

# **Genoa Charter Township Capital Improvement Program 2015-2021**



June 2015

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## **INTRODUCTION**

In order to effectively budget for capital improvement expenditures it is important for a community to create a plan in order to strategically allocate funds and to assess current and future needs. A capital improvement plan is a six year schedule of all proposed major capital improvement projects. This plan identifies specific capital improvements, assesses their priority, estimates cost, determines potential methods of financing (if necessary) and evaluates their impact on current and future operating costs. There are several benefits to creating a capital improvement plan. These benefits include:

- Ensuring consistency of public facilities with the Township Master Plan.
- Allowing proposed improvements to be scrutinized systematically, and tested against funding and land use policies.
- Improving the scheduling of public improvements.
- Providing a system for long range financial planning and management.
- Enhancing the opportunities to participate in federal and state grant –in-aid programs.

In addition to the specified benefits, Genoa Township is required by the Michigan Planning Enabling Act of 2008 to “annually prepare a capital improvements program of public structures and improvements” because we “own and operate a water supply and sewage disposal system.” This document serves to not only meet our statutory requirement, but to provide the benefits of capital expenditure planning.

A successful process not only includes staff suggestions, but input from the public, the Planning Commission and Township Board of Trustees. I look forward to furthering the discussion of how our community will grow in the future.

Respectfully Submitted,

---

Ronald A. Akers  
Zoning Official

**ACKNOWLEDGEMENTS**

**TOWNSHIP BOARD OF TRUSTEES**

Gary McCrie, Supervisor

Robin Hunt, Treasurer

Polly Skolarus, Clerk

Jean Ledford

Jim Mortensen

Linda Rowell

Todd Smith

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Doug Brown, Chair

Diana Lowe, Vice-Chair

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Chris Grajek

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Eric Rauch

**TOWNSHIP STAFF**

Michael Archinal, AICP, Township Manager

Kelly VanMarter, AICP, Assistant Township Manager/Community Development Director

Ron Akers, Zoning Official

Adam VanTassell, IT Director/Facilities Manager

Angie Williams, Bookkeeper Specialist

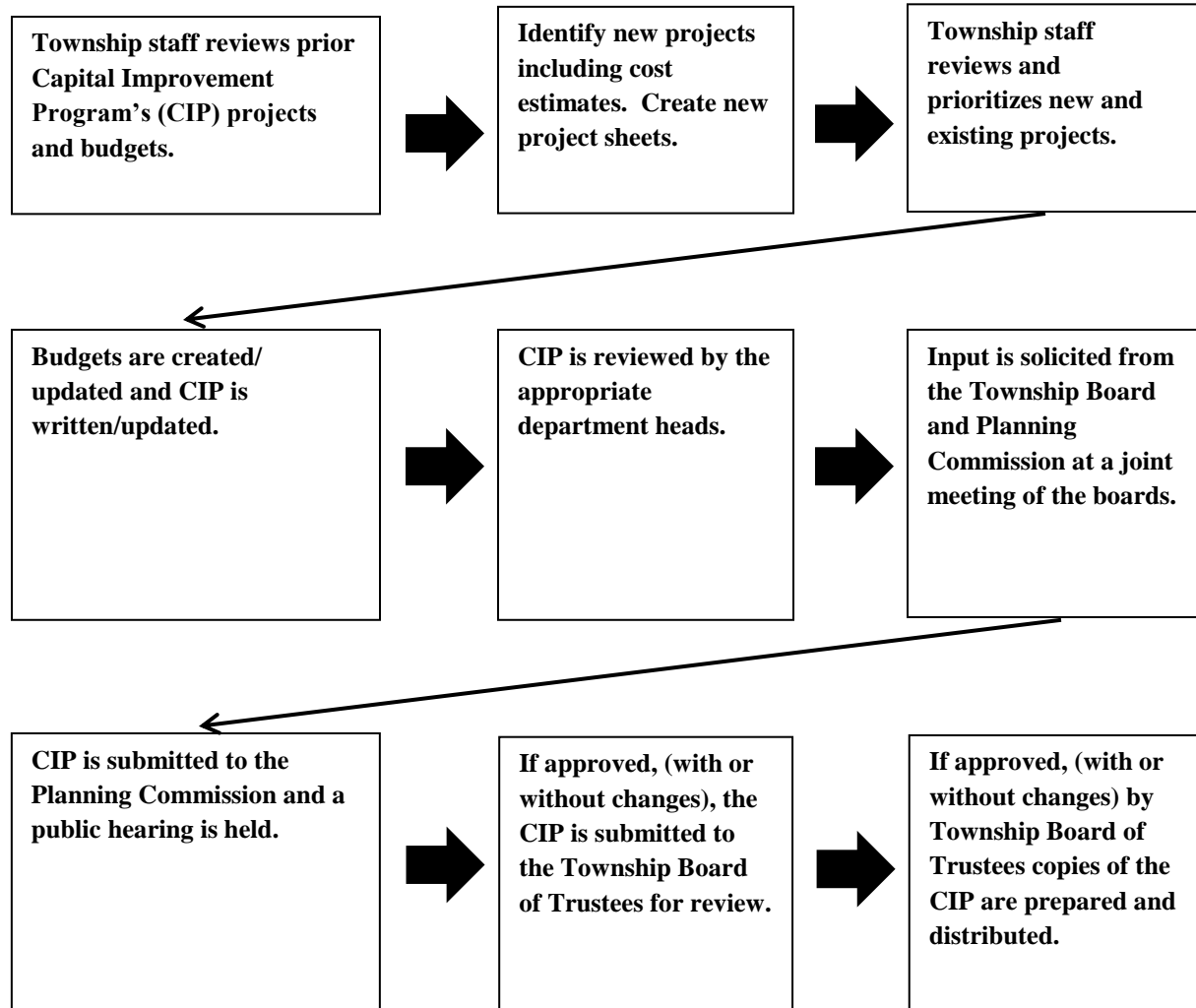
Kathryn Poppy, Administrative Assistant

Kathleen Murphy, Administrative Assistant

Cindy Overby, Accounts Payable/Payroll

**CAPITAL IMPROVEMENTS PROGRAM PROCESS**

The following is the input process for the creation and development of the Capital Improvement Program:



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## **FINANCIAL SUMMARY/IMPACT**

### **REVENUES**

In order to effectively implement a Capital Improvement Plan it is important to identify the way proposed projects are intended to be funded, evaluate the available resources and what impact the capital expenditures will have on the Genoa Township's financial resources. Available resources have a strong impact on how projects are evaluated and prioritized. The following are the different types of revenue sources identified in the capital improvements plan.

### **GENOA TOWNSHIP REVENUES**

#### **General Fund #101**

The General Fund is the fund from which primary governmental activities are financed. In the Capital Improvement Plan, revenue from the General Fund directly goes toward expenditures in the Service Support area and transfers from the General Fund finance the majority of the other governmental funds.

#### **General Fund Road Improvement #101**

General Fund Road Improvement #101 is a specific line item within the General Fund #101 and is primarily used for road maintenance projects such as crack sealing, crushed limestone application or other pavement maintenance projects. The amount allocated each year is approximately \$250,000, but the amount may vary based on project type and scope.

#### **Cemetery & Building Reserve Fund #271**

The Cemetery & Building Reserve Fund is primarily used for building, grounds and cemetery improvements and maintenance. The amount of money that is allocated to this fund varies annually based upon proposed projects.

#### **Future Parks & Recreation Fund #270**

The Future Parks & Recreation Fund is primarily used for property acquisition for public parks, park improvement/maintenance, and sidewalk/pathway installation. Approximately \$250,000 to \$300,000 is transferred from the General Fund to the Future Parks & Recreation Fund per year, but this amount varies based upon proposed projects.

#### **Road Reimbursement Fund #264**

The Road Reimbursement Fund is a revolving loan fund for road improvement projects in the Township. These funds are reimbursed to the Township via a special assessment district (SAD) that is usually paid off over a 3-10 year period. The Township has a history of matching

subdivision special assessment districts at a rate of 25% or \$1,000 per parcel, whichever is less. This fund also finances invasive lake weed removal.

#### Future Road Projects Fund #261

The Future Road Projects Fund is a “savings” fund which over time allows the Township to save large amounts of money for major road projects. A major road project can include contributions toward Michigan Department of Transportation or Livingston County Road Commission projects such as paving a portion of a gravel road, rerouting an existing road or intersection improvements such as round-a-bout installation. Approximately \$250,000 each year is transferred from the General Fund to the Future Road Projects Fund.

### GRANT MONEY AND OTHER AGENCY

#### Michigan Natural Resources Trust Fund

The Michigan Natural Resources Trust Fund is a competitive state grant program which is administered by the Michigan Department of Natural Resources. The program’s purpose is to provide a source of funding for the public acquisition of lands for resource protection and public outdoor recreation.

#### Transportation Alternatives Program

The Transportation Alternatives Program (TAP) is a competitive federal grant program administered by the Michigan Department of Transportation (MDOT) and the Southeast Michigan Council of Governments. TAP offers funding opportunities for different types of transportation improvements such as pedestrian and bicycle infrastructure and safety programs, historic preservation and rehabilitation of transportation facilities, environmental mitigation activities and Safe Routes to School Programs.

#### Safe Routes to School

The Michigan Safe Routes to School Program is a competitive federal grant program administered by MDOT with support from the Michigan Fitness Foundation. The purposes of this program are to enable and encourage children in grades K-8 to walk and bicycle to school; to make bicycling and walking to school a safer and more appealing transportation choice, thereby encouraging a healthy and active lifestyle from an early age; and to facilitate the planning, development and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity of elementary schools.

#### Michigan Department of Natural Resources Recreational Passport

The Recreational Passport program is a competitive state grant program which is administered by the Michigan Department of Natural Resources. The program’s purpose is to provide funds to be used for the development of public recreation facilities for local units of government and is

focused on renovating and improving existing parks. The development of new parks is eligible for this program.

#### OTHER AGENCY CONTRIBUTIONS

##### Marion Township

On road improvement projects for roads which share a border with other municipalities, the capital improvement plan identifies contribution from those adjacent municipalities. This plan lists Marion Township as sharing a portion of the cost of road improvement projects for Fisk Road and a portion of Brighton Road. This has not been previously discussed with Marion Township and at the time preliminary planning occurs an effort needs to be made to discuss participation in the project.

##### Hamburg Township

On road improvement projects for roads which share a border with other municipalities, the capital improvement plan identifies contribution from those adjacent municipalities. This plan lists Hamburg Township as sharing a portion of the cost of a road improvement project for a portion of Schafer Road. This has not been previously discussed with Hamburg Township and at the time preliminary planning occurs an effort needs to be made to discuss participation in the project.

##### Oceola Township

On road improvement projects for roads which share a border with other municipalities, the capital improvement plan identifies contribution from those adjacent municipalities. This plan lists Oceola Township as sharing a portion of the cost of a road improvement project for Golf Club Road.

##### Livingston County Road Commission

The Livingston County Road Commission is responsible for the majority of the public roads in Genoa Township. They receive a funding each year from the State of Michigan which they use for various road maintenance and improvement projects. The capital improvement plan identifies projects which estimate participation from both the Livingston County Road Commission and Genoa Township. The project that the Livingston County Road Commission is financing in this plan is the round-a-bout installation at the Coon Lake Road and Chilson Road intersection.

### Unknown

Due to the high cost of certain projects identified in the plan, the need for other agency participation, and uncertainty regarding who will participate and how much will they contribute to a project, we have listed the funding method as unknown. The uncertainty with regards to road funding in the State of Michigan will have a large impact on the timeframe in which these projects are completed or if they are completed. As the capital improvement plan is updated every year, revenue sources will be added annually as they are identified.

## EXPENDITURES

### Land and Major Facilities

Expenditures which fall under this category include non-utility buildings or infrastructure involving new construction, building and grounds maintenance/upkeep, vehicle and equipment purchases, and land acquisition.

### Services Support

Expenditures that fall under this category include computer/tablet purchases, software and website maintenance and updates, Master Plan updates, Zoning Ordinance updates, etc.

### Sidewalks

Expenditures that fall under this category include sidewalk and pathway installation.

### Gravel Road Improvements

Expenditures that fall under this category include gravel road improvements such as crushed limestone application.

### Paved Road Improvements

Expenditures that fall under this category include paved road improvements such as road surface maintenance, new road construction, intersection improvements and traffic signal improvements.

## IMPACT ON TOWNSHIP RESOURCES

Capital expenditures have substantial impacts on Township resources. In order to effectively plan for these large expenditures and ensure that sufficient funds remain for non-capital expenses, it is important to analyze the impacts these expenditures will have on the various fund balances that revenue is obtained from. The following are tables which depict the impacts the projected capital expenditures will have on various fund balances:



TABLE A: GENOA CHARTER TOWNSHIP CIP FINANCIAL SUMMARY

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	TOTAL
<b>REQUIRED REVENUE:</b>							
General Fund #101	\$99,200	\$42,800	\$45,000	\$59,600	\$37,200	\$37,800	<b>\$321,600</b>
Cemetery & Building Reserve Fund #271	\$62,500	\$0	\$12,500	\$25,000	\$0	\$0	<b>\$100,000</b>
Future Parks & Recreation Fund #270	\$393,000	\$31,350	\$302,000	\$166,250	\$235,000	\$250,000	<b>\$1,377,600</b>
General Fund - Road Improvement #101	\$101,000	\$0	\$200,000	\$148,000	\$183,000	\$0	<b>\$632,000</b>
Road Reimbursement Fund #264	\$637,500	\$0	\$0	\$0	\$0	\$0	<b>\$637,500</b>
Future Road Projects Fund #261	\$212,500	\$0	\$0	\$0	\$0	\$0	<b>\$212,500</b>
Various Grants & Other Agency Contribution	\$399,000	\$600,000	\$0	\$308,750	\$45,000	\$0	<b>\$1,352,750</b>
<b>TOTAL REVENUES:</b>	<b>\$1,904,700</b>	<b>\$674,150</b>	<b>\$559,500</b>	<b>\$707,600</b>	<b>\$500,200</b>	<b>\$287,800</b>	<b>\$4,633,950</b>
<b>EXPENDITURES</b>							
Land & Major Facilities	\$62,500	\$31,350	\$22,500	\$25,000	\$25,000	\$2,000	<b>\$168,350</b>
Services Support	\$99,200	\$42,800	\$45,000	\$59,600	\$37,200	\$37,800	<b>\$321,600</b>
Sidewalk Installation	\$393,000	\$0	\$292,000	\$475,000	\$255,000	\$248,000	<b>\$1,663,000</b>
Gravel Road Improvements	\$0	\$0	\$200,000	\$148,000	\$183,000	\$0	<b>\$531,000</b>
Paved Road Improvements	\$1,350,000	\$600,000	\$0	\$0	\$0	\$0	<b>\$1,950,000</b>
<b>TOTAL EXPENDITURES</b>	<b>\$1,904,700</b>	<b>\$674,150</b>	<b>\$559,500</b>	<b>\$707,600</b>	<b>\$500,200</b>	<b>\$287,800</b>	<b>\$4,633,950</b>
<b>Required Revenue Over/(Under) Expenditures</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

