sixth Gate Reconstruction**

**Project Number: 13**

**CIP Number: 112-01**

**Description:**

Sixth Gate was originally a gravel road that was treated with chip seal in the mid to late 2000s. The road has deteriorated significantly and is in very poor condition with drainage problems evident. The road is not a good candidate for another chip seal and complete reconstruction is recommended as a 24-foot wide asphalt road with drainage improvements.

**Justification:**

The project was recommended by the 2013 Chip Seal Road Evaluation Report.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	203-203.00-805.000				\$19,285			\$19,285
Construction	203-203.00-865.000				\$79,300			\$79,300
ROW								
Other								
<b>TOTAL BUDGET</b>					<b>\$98,585</b>			<b>\$98,585</b>

**Taft Road (10 Mile Rd to Grand River Ave)**

**Project Number: 14**

**CIP Number: 121-001**

**Description:**

Rehabilitation of 7,500 feet of Taft Road from 10 Mile Road to Grand River Avenue to provide a smooth asphalt surface and extend the life of the road. The project would add bike lanes along Taft Road as recommended by the non-motorized master plan to improve non-motorized connectivity. This project was submitted in 2014 for potential grant funding in 2018.

**Justification:**

The road is currently rated a PASER 2 and 3 and should be rehabilitated to improve the road so it will remain serviceable.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	202-202.00-805.000				\$54,325			\$54,325
Construction	202-202.00-865.000				\$217,286			\$217,286
ROW								
Other								
<b>TOTAL BUDGET</b>					<b>\$271,611</b>			<b>\$271,611</b>

**Trans-X Drive Rehabilitation**

**Project Number: 15**

**CIP Number: 082-16**

**Description:**

Partial reconstruction and rehabilitation of discrete areas of Trans-X Road along with preventative maintenance for the remainder of the segment. This project would complement the capital preventative maintenance completed in 2010 to preserve the life of the roadway.

**Justification:**

The road has a PASER rating of 4 to 5 and should be rehabilitated in order to keep the pavement in serviceable condition.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	202-202.00-805.000				\$65,000			\$65,000
Construction	202-202.00-865.000				\$312,800			\$312,800
ROW								
Other								
<b>TOTAL BUDGET</b>					<b>\$377,800</b>			<b>\$377,800</b>

**13 Mile Road Rehab (Novi Rd to Meadowbrook Rd)**

**Project Number: 16**

**CIP Number: 10-2023**

**Description:**

Repair and repave 13 Mile Road from Novi Road to Meadowbrook Road (2,600 feet) to extend the useful life of the roadway. The project includes reconstruction of a failed section of 13 Mile near Meadowbrook adjacent to a wetland and the repair of a failed section of Meadowbrook Road near Burroughs Ave. The project would also add bike lanes and other non-motorized improvements as recommended by the master plan to improve non-motorized connectivity.

**Justification:**

The road has a PASER rating of 3 and 4 and will require capital preventative maintenance.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	202-202.00-805.000				\$95,610			\$95,610
Construction	202-202.00-865.000				\$458,940			\$458,940
ROW								
Other								
<b>TOTAL BUDGET</b>					<b>\$554,550</b>			<b>\$554,550</b>

**Crescent Blvd Extension (between Grand River Ave & Novi Rd)—Phase II & III**

**Project Number: 17**

**CIP Number: 082-03**

**Description:**

Construction of a 1,300 foot long, 4 lane boulevard connecting Novi Road and Grand River Avenue in the northwest quadrant of the intersection; and a 650 foot long industrial spur road. Project includes a bridge over the Rouge River, repaving of the existing portion of Crescent Blvd west of Novi Road (f/k/a Fonda Street) and a new signal at the intersection with Grand River. The final design was completed in FY10-11.

**Justification:**

As early as 1980, the City’s Master Plan envisioned a “ring road” around the intersection to relieve traffic congestion and provide access to vacant land that does not have frontage on either Grand River Avenue or Novi Road. The Northeast quadrant of the ring road consisting of Crescent Boulevard and Town Center Drive was completed in the 1990’s. Completion of the Northwest Quadrant Ring Road will improve safety and reduce congestion at this busy intersection. An added benefit of the project is that it will provide a bypass for truck traffic, benefitting residents who use the Novi/Grand River intersection by diverting much of this heavy traffic.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-805.000				\$37,655			\$37,655
Construction	204-204.00-865.000				\$589,925			\$589,925
ROW								
Other								
<b>TOTAL BUDGET</b>					<b>\$627,580</b>			<b>\$627,580</b>

**Old Novi Road Rehabilitation**

**Project Number: 18**

**CIP Number: 102-04**

**Description:**

Rehabilitation of Old Novi Road from Novi Road to 13 Mile Road (1,630 feet) to provide a smooth asphalt surface and extend the life of the road.

**Justification:**

The road is currently rated a PASER 4 and 5 and will be due for capital preventative maintenance.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	202-202.00-805.000				\$114,800			\$114,800
Construction	202-202.00-865.000				\$551,000			\$551,000
ROW								
Other								
<b>TOTAL BUDGET</b>					<b>\$665,800</b>			<b>\$665,800</b>

**Wixom Road (10 Mile Rd to 11 Mile Rd)**

**Project Number: 19**

**CIP Number: 092-22**

**Description:**

Repair, mill and overlay Wixom Road from 10 Mile Road to 11 Mile Road (5,200 feet) to extend the useful life of the road. The existing roadway is asphalt and the curb and gutter is in relatively good condition. The road had a PASER rating of 5 in 2012 and minor rehabilitation would help to increase the serviceable life of the roadway.

**Justification:**

The road has a PASER rating of 5 and should be rehabilitated in order to keep the pavement in serviceable condition.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	202-202.00-805.000				\$123,700			\$123,700
Construction	202-202.00-865.000				\$593,700			\$593,700
ROW								
Other								
<b>TOTAL BUDGET</b>					<b>\$717,400</b>			<b>\$717,400</b>

**11 Mile Road Rehabilitation and Paving (Taft Rd to Beck Rd)**

**Project Number: 20**

**CIP Number: 082-30**

**Description:**

Repair and repaving of 11 Mile Road between Taft Road and Beck Road (5,280 feet). Includes the addition of a dedicated right turn lane for westbound 11 Mile Road at Beck Road as recommended in Beck Road Scoping Study short term capacity improvements. The project would also look for opportunities for non-motorized improvements, however the existing curb and gutter is in relatively good condition.

**Justification:**

The road has a PASER rating of 4 and should be rehabilitated in order to keep the road in serviceable condition.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	202-202.00-805.000				\$135,000			\$135,000
Construction	202-202.00-865.000				\$647,700			\$647,700
ROW								
Other								
<b>TOTAL BUDGET</b>					<b>\$782,700</b>			<b>\$782,700</b>

**Beck Road Widening (8 Mile Rd to 10 Mile Rd)—preliminary engineering only**

**Project Number:** 21

**CIP Number:** 132-25

**Description:**

The widening of Beck Road between 8 Mile Road and Grand River Avenue as a 5-lane road or a 4-lane boulevard was recommended in the Beck Road Scoping Study dated December 2006. The Oakland County Federal Aid Committee has issued a call for projects for potential grant funding of widening projects for the first time in several years. The City plans to submit an application for funding the preliminary engineering phase of the project for 2018. The construction of the project is not listed in the Regional Transportation Plan until after 2020.

**Justification:**

Recommended by 2006 Beck Road Scoping Study.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	202-202.00-805.000					\$200,000		\$200,000
Construction	202-202.00-865.000							
ROW								
Other								
<b>TOTAL BUDGET</b>						<b>\$200,000</b>		<b>\$200,000</b>

**11 Mile Road Rehabilitation (Taft Rd to Clark Rd)**

**Project Number:** 22

**CIP Number:** 132-27

**Description:**

Rehabilitation of 3,000 feet of 11 Mile Road from Taft Road to Clark Street to provide a smooth asphalt surface and extend the life of the road.

**Justification:**

The road has a PASER rating of 5 and should be rehabilitated in order to keep the road in serviceable condition.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	202-202.00-805.000					\$55,490		\$55,490
Construction	202-202.00-865.000					\$266,350		\$266,350
ROW								
Other								
<b>TOTAL BUDGET</b>						<b>\$321,840</b>		<b>\$321,840</b>

**Jo Drive Rehabilitation and Extension**

**Project Number:** 23

**CIP Number:** 132-02

**Description:**

Jo Drive is currently a dead end concrete street with a PASER rating of 4 and requires rehabilitation. The project presents an opportunity to extend Jo Drive to make a connection through existing city-owned property to Seeley Road to provide better access to the businesses along Vincenti and Jo. The project would include the extension of Jo Drive from its current terminus to Seeley Road and would include the construction of sidewalks along both sides of existing and proposed Jo Drive to improve non-motorized access in the area.

**Justification:**

This road is currently rated a PASER 4 and requires rehabilitation to prevent further deterioration requiring higher cost construction.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-805.000					\$65,000		\$65,000
Construction	204-204.00-865.000					\$409,000		\$409,000
ROW								
Other								
<b>TOTAL BUDGET</b>						<b>\$474,000</b>		<b>\$474,000</b>

**West Park Rehabilitation (West Rd to Pontiac Trail)**

**Project Number:** 24

**CIP Number:** 132-28

**Description:**

Rehabilitation of 1.5 miles of West Park Drive from West Road to Pontiac Trail to provide a smooth asphalt surface and extend the life of the road. The project would also look for opportunities for non-motorized improvements, however the existing curb and gutter is in relatively good condition.

**Justification:**

The road has a PASER rating of 4-6 and should be rehabilitated in order to keep the road in serviceable condition.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	202-202.00-805.000					\$106,210		\$106,210
Construction	202-202.00-865.000					\$509,820		\$509,820
ROW								
Other								
<b>TOTAL BUDGET</b>						<b>\$616,030</b>		<b>\$616,030</b>

**11 Mile Rehabilitation (Beck Rd to Wixom Rd)**

**Project Number:** 25

**CIP Number:** 132-26

**Description:**

Rehabilitation of 5,280 feet of 11 Mile Road from Beck Road to Wixom Road to provide a smooth asphalt surface and extend the life of the road. Includes the addition of a dedicated right turn lane for eastbound 11 Mile Road at Beck Road as recommended in Beck Road Scoping Study short term capacity improvements. The project would also look for opportunities for non-motorized improvements, however the existing curb and gutter is in relatively good condition.

**Justification:**

The road has a PASER rating of 4 and should be rehabilitated in order to keep the road in serviceable condition.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	202-202.00-805.000					\$129,080		\$129,080
Construction	202-202.00-865.000					\$619,600		\$619,600
ROW								
Other								
<b>TOTAL BUDGET</b>						<b>\$748,680</b>		<b>\$748,680</b>

**12 Mile Road/Declaration Drive Boulevard Extension**

**Project Number:** 26

**CIP Number:** 142-05

**Description:**

Extension of the existing boulevard island on 12 Mile Road approximately 1200 feet to the west to create an indirect left turn (aka Michigan Left) for Declaration Drive to go east on 12 Mile Road. Staff has received several complaints from residents in Liberty Park about difficulty turning left during the AM and PM peak hours. The intersection was studied for a traffic signal, but does not meet warrants. The Road Commission for Oakland County controls 12 Mile and would be in favor of the project. This project could be a candidate for tri-party funding.

**Justification:**

A traffic safety improvement is needed to prevent a serious crash.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-805.000						\$100,000	\$100,000
Construction	204-204.00-865.000						\$500,000	\$500,000
ROW								
Other								
<b>TOTAL BUDGET</b>						<b>\$600,000</b>		<b>\$600,000</b>



**Dixon Road Paving**

**Project Number: 27**

**CIP Number: 142-02**

**Description:**

Dixon Road is currently a gravel road that was chip sealed in the mid-2000s and then later returned to gravel. Unlike other chip-seal roads with limited traffic and good drainage, Dixon Road has higher traffic volumes and moderate drainage issues. The 2013 evaluation report for chip seal streets recommended that Dixon Road should be paved rather than chip sealed again.

**Justification:**

The paving of Dixon Road was recommended by the 2013 Chip Seal Evaluation Report as the long term solution to Dixon Road rather than chip seal which did not perform well.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	203-203.00-805.000						\$149,400	\$149,400
Construction	203-203.00-865.000						\$747,000	\$747,000
ROW								
Other								
<b>TOTAL BUDGET</b>							<b>\$896,400</b>	<b>\$896,400</b>

**Southwest Quadrant Ring Road, Flint Street, Novi Rd, and Grand River Ave**

**Project Number: 28**

**CIP Number: 092-50**

**Description:**

A study is currently underway to evaluate the existing alignment of Flint Street and potential alternatives to provide a connection to the ring road at the northwest quadrant of Grand River Avenue and Novi Road. A preliminary design and report will be completed at the end of FY14-15.

**Justification:**

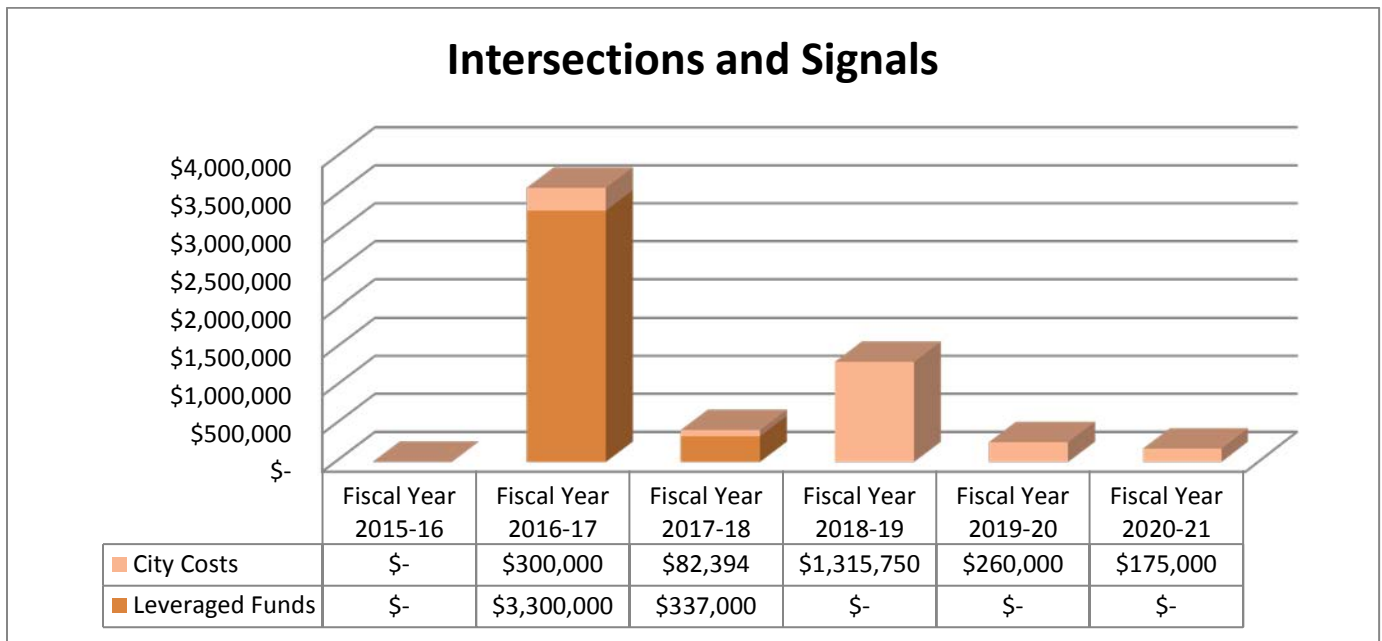
Study recommended by the Northwest Quadrant Ring Road Scoping Study to complete the ring road around the Grand River and Novi Road intersection to improve traffic flow in the area.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-805.000						\$363,612	\$363,612
Construction	204-204.00-865.000						\$1,455,000	\$1,455,000
ROW								
Other								
<b>TOTAL BUDGET</b>							<b>\$1,818,612</b>	<b>\$1,818,612</b>

## Intersection and Signals

The City of Novi is 32 square miles with 185 miles of major and neighborhood roads. To facilitate safe motorized and non-motorized transportation throughout the City safe road and street intersections and traffic signals need to be designed and maintained year in and year out. Sample projects found in this category are new traffic signals at City intersections, pedestrian crossing signals, turn lanes on major roads and roundabouts at key intersections to calm traffic.

Funding for proposed projects come from a variety of sources Major, Local and Municipal Street funds, and various grant programs that fund traffic related projects.



**Napier Road and 10 Mile Road Intersection Improvements to Include Paving Napier Road (9 Mile to 10 Mile)**

**Project Number: 29**

**CIP Number: 116-04**

**Description:**

The project would improve the intersection by widening Napier and 10 Mile at the intersection to add left-turn lanes and could include signalization of the intersection, if warranted, or a roundabout. The intersection was determined to have a casualty ratio from crashes at a much higher rate than other intersections in SE Michigan which can be mitigated by the improvements. The project would be a potential candidate for safety grant funding. RCOC is dedicating \$1.5 million dollars in FY 2015-16 and again in FY 2016-17.

**Justification:**

Improve safety at the intersection of 10 Mile and Napier that currently has a higher than average casualty ratio.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction	204-204.00-863.513		\$300,000					\$300,000
ROW								
Other								
<b>TOTAL BUDGET</b>			<b>\$300,000</b>					<b>\$300,000</b>

**Taft and 9 Mile Road - New Roundabout**

**Project Number: 30**

**CIP Number: 086-08**

**Description:**

Construct a modern roundabout at the intersection of Taft Road and 9 Mile Road. The roundabout would eliminate the existing four-way stop control and act as a traffic calming measure. Roundabouts not only act as a traffic calming measure (slowing traffic down) but are also safer by eliminating the head-on and angle crashes which tend to cause injury. A grant application will be submitted for potential federal funding for 100% of the construction cost (awards to be announced in April 2015 for funding year 2016).

**Justification:**

Traffic safety improvement, congestion reduction, air quality improvement and aesthetic improvement.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	202-202.00-863.514			\$82,394				\$82,394
Construction								
ROW								
Other								
<b>TOTAL BUDGET</b>				<b>\$82,394</b>				<b>\$82,394</b>

**Beck Road at 9 Mile Road Signal Modernization**

**Project Number: 31**

**CIP Number: 136-02**

**Description:**

The existing traffic signal at the intersection of Beck Road and 9 Mile Road was installed in 1998 and is reaching the end of its useful life. The signal would be reconstructed with new equipment reflecting the updated standards and improved technology that has changed since the original installation to improve traffic operation and safety. Additionally, the sidewalk ramps and pedestrian signals would be improved and street lighting added to the intersection.

**Justification:**

The equipment is approaching the end of its serviceable life.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	202-202.00-863.000				\$40,000			\$40,000
Construction	202-202.00-863.000				\$175,000			\$175,000
ROW								
Other								
<b>TOTAL BUDGET</b>					<b>\$215,000</b>			<b>\$215,000</b>

**Lewis and Haggerty Road - New Signal**

**Project Number: 32**

**CIP Number: 086-07**

**Description:**

Construct a new traffic signal for the intersection of Lewis Drive and Haggerty Road based on anticipated future need.

**Justification:**

Traffic safety improvement and congestion reduction.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-863.000				\$50,000			\$50,000
Construction	204-204.00-863.000				\$175,000			\$175,000
ROW								
Other								
<b>TOTAL BUDGET</b>					<b>\$225,000</b>			<b>\$225,000</b>

**New Roundabout at 11 Mile Road and Wixom Road**

**Project Number: 33**

**CIP Number: 102-10**

**Description:**

The intersection of Wixom and 11 Mile Road has been studied twice and has not met the warrant for a traffic signal. The increase in traffic along Wixom Road during peak hours has decreased the number of gaps to allow vehicles to turn onto Wixom Road. A roundabout would regulate traffic at the intersection and work to calm traffic on Wixom Road consistent with the non-motorized character recommended in the non-motorized master plan.

**Justification:**

Recommended by traffic engineering study completed in 2012 and 2011 Non-Motorized Master Plan.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	202-202.00-863.000				\$175,150			\$175,150
Construction	202-202.00-863.000				\$700,600			\$700,600
ROW								
Other								
<b>TOTAL BUDGET</b>					<b>\$875,750</b>			<b>\$875,750</b>

**Novi Road and 13 Mile Road Signal Modernization**

**Project Number: 34**

**CIP Number: 136-01**

**Description:**

The existing traffic signal at the intersection of Novi Road and 13 Mile Road was last improved in 1999 and is reaching the end of its useful life. The signal would be reconstructed with new equipment reflecting the updated standards and improved technology that has changed since the original installation to improve traffic operation and safety. This intersection is located along one of the three mast arm corridors in the City, therefore, the signal would be reconstructed with the Novi standard decorative mast arms. Additionally, the sidewalk ramps and pedestrian signals would be improved and street lighting added to the intersection.

**Justification:**

The equipment is approaching the end of its serviceable life

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	202-202.00-863.000					\$50,000		\$50,000
Construction	202-202.00-863.000					\$210,000		\$210,000
ROW								
Other								
<b>TOTAL BUDGET</b>					<b>\$260,000</b>			<b>\$260,000</b>

**West Park and South Lake Drive Traffic Signal Modernization**

**Project Number:** 35

**CIP Number:** 146-01

**Description:**

Replacement of the existing traffic signal at the intersection of West Park Drive and South Lake Drive with a new traffic signal that meets current standard. The existing signal is reaching the end of its useful life.

**Justification:**

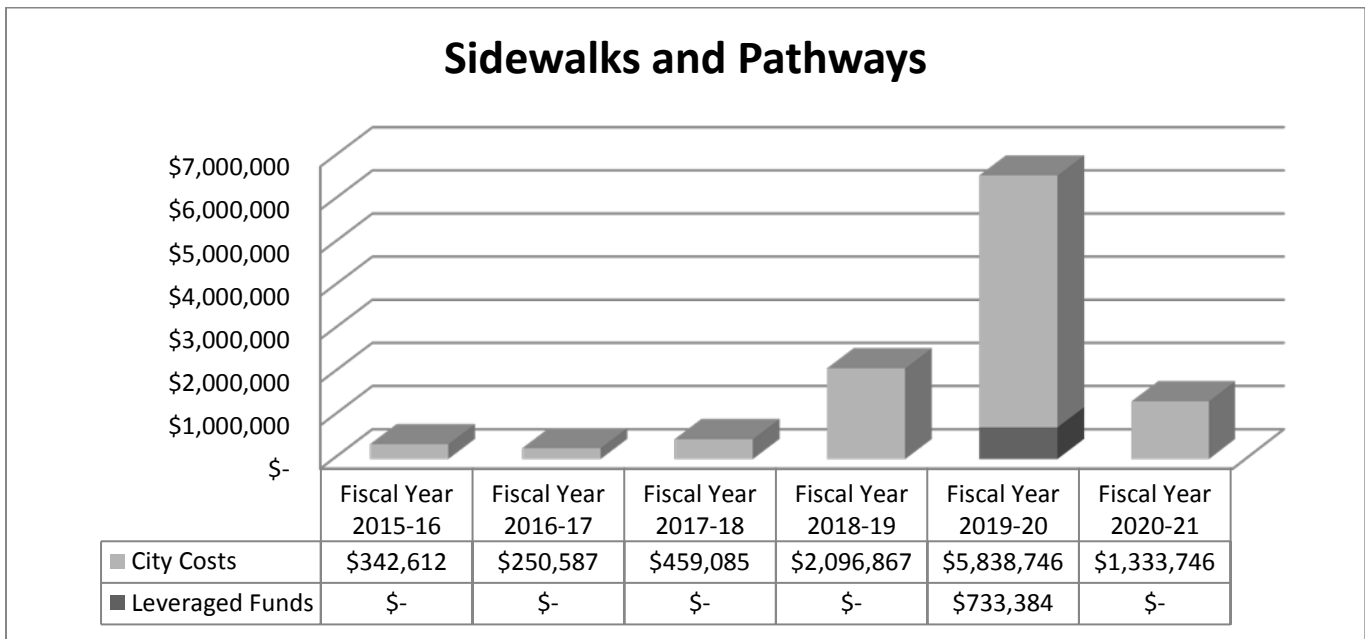
The existing signal was installed in 1999 and has reached the end of its useful life.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction	202-202.00-863.000						\$175,000	\$175,000
ROW								
Other								
<b>TOTAL BUDGET</b>							<b>\$175,000</b>	<b>\$175,000</b>

## Sidewalk and Pathways

The City of Novi is committed to providing non-motorized sidewalks and pathways in an effort to provide alternative modes of transportation for citizens and stakeholders alike. In this effort the City Council adopted a Non-Motorized Master Plan in 2011. It recommends the installation of bike routes and wayfinding signage along residential streets to enhance the existing neighborhood connections. The City of Novi has had a long standing interest in providing pathways and sidewalks to connect neighborhoods with destinations throughout the City and Region. Currently the City has over 200 miles of pathways and sidewalks. The Capital Improvement Plan incorporates plans and efforts and preferences of the Non-Motorized Plan.

Walkable Novi Committee along with the analysis from the City's Engineering Division makes recommendations to fill the non-motorized gaps throughout the City. A portion of the City's road millage goes toward financing sidewalk and pathway projects in the City of Novi.



**Taft Road at Jacob Drive - Non-Motorized Crossing**

**Project Number:** 36

**CIP Number:** 115-999

**Description:**

Provides a mid-block crossing on Taft Road at Jacob Drive to provide access from the east side of Taft Road to the schools located on the west side of Taft Road.

**Justification:**

Recommended by the Non-Motorized Master Plan.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-974.447	\$6,000						\$6,000
Construction	204-204.00-974.447	\$28,212						\$28,212
ROW								
Other								
<b>TOTAL BUDGET</b>		<b>\$34,212</b>						<b>\$34,212</b>

**Segment 9--Pontiac Trail, South Side (6' foot Sidewalk) Beck Road to West Park Drive**

**Project Number:** 37

**CIP Number:** 115-009

**Description:**

Construction of 5,000 feet of 6' wide sidewalk along the south side of Pontiac Trail between Beck Road and West Park Drive.

**Justification:**

The project will complete missing segments of the pathway system throughout the City and work to improve the connectivity of the non-motorized transportation system. Ranked 2nd in the 2014 update of the Annual Non-Motorized Prioritization.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-974.446	\$35,000		\$41,565				\$76,565
Construction	204-204.00-974.446			\$367,520				\$367,520
ROW								
Other	204-204.00-974.446	\$11,410						\$11,410
<b>TOTAL BUDGET</b>		<b>\$46,410</b>		<b>\$409,085</b>				<b>\$455,495</b>



**Americans with Disabilities Act (ADA) Compliance Plan Annual Implementation**

**Project Number: 38**

**CIP Number: 10-5002**

**Description:**

Annual program to retrofit existing sidewalk and pathway facilities in public rights-of-way with slope and ramp improvements to meet Americans with Disability Act (ADA) requirements for accessibility, based on the findings and recommendations of the February 2011 ADA Compliance Plan. This project is in addition to existing allocations in other road and sidewalk projects that are used for ADA compliance.

**Justification:**

An annual budget for ADA compliance is recommended by the 2011 ADA Compliance Transition Plan to establish a plan for ADA conformance in the City. As discussed in the ADA Compliance Plan, a provision of federal regulation 28 CFR 35 is that all state and local governments prepare a transition plan to guide efforts to bring facilities into compliance with ADA, which must include a schedule and methodology for compliance. An annual budget was initiated in 2011 of \$50,000 to facilitate compliance. See attached Council resolution and report for project justification details.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction	204-204.00-805.003	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$300,000
ROW								
Other								
<b>TOTAL BUDGET</b>		<b>\$50,000</b>	<b>\$50,000</b>	<b>\$50,000</b>	<b>\$50,000</b>	<b>\$50,000</b>	<b>\$50,000</b>	<b>\$300,000</b>

**Segment 10--Beck Road, East Side, South of Pontiac Trail, (5' foot Sidewalk Short Segment)**  
**Concrete**

**Project Number: 39**

**CIP Number: 095-10**

**Description:**

Construct 200 feet of 6' sidewalk along the east side of Beck Road across the frontage of K & S Plaza, South of Pontiac Trail to fill an existing gap in the sidewalk system.

**Justification:**

The project will complete missing segments of the pathway system throughout the City and work to improve the connectivity of the non-motorized transportation system.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-974.449	\$5,300						\$5,300
Construction	204-204.00-974.449	\$25,630						\$25,630
ROW	204-204.00-974.449	\$25,000						\$25,000
Other								
<b>TOTAL BUDGET</b>		<b>\$55,930</b>						<b>\$55,930</b>

**Segment 1B-14 Mile (south side) Haverhill to M-5**

**Project Number:** 40

**CIP Number:** 145-01

**Description:**

Construction of 867 feet of 6-foot wide pathway along the south side of 14 Mile Road between Haverhill Farms and M-5 to connect Haverhill Farm to the rest of the city's pathway network. This segment had significant interest from the public and the Walkable Novi committee.