**TABLE B: GENERAL FUND #101 SUMMARY**

	<b>2012-13 - Actual</b>	<b>2013-14 - Actual</b>	<b>2014-15 - Projected</b>	<b>2015-16 - Projected</b>	<b>2016-17 - Projected</b>	<b>2017-18 - Projected</b>	<b>2018-19 - Projected</b>	<b>2019-20 - Projected</b>	<b>2020-21 - Projected</b>
<b>REVENUE: (After 2015-16 Projected 1% Increase Each Fiscal Year)</b>									
Taxes, Fees, State Shared, Transfers	\$3,950,804	\$3,983,953	\$4,257,500	\$4,288,500	\$4,331,385	\$4,374,699	\$4,418,446	\$4,462,630	\$4,507,257
<b>TOTAL REVENUES:</b>	<b>\$3,950,804</b>	<b>\$3,983,953</b>	<b>\$4,257,500</b>	<b>\$4,288,500</b>	<b>\$4,331,385</b>	<b>\$4,374,699</b>	<b>\$4,418,446</b>	<b>\$4,462,630</b>	<b>\$4,507,257</b>
<b>EXPENDITURES: (After 2015-16 Project 3% Increase Each Fiscal Year)</b>									
Services Support	-	-	-	\$99,200	\$42,800	\$45,000	\$59,600	\$37,200	\$37,800
Non-Capital Expenditures	\$2,936,170	\$3,138,022	\$3,342,500	\$3,443,000	\$3,546,290	\$3,652,679	\$3,762,259	\$3,875,127	\$3,991,381
Road Improvement	\$116,695	\$194,572	\$250,000	\$101,000	\$0	\$200,000	\$148,000	\$183,000	\$0
Transfer to Future Road Projects Fund #261	\$200,000	\$250,000	\$250,000	\$250,000	\$10,000	\$10,000	\$50,000	\$10,000	\$10,000
Transfer to Road Reimbursement Fund #264	\$350,000	\$500,000	\$250,000	\$250,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000
Transfer to Future Parks & Recreation Fund #270	\$379,000	\$250,000	\$350,000	\$450,000	\$200,000	\$290,000	\$191,000	\$148,000	\$257,000
Transfer to Cemetery & Building Reserve Fund #271	\$0	\$200,000	\$0	\$10,000	\$10,000	\$10,000	\$10,000	\$10,250	\$10,250
<b>TOTAL EXPENDITURES</b>	<b>\$3,981,865</b>	<b>\$4,532,594</b>	<b>\$4,442,500</b>	<b>\$4,603,200</b>	<b>\$4,009,090</b>	<b>\$4,407,679</b>	<b>\$4,420,859</b>	<b>\$4,463,577</b>	<b>\$4,506,431</b>
NET REVENUE/EXPENDITURES	(\$31,061)	(\$548,641)	(\$185,000)	(\$314,700)	\$322,295	(\$32,980)	(\$2,413)	(\$947)	\$826
<b>BEGINNING GENERAL FUND BALANCE</b>	<b>\$2,593,463</b>	<b>\$2,562,402</b>	<b>\$2,013,761</b>	<b>\$1,828,761</b>	<b>\$1,514,061</b>	<b>\$1,836,356</b>	<b>\$1,803,376</b>	<b>\$1,800,963</b>	<b>\$1,800,016</b>
<b>ENDING GENERAL FUND BALANCE</b>	<b>\$2,562,402</b>	<b>\$2,013,761</b>	<b>\$1,828,761</b>	<b>\$1,514,061</b>	<b>\$1,836,356</b>	<b>\$1,803,376</b>	<b>\$1,800,963</b>	<b>\$1,800,016</b>	<b>\$1,800,842</b>
<b>GENERAL FUND BALANCE AS % OF EXPENDITURES</b>	<b>64.35%</b>	<b>44.43%</b>	<b>41.17%</b>	<b>32.89%</b>	<b>45.80%</b>	<b>40.91%</b>	<b>40.74%</b>	<b>40.33%</b>	<b>39.96%</b>
Future Road Projects Fund #261 Ending Balance	\$833,821	\$939,276	\$1,187,776	\$1,225,276	\$1,235,276	\$1,245,276	\$1,295,276	\$1,305,276	\$1,315,276
Road Reimbursement Fund #264 Ending Balance	\$816,648	\$644,726	\$919,326	\$617,126	\$916,426	\$1,215,726	\$1,515,026	\$1,814,326	\$2,113,626
Future Parks & Recreation Fund #270 Ending Balance	\$718,042	\$496,837	\$557,237	\$562,407	\$674,567	\$598,403	\$551,749	\$388,499	\$310,472
Cemetery & Building Reserve Fund #271 Ending Balance	\$200,921	\$282,543	\$267,599	\$215,399	\$225,699	\$223,499	\$208,799	\$219,349	\$229,899
<b>BALANCE</b>	<b>\$2,569,432</b>	<b>\$2,363,382</b>	<b>\$2,931,938</b>	<b>\$2,620,208</b>	<b>\$3,051,968</b>	<b>\$3,282,904</b>	<b>\$3,570,850</b>	<b>\$3,727,450</b>	<b>\$3,969,273</b>
<b>TOTAL BALANCE (GENERAL FUND &amp; OTHER LISTED FUNDS)</b>	<b>\$5,131,834</b>	<b>\$4,377,143</b>	<b>\$4,760,699</b>	<b>\$4,134,269</b>	<b>\$4,888,324</b>	<b>\$5,086,280</b>	<b>\$5,371,813</b>	<b>\$5,527,466</b>	<b>\$5,770,116</b>
<b>TOTAL BALANCE AS A % OF GENERAL FUND EXPENDITURES</b>	<b>128.88%</b>	<b>96.57%</b>	<b>107.16%</b>	<b>89.81%</b>	<b>121.93%</b>	<b>115.40%</b>	<b>121.51%</b>	<b>123.83%</b>	<b>128.04%</b>

**TABLE C: CEMETERY & BUILDING FUND #271 SUMMARY**

	<b>2012-13 - Actual</b>	<b>2013-14 - Actual</b>	<b>2014-15 - Projected</b>	<b>2015-16 - Projected</b>	<b>2016-17 - Projected</b>	<b>2017-18 - Projected</b>	<b>2018-19 - Projected</b>	<b>2019-20 - Projected</b>	<b>2020-21 - Projected</b>
<b>REVENUE:</b>									
Interest Income	\$400	\$275	\$400	\$300	\$300	\$300	\$300	\$300	\$300
Transer from General Fund #101	\$0	\$200,000	\$0	\$10,000	\$10,000	\$10,000	\$10,000	\$10,250	\$10,250
Misc. Income	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>TOTAL REVENUES:</b>	<b>\$400</b>	<b>\$200,275</b>	<b>\$400</b>	<b>\$10,300</b>	<b>\$10,300</b>	<b>\$10,300</b>	<b>\$10,300</b>	<b>\$10,550</b>	<b>\$10,550</b>
<b>EXPENDITURES:</b>									
Capital Improvements		\$118,622	\$50,000	\$62,500	\$0	\$12,500	\$25,000	\$0	\$0
Misc/Audit	\$0	\$31	\$250	\$0	\$0	\$0	\$0	\$0	\$0
<b>TOTAL EXPENDITURES</b>	<b>\$0</b>	<b>\$118,653</b>	<b>\$50,250</b>	<b>\$62,500</b>	<b>\$0</b>	<b>\$12,500</b>	<b>\$25,000</b>	<b>\$0</b>	<b>\$0</b>
NET REVENUE/EXPENDITURES	\$400	\$81,622	(\$49,850)	(\$52,200)	\$10,300	(\$2,200)	(\$14,700)	\$10,550	\$10,550
<b>BEGINNING FUND BALANCE</b>	<b>\$200,521</b>	<b>\$200,921</b>	<b>\$282,543</b>	<b>\$267,599</b>	<b>\$215,399</b>	<b>\$225,699</b>	<b>\$223,499</b>	<b>\$208,799</b>	<b>\$219,349</b>
<b>ENDING FUND BALANCE</b>	<b>\$200,921</b>	<b>\$282,543</b>	<b>\$267,599</b>	<b>\$215,399</b>	<b>\$225,699</b>	<b>\$223,499</b>	<b>\$208,799</b>	<b>\$219,349</b>	<b>\$229,899</b>

**TABLE D: FUTURE PARKS & RECREATION FUND #270 SUMMARY**

	<b>2012-13 - Actual</b>	<b>2013-14 - Actual</b>	<b>2014-15 - Projected</b>	<b>2015-16 - Projected</b>	<b>2016-17 - Projected</b>	<b>2017-18 - Projected</b>	<b>2018-19 - Projected</b>	<b>2019-20 - Projected</b>	<b>2020-21 - Projected</b>
<b>REVENUE:</b>									
Interest Income	\$2,561	\$1,219	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
Transfer from General Fund #101	\$379,000	\$250,000	\$350,000	\$450,000	\$200,000	\$290,000	\$191,000	\$148,000	\$257,000
Misc. Income	\$40,051	\$12,750	\$11,900	\$11,900	\$11,900	\$11,900	\$11,900	\$11,900	\$11,900
<b>TOTAL REVENUES:</b>	<b>\$421,612</b>	<b>\$263,969</b>	<b>\$363,900</b>	<b>\$463,900</b>	<b>\$213,900</b>	<b>\$303,900</b>	<b>\$204,900</b>	<b>\$161,900</b>	<b>\$270,900</b>
<b>EXPENDITURES:</b>									
Capital Improvements	\$404,750	\$484,374	\$302,000	\$393,000	\$31,350	\$302,000	\$166,250	\$235,000	\$250,000
Township Hall Path and Recreation Maintenance	-	-	-	\$60,000	\$61,800	\$63,654	\$65,564	\$67,531	\$69,556
Additional Sidewalk Maintenance	-	-	-	\$4,230	\$7,090	\$12,910	\$18,240	\$21,120	\$27,870
Misc/Audit	\$2,047	\$800	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500
<b>TOTAL EXPENDITURES</b>	<b>\$406,797</b>	<b>\$485,174</b>	<b>\$303,500</b>	<b>\$458,730</b>	<b>\$101,740</b>	<b>\$380,064</b>	<b>\$251,554</b>	<b>\$325,151</b>	<b>\$348,926</b>
NET REVENUE/EXPENDITURES	\$14,815	(\$221,205)	\$60,400	\$5,170	\$112,160	(\$76,164)	(\$46,654)	(\$163,251)	(\$78,026)
<b>BEGINNING FUND BALANCE</b>	<b>\$703,227</b>	<b>\$718,042</b>	<b>\$496,837</b>	<b>\$557,237</b>	<b>\$562,407</b>	<b>\$674,567</b>	<b>\$598,403</b>	<b>\$551,749</b>	<b>\$388,499</b>
<b>ENDING FUND BALANCE</b>	<b>\$718,042</b>	<b>\$496,837</b>	<b>\$557,237</b>	<b>\$562,407</b>	<b>\$674,567</b>	<b>\$598,403</b>	<b>\$551,749</b>	<b>\$388,499</b>	<b>\$310,472</b>

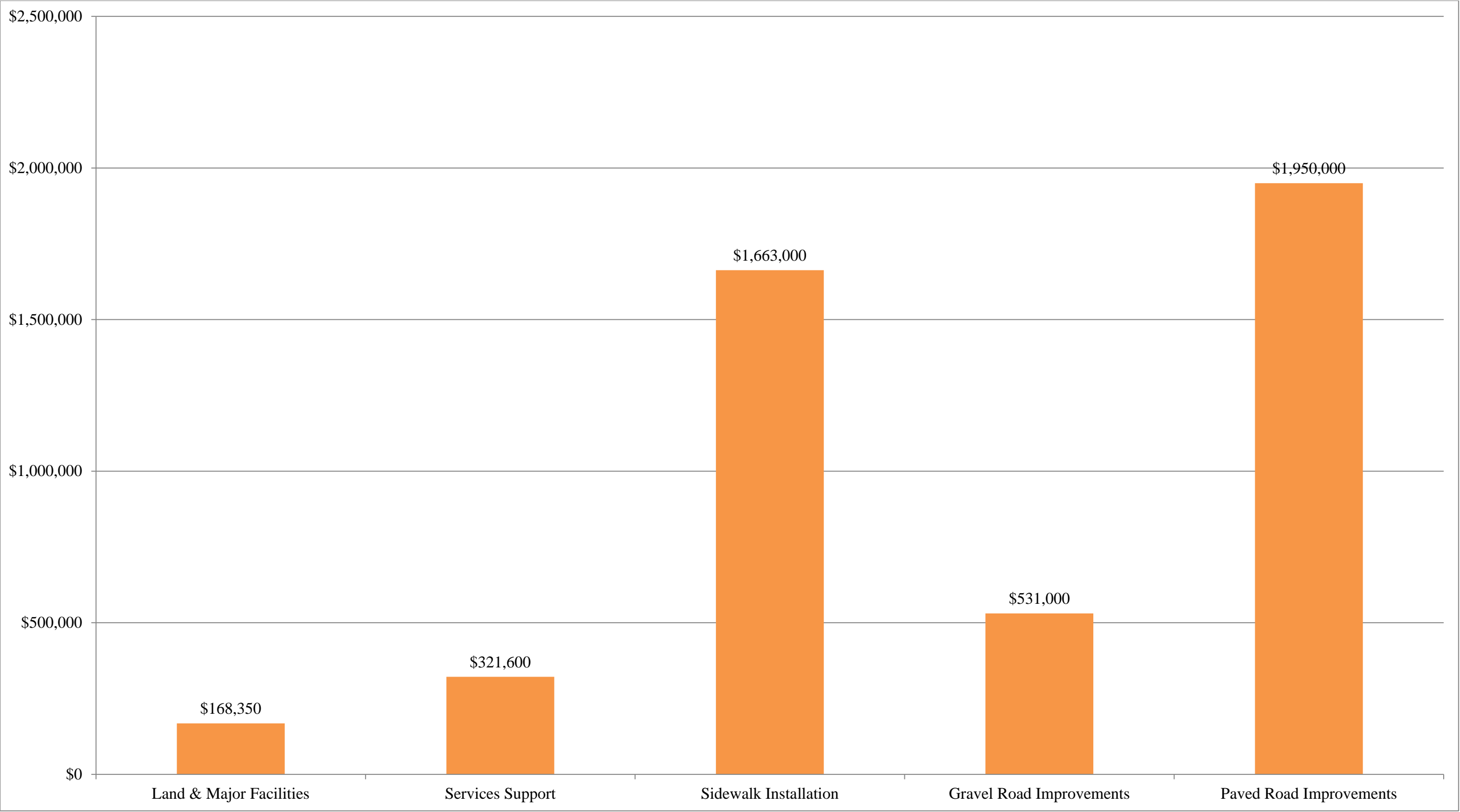
**TABLE E: FUTURE ROAD PROJECT FUND #261 SUMMARY**

	<b>2012-13 - Actual</b>	<b>2013-14 - Actual</b>	<b>2014-15 - Projected</b>	<b>2015-16 - Projected</b>	<b>2016-17 - Projected</b>	<b>2017-18 - Projected</b>	<b>2018-19 - Projected</b>	<b>2019-20 - Projected</b>	<b>2020-21 - Projected</b>
<b>REVENUE:</b>									
Interest Income	\$900	\$520	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
<b>Transfer from General Fund #101</b>	<b>\$200,000</b>	<b>\$250,000</b>	<b>\$250,000</b>	<b>\$250,000</b>	<b>\$10,000</b>	<b>\$10,000</b>	<b>\$50,000</b>	<b>\$10,000</b>	<b>\$10,000</b>
Misc. Income	\$0	\$139,416	\$0	\$0		\$0	\$0	\$0	\$0
<b>TOTAL REVENUES:</b>	<b>\$200,900</b>	<b>\$389,936</b>	<b>\$251,000</b>	<b>\$251,000</b>	<b>\$11,000</b>	<b>\$11,000</b>	<b>\$51,000</b>	<b>\$11,000</b>	<b>\$11,000</b>
<b>EXPENDITURES:</b>									
Capital Improvements	\$537,703	\$283,763	\$0	\$212,500	\$0	\$0	\$0	\$0	\$0
Misc/Audit	\$657	\$718	\$2,500	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
<b>TOTAL EXPENDITURES</b>	<b>\$538,360</b>	<b>\$284,481</b>	<b>\$2,500</b>	<b>\$213,500</b>	<b>\$1,000</b>	<b>\$1,000</b>	<b>\$1,000</b>	<b>\$1,000</b>	<b>\$1,000</b>
NET REVENUE/EXPENDITURES	(\$337,460)	\$105,455	\$248,500	\$37,500	\$10,000	\$10,000	\$50,000	\$10,000	\$10,000
<b>BEGINNING FUND BALANCE</b>	<b>\$1,171,281</b>	<b>\$833,821</b>	<b>\$939,276</b>	<b>\$1,187,776</b>	<b>\$1,225,276</b>	<b>\$1,235,276</b>	<b>\$1,245,276</b>	<b>\$1,295,276</b>	<b>\$1,305,276</b>
<b>ENDING FUND BALANCE</b>	<b>\$833,821</b>	<b>\$939,276</b>	<b>\$1,187,776</b>	<b>\$1,225,276</b>	<b>\$1,235,276</b>	<b>\$1,245,276</b>	<b>\$1,295,276</b>	<b>\$1,305,276</b>	<b>\$1,315,276</b>