**Justification:**

Provides a pathway connection for a currently isolated subdivision.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-974.448	\$26,010						\$26,010
Construction	204-204.00-974.448	\$130,050						\$130,050
ROW								
Other								
<b>TOTAL BUDGET</b>		<b>\$156,060</b>						<b>\$156,060</b>

**Segment 127A--Novi Way, East Side (6' foot Sidewalk) Concrete**

**Project Number:** 41

**CIP Number:** 101-127

**Description:**

Construction of 350 feet of 6-foot wide sidewalk along the east side of Novi Way from 10 Mile Road south. The project would connect to the proposed sidewalk along the Power Park access road and provide connectivity to the Civic Center.

**Justification:**

The project will complete missing segments of the pathway system throughout the City and work to improve the connectivity of the non-motorized transportation system.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-974.450		\$4,720					\$4,720
Construction	204-204.00-974.450		\$22,667					\$22,667
ROW								
Other								
<b>TOTAL BUDGET</b>			<b>\$27,387</b>					<b>\$27,387</b>

**Segment 53--Beck Road, West Side, (8' foot Pathway) 11 Mile Road to Kirkway Place**

**Project Number: 42**

**CIP Number: 125-053**

**Description:**

Construction of 700 feet of 8-foot wide pathway along the west side of Beck Road from 11 Mile Road to Kirkway. This segment was identified as a top 20 priority segment by Walkable Novi Committee.

**Justification:**

The project will complete missing segments of the pathway system throughout the City and work to improve the connectivity of the non-motorized transportation system. Ranked 19th in the 2014 update of the Annual Non-Motorized Prioritization.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-974.451		\$12,000					\$12,000
Construction	204-204.00-974.451		\$56,000					\$56,000
ROW								
Other	204-204.00-974.451		\$13,000					\$13,000
<b>TOTAL BUDGET</b>			<b>\$81,000</b>					<b>\$81,000</b>

**Segment 5--14 Mile Road, South Side, Beach Walk to East Lake Drive**

**Project Number: 43**

**CIP Number: 125-005**

**Description:**

Construction of 780 linear feet of sidewalk along the south side of 14 Mile Road to complete a connection from East Lake Drive to Novi Road and to complete a gap in the right-of-way sidewalk near Beachwalk Apartments. The existing sidewalk connects to a sidewalk on private property that has stairs. This segment was identified as a top 20 priority segment by Walkable Novi Committee.

**Justification:**

The project will complete missing segments of the pathway system throughout the City and work to improve the connectivity of the non-motorized transportation system. Ranked 12th by the 2014 update of the Annual Non-Motorized Prioritization.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-974.452		\$9,200					\$9,200
Construction	204-204.00-974.452		\$78,000					\$78,000
ROW	204-204.00-974.452		\$5,000					\$5,000
Other								
<b>TOTAL BUDGET</b>			<b>\$92,200</b>					<b>\$92,200</b>

**Segment 133--Wixom Road Crossing, North of 11 Mile Road (8' foot Pathway Short Segment)**

**Project Number: 44**

**CIP Number: 095-133**

**Description:**

Construction of approximately 75 feet of 8' pathway and associated ramps to cross Wixom Road north of 11 Mile and at Wixom Road and Glenwood to improve the pedestrian routes to Novi Middle School and Deerfield Elementary.

**Justification:**

The project will complete missing segments of the pathway system throughout the City and work to improve the connectivity of the non-motorized transportation system.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-974.000				\$6,390			\$6,390
Construction	204-204.00-974.000				\$30,660			\$30,660
ROW								
Other								
<b>TOTAL BUDGET</b>					<b>\$37,050</b>			<b>\$37,050</b>

**Segment 93--9Mile Road, Novi Road to Taft, North Side (6' foot Sidewalk) Concrete**

**Project Number: 45**

**CIP Number: 095-93**

**Description:**

Construction of 3,300 feet of 6' wide sidewalk along the north side of 9 Mile Road from Novi Road to Taft Road. This segment was identified as a top 20 priority segment by Walkable Novi Committee.

**Justification:**

The project will complete missing segments of the pathway system throughout the City and work to improve the connectivity of the non-motorized transportation system. Ranked 7th by the 2014 update of the Annual Non-Motorized Prioritization.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-974.000				\$46,950			\$46,950
Construction	204-204.00-974.000					\$225,370		\$225,370
ROW								
Other	204-204.00-974.000				\$16,600			\$16,600
<b>TOTAL BUDGET</b>					<b>\$63,550</b>	<b>\$225,370</b>		<b>\$288,920</b>

**Segment 81--10 Mile Road, South Side, (8' foot pathway) Meadowbrook Road to Haggerty Road**

**Project Number: 46**

**CIP Number: 125-081**

**Description:**

Construction of 5,280 feet of 8' wide pathway along the south side of 10 Mile Road from Meadowbrook Road to Haggerty Road. This segment was identified as a top 20 priority segment by Walkable Novi Committee.

**Justification:**

The project will complete missing segments of the pathway system throughout the City and work to improve the connectivity of the non-motorized transportation system. Ranked 1st by the 2014 update of the Annual Non-Motorized Prioritization.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-974.000				\$100,800			\$100,800
Construction	204-204.00-974.000					\$254,067	\$229,900	\$483,967
ROW								
Other	204-204.00-974.000					\$25,000	\$10,000	\$35,000
<b>TOTAL BUDGET</b>					<b>\$100,800</b>	<b>\$279,067</b>	<b>\$239,900</b>	<b>\$619,767</b>

**Segment 105 - 8 Mile Road (north side, 8' pathway) Between Garfield and Napier**

**Project Number: 47**

**CIP Number: 125-105**

**Description:**

Construction of 5,280 feet of 8' wide pathway to fill one gap along the north side of 8 Mile Road from Garfield Road to Napier Road to provide an off-road non-motorized connection to Maybury State Park, ITC Community Sports Park, the City of Northville, and Northville Township.

**Justification:**

Provides connections between communities and parks.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-974.000				\$126,000			\$126,000
Construction	204-204.00-974.000					\$609,260		\$609,260
ROW								
Other								
<b>TOTAL BUDGET</b>					<b>\$126,000</b>	<b>\$609,260</b>		<b>\$735,260</b>

**Non-Motorized Crossing of I-96 at Novi Road**

**Project Number: 48**

**CIP Number: 115-0002**

**Description:**

Construction of a non-motorized crossing of I-96 at Novi Road by constructing a sidewalk along the west side of Novi Road from Crescent Blvd to West Oaks, realigning the existing lanes on the bridge and constructing a barrier wall between vehicular and non-motorized traffic. The project may also require the upgrade of the two existing signals at Novi Road and I-96, which would be replaced with mast arms as was the rest of Novi Road.

**Justification:**

This project will provide a non-motorized connection between the north and south sides of Novi Road and provide access to shopping area. Recommended by Non-Motorized Master Plan and Novi Transportation Improvement Plan.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-974.000				\$142,700			\$142,700
Construction	204-204.00-974.000					\$620,400		\$620,400
ROW								
Other								
<b>TOTAL BUDGET</b>					<b>\$142,700</b>	<b>\$620,400</b>		<b>\$763,100</b>

**Segment 129-14 Mile Road (6', south side)--Haverhill Farms to Maple Place**

**Project Number: 49**

**CIP Number: 135-129**

**Description:**

Construction of 600 feet of 6-foot wide pathway along the south side of 14 Mile Road between Haverhill Farms and Maples Place to complete a gap in the pathway network. This segment was identified as a top 20 priority segment by Walkable Novi Committee.

**Justification:**

The project will complete missing segments of the pathway system throughout the City and work to improve the connectivity of the non-motorized transportation system. Ranked 15th by the 2014 update of the Annual Non-Motorized Prioritization.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-974.000				\$24,616			\$24,616
Construction	204-204.00-974.000				\$98,464			\$98,464
ROW	204-204.00-974.000				\$36,000			\$36,000
Other								
<b>TOTAL BUDGET</b>					<b>\$159,080</b>			<b>\$159,080</b>

**Segment 62--10 Mile Road, Eaton Center to Churchill (6' sidewalk and Boardwalk) for North side**

**Project Number: 50**

**CIP Number: 085-62**

**Description:**

Construction of 400 feet of boardwalk to fill a gap along the north side of 10 Mile Road from Eaton Center to Churchill Crossing. This project was identified as a top 20 priority segment in the Annual Non-Motorized Prioritization Update.

**Justification:**

The project will complete missing segments of the pathway system throughout the City and work to improve the connectivity of the non-motorized transportation system. Ranked 4th by the 2014 update of the Annual Non-Motorized Prioritization.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-974.000				\$30,000			\$30,000
Construction	204-204.00-974.000				\$130,446			\$130,446
ROW	204-204.00-974.000				\$14,000			\$14,000
Other								
<b>TOTAL BUDGET</b>					<b>\$174,446</b>			<b>\$174,446</b>

**Segment 51-10 Mile Road (6' wide, north side)-Dinser to Woodham**

**Project Number: 51**

**CIP Number: 135-51**

**Description:**

Construction of 1,780 feet of 6' wide pathway along the north side of 10 Mile Road between Dinser Drive and Woodham Drive to complete a gap in the pathway network. This segment was discussed at Walkable Novi as a segment of interest because of recent developments in the area that have added to the pathway network. This segment provides a connection between Wixom and Beck on the north side of 10 Mile Road.

**Justification:**

The project will complete missing segments of the pathway system throughout the City and work to improve the connectivity of the non-motorized transportation system.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-974.000				\$23,900			\$23,900
Construction	204-204.00-974.000				\$114,700			\$114,700
ROW								
Other	204-204.00-974.000				\$43,000			\$43,000
<b>TOTAL BUDGET</b>					<b>\$181,600</b>			<b>\$181,600</b>

**Segment 39--Beck Road, West Side, from 11 Mile Road to Providence**

**Project Number:** 52

**CIP Number:** 125-039

**Description:**

Construction of 1,350 feet of 8' wide pathway along the west side of Beck Road to complete the gap between 11 Mile Road and Providence Park Hospital.

**Justification:**

The project will complete missing segments of the pathway system throughout the City and work to improve the connectivity of the non-motorized transportation system. Ranked 5th in the 2014 update of the Annual Non-Motorized Prioritization.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-974.000				\$22,000			\$22,000
Construction	204-204.00-974.000				\$105,441			\$105,441
ROW								
Other	204-204.00-974.000				\$57,000			\$57,000
<b>TOTAL BUDGET</b>					<b>\$184,441</b>			<b>\$184,441</b>

**Segment NC4--Neighborhood Connection Between Main Street and Meadowbrook Glens**

**Project Number:** 53

**CIP Number:** 10-5007

**Description:**

Construct 650 feet of 6 foot wide concrete sidewalk and acquire easement rights over existing sidewalks to develop a neighborhood connection between Meadowbrook Glens and Main Street.

**Justification:**

Recommended by Non-motorized master plan.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-974.000				\$11,000			\$11,000
Construction	204-204.00-974.000				\$51,400			\$51,400
ROW	204-204.00-974.000				\$150,000			\$150,000
Other								
<b>TOTAL BUDGET</b>					<b>\$212,400</b>			<b>\$212,400</b>



**Segment 90-10 Mile Road, (8' foot Pathway) South Side, Novi Road to Chipmunk Trail – Concrete**

**Project Number: 54**

**CIP Number: 105-90**

**Description:**

Construction of 2,400 feet of 8' wide pathway along the south side of 10 Mile Road from Novi Road to Chipmunk Trail. This segment was identified as a top 20 priority segment by Walkable Novi Committee.

**Justification:**

The project will complete missing segments of the pathway system throughout the City and work to improve the connectivity of the non-motorized transportation system. Ranked 3rd by the 2014 update of the Annual Non-Motorized Prioritization.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-974.000				\$48,000			\$26,010
Construction	204-204.00-974.000				\$228,000			\$130,050
ROW								
Other	204-204.00-974.000				\$11,800			\$11,800
<b>TOTAL BUDGET</b>					<b>\$287,800</b>			<b>\$287,800</b>

**Segment 119--Meadowbrook Road, East Side, (6' foot Sidewalk) 8 Mile Road to 9 Mile Road**

**Project Number: 55**

**CIP Number: 125-119**

**Description:**

Construction of 3,800 feet of 6' wide pathway along the east side of Meadowbrook Road from 8 Mile Road to 9 Mile Road. This segment was identified as a top 20 priority segment by Walkable Novi Committee.

**Justification:**

The project will complete missing segments of the pathway system throughout the City and work to improve the connectivity of the non-motorized transportation system. Ranked 8th by the 2014 update of the Annual Non-Motorized Prioritization.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-974.000				\$65,000			\$65,000
Construction	204-204.00-974.000				\$312,000			\$312,000
ROW								
Other								
<b>TOTAL BUDGET</b>					<b>\$377,000</b>			<b>\$377,000</b>

**M-5/I-275 Regional Trail Connection - Phase II Meadowbrook Road and 13 Mile Road, Between 12 Mile Road and M-5**

**Project Number: 56**

**CIP Number: 115-0003**

**Description:**

Widening the existing pathways along the east side of Meadowbrook Road between 12 Mile and 13 Mile Road and the existing pathway along the north side of 13 Mile Road between Meadowbrook Road and M-5 to a 10-foot wide regional trail. This project is the second phase of a project to create a 10' wide connection between the I-275 regional pathway that ends at Meadowbrook Road and I-275 and the M-5 pathway that begins at M-5 and 13 Mile Road.

**Justification:**

Provides full connectivity to a larger non-motorized regional network through the City of Novi.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-974.000					\$85,000	\$28,835	\$113,835
Construction	204-204.00-974.000						\$259,511	\$259,511
ROW								
Other	204-204.00-974.000					\$12,000		\$12,000
<b>TOTAL BUDGET</b>						<b>\$97,000</b>	<b>\$288,346</b>	<b>\$385,346</b>

**Segment 88--9 Mile Road, North Side, Novi Road - Railroad (6' Sidewalk) Concrete**

**Project Number: 57**

**CIP Number: 095-88**

**Description:**

Construction of 1,750 feet of 6' wide sidewalk along the north side of 9 Mile Road from Novi Road to CSX Railroad. This segment was identified as a top 20 priority segment by Walkable Novi Committee.

**Justification:**

The project will complete missing segments of the pathway system throughout the City and work to improve the connectivity of the non-motorized transportation system. Ranked 18th by the 2014 update of the Annual Non-Motorized Prioritization.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-974.000					\$30,742		\$30,742
Construction	204-204.00-974.000					\$147,560		\$147,560
ROW								
Other								
<b>TOTAL BUDGET</b>						<b>\$178,302</b>		<b>\$178,302</b>

**Segment 70--Meadowbrook Road (8' west side)--Gateway Village to 11 Mile**

**Project Number: 58**

**CIP Number: 135-70**

**Description:**

Construction of 900 feet of 8' wide pathway along the west side of Meadowbrook Road between Gateway Village and 11 Mile Road to complete a gap in the pathway network. Due to the proximity of Bishop Creek along a major portion of the route, a significant amount of boardwalk will be required to complete the segment, leading to a high construction cost. This segment was identified as a top 20 priority segment by Walkable Novi Committee.

**Justification:**

The project will complete missing segments of the pathway system throughout the City and work to improve the connectivity of the non-motorized transportation system. Ranked 13th by the 2014 update of the Annual Non-Motorized Prioritization.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-974.000					\$75,700		\$75,700
Construction	204-204.00-974.000					\$333,150		\$333,150
ROW								
Other	204-204.00-974.000					\$43,000		\$43,000
<b>TOTAL BUDGET</b>						<b>\$451,850</b>		<b>\$451,850</b>

**Segment 99--10 Mile Road, South Side, from Wixom road to Beck Road (8' foot Pathway)**

**Project Number: 59**

**CIP Number: 095-99**

**Description:**

Construction of 3,500 feet of 8' pathway along the south side of 10 Mile in two segments from Wixom to Beck. This segment was identified as a top 20 priority segment by Walkable Novi Committee.

**Justification:**

The project will complete missing segments of the pathway system throughout the City and work to improve the connectivity of the non-motorized transportation system. Ranked 9th by the 2014 update of the Annual Non-Motorized Prioritization.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-974.000					\$64,310		\$64,310
Construction	204-204.00-974.000					\$308,650		\$308,650
ROW								
Other	204-204.00-974.000					\$89,352		\$89,312
<b>TOTAL BUDGET</b>						<b>\$462,312</b>		<b>\$462,312</b>

**Segment 84--Meadowbrook Road, 9 Mile Road to 10 Mile Road (6' Sidewalk) for East Side**

**Project Number: 60**

**CIP Number: 085-84**

**Description:**

Construction of 4,400 feet of 6' wide sidewalk to fill two gaps along the east side of Meadowbrook Road from 9 Mile Road to 10 Mile Road. This segment was identified as a top 20 priority segment by Walkable Novi Committee.

**Justification:**

The project will complete missing segments of the pathway system throughout the City and work to improve the connectivity of the non-motorized transportation system. Ranked 11th by the 2013 update of the Annual Non-Motorized Prioritization.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-974.000					\$137,069		\$137,069
Construction	204-204.00-974.000					\$657,944		\$657,944
ROW								
Other								
<b>TOTAL BUDGET</b>						<b>\$795,013</b>		<b>\$795,013</b>

**Non-Motorized Crossing of I-96 at Taft Road**

**Project Number: 61**

**CIP Number: 115-0005**

**Description:**

Construction of a non-motorized bridge over I-96 at Taft Road along with construction of pathways along Taft Road to connect the bridge to the rest of the non-motorized network. The bridge would be part of the larger regional trail network proposed in the Non-Motorized Master Plan.

**Justification:**

The bridge would provide a north-south connection for the City over I-96 and provide a link to the proposed regional trail network. Recommended by Non-Motorized Master Plan and the Novi Transportation Improvement Plan.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-974.000					\$387,172		\$387,172
Construction	204-204.00-974.000					\$1,683,000		\$1,683,000
ROW								
Other								
<b>TOTAL BUDGET</b>						<b>\$2,070,172</b>		<b>\$2,070,172</b>

**Segment 38-Beck Road, east side, Eleven Mile to Grand River (6' sidewalk)**

**Project Number: 62**

**CIP Number: 145-38**

**Description:**

Construction of 2,100 feet of 6-foot wide sidewalk along the east side of Beck Road from Eleven Mile Road to Grand River Avenue to complete a gap in the pathway network. This segment was identified as a top 20 priority segment by Walkable Novi Committee.

**Justification:**

This project was ranked 17th in the 2014 Annual Non-Motorized Prioritization.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-974.000						\$46,200	\$26,010
Construction	204-204.00-974.000						\$231,000	\$130,050
ROW	204-204.00-974.000						\$12,500	\$12,500
Other								
<b>TOTAL BUDGET</b>							<b>\$289,700</b>	<b>\$289,700</b>

**Segment 64--Taft Road, east side, Ten Mile to 11 Mile (6' sidewalk)**

**Project Number: 63**

**CIP Number: 145-64**

**Description:**

Construction of 3,840 feet of 6-foot wide sidewalk along the east side of Taft Road between Ten Mile Road and 11 Mile Road. This segment was identified as a top 20 priority segment by Walkable Novi Committee.

**Justification:**

This project was ranked 16th by the 2014 Annual Non-Motorized Prioritization.

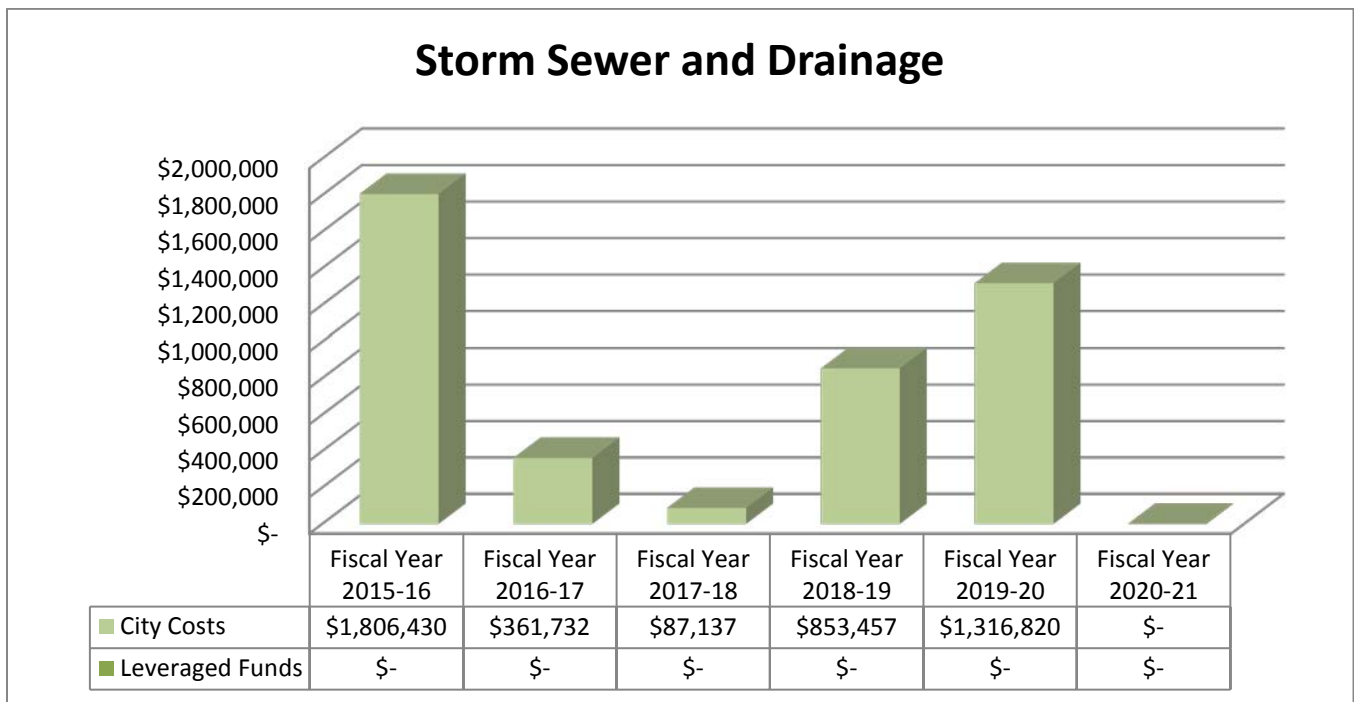
Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	204-204.00-974.000						\$76,800	\$76,800
Construction	204-204.00-974.000						\$384,000	\$384,000
ROW	204-204.00-974.000						\$5,000	\$5,000
Other								
<b>TOTAL BUDGET</b>							<b>\$465,800</b>	<b>\$465,800</b>

## Storm Sewer & Drainage

The City of Novi is located within two major watersheds in southeast Michigan (the Rouge River Watershed and the Huron River Watershed). Novi is committed to protecting the water courses within and downstream of the community.

As development occurs, the additional impervious surface area impacts the effective drainage of these flows, driving the need for drainage infrastructure. The City partners with the development community to ensure that onsite drainage issues are addressed during the development process.

The City's Capital Improvement Program addresses regional drainage issues through the drainage projects contained herein. Drainage projects are funded by a dedicated millage for acquiring, constructing, improving, and maintaining drain, storm water, and flood control systems in the City of Novi; up to 0.7719 mills annually.



**Orchard Hill Place Regional Detention Basin Improvement**

**Project Number: 144**

**CIP Number: 133-01**

**Description:**

The recently completed Storm Water study identified several recommendations to improve the city-owned and privately owned detention basin that has historically been maintained by the City near Orchard Hill Place near 8 Mile Road and Haggerty Road. The work on the city-owned basin includes reconstruction of the outlet control, while the work on the city maintained basin includes dredging and rehabilitation of the outlet control. The project will also resolve any ownership and maintenance responsibility issues.

**Justification:**

Recommended by the 2013 Storm Water Study.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction	210-211.00-865.137	\$126,600						\$126,600
ROW								
Other								
<b>TOTAL BUDGET</b>		<b>\$126,600</b>						<b>\$126,600</b>

**Streambank Stabilization-Bishop Creek and Ingersol (10 Mile to Meadowbrook)**

**Project Number: 145**

**CIP Number: 133-04**

**Description:**

The 2013 Storm Water Study identified several areas along Bishop Creek south of 10 Mile Road and Ingersol Creek between Bishop Creek and Meadowbrook Road where severe bank erosion was present. This project would include the acquisition of several easements to complete the work behind the houses along the stream. This project will repair and protect the streambank from future erosion.

**Justification:**

Recommended by the 2013 Storm Sewer Study.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction	210-211.00-865.138	\$750,660						\$750,660
ROW								
Other								
<b>TOTAL BUDGET</b>		<b>\$750,660</b>						<b>\$750,660</b>

**Village Wood Lake/Village Oaks Lake Inlet and Outlet Improvements**

**Project Number: 146**

**CIP Number: 133-02**

**Description:**

The 2013 Storm Water Study recommended improvements to several of the inlets and outlets to Village Oaks Lake and Village Wood Lake. A resolution passed by the City Council in the 1980s requires that the City maintain these facilities. The work will include replacement of end sections, repair of damaged storm sewer and rehabilitation of outlet control structures.

**Justification:**

Recommended by the 2013 Storm Water Study.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	210-211.00-865.139	\$135,400						\$135,400
Construction	210-211.00-865.139	\$649,770						\$649,770
ROW								
Other	210-211.00-865.139	\$144,000						\$144,000
<b>TOTAL BUDGET</b>		<b>\$929,170</b>						<b>\$929,170</b>

**Rotary Park Streambank Stabilization**

**Project Number: 147**

**CIP Number: 093-10**

**Description:**

Stabilization of Middle Rouge River streambanks within Rotary Park. The project was recommended by Phase I Storm Water Master Plan.

**Justification:**

Recommended by 2005 Storm Water Master Plan Phase I.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	210-211.00-865.000		\$27,700					\$27,700
Construction	210-211.00-865.000		\$133,200					\$133,200
ROW								
Other								
<b>TOTAL BUDGET</b>			<b>\$160,900</b>					<b>\$160,900</b>



**Bishop District New Sedimentation Dredging Near 11 Mile Road**

**Project Number: 148**

**CIP Number: 093-11**

**Description:**

Project to address the sedimentation within the wetland south of 11 Mile and west of Meadowbrook. Potential dredging to remove accumulated sediment. Includes streambank stabilization upstream and downstream of 11 Mile Road. The project was recommended by the Phase 1 Storm Water Master Plan.

**Justification:**

Recommended by the Phase 1 Storm Water Master Plan and 2009 Storm Water Modeling Study.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	210-211.00-865.141		\$34,600					\$34,600
Construction	210-211.00-865.141		\$166,232					\$166,232
ROW								
Other								
<b>TOTAL BUDGET</b>			<b>\$200,832</b>					<b>\$200,832</b>

**Streambank Stabilization Ingersol Creek (10 Mile Rd. to Willowbrook Dr.)**

**Project Number: 149**

**CIP Number: 133-05**

**Description:**

The 2013 Storm Water Study identified several areas along Ingersol Creek between 10 Mile Road and Willowbrook Drive where severe bank erosion was present. This project would include the acquisition of several easements to complete the work behind the houses along the stream. This project will repair and protect the streambank from future erosion.

**Justification:**

Recommended by the 2013 Storm Sewer Study.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	210-211.00-865.143			\$67,137				\$67,137
Construction	210-211.00-865.143				\$322,260			\$322,260
ROW								
Other	210-211.00-865.143			\$20,000				\$20,000
<b>TOTAL BUDGET</b>				<b>\$87,137</b>	<b>\$322,260</b>			<b>\$409,397</b>

**Streambank Stabilization Bishop Creek (along Meadowbrook, north of Grand River)**

**Project Number: 150**

**CIP Number: 133-07**

**Description:**

The 2013 Storm Water Study identified several areas along Bishop Creek along Meadowbrook Road where severe bank erosion was present. This project will repair and protect the streambank from future erosion.

**Justification:**

Recommended by the 2013 Storm Sewer Study.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	210-211.00-865.000				\$88,137			\$88,137
Construction	210-211.00-865.000				\$423,060			\$423,060
ROW								
Other	210-211.00-865.000				\$20,000			\$20,000
<b>TOTAL BUDGET</b>					<b>\$531,197</b>			<b>\$531,197</b>

**Streambank Stabilization on Rouge River near 9 Mile Rd.**

**Project Number: 151**

**CIP Number: 133-08**

**Description:**

The 2013 Storm Water Study identified an area along the Rouge River downstream of Meadowbrook Lake where severe bank erosion was present. This project will repair and protect the streambank from future erosion.