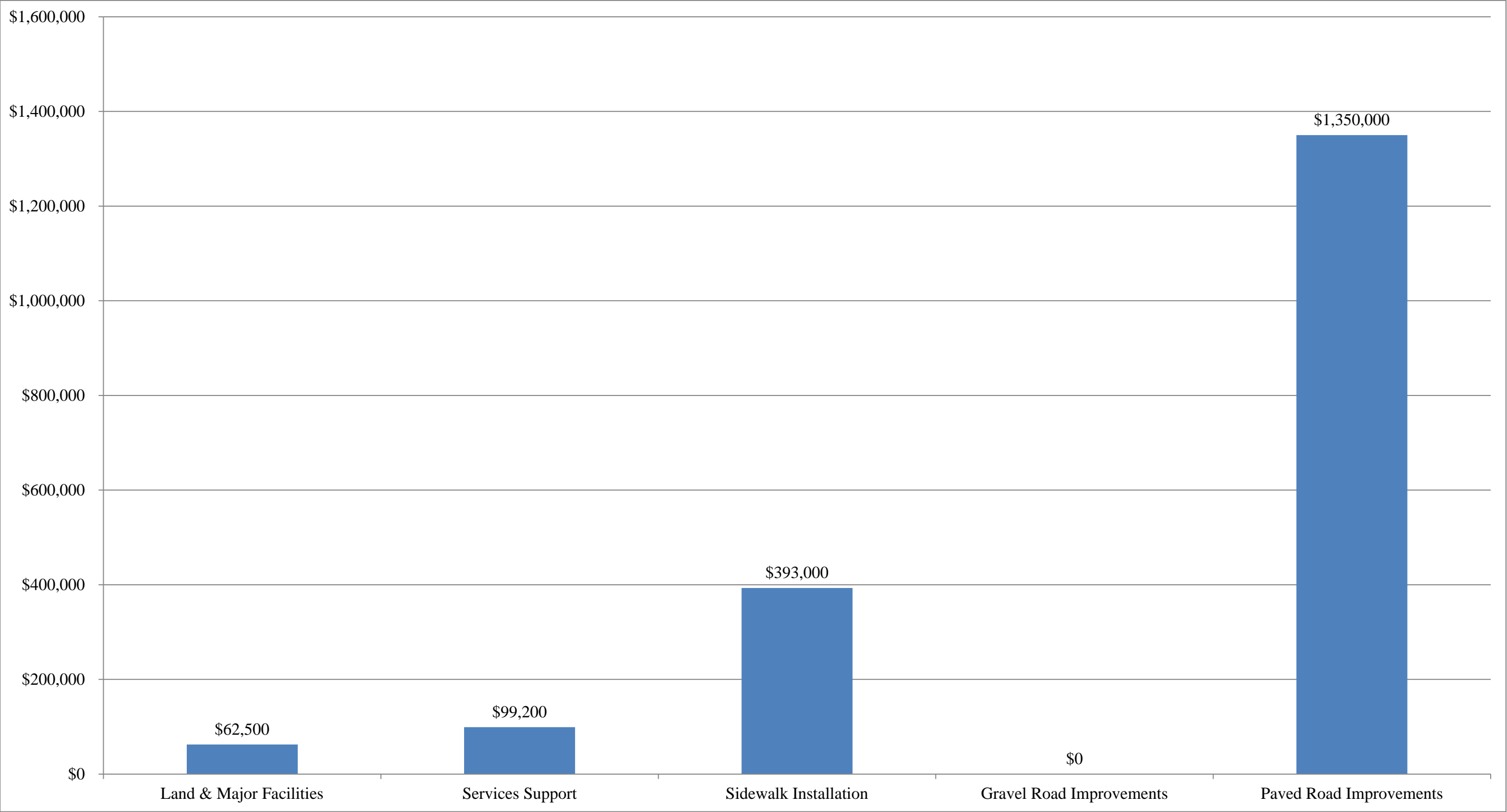
**TABLE F: ROAD REIMBURSEMENT FUND #264 SUMMARY**

	<b>2012-13 - Actual</b>	<b>2013-14 - Actual</b>	<b>2014-15 - Projected</b>	<b>2015-16 - Projected</b>	<b>2016-17 - Projected</b>	<b>2017-18 - Projected</b>	<b>2018-19 - Projected</b>	<b>2019-20 - Projected</b>	<b>2020-21 - Projected</b>
<b>REVENUE:</b>									
Interest Income	\$558	\$918	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Revenue from Special Assessments	\$114,567	\$191,744	\$174,400	\$227,300	\$241,300	\$241,300	\$241,300	\$241,300	\$241,300
Transfer from General Fund #101	\$350,000	\$500,000	\$250,000	\$250,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000
Misc. Income	\$3,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>TOTAL REVENUES:</b>	<b>\$468,625</b>	<b>\$692,662</b>	<b>\$425,400</b>	<b>\$478,300</b>	<b>\$442,300</b>	<b>\$442,300</b>	<b>\$442,300</b>	<b>\$442,300</b>	<b>\$442,300</b>
<b>EXPENDITURES:</b>									
Capital Improvements	<b>\$136,460</b>	<b>\$741,403</b>	<b>\$7,300</b>	<b>\$637,500</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
Lake Weed Removal	\$77,649	\$120,543	\$140,500	\$140,000	\$140,000	\$140,000	\$140,000	\$140,000	\$140,000
Misc/Audit	\$2,559	\$2,638	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
<b>TOTAL EXPENDITURES</b>	<b>\$216,668</b>	<b>\$864,584</b>	<b>\$150,800</b>	<b>\$780,500</b>	<b>\$143,000</b>	<b>\$143,000</b>	<b>\$143,000</b>	<b>\$143,000</b>	<b>\$143,000</b>
NET REVENUE/EXPENDITURES	\$251,957	(\$171,922)	\$274,600	(\$302,200)	\$299,300	\$299,300	\$299,300	\$299,300	\$299,300
<b>BEGINNING FUND BALANCE</b>	<b>\$564,691</b>	<b>\$816,648</b>	<b>\$644,726</b>	<b>\$919,326</b>	<b>\$617,126</b>	<b>\$916,426</b>	<b>\$1,215,726</b>	<b>\$1,515,026</b>	<b>\$1,814,326</b>
<b>ENDING FUND BALANCE</b>	<b>\$816,648</b>	<b>\$644,726</b>	<b>\$919,326</b>	<b>\$617,126</b>	<b>\$916,426</b>	<b>\$1,215,726</b>	<b>\$1,515,026</b>	<b>\$1,814,326</b>	<b>\$2,113,626</b>

**FIGURE 1: TOTAL CAPITAL EXPENDITURES 2015-2021**

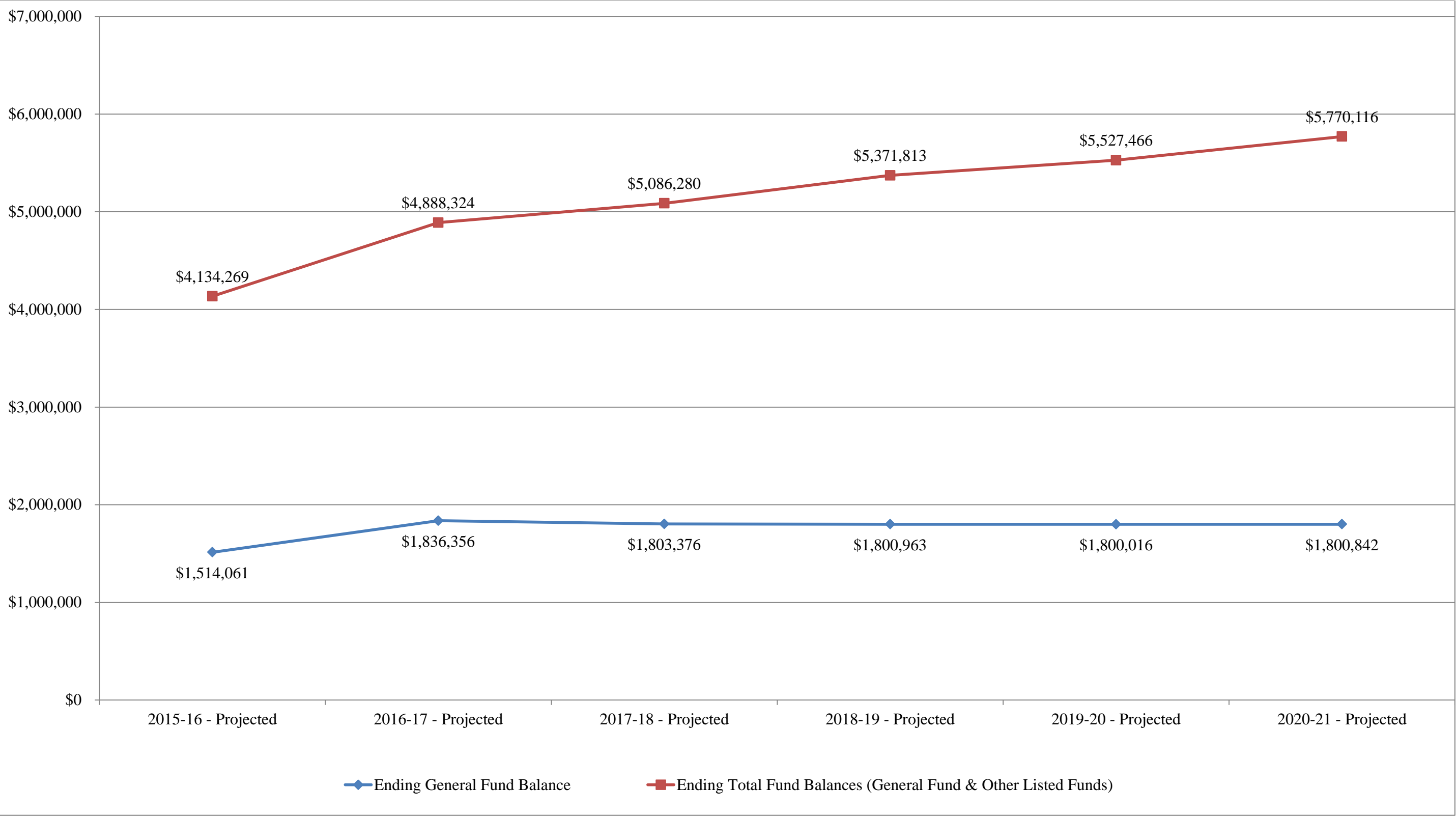


**FIGURE 2: TOTAL CAPITAL EXPENDITURES 2015-16 FISCAL YEAR**

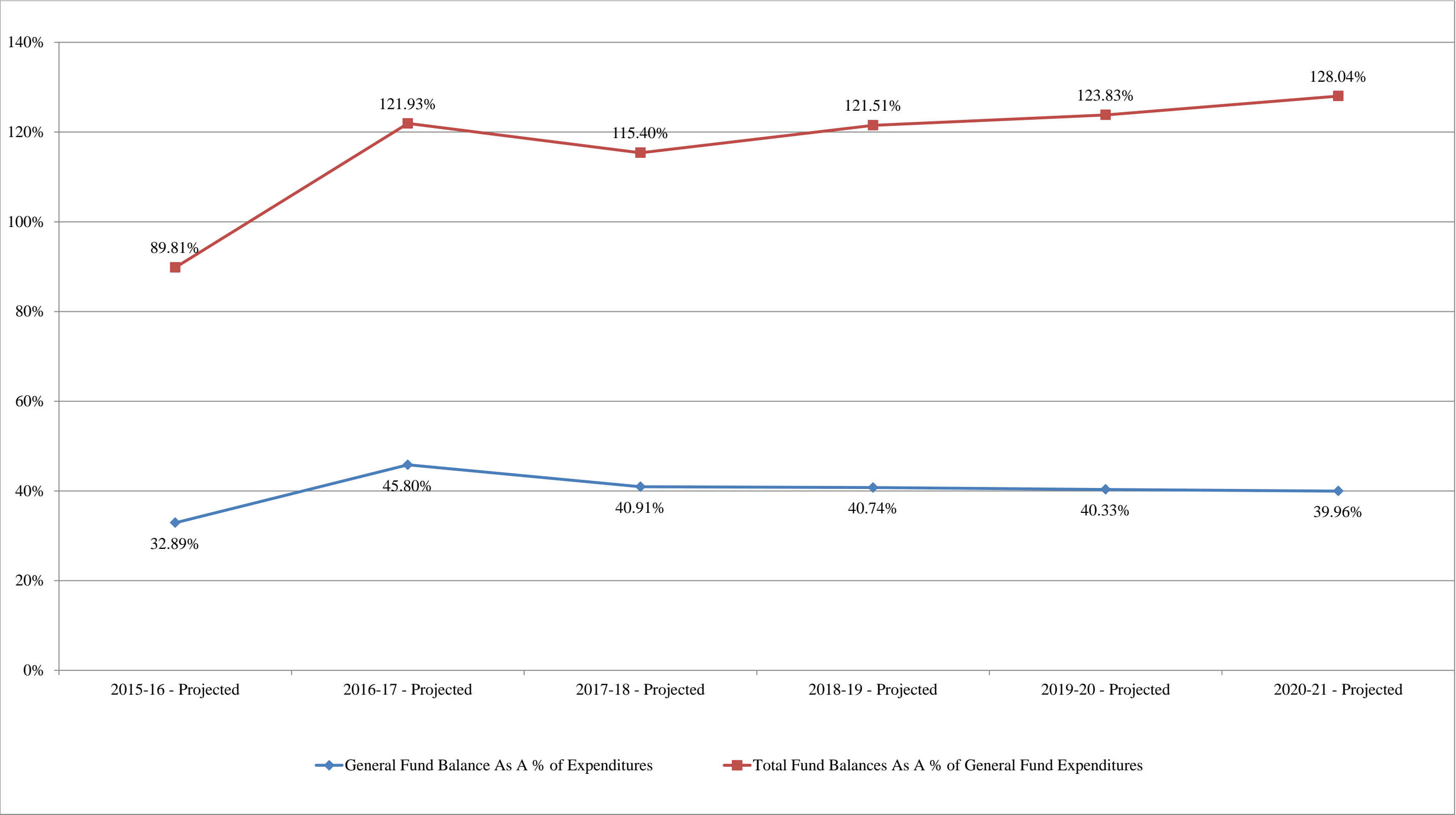




**FIGURE 3: FISCAL YEAR ENDING FUND BALANCES**



**FIGURE 4: FUND BALANCES AS A % OF GENERAL FUND EXPENDITURES**



**TABLE G: LAND & MAJOR FACILITIES PROJECTS**

PROJECT	FUND SOURCE	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	FUTURE	TOTAL
Park Acquisition	Future Parks & Recreation Fund #270							\$500,000	<b>\$650,000</b>
	MNRTF							\$150,000	
Senior Citizen Playground	Future Parks & Recreation Fund #270		\$31,350						<b>\$31,350</b>
Irrigation System for Lower Fields	Future Parks & Recreation Fund #270							\$28,000	<b>\$28,000</b>
Park Information Sign	Future Parks & Recreation Fund #270						\$2,000		<b>\$2,000</b>
Shaded Park Benches	Future Parks & Recreation Fund #270					\$25,000			<b>\$25,000</b>
Softball/baseball Complex	Future Parks & Recreation Fund #270							\$1,330,000	<b>\$1,630,000</b>
	MNRTF							\$300,000	
Township Hall Carpet replacement	Cemetery & Building Reserve Fund #271	\$12,500		\$12,500					<b>\$25,000</b>
Repair and Replace Township Hall Parking Lot	Cemetery & Building Reserve Fund #271	\$50,000							<b>\$50,000</b>
Township Park Path System	Future Parks & Recreation Fund #270							\$98,000	<b>\$98,000</b>
Township Truck Replacement	Cemetery & Building Reserve Fund #271				\$25,000				<b>\$25,000</b>
Township Hall Park Buildout Plan	Future Parks & Recreation Fund #270			\$10,000					<b>\$10,000</b>
Township Hall Solar Panels	Cemetery & Building Reserve Fund #271							?	<b>\$0</b>
<b>TOTAL</b>		<b>\$62,500</b>	<b>\$31,350</b>	<b>\$22,500</b>	<b>\$25,000</b>	<b>\$25,000</b>	<b>\$2,000</b>	<b>\$2,406,000</b>	<b>\$2,574,350</b>

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**LAND & MAJOR FACILITIES - PROJECT DESCRIPTION**

<b>Project Title:</b>	Park Acquisition
<b>Funding Source:</b>	Future Parks & Recreation Fund #270; Michigan Natural Resources Trust Fund

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	0	0	0	0	0	0	\$650,000

<b>Project Description and Location</b>
<p>This project involves the purchase of property for future Township recreational needs. The Genoa Township Recreation Plan adopted in 2002 highlights three areas where the Township should focus their efforts with regards to land acquisition. These areas are near Kellogg Road and McClements Road; Brighton Road and Chilson Road; and Crooked Lake Road and S. Latson Road. Due to Livingston County looking at plans to develop a park near Kellogg Road and McClements Road, efforts should be focused on expansion of the existing Township Hall Park.</p>

<b>Justification</b>
<p>The Genoa Township Master Plan highlights two specific goals attributed to park acquisition. These goals are to, "Provide high-quality centralized parks, recreation facilities and open space to meet the needs of Township residents," and to, "Provide public spaces that meet the needs of Township residents and can expand or adapt to meet the needs of the future population."</p>

<b>Schedule</b>
<p>There is no specific timeline listed in the Capital Improvement Program for park acquisition. It is unpredictable when ideal property will become available for sale. Due to this it is important to maintain adequate fund balances to allow for the purchase of property when it becomes available.</p>

<b>Impact on Operating Expenses</b>
<p>Cost projections are an approximate estimate based on recent land costs in the Township. As property is purchased more funding will need to be set aside for maintenance and eventual improvement of park property.</p>

**LAND & MAJOR FACILITIES - PROJECT DESCRIPTION**

<b>Project Title:</b>	Senior Citizen Playground
<b>Funding Source:</b>	Future Parks & Recreation Fund #270

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	0	\$31,350	0	0	0	0	0

<b>Project Description and Location</b>
This project involves purchasing and installing exercise equipment specifically made for senior citizens at the Township Hall Park.