**Justification:**

Recommended by the 2013 Storm Sewer Study.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	210-211.00-865.000					\$223,600		\$223,600
Construction	210-211.00-865.000					\$1,073,220		\$1,073,220
ROW								
Other	210-211.00-865.000					\$20,000		\$20,000
<b>TOTAL BUDGET</b>						<b>\$1,316,820</b>		<b>\$1,316,820</b>

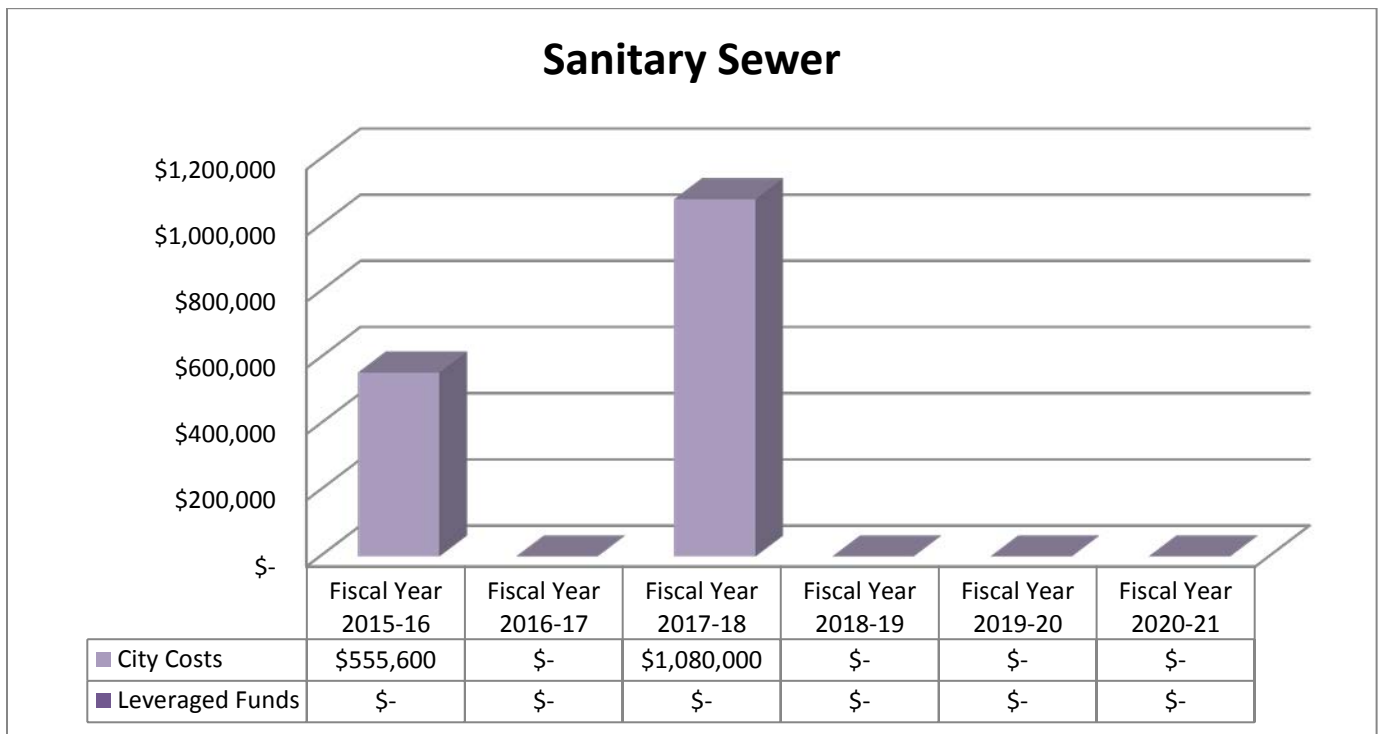
## Sanitary Sewer

The City of Novi purchases sewage disposal services from Oakland County Water Resources Commissioner (OCWRC). The City currently has approximately 243 miles of sanitary sewer mains. These sewer mains are part of three separate districts: the Wayne County North Huron Valley/Rouge Valley (NHV/RV) System, South Commerce Township Treatment Plant, and the Walled Lake-Novi Treatment Plant. The majority of the City is served by the NHV/RV system. The City of Novi Water & Sewer Fund, the Oakland County Water Resource Commission (OCWRC) and the Detroit Water & Sewerage Department (DWSD) are all not-for profit entities and therefore rates are intended and required to only cover costs.

The development of the proposed sanitary sewer projects were based upon system deficiencies and needs obtained from area residents, business owners, and City staff. These projects are coordinated with storm water management, roadway, and pathway improvements to maximize cost savings through economies of scale, resulting in a more effective and efficient process to implement the construction projects.

The proposed water and sanitary sewer projects are flexible, allowing for the addition of new improvements to address specific needs without deferring other projects along the way. Studies and analysis of the existing system is an on-going program that, coupled with new technologies, provides for improved system capabilities and reliability.

Water and sanitary sewer projects identified as urgent are not subject to the rating/weighting scale required of capital improvement. Projects included in this category are funded by the City's Water and Sewer Fund which is financed through user rates and connection fees.



**Country Place Pump Station Capacity Upgrades**

**Project Number: 72**

**CIP Number: W&S004**

**Description:**

The Country Place Pump Station improvements are required to upgrade the pump station capacity to accommodate peak design flows to the station. Recent wet weather flows from August 11, 2014 almost exceeded the stations firm capacity. Recent capacity study findings indicate that the design peak flow exceeds the capacity of the station, thus station capacity upgrades are needed. An excerpt from the recent capacity study is attached for reference. In addition to capacity upgrades, the station is in need of redundancy upgrades as the station's force main is 40 year old asbestos concrete (AC) pipe. If the old force main were to fail, the station's flows would back up into the residential basements in the area. For this reason, a parallel force main (~2100 feet in length) is proposed to provide additional redundancy to the station. A copy of the engineer's estimate is also provided for reference.

**Justification:**

Recent capacity study findings indicate that the design peak flow exceeds the capacity of the station, thus station capacity upgrades are needed.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	592-592.00-976.008	\$46,300						\$46,300
Construction	592-592.00-976.008	\$463,000						\$463,000
<b>ROW</b>								
Other	592-592.00-976.008	\$46,300						\$46,300
<b>TOTAL BUDGET</b>		<b>\$555,600</b>						<b>\$555,600</b>

**8 Mile Equalization Basin Project**

**Project Number: 73**

**CIP Number: W&S007**

**Description:**

The City of Novi's current contract capacity to the Rouge Valley Sewage Disposal System is 20.48 cubic feet per second (cfs). The recently completed sanitary sewer capacity study indicates that for full build-out conditions, the design peak flow rate from the City of Novi will be 25.1 cfs, which exceeds our contract capacity. Given this outlet capacity shortfall, the capacity study indicated that a 450,000 gallon equalization basin would be sufficient to detain peak flow to remain within the current contract capacity. Wayne County is currently performing system flow monitoring to evaluate the need for a regional storage tunnel to which the City of Novi has the option to participate in, in order to mitigate peak flow in excess of the contract capacity. If the City of Novi's cost share in the regional storage tunnel project is less than the cost of a 450,000 gallon equalization basin, the City should participate in the regional storage tunnel project. This project should not be authorized until Wayne County has completed the evaluation of alternatives for the regional system. It is anticipated that Wayne County will complete this study by the end of 2015.

**Justification:**

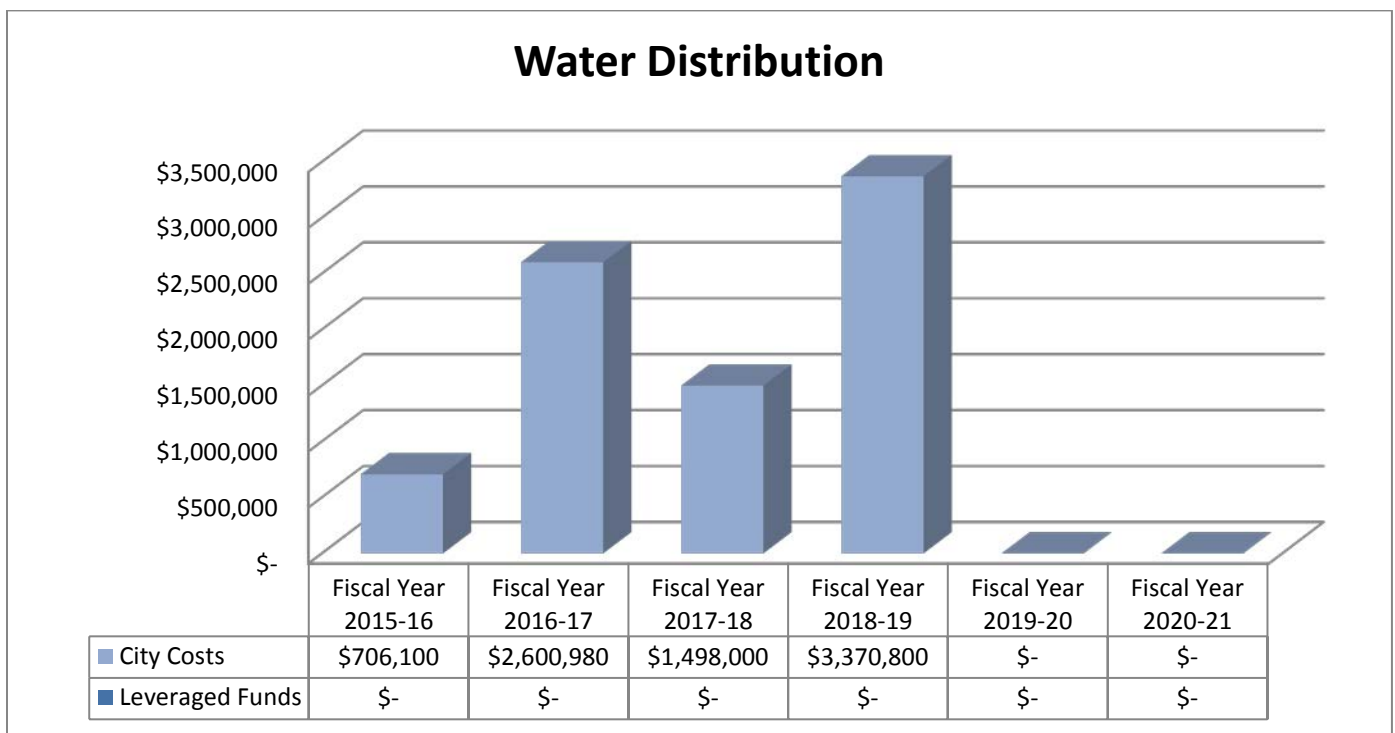
The recently completed sanitary sewer capacity study indicates that for full build-out conditions, the design peak flow rate from the City of Novi will be 25.1 cfs, which exceeds our contract capacity. Given this outlet capacity shortfall, the capacity study indicated that a 450,000 gallon equalization basin would be sufficient to detain peak flow to remain within the current contract capacity. Wayne County is currently performing system flow monitoring to evaluate the need for a regional storage tunnel to which the City of Novi has the option to participate in, in order to mitigate peak flow in excess of the contract capacity. If the City of Novi cost share in the regional storage tunnel project is less than the cost of a 450,000 gallon equalization basin, the City should participate in the regional storage tunnel project. Initial site locations for the proposed basin have been identified in the area of Rotary Park.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	592-592.00-976.014			\$90,450				\$90,450
Construction	592-592.00-976.014			\$899,100				\$899,100
ROW								
Other	592-592.00-976.014			\$90,450				\$90,450
<b>TOTAL BUDGET</b>				<b>\$1,080,000</b>				<b>\$1,080,000</b>

## Water Distribution

The City of Novi purchases treated water from Detroit Water and Sewerage Department (DWSD). DWSD operates the largest water system in the State of Michigan and supplies water to roughly four million people. Water production is costly. Aging water and wastewater treatment systems must be maintained and replaced to ensure reliable service. Rate increases are primarily due to new and rehabilitative projects that are completed under the DWSD Capital Improvement Programs. DWSD rates reflect energy costs to maintain water pumps, water mains, and storage tanks necessary to transport water to our community.

The City is responsible for 329 miles of water main pipe, 4,190 fire hydrants and 13,750 water service connections. Projects included in this category are funded by the City's Water and Sewer Fund which is financed through user rates and connection fees.



**8 Mile Loop Connection at Meadowbrook**

**Project Number: 74**

**CIP Number: 091-26**

**Description:**

Extend a 12-inch water main approximately 1,300 feet from the existing 12-inch main at 8 Mile Road and Club Lane to the east to the existing 12-inch water main on 8 Mile Road east of Cambridge. This project was recommended as part of the 2008 Water System Master Plan and improves redundancy for the Meadowbrook View Estates and Club Lane Subdivisions, which are both currently fed from a single water main.

**Justification:**

This project was recommended as part of the 2008 Water System Master Plan and improves redundancy for the Meadowbrook View Estates and Club Lane Subdivisions, which are both currently fed from a single water main.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	592-592.00-976.012	\$22,500						\$22,500
Construction	592-592.00-976.012	\$225,000						\$225,000
ROW								
Other	592-592.00-976.012	\$22,500						\$22,500
<b>TOTAL BUDGET</b>		<b>\$270,000</b>						<b>\$270,000</b>

**PRV Redistricting - Meadowbrook and 13 Mile Road**

**Project Number: 75**

**CIP Number: 091-06**

**Description:**

De-commission the existing PRV at Meadowbrook and 12 Mile Road and install new PRV at 13 Mile and Novi Road. The new PRV will provide a better range of working pressures within the Intermediate pressure district. These improvements will also allow opening of the closed valve in the Haggerty Corporate Park (13 Mile and M-5), which will connect two dead-end branches of the system, thus allowing for more system redundancy.

**Justification:**

The new PRV will provide a better range of working pressures within the Intermediate pressure district. These improvements will also allow opening of the closed valve in the Haggerty Corporate Park (13 Mile and M-5), which will connect two dead-end branches of the system, thus allowing for more system redundancy.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	592-592.00-976.013	\$50,000						\$50,000
Construction	592-592.00-976.013	\$351,000						\$351,000
ROW								
Other	592-592.00-976.013	\$35,100						\$35,100
<b>TOTAL BUDGET</b>		<b>\$436,100</b>						<b>\$436,100</b>

**Haggerty Loop Connection North of 12 Mile**

**Project Number: 76**

**CIP Number: 091-31**

**Description:**

Construction of approximately 1,500 feet of 12-inch water main along Haggerty Road to provide looping redundancy for the commercial area at 12 Mile and Haggerty. This improvement was recommended as part of the 2008 Water Master Plan.

**Justification:**

To provide looping redundancy for the commercial area at 12 Mile and Haggerty.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	592-592.00-976.015		\$30,000					\$30,000
Construction	592-592.00-976.015		\$300,000					\$300,000
ROW	592-592.00-976.015		\$10,000					\$10,000
Other	592-592.00-976.015		\$30,000					\$30,000
<b>TOTAL BUDGET</b>			<b>\$370,000</b>					<b>\$370,000</b>



**Island Lake Pressure District Expansion – Phase 1**

**Project Number: 77**

**CIP Number: W&S008**

**Description:**

The Island Lake Pressure District (ILPD) expansion project has four key project components which will allow for the expansion of the ILPD into sections 29, 30, 31, & 32. Over the past several years, residents within these sections have complained of low pressure issues, especially during high usage periods when lawn sprinkling occurs. Typically, system operators would increase the discharge pressure from the West Park Booster Station during these periods of pressure complaints; however, there is limited opportunity to boost pressures to the desired level in these sections as it would cause excessively high pressures within the lower elevation areas in the Intermediate Pressure District (along Novi Road north of 9 Mile and south of Grand River). For this reason, re-districting was proposed as part of the 2014 Water System Master Plan update. The four main components of this project include:

- (1) Extension of a 12-inch water main from 10 Mile and Wixom to the stub at Woodham Road and 10 Mile (less the section of main that was installed along 10 Mile as part of the Velencia Estates Subdivision)
- (2) Installation of a new PRV at Ten Mile and Beck Road
- (3) Installation of a new PRV at 9 Mile and Beck Road
- (4) Pump upgrades at the Island Lake Booster Station

**Justification:**

Over the past several years, residents within these sections have complained of low pressure issues, especially during high usage periods when lawn sprinkling occurs. Typically, system operators would increase the discharge pressure from the West Park Booster Station during these periods of pressure complaints.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	592-592.00-976.016		\$156,560					\$156,560
Construction	592-592.00-976.016		\$1,957,000					\$1,957,000
ROW								
Other	592-592.00-976.016		\$117,420					\$117,420
<b>TOTAL BUDGET</b>			<b>\$2,230,980</b>					<b>\$2,230,980</b>

**10 Mile Loop Connection West of Wixom Rd**

**Project Number: 78**

**CIP Number: 091-22**

**Description:**

Connect the existing water main at Wixom Road and 10 Mile to the existing 12-inch water main east of Terra Del Mar on 10 Mile Road with approximately 2,700 feet of 12-inch water main. This project was recommended in the 2008 Water Master Plan and provides redundancy to the Island Lake Phase 4 and Island Lake Phase 8 subdivisions.

**Justification:**

This project was recommended in the 2008 Water Master Plan and provides redundancy to the Island Lake Phase 4 and Island Lake Phase 8 subdivisions.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	592-592.00-976.017			\$42,100				\$42,100
Construction	592-592.00-976.017			\$421,000				\$421,000
ROW								
Other	592-592.00-976.017			\$42,100				\$42,100
<b>TOTAL BUDGET</b>				<b>\$505,200</b>				<b>\$505,200</b>

**11 Mile Loop Connection at Seely Road**

**Project Number: 79**

**CIP Number: 091-18**

**Description:**

Construct 12-inch water main approximately 2,500 feet from the existing 12-inch water main of Seeley Road and 11 Mile to the west along 11 Mile Road to the existing water main stub at 41390 Bridge Street 500 feet east of Meadowbrook. This water main loop connection would eliminate dead-end portions of the system along Bridge Street and Seeley Road, thus increasing the redundancy of the system.

**Justification:**

This water main loop connection would eliminate dead-end portions of the system along Bridge Street and Seeley Road, thus increasing the redundancy of the system.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	592-592.00-976.018			\$81,900				\$81,900
Construction	592-592.00-976.018			\$819,000				\$819,000
ROW	592-592.00-976.018			\$10,000				\$10,000
Other	592-592.00-976.018			\$81,900				\$81,900
<b>TOTAL BUDGET</b>				<b>\$992,800</b>				<b>\$992,800</b>

**11 Mile Loop Connection between Mandalay and Sullivan**

**Project Number:** 80

**CIP Number:** 091-19

**Description:**

Complete the 12-inch water main along 11 Mile Road from Mandalay Circle to the stub at Sullivan Lane. The project would include a total of 4,800 feet of 12-inch water main. This project was recommended as part of the 2008 Water System Master Plan.

**Justification:**

To provide looping redundancy along 11 Mile between Beck and Taft Road.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	592-592.00-976.000				\$65,000			\$65,000
Construction	592-592.00-976.000				\$650,000			\$650,000
<b>ROW</b>								
Other	592-592.00-976.000				\$65,000			\$65,000
<b>TOTAL BUDGET</b>					<b>\$780,000</b>			<b>\$780,000</b>

**Island Lake Pressure District Expansion – Phase 2**

**Project Number:** 81

**CIP Number:** W&S009

**Description:**

The Island Lake Pressure District (ILPD) Phase 2 Expansion Project has two key project components which will allow for the expansion of the ILPD into the northeast quadrant of section 18. The Catholic Central site water main was installed with a backup up pressure reducing valve (PRV) in lieu of a looped system in case water pressure is ever lost from the Intermediate Pressure District. This PRV provides limited redundancy as it rarely operates, so system operators cannot tell if it is in working order. In addition, the design of this PRV allows for the Island Lake Booster Station to feed the Intermediate district during times of pressure loss. The design did not take into account the fact that the Island Lake Booster Station is not large enough to feed the Intermediate District. For this reason, re-districting was proposed as part of the 2014 Water System Master Plan update. The two main components of this project include:

- (1) Installation of a 16-inch transmission main through Wildlife Woods Park to provide sufficient conveyance to the Island Lake Booster Station.
- (2) Decommissioning of PRV at the Catholic Central Site.

**Justification:**

The Catholic Central site water main was installed with a backup up pressure reducing valve (PRV) in lieu of a looped system in case water pressure is ever lost from the Intermediate Pressure District. This PRV provides limited redundancy as it rarely operates, so system operators cannot tell if it is in working order. In addition, the design of this PRV allows for the Island Lake Booster Station to feed the Intermediate district during times of pressure loss. The design did not take into account the fact that the Island Lake Booster Station is not large enough to feed the Intermediate District. For this reason, re-districting was proposed as part of the 2014 Water System Master Plan update. The two main components of this project include:

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	592-592.00-976.000				\$85,400			\$85,400
Construction	592-592.00-976.000				\$854,000			\$854,000
ROW								
Other	592-592.00-976.000				\$85,400			\$85,400
<b>TOTAL BUDGET</b>					<b>\$1,024,800</b>			<b>\$1,024,800</b>

**New Proposed Master Meter**

**Project Number: 82**

**CIP Number: 091-11/091-10**

**Description:**

Install a new master meter connection to Detroit Water and Sewerage Department (DWSD) along with a pressure reducing valve (PRV) as this feed will serve directly into the Intermediate Pressure District. This improvement would provide service to any new development between Haggerty and M-5, north of 13 Mile Road. The meter pit would only be installed if the developer were to install a transmission main to this location. This project was recommended as part of the 2008 Water System Master Plan.

**Justification:**

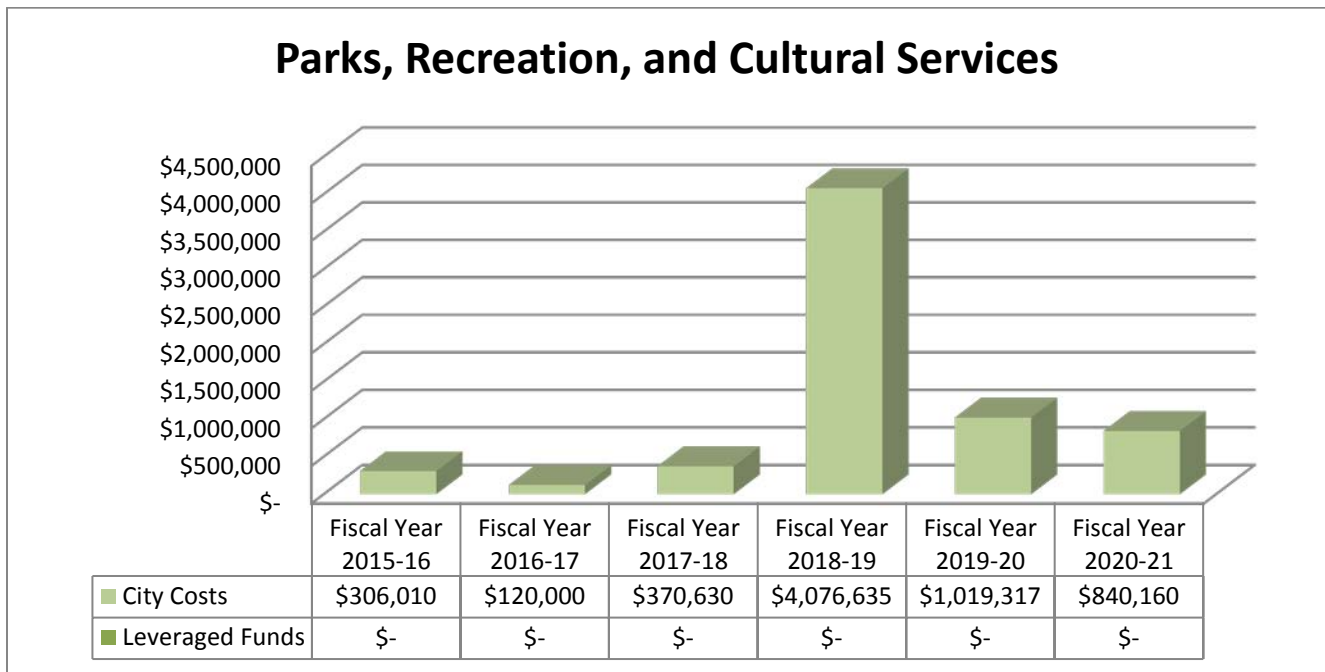
This feed will serve directly into the Intermediate Pressure District. This improvement would provide service to any new development between Haggerty and M-5, north of 13 Mile Road.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	592-592.00-976.000				\$130,500			\$130,500
Construction	592-592.00-976.000				\$1,305,000			\$1,305,000
ROW								
Other	592-592.00-976.000				\$130,500			\$130,500
<b>TOTAL BUDGET</b>					<b>\$1,566,000</b>			<b>\$1,566,000</b>

## Parks, Recreation and Cultural Services

Quality of life initiatives, such as those represented by parks; open space, and trails projects, are an important component of the Capital Improvement Program. The City of Novi Department of Parks, Recreation and Cultural Services offers lighted ball fields, extensive picnic grounds, shaded playgrounds, beaches, an urban lake, and much, much more. Neighborhood parks provide recreational amenities close to home, while the city's ever-growing network of trails accommodates walkers, joggers, strollers, bicyclists, roller bladders, and equestrians.

Funding for parks, open space, and cultural events is primarily from the Parks and Recreation dedicated millage that was established for maintaining parks and recreation purposes. A dedicated millage of 0.3857 mills and impact fees make up the main funding source for Parks, Recreation and Cultural Services.



**ITC Community Sports Park Pathway Resurfacing**

**Project Number:** 83

**CIP Number:** 100-05

**Description:**

This project will revitalize the park pathway system and support the active, healthy lifestyle we provide our citizens, by asphalt resurfacing one mile of pathway, to include mill and overlay. Developed in 1996, ITC Community Sports Park caters to active recreational pursuits. This park is known as the premier soccer and baseball complex in the area. PRCS utilizes the park for leagues and camps as well as field rentals and tournaments throughout the year. Tennis and basketball courts are also within the park. For non-sports enthusiasts, one picnic shelter is available for community use throughout the year or to rent for gatherings of all sorts. Two play structures, one near each entrance of the park, are popular all year round. The pathways are utilized for access to fields and amenities as well as for fitness use.

**Justification:**

The one mile park pathway system is 20 years old and is showing signs of degradation. The system will need to have various spots replaced and others capped in an effort to maintain the structural integrity of the walkways. The pathway system in the parks is vital to mobility between athletic surfaces, facilities, and to the health and welfare of park patrons. As the park ages, the infrastructure begins to degrade and maintenance is necessary to keep the infrastructure functional.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction	208-691.00-977.001	\$85,670						\$85,670
ROW								
Other								
<b>TOTAL BUDGET</b>		<b>\$85,670</b>						<b>\$85,670</b>

**Pavilion Shore Park - Phase III**

**Project Number: 84**

**CIP Number: PRC013**

**Description:**

Pavilion Shore Park officially opened to the public in August 2013. Original planning for the park included the addition of a water feature and restroom facility in FY2017-18 for \$420,000. In October 2014, the PRCS Capital Needs Assessment noted the park was in need of permanent restroom facilities. Based on the assessment and resident requests, PRCS proposes a combined shelter/restroom facility (\$280,000) be installed in FY2015-16. The project will also include additional benches (\$17,600), and picnic tables (\$19,640) and the installation of 3 grills and 2 serving tables (\$3,100) in the park to allow users to gather with friends and family.

**Justification:**

Currently there are no restroom facilities at the park. There is also no shelter available for citizens to use should there be a need to find shade from excess heat or summer rain or as a resting spot for walkers, joggers, and bikers.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction	208-691.00-977.086	\$180,000						\$180,000
ROW								
Other		\$40,340						\$40,340
<b>TOTAL BUDGET</b>		<b>\$220,340</b>						<b>\$220,340</b>

**Wildlife Woods Soccer Field Drainage**

**Project Number: 85**

**CIP Number: PRC018**

**Description:**

A project identified in the 2014 PRCS Capital Needs Assessment included improvement to the Wildlife Woods soccer field by installing new drainage to create 2 new tournament level soccer fields.

**Justification:**

The Wildlife Woods Park soccer fields are in fair condition. There is currently not a drainage system in place. By renovating these fields, PRCS will be able to make improvements to ITC Community Sports Park fields and begin a rotation schedule allowing fields to rest and recover from heavy use.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	208-691.00-977.000		\$120,000					\$120,000
<b>TOTAL BUDGET</b>			<b>\$120,000</b>					<b>\$120,000</b>



**ITC Community Sports Park Play Structure Replacement**

**Project Number: 86**

**CIP Number: 100-03**

**Description:**

This project would remove one of two existing play structures in the first quarter and replace it with a new (Americans with Disabilities Act) ADA accessible play structure developed for children ages 2-12 by the end of the third quarter.