<b>Justification</b>
This project promotes active recreation, further enhances the Township Hall Park and provides an additional recreation opportunity to promote healthy activity.

<b>Schedule</b>
This project is estimated to be completed in fiscal year 2016-17.

<b>Impact on Operating Expenses</b>
Annual expenses to this project will include routine maintenance.

**LAND & MAJOR FACILITIES - PROJECT DESCRIPTION**

<b>Project Title:</b>	Irrigation System of Lower Field
<b>Funding Source:</b>	Future Parks & Recreation Fund #270

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	0	0	0	0	0	0	\$28,000

**Project Description and Location**

This project involves the installation of an irrigation system for the fields at the base of the sled hill on the Township Hall Park property.

**Justification**

Promoting active recreation was identified in the 2002 Parks and Recreation Plan. By irrigating the fields, the condition could be improved so the area could be used for soccer or lacrosse fields.

**Schedule**

This project is listed as a future project. This project should be scheduled after the creation of a Township Hall property master plan which will give the Township Board the opportunity to determine what necessary park improvements should be.

**Impact on Operating Expenses**

Annual maintenance and inspections will need to occur if the system is installed, which will increase the annual maintenance costs of the Township Hall Park property.

**LAND & MAJOR FACILITIES - PROJECT DESCRIPTION**

<b>Project Title:</b>	Park Information Sign
<b>Funding Source:</b>	Future Parks & Recreation Fund #270

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	0	0	0	0	0	\$2,000	0

**Project Description and Location**

This project involves the installation of an information sign at the Township Park depicting a map of the property and information regarding the facilities.

**Justification**

Enhancing the Township Hall Park through interpretive signage was identified in the 2002 Parks and Recreation Plan.

**Schedule**

This project is scheduled for the 2020-21 fiscal year.

**Impact on Operating Expenses**

Installation should have a limited impact on operating expenses.



**LAND & MAJOR FACILITIES - PROJECT DESCRIPTION**

<b>Project Title:</b>	Shaded Park Benches
<b>Funding Source:</b>	Future Parks & Recreation Fund #270

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	0	0	0	0	\$25,000	0	0

**Project Description and Location**

This project involves the installation of shaded seating areas at the Township Hall Park.

**Justification**

The goal, “Genoa Township will provide its residents a destination to recreate with friends, family and neighbors that offers a variety of recreation activities to serve the needs and interests of the community” was identified in the 2002 Parks and Recreation Plan. We have had feedback from the residents regarding the lack of shaded seating areas facing the playground areas of the Township Hall Park.

**Schedule**

This project is scheduled for the 2019-20 fiscal year.

**Impact on Operating Expenses**

Additional facilities or equipment will need routine maintenance and upkeep.

**LAND & MAJOR FACILITIES - PROJECT DESCRIPTION**

<b>Project Title:</b>	Softball/Baseball Complex
<b>Funding Source:</b>	Future Parks & Recreation Fund #270 Michigan Natural Resources Trust Fund

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	0	0	0	0	0	0	\$1,630,000

**Project Description and Location**

This project involves the construction of a softball/baseball field complex and the associated parking and buildings. The location is unknown.

**Justification**

“Offer a community park that can be used for fundamental active recreation such as ball fields and soccer fields to enhance community and regional recreation programs” was identified in the 2002 Parks and Recreation Plan as an objective.

**Schedule**

This project is listed as a future project. The existing Township Hall property is not adequately sized for softball/baseball fields. Additional property would need to be acquired to accomplish this. The project should be scheduled when additional property is acquired.

**Impact on Operating Expenses**

The development of a softball/baseball complex would have a large impact on operating expenses. Additional funds will need to be set aside for lawn and field maintenance.

**LAND & MAJOR FACILITIES - PROJECT DESCRIPTION**

<b>Project Title:</b>	Township Hall Carpet Replacement
<b>Funding Source:</b>	Cemetery & Building Reserve Fund #271

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	\$12,500	0	\$12,500	0	0	0	0

<b>Project Description and Location</b>
This project involves the replacement of the carpet at Township Hall which is starting to show signs of wear.

<b>Justification</b>
The existing carpet is 17 years old and expected wear and tear is visible.

<b>Schedule</b>
Preparation, removal and installation should take approximately one week. The replacement of the Boardroom carpet at Township Hall is scheduled for fiscal year 2015-16 and the replacement of the office areas carpet is scheduled for fiscal year 2017-18.

<b>Impact on Operating Expenses</b>
This project would have a limited impact on operating expenses. The use of carpet tiles would make carpet repairs easier and more cost effective.

**LAND & MAJOR FACILITIES - PROJECT DESCRIPTION**

<b>Project Title:</b>	Repair and Replace the Township Hall Parking Lots
<b>Funding Source:</b>	Cemetery & Building Reserve Fund #271

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	\$50,000	0	0	0	0	0	0

<b>Project Description and Location</b>
This project involves the pavement maintenance and repair on the Township Hall Parking lot in order to extend the parking lot's useful life.

<b>Justification</b>
Project will extend the useful life of the parking lot.

<b>Schedule</b>
This project is scheduled for the 2015-16 fiscal year.

<b>Impact on Operating Expenses</b>
This project would have a limited impact if any on operating expenses.

**LAND & MAJOR FACILITIES - PROJECT DESCRIPTION**

<b>Project Title:</b>	Township Park Path System
<b>Funding Source:</b>	Future Parks & Recreation Fund #270

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	0	0	0	0	0	0	\$98,000

<b>Project Description and Location</b>
This project involves installing additional pathway in the Township Hall Park to complete a one (1) mile long trail.

<b>Justification</b>
The 2002 Parks and Recreation Plan states, "Enhance the Township Hall park through passive recreation improvements, nature trails and interpretive signage" as an objective.

<b>Schedule</b>
This project is listed as a future project. This project should be scheduled after the creation of a Township Hall property master plan which will give the Township Board the opportunity to determine what necessary park improvements should be.

<b>Impact on Operating Expenses</b>
This project would increase annual maintenance costs for the Township Hall Park.

**LAND & MAJOR FACILITIES - PROJECT DESCRIPTION**

<b>Project Title:</b>	Township Truck Replacement
<b>Funding Source:</b>	Cemetery & Building Reserve Fund #271

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	0	0	0	\$25,000	0	0	0

**Project Description and Location**

This project involves the purchase of a new Township pickup truck.

**Justification**

The Township truck is used by the Facilities Manager, Assessing and Ordinance Enforcement Officers. A pickup truck is required due to the number of items that need to be transported during elections and for the removal of signs in the road right-of-way.

**Schedule**

This project is scheduled in the 2018-19 fiscal year.

**Impact on Operating Expenses**

Operating expenses should remain consistent by replacing the Township truck. Depending on the fuel efficiency of the new truck, the Township may save money in fuel costs, but any savings would be minimal.

**LAND & MAJOR FACILITIES - PROJECT DESCRIPTION**

<b>Project Title:</b>	Township Hall Park Build Out Plan
<b>Funding Source:</b>	Cemetery & Building Reserve Fund #271

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	0	0	\$10,000	0	0	0	0

<b>Project Description and Location</b>
This project involves the creation of a master development plan of the Township Hall Park property.

<b>Justification</b>
To plan for the future development of Township Hall Park and recreation facilities.

<b>Schedule</b>
This project is scheduled for the 2017-18 fiscal year.

<b>Impact on Operating Expenses</b>
If implemented it should promote efficient and effective use of Township resources by focusing the needs and desires of the community and evaluating this based on existing facilities.

**LAND & MAJOR FACILITIES - PROJECT DESCRIPTION**

<b>Project Title:</b>	Township Hall Solar Panels
<b>Funding Source:</b>	Cemetery & Building Reserve Fund #271

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	0	0	0	0	0	0	?

<b>Project Description and Location</b>
This project involves the installation of solar panels on the Township Hall roof.

<b>Justification</b>
The system is a clean energy source for the Township and will reduce electricity costs over the life of the system.

<b>Schedule</b>
This project is scheduled as a future project.

<b>Impact on Operating Expenses</b>
Repair and routine maintenance are low-cost. Installation will reduce energy costs.



TABLE H: SERVICES SUPPORT PROJECTS

PROJECT	FUND SOURCE	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	FUTURE	TOTAL
Computer Rotation	General Fund #101	\$ 6,000	\$ 6,000	\$ 6,000					\$ 18,000
Tablet Rotation	General Fund #101		\$ 3,000	\$ 3,000	\$ 3,000				\$ 9,000
Server Replacements	General Fund #101							\$ 10,000	\$ 10,000
Software									
BSA	General Fund #101	\$ 4,600	\$ 4,700	\$ 4,800	\$ 4,900	\$ 5,000	\$ 5,100		\$ 29,100
Springbrook	General Fund #101	\$ 6,600	\$ 6,900	\$ 7,200	\$ 7,500	\$ 7,800	\$ 8,100		\$ 44,100
ArcGIS Map	General Fund #101	\$ 5,000	\$ 5,200	\$ 5,400	\$ 5,600	\$ 5,800	\$ 6,000		\$ 33,000
Software Total		\$ 16,200	\$ 16,800	\$ 17,400	\$ 18,000	\$ 18,600	\$ 19,200		
Copier/Printer Maintenance & Replacement	General Fund #101	\$ 17,000	\$ 17,000	\$ 18,600	\$ 18,600	\$ 18,600	\$ 18,600		\$ 108,400
Website Update	General Fund #101	\$ 10,000							\$ 10,000
Zoning Ordinance Update	General Fund #101	\$ 50,000							\$ 50,000
Master Plan Update	General Fund #101				\$ 20,000				
TOTAL		\$ 99,200	\$ 42,800	\$ 45,000	\$ 59,600	\$ 37,200	\$ 37,800	\$ 10,000	\$ 311,600

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**SERVICES SUPPORT - PROJECT DESCRIPTION**

<b>Project Title:</b>	Computer Rotation
<b>Funding Source:</b>	General Fund #101

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	\$6,000	\$6,000	\$6,000	0	0	0	0

**Project Description and Location**

This is a program for the replacement of computer workstations. There are currently twenty-five (25) workstation desktops and staff has devised a schedule to replace machines approximately every three to five years.

**Justification**

The useful life of a desktop is approximately three to five years. Worker productivity suffers and maintenance costs increase when machines start to become obsolete. Capital costs of new equipment are spread out via a replacement schedule.

**Schedule**

Please see the replacement schedule.

**Impact on Operating Expenses**

New machines will reduce ongoing maintenance costs.

**SERVICES SUPPORT - PROJECT DESCRIPTION**

<b>Project Title:</b>	Tablet Rotation
<b>Funding Source:</b>	General Fund #101

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	0	\$3,000	\$3,000	\$3,000	0	0	0

**Project Description and Location**

This is a program for the replacement of the 19 tablets currently in use by the Township staff, elected officials, and appointed officials.

**Justification**

The useful life of a tablet is approximately three to ten years. Worker productivity suffers and maintenance costs increase when machines start to become obsolete. Capital costs of new equipment are spread out via a replacement schedule.

**Schedule**

Please see the replacement schedule.

**Impact on Operating Expenses**

This project will have a limited impact on operating expenses.

**SERVICES SUPPORT - PROJECT DESCRIPTION**

<b>Project Title:</b>	Server Replacements
<b>Funding Source:</b>	General Fund #101

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	0	0	0	0	0	0	\$10,000

<b>Project Description and Location</b>
This project involves replacing a server at Township Hall to maintain the Township's information systems network.

<b>Justification</b>
To ensure information integrity and data security, it is important to ensure this technology is regularly updated.

<b>Schedule</b>
This project is scheduled as a future project. One (1) server was replaced in the 2014-15 fiscal year.

<b>Impact on Operating Expenses</b>
This project will have a limited impact on operating expenses.

**SERVICES SUPPORT - PROJECT DESCRIPTION**

<b>Project Title:</b>	Software Purchases
<b>Funding Source:</b>	General Fund #101

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	\$16,200	\$16,800	\$17,400	\$18,000	\$18,600	\$19,200	0

**Project Description and Location**

This project includes several anticipated software purchases and upgrades.

**Justification**

The listed software performs several different functions. Springbrook is an accounting software used by the Clerk's department. ArcGIS is mapping software used by the Manager's, Assessor's and the Utility departments. BS&A is a database management software used by the Manager's, Assessing and Treasurer's department.

**Schedule**

Maintenance costs are paid annually.

**Impact on Operating Expenses**

Annual maintenance costs are taken from the General Fund operating budget.

**SERVICES SUPPORT - PROJECT DESCRIPTION**

<b>Project Title:</b>	Copier/Printer Maintenance and Replacement
<b>Funding Source:</b>	General Fund #101

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	\$17,000	\$17,000	\$18,600	\$18,600	\$18,600	\$18,600	0

<b>Project Description and Location</b>
The Township contracts with a company which owns and maintains the printers and copiers in the Township Hall Office. This cost includes annual maintenance and replacement of our printers and copiers.

<b>Justification</b>
Printers and copiers are necessary for day-to-day office duties and for the printing of bi-annual tax bills and assessment change notices.

<b>Schedule</b>
It is anticipated that a copier will need to be replaced in the 2017-18 fiscal year which will increase annual operating costs.

<b>Impact on Operating Expenses</b>
The annual maintenance costs will increase after a proposed copier replacement in 2017-18.

**SERVICES SUPPORT - PROJECT DESCRIPTION**

<b>Project Title:</b>	Website Update
<b>Funding Source:</b>	General Fund #101

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	\$10,000	0	0	0	0	0	0

<b>Project Description and Location</b>
This project is to update the Township website in order to ensure that we are keeping up with new technology and providing an attractive, professional website to Township residents.

<b>Justification</b>
Keeping up with new technology allows the Township to communicate information to our residents more effectively.

<b>Schedule</b>
This project is proposed in the 2015-16 fiscal year and should take approximately one (1) to two (2) months.