**Justification:**

The current structure provides limited accessibility for the physically challenged community. An enhanced structure would meet current ADA standards and provide updated play equipment.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	208-691.00-977.003			\$75,000				\$75,000
<b>TOTAL BUDGET</b>				<b>\$75,000</b>				<b>\$75,000</b>

**Wildlife Wood Trail**

**Project Number: 87**

**CIP Number: PRC010**

**Description:**

The project will construct a sidewalk and paved 10' non-motorized trail 0.3 miles through an existing woodlot, providing connections to Wildlife Woods, Deerfield Elementary School, existing sidewalk networks, adjacent neighborhoods and regional trail systems.

**Justification:**

The proposed trail would enable over 1400 students to use a non-motorized multi-use path to access an existing city park as well as a city-wide connection for other residents.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	208-691.00-977.004			\$95,630				\$95,630
<b>TOTAL BUDGET</b>				<b>\$95,630</b>				<b>\$95,630</b>

**ITC Community Sports Park Update**

**Project Number: 88**

**CIP Number: PRC019**

**Description:**

The ITC Soccer fields were originally constructed utilizing the "crown" method of drainage. Based on current field conditions it is recommended to install a proper drainage system on all the soccer fields (2 Regulation, 2 Junior, 6 Youth) as well as re-grading them to make them flat and level. The project will also include replacement of the existing benches, picnic tables and waste receptacles with new amenities made of durable materials that are consistent with the park system. These will be placed on concrete pads for easy maintenance and accessibility.

**Justification:**

The existing soccer fields are experiencing many drainage issues and the fields are not level giving an unfair advantage to teams. The existing benches are currently in fair condition. Some of the wood is splintering and warped. The existing 10 picnic tables are in fair condition and are not consistent with the other parks. The existing 14 waste receptacles are in fair condition and are not consistent with the other parks.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	208-691.00-977.005			\$200,000	\$471,800			\$671,800
<b>TOTAL BUDGET</b>				<b>\$200,000</b>	<b>\$471,800</b>			<b>\$671,800</b>

**Villa Park Property Studio**

**Project Number: 89**

**CIP Number: PRC015**

**Description:**

Villa Barr Art Park and Cultural Education Center was officially dedicated as park land at the February 25, 2013 City Council meeting. The current structure on the property is in need of a public restroom facility and defined cultural arts programming space. With the remodel of the structure at Villa Barr Art Par property to include a public restroom and cultural arts programming space, the park can be utilized by the public for intended usage.

**Justification:**

Addition of the new park enhancement will enable the space to be used by the public for cultural arts programming.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	208-691.00-977.000				\$135,000			\$135,000
<b>TOTAL BUDGET</b>					<b>\$135,000</b>			<b>\$135,000</b>

**Power Park Upgrade**

**Project Number: 90**

**CIP Number: PRC020**

**Description:**

The concession stand/restroom/storage building at Ella Mae Power Park was constructed in 2008. The building contains men's and women's restrooms, concessions with supporting janitorial room, storage and a mechanical electrical room. The pavement around the restroom and in the courtyard area should be replaced to prevent any tripping hazards. The project will also replace the existing benches with new benches, picnic tables, and waste receptacles made of durable materials that are consistent with the park system and that will be placed on concrete pad for easy maintenance and accessibility. The existing shelter by Field #1 will also be replaced with a new modern shelter made of durable materials.

**Justification:**

Upgrades to the park must continue in order for it to remain as an attractive destination for residents and tournaments. As new sports complexes are built around the state, investment in Ella Mae Power Park is needed to attract and retain leagues and tournaments. Upgrades will also provide consistency in style of amenities located throughout the City's parks.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	208-691.00-977.000				\$165,790			\$165,790
<b>TOTAL BUDGET</b>					<b>\$165,790</b>			<b>\$165,790</b>

**Field/Parking Development with Novi Community School District for Schools**  
**11 Mile/Beck Road Property**

**Project Number: 91**

**CIP Number: PRC003**

**Description:**

The property is owned by Novi Community Schools. This project would entail working out an agreement with the schools to develop a portion of the property for recreational use. The development would consist of multi-use fields that could be used as practice space for popular sports such as soccer or used by some of our growing sports such as Lacrosse and Cricket. The current scope of the project would include making minor improvements for developing seven acres for parking purposes.

**Justification:**

The project would be used as a community gathering space, utilized for sports, and recreational use.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	208-691.00-977.000				\$182,000			\$182,000
<b>TOTAL BUDGET</b>					<b>\$182,000</b>			<b>\$182,000</b>

**Tim Pope Play Structure Replacement**

**Project Number:** 92

**CIP Number:** 109-03

**Description:**

This project would remove the Tim Pope Play Structure (built in 1997) located at ITC Community Sports Park, off the 8 Mile entrance. The structure would be replaced with a new Americans with Disabilities Act (ADA) accessible structure and accessible safety surfacing. The intent would be to keep the name of the playground the same after replacement of the structure.

**Justification:**

The current structure has exceeded its useful life and does not meet the Americans with Disability (ADA) and Architectural Barriers Act (ABA) standards. In addition, the current structure was constructed from chromated copper arsenate (CCA) treated wood. This chemical has been linked to health concerns with excessive exposure.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	208-691.00-977.000				\$250,000			\$250,000
<b>TOTAL BUDGET</b>					<b>\$250,000</b>			<b>\$250,000</b>

**Greenway Development Phase 1B (9 Mile Rd. to Fire Station 4 Parking Lot)**

**Project Number:** 93

**CIP Number:** 125-997

**Description:**

To plan and build a paved north-south regional pathway for recreational use along the ITC Transmission Corridor, which would be 10' in width using an asphalt surface. The pathway would connect ITC Community Sports Park to the Providence Park Campus. Due to the length of the path being proposed, a phased approach to design and construction would be likely. Phase 1A of the pathway would begin at ITC Community Sports Park, continue along the ITC corridor and end at Nine Mile Road. Phase 1B pathway would continue from 9 Mile Road to Fire Station 4 parking lot where a parking area could be located, and has various alternative routes around the wetland.

**Justification:**

2014 National Citizen Survey ranked ease of bicycle traveling and ease of walking in Novi at 50% and 58% respectively, A regional trail along the western portion of the City was recommended as part of the Non-Motorized Master Plan to provide a connection between Maybury State Park, Providence Hospital and eventually Walled Lake. From an economic standpoint, the greenway has the potential to increase real property values, in turn increasing municipal revenues.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	208-691.00-977.000				\$1,345,065			\$1,345,065
<b>TOTAL BUDGET</b>					<b>\$1,345,065</b>			<b>\$1,345,065</b>

**Lakeshore Park Entry, New Camp Building, and New North Shelter**

**Project Number: 94**

**CIP Number: PRC017**

**Description:**

A priority project as identified in the 2014 PRCS Capital Needs Assessment includes improvements to the Lakeshore Park entry including construction of a new building designed to accommodate all program requirements as well as new concession space, meeting room and public restrooms. Park Entry/Arrival Redevelopment is recommended as part of the plan to improve park circulation patterns. Site preparation and grading, a new entrance drive, new parking area and a new entry booth are included in the redevelopment. Also identified in the assessment is the recommendation for the North Shelter to be replaced including a barrier free walk, new concrete pad and electrical distribution in the site work.

**Justification:**

The present 1,488 s.f. building was constructed over 50 years ago and contains structural damage. The public restrooms do not comply with the current barrier free accessibility code or the plumbing code. The program requirements cannot be met within the existing area. Renovation of this building is not recommended. The new building will serve as a focal point of the park with views of Walled Lake. It will feature two levels providing approximately 4800 s.f of space for camp, meetings, parties, receptions and programs. Complete redesign of the park entrance, parking lots, pathways, and volleyball courts will enhance the visitor experience and make the park an attractive destination for all area residents. PRCS has maintained a consistent pattern of renting all shelters at Lakeshore Park on weekends. Replacing the North Shelter and adding a new building will increase rental opportunities and rental income.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	208-691.00-977.000				\$1,526,980			\$1,526,980
<b>TOTAL BUDGET</b>					<b>\$1,526,980</b>			<b>\$1,526,980</b>

**Pavilion Shore Park – Phase IV (Pavilion and Waterfront Picnic Plaza, Site Lighting) – Grant Match**

**Project Number: 95**

**CIP Number: PRC001**

**Description:**

This project is a Michigan Natural Resources Trust Fund (MNRTF) grant match. The project would construct improvements for Pavilion Shore Park to include a park pavilion, accessible picnic tables, accessible benches, concrete bench pads, site lighting, trees, and interpretive signage. The MNRTF development grant amount requested is \$189,600 with a match of \$81,300 for a total of \$270,900.

**Justification:**

This development of accessible waterfront park and trailhead with 835 linear feet of naturalized shoreline will continue improvements of a MNRTF development grant.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	208-691.00-977.000					\$81,300		\$81,300
<b>TOTAL BUDGET</b>						<b>\$81,300</b>		<b>\$81,300</b>

**Ella Mae Power Park Irrigation and Fencing Fields 5 & 6 Replacement**

**Project Number: 96**

**CIP Number: PRC008**

**Description:**

The current fencing located at Ella Mae Power Park Fields 5 & 6 (ball diamonds) is in need of repair. The fences can be moved allowing more adult and youth games and tournaments to be played. By repairing the fencing that is currently outdated and in need of repair at these fields, all fencing in the Ella Mae Power Park would match.

**Justification:**

The current ball diamonds located at the back of Ella Mae Power Park are called fields 5 & 6. Those fields are in need of major overhaul due to the complex and the need of more teams & tournaments wanting to play in Novi leagues. Currently the fences are very short and for playability and safety reasons, in need of repair. In order to bring those fields in line with the entire look of the rest of the Civic Center field complex and to be able to offer more adult softball games, the renovations would allow not only more leagues and tournaments to play, but also offer more business opportunity for possible naming rights opportunities.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	208-691.00-977.000					\$113,380		\$113,380
<b>TOTAL BUDGET</b>						<b>\$113,380</b>		<b>\$113,380</b>

**Mobile Sound Stage Replacement**

**Project Number: 97**

**CIP Number: PRC025**

**Description:**

The City's mobile sound stage was originally purchased in 1995. Replacement is necessary due to its current condition. A new stage will include wiring for light and sound equipment, positional roof, overhead canopy and state of the art acoustical shell. The roof and canopy can be lowered to a closed position and locked with the stage deck fully deployed allowing all extensions, stairs, decorative skirting and stage equipment to be left in place, protected from weather and vandals, allowing setup to occur prior to the event/performance. Expected useful life would be 15-20 years.

**Justification:**

The City currently uses the sound stage for major events including Memorial Day Parade, Light Up the Night, Ethnic Taste and Tunes Festival, and summer concerts. The stage is also used by the Michigan State Fair, community groups and neighboring municipalities but rentals have been limited due to the age and condition of the stage. A sound stage is a temporary way to house entertainment at an event that does not permanently alter the natural beauty of its surroundings. The sound stage makes every event more professional, more exciting and more convenient.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	208-691.00-000.000					\$130,000		\$130,000
<b>TOTAL BUDGET</b>						<b>\$130,000</b>		<b>\$130,000</b>

**Ella Mae Power Park Lighting – Ball Fields 5 & 6**

**Project Number: 98**

**CIP Number: PRC004**

**Description:**

Ella Mae Power Park fields 5 & 6 are located directly south of ball fields 1-4 and are in need of field lighting.

**Justification:**

Current field availability for user groups and parks & recreation programs is limited to daylight hours. Allowing lighting will increase field usage and recreational opportunities by allowing activities to be played in the evening. Each field has four hours of use each weeknight and seven to ten hours of use each weekend. Users are Novi Parks and Recreation youth softball, Madness softball, Detroit Cricket League, fast-pitch girls softball tournaments and random rental groups for softball practice.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	208-691.00-977.000					\$255,000		\$255,000
<b>TOTAL BUDGET</b>						<b>\$255,000</b>		<b>\$255,000</b>



**ITC Community Sports Park Trail**

**Project Number: 99**

**CIP Number: PRC016**

**Description:**

Develop a 3,709 linear foot non-motorized trailhead and trail through ITC Community Sports Park. The trailhead and trail will tie into the proposed ITC corridor regional trail to the north, and the Maybury State Park regional trail system to the south. The trailhead items will include bike racks, park benches, signage and an information kiosk. Restrooms and shade are provided on site.

**Justification:**

In February 2011, the City established a Non-Motorized Master Plan generated through the efforts of the Walkable Novi Committee, which calls for a pathway through ITC Community Sports Park.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	208-691.00-977.000					\$439,637		\$439,637
<b>TOTAL BUDGET</b>						<b>\$439,637</b>		<b>\$439,637</b>

**Lakeshore Park Playground Improvement**

**Project Number: 100**

**CIP Number: PRC021**

**Description:**

The North Playground was installed in 2002 and many of its components do not meet the current Playground Safety Guidelines. It is recommended that some of these components be replaced with universally accessible elements. The entire structure may be replaced if deemed necessary based on condition and updated guidelines in 2020-2021.

**Justification:**

Due to its age and compliance issues, this project would remove outdated components and/or replace the structure with a new inclusive design play structure specifically developed for children ages 2-12 to include above ground wheelchair access and meet/exceed all of the current safety and accessibility requirements. The last 20 years in the playground industry has seen the introduction of numerous playground safety and accessibility regulations. With the advent of the Americans with Disabilities Act in 1990, the Access Board's playground accessibility rules of 2000, and the latest Department of Justice Standards published in 2010, accessibility has been at the forefront of recreation facility and playground development. Designers have consistently advocated the value of highly accessible facilities.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	208-691.00-977.000						\$75,000	\$75,000
<b>TOTAL BUDGET</b>							<b>\$75,000</b>	<b>\$75,000</b>

**Wildlife Woods Entrance**

**Project Number: 101**

**CIP Number: PRC022**

**Description:**

The park is located at the back of the Novi Middle School. The park is not easily seen or visible to the community. A new Entrance to the park would greatly benefit this park. An entrance located at the northeast section of the park would be ideal for use of the shelter, and sports facilities.

**Justification:**

A large portion of Wildlife Woods Park is currently not accessible and far from existing parking areas. The opportunity exists to create a new entrance and parking area at the north end of the park closer to the existing shelter and sports fields.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	208-691.00-977.000						\$105,000	\$105,000
<b>TOTAL BUDGET</b>							<b>\$105,000</b>	<b>\$105,000</b>

**Village Wood Lake Park Improvements**

**Project Number: 102**

**CIP Number: PRC023**

**Description:**

Village Wood Lake Park is a 54-acre park located at the end of an established subdivision. It was obtained in 2005 through a Michigan Natural Resources Trust Fund Grant. Its location lends itself to passive activities. In October 2014, the PRCS Capital Needs Assessment recommended installation of a shade shelter (\$50,000), more accessible amenities including picnic tables installed on a hard surface (\$22,800) and benches (\$6,000) made of durable materials that are consistent within the park system, and two overlook decks to be installed for fishing/ wildlife viewing (\$81,000), one at the north end of the park (1,000 square feet) and one at the south end of the park (800 square feet).

**Justification:**

Because Village Wood Lake is located within a neighborhood, it is recommended that a shade shelter be installed to better facilitate neighborhood gatherings. Amenities in the shelter should include additional picnic tables (including barrier free) and waste receptacles to be installed on concrete pads to allow for easy maintenance. Opportunities for the public to gain access to the water should be provided with overlook decks on Village Wood Lake at the North end of the park (1,000 square feet) and South end of the park (800 square feet).

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	208-691.00-977.000						\$159,800	\$159,800

**ITC Field Improvements****Project Number: 103****CIP Number: PRC024****Description:**

Several field improvements were noted in the 2014 PRCS Capital Needs Assessment to this multi-player sports field park. Included were (14) ball diamond dugouts to provide shade and protection from the outdoor elements estimated at (\$112,000). Also recommended was to light the ball diamonds for maximum field usage (\$240,000), and a new design of the parking lot with a drop off area for easy access to the fields and spectator areas, which would allow coaches to drop off equipment allow people with disabilities to be dropped off close to the ball diamonds (\$48,360). Adding two shade shelters were recommended to be added to the park to provide an area for park users to sit and enjoy a picnic, rest or have a gathering with friends or family (\$100,000).

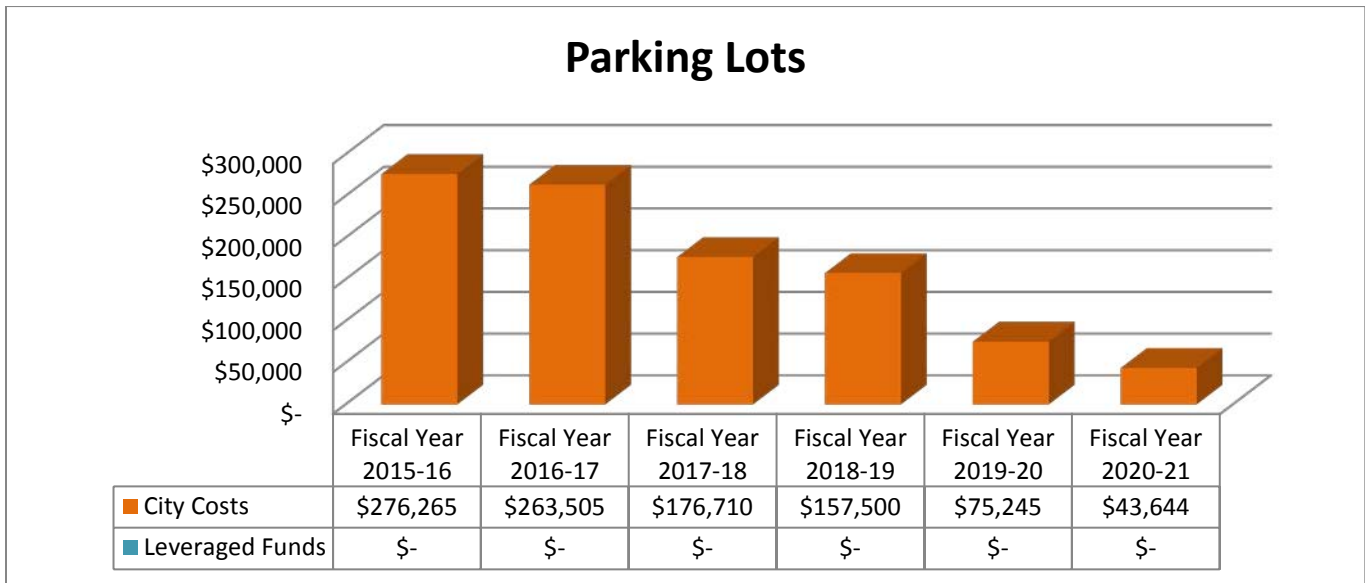
**Justification:**

Current access to the ball fields is difficult. The route is long and the paving needs to be replaced. There is no barrier free access for the public. Lighting the fields has been requested by user groups and will extend the amount of time available for rentals and programs.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	208-691.00-977.000						\$500,360	\$500,360
<b>TOTAL BUDGET</b>							<b>\$500,360</b>	<b>\$500,360</b>

## Parking Lots

In addition to the “bricks and mortar” at the various operating facilities within the City of Novi, there are a substantial number of parking lots. The City maintains the lots through annual budget appropriations but replacement and/or improvement of the lots fall under the capital program (included in the category of “buildings and property” in previous years). The parking lots include all those at public services facilities, police and fire stations, parks, senior housing, ice arena and the civic center.



**Fire Parking Lot Improvements (FS #2, #4 & CEMS)**

**Project Number:** 104

**CIP Number:** LOT002

**Description:**

This project is for the rehabilitation of the parking lots at Fire Stations #2, #4 and the CEMS Satellite Center. During 2012, the Engineering Department coordinated a review of all City facility parking lots; they were each evaluated to determine the condition and type of repairs that would be appropriate. Geotechnical engineering investigation was also completed. In July 2012 a construction contract was awarded for the construction phase of the repairs based on available funding. This request is for the parking lots at Fire Stations #2, #4 and the CEMS Satellite Center. Rehabilitation methods range from complete pavement removal and replacement to minor patching and repairs. Drainage improvements will also be completed in some locations where appropriate. Improvements to Fire Station #2 & CEMS were recommended by the Parking Lot Inventory and Maintenance Plan, completed in January 2014. Rated PASER 3 at the time of completion. Particularly harsh winter conditions have resulted in additional deterioration. Improvements include patching, HMA crack repair, seal coat and concrete pavement replacement. FS#4 proposed in FY15-16, CEMS and FS 2 proposed in FY17-18.

**Justification:**

Failure to fund the request will result in continued deterioration, increased repair costs, potential risk to employees and damage to vehicles. Engineering would bid the project and oversee the work.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-442.10-981.000	\$21,560		\$143,110				\$164,670
<b>TOTAL BUDGET</b>		<b>\$21,560</b>		<b>\$143,110</b>				<b>\$164,670</b>

**Police Parking Lot East Improvements**

**Project Number: 105**

**CIP Number: LOT006**

**Description:**

Improvements to Police Parking Lot East recommended by the Parking Lot Inventory and Maintenance Plan, completed in January 2014. Rated PASER 8 at the time of completion. Particularly harsh winter conditions have resulted in additional deterioration. Improvements include HMA crack overlay.

**Justification:**

Will improve ease of access to Police Station.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction	101-442.10-981.000	\$39,600						\$39,600
ROW								
Other								
<b>TOTAL BUDGET</b>		<b>\$39,600</b>						<b>\$39,600</b>

**Civic Center Parking Lot & Novi Way Improvements**

**Project Number: 106**

**CIP Number: LOT005**

**Description:**

Improvements to Civic Center Parking Lot and Novi Way recommended by the Parking Lot Inventory and Maintenance Plan, completed in January 2014. Rated PASER 6 at the time of completion. Particularly harsh winter conditions have resulted in additional deterioration. Improvements include patching, HMA crack repair, & HMA crack overlay.

**Justification:**

Improves ease of access to the Civic Center Campus.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction	101-442.10-981.000	\$215,105	\$215,105					\$430,210
ROW								
Other								
<b>TOTAL BUDGET</b>		<b>\$215,105</b>	<b>\$215,105</b>					<b>\$430,210</b>

**Police Access Driveway and Firearms Training Center Parking Lot**

**Project Number: 107**

**CIP Number: LOT004**

**Description:**

This project is for the rehabilitation of the parking lot at the Firearms Training Center and the Police Department east access driveway. During 2013, the Engineering Department coordinated a review of all Police and Fire parking lots. Public Safety parking lots, along with other City parking lots, were evaluated to determine the number and types of defects and the type of repairs or rehabilitation that would be appropriate. In the past two years, both the front and back parking lots at the Police Department were repaired. This request is for the continuation of repairs being made to the parking lot at the Range and the access drive at the police department building. The rehabilitation methods range from complete pavement removal and replacement to minor patching and repairs. Drainage improvements will also be completed in some locations where appropriate. Engineering would bid the project and oversee the work.

**Justification:**

Failure to fund the request will result in continued deterioration, increased repair costs, potential risks to employees and damage to vehicles. Engineering would bid the project and oversee the work.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction	101-442.10-981.000		\$48,400					\$48,400
ROW								
Other								
<b>TOTAL BUDGET</b>			<b>\$48,400</b>					<b>\$48,400</b>

**Lakeshore Park Parking Lot Improvements**

**Project Number: 108**

**CIP Number: LOT008**

**Description:**

Improvements to Lakeshore Park Parking Lot recommended by the Parking Lot Inventory and Maintenance Plan, completed in January 2014. Rated PASER 6 at the time of completion. Improvements include patching, HMA crack repair, seal coat, partial over band crack seal and re-grade gravel.

**Justification:**

Will improve access to Lakeshore Park interior parking lots and asphalt access roads

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction	208-691.00-981.000			\$33,600				\$33,600
ROW								
Other								
<b>TOTAL BUDGET</b>				<b>\$33,600</b>				<b>\$33,600</b>

**ITC Community Sports Park Parking Lot Improvements**

**Project Number: 109**

**CIP Number: LOT014**

**Description:**

Improvements to ITC Community Sports Park Parking Lot recommended by the Parking Lot Inventory and Maintenance Plan, completed in January 2014. Rated PASER 6 at the time of completion. Improvements include patching, HMA crack repair, seal coat and re-grade gravel.

**Justification:**

Will improve ease of access to ITC Community Sports Park.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction	208-691.00-981.000				\$157,500			\$157,500
ROW								
Other								
<b>TOTAL BUDGET</b>					<b>\$157,500</b>			<b>\$157,500</b>

**Partial Parking Lot Repair - Meadowbrook Commons Activity Center**

**Project Number: 110**

**CIP Number: SNR004**

**Description:**

Asphalt replacement for various areas of the Meadowbrook Commons parking lot.

**Justification:**

Various areas of the parking lot is in need of repair due to deterioration from weather and normal wear and tear.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction	594-000.00-969.000					\$75,245		\$75,425
ROW								
Other								
<b>TOTAL BUDGET</b>						<b>\$75,245</b>		<b>\$75,425</b>



**Rotary Park Parking Area**

**Project Number: 111**

**CIP Number: LOT015**

**Description:**

Rotary Park features a park shelter, tennis courts, trails, and a modern play structure installed in 2013. The existing parking lot is not in close proximity to the pavilion and does not have an accessible walkway connecting the park amenities. The project will include the addition of a second parking lot off Roethel Drive and improvements/additions to the pathways in the park.

**Justification:**

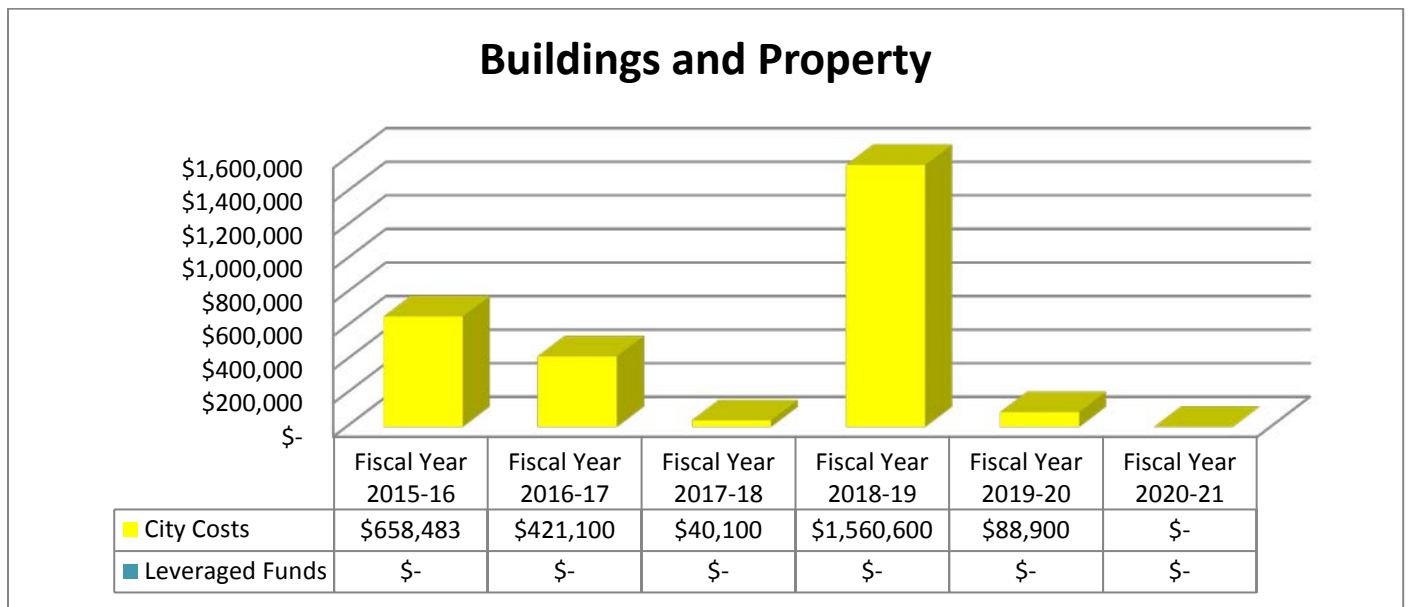
There is a need for additional parking with better access to the restroom building and shelter. Currently, users of the park utilize the street, grassy areas, and local business to access the park. The parking lot would add additional spaces and easier access to the pavilion and playground while providing an improved circulation system in the park for foot traffic.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction	208-691.00-981.000						\$43,644	\$43,644
ROW								
Other								
<b>TOTAL BUDGET</b>							<b>\$43,644</b>	<b>\$43,644</b>

## Buildings and Property

Operational facilities are the “bricks and mortar” from which the City of Novi provides services to its residents and businesses. Increasingly, operational facilities also include the systems that facilitate service delivery in the information age. Projects include the construction of new facilities, as well as the maintenance, rehabilitation, renovation, and expansion of existing facilities.

Operational facilities projects are funded from a variety of different sources, depending on the use of the facility. Sources mainly are tied to the General Fund and leveraged funds.