<b>Impact on Operating Expenses</b>
This project should have a limited impact on operating costs.



**SERVICES SUPPORT - PROJECT DESCRIPTION**

<b>Project Title:</b>	Zoning Ordinance Update
<b>Funding Source:</b>	General Fund #101

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	\$50,000	0	0	0	0	0	0

**Project Description and Location**

In 2013 the Township Master Plan was updated. There were several changes to the Master Plan which resulted in various recommendations to change the Zoning Ordinance. Due to these recommendations and the age of our existing Zoning Ordinance, we have proposed to rewrite and reformat the Zoning Ordinance.

**Justification**

The Michigan Zoning Enabling Act requires that a Zoning Ordinance be based on the Township Master Plan. It is in the best interest of the Township to ensure these documents are aligned and that our Zoning Ordinance is updated to ensure we are responsive to community trends.

**Schedule**

This project was approved at the January 20, 2015 Township Board of Trustees Meeting. This project will take approximately 4-6 months to complete.

**Impact on Operating Expenses**

This project will have no direct impact on operating expenses.

**SERVICES SUPPORT - PROJECT DESCRIPTION**

<b>Project Title:</b>	Master Plan Update
<b>Funding Source:</b>	General Fund #101

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	0	0	0	\$20,000	0	0	0

**Project Description and Location**

The Michigan Planning Enabling Act requires the Township to review its Master Plan every five (5) years. The last review of the Master Plan was in 2013. This expense is budgeted for in the event it is determined that an update to the Master Plan is required.

**Justification**

This review of the Township Master Plan every five (5) years is a statutory requirement.

**Schedule**

This project is scheduled for the fiscal year 2018-19 and will take 3-5 months to complete.

**Impact on Operating Expenses**

This project will have no direct impact on operating expenses.

**TABLE I: TABLET ROTATION**

<b>ASSET ID</b>	<b>EMPLOYEE</b>	<b>DATE ACQUIRED</b>	<b>DESCRIPT ION</b>	<b>DATE OF REPLACEMENT</b>
1	Linda Rowell	4/1/2012	iPad2	4/1/2016
2	Jim Mortensen	4/1/2012	iPad2	4/1/2016
3	Polly Skolarus	4/1/2012	iPad2	4/1/2016
4	Robin Hunt	4/1/2012	iPad2	4/1/2016
5	Gary McCririe	4/1/2012	iPad2	4/1/2016
6	Todd Smith	4/1/2012	iPad2	4/1/2016
7	Jean Ledford	4/1/2012	iPad2	4/1/2016
8	Chris Grajek	4/1/2012	iPad2	4/1/2017
9	Jeff Dhaenens	4/1/2012	iPad2	4/1/2017
10	Marianne McCreary	4/1/2012	iPad2	4/1/2017
11	Diana Lowe	4/1/2012	iPad2	4/1/2017
12	Doug Brown	4/1/2012	iPad2	4/1/2017
13	John McManus	4/1/2012	iPad2	4/1/2017
14	Eric Rauch	4/1/2012	iPad2	4/1/2017
15	Ron Akers	4/1/2012	iPad2	4/1/2018
16	Kelly VanMarter	4/1/2012	iPad2	4/1/2018
17	Michael Archinal	4/1/2012	iPad2	4/1/2018
18	Laura Mroczka	4/1/2012	iPad2	4/1/2018
19	Adam VanTassell	4/1/2012	iPad2	4/1/2018

**TABLE J: COMPUTER ROTATION**

<b>ASSET ID</b>	<b>EMPLOYEE</b>	<b>DATE ACQUIRED</b>	<b>DESCRIPTION</b>	<b>DATE OF REPLACEMENT</b>
1	Cindy Overby	7/1/2011	Dell Optiplex	7/1/2016
2	Kristen Sapienza	7/1/2011	Dell Optiplex	7/1/2016
3	Michael Archinal	7/1/2011	Dell Optiplex	7/1/2016
4	Adam VanTassell	7/1/2011	Dell Optiplex	7/1/2016
5	Laura Mrocza	7/1/2011	Dell Optiplex	7/1/2016
6	Deborah Rojewski	7/1/2011	Dell Optiplex	7/1/2016
7	Kelly VanMarter	7/1/2011	Dell Optiplex	7/1/2016
8	Amy Ruthig	7/1/2011	Dell Optiplex	7/1/2016
9	Robin Hunt	7/1/2011	Dell Optiplex	7/1/2016
10	Sharon Stone	7/1/2011	Dell Optiplex	7/1/2016
11	Angie Williams	7/1/2011	Dell Optiplex	7/1/2016
12	Tammy Lindberg	7/1/2011	Dell Optiplex	7/1/2016
13	Spare Computer	4/1/2013	Dell Optiplex 790	4/1/2018
14	Kathryn Poppy	4/1/2013	Dell Optiplex 790	4/1/2018
15	Kathleen Murphy	4/1/2013	Dell Optiplex 790	4/1/2018
16	Ron Akers	4/1/2013	Dell Optiplex 790	4/1/2018
17	Sue Sitner		State supplied computer	
18	Clerk Front Counter	7/1/2013	Unknown	7/1/2018
19	Map Room Computer	7/1/2007	Unknown	7/1/2015
20	Tax Front Counter	7/1/2005	Unknown	As Needed
21	Vacant, Clerk	7/1/2005	Unknown	As Needed
22	Vacant, Assessing	7/1/2012	Unknown	As Needed
23	Polly Skolarus	7/1/2012	Laptop	As Needed
24	Gary McCririe	7/1/2010	Laptop	As Needed

TABLE K: SIDEWALK PROJECTS

SIDEWALK LOCATION	FUND SOURCE	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	FUTURE	TOTAL
Grand River Ave.	Future Parks and Recreation #270								\$ 1,474,000
<i>S. Hacker Rd to 242 Church, S. Side of Road, St. Joseph Mercy to Kellogg Rd N. Side of Road</i>	Future Parks and Recreation #270	\$ 393,000							\$ 393,000
<i>Sunrise Park Rd to Kellogg Rd, N. Side of Road</i>	Future Parks and Recreation #270			\$ 292,000					\$ 292,000
<i>S. Latson to West Township Limit, S. Side of Road</i>	Future Parks and Recreation #270							\$ 386,000	\$ 386,000
<i>S. Latson to 242 Church, S. Side of Road</i>	Future Parks and Recreation #270							\$ 347,000	\$ 347,000
<i>St. Joseph Mercy to Hacker, N. Side of Road</i>	Future Parks and Recreation #270							\$ 56,000	\$ 56,000
Crooked Lake Rd (S. Latson Rd to Dorr Rd)	Future Parks and Recreation #270				\$ 166,250				\$ 475,000
	TAP				\$ 308,750				
Dorr Rd (Township Hall to Challis Rd)	Future Parks and Recreation #270					\$ 210,000			\$ 255,000
	DNR Recreational Passport					\$ 45,000			
Challis Rd (Dorr Rd to Bauer Rd)	Future Parks and Recreation #270						\$ 248,000		\$ 248,000
Brighton Rd (Brookwood Meadows to Honors Way)	Future Parks and Recreation #270							\$ 350,000	\$ 800,000
	MNRTF							\$ 250,000	
	Safe Routes to School							\$ 200,000	
Chilson Rd (Brighton Rd to Coon Lake Rd)	Future Parks and Recreation #270							\$ 166,000	\$ 166,000
Hughes Rd	Future Parks and Recreation #270							\$ 482,000	\$ 482,000
Power Corridor (Golf Club Rd to Grand River Ave)	Future Parks and Recreation #270							\$ 204,000	\$ 204,000
S. Latson Rd (Crooked Lake Rd to Chilson Rd) & Chilson Rd (S. Latson Rd to Coon Lake Rd)	Future Parks and Recreation #270							\$ 264,000	\$ 264,000
Chilson Rd (Chilson Hills to Grand River Ave)	Future Parks and Recreation #270							\$ 89,000	\$ 89,000
<b>TOTAL</b>		\$ 393,000	\$ -	\$ 292,000	\$ 475,000	\$ 255,000	\$ 248,000	\$ 2,794,000	\$ 4,457,000

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**SIDEWALKS – PROJECT DESCRIPTION**

<b>Project Title:</b>	E. Grand River Ave. (Hacker Road to 242 Church on S. Side of Road & St. Joseph Mercy to Kellogg Road on N. Side of Road)
<b>Funding Source:</b>	Future Parks & Recreation #270

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	\$393,000	0	0	0	0	0	0

**Project Description and Location**

This project involves the installation of a five (5) foot wide concrete sidewalk on the south side of E. Grand River Avenue from Hacker Road to 242 Church then on the north side of E. Grand River Avenue from Woodland Medical Center to Kellogg Road.

**Justification**

The 2002 Parks and Recreation Plan lists an objective to, “Complete the pathway system along Grand River Avenue.”

**Schedule**

This project is scheduled for the 2015-16 fiscal year. Estimated project completion time will depend on amount of right-of-way acquisition needed.

**Impact on Operating Expenses**

Additional sidewalk installation will lead to an increase in maintenance costs. Based on the 2014-15 maintenance expenses we have estimated annual maintenance costs for sidewalks to be approximately \$0.50 per linear foot of sidewalk. Costs are projected to increase at this rate as new sidewalk is installed.

### **SIDEWALKS - PROJECT DESCRIPTION**

<b>Project Title:</b>	E. Grand River Ave. (Sunrise Park to Kellogg Road on N. Side of Road)
<b>Funding Source:</b>	Future Parks & Recreation #270

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	0	0	\$292,000	0	0	0	0

#### **Project Description and Location**

This project would involve the installation of five (5) foot wide concrete sidewalk along the north side of E. Grand River Avenue from Boulevard Drive (entrance to Sunrise Park) to Kellogg Road.

#### **Justification**

The 2002 Parks and Recreation Plan lists an objective to, "Complete the pathway system along Grand River Avenue."

#### **Schedule**

This project is scheduled for the 2017-18 fiscal year. Time of completion would depend upon the amount of right-of-way acquisition required to complete the project.

#### **Impact on Operating Expenses**

Additional sidewalk installation will lead to an increase in maintenance costs. Based on the 2014-15 maintenance expenses we have estimated annual maintenance costs for sidewalks to be approximately \$0.50 per linear foot of sidewalk. Costs are projected to increase at this rate as new sidewalk is installed.



### **SIDEWALKS - PROJECT DESCRIPTION**

<b>Project Title:</b>	Crooked Lake Road (S. Latson Road to Dorr Road)
<b>Funding Source:</b>	Future Parks & Recreation #270, TAP

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	0	0	0	\$475,000	0	0	0

#### **Project Description and Location**

This project would involve the installation of ten (10) foot wide asphalt sidewalk along Crooked Lake Road from S. Latson Road to the Genoa Township Hall Park on Dorr Road. This project also estimates the planting of one (1) tree every fifty (50) linear feet to mitigate the effects of potential tree removal.

#### **Justification**

The 2002 Parks and Recreation Plan states, "Genoa Township will have a complete pathway system that links key destination areas within the community and connects to the regional pathway system."

#### **Schedule**

This project is scheduled for the 2018-19 fiscal year. Time of completion would depend upon the amount of right-of-way acquisition required to complete the project.

#### **Impact on Operating Expenses**

Additional sidewalk installation will lead to an increase in maintenance costs. Based on the 2014-15 maintenance expenses we have estimated annual maintenance costs for sidewalks to be approximately \$0.50 per linear foot of sidewalk. Costs are projected to increase at this rate as new sidewalk is installed.

### **SIDEWALKS - PROJECT DESCRIPTION**

<b>Project Title:</b>	Dorr Road (Township Hall Property to Challis Road)
<b>Funding Source:</b>	Future Parks & Recreation #270, DNR Recreational Passport

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	0	0	0	0	\$255,000	0	0

#### **Project Description and Location**

This project involves the installation of eight (8) foot wide asphalt sidewalk from the Township Hall Park property to Challis Road. This project also estimates the planting of one (1) tree every fifty (50) linear feet to mitigate the effects of potential tree removal.

#### **Justification**

The 2002 Parks and Recreation Plan states, "Genoa Township will have a complete pathway system that links key destination areas within the community and connects to the regional pathway system."

#### **Schedule**

This project is scheduled for the 2019-20 fiscal year. Time of completion would depend upon the amount of right-of-way acquisition required to complete the project.

#### **Impact on Operating Expenses**

Additional sidewalk installation will lead to an increase in maintenance costs. Based on the 2014-15 maintenance expenses we have estimated annual maintenance costs for sidewalks to be approximately \$0.50 per linear foot of sidewalk. Costs are projected to increase at this rate as new sidewalk is installed.

**SIDEWALKS - PROJECT DESCRIPTION**

<b>Project Title:</b>	Challis Road to Bauer Road
<b>Funding Source:</b>	Future Parks & Recreation #270

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	0	0	0	0	0	\$248,000	0

**Project Description and Location**

This project involves the installation of eight (8) foot wide asphalt sidewalk from the existing pathway near the Challis and Bauer Road intersection to the Challis and Dorr Road intersection. This project also estimates the planting of one (1) tree every fifty (50) linear feet to mitigate the effects of potential tree removal.

**Justification**

The 2002 Parks and Recreation Plan states, "Genoa Township will have a complete pathway system that links key destination areas within the community and connects to the regional pathway system."

**Schedule**

This project is scheduled for the 2020-21 fiscal year.

**Impact on Operating Expenses**

Additional sidewalk installation will lead to an increase in maintenance costs. Based on the 2014-15 maintenance expenses we have estimated annual maintenance costs for sidewalks to be approximately \$0.50 per linear foot of sidewalk. Costs are projected to increase at this rate as new sidewalk is installed.

### **SIDEWALKS - PROJECT DESCRIPTION**

<b>Project Title:</b>	Brighton Road (Brookwood Meadows to Honors Way)
<b>Funding Source:</b>	Future Parks & Recreation #270, Safe Routes to School; Michigan Natural Resources Trust Fund

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	0	0	0	0	0	0	\$800,000

#### **Project Description and Location**

This project involves the installation of eight (8) foot wide asphalt sidewalk from Brookwood Meadows Drive to Honors Way.

#### **Justification**

The 2002 Parks and Recreation Plan states, "Genoa Township will have a complete pathway system that links key destination areas within the community and connects to the regional pathway system."

#### **Schedule**

This project is scheduled as a future project. Time of completion would depend upon the amount of right-of-way acquisition required to complete the project. It is expected that this project will be scheduled in future program updates.

#### **Impact on Operating Expenses**

Additional sidewalk installation will lead to an increase in maintenance costs. Based on the 2014-15 maintenance expenses we have estimated annual maintenance costs for sidewalks to be approximately \$0.50 per linear foot of sidewalk. Costs are projected to increase at this rate as new sidewalk is installed.

### **SIDEWALKS - PROJECT DESCRIPTION**

<b>Project Title:</b>	Future Sidewalk Projects Other than Brighton Road
<b>Funding Source:</b>	Future Parks & Recreation #270

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	0	0	0	0	0	0	\$1.994M

#### **Project Description and Location**

There are various projects identified as future sidewalk projects. These projects should be prioritized in future program updates based on available resources from outside agencies.

#### **Justification**

The 2002 Parks and Recreation Plan states, "Genoa Township will have a complete pathway system that links key destination areas within the community and connects to the regional pathway system."