**Rubber Flooring in Upper Lobby (Ice Arena)**

**Project Number: 112**

**CIP Number: ICE012**

**Description:**

Replace approximately 1,400 square feet of existing, 16-year old rubber flooring in the main lobby, entranceway, and two main stairwells of the ice arena with new flooring. Last estimated price per square foot of similar flooring to what is already in the ice arena was previously quoted in a range of \$16-\$20 per square foot. Quotes from previous flooring projects are included with the request as supporting documents used in determining the cost of the project.

**Justification:**

The existing flooring is approaching the end of its useful life. It is wearing away in high traffic areas in the stairwells; that could potentially lead to a trip hazard and safety issue. The color of the flooring no longer matches the rest of the facility. New flooring will improve the appearance and functionality of the facility. The lower level flooring was completed in July 2014.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	590-000.00-969.000	\$30,000						\$30,000
<b>TOTAL BUDGET</b>		<b>\$30,000</b>						<b>\$30,000</b>

**LED Lighting in Blue & Red Rinks (Ice Arena)**

**Project Number: 113**

**CIP Number: ICE011**

**Description:**

Replace 120 six-lamp fluorescent light fixtures in both the Blue and Red Rinks (60 fixtures in each rink) of the Novi Ice Arena with 64 LED fixtures (32 fixtures in each rink).

**Justification:**

LED light fixtures are more energy efficient and require less regular maintenance than fluorescent fixtures. LED lights use less energy than fluorescent fixtures and the number of fixtures can be reduced, further reducing the amount of energy consumed by rink lighting. LED lighting comes with a 10-year warranty on the equipment. Currently, arena staff has to change out light bulbs every two years on fluorescent rink lighting at a cost of \$2,500 a time. Over 10 years, this would be a cost savings of \$12,500 in parts and labor. Based on energy savings alone, the return on investment of switching to LED lighting is less than 3.5 years. Factoring in maintenance savings further reduces the payback time. A payback analysis and lumen calculation is attached with this request.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	590-000.00-969.000	\$35,000						\$35,000
<b>TOTAL BUDGET</b>		<b>\$35,000</b>						<b>\$35,000</b>

**Equipment Room Roof Replacement - Back Mechanic Roof (Ice Arena)**

**Project Number:** 114

**CIP Number:** ICE009

**Description:**

This project would consist of the full replacement of the Equipment room roof at the Novi Ice Arena. The roof would be replaced with an 80mil GAF EverGuard TPO membrane (same product on the Civic Center). The new roof would include over 3" of ridged insulation bringing the R-value to almost an R-20. Also, the price includes the repair and coating of all the dilapidated roof-top duct work (see pictures). The overall price includes all material, labor and permits required to complete the project.

**Justification:**

The current arcade renovation includes providing an area in the east section designated for birthday party rentals. This opens up the private rental space rooms to be programed differently but before those ideas can be acted upon the roof above needs to be replaced. The roof itself is well past its normal life and needs to be replaced before further failure.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	590-000.00-969.000	\$44,000						\$44,000
<b>TOTAL BUDGET</b>		<b>\$44,000</b>						<b>\$44,000</b>

**Fire Station #4 Training Tower Upgrade - Phase 2**

**Project Number:** 115

**CIP Number:** FIR012

**Description:**

This project would consist of the completing upgrades to the Fire Station 4 training tower. In FY 13/14 engineering, roof and steel sub-structure was installed and finished painted. The proposed scope will include furnishing and installing window fill-in frames and six panels to allow the structure to be as weather-tight as possible.

**Justification:**

The major purpose for this project is extending the life of the tower structure. During design phase the potential for snow impact was neglected causing the winter's snow pack to infiltrate. With the 4 seasons of Michigan this is taking a toll of the life expectancy of the structure.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-337.00-976.000	\$46,000						\$46,000
<b>TOTAL BUDGET</b>		<b>\$46,000</b>						<b>\$46,000</b>

**Multi-Purpose Room Upgrades (Ice Arena)**

**Project Number: 116**

**CIP Number: ICE010**

**Description:**

This project would consist of the full renovation of the two multipurpose rooms at the Novi Ice Arena. The renovation will include the following upgrades: removal of existing folding partition wall, replacement of ceiling tiles, replacement of flooring with new rubber flooring, new mirrors, minor reworking of perimeter walls. The cost also includes contingency and engineering/design.

**Justification:**

The current arcade renovation includes providing an area in the east section designated for birthday party rentals. This opens up the private multi-purpose rooms to be programed differently allowing more revenue and better facilities for our citizens.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	590-000.00-969.000	\$55,000						\$55,000
<b>TOTAL BUDGET</b>		<b>\$55,000</b>						<b>\$55,000</b>

**Equipment Storage Building at ITC Community Sports Park**

**Project Number: 117**

**CIP Number: FLD024**

**Description:**

Each work day from April through November, DPS park maintenance staff deploy large mowers and other equipment from the DPS garage located on Lee BeGole Drive to ITC Community Sports Park and back, which is a round-trip distance of 16.2 miles. Equipment must be safely loaded onto trailers then transported to ITC Sports Park, where it is off-loaded for the day's use. At the end of the day, workers must re-load the equipment onto trailers and travel back to DPS's yard where it is off-loaded for nightly storage. Also, workers have to return to the garage for their lunch break each day because there is not an employee break facility at the Park. This daily process results in lost productivity in terms of added labor and equipment costs totaling \$35,274 per year (see attached spreadsheet for a detailed analysis of this lost productivity cost and the resulting Return on Investment calculation, and attached photo depicting a typical loaded trailer). A new equipment storage building at ITC Community Sports Park would eliminate this costly and inefficient practice.

In 2008, the City planned, designed and bid a 2,400 square-foot building for construction near the southeast corner of the park, just east of the existing pavillion/rest room building (see attached map). Although funds were appropriated for construction of the project, it was deferred because an area of poor soils that required remediation pushed the bid prices over the budgeted amount (see attached memo that was shared with City Council in the October 30, 2008 e-packet indicating that this project would be deferred). At that time, DPS was storing its Sports Park maintenance equipment at former Fire Station No. 4 located at Beck and 11 Mile Roads (currently the CEMS facility) - a round trip distance of 9.8 miles. DPS vacated this closer facility in 2010 when CEMS took occupancy of the station, thus causing the even greater inefficiency that persists today.

This resurrected project would provide a facility that would house all Sports Park maintenance equipment and supplies, and include an employee break room. The proposed budget amount was derived by applying a construction cost inflation multiplier to the lowest responsive bid price received in 2008, and by adding on a contingency amount and an engineering fee (see attached cost estimate).

**Justification:**

Constructing an equipment storage building would be a sound business decision for the following reasons:

Return on Investment. The estimated cost to revise and update the design, bid and construct the facility is \$245,483. The City is currently spending \$35,274 annually to trailer equipment to/from the Park. The City's investment would therefore be returned with a payback period of 7 years.

Productivity. One of DPS's scarcest human resources is park maintenance staff. The 928 man-hours currently wasted each year trailering equipment could be put to productive use maintaining the park, if a new storage building were to be constructed.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	101-442.00-976.000	\$20,457						\$20,457
Construction	101-442.00-976.000	\$225,026						\$225,026
ROW								
Other								
<b>TOTAL BUDGET</b>		<b>\$245,483</b>						<b>\$245,483</b>

**Community Development Suite Renovation**

**Project Number: 118**

**CIP Number: CDV001**

**Description:**

This project would consist of the complete renovation of the entire Community Development Suite at the Civic Center. The budgeted amount includes the following: removal of existing furniture, estimated electrical/data installation, removal and replacement of carpet, complete re-paint of the suite, and the installation of new furniture.

**Justification:**

The Civic Center facility dates back to 1987 and so does most of the office furniture. Many of the workstations are past the point of repair and are in need of replacement, not only due to safety concerns but also for cosmetics allowing a better customer experience. Collaborative workspaces bring employees out of private, heads-down, doors-closed environments into an open environment designed to encourage exactly what the name implies — collaboration.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-371.00-969.000	\$203,000						\$203,000
<b>TOTAL BUDGET</b>		<b>\$203,000</b>						<b>\$203,000</b>

**Civic Center Solar Panels**

**Project Number: 119**

**CIP Number: FAC009**

**Description:**

This project would consist of the construction of a roof-top solar panel field on the Civic Center. The goal of this project would be to provide alternative energy capable enough to power the LED atrium light fixtures. The project would include engineering and construction of the field on the Northwest corner of the Civic Center allowing our citizens the ability to view to field from the second floor. Also, this project would include a reporting monitor in the atrium showing a live snap-shot of the solar panels performance and monies saved.

**Justification:**

Over the past few years we have made huge strides with the City's commitment to sustainability in our facilities and it's time to step to the next level. This project would allow us to take a small step into the world of solar allowing the opportunity to measure the pros and cons before embarking on larger capital projects in future years.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-265.00-969.000		\$45,000					\$45,000
<b>TOTAL BUDGET</b>			<b>\$45,000</b>					<b>\$45,000</b>

**Evaporative Cooling Tower (Ice Arena)**

**Project Number: 120**

**CIP Number: ICE003**

**Description:**

Replace existing EVAPCO ATC-370 Evaporative cooling tower with new. The Existing unit was installed in 1998 and is currently working and in fair condition. The cooling tower cools and condenses the hot ammonia gas back into a liquid to be used in the refrigeration process. Compressors will not run without a properly working cooling tower. Ice cannot be made without all phases of the refrigeration system operating correctly.

**Justification:**

The existing condenser tower is approaching the end of its useful life. The costs of operation and repairs are increasing. New machines provide a more energy efficient operation and allow a more efficient operation of the refrigeration plant. A more efficient the refrigeration plant operates, the better the ice quality will be.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	590-000.00-969.000		\$65,000					\$65,000
<b>TOTAL BUDGET</b>			<b>\$65,000</b>					<b>\$65,000</b>



**Gun Range Building Addition**

**Project Number: 121**

**CIP Number: POL009**

**Description:**

This request is for a building addition to be added to the Gun Range. In early 2014 Sidock Architects performed an architectural assessment and long term needs assessment for all Public Safety facilities. This inspection and evaluation included the physical assessment of each facility's capability to accomplish the operational needs of the Department and to recommend short and long term improvements to further that mission. The Gun Range was constructed in 2008 utilizing drug forfeiture funds. The Gun Range is in good condition and has proven to be a valuable resource for the law enforcement community. Its usage has increased beyond the original vision for the facility; which has placed additional requirements on the ability to meet functional needs. The range has been used heavily by the US Border Patrol as well as for qualification for public concealed weapons permits. Training is currently conducted with chairs lining the walls of the lobby. The increased demand has pointed out the need for additional space for storage, for toilet facilities and for ease of maintenance/supplies for the roof-top exhaust air system. The renovation consists of an addition to the Gun Range of 1,100 sq. ft. to accommodate a Training Room, reconfiguration and addition for male/female restrooms, an additional storage room and a stairwell to the roof.

**Justification:**

The Gun Range has experienced greater usage than originally anticipated and accounted for in its original design. Space needs to be added to accommodate a training room, reconfiguration of the restrooms, storage and easier access to the roof if we intend to maintain the current usage. Council has agreed that any revenues as a result of the rental of the range can be used to fund future capital projects

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	402-402.00-976.000		\$311,100					\$311,100
<b>TOTAL BUDGET</b>			<b>\$311,100</b>					<b>\$311,100</b>

**Police Station Rubber Flooring (Sgt's Office & Briefing Room)**

**Project Number:** 122

**CIP Number:** POL008

**Description:**

This project scope consists of replacing the current dilapidated carpet in the Briefing room; Michigan State Police office, Sergeants Office, and Front counter office with new durable rubber flooring. The proposed product is the right flooring for the amount of foot traffic in these areas, allowing the life of the product to achieve its recommended specifications. The scope includes the removal and installation of over 2400 ft. sq. of new flooring made by Eco Studio Flooring. The selected flooring is a high candidate for promoting sustainability as most of the product is fully recyclable. Also including in the scope is the replacement of base molding.

**Justification:**

Commercial-grade carpeting generally lasts anywhere from three to ten years, however, there are many factors that can impact a carpet's lifespan. These include:

- Fiber
- Density
- Color selection
- Locations

The current carpet in the proposed replacement areas is well over 12 years old and greatly in need of replacement according to industry standards.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-301.00-976.000			\$40,100				\$40,100
<b>TOTAL BUDGET</b>				<b>\$40,100</b>				<b>\$40,100</b>

**Fire Station #3 Renovation**

**Project Number: 123**

**CIP Number: FIR014**

**Description:**

This request is for the renovation/reconfiguration of Fire Station #3. In early 2014 Sidock Architects performed an architectural assessment and long term needs assessment for all Public Safety facilities. This inspection and evaluation included the physical assessment of each facility's capability to accomplish the operational needs of the Department and to recommend short and long term improvements to further that mission. Fire Station #3 was built in 1978 to serve the southern area of the City of Novi. The station is over 30 years, but remains in good physical condition. There are signs of the wear and tear of an older facility and general updating of materials and finishes is required. The station is small for modern equipment and facilities. Due to the changes in the fire service in the last 30 years, the station exhibits the pressures of a building not capable of accommodating those changes. There is no room for substantial additions. There is, however, need for increased storage and adequate locker room areas and a separate sleeping area. The renovation includes separate locker and sleeping areas, upgrading the shower rooms and relocation of the site light in the parking lot area.

**Justification:**

The function of Fire Station #3 has changed and the facilities need to renovate to accommodate the changes and meet the workload demanded by the citizens of Novi. Failure to make the necessary renovations will result in the continued sharing of workspace areas that would hamper efficiency.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-337.00-976.000				\$327,650			\$327,650
<b>TOTAL BUDGET</b>					<b>\$327,650</b>			<b>\$327,650</b>

**Police Building 2<sup>nd</sup> Floor Renovation**

**Project Number: 124**

**CIP Number: POL006**

**Description:**

This request is for the renovation/reconfiguration and new furniture/carpet on the 2nd Floor of the Police Building. In early 2014 Sidock Architects performed an architectural assessment and long term needs assessment for all Public Safety facilities. This inspection and evaluation included the physical assessment of each facility's capability to accomplish the operational needs of the Department and to recommend short and long term improvements to further that mission. The Police Building, constructed in 1980, has been well maintained and generally is in good physical condition. The Police Building has absorbed a number of functional changes in recent years to include the reorganization to a Public Safety Administration as an operational model incorporates the Fire Department command and staff as well as housing two independent outside agencies (Michigan State Police and Secret Service) utilizing the building as a home base for their operations. While the building has been able to accommodate these changes/additions, the result has placed a strain on some building characteristics of storage and had some effect on operational efficiencies. There are pressures for additional storage that are approaching serious concerns. The renovation includes the relocation of the exercise room, the Secret Service offices, the Fire Marshal Office and the detective area as well as new carpet and furniture throughout the 2nd floor that are way past their useful life.

**Justification:**

The Police Department dates back to the 1980's and so does most of the furniture and carpet. The workstations are past the point of repair and need replacement, not only due to safety concerns but also for cosmetics; commercial-grade carpeting usually last anywhere from three-ten years. The existing carpet is going on 13 years. The reconfiguration of space throughout the 2nd floor will accommodate the increased staffing levels (fire, police, MSP and Secret Service) needed to meet the workload demanded by the citizens of Novi. Failure to reconfigure space will result in sharing office and workspace area which could hamper efficiency. The lack of adequate storage could result in damage to or loss of evidence and equipment.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-301.00-976.000				\$608,550			\$608,550
<b>TOTAL BUDGET</b>					<b>\$608,550</b>			<b>\$608,550</b>

**Fire Station #1 Renovation**

**Project Number: 125**

**CIP Number: FIR011**

**Description:**

This request is for the renovation/reconfiguration of Fire Station #1. In early 2014 Sidock Architects performed an architectural assessment and long term needs assessment for all Public Safety facilities. This inspection and evaluation included the physical assessment of each facility's capability to accomplish the operational needs of the Department and to recommend short and long term improvements to further that mission. Fire Station #1, constructed in 1981 and over 30 years old has been well maintained and generally in good condition. The function of the station has changed to more of a satellite station with the adoption of the Public Safety Administration structure and the relocation of the Fire Department administrative staff to the Police Building. This move provides an opportunity for a renovation that includes an upgraded, operational fire station capable of accommodating male and female fire fighters, dedicated locker room and bunk rooms without the expansion of the existing facility. Several cosmetic flaws as well as design/functions flaws were noted and recommendations made.

**Justification:**

The function of Fire Station #1 has changed and the facilities need to be renovated to accommodate the changes and meet the workload demanded by the citizens of Novi. Failure to make the necessary renovations will result in the continued sharing of workspace areas that would hamper efficiency.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-337.00-976.000				\$624,400			\$624,400
<b>TOTAL BUDGET</b>					<b>\$624,400</b>			<b>\$624,400</b>

**Natural Gas Generator – Police Building**

**Project Number: 126**

**CIP Number: POL011**

**Description:**

This project is for a backup generator at the Novi Police Station with a new natural gas model. The proposed model is sized at 150 kWe and is EPA approved. The proposed unit is manufactured by Blue Star, a very reputable company in the generator world. The benefit of going to natural gas opposed to diesel is simple....Demand, in the event of an extended power outage or diesel shortage we would not be affected. The proposal included all parts, labor, and permits to complete the work.

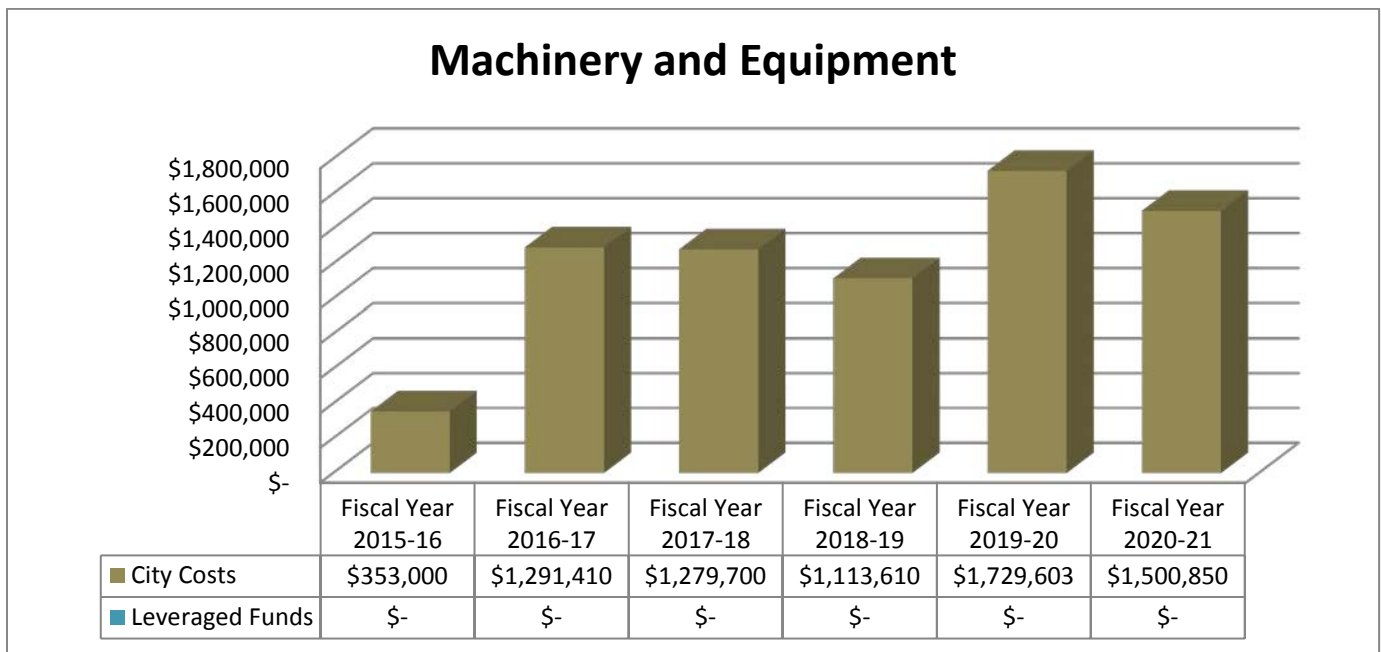
**Justification:**

The police station is one of the most vital facilities in the City that would suffer a huge community disruption in the event of a power failure.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-301.00-976.000					\$88,900		\$88,900
<b>TOTAL BUDGET</b>						<b>\$88,900</b>		<b>\$88,900</b>

## Machinery and Equipment

Novi employees depend on dependable equipment to allow and assist them to do their jobs day in and day out. The equipment comes in many forms, plow trucks, police cars, generators, fire apparatus, etc., the equipment that literally keeps the City of Novi moving. All the vehicles found in this category are the cars and trucks that appear at the front doors of Novi residents and business owners such as public safety (police, fire, water, sewer and street maintenance). Generators that keep municipal buildings and a 911 call center operational during power outages along with ice resurfaces for the City's ice arena fall under this category. Novi City Council has established the precedent over the years in providing Novi employees with the tools necessary to do their job and provide the best level of service to the community. A number of varied funding sources can be used to finance the equipment necessary to efficiently deliver service: General, Major Street, Local Street, Public Safety, and Drug Forfeiture Funds.



**Mini Concrete Mixer - Two Yard Capacity**

**Project Number:** 127

**CIP Number:** FLD025

**Description:**

One of the largest maintenance challenges the City faces is addressing failed concrete streets. In FY 2014-15 the Department of Public Services was allocated \$110,000 for the purchase of a new 1-ton swap loader truck. This truck has the ability to carry multiple types of attachments (cargo boxes, stake racks, liquid tanks, etc.) on the same chassis; eliminating the need to purchase dedicated equipment for one job. An attachment that would be used regularly is a two cubic yard capacity concrete mixer. This mixer would be mounted to a skid plate and pulled onto the bed of the truck when needed to pour not only concrete for roadway panels, but also sidewalk flags, storm drain repairs, or special projects that require small foundations (signs, lighting, etc.).

**Justification:**

Each year the City of Novi performs approximately 50 jobs that require crews to wait for concrete trucks to show up to job sites. Calling for concrete requires a work leader to schedule a truck one-two days ahead of the estimated project completion date, and then wait for a call when the truck is estimated to be at the job site for delivery. While the crew leader is waiting for a call, he must also find busy work for the crew assisting with the pour and finishing. Often times, after the crew leader is notified by the truck driver he is on the way, crews report to the job site, but sit idle waiting for the truck to arrive because it often gets caught up at the previous job or caught in traffic. Purchasing a mixer to use in-house eliminates time crews wait on concrete deliveries and provides expedited services to residents. Crew sizes for concrete jobs can range between 5-10 staff members. Based on an estimated 50 jobs a year, where crews have to wait approximately 1/2 hour for each delivery (on 3.5 lost man-hours); yields approximately 175 hours of lost productivity per year. That productivity loss totals an estimated \$8,000/year. By purchasing a mixer to be used internally, down time is eliminated and provides an approximate return on investment in 4.75 years.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-442.20-982.000	\$38,000						\$38,000
<b>TOTAL BUDGET</b>		<b>\$38,000</b>						<b>\$38,000</b>



**Combination V-Box Salt Spreader Inserts (4)**

**Project Number: 128**

**CIP Number: FLD006**

**Description:**

The next step in the City's snow and ice removal program is to enhance winter maintenance functions on four dump trucks. Combination truck box inserts are designed to carry granular rock salt and liquid anti-icing solutions that can assist with winter snow and ice control and summer dust suppression on gravel roads. The combination unit is a "V-Box" that slides into the existing dump body from a self-supporting leg kit. It is equipped with liquid tanks carrying up to 720 gallons of liquid, a reversible continuous belt cross conveyor, salt slurry generator, spinner, and anti-ice boom system that can de-ice up to three lanes of traffic at one time.

**Justification:**

Crushing, pre-wetting, and conservatively applying anti-icing products allow DPS to reduce annual salt consumption by 25% compared to conventional methods. From FY13/14 to FY 14/15, contract salt prices have increased over 100% (from \$36/ton to over \$76/ton). By implementing new technology with enhanced best management practices, these inserts can save up to \$60,000 annually, depending on the number and type of snow events, compared to existing pre-wetting practices. This savings demonstrates a potential return on investment in 3 to 4 years.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-442.20-982.000	\$125,000	\$125,000					\$250,000
<b>TOTAL BUDGET</b>		<b>\$125,000</b>	<b>\$125,000</b>					<b>\$250,000</b>

**Single-Axle 5 Cubic Yard Dump Trucks w/Front Plows & Underbody Scrapers - (Replaces #686, 1994 Ford)**

**Project Number: 129**

**CIP Number: FLD013**

**Description:**

The replacement dump truck would be used to transport materials and equipment, aid in road maintenance and drainage work, and to perform snow removal operations. The truck would come equipped with a front plow, underbody scraper and wing plow; and would be a replacement for truck #686 - a 1994 Ford Single-Axle Dump Truck, which is in poor condition with over \$47,800 invested in maintenance and repairs to date. The frequency of repairs to truck #686 has increased significantly in recent years.

**Justification:**

Truck #686 has exceeded its 10-year useful life by 11 years. Investing more funds into maintenance and repair does not promote fiscal responsibility. Because of the regularity of repairs, the incumbent truck is more prone to breakdown in large storm events when it is needed most. This new truck will replace a vehicle with antiquated salt application control systems and plowing capabilities. New plow blade technology allows operators to change the direction snow is being pushed with a thumb control, whereas old technology requires the operator to stop the truck, pick up the blade, then rotate it before re-starting plowing operations. Current de-icing technology allows operators to monitor salting rates and brining application rates, reducing material expenditures while also preserving roadway life and minimizing the negative environmental impacts of salt. One of the greatest positive attributes is that this truck will be equipped with a wing plow that allows operators to clear roadways they are assigned at a rate of up to one third faster than traditional trucks (see attached wing plow information, along with the business case for investing in this technology).

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-442.20-984.000	\$190,000						\$190,000
<b>TOTAL BUDGET</b>		<b>\$190,000</b>						<b>\$190,000</b>

**Property Room Shelving Unit**

**Project Number: 130**

**CIP Number: POL013**

**Description:**

This request is for new shelving units for the property room. In August 2014 a complete audit of the Novi Police property room was conducted by an Oakland County Auditor and a Senior Property Room Technician with Oakland County. Beyond audits typically done in the past, this audit also addressed property entry in the CLEMIS system as well as property room standards and procedures. During this audit, it was recommended that the Department look into investing into a rolling shelving unit system for the property room, similar to one implemented by the Oakland County Sheriff's Department. Our current system has not been upgraded in approximately 15 years, is showing wear and is near capacity during portions of the year. The new system would upgrade our current storage from 760 cubic feet to approximately 2,270 cubic feet and allow for a more functional storage environment with enclosed shelves. With the influx of commerce, population growth, expansion of the SEMFCTF task force in our building and police calls for service, this additional storage would provide us room to expand well into the next 15 years. The shelving units are movable either manually or electronic, and would allow for various additional upgrades such as lighting or locking cabinets if desired.

**Justification:**

Our current system has not been upgraded in approximately 15 years, is showing wear and is near capacity during portions of the year. The new system would upgrade our current storage from 760 cubic feet to approximately 2,270 cubic feet and allow for a more functional storage environment with enclosed shelves. With the influx of commerce, population growth, expansion of the SEMFCTF task force in our building and police calls for service, this additional storage would provide us room to expand well into the next 15 years.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-301.00-982.000		\$60,775					\$60,775
<b>TOTAL BUDGET</b>			<b>\$60,775</b>					<b>\$60,775</b>

**Firearms Training Simulator Replacement**

**Project Number: 131**

**CIP Number: POL012**

**Description:**

This request is to replace the outdated Firearms Training Simulators (FATS) System. In 2002 the Novi Police Department purchased a Firearms Training Simulator (FATS) to serve as an aid in “shoot, don’t shoot” use of force situations. FATS was comprised of various lethal and non-lethal weapons utilized by the department at the time; Glock handgun, Remington Shotgun, pepper spray and a flashlight all of which were tethered to a control unit and compressed gas tank. Also incorporated in the system was a projector and remote “nerf” gun that could be used to challenge officer’s choice of cover or concealment. The system projected a pre-recorded use of force scenario on the screen and the officers were directed to react accordingly based on their training, laws, policies and procedures. What once was a cutting edge training system is now outdated and unreliable. The operating system is Windows ‘98 and the constant set up and takedown has rendered the system unpredictable and no longer operational. Additionally, the manufacturer will no longer service the system or repair its weapons and new training scenarios are unavailable. The Glock handguns and shotguns are no longer utilized by NPD. New systems are wireless affording more mobility for the officers. We can tailor the weapons to our current Sig Sauer pistols and rifles. The new systems provide interactive high-definition video training scenarios and computer-generated graphics content to allow trainees to interact through the use of simulated and live weapons.