#### **Schedule**

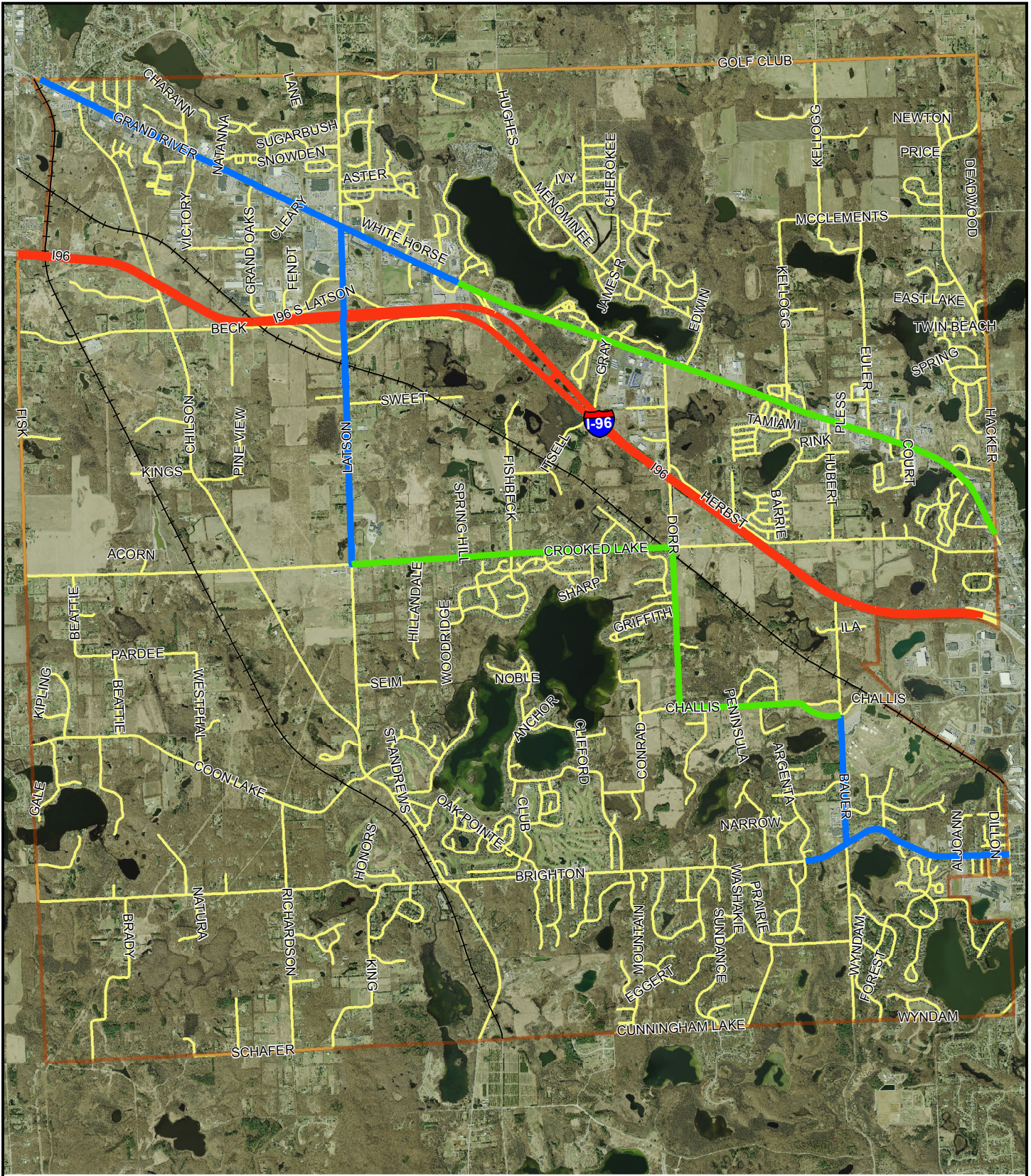
These projects are scheduled as future projects. Time of completion would depend upon the amount of right-of-way acquisition required to complete the projects. It is expected that these projects are scheduled in future program updates.

#### **Impact on Operating Expenses**

Additional sidewalk installation will lead to an increase in maintenance costs. Based on the 2014-15 maintenance expenses we have estimated annual maintenance costs for sidewalks to be approximately \$0.50 per linear foot of sidewalk. Costs are projected to increase at this rate as new sidewalk is installed.



# Map 1: Proposed Sidewalk Projects: 2015-2021



## Genoa Charter Township

Livingston County, MI  
810-227-5225  
[www.genoa.org](http://www.genoa.org)

- Proposed Sidewalk    — Roads    — Railroad
- Existing Sidewalk    — Interstate     Twp Boundary



0      0.5      1      2 Miles

Road Data Source:  
Livingston County G.I.S.  
Map Prepared By:  
Genoa Township on  
3/23/2015



TABLE L: GRAVEL ROAD IMPROVEMENT PROJECTS - CRUSHED LIMESTONE APPLICATION

ROAD NAME	FUND SOURCE	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	FUTURE	TOTAL
Herbst Rd (Gravel Portion East of Dorr Rd to Township Line)	General Fund #101 - Road Improvement			\$200,000					<b>\$200,000</b>
Bauer Rd (River Ridge to Township Limit)	General Fund #101 - Road Improvement				\$148,000				<b>\$148,000</b>
McClements Rd (West Kellogg Rd to Hacker Rd)	General Fund #101 - Road Improvement					\$183,000			<b>\$183,000</b>
Crooked Lake Rd (Chilson Rd to Fisk Rd)	General Fund #101 - Road Improvement							\$334,000	<b>\$334,000</b>
Fishbeck Rd (Crooked Lake Rd to Itsell Rd)	General Fund #101 - Road Improvement							\$119,000	<b>\$119,000</b>
Fisk Rd	General Fund #101 - Road Improvement							\$175,000	<b>\$350,000</b>
	Marion Township							\$175,000	
Cunningham Lake Rd (Sundance Rd to Bauer Rd)	General Fund #101 - Road Improvement							\$222,000	<b>\$222,000</b>
King Rd	General Fund #101 - Road Improvement							\$157,000	<b>\$157,000</b>
Schafer Rd (King Rd to Mar Char Dr)	General Fund #101 - Road Improvement							\$80,000	<b>\$160,000</b>
	Hamburg Township							\$80,000	
Sweet Rd	General Fund #101 - Road Improvement							\$134,000	<b>\$134,000</b>
Brighton Rd (Treasure Lake Dr to Township Limits)	General Fund #101 - Road Improvement							\$189,000	<b>\$209,000</b>
	Marion Township							\$20,000	
Euler Rd	General Fund #101 - Road Improvement							\$246,000	<b>\$246,000</b>
Bauer Rd (N. of Challis Rd)	General Fund #101 - Road Improvement							\$111,000	<b>\$111,000</b>
Hubert Rd (Pavement to Herbst Rd)	General Fund #101 - Road Improvement							\$153,000	<b>\$153,000</b>
Itsell Rd	General Fund #101 - Road Improvement							\$120,000	<b>\$120,000</b>
Brady Rd	General Fund #101 - Road Improvement							\$140,000	<b>\$140,000</b>
<b>TOTAL</b>		<b>\$0</b>	<b>\$0</b>	<b>\$200,000</b>	<b>\$148,000</b>	<b>\$183,000</b>	<b>\$0</b>	<b>\$2,149,000</b>	<b>\$2,986,000</b>

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**GRAVEL ROAD IMPROVEMENTS - PROJECT DESCRIPTION**

<b>Project Title:</b>	Crushed Limestone Application to Gravel Roads
<b>Funding Source:</b>	General Fund #101 – Road Improvement

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	0	0	\$200,000	\$148,000	\$183,000	0	\$2.149M

**Project Description and Location**

This project involves the installation of crushed limestone to specified gravel roads in the Township. Gravel roads are prioritized by their annual average daily traffic counts and the time frame of when crushed limestone was previously installed.

**Justification**

Genoa Township consistently has invested in road improvement projects. Due to the low density development patterns, the vast majority of our residents use automobiles to meet their daily needs. Due to the lack of funding the Livingston County Road Commission receives from the State, municipalities in Livingston County have contributed to road maintenance and improvement to ensure the County's road system remains intact.

**Schedule**

The schedule of crushed limestone application is depicted in tables L and M. Installation depending on the size and scope of the project will take approximately three (3) weeks.

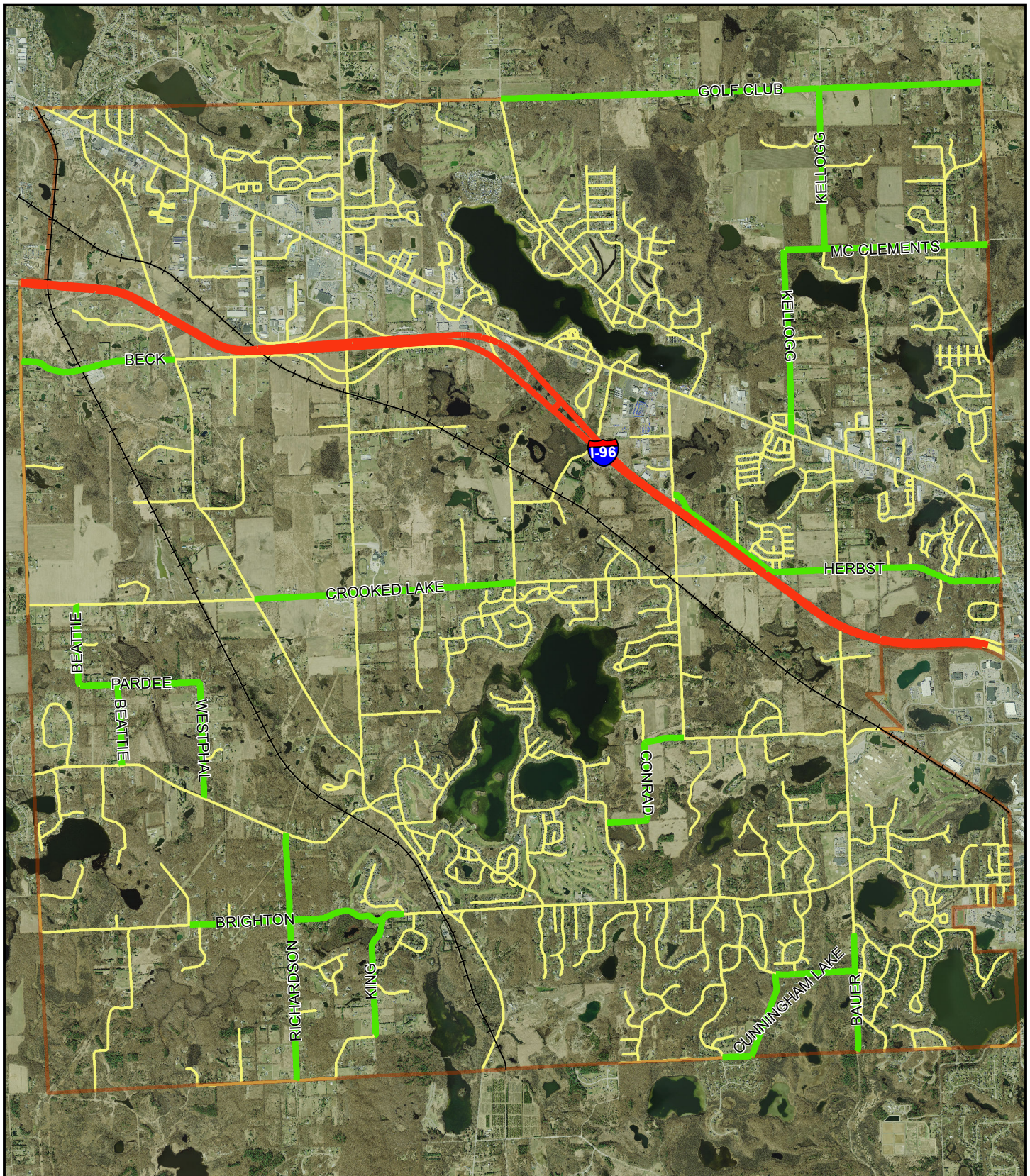
**Impact on Operating Expenses**

The Township has consistently set aside approximately \$250,000 annual for road improvement projects. The roads are maintained by the Livingston County Road Commission and there would be no direct impact on Township operating expenses.

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# Map 2: Previous Crushed Limestone Projects: 1998-2014



**Genoa Charter Township**  
 Livingston County, MI  
 810-227-5225  
[www.genoa.org](http://www.genoa.org)

— Crushed Limestone Projects 1998-2014  
— Roads  
— Interstate  
— Railroad  
 Twp Boundary

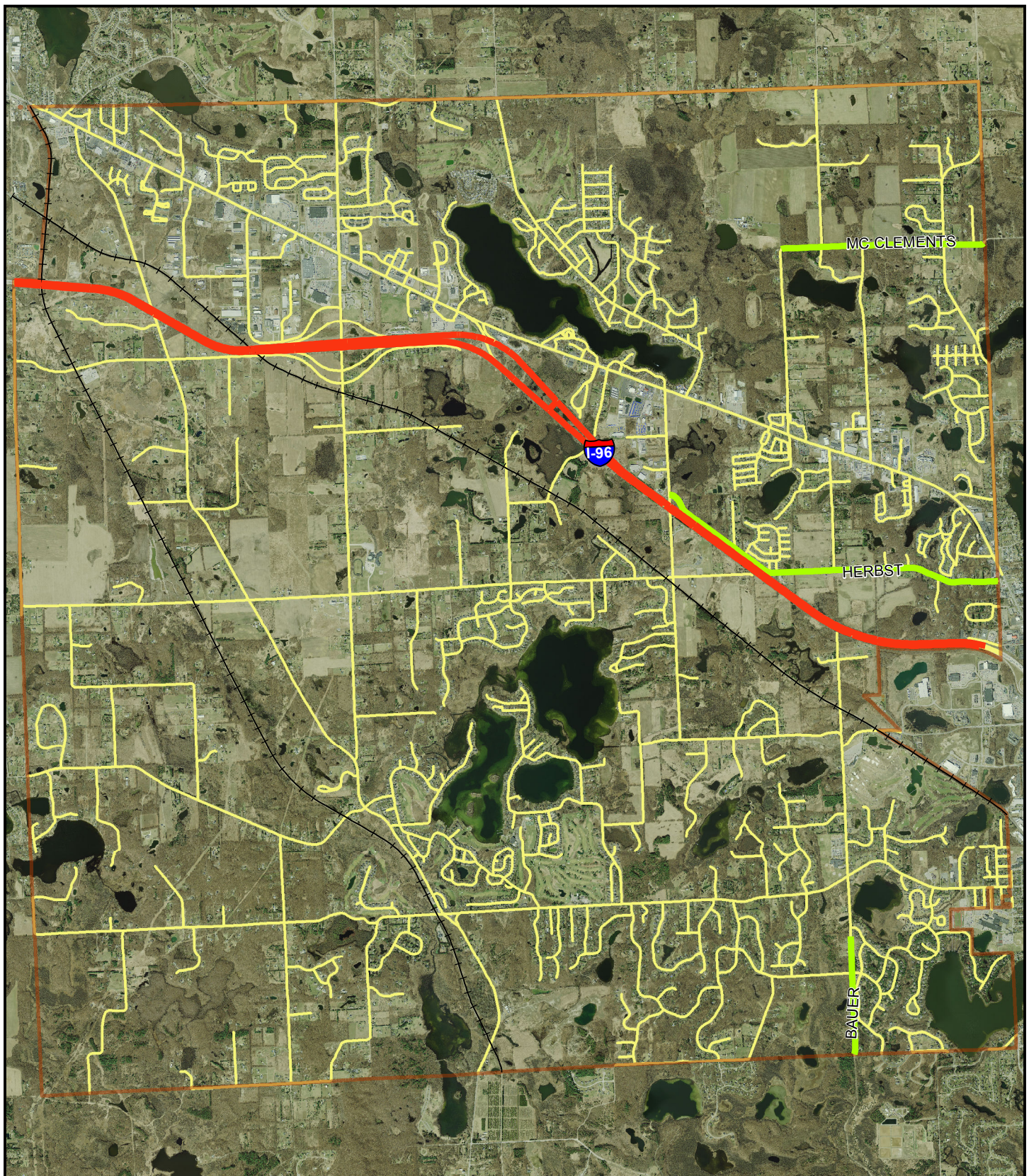


Miles  
 0      0.5      1      2

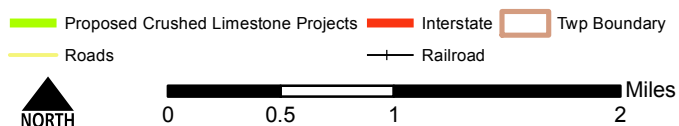
Road Data Source:  
 Livingston County G.I.S.  
 Map Prepared By:  
 Genoa Township on  
 3/23/2015



# Map 3: Proposed Crushed Limestone Projects: 2015-2021



**Genoa Charter Township**  
Livingston County, MI  
810-227-5225  
[www.genoa.org](http://www.genoa.org)



Road Data Source:  
Livingston County G.I.S.  
Map Prepared By:  
Genoa Township on  
3/25/2015



**TABLE M: CRUSHED LIMESTONE ROAD IMPROVEMENT ANALYSIS 1998-2015**

ROAD NAME	AVERAGE DAILY TRAFFIC COUNTS	LINEAR FEET	PROJECTED LIMESTONE THICKNESS FOR NEW PROJECT	ESTIMATED PROJECT COST	ESTIMATED YEAR OF FIRST LIMESTONE APPLICATION OR YEAR OF PREVIOUS IMPROVEMENT	ESTIMATED YEAR OF ADDITIONAL APPLICATION (ASSUMING 15 YEAR LIFE)
Crooked Lake Rd (Fishbeck Rd to Chilson Rd)	1,285.0	7,000	4" Fishbeck to S. Latson & 8" S. Latson to Chilson	-	2014	2029
Conrad Rd (Clifford Rd to Challis Rd) & Challis Rd (Dorr Rd to Conrad Rd)	1,135.0	5,300	4"	-	2004	2019
Bauer Rd (River Ridge to Township Limit)	1,085.0	4,330	6"	\$147,493	Between 1998-2002	2016
Herbst Rd (Dorr Rd to Township Limits)	910.0	8,600	6"	\$200,000	1999	2015
Golf Club Rd (Hacker Rd to Hughes Rd)	760.0	15,840	6"	-	2009	2024
Beck Rd (Chilson Rd to Fisk Rd)	550.0	5,250	8"	-	2013	2028
Brighton Rd (King Rd to Treasure Lake Rd)	500.0	6,850	4"	-	2013	2028
McClements Rd (Kellogg Rd to Hacker Rd)	463.3	5,370	6"	\$182,919	2003	2017
Crooked Lake Rd (Chilson Rd to Fisk Rd)	445.0	7,500	8"	\$333,788	2018-19	2034
Fishbeck Rd	420.0	2,660	8"	\$118,383	2019-20	2035
Fisk (Crooked Lake Rd to Francis Rd)	416.7	10,220	8"	\$348,124	2020-21	2036
Kellogg Rd (Golf Club Rd to McClements Rd)	410.0	5,290	8"	-	2011	2026
King Rd	370.0	6,280	4"	-	1999	2014
Cunningham Lake Rd (Sundance Rd to Bauer Rd)	370.0	6,500	6"	-	Between 1998-2002	2016
Kellogg Rd (McClements Rd to W. Grand River Ave.)	350.0	6,160	6"	-	2006	2021
Richardson Rd (Coon Lake Rd to Schafer Rd)	315.0	8,250	4"	-	2005	2020
Schafer Rd (King Rd to Township Limit)	300.0	4,690	6"	-	Future	Future
Sweet Rd	270.0	3,920	6"	-	Future	Future
Brighton Rd (Treasure Lake to Township Limit)	240.0	6,090	6"	-	Future	Future
Euler Rd	240.0	7,210	6"	-	Future	Future
Bauer Rd (N. of Challis)	200.0	3,230	6"	-	Future	Future
Hubert Rd	190.0	2,635	8"	-	Future	Future
Itsell Rd	170.0	3,500	6"	-	Future	Future
Beattie Rd - Pardee Rd - Westphal Rd	132.5	13,200	6"	-	2008	2023
Brady Rd	40.0	6,800	4"	-	Future	Future

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TABLE N: PROPOSED PAVEMENT AND FUTURE LARGE ROAD IMPROVEMENT PROJECTS

ROAD NAME	PROJECT	FUND SOURCE	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	FUTURE	TOTAL
Coon Lake Rd & Chilson Rd Intersection	Intersection Reconstruction (Round-A-Bout)	Livingston County Road Commission		\$600,000						\$600,000
Golf Club Rd (E. Grand River Ave. to S. Latson Rd)	Mill and Overlay	General Fund #101 - Road Improvement	\$101,000							\$500,000
		Oceola Township	\$399,000							
Grand Oaks Rd (Grand River Ave to Fendt Dr)	Mill and Overlay	Future Road Projects Fund #261 (25% Match)	\$212,500							\$850,000
		Reimbursable Road Project Fund #264	\$637,500							
Bauer Rd & Challis Rd Intersection	Intersection Reconstruction (Round-A-Bout)	Future Road Projects Fund #261 & Unknown							\$2,300,000	\$2,300,000
TOTAL			\$1,350,000	\$600,000	\$0	\$0	\$0	\$0	\$2,300,000	\$4,250,000

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**PAVED ROAD IMPROVEMENT– PROJECT DESCRIPTION**

<b>Project Title:</b>	Golf Club Rd (E. Grand River Ave. to S. Latson Road) – Mill and Overlay
<b>Funding Source:</b>	General Fund #101 – Road Improvement, Oceola Township

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	\$500,000	0	0	0	0	0	0

**Project Description and Location**

This project involves pavement improvements (Mill & Overlay and Spot Based Repair) on Golf Club Road between E. Grand River Ave. and S. Latson Road.

**Justification**

Genoa Township consistently has invested in road improvement projects. Due to the low density development patterns, the vast majority of our residents use automobiles to meet their daily needs. Due to the limited amount of funding the Livingston County Road Commission receives from the State, municipalities in Livingston County have contributed to road maintenance and improvement to ensure the County's road system remains intact.

**Schedule**

This project is scheduled for the fiscal year 2015-16.

**Impact on Operating Expenses**

The Township has consistently set aside funds annual for road improvement and maintenance projects. The roads are maintained by the Livingston County Road Commission and there would be no direct impact on Township operating expenses.

**PAVED ROAD IMPROVEMENT– PROJECT DESCRIPTION**

<b>Project Title:</b>	Grand Oaks Road (E. Grand River Ave. to Fendt Drive) – Mill and Overlay
<b>Funding Source:</b>	Future Road Projects Fund #261, Road Reimbursement Fund #264

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	\$850,000	0	0	0	0	0	0

**Project Description and Location**

This project involves pavement improvements to Grand Oaks Road via the creation of a special assessment district. It is estimated that the Township will match the project at 25%.

**Justification**

Genoa Township has consistently invested in road improvement projects. Due to the low density development patterns, the vast majority of our residents use automobiles to meet their daily needs. Due to the limited amount of funding the Livingston County Road Commission receives from the State, municipalities in Livingston County have contributed to road maintenance and improvement to ensure the County's road system remains intact. Typically we use the Road Reimbursement fund for subdivision roads, but in this case Grand Oaks is road in an industrial park. Due to this, the fact that Grand Oaks provides a secondary route to two (2) major primary roads, and the industrial parcels contribute significantly more in annual property taxes, the Township should consider contributing at a higher match rate.

**Schedule**

This project is scheduled for the fiscal year 2015-16.

**Impact on Operating Expenses**

The Township has consistently set aside funds annual for road improvement and maintenance projects. The roads are maintained by the Livingston County Road Commission and there would be no direct impact on Township operating expenses.

**PAVED ROAD IMPROVEMENT– PROJECT DESCRIPTION**

<b>Project Title:</b>	Reimbursable Road Projects
<b>Funding Source:</b>	Road Reimbursement Fund #264

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	0	0	0	0	0	0	0

**Project Description and Location**

There are several road projects in the preliminary planning stage which would use resources from the Road Reimbursement Fund #264. The CIP estimates that \$200,000 will be transferred to this fund over the six year period to cover potential project costs.

**Justification**

Genoa Township has consistently invested in road improvement projects. Due to the low density development patterns, the vast majority of our residents use automobiles to meet their daily needs. Due to the limited amount of funding the Livingston County Road Commission receives from the State, municipalities in Livingston County have contributed to road maintenance and improvement to ensure the County's road system remains intact.

**Schedule**

The schedule of work will depend on the scope of the project. No funding is scheduled for these projects because they are an early planning stage.

**Impact on Operating Expenses**

The Township has consistently set aside funds annual for road improvement and maintenance projects. The roads are maintained by the Livingston County Road Commission or in the case of private roads, the property owners who access the private road. Due to this there would be no direct impact on Township operating expenses.

**PAVED ROAD IMPROVEMENT– PROJECT DESCRIPTION**

<b>Project Title:</b>	Bauer Road & Challis Road Intersection Reconstruction (Round-A-Bout)
<b>Funding Source:</b>	Future Road Projects Fund #261 & Unknown

<b>Fiscal Year:</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Future</b>
<b>Est. Cost:</b>	0	0	0	0	0	0	\$2,300,000

**Project Description and Location**

The project involves the reconstruction of the intersection at Bauer and Challis roads.

**Justification**

Genoa Township has consistently invested in road improvement projects. Due to the low density development patterns, the vast majority of our residents use automobiles to meet their daily needs. Due to the limited amount of funding the Livingston County Road Commission receives from the State, municipalities in Livingston County have contributed to road maintenance and improvement to ensure the County's road system remains intact.

**Schedule**

The schedule of work will depend on the scope of the project. The project is listed as a future project because it will require participation from an outside agency to complete. This agency have not been identified at this time.

**Impact on Operating Expenses**

The Township has consistently set aside funds annual for road improvement and maintenance projects. The roads are maintained by the Livingston County Road Commission and there would be no direct impact on Township operating expenses.



# Map 4: Pavement and Future Large Road Improvement Projects 2015-2021



**Genoa Charter Township**

Livingston County, MI  
810-227-5225  
[www.genoa.org](http://www.genoa.org)



Intersection Improvements



NORTH

0 0.5 1 2 Miles



Road Pavement Projects



Interstate



Twp Boundary



Roads



Railroad

Road Data Source:  
Livingston County G.I.S.  
Map Prepared By:  
Genoa Township on  
3/25/2015



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## UTILITIES

### INTRODUCTION

Genoa Township owns the Oak Pointe Sanitary Sewer & Water System which services the Oak Pointe and Northshore communities and the Lake Edgewood Sanitary Sewer System which services the Grand River Avenue corridor from Kellogg Road to Conference Center Drive. The day to day operation, planning, and operation of these systems are overseen by the Genoa Township Utility Department, also known as the MHOG Utility Department. A capital improvement plan for each system for the time period 2010-2016 has been previously created by the Utility Department. For the purposes of this plan we will include the existing capital improvement plans for each system and provide a status update on the proposed projects. Capital improvement plans for the other systems MHOG operates, including Marion, Howell, Oceola, Genoa (MHOG) Water System and the Genoa-Oceola (G-O) Sanitary Sewer System, will not be included in this plan despite Genoa Township having membership in the authority. The reason for this is that Genoa Township is not exclusively responsible for these systems, but rather the responsibility lies on the Authority Board.

### REVENUE

Each system has an individual proprietary fund in which revenues are obtained primarily from user fees. The specific projects are intended to be funded from an operation and maintenance budget, grant money and capital improvement bonds. The specific impact each project has on operating expenses are outlined in each plan.

### CAPITAL IMPROVEMENT PLAN UPDATE

Oak Pointe Sanitary Sewer & Water System:

1. Pump Station Stand-by Generators:
  - a. Status: Partially Completed. One (1) portable generator was purchased.
2. Painting Oak Pointe Water Tower:
  - a. Status: Not Completed. The water tower painting has been authorized by the Township Board and is scheduled for spring 2015.
3. Oak Pointe Waste Water Treatment Plant (WWTP) Upgrades:
  - a. Status: Not Needed. The upgrades to the WWTP were only required if the re-routing of Oak Pointe WWTP flows to Genoa-Oceola WWTP was unable to be accomplished.
4. Re-Route Oak Pointe Waste Water Treatment Plant (WWTP) flows to Genoa-Oceola Waste Water Treatment Plant (WWTP):
  - a. Status: In Progress. The project was approved by the Genoa Township Board in summer 2014. Work on the project has commenced and is projected to be completed August 2015.
5. Sodium and Chloride Corrective Actions:
  - a. Status: Not Needed. Due to the re-route of WWTP flows to Genoa-Oceola these corrective actions are not necessary.

6. Collection System SCADA System:
  - a. Status: Completed
7. Redundant Water Main Loop to Northshore.
  - a. Status: Not Completed.
8. MHOG Water to Oak Pointe:
  - a. Status: Not Completed. The estimated project cost in the plan has been determined to be very low compared to the actual cost of the project.

Lake Edgewood Sanitary Sewer System:

1. Valve Actuators at Waste Water Treatment Plant (WWTP):
  - a. Status: Completed.
2. Muffin Monster at Waste Water Treatment Plant (WWTP):
  - a. Status: Completed
3. Improved Alum Addition:
  - a. Status: Completed.
4. Waste Water Treatment Plant (WWTP) Additional Blowers (2 Total):
  - a. Status: Not Completed.
5. Pump Station Standby Generators (3 Total):
  - a. Status: Not Completed.
6. New Roof on Old Side of Waste Water Treatment Plant (WWTP):
  - a. Status: Completed.
7. Re-Route Lake Edgewood Waste Water Treatment Plant (WWTP) Flows to Genoa-Oceola Waste Water Treatment Plant (WWTP):
  - a. Status: Not Completed. Per discussion with MHOG staff, this project is likely to be removed from their next capital improvement plan.

Utility Department

1. Grinder Pump Replacement:
  - a. Status: Completed.
2. Vactor Truck:
  - a. Status: Completed. The Utility Department purchased a Grinder Van in lieu of a vactor truck.
3. Sewer Line Camera:
  - a. Status: Completed. The Utility Department purchased a push camera in lieu of a sewer line camera.
4. Flow Meters
  - a. Status: Partially Completed. The Utility Department purchased 1 meter.



# Oak Pointe Sanitary Sewer and Water Genoa Charter Township

2010 - 2016

## Capital Improvement Plan



March 8, 2010

## INTRODUCTION

Presented is the 2010 – 2016 Genoa Charter Township Capital Improvement Plan (CIP) for the Oak Pointe Sanitary Sewer and Water Systems. Capital improvements are defined as those physical facilities which involve a substantial investment and last a long time. This plan was developed to provide a tool to assess the long-term capital project requirements of the Oak Pointe Sewer and Water Systems and allow the Township to prioritize and plan for the investment in its infrastructure for long term sustainability.

## OAK POINTE WASTEWATER SYSTEM

The Oak Pointe wastewater system was originally privately constructed to serve an individual development. The Township took over this system to provide proper oversight and to provide protection to the residents. In the late 1990s, the State of Michigan became concerned with sodium and chloride from groundwater discharge plants. Sodium and chloride are introduced into the waste stream from the use of a sodium based water softener salt and the placement of regeneration brine into the wastewater system. Current wastewater treatment methods are incapable of removing these contaminants.

Upon investigation, it was determined that the Oak Pointe Wastewater System impacted downstream groundwater and residential drinking water wells. As a result, the Township and the MDEQ entered into a consent judgment that dictated requirements and restrictions. Since 2003 the Oak Pointe system has been seeking a funding source to eliminate the ground water discharge at this site. Currently the Township is pursuing a federal appropriation to re-route the flows normally received at the Oak Pointe wastewater treatment plant (WWTP) to the Genoa Oceola WWTP. Since the Township is actively pursuing taking this plant off line, only minimal capital improvement funds have been invested at this plant since 2003. Additional WWTP upgrades will be necessary, should federal appropriations not develop, to continue to adequately operate the system and reduce the labor involved in operation.

Additionally, the Oak Pointe Wastewater system has several other unique challenges facing it, which include:

- Wastewater Treatment Plant is at capacity;
- Small number of users connected to system resulting in a low annual operating budget;
- Limited amount of system owned and operated service equipment such as vactor trucks, flow meters, and cameras;
- Risk associated with the remote lift stations;
- Low replacement reserve funds; and,
- Sodium and chloride plume in local groundwater from historic discharge.