**Justification:**

The existing system is outdated and no longer operational. The manufacturer will no longer repair the systems. New systems are wireless and afford the department better training, as the system can be tailored for our existing weapons. The system is also used during the Citizens Police Academy training sessions and for Fall for Novi.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	402-402.00-982.000		\$90,300					\$90,300
<b>TOTAL BUDGET</b>			<b>\$90,300</b>					<b>\$90,300</b>

**Zamboni Ice Resurfacers (Ice Arena)**

**Project Number:** 132

**CIP Number:** ICE002

**Description:**

Replace the current fair condition Model 500 Zamboni Machine with over 8,000 hours of operation with a Model 546, the newest model line in the Zamboni Company.

**Justification:**

The existing Zamboni machine is approaching the end of its useful life. The costs of operation and repairs are increasing. New machines provide a better ice quality and performance reliability for the arena. Improved ice surface is a benefit to all skaters and being able to maintain quality ice throughout every resurface would reduce the amount of ice repairs and maintenance required. This also opens up opportunities for sponsorships.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	590-000.00-969.000		\$95,000					\$95,000
<b>TOTAL BUDGET</b>			<b>\$95,000</b>					<b>\$95,000</b>

**Single Axle 5-Cubic Yard Dump Truck w/Front Plow, Underbody Scraper, & Wing Plow**  
**(replaces #687 – 1994 Ford)**

**Project Number:** 133

**CIP Number:** FLD013

**Description:**

The replacement dump truck would be used to transport materials and equipment, aid in road maintenance, drainage work, and snow removal operations. The truck would come equipped with a front plow; underbody scraper & wing plow. Replacement for #687 - 1994 Ford, in poor condition, with over \$59,000 in maintenance and repairs to date.

**Justification:**

Truck #687 has exceeded its useful life. Investing more funds into maintenance and repair does not promote fiscal responsibility.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-442.30-984.000		\$190,000					\$190,000
<b>TOTAL BUDGET</b>			<b>\$190,000</b>					<b>\$190,000</b>

**Tandem Axle Swap Loader Dump Truck with Front Plow, Underbody Scraper, & Wing Plow**  
**(replaces #699 – 2000 Sterling)**

**Project Number: 134**

**CIP Number: FLD003**

**Description:**

One of the most heavily used pieces of equipment used by field crews in the winter months is a tandem axle dump truck. These trucks are normally dispatched to high ADT roadways like Grand River Ave., 12 Mile Road, Novi Road, and Ten Mile Road, and have historically been outfitted with a fixed dump body, v-box, plows and computer controls for winter maintenance. The trucks are also used extensively for water main breaks and hauling equipment/material trailers when not clearing roadways. The proposed replacement vehicle is called a swap loader. The chassis is outfitted with all of the traditional winter maintenance equipment, but equipped with hydraulic arms with a hook that allow the truck to unload and pull up different implements (dump box, liquid tank, v-box, closed material containment boxes, etc.). This ability allows the truck to be used all year by both the Field Operations and Water & Sewer divisions of the DPS. This truck would replace truck #699 - 2000 Sterling, which is in fair condition, with over \$73,500 in maintenance and repairs to date.

**Justification:**

Truck #699 has exceeded its useful life and may no longer be cost effective to repair. In the winter months, trucks require specialized de-icing equipment to maintain roadways. In many cases the Water and Sewer Division requires use of the trucks during water main breaks. In order to do this, salting equipment is removed and then reinstalled before a winter event. With a swap loader, the truck can be used for multiple purposes. Making this investment increases the versatility of the equipment. The body purchased for the trucks can be picked-up on any other hook lift of the same size.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-442.20-984.000		\$300,000					\$300,000
<b>TOTAL BUDGET</b>			<b>\$300,000</b>					<b>\$300,000</b>

**Tanker 1 Replacement (#311 – 1997 Chevrolet)**

**Project Number: 135**

**CIP Number: FIR013**

**Description:**

This project is for the replacement of Tanker 1 (Vehicle #311). Tanker 1 is a KME Water Tanker, built on a 1997 Chevrolet C 8500 chassis. The Tanker carries 1500 gallons of water and is equipped with a 500 gallon per minute power take off pump. This apparatus has 14,081 miles (10/14) on it. Mileage is not the sole determination for replacement of an apparatus. Time the vehicle has been in service also must be taken into consideration. It is estimated that fire apparatus have a fifteen year life span. In 2014 Tanker 1 will have been in service for seventeen years. It carries limited equipment and its primary role is to deliver water to areas of the City without fire hydrants. Since its purchase the role of the tanker in the fire service has changed. Methods of supplying water to areas without fire hydrants require higher capacity fire pumps, different methods of discharging water and the ability to carry more personnel. This new truck will have the ability to carry four personnel and additional equipment. It will carry a minimum of 1500 gallons of water and be able to discharge its water not only from the rear but sides and be capable of drafting water from a static source.

**Justification:**

Many areas in our city are not serviced by the municipal water system. Because of the absence of fire hydrants we rely on the water carried on the fire apparatus to extinguish the fire. Our first due engines carry between 500 and 1,000 gallons of water which many times is not enough to extinguish the fire. To increase the amount of water dispatched to the scene we rely on water tankers to supplement the supply. Since its purchase the role of the tanker in the fire service has changed. Methods of supplying water to areas without fire hydrants require higher capacity fire pumps, different methods of discharging water and the ability to carry more personnel. This new truck will have the ability to carry four personnel and additional equipment.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-337.00-979.000		\$430,335					\$430,335
<b>TOTAL BUDGET</b>			<b>\$430,335</b>					<b>\$430,335</b>

**Mini Excavator (replaces #622 – 2000 Bobcat)**

**Project Number: 136**

**CIP Number: FLD004**

**Description:**

The Department of Public Services currently performs such tasks as catch basin repair, water main repair, ditching, and various roadway improvement projects. Often times multiple crews require the use of the same equipment to perform excavation or heavy lifting functions. The replacement of a mini track excavator would enhance efficiency and provide a higher/expedited level of service to residents. Unit #622 - 2000 Bobcat, is in fair condition, with over \$16,100 in maintenance and repairs to date.

**Justification:**

Currently the Department of Public Services utilizes a Bobcat 330 with 11 feet of boom for Field Operations excavation projects. A replacement machine would allow crews to enhance the level of service to our residents. #622 is in need of a new hydraulic drive motor, for which we recently received an estimate of \$7,400 to replace.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-442.20-982.000			\$90,000				\$90,000
<b>TOTAL BUDGET</b>				<b>\$90,000</b>				<b>\$90,000</b>



**1-Ton Dump Truck with Front Plow and Swap Loader**

**Project Number: 137**

**CIP Number: FLD002**

**Description:**

A one-ton dump truck is used daily to transport materials for road maintenance, drainage activities, snow maintenance operations and patching roads. One of the most heavily used pieces of equipment used by field crews are small one-ton dump trucks. These trucks come outfitted with a dump box, front plow and salting box so that they can be used all season for hauling materials to job sites, transporting heavy equipment, and de-icing roadways. In an effort to increase functionality, save time, and reduce expenditures, a truck can be outfitted with a swap loader (or hook) system that is capable of pulling up multiple components onto its chassis. DPS is requesting the purchase of a new one-ton truck with the following components: dump body, v-box salt spreader, liquid tank, and stake rack bed.

**Justification:**

By funding this purchase, DPS can further maximize the use of its vehicles and increases its ability to become more efficient. As an example, if crews are rebuilding a storm catch basin, a stake rack bed with all the materials can be dropped at the site, while the operator heads back to the garage, picks up the dump body, and hauls sand to a separate job site.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-442.20-984.000			\$120,000				\$120,000
<b>TOTAL BUDGET</b>				<b>\$120,000</b>				<b>\$120,000</b>

**Bobcat All-Wheel Loader with Milling Machine Attachment**

**Project Number: 138**

**CIP Number: FLD007**

**Description:**

An all-wheel loader would be used to transport materials to and work on jobsites with space constraints, such as within heavily landscaped areas and storm drain easements. This unit would also be used for snow removal on bridge decks and pathways, and heavily landscaped locations. The loader would be equipped with a milling head that removes damaged concrete from joints so that neat and uniform repairs can be made.

**Justification:**

The all-wheel loader is a versatile piece of equipment that would be used year-round by DPS Field Operations and Water & Sewer Divisions. A Bobcat would alleviate the need to use several pieces of equipment currently needed to perform work at jobsites that have space/maneuverability constraints.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-442.20-982.000			\$125,000				\$125,000
<b>TOTAL BUDGET</b>				<b>\$125,000</b>				<b>\$125,000</b>

**Munters Dehumidification Unit Replacement (Ice Arena)**

**Project Number: 139**

**CIP Number: ICE004**

**Description:**

Replace the current dehumidifier (1998 Munters # AM30), which will be approaching the end of its useful life, with a new unit. This unit keeps the relative humidity in the rinks at a point where the glass does not have condensation and fog. Also, with lights and electrical systems in the rink, it is very important to keep the moisture levels at a minimum. The ice condition is also dependent on the proper relative humidity. Too much humidity and the ice quality are too soft and do not set up properly. If the air is too dry the ice will also be too dry and will have tendency to crack and chip.

**Justification:**

The current unit is approaching the end of its useful life and is operating less efficiently. New models have more energy efficient capabilities that would save the City on utility costs. Cost to repair and maintain are increasing.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	590-000.00-969.000			\$190,000				\$190,000
<b>TOTAL BUDGET</b>				<b>\$190,000</b>				<b>\$190,000</b>

**Single Axle 5-Cubic Yard Dump Truck with Front Plow, Underbody Scraper, & Wing Plow**

**Project Number:** 140

**CIP Number:** FLD010

**Description:**

The dump truck would be used to transport materials and equipment, aid in road maintenance and drainage work, and for snow removal operations. The truck would come equipped with a front plow; underbody scraper & wing plow.

**Justification:**

This request is for a new truck due to an aging fleet with excessive use, rust, and frequent maintenance that take trucks out of service and undermine City services.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-442.20-984.000			\$200,000				\$200,000
<b>TOTAL BUDGET</b>				<b>\$200,000</b>				<b>\$200,000</b>

**Gun Range Total Containment Bullet Trap System**

**Project Number: 141**

**CIP Number: POL010**

**Description:**

This request is for the replacement of the current rubber berm trap at the Gun Range with a Total Containment Trap (TCT). When the Firearms Training Center was designed and constructed it was never anticipated that the facility would receive the amount of use that it has. Over the past four years the Firearm Training Center has been utilized by the Customs and Border Patrol (CBP) to regularly train over 500 agents in southeast Michigan. CBP has been renting our facility Monday-Friday for the past several years. This usage, coupled with our own department training and the occasional rental by other law enforcement agencies has significantly increased the frequency of maintenance to the bullet trap. The original maintenance schedule projected the rubber berm trap to be cleaned out once every 3 years. Current usage levels have required us to clean out the trap every 12 months at a cost between \$7-\$20K. A TCT is specifically designed to handle the volume of use our facility has seen over the past four (4) plus years. The TCT is completely constructed of armor plated steel. Fired rounds are funneled into a deceleration chamber. Once the round is slowed down, the bullet drops into the base of a chamber where it is contained in a bucket or moved via an electric auger into a large storage container. This system eliminates the need to have the spent bullets milled from the trap.

**Justification:**

When the Firearms Training Center was designed and constructed it was never anticipated that the facility would receive the amount of use that it has. As a result of the usage, the maintenance on the trap is now completed annually at cost between \$7K-\$20K. The TCT system is specifically designed for the usage we are experiencing at the range.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	402-402.00-982.000			\$254,700				\$254,700
<b>TOTAL BUDGET</b>				<b>\$254,700</b>				<b>\$254,700</b>

**Tandem Axle Swap Loader Dump Truck with Front Plow, Underbody Scraper, & Wing Plow**  
**(replaces #620 – 2001 Sterling)**

**Project Number: 142**

**CIP Number: FLD003**

**Description:**

One of the most heavily used pieces of equipment used by field crews in the winter months is a tandem axle dump truck. These trucks are normally dispatched to high ADT roadways like Grand River Ave., 12 Mile Road, Novi Road, and Ten Mile Road, and have historically been outfitted with a fixed dump body, v-box, plows and computer controls for winter maintenance. The trucks are also used extensively for water main breaks and hauling equipment/material trailers when not clearing roadways. The proposed replacement vehicle is called a swap loader. The chassis is outfitted with all of the traditional winter maintenance equipment, but equipped with hydraulic arms with a hook that allows the truck to unload and pull up different implements (dump box, liquid tank, v-box, closed material containment boxes, etc.). This ability allows the truck to be used all year by both the Field Operations and Water & Sewer divisions of the DPS. This truck would replace truck #620 - 2001 Sterling, which is in fair condition, with over \$54,800 in maintenance and repairs to date.

**Justification:**

Truck #620 has exceeded its useful life and may no longer be cost effective to repair. In the winter months, trucks require specialized de-icing equipment to maintain roadways. In many cases the Water and Sewer Division requires use of the trucks during water main breaks. In order to do this, salting equipment is removed and then reinstalled before a winter event. With a swap loader, the truck can be used for multiple purposes. Making this investment increases the versatility of the equipment. The body purchased for the truck can be picked-up on any other hook lift of the same size.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-442.20-984.000			\$300,000				\$300,000
<b>TOTAL BUDGET</b>				<b>\$300,000</b>				<b>\$300,000</b>

**Public Address and Stereo System Replacement (Ice Arena)**

**Project Number:** 143

**CIP Number:** ICE007

**Description:**

Replace the current tower of stereo equipment, tuners, relays, and speakers throughout the facility with new. The existing equipment is approaching the end of its useful life and there is much better equipment available to provide an atmosphere appreciated by the customers. Current equipment is outdated and the costs to repair and maintain are increasing. The equipment is used to provide music during open skating and new equipment would provide better service to the customer. This has been scheduled on the Capital Needs Assessment that was created in August 2009.

**Justification:**

The current equipment is approaching the end of its useful life and the costs to maintain and repair are increasing. New equipment can provide a better service to the customers and create a better atmosphere within the facility and on the ice.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	590-000.00-969.000				\$27,000			\$27,000
<b>TOTAL BUDGET</b>					<b>\$27,000</b>			<b>\$27,000</b>

**Rescue #3 & #4 (replace #344 & #355 – 2011 Expeditions)**

**Project Number: 144**

**CIP Number: FIR015**

**Description:**

This project is for the replacement of Rescue #3 (#335) and Rescue #4 (#344) which are 2011 Ford Expeditions. The vehicles are classified as light duty Non Transport capable BLS units. The expected life is 8 years of front line service. The vehicles responds to fire and medical emergencies on a daily basis with all of the equipment needed and required by the state to be licensed as a Basic Life Support Vehicle. They also carry 2 firefighters and their gear to the scene of emergencies. The vehicles were deployed in 2011 based on the direction of the ICMA report to replace transporting squads with SUV-type vehicles. The recommendation is to replace the current SUV-type Rescue vehicles with Crew Cab (4 door) Heavy Duty Diesel 4x4 Chassis trucks with 8-9 foot utility bodies. The proposed vehicle will be able to carry the same items the SUV-type rescues carry plus, 2 additional firefighters and their gear, additional equipment, extinguishers, and even have room for ice rescue equipment or water rescue equipment. The new vehicles would be more flexible in what they can carry, and how it is carried. The SUV-type rescues are limited by space, seating, and compartments. The proposed replacement vehicle would allow for better personnel carrying capacity, larger capacity of tools, and the ability to adapt the truck to the seasonal needs of the department based on its location i.e.: ice rescue or water rescue, brush fire season, PR details, training.

**Justification:**

The newly Heavy Duty Crew Cab Diesel 4x4 Utility trucks will be able to carry the same items listed as the SUV-type rescues carry plus, 2 additional firefighters and their gear, additional equipment, extinguishers, and even have room for the ice rescue equipment or water rescue equipment. The new vehicles would be more flexible in what they can carry, and how it is carried. The SUV-type rescues are limited by space, seating, and compartments. The proposed vehicle will allow for increased payload, personnel carrying capacity, and flexibility to change the payload based on the situation. We would be able to outfit the trucks with the proper equipment, and maximize the space. It will improve services by offering a wider range of services, due to increased payloads, cargo space, and diversified equipment.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-337.00-979.000				\$143,430			\$143,430
<b>TOTAL BUDGET</b>					<b>\$143,430</b>			<b>\$143,430</b>

**Single Axle 5-Cubic Yard Dump Truck with Front Plow, Underbody Scraper, & Wing Plow**  
**(replaces #621 – 2001 Sterling)**

**Project Number: 145**

**CIP Number: FLD012**

**Description:**

The replacement dump truck would be used to transport materials and equipment, aid in road maintenance, drainage work, and snow removal operations. The truck would come equipped with a new V-Box insert which has the ability to reduce annual salt consumption by 30% compared to conventional methods. This truck would replace #621 - 2001 Sterling Single-Axle Dump, which is in fair condition, with approximately \$47,000 in repairs and maintenance to date.

**Justification:**

This request is to replace #621 due to excessive use, rust, and frequent maintenance that take it out of service.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-442.20-984.000				\$200,000			\$200,000
<b>TOTAL BUDGET</b>					<b>\$200,000</b>			<b>\$200,000</b>

**Single Axle 5-Cubic Yard Dump Truck with Front Plow, Underbody Scraper, & Wing Plow**  
**(replaces #698 – 1998 Ford)**

**Project Number: 146**

**CIP Number: FLD019**

**Description:**

The replacement dump truck would be used to transport materials and equipment, road maintenance and drainage work, and snow removal operations. This truck would come equipped with new V-box inserts which have the ability to reduce annual salt consumption by 30% compared to conventional methods. This truck would replace truck #698 - 1998 Ford Single-Axle Dump Truck, which is in fair condition, with over \$62,000 in repairs and maintenance to date.

**Justification:**

This request is to replace the dump truck #698 due to excessive use, rust and frequent maintenance that often takes the truck out of service.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-442.20-984.000				\$200,000			\$200,000
<b>TOTAL BUDGET</b>					<b>\$200,000</b>			<b>\$200,000</b>



**Command Vehicle (replaces #320 – 2011 Expedition)**

**Project Number: 147**

**CIP Number: FIR018**

**Description:**

This request is for the replacement of the Supervisor’s vehicle, a 2011 Ford Expedition (#320). It has a life expectancy of 8 years. It is used by the Captain to respond to emergencies and is the primary incident command center. To be used as a command center the work station is pulled out on a slide out unit and the command personnel stand outside to control the scene. The recommendation is to replace this vehicle with a vehicle that will allow a command work space that is inside out of the elements. The recommendation is to purchase a commercial van that is designed as a command center. The Sprinter platform is designed to allow for ample work space, carry additional equipment and still be small enough to use to respond to all emergencies.

**Justification:**

The Supervisor’s vehicle, a 2011 Ford Expedition (#320) is used by the Captain to respond to emergencies and is the primary incident command center. The recommendation is to replace this vehicle with a vehicle that will allow a command work space that is inside out of the elements. The recommendation is an option that we have would be to purchase a commercial van that is designed as a command center. The Sprinter platform is designed to allow for ample work space, carry additional equipment and still be small enough to use to respond to all emergencies.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-337.00-979.000				\$268,180			\$268,180
<b>TOTAL BUDGET</b>					<b>\$268,180</b>			<b>\$268,180</b>

**Front End Loader (replaces #689 – 1995 Case)**

**Project Number: 148**

**CIP Number: FLD009**

**Description:**

A Front-End Loader is used daily for loading dirt, debris, road salt and to unload gravel train deliveries. It is also used for snow removal on bridge decks and parking areas. This asset would replace unit #689, a 1995 Case Loader 821B, in fair condition, with \$33,292 in repairs and maintenance to date.

**Justification:**

The existing Loader has exceeded its useful life and maintenance and repairs are excessive and expensive.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-442.20-984.000				\$275,000			\$275,000
<b>TOTAL BUDGET</b>					<b>\$275,000</b>			<b>\$275,000</b>

**HVAC Units Replacement – Meadowbrook Commons Activity Center**

**Project Number: 149**

**CIP Number: SNR003**

**Description:**

Replace approximately 20 to 22 of the suburban thru-wall electric units for apartments and common areas.

**Justification:**

Various HVAC units will need to be replaced due to life expectancy.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	594-000.00-969.000					\$36,403		\$36,403
<b>TOTAL BUDGET</b>					<b>\$36,403</b>			<b>\$36,403</b>

**Single Axle 5-Cubic Yard Dumpt Truck with Front Plow, Underbody Scraper, & Wing Plow**  
**(replaces #605 – 2001 Osh Kosh)**

**Project Number:** 150

**CIP Number:** FLD014

**Description:**

One of the largest maintenance challenges the City faces is addressing failed concrete streets. In FY 2014-15 the Department of Public Services was allocated \$110,000 for the purchase of a new 1-ton swap loader truck. This truck has the ability to carry multiple types of attachments (cargo boxes, stake racks, liquid tanks, etc.) on the same chassis; eliminating the need to purchase dedicated equipment for one job. An attachment that would be used regularly is a two cubic yard capacity concrete mixer. This mixer would be mounted to a skid plate and pulled onto the bed of the truck when needed to pour not only concrete for roadway panels, but also sidewalk flags, storm drain repairs, or special projects that require small foundations (signs, lighting, etc.).

**Justification:**

It is very difficult to procure parts for this particular truck; due to its age and limitation of parts distributors.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-442.20-984.000					\$200,000		\$200,000
<b>TOTAL BUDGET</b>						<b>\$200,000</b>		<b>\$200,000</b>

**Squad 2 (replaces #314 – 209 International MedTec Ambulance)**

**Project Number: 151**

**CIP Number: FIR016**

**Description:**

This project is for the replacement of Squad 2 (Vehicle #314) a 2009 International MedTec transporting ambulance. This apparatus is a transport-capable basic life support medium duty vehicle. It responds to fires, injury accidents, medicals, and can provide a sheltered rehab area on an emergency scene. The recommended replacement would be a Horton Navistar 623 ambulance.

**Justification:**

This vehicle will provide a variety of uses that are essential for the Fire Departments operations. This vehicle will be able to transport multiple fire staff/ equipment to the scene of an emergency. The transport capability can be used when our private ambulance service is not available, multiple patients, or mutual aid for surrounding departments for BLS transports. The rear patient compartment can provide rehab area for fire staff to dress out for an ice rescue emergency out of the weather. This is the only transport vehicle in the current Fire Department fleet.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-337.00-979.000					\$243,200		\$243,200
<b>TOTAL BUDGET</b>						<b>\$243,200</b>		<b>\$243,200</b>

**Ditching Machine (replaces #675 – 1991 Gradall)**

**Project Number: 152**

**CIP Number: FLD008**

**Description:**

A Ditching Machine/Excavator can be driven instead of being trailered to job sites. Projects include road maintenance, culvert replacements and drain repairs. This machine is designed for precision excavation and the lifting of large, heavy items on construction sites and would replace #675 -1991 Gradall, in fair condition, with over \$17,700 in maintenance and repairs to date.

**Justification:**

As this equipment further exceeds its useful life of 15 years, repairs become more frequent and the machine is less reliable and expenses will continue to increase. #675 has over \$17,700 in maintenance and repair.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	210-211.00-982.000					\$300,000		\$300,000
<b>TOTAL BUDGET</b>						<b>\$300,000</b>		<b>\$300,000</b>

**All-Wheel Drive Motor Grader (replaces #612 – 2005 CAT)**

**Project Number: 153**

**CIP Number: FLD011**

**Description:**

Novi's one road grader is used for snow removal, maintaining road shoulders, and cutting and leveling road surfaces for asphalt and concrete repairs. As the community grows traffic volume increases on the few remaining gravel roads Novi persists; and If not maintained, there becomes an increased risk of vehicle damage and traffic accidents. Unit #612 is a rear-wheel drive grader, which is extremely difficult to drive on snow, sleet and ice. A replacement motor grader would be all wheel drive, making it an added resource for snow removal. It is in fair condition, and has over \$19,800 in repairs and maintenance to date.

**Justification:**

As this equipment further exceeds its useful life of 15 years, repairs become more frequent and the machine is less reliable, and expenses will continue to increase.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-442.20-984.000					\$300,000		\$300,000
<b>TOTAL BUDGET</b>						<b>\$300,000</b>		<b>\$300,000</b>

**Tandem Axle Swap Loader Dump Truck with Front Plow, Underbody Scraper, & Wing Plow**  
**(replaces #603 – 2003 Sterling)**

**Project Number:** 154

**CIP Number:** FLD020

**Description:**

One of the most heavily used pieces of equipment used by field crews in the winter months is a tandem axle dump truck. These trucks are normally dispatched to high ADT roadways like Grand River Ave., 12 Mile Road, Novi Road, and Ten Mile Road, and have historically been outfitted with a fixed dump body, v-box, plows and computer controls for winter maintenance. The trucks are also used extensively for water main breaks and hauling equipment/material trailers when not clearing roadways. The proposed replacement vehicle is called a swap loader. The chassis is outfitted with all of the traditional winter maintenance equipment, but equipped with hydraulic arms with a hook that allows the truck to unload and pull up different implements (dump box, liquid tank, v-box, closed material containment boxes, etc.). This ability allows the truck to be used all year by both the Field Operations and Water & Sewer divisions of the DPS. This truck would replace truck #603 - 2003 Sterling, Tandem-Axle Dump Truck, which is in fair condition, with over \$39,700 in repairs and maintenance to date.

**Justification:**

Truck #603 has exceeded its useful life and may no longer be cost effective to repair. In the winter months, trucks require specialized de-icing equipment to maintain roadways. In many cases the Water and Sewer Division requires use of the trucks during water main breaks. In order to do this, salting equipment is removed and then reinstalled before a winter event. With a swap loader, the truck can be used for multiple purposes. Making this investment increases the versatility of the equipment. The body purchased for the truck can be picked-up on any other hook lift of the same size.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-442.30-984.000					\$325,000		\$325,000
<b>TOTAL BUDGET</b>						<b>\$325,000</b>		<b>\$325,000</b>

**1-Ton Dump Truck with Front Plow and Swap Loader (replaces #633 – 1998 GMC)**

**Project Number:** 155

**CIP Number:** FLD015

**Description:**

A one-ton dump truck is used daily to transport materials for road maintenance, drainage activities, snow maintenance operations and patching roads. One of the most heavily used pieces of equipment used by field crews are small one-ton dump trucks. These trucks come outfitted with a dump box, front plow and salting box so that they can be used all season for hauling materials to job sites, transporting heavy equipment, and de-icing roadways. In an effort to increase functionality, save time, and reduce expenditures, a truck can be outfitted with a hook system that is capable of pulling up multiple components onto its chassis. DPS is requesting the purchase of a new one-ton truck with the following components: dump body, v-box salt spreader, liquid tank, and stake rack bed. Replacement truck #633 - 1998 GMC 3500 Series 1-Ton Dump Truck, which is in poor condition, with over \$31,200 in repairs and maintenance to date.

**Justification:**

Truck #633 is not large enough to handle our daily operation and is incurring frequent maintenance costs. The dump body was replaced in 2010 at a cost of over \$9,500. By funding this purchase, DPS can further maximize the use of its vehicles and increases its ability to become more efficient. As an example, if crews are rebuilding a storm catch basin, a stake rack bed with all the materials can be dropped at the site, while the operator heads back to the garage, picks up the dump body, and hauls sand to a separate job site. By not taking advantage of this technology, additional trucks would be needed to enhance efficiency.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-442.20-984.000					\$325,000		\$325,000
<b>TOTAL BUDGET</b>						<b>\$325,000</b>		<b>\$325,000</b>

**1-Ton Dump Truck with Front Plow and Swap Loader (replaces #690 – 1999 Ford)**

**Project Number: 156**

**CIP Number: FLD026**

**Description:**

A one-ton dump truck is used daily to transport materials for road maintenance, drainage activities, snow maintenance operations and patching roads. One of the most heavily used pieces of equipment used by field crews are small one-ton dump trucks. These trucks come outfitted with a dump box, front plow and salting box so that they can be used all season for hauling materials to job sites, transporting heavy equipment, and de-icing roadways. In an effort to increase functionality, save time, and reduce expenditures, a truck can be outfitted with a hook system that is capable of pulling up multiple components onto its chassis. DPS is requesting the purchase of a new one-ton truck with the following components: dump body, v-box salt spreader, liquid tank, and stake rack bed. This truck replaces dump truck #690 - 1999 Ford 1-Ton Dump Truck, which is in poor condition, with over \$73,800 in repairs and maintenance to date.

**Justification:**

Truck #690 is not large enough to handle our daily operation and is incurring frequent maintenance costs. The dump body was replaced in 2010 at a cost of over \$9,500. By funding this purchase, DPS can further maximize the use of its vehicles and increases its ability to become more efficient. As an example, if crews are rebuilding a storm catch basin, a stake rack bed with all the materials can be dropped at the site, while the operator heads back to the garage, picks up the dump body, and hauls sand to a separate job site. By not taking advantage of this technology, additional trucks would be needed to enhance efficiency.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-442.20-984.000						\$120,000	\$120,000
<b>TOTAL BUDGET</b>							<b>\$120,000</b>	<b>\$120,000</b>



**1-Ton Dump Truck with Front Plow and Swap Loader (replaces #649 – 2000 Ford)**

**Project Number:** 157

**CIP Number:** FLD027

**Description:**

A one-ton dump truck is used daily to transport materials for road maintenance, drainage activities, snow maintenance operations and patching roads. One of the most heavily used pieces of equipment used by field crews are small one-ton dump trucks. These trucks come outfitted with a dump box, front plow and salting box so that they can be used all season for hauling materials to job sites, transporting heavy equipment, and de-icing roadways. In an effort to increase functionality, save time, and reduce expenditures, a truck can be outfitted with a hook system that is capable of pulling up multiple components onto its chassis. DPS is requesting the purchase of a new one-ton truck with the following components: dump body, v-box salt spreader, liquid tank, and stake rack bed. This truck replaces dump truck #649 - 2000 Ford 1-Ton Dump Truck, which is in poor condition, with over \$9,100 in repairs and maintenance to date.

**Justification:**

Truck #649 is not large enough to handle our daily operation and is incurring frequent maintenance costs. By funding this purchase, DPS can further maximize the use of its vehicles and increases its ability to become more efficient. As an example, if crews are rebuilding a storm catch basin, a stake rack bed with all the materials can be dropped at the site, while the operator heads back to the garage, picks up the dump body, and hauls sand to a separate job site. By not taking advantage of this technology, additional trucks would be needed to enhance efficiency.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-442.20-984.000						\$120,000	\$120,000
<b>TOTAL BUDGET</b>							<b>\$120,000</b>	<b>\$120,000</b>

**1-Ton Dump Truck with Front Plow and Swap Loader (replaces #691 – 2001 Ford)**

**Project Number:** 158

**CIP Number:** FLD028

**Description:**

A one-ton dump truck is used daily to transport materials for road maintenance, drainage activities, snow maintenance operations and patching roads. One of the most heavily used pieces of equipment used by field crews are small one-ton dump trucks. These trucks come outfitted with a dump box, front plow and salting box so that they can be used all season for hauling materials to job sites, transporting heavy equipment, and de-icing roadways. In an effort to increase functionality, save time, and reduce expenditures, a truck can be outfitted with a hook system that is capable of pulling up multiple components onto its chassis. It replaces dump truck #691 - 2001 Ford 1-Ton Dump Truck, which is in poor condition, with over \$49,800 in repairs and maintenance to date.

**Justification:**

Truck #691 is not large enough to handle our daily operation and is incurring frequent maintenance costs. By funding this purchase, DPS can further maximize the use of its vehicles and increases its ability to become more efficient. As an example, if crews are rebuilding a storm catch basin, a stake rack bed with all the materials can be dropped at the site, while the operator heads back to the garage, picks up the dump body, and hauls sand to a separate job site. By not taking advantage of this technology, additional trucks would be needed to enhance efficiency.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-442.20-984.000						\$120,000	\$120,000
<b>TOTAL BUDGET</b>							<b>\$120,000</b>	<b>\$120,000</b>

**Truck Mounted Combination (jet and vacuum) Sewer Cleaner (replaces #614 – 2007 Sterline) (Vactor)**

**Project Number: 159**

**CIP Number: FLD018**

**Description:**

This piece of equipment is vital to the Department of Public Services. The replacement of this unit will maintain DPS's capability to clean storm drains, perform hydro-excavations, jet culverts and clean up after flooding incidents. The DPS Field Operations Division unit is also used as a stand-by in cases where the Water & Sewer Division Vactor is down for repair. This unit would replace #614 - 2007 Sterling Vactor, in fair condition, with \$30,394 in repairs and maintenance to date.

**Justification:**

The existing unit will have reached its useful life in 2017 and will have enough value left to bring a decent trade-in amount to be applied to the purchase of its replacement. The older this machine gets, the more costly and extensive are its repairs.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	210-211.00-982.000						\$400,000	\$400,000
<b>TOTAL BUDGET</b>							<b>\$400,000</b>	<b>\$400,000</b>

**Engine 3 (replaces #342 – 2005 Seagrove)**

**Project Number: 160**

**CIP Number: FIR017**

**Description:**

This request is for the replacement of a 2005 Seagrave Pumper Class A Engine. The Engine will be equipped with an enclosed 6-person cab, a 1,250 gallon per minute Class "A" single stage centrifugal type pump, a 1,000 gallon tank , a full complement of ground ladders and all required equipment including hoses, nozzles & appliances, emergency warning devices, hand tools, power tools, EMS (BLC) equipment and all miscellaneous tools & equipment. The new engine will also be equipped with a Foam Proportioning system that is suitable for all types of Class A & B foams.

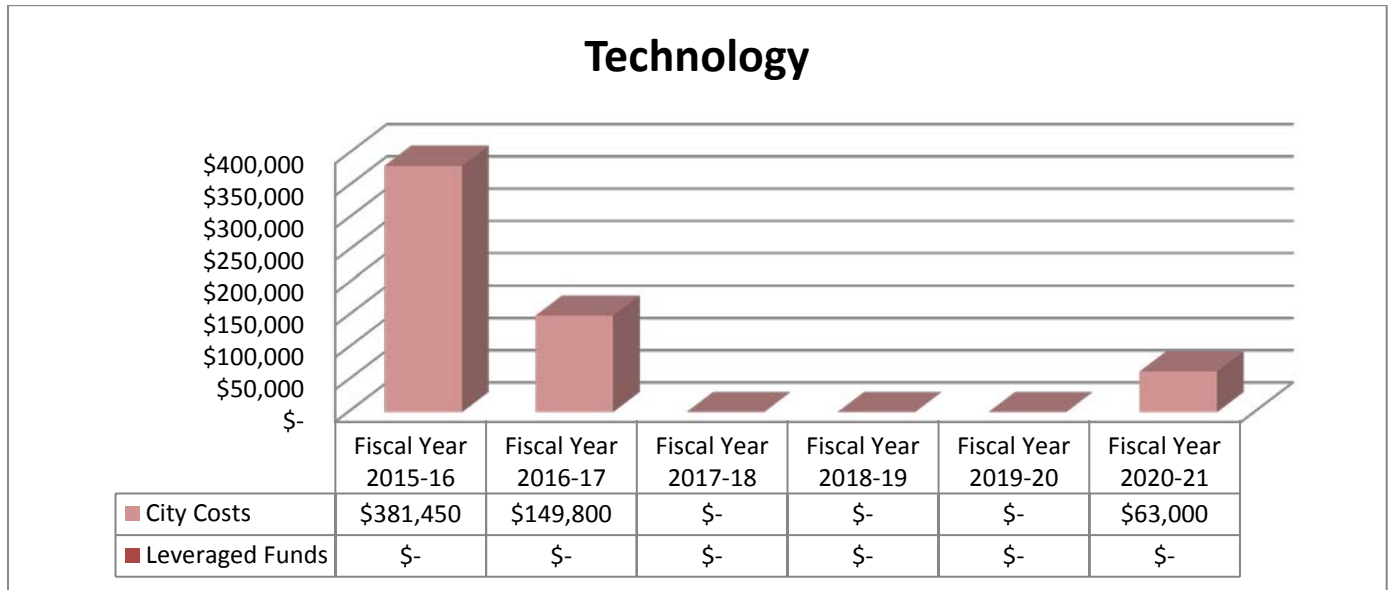
**Justification:**

The new engine will be fully compliant with the 2010 edition of NFPA 1901. It is expected that by replacing this unit with a new apparatus the fire ground operations of the Department will improve due to the improved service reliability of the newer Engine, the availability of foam proportioning system for quicker fire knock-down and extinguishment, and the availability of the mounted and portable hydraulic rescue tools.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-337.00-979.000						\$740,850	\$740,850
<b>TOTAL BUDGET</b>							<b>\$740,850</b>	<b>\$740,850</b>

## Technology

The City of Novi continues to provide its customers and employees with the latest technology to support outstanding customer services. Technology includes items such as servers, storage and scanners for employees as well as items like security cameras, water and sewer flow monitors and alarms to ensure our customers are safe and have uninterrupted services. Technology was previously included in the category “machinery and equipment” and includes all departments of the City.



**SCADA Upgrades to Sanitary Lift Stations**

**Project Number: 161**

**CIP Number: W&S006**

**Description:**

All sanitary pump stations have auto dialers that communicate through the phone line to notify system operators in case of a failure at the pump station. The existing auto dialers have proven unreliable in some cases. For this reason, the Department of Public Service's Water and Sewer Division proposes to upgrade all 19 of the pump station with Mission Communications back up alarm notifications. The proposed Mission equipment communicates through cellular channels and has a track record for reliability. The Water and Sewer Division is having this equipment installed at two new pump stations, Andelina Ridge and Island Lake Phase 8, for piloting purposes. If the equipment works reliably, the Water and Sewer Division proposes to deploy this equipment to all pump stations in FY 2015-2016.

**Justification:**

This equipment will replace the existing sensaphone auto dialer system.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction	592-592.00-986.002	\$56,000						\$56,000
ROW								
Other								
<b>TOTAL BUDGET</b>		<b>\$56,000</b>						<b>\$56,000</b>

**Server Storage Replacement**

**Project Number: 162**

**CIP Number: IFT003**

**Description:**

The Information Technology Department operates a virtual server environment that allows us to run dozens of virtual servers on a few robust physical devices. This request will allow us to replace our existing aging hardware platform with servers and storage specifically engineered for virtualization projects like ours. These new devices will allow the Information Technology Department to meet the growing demands placed on the City's technology infrastructure. This project consists of the following physical hardware: (3) servers, (1) shared storage device, and (2) switches.

**Justification:**

The City's current virtualization hardware platform has reached the end of its useful life. Additionally, we are unable to expand the current solution to meet the growing demands of our user community. The following items would be negatively impacted by not approving this request: OnBase (digital imaging), NEAMS (Novi Enterprise Asset Management System based on City Works Software), day-to-day file storage requirements, Remote Desktop Services (field based staff and Library connectivity), Secured VPN Access (Netmotion), Firewall Logs, email Archiving, and Spam filtering.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-205.00-986.000	\$62,950					\$63,000	\$125,950
<b>TOTAL BUDGET</b>		<b>\$62,950</b>					<b>\$63,000</b>	<b>\$125,950</b>

**Police Building Camera System - Replacement**

**Project Number: 163**

**CIP Number: POL007**

**Description:**

This request is for the replacement of the Police Building camera system. In 2009, a then state of the art camera system was installed by Camtronics at the police building and later at the Firearms Training Center and Department of Public Services yard to enhance security and risk management. The current system has (54) cameras defined on it. The system has (49) cameras dedicated to the police building that offer live and recorded monitoring of our prisoner intake, individual jail cells, sally ports, lobby areas, public and employee parking lots and three interview rooms. The remaining cameras are assigned to Firearms Training Center (2) and Department of Public Works (3). Public Act 479 of 2012 went into effect earlier this year mandating all law enforcement agencies “make a time-stamped, audiovisual recording” of custodial interrogations for certain felonies and in September 2013, the Michigan Commission on Law Enforcement Standards (MCOLES) released standards for said equipment. The current system has surpassed its useful life. We have experienced reliability issues in recording, retention and retrieval. Advancements in camera technology offer higher resolution and overall video/image quality. Our research has established that several components of the current system can be leveraged within a proposed replacement. We will be strategically replacing cameras on the exterior of the building to leverage technology advancements.

**Justification:**

The current system has surpassed its useful life. After careful evaluation of the current system, it is our recommendation that we request a replacement of the current system (servers, encoder, camera license and digital cameras). The proposal will include the replacement of 4 exterior antiquated analog units to digital models with pan, tilt, zoom capabilities. This will ensure compliance with all MCOLES and Commission on Accreditation for Law Enforcement Agencies (CALEA) audiovisual specifications along with modernizing our system to current standards. The IT Department will be involved in all aspects of this project.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-301.00-986.000	\$63,500						\$63,500
<b>TOTAL BUDGET</b>		<b>\$63,500</b>						<b>\$63,500</b>

**SCADA Upgrades to Incorporate In-System Sewer Flow Meters**

**Project Number: 164**

**CIP Number: W&S005**

**Description:**

The City of Novi recently completed a sanitary collection system capacity study. The study indicated the need to install permanent flow metering devices at 8 key locations throughout the City. The City is purchasing these meters as part of the FY14/15 budget cycle; however, manual download and maintenance of the meter devices can be very labor intensive. As part of this CIP request, the Water and Sewer Division proposes to install cellular communication devices, such that the in-system sewer flow meters can be monitored through the existing SCADA (supervisory control and data acquisition) system. The ability to monitor the devices remotely through the SCADA system greatly reduces the labor requirements for maintaining the devices. In addition to the operational efficiencies gained, the remote monitoring of these sites will allow Water and Sewer Division staff to remotely monitor any adverse conditions within the system, such as system surcharging (system backup) with the potential to respond to these types of situations before they become a major problem. A copy of the report recommending the upgrades, along with a location map, and cost estimate, is provided for reference.

**Justification:**

The Water and Sewer Division proposes to install cellular communication devices, such that the in-system sewer flow meters can be monitored through the existing SCADA (supervisory control and data acquisition) system. The ability to monitor these devices remotely through the SCADA system greatly reduces the labor requirements for maintaining these devices. In addition to the operational efficiencies gained, the remote monitoring of these sites will allow Water and Sewer Division staff to remotely monitor any adverse conditions within the system such as system surcharging (system backup) with the potential to respond to these types of situations before they become a major problem.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering	592-592.00-986.001	\$15,000						\$15,000
Construction	592-592.00-986.001	\$184,000						\$184,000
ROW								
Other								
<b>TOTAL BUDGET</b>		<b>\$199,000</b>						<b>\$199,000</b>

**Virtual Remote Desktop Infrastructure Project**

**Project Number: 165**

**CIP Number: IFT004**

**Description:**

As the City continues to boost productivity, by expanding the roll of technology outside of the traditional office environment, there is a need to access applications and data anywhere. An additional requirement of this push is that the data needs to be able to be consumed agnostic of the hardware platform. That hardware may be issued by the City or the offspring of our Bring Your Own Device (BYOD) friendly environment. All of this must also be accomplished while safeguarding against data loss or intrusion. In order to fulfill these needs the Information Technology Department will leverage the cloud, public or private, to securely deliver a virtual desktop solution that can be centrally managed and provide on-demand delivery City applications and data. Examples of use are:

- Building Inspectors accessing BS&A Building .Net via laptops in the field.
- DPS Field Operations crews accessing NEAMS applications via tablets at the worksite.
- Water/Sewer personnel connecting with both NEAMS and SCADA applications via tablet or laptop.
- Flexwork and telework requirements.

**Justification:**

Virtual remote desktop virtualization delivers on-demand desktops to users for anytime, anywhere, any device access. This provides employees with full access to their complete business desktop from multiple devices, such as their home PC, a smart phone or an iPad. All they need to work is an Internet connection from any device, anywhere. Virtual desktops also provide greater security to the organization, since employees aren't "carrying around" confidential company data on a personal device that could be lost, stolen or tampered with.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-205.00-986.000		\$69,800					\$69,800
<b>TOTAL BUDGET</b>			<b>\$69,800</b>					<b>\$69,800</b>



**Community Development Document Imaging Project**

**Project Number: 166**

**CIP Number: CDV003**

**Description:**

Document Imaging provides the capability to capture, store, manage, retrieve, and route documentations in a secure electronic manner. With document imaging paper documents, photos, and graphics can be scanned and saved as images. The images are organized into folders, linked to business applications, and retrieved by the users. The project will consist of the following components: Due diligence, additional OnBase licensing, scanner(s), and storage.

**Justification:**

Without a document imaging solution the costs associated with a paper-based system will continue to grow. We will continue to be susceptible to loss caused by natural or manmade disaster.

Category	Account No.	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
Engineering								
Construction								
ROW								
Other	101-807.00-986.000		\$80,000					\$80,000
<b>TOTAL BUDGET</b>			<b>\$80,000</b>					<b>\$80,000</b>



Capital Improvement Program  
2015- 2021 Project Summary

DPS CIP#	PROJECT DESCRIPTION	FUNDING SOURCE	TOTAL			BUDGET		PROJECTED				FORECAST							
			PROJECT COST	OUTSIDE LEVERAGE	CITY COST	FY 2015-16		FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20		FY 2020-21			
						OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST		
1	112-02 Meadowbrook Road Reconstruction, I-96 to 12 Mile	MAJOR STREET FUND 202	\$ 1,336,580	\$ 184,951	\$ 1,151,629		\$ 145,000	\$ 184,951	\$ 1,006,629										
2	142-22 Catherine Industrial Cul-de-Sac Reconstruction	MAJOR STREET FUND 202	\$ 170,000	\$ -	\$ 170,000		\$ 170,000												
3	132-01 Beck Road (8 Mile to 9 Mile) Reconstruction	MAJOR STREET FUND 202	\$ 1,494,225	\$ 222,875	\$ 1,271,350		\$ 175,300	\$ 222,875	\$ 1,096,050										
4	122-65 9 Mile Road Meadowbrook to Novi Road Rehabilitation	MAJOR STREET FUND 202	\$ 635,325	\$ 209,808	\$ 425,517	\$ 209,808	\$ 425,517												
5	102-03 Novi Road from 12 Mile Road to 13 Mile Road Rehabilitation	MAJOR STREET FUND 202	\$ 1,026,675	\$ 551,440	\$ 475,235	\$ 551,440	\$ 475,235												
6	082-18 Karim Blvd. Rehabilitation	MAJOR STREET FUND 202	\$ 1,215,000	\$ -	\$ 1,215,000		\$ 1,215,000												
7	082-10 Crescent Blvd., Novi Road to Town Center Drive Rehabilitation	MAJOR STREET FUND 202	\$ 1,798,785	\$ -	\$ 1,798,785		\$ 1,798,785												
8	102-01 Neighborhood Road Rehabilitation, Repaving and Reconstruction Program	LOCAL STREET FUND 203	\$ 16,470,000	\$ -	\$ 16,470,000		\$ 2,090,000		\$ 2,500,000		\$ 2,970,000		\$ 2,970,000		\$ 2,970,000			\$ 2,970,000	
9	102-05 Taft Road, 9 Mile Road to 10 Mile Road Rehabilitation	MAJOR STREET FUND 202	\$ 1,153,125	\$ -	\$ 1,153,125				\$ 1,153,125										
10	132-05 Meadowbrook Road (Southbound at 11 Mile)--Add right Turn Lane	MAJOR STREET FUND 202	\$ 131,100	\$ -	\$ 131,100						\$ 131,100								
11	132-03 Meadowbrook Road (North of 12 Mile Road) Major Repair	MAJOR STREET FUND 202	\$ 584,800	\$ -	\$ 584,800						\$ 584,800								
12	142-01 Beck Road (9 Mile to 10 Mile) Rehabilitation	MAJOR STREET FUND 202	\$ 1,100,000	\$ -	\$ 1,100,000						\$ 1,100,000								
13	112-01 Sixth Gate Reconstruction	LOCAL STREET FUND 203	\$ 98,585	\$ -	\$ 98,585								\$ 98,585						
14	121-001 Taft Road, 10 Mile Road to Grand River Avenue	MAJOR STREET FUND 202	\$ 608,500	\$ 336,889	\$ 271,611							\$ 336,889	\$ 271,611						
15	082-16 Trans-X Drive Rehabilitation	MAJOR STREET FUND 202	\$ 377,800	\$ -	\$ 377,800								\$ 377,800						
16	10-2023 13 Mile Road Rehabilitation, Novi Road to Meadowbrook Road	MAJOR STREET FUND 202	\$ 554,550	\$ -	\$ 554,550								\$ 554,550						
17	082-03 Crescent Blvd (New Roadway) Extension Between Grand River Avenue and Novi Road - Phase II and III	MUNICIPAL STREET FUND 204	\$ 3,417,580	\$ 2,790,000	\$ 627,580							\$ 2,790,000	\$ 627,580						
18	102-04 Old Novi Road Rehabilitation	MAJOR STREET FUND 202	\$ 665,800	\$ -	\$ 665,800								\$ 665,800						
19	092-22 Wixom Road, from 10 Mile Road to 11 Mile Road	MAJOR STREET FUND 202	\$ 717,400	\$ -	\$ 717,400								\$ 717,400						
20	082-30 11 Mile Road Rehabilitation and Repaving, Taft Road to Beck Road	MAJOR STREET FUND 202	\$ 782,700	\$ -	\$ 782,700								\$ 782,700						
21	132-25 Beck Road Widening (8 Mile to 10 Mile) Preliminary Engineering ONLY	MAJOR STREET FUND 202	\$ 1,000,000	\$ 800,000	\$ 200,000									\$ 800,000	\$ 200,000				
22	132-27 11 Mile Rehabilitation (Taft to Clark)	MAJOR STREET FUND 202	\$ 321,840	\$ -	\$ 321,840										\$ 321,840				
23	132-02 Jo Drive Rehabilitation and Extension	MUNICIPAL STREET FUND 204	\$ 474,000	\$ -	\$ 474,000										\$ 474,000				
24	132-28 West Park Rehabilitation (West Road to Pontiac Trail)	MAJOR STREET FUND 202	\$ 616,030	\$ -	\$ 616,030										\$ 616,030				
25	132-26 11 Mile Rehabilitation (Beck to Wixom)	MAJOR STREET FUND 202	\$ 748,680	\$ -	\$ 748,680										\$ 748,680				
26	142-05 12 Mile Road/Declaration Drive Boulevard Extension	MUNICIPAL STREET FUND 204	\$ 600,000	\$ -	\$ 600,000													\$ 600,000	
27	142-02 Dixon Road Paving	LOCAL STREET FUND 203	\$ 896,400	\$ -	\$ 896,400													\$ 896,400	
28	092-50 Southwest Quadrant Ring Road Flint Street, Novi Road and Grand River - New	MUNICIPAL STREET FUND 204	\$ 1,818,612	\$ -	\$ 1,818,612													\$ 1,818,612	
SUBTOTAL			\$ 40,814,092	\$ 5,095,963	\$ 35,718,129	\$ 761,248	\$ 6,494,837	\$ 407,826	\$ 5,755,804	\$ -	\$ 4,785,900	\$ 3,126,889	\$ 7,066,026	\$ 800,000	\$ 5,330,550	\$ -	\$ 6,285,012		



Capital Improvement Program  
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DPS CIP#	PROJECT DESCRIPTION	FUNDING SOURCE	TOTAL			BUDGET		PROJECTED				FORECAST					
			PROJECT COST	OUTSIDE LEVERAGE	CITY COST	FY 2015-16		FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20		FY 2020-21	
						OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST

Intersections & Signals

29	116-04	Napier Road and 10 Mile Road Intersection Improvements to Include Paving Napier Road (9 Mile to 10 Mile)	MUNICIPAL STREET FUND 204	\$ 3,600,000	\$ 3,300,000	\$ 300,000			\$ 3,300,000	\$ 300,000								
30	086-08	Taft and 9 Mile Road - New Roundabout	MAJOR STREET FUND 202	\$ 419,394	\$ 337,000	\$ 82,394					\$ 337,000	\$ 82,394						
31	136-02	Beck Road at 9 Mile Road Signal Modernization	MAJOR STREET FUND 202	\$ 215,000	\$ -	\$ 215,000							\$ 215,000					
32	086-07	Lewis and Haggerty Road - New Signal	MUNICIPAL STREET FUND 204	\$ 225,000	\$ -	\$ 225,000							\$ 225,000					
33	102-10	New Roundabout at 11 Mile Road and Wixom Road	MAJOR STREET FUND 202	\$ 875,750	\$ -	\$ 875,750							\$ 875,750					
34	136-01	Novi Road and 13 Mile Road Signal Modernization	MAJOR STREET FUND 202	\$ 260,000	\$ -	\$ 260,000								\$ 260,000				
35	146-01	West Park and South Lake Drive Traffic Signal Modernization	MAJOR STREET FUND 202	\$ 175,000	\$ -	\$ 175,000											\$ 175,000	
SUBTOTAL				\$ 5,770,144	\$ 3,637,000	\$ 2,133,144	\$ -	\$ -	\$ 3,300,000	\$ 300,000	\$ 337,000	\$ 82,394	\$ -	\$ 1,315,750	\$ -	\$ 260,000	\$ -	\$ 175,000

Sidewalks & Pathways

36	115-999	Taft Road at Jacob Drive - Non-Motorized Crossing	MUNICIPAL STREET FUND 204	\$ 34,212	\$ -	\$ 34,212		\$ 34,212										
37	115-009	Segment 9--Pontiac Trail, South Side (6' foot Sidewalk) Beck Road to West Park Drive	MUNICIPAL STREET FUND 204	\$ 455,495	\$ -	\$ 455,495		\$ 46,410			\$ 409,085							
38	10-5002	Americans with Disabilities Act (ADA) Compliance Plan Annual Implementation	MUNICIPAL STREET FUND 204	\$ 300,000	\$ -	\$ 300,000		\$ 50,000		\$ 50,000		\$ 50,000		\$ 50,000			\$ 50,000	
39	095-10	Segment 10--Beck Road, East Side, South of Pontiac Trail, (5' foot Sidewalks Short Segment) Concrete	MUNICIPAL STREET FUND 204	\$ 55,930	\$ -	\$ 55,930		\$ 55,930										
40	145-01	Segment 1B-14 Mile (south side) Haverhill to M-5	MUNICIPAL STREET FUND 204	\$ 156,060	\$ -	\$ 156,060		\$ 156,060										
41	101-127	Segment 127A--Novi Way, East Side (6' foot Sidewalk) Concrete	MUNICIPAL STREET FUND 204	\$ 27,387	\$ -	\$ 27,387			\$ 27,387									
42	125-053	Segment 53--Beck Road, West Side, (8' foot Pathway) 11 Mile Road to Kirkway Place	MUNICIPAL STREET FUND 204	\$ 81,000	\$ -	\$ 81,000			\$ 81,000									
43	125-005	Segment 5--14 Mile Road, South Side, Beach Walk to East Lake Drive	MUNICIPAL STREET FUND 204	\$ 92,200	\$ -	\$ 92,200			\$ 92,200									
44	095-133	Segment 133--Wixom Road Crossing, North of 11 Mile Road (8' foot Pathway Short Segment)	MUNICIPAL STREET FUND 204	\$ 37,050	\$ -	\$ 37,050						\$ 37,050						
45	095-93	Segment 93--9 Mile Road, Novi Road to Taft, North Side (6' foot Sidewalk) Concrete	MUNICIPAL STREET FUND 204	\$ 288,920	\$ -	\$ 288,920							\$ 63,550	\$ 225,370				
46	125-081	Segment 81--10 Mile Road, South Side, (8' foot pathway) Meadowbrook Road to Haggerty Road	MUNICIPAL STREET FUND 204	\$ 619,767	\$ -	\$ 619,767							\$ 100,800	\$ 279,067			\$ 239,900	
47	125-105	Segment 105 - 8 Mile Road (north side, 8' pathway) Between Garfield and Napier	MUNICIPAL STREET FUND 204	\$ 735,260	\$ -	\$ 735,260							\$ 126,000	\$ 609,260				
48	115-0002	Non-Motorized Crossing of I-96 at Novi Road	MUNICIPAL STREET FUND 204	\$ 763,100	\$ -	\$ 763,100							\$ 142,700	\$ 620,400				
49	135-129	Segment 129-14 Mile Road (6', south side)--Haverhill Farms to Maple Place	MUNICIPAL STREET FUND 204	\$ 159,080	\$ -	\$ 159,080							\$ 159,080					
50	085-62	Segment 62--10 Mile Road, Eaton Center to Churchill (6' sidewalk and Boardwalk) for North side	MUNICIPAL STREET FUND 204	\$ 174,446	\$ -	\$ 174,446							\$ 174,446					
51	135-51	Segment 51-10 Mile Road (6' wide, north side)-Dinser to Woodham	MUNICIPAL STREET FUND 204	\$ 181,600	\$ -	\$ 181,600							\$ 181,600					
52	125-039	Segment 39--Beck Road, West Side, from 11 Mile Road to Providence	MUNICIPAL STREET FUND 204	\$ 184,441	\$ -	\$ 184,441							\$ 184,441					
53	10-5007	Segment NC4--Neighborhood Connection Between Main Street and Meadowbrook Glens	MUNICIPAL STREET FUND 204	\$ 212,400	\$ -	\$ 212,400							\$ 212,400					
54	105-90	Segment 90-10 Mile Road, (8' foot Pathway) South Side, Novi Road to Chipmunk Trail - Concrete	MUNICIPAL STREET FUND 204	\$ 287,800	\$ -	\$ 287,800							\$ 287,800					