## OAK POINTE WATER SYSTEM

The Oak Pointe water system consists of an iron removal plant, an elevated water storage tank, a ground storage tank, four wells, and 79,000 linear feet of pipe. Geographically, the distribution system can be divided into two separate areas: 1) the Oak Pointe service area and, 2) the Northshore service area. The Oak Pointe water system has unique challenges facing it, which include:

- Water Treatment Plant is at capacity;
- Small number of users connected to system resulting in a low annual operating budget;
- Low replacement reserve funds;
- Water Treatment Plant provides iron removal only; and
- Difficulty maintaining pressures in Northshore during Max Day Demands

## GOALS

Developing a CIP for a small utility in the current economy is a difficult task. The system cannot rely on development or new users to fund capital improvements, and given its small size, assessments and capital improvement charges against existing users are unfavorable. Therefore, the goals of the CIP are to address the existing system deficiencies within both reasonable budgets and the existing challenges. The goals of the CIP are:

- Work Towards Consolidation of the Systems
  - Consolidate the Wastewater System with Genoa-Oceola Wastewater Treatment Plant
  - Consolidate the Water System with MHOG
- Reduce the Risk of the Remote Lift Stations
- Perform Plant Improvements

## SUMMARY

Eight projects have been identified for the Oak Pointe CIP for the calendar years 2010 – 2016. Each project has been classified as critical, important, or preferred, and the CIP is organized by this classification. Those projects which are classified as “Critical” are listed first. A critical project requires immediate attention, has a large financial risk, and/or has the ability to greatly improve system operation and reliability. Projects classified as “Important” are listed secondly. Important projects should be completed; however there is no funding source available for them. Finally, “Preferred” projects are listed, which are primarily projects that are growth dependent.

A summary of the total cost for each classification is listed below:

<b>Classification</b>	<b>Budget Amount</b>
Critical	\$325,000
Important	\$8,600,000
Preferred	\$2,650,000

The table on the next page outlines each of the eight capital improvement projects, a timetable for each project, and the anticipated funding source. Following the project summary table is a brief report for each project, which describes the project and provides the justification for completing the project.

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**TABLE O: OAK POINTE CAPTIAL IMPROVEMENT PROJECT SUMMARY 2010-2016**

No .	Project	Classificatio n	Trigger	Budget Amount	2010		2011		2012		2013		2014		2015	
					O&M	Other	O&M	Other	O&M	Other	O&M	Other	O&M	Other	O&M	Other
1	Pump Station Stand-by Generators	Critical	Funding	\$175,000	\$0	\$0	\$43,750	\$0	\$43,750	\$0	\$43,750	\$0	\$43,750	\$0	\$0	\$0
2	Painting Oak Pointe Water Tower	Critical	Age	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150,000	\$0	\$0	\$0
3	Oak Pointe WWTP Upgrades (only required if re-routing is unable to be accomplished)	Important	Age	\$600,000	\$0	\$0	\$50,000	\$0	\$100,000	\$0	\$100,000	\$0	\$200,000	\$0	\$150,000	\$0
4	Re-Route Oak Pointe WWTP flows to GO WWTP	Important	Funding / Regulatory	\$7,000,000	\$0	\$0	\$0	\$500,000	\$0	\$6,500,000	\$0	\$0	\$0	\$0	\$0	\$0
5	Sodium and Chloride Corrective Actions	Important	Regulatory	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000,000
6	Collection System SCADA System	Preferred	Funding	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$150,000	\$0	\$0	\$0	\$0	\$0
7	Redundant Water Main Loop to Northshore	Preferred	Funding	\$500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$500,000
8	MHOG Water to Oak Pointe	Preferred	Additional Flow	\$2,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,000,000
<b>Total</b>				<b>\$11,575,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$93,750</b>	<b>\$500,000</b>	<b>\$143,750</b>	<b>\$6,500,000</b>	<b>\$293,750</b>	<b>\$0</b>	<b>\$393,750</b>	<b>\$0</b>	<b>\$150,000</b>	<b>\$3,500,000</b>

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**OAK POINTE 2010-2016 PROJECT DESCRIPTION**

Project Title: Oak Pointe Pump Station Standby Generators  
Project Type: Water and Sewer Utilities  
Useful Life: 25 Years  
Re-submittal/New Project: New Project  
Classification: Critical

---

**PROJECT DESCRIPTION**

Installation of standby generators at the key major lift stations 54, 60, 56, 57 would make service of the other remaining stations manageable with the existing portable generator in the event of a large power outage.

**JUSTIFICATION**

Currently, the wastewater system has 10 pump stations, none of which have standby generators. One portable generator is available to operate the 10 pump stations as well as the water booster station. As a result, during a power outage, operators must work continuously to operate portable generators to maintain sanitary service in this area. This is a dangerous situation that could result in the backup of a sanitary pump station during a widespread power outage, which could cause significant property and environmental damage.

**SCHEDULE**

Due to limited funds in the operating budget, one generator per year, with an average installation price of \$43,750 will be purchased and installed. This will result in the four generators being installed by 2015.

**IMPACT ON OPERATING EXPENSES**

Since the funding source is operation and maintenance fees, the project will have a short term increase in Operation and Maintenance Rates to cover the cost of installation. However, after project implementation, the project will result in reduced overtime and reduced liability, resulting in savings on insurance coverage. Additionally, there will be immeasurable savings from the protection to personal property from preventing a sewer backup event.

**EXPENDITURE SCHEDULE**

<b>FUND SOURCE</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>TOTAL</b>
O.P. Operating Fund	\$0	\$43,750	\$43,750	\$43,750	\$43,750	\$0	\$175,000

## **OAK POINTE 2010-2016 PROJECT DESCRIPTION**

Project Title: Interior and Exterior Painting of the Oak Pointe Water Tower  
Project Type: Water and Sewer Utilities  
Useful Life: 10 Years  
Re-submittal/New Project: New Project  
Classification: Critical

---

### **PROJECT DESCRIPTION**

The Oak Pointe 250,000 gallon elevated water storage tank was placed in operation in 1991. The tower exterior was painted in 2004 and the interior is the original paint. The project consists of the painting of the interior and exterior of the Oak Pointe elevated water storage tank.

### **JUSTIFICATION**

Painting will extend the life of the tower. Steel water towers can have a useful life of nearly 100 years if properly maintained. Typically, interior and exterior painting is required every ten years for a steel tower. This planned second exterior painting and initial interior re-coating will provide the scheduled maintenance to maintain the maximum useful life of this elevated storage tank.

### **SCHEDULE**

It is planned that the painting of the Oak Pointe Tower will be required in the year 2014.

### **IMPACT ON OPERATING EXPENSES**

The Oak Pointe Water System, due to small size and limited customer base, has been unable to maintain reserve funds to cover significant operational expenditures such as water tower painting. Currently, there is a \$10 / Qtr. capital charge assigned to all bills. This charge was established for 5 years to cover the cost of the water treatment plant painting and green sand replacement that occurred in 2009. This charge will be continued to cover the cost of painting the elevated storage tank.

### **EXPENDITURE SCHEDULE**

<b>FUND SOURCE</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>TOTAL</b>
Capital Charge on Bills	\$0	\$0	\$0	\$0	\$150,000	\$0	\$150,000



## **OAK POINTE 2010-2016 PROJECT DESCRIPTION**

Project Title: Oak Pointe Waste Water Treatment Plant Upgrades  
Project Type: Water and Sewer Utilities  
Useful Life: 10 Years  
Re-submittal/New Project: New Project  
Classification: Important

---

### **PROJECT DESCRIPTION**

The existing Oak Pointe WWTP equipment was placed in operation in 1991. The treatment process consists of four sequencing batch reactors that remove BOD, PO<sub>4</sub>, and Total Inorganic Nitrogen (TIN) prior to discharge to the groundwater via too rapid infiltration basins. This project involves improvements to the WWTP including variable frequency drives (VFDs) for blowers, installation of dissolved oxygen (DO) probes, recycle pump replacement, and automation of the sludge wasting process.

### **JUSTIFICATION**

Since 2003 the Oak Pointe system has been seeking a funding source to eliminate the ground water discharge at this site, which has been plagued by historic sodium and chloride violations. Currently the Township is pursuing a federal appropriation to combine the Oak Pointe system with the Genoa Oceola system. Since the Township is actively pursuing taking this plant off line only minimal capital improvement funds have been invested at this plant since 2003. Capital improvements that have been completed include the addition of an alum chemical feed system, a new control panel, SCADA controls, and refurbishing the rapid infiltration basins. Even with the improvements implemented thus far, the Oak Pointe WWTP remains a highly labor intensive operation (> 6 hrs day) and relies on equipment that is 20 years old under continuous operation. Additional WWTP upgrades will be necessary, should federal appropriations not develop, to continue to adequately operate the system and reduce the labor involved in operation.

### **SCHEDULE**

It is planned that these improvements will occur in a phased approach beginning in 2011 should the Oak Pointe System not obtain federal appropriation assistance.

### **IMPACT ON OPERATING EXPENSES**

These improvements will have a significant impact on reducing operating expenses by reducing overtime and lower operator time at the facility. However, as Oak Pointe has no reserve funds, these improvements will significantly impact operating rates. Therefore, it will be necessary to phase in the improvements to minimize the impact to operational rates.

**EXPENDITURE SCHEDULE**

<b>FUND SOURCE</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>TOTAL</b>
Capital Charge on Bills	\$0	\$50,000	\$100,000	\$100,000	\$200,000	\$150,000	\$600,000

**OAK POINTE 2010-2016 PROJECT DESCRIPTION**

Project Title: Re-Route Oak Pointe WWTP Flows to Genoa-Oceola WWTP  
Project Type: Water and Sewer Utilities  
Useful Life: 50 Years  
Re-submittal/New Project: New Project  
Classification: Important

---

**PROJECT DESCRIPTION**

The Oak Pointe WWTP discharges to groundwater and the effluent contains elevated concentrations of sodium and chloride. In 1999 Genoa Township began an investigation to monitor the sodium and chloride plume. Currently the plume is delineated by the existing monitoring well network, and the Township conducts annual groundwater sampling and provides reverse osmosis units to those private wells impacted by the plume. The Township's goal is to eliminate the source of sodium and chloride in WWTP effluent. This will be accomplished by re-routing the wastewater flows normally received at the Oak Pointe WWTP to the Genoa-Oceola WWTP.

This project will include the installation of approximately 25,000 linear feet of force main, a new pump station, upgrades to existing PS-57 and PS-60, upgrades to the Oak Pointe WWTP to convert the plant to an equalization basin and pumping facility, and upgrades to the Genoa-Oceola WWTP to create additional sludge handling capacity. The location of the proposed improvements is shown on the attached figure.

**JUSTIFICATION**

This project is required to eliminate the source of sodium and chloride in the groundwater near the Oak Pointe WWTP site. The Genoa-Oceola WWTP is a newer plant with a superior treatment process. Additionally, consolidation of the Township's WWTPs provides the benefits of reduced labor costs, reduced energy use, reduced chemical use, reduced O&M fees due to a larger system and customer base, and reduced points of discharge to the environment. Furthermore, due to capacity concerns at the Oak Pointe WWTP site, growth may also result in the implementation of this project.

**SCHEDULE**

The Township will continue to pursue funding for the re-routing of Oak Pointe to Genoa-Oceola. This schedule assumes a State and Tribal Assistance Grant (STAG) is obtained in FY 2011 for design and FY 2012 for construction.

**IMPACT ON OPERATING EXPENSES**

There is no funding available for this project at this time. However, should growth or sodium chloride corrective actions be required, this project will have to be implemented earlier than anticipated.

It is assumed that a STAG grant will be obtained to fund this project. After implementation it is anticipated that the annual O&M budget expenditures will decrease due to the elimination of the existing reverse osmosis program, due to chemical cost reduction, labor savings, and energy savings. These O&M reductions will be utilized to provide the Township's 45% match for the STAG grant. If a grant is not obtained and regulatory requirements mandate the project, then the project will likely be funded by assessments against existing users.

**EXPENDITURE SCHEDULE**

<b>FUND SOURCE</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>TOTAL</b>
Grant & Loan	\$0	\$500,000	\$6,500,000	\$0	\$0	\$0	\$7,000,000

**OAK POINTE 2010-2016 PROJECT DESCRIPTION**

Project Title: Sodium and Chloride Corrective Actions  
Project Type: Water and Sewer Utilities  
Useful Life: 30 Years  
Re-submittal/New Project: New Project  
Classification: Important

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**PROJECT DESCRIPTION**

The Oak Pointe WWTP discharges to groundwater and the effluent contains elevated concentrations of sodium and chloride. In 1999, Genoa Township began an investigation to monitor the sodium and chloride plume. Currently the plume is delineated by the existing monitoring well network. The Township is required to complete annual groundwater sampling, and since the investigation began in 1999 the plume has traveled from the Oak Pointe WWTP site in a southwesterly direction.

The elevated sodium and chloride concentrations being discharged from the Oak Pointe WWTP have impacted approximately 25 residential private water wells downstream of the plant. The Township is responsible for providing a safe drinking water supply to these residents. The interim solution the Township has implemented is providing reverse osmosis systems to the impacted residents. The long term plan is to eliminate the source of sodium and chloride by re-routing the Oak Pointe WWTP effluent to the Genoa Oceola WWTP. However, this ultimate solution may be cost prohibitive. If the Township cannot eliminate the source of the sodium and chloride then a permanent alternate drinking water will be provided to the impacted residents south of the WWTP. This project consists of running municipal water from the Oak Pointe system approximately 2,500 linear feet south of Brighton Road. It should be noted that the exiting Oak Pointe water system is at capacity, and improvements to the water supply for the Oak Pointe system will have to be implemented prior to installing this water main. The costs for the Oak Pointe water system improvements are not included in this project cost.

**JUSTIFICATION**

Genoa Township has been providing the interim solution of reverse osmosis units for approximately 10 years, and during this time has maintained sodium and chloride concentrations at or near permit effluent levels. However, allowable groundwater concentrations are lower than the plants permitted effluent limits, resulting in continued impacts. If the Township cannot eliminate the source of sodium and chloride in the Oak Pointe WWTP effluent below groundwater concentrations, then this project may be required by the State of Michigan to provide a permanent alternate drinking water source to the impacted residents.

## SCHEDULE

It is assumed that the Township will continue to pursue the re-routing of Oak Pointe to Genoa-Oceola over the next six years. For planning purposes this project is included at the end of this capital improvement plan, although regulations may accelerate this schedule.

## IMPACT ON OPERATING EXPENSES

There is no funding available for this project at this time. Dependent on regulatory pressure, this project will have a significant impact on operating expenses, should this project be required to be completed with existing user funds. After implementation, it is anticipated that the annual O&M budget expenditures will decrease due to the elimination of the existing reverse osmosis program. Also, additional revenue will be available in the water O&M budget due to the new users on the system that this project will provide.

## **EXPENDITURE SCHEDULE**

<b>FUND SOURCE</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>TOTAL</b>
Unknown	\$0	\$0	\$0	\$0	\$0	\$1,000,000	\$1,000,000

## **OAK POINTE 2010-2016 PROJECT DESCRIPTION**

Project Title: Collection System SCADA System  
Project Type: Water and Sewer Utilities  
Useful Life: 20 Years  
Re-submittal/New Project: New Project  
Classification: Preferred

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### **PROJECT DESCRIPTION**

The Oak Pointe WWTP collection system consists of 175,000 linear feet of sanitary sewer pipe and 10 pump stations. Each of the 10 pump stations is monitored via on-site dialers. The dialers utilize phone lines to alert operations staff when an alarm occurs at a remote pump station site. This project will upgrade the monitoring system for the 10 lift stations from dialers to a Supervisory Control and Data Acquisition (SCADA) system. The SCADA system will communicate with operators via a radio system. A radio will be installed at each pump station. A control computer and Programmable Logic Controller will be installed at the WWTP.

### **JUSTIFICATION**

A SCADA system will provide more reliable communication with the remote lift stations, therefore reducing liability and required physical inspections. In addition, a SCADA system will gather data throughout the collection system. Finally, a SCADA system will be compatible with the Genoa-Oceola SCADA system if these two systems are combined.

### **SCHEDULE**

There is a definite cost savings to completing the entire SCADA system at one time, so even though there is limited funding in the Oak Pointe system, there is not a benefit to completing portions of this each year. It is therefore assumed that the SCADA system will be installed in FY 2013.

### **IMPACT ON OPERATING EXPENSES**

This project will be funded out of the Oak Pointe operation and maintenance budget, which will result in additional