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DPS CIP#	PROJECT DESCRIPTION	FUNDING SOURCE	TOTAL			BUDGET		PROJECTED				FORECAST					
			PROJECT COST	OUTSIDE LEVERAGE	CITY COST	FY 2015-16		FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20		FY 2020-21	
						OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST
55	125-119 Segment 119--Meadowbrook Road, East Side, (6' foot Sidewalk) 8 Mile Road to 9 Mile Road	MUNICIPAL STREET FUND 204	\$ 377,000	\$ -	\$ 377,000								\$ 377,000				
56	115-0003 M-5/I-275 Regional Trail Connection - Phase II Meadowbrook Road and 13 Mile Road, Between 12 Mile Road and M-5	MUNICIPAL STREET FUND 204	\$ 1,118,730	\$ 733,384	\$ 385,346									\$ 733,384	\$ 97,000		\$ 288,346
57	095-88 Segment 88--9 Mile Road, North Side, Novi Road - Railroad (6' Sidewalk) Concrete	MUNICIPAL STREET FUND 204	\$ 178,302	\$ -	\$ 178,302										\$ 178,302		
58	135-70 Segment 70--Meadowbrook Road (8' west side)-- Gateway Village to 11 Mile	MUNICIPAL STREET FUND 204	\$ 451,850	\$ -	\$ 451,850										\$ 451,850		
59	095-99 Segment 99--10 Mile Road, South Side, from Wixom road to Beck Road (8' foot Pathway)	MUNICIPAL STREET FUND 204	\$ 462,312	\$ -	\$ 462,312										\$ 462,312		
60	085-84 Segment 84--Meadowbrook Road, 9 Mile Road to 10 Mile Road (6' Sidewalk) for East Side	MUNICIPAL STREET FUND 204	\$ 795,013	\$ -	\$ 795,013										\$ 795,013		
61	115-0005 Non-Motorized Crossing of I-96 at Taft Road	MUNICIPAL STREET FUND 204	\$ 2,070,172	\$ -	\$ 2,070,172										\$ 2,070,172		
62	145-38 Segment 38-Beck Road, east side, Eleven Mile to Grand River (6' sidewalk)	MUNICIPAL STREET FUND 204	\$ 289,700	\$ -	\$ 289,700												\$ 289,700
63	145-64 Segment 64--Taft Road, east side, Ten Mile to 11 Mile (6' sidewalk)	MUNICIPAL STREET FUND 204	\$ 465,800	\$ -	\$ 465,800												\$ 465,800
SUBTOTAL			\$ 11,055,027	\$ 733,384	\$ 10,321,643	\$ -	\$ 342,612	\$ -	\$ 250,587	\$ -	\$ 459,085	\$ -	\$ 2,096,867	\$ 733,384	\$ 5,838,746	\$ -	\$ 1,333,746

Storm Sewer & Drainage

64	133-01 Orchard Hill Place Regional Detention Basin Improvement	DRAIN FUND 210	\$ 126,600	\$ -	\$ 126,600		\$ 126,600										
65	133-04 Streambank Stabilization-Bishop Creek and Ingersol (10 Mile to Meadowbrook)	DRAIN FUND 210	\$ 750,660	\$ -	\$ 750,660		\$ 750,660										
66	133-02 Village Wood Lake/Village Oaks Lake Inlet and Outlet Improvements	DRAIN FUND 210	\$ 929,170	\$ -	\$ 929,170		\$ 929,170										
67	093-10 Rotary Park Streambank Stabilization	DRAIN FUND 210	\$ 160,900	\$ -	\$ 160,900			\$ 160,900									
68	093-11 Bishop District New Sedimentation Dredging Near 11 Mile Road	DRAIN FUND 210	\$ 200,832	\$ -	\$ 200,832			\$ 200,832									
69	133-05 Streambank Stabilization Ingersol Creek (10 Mile Road to Willowbrook Drive)	DRAIN FUND 210	\$ 409,397	\$ -	\$ 409,397				\$ 87,137			\$ 322,260					
70	133-07 Streambank Stabilization Bishop Creek (along Meadowbrook, north of Grand River)	DRAIN FUND 210	\$ 531,197	\$ -	\$ 531,197							\$ 531,197					
71	133-08 Streambank Stabilization on Rouge River near 9 Mile Rod	DRAIN FUND 210	\$ 1,316,820	\$ -	\$ 1,316,820								\$ 1,316,820				
SUBTOTAL			\$ 4,425,576	\$ -	\$ 4,425,576	\$ -	\$ 1,806,430	\$ -	\$ 361,732	\$ -	\$ 87,137	\$ -	\$ 853,457	\$ -	\$ 1,316,820	\$ -	\$ -

Sanitary Sewer

72	W&S004 Country Place Pump Station Capacity Upgrades	WATER AND SEWER FUND 592	\$ 555,600	\$ -	\$ 555,600		\$ 555,600										
73	W&S007 8 Mile Equalization Basin Project	WATER AND SEWER FUND 592	\$ 1,080,000	\$ -	\$ 1,080,000				\$ 1,080,000								
SUBTOTAL			\$ 1,635,600	\$ -	\$ 1,635,600	\$ -	\$ 555,600	\$ -	\$ -	\$ -	\$ 1,080,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -



**Capital Improvement Program**  
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DPS CIP#	PROJECT DESCRIPTION	FUNDING SOURCE	TOTAL			BUDGET		PROJECTED				FORECAST					
			PROJECT COST	OUTSIDE LEVERAGE	CITY COST	FY 2015-16		FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20		FY 2020-21	
						OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST

**Water Distribution**

74	091-26	8 Mile Loop Connection at Meadowbrook	WATER AND SEWER FUND 592	\$ 270,000	\$ -	\$ 270,000		\$ 270,000										
75	091-06	PRV Redistricting - Meadowbrook and 13 Mile Road	WATER AND SEWER FUND 592	\$ 436,100	\$ -	\$ 436,100		\$ 436,100										
76	091-31	Haggerty Loop Connection North of 12 Mile	WATER AND SEWER FUND 592	\$ 370,000	\$ -	\$ 370,000			\$ 370,000									
77	W&S008	Island Lake Pressure District Expansion - Phase 1	WATER AND SEWER FUND 592	\$ 2,230,980	\$ -	\$ 2,230,980			\$ 2,230,980									
78	091-22	10 Mile Loop Connection West of Wixom Road	WATER AND SEWER FUND 592	\$ 505,200	\$ -	\$ 505,200				\$ 505,200								
79	091-18	11 Mile Loop Connection at Seely Road	WATER AND SEWER FUND 592	\$ 992,800	\$ -	\$ 992,800				\$ 992,800								
80	091-19	11 Mile Loop Connection between Mandalay and Sullivan	WATER AND SEWER FUND 592	\$ 780,000	\$ -	\$ 780,000						\$ 780,000						
81	W&S009	Island Lake Pressure District Expansion - Phase 2	WATER AND SEWER FUND 592	\$ 1,024,800	\$ -	\$ 1,024,800						\$ 1,024,800						
82	091-11 & 091-10	New Proposed Master Meter	WATER AND SEWER FUND 592	\$ 1,566,000	\$ -	\$ 1,566,000						\$ 1,566,000						
SUBTOTAL				\$ 8,175,880	\$ -	\$ 8,175,880	\$ -	\$ 706,100	\$ -	\$ 2,600,980	\$ -	\$ 1,498,000	\$ -	\$ 3,370,800	\$ -	\$ -	\$ -	\$ -

**Parks, Recreation, & Cultural Services**

83	100-05	ITC Community Sports Park Pathway Resurfacing	PARKS, RECREATION, & CULTURAL SERVICES FUND 208	\$ 85,670	\$ -	\$ 85,670		\$ 85,670										
84	PRC013	Pavilion Shore Park - Phase III	PARKS, RECREATION, & CULTURAL SERVICES FUND 208	\$ 220,340	\$ -	\$ 220,340		\$ 220,340										
85	PRC018	Wildlife Woods Soccer Field Drainage	PARKS, RECREATION, & CULTURAL SERVICES FUND 208	\$ 120,000	\$ -	\$ 120,000			\$ 120,000									
86	100-003	ITC Community Sports Park Play Structure Replacement	PARKS, RECREATION, & CULTURAL SERVICES FUND 208	\$ 75,000	\$ -	\$ 75,000				\$ 75,000								
87	PRC010	Wildlife Wood Trail	PARKS, RECREATION, & CULTURAL SERVICES FUND 208	\$ 95,630	\$ -	\$ 95,630				\$ 95,630								
88	PRC019	ITC Community Sports Park Update	PARKS, RECREATION, & CULTURAL SERVICES FUND 208	\$ 671,800	\$ -	\$ 671,800				\$ 200,000		\$ 471,800						
89	PRC015	Villa Park Property Studio	PARKS, RECREATION, & CULTURAL SERVICES FUND 208	\$ 135,000	\$ -	\$ 135,000						\$ 135,000						



Capital Improvement Program  
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DPS CIP#	PROJECT DESCRIPTION	FUNDING SOURCE	TOTAL			BUDGET		PROJECTED				FORECAST					
			PROJECT COST	OUTSIDE LEVERAGE	CITY COST	FY 2015-16		FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20		FY 2020-21	
						OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST
90	PRC020	Power Park Upgrade	\$ 165,790	\$ -	\$ 165,790								\$ 165,790				
91	PRC003	Field/Parking Development with Novi Community School District for Schools 11 Mile/Beck Road Property	\$ 182,000	\$ -	\$ 182,000								\$ 182,000				
92	109-03	Tim Pope Play Structure Replacement	\$ 250,000	\$ -	\$ 250,000								\$ 250,000				
93	125-997	Greenway Development Phase 1B (9 Mile Rd. to Fire station 4 parking lot)	\$ 1,345,065	\$ -	\$ 1,345,065								\$ 1,345,065				
94	PRC017	Lakeshore Park Entry, New Camp Building, New North Shelter	\$ 1,526,980	\$ -	\$ 1,526,980								\$ 1,526,980				
95	PRC001	Pavilion Shore Park - Phase IV (Pavilion and Waterfront Picnic Plaza, Site Lighting) - Grant Match	\$ 81,300	\$ -	\$ 81,300									\$ 81,300			
96	PRC008	Ella Mae Power Park Irrigation and Fencing Fields 5 & 6 Replacement	\$ 113,380	\$ -	\$ 113,380									\$ 113,380			
97	PRC025	Mobile Sound Stage Replacement	\$ 130,000	\$ -	\$ 130,000									\$ 130,000			
98	PRC004	Ella Mae Power Park Lighting - Ball Fields 5 & 6 - New	\$ 255,000	\$ -	\$ 255,000									\$ 255,000			
99	PRC016	ITC Community Sports Park Trail	\$ 439,637	\$ -	\$ 439,637									\$ 439,637			
100	PRC021	Lakeshore Park Playground Improvement	\$ 75,000	\$ -	\$ 75,000												\$ 75,000
101	PRC022	Wildlife Woods Entrance	\$ 105,000	\$ -	\$ 105,000												\$ 105,000
102	PRC023	Village Wood Lake Park Improvements	\$ 159,800	\$ -	\$ 159,800												\$ 159,800



Capital Improvement Program  
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			PROJECT COST	OUTSIDE LEVERAGE	CITY COST	FY 2015-16		FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20		FY 2020-21	
						OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST
103	PRC024 ITC Field Improvements	PARKS, RECREATION, & CULTURAL SERVICES FUND 208	\$ 500,360	\$ -	\$ 500,360												\$ 500,360
SUBTOTAL			\$ 6,732,752	\$ -	\$ 6,732,752	\$ 306,010	\$ -	\$ 120,000	\$ -	\$ 370,630	\$ -	\$ 4,076,635	\$ -	\$ 1,019,317	\$ -	\$ 840,160	

Parking Lots

104	LOT002 Fire Parking Lot Improvements (FS #2, #4 & CEMS) - Replacement	GENERAL FUND 101	\$ 164,670	\$ -	\$ 164,670		\$ 21,560			\$ 143,110							
105	LOT006 Police Parking Lot East Improvements	GENERAL FUND 101	\$ 39,600	\$ -	\$ 39,600		\$ 39,600										
106	LOT005 Civic Center Parking Lot & Novi Way Improvements	GENERAL FUND 101	\$ 430,210	\$ -	\$ 430,210		\$ 215,105		\$ 215,105								
107	LOT004 Police Access Driveway and Firearms Training Center Parking Lot - Replacement	GENERAL FUND 101	\$ 48,400	\$ -	\$ 48,400				\$ 48,400								
108	LOT008 Lakeshore Park Parking Lot Improvements	PARKS, RECREATION, & CULTURAL SERVICES FUND 208	\$ 33,600	\$ -	\$ 33,600					\$ 33,600							
109	LOT014 ITC Community Sports Park Parking Lot Improvements	PARKS, RECREATION, & CULTURAL SERVICES FUND 208	\$ 157,500	\$ -	\$ 157,500						\$ 157,500						
110	SNR004 Partial Parking Lot Repair - Meadowbrook Commons Activity Center	SENIOR HOUSING FUND 594	\$ 75,245	\$ -	\$ 75,245							\$ 75,245					
111	LOT015 Rotary Park Parking Area	PARKS, RECREATION, & CULTURAL SERVICES FUND 208	\$ 43,644	\$ -	\$ 43,644											\$ 43,644	
SUBTOTAL			\$ 992,869	\$ -	\$ 992,869	\$ -	\$ 276,265	\$ -	\$ 263,505	\$ -	\$ 176,710	\$ -	\$ 157,500	\$ -	\$ 75,245	\$ -	\$ 43,644

Buildings & Property

112	ICE012 Rubber Flooring in Upper Lobby (Ice Arena)	ICE ARENA FUND 590	\$ 30,000	\$ -	\$ 30,000		\$ 30,000										
113	ICE011 LED Lighting in Blue & Red Rinks (Ice Arena)	ICE ARENA FUND 590	\$ 35,000	\$ -	\$ 35,000		\$ 35,000										
114	ICE009 Equipment Room Roof Replacement - Back Mechanic Roof (Ice Arena)	ICE ARENA FUND 590	\$ 44,000	\$ -	\$ 44,000		\$ 44,000										
115	FIR012 Fire Station #4 - Training Tower Upgrade - Phase 2	GENERAL FUND 101	\$ 46,000	\$ -	\$ 46,000		\$ 46,000										
116	ICE010 Multi-Purpose Room Upgrades (Ice Arena)	ICE ARENA FUND 590	\$ 55,000	\$ -	\$ 55,000		\$ 55,000										
117	FLD024 Equipment Storage Building at ITC Community Sports Park	GENERAL FUND 101	\$ 245,483	\$ -	\$ 245,483		\$ 245,483										
118	CDV001 Community Development Suite Renovation	GENERAL FUND 101	\$ 203,000	\$ -	\$ 203,000		\$ 203,000										
119	FAC009 Civic Center Solar Panels	GENERAL FUND 101	\$ 45,000	\$ -	\$ 45,000			\$ 45,000									
120	ICE003 Evaporative Cooling Tower (Ice Arena)	ICE ARENA FUND 590	\$ 65,000	\$ -	\$ 65,000			\$ 65,000									
121	POL009 Gun Range Building Addition	GUN RANGE FACILITY FUND 402	\$ 311,100	\$ -	\$ 311,100			\$ 311,100									
122	POL008 Police Station Rubber Flooring (Sgt's Office & Briefing Room)	GENERAL FUND 101	\$ 40,100	\$ -	\$ 40,100				\$ 40,100								





Capital Improvement Program  
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			PROJECT COST	OUTSIDE LEVERAGE	CITY COST	FY 2015-16		FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20		FY 2020-21		
						OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	
123	FIR014	Fire Station #3 Renovation	GENERAL FUND 101	\$ 327,650	\$ -	\$ 327,650												
124	POL006	Police Building 2nd Floor Renovation	GENERAL FUND 101	\$ 608,550	\$ -	\$ 608,550												
125	FIR011	Fire Station #1 Renovation	GENERAL FUND 101	\$ 624,400	\$ -	\$ 624,400												
126	POL011	Natural Gas Generator - Police Building	GENERAL FUND 101	\$ 88,900	\$ -	\$ 88,900												
SUBTOTAL				\$ 2,769,183	\$ -	\$ 2,769,183	\$ -	\$ 658,483	\$ -	\$ 421,100	\$ -	\$ 40,100	\$ -	\$ 1,560,600	\$ -	\$ 88,900	\$ -	\$ -

Machinery & Equipment

127	FLD025	Mini Concrete Mixer - Two Yard Capacity	GENERAL FUND 101	\$ 38,000	\$ -	\$ 38,000		\$ 38,000										
128	FLD006	Combination V-Box Salt Spreader Inserts (Four Each)	GENERAL FUND 101	\$ 250,000	\$ -	\$ 250,000		\$ 125,000		\$ 125,000								
129	FLD013	Single-Axle 5-Cubic Yard Dump Truck w/Front Plow; Underbody Scraper, & Wing Plow (Replaces #686 - 1994 Ford)	GENERAL FUND 101	\$ 190,000	\$ -	\$ 190,000		\$ 190,000										
130	POL013	Property Room Shelving Unit	GENERAL FUND 101	\$ 60,775	\$ -	\$ 60,775				\$ 60,775								
131	POL012	Firearms Training Simulator Replacement	GUN RANGE FACILITY FUND 402	\$ 90,300	\$ -	\$ 90,300				\$ 90,300								
132	ICE002	Zamboni Ice Resurfacer (Ice Arena)	ICE ARENA FUND 590	\$ 95,000	\$ -	\$ 95,000				\$ 95,000								
133	FLD013	Single-Axle 5-Cubic Yard Dump Truck w/Front Plow; Underbody Scraper & Wing Plow (Replaces #687 - 1994 Ford)	GENERAL FUND 101	\$ 190,000	\$ -	\$ 190,000				\$ 190,000								
134	FLD003	Tandem-Axle Swap Loader Dump Truck w/Front Plow; Underbody Scraper & Wing Plow (Replaces #699 - 2000 Sterling)	GENERAL FUND 101	\$ 300,000	\$ -	\$ 300,000				\$ 300,000								
135	FIR013	Tanker 1 Replacement (#311, 1997 Chevrolet)	GENERAL FUND 101	\$ 430,335	\$ -	\$ 430,335				\$ 430,335								
136	FLD004	Mini Excavator (Replaces #622 - Model Year 2000 Bobcat)	GENERAL FUND 101	\$ 90,000	\$ -	\$ 90,000					\$ 90,000							
137	FLD002	1-Ton Dump Truck w/Front Plow and Swap Loader - New	GENERAL FUND 101	\$ 120,000	\$ -	\$ 120,000					\$ 120,000							
138	FLD007	Bobcat All-Wheel Loader With Milling Machine Attachment	GENERAL FUND 101	\$ 125,000	\$ -	\$ 125,000					\$ 125,000							
139	ICE004	Munters Dehumidification Unit Replacement (Ice Arena)	ICE ARENA FUND 590	\$ 190,000	\$ -	\$ 190,000					\$ 190,000							
140	FLD010	Single-Axle 5-Cubic Yard Dump Truck w/Front Plow; Underbody Scraper & Wing Plow - New	GENERAL FUND 101	\$ 200,000	\$ -	\$ 200,000					\$ 200,000							
141	POL010	Gun Range Total Containment Bullet Trap System	GUN RANGE FACILITY FUND 402	\$ 254,700	\$ -	\$ 254,700					\$ 254,700							
142	FLD003	Tandem-Axle Swap Loader Dump Truck w/Front Plow; Underbody Scraper & Wing Plow (Replaces #620 - 2001 Sterling)	GENERAL FUND 101	\$ 300,000	\$ -	\$ 300,000					\$ 300,000							
143	ICE007	Public Address and Stereo System Replacement (Ice Arena)	ICE ARENA FUND 590	\$ 27,000	\$ -	\$ 27,000						\$ 27,000						
144	FIR015	Rescue #3 & #4 Replacements (#344, #355 - 2011 Expeditions)	GENERAL FUND 101	\$ 143,430	\$ -	\$ 143,430						\$ 143,430						
145	FLD012	Single-Axle 5-Cubic Yard Dump Truck w/Front Plow; Underbody Scraper & Wing Plow (Replaces #621 - 2001 Sterling)	GENERAL FUND 101	\$ 200,000	\$ -	\$ 200,000						\$ 200,000						
146	FLD019	Single-Axle 5-Cubic Yard Dump Truck w/Front Plow; Underbody Scraper & Wing Plow (Replaces #698 - 1998 Ford)	GENERAL FUND 101	\$ 200,000	\$ -	\$ 200,000						\$ 200,000						
147	FIR018	Command Vehicle Replacement (#320 - 2011 Expedition)	GENERAL FUND 101	\$ 268,180	\$ -	\$ 268,180						\$ 268,180						
148	FLD009	Front-End Loader (Replaces #689 - 1995 Case)	GENERAL FUND 101	\$ 275,000	\$ -	\$ 275,000						\$ 275,000						





Capital Improvement Program  
2015- 2021 Project Summary

DPS CIP#	PROJECT DESCRIPTION	FUNDING SOURCE	TOTAL			BUDGET		PROJECTED				FORECAST						
			PROJECT COST	OUTSIDE LEVERAGE	CITY COST	FY 2015-16		FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20		FY 2020-21		
						OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	OUTSIDE LEVERAGE	CITY COST	
149	SNR003 HVAC Units Replacement - Meadowbrook Commons Activity Center	SENIOR HOUSING FUND 594	\$ 36,403	\$ -	\$ 36,403													
150	FLD014 Single-Axle 5-Cubic Yard Dump Truck w/Front Plow; Underbody Scraper & Wing Plow (Replaces #605 - 2001 Osh Kosh)	GENERAL FUND 101	\$ 200,000	\$ -	\$ 200,000										\$ 200,000			
151	FIR016 Squad 2 Replacement (#314 - 209 International Medtec Ambulance)	GENERAL FUND 101	\$ 243,200	\$ -	\$ 243,200										\$ 243,200			
152	FLD008 Ditching Machine (Replaces #675 - 1991 Gradall)	DRAIN FUND 210	\$ 300,000	\$ -	\$ 300,000										\$ 300,000			
153	FLD011 All-Wheel Drive Motor Grader (Replaces #612 - 2005 CAT)	GENERAL FUND 101	\$ 300,000	\$ -	\$ 300,000										\$ 300,000			
154	FLD020 Tandem-Axle Swap Loader Dump Truck w/Front Plow; Underbody Scraper & Wing Plow (Replaces #603 - 2003 Sterling)	GENERAL FUND 101	\$ 325,000	\$ -	\$ 325,000										\$ 325,000			
155	FLD015 1-Ton Dump Truck w/Front Plow and Swap Loader (Replaces #633 - 1998 GMC)	GENERAL FUND 101	\$ 325,000	\$ -	\$ 325,000										\$ 325,000			
156	FLD026 1-Ton Dump Truck w/Front Plow and Swap Loader (Replaces #690 - 1999 Ford)	GENERAL FUND 101	\$ 120,000	\$ -	\$ 120,000												\$ 120,000	
157	FLD027 1-Ton Dump Truck w/Front Plow and Swap Loader (Replaces #649 - 2000 Ford)	GENERAL FUND 101	\$ 120,000	\$ -	\$ 120,000												\$ 120,000	
158	FLD028 1-Ton Dump Truck w/Front Plow and Swap Loader (Replaces #691 - 2001 Ford)	GENERAL FUND 101	\$ 120,000	\$ -	\$ 120,000												\$ 120,000	
159	FLD018 Truck-Mounted Combination (Jet and Vacuum) Sewer Cleaner (Replaces #614 - 2007 Sterling) (Vactor)	DRAIN FUND 210	\$ 400,000	\$ -	\$ 400,000												\$ 400,000	
160	FIR017 Engine 3 Replacement (#342, 2005 Seagrove)	GENERAL FUND 101	\$ 740,850	\$ -	\$ 740,850												\$ 740,850	
SUBTOTAL			\$ 7,268,173	\$ -	\$ 7,268,173	\$ -	\$ 353,000	\$ -	\$ 1,291,410	\$ -	\$ 1,279,700	\$ -	\$ 1,113,610	\$ -	\$ 1,729,603	\$ -	\$ 1,500,850	

Technology

161	W&S006 SCADA Upgrades to Sanitary Lift Stations	WATER AND SEWER FUND 592	\$ 56,000	\$ -	\$ 56,000		\$ 56,000											
162	IFT003 Server Storage Replacement	GENERAL FUND 101	\$ 125,950	\$ -	\$ 125,950		\$ 62,950										\$ 63,000	
163	POL007 Police Building Camera System - Replacement	GENERAL FUND 101	\$ 63,500	\$ -	\$ 63,500		\$ 63,500											
164	W&S005 SCADA Upgrades to Incorporate In-System Sewer Flow Meters	WATER AND SEWER FUND 592	\$ 199,000	\$ -	\$ 199,000		\$ 199,000											
165	IFT004 Virtual Remote Desktop Infrastructure Project	GENERAL FUND 101	\$ 69,800	\$ -	\$ 69,800			\$ 69,800										
166	CDV003 Community Development Document Imaging Project	GENERAL FUND 101	\$ 80,000	\$ -	\$ 80,000			\$ 80,000										
SUBTOTAL			\$ 594,250	\$ -	\$ 594,250	\$ -	\$ 381,450	\$ -	\$ 149,800	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 63,000

TOTAL			\$ 90,233,546	\$ 9,466,347	\$ 80,767,199	\$ 761,248	\$ 11,880,787	\$ 3,707,826	\$ 11,514,918	\$ 337,000	\$ 9,859,656	\$ 3,126,889	\$ 21,611,245	\$ 1,533,384	\$ 15,659,181	\$ -	\$ 10,241,412
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General Fund - 101	\$ 9,125,983	\$ -	\$ 9,125,983	\$ -	\$ 1,250,198	\$ -	\$ 1,564,415	\$ -	\$ 1,018,210	\$ -	\$ 2,647,210	\$ -	\$ 1,482,100	\$ -	\$ 1,163,850		
Major Street Fund - 202	\$ 18,984,059	\$ 2,642,963	\$ 16,341,096	\$ 761,248	\$ 4,404,837	\$ 407,826	\$ 3,255,804	\$ 337,000	\$ 1,898,294	\$ 336,889	\$ 4,460,611	\$ 800,000	\$ 2,146,550	\$ -	\$ 175,000		
Local Street Fund - 203	\$ 17,464,985	\$ -	\$ 17,464,985	\$ -	\$ 2,090,000	\$ -	\$ 2,500,000	\$ -	\$ 2,970,000	\$ -	\$ 3,068,585	\$ -	\$ 2,970,000	\$ -	\$ 3,866,400		
Municipal Street Fund - 204	\$ 21,190,219	\$ 6,823,384	\$ 14,366,835	\$ -	\$ 342,612	\$ 3,300,000	\$ 550,587	\$ -	\$ 459,085	\$ 2,790,000	\$ 2,949,447	\$ 733,384	\$ 6,312,746	\$ -	\$ 3,752,358		
Parks, Recreation, & Cultural Services Fund - 208	\$ 6,967,496	\$ -	\$ 6,967,496	\$ -	\$ 306,010	\$ -	\$ 120,000	\$ -	\$ 404,230	\$ -	\$ 4,234,135	\$ -	\$ 1,019,317	\$ -	\$ 883,804		
Drain Fund - 210	\$ 5,125,576	\$ -	\$ 5,125,576	\$ -	\$ 1,806,430	\$ -	\$ 361,732	\$ -	\$ 87,137	\$ -	\$ 853,457	\$ -	\$ 1,616,820	\$ -	\$ 400,000		
Gun Range Facility Fund - 402	\$ 656,100	\$ -	\$ 656,100	\$ -	\$ -	\$ -	\$ 401,400	\$ -	\$ 254,700	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Ice Arena Fund - 590	\$ 541,000	\$ -	\$ 541,000	\$ -	\$ 164,000	\$ -	\$ 160,000	\$ -	\$ 190,000	\$ -	\$ 27,000	\$ -	\$ -	\$ -	\$ -		
Water & Sewer Fund - 592	\$ 10,066,480	\$ -	\$ 10,066,480	\$ -	\$ 1,516,700	\$ -	\$ 2,600,980	\$ -	\$ 2,578,000	\$ -	\$ 3,370,800	\$ -	\$ -	\$ -	\$ -		
Senior Housing Fund - 594	\$ 111,648	\$ -	\$ 111,648	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 111,648	\$ -	\$ -		
TOTAL			\$ 90,233,546	\$ 9,466,347	\$ 80,767,199	\$ 761,248	\$ 11,880,787	\$ 3,707,826	\$ 11,514,918	\$ 337,000	\$ 9,859,656	\$ 3,126,889	\$ 21,611,245	\$ 1,533,384	\$ 15,659,181	\$ -	\$ 10,241,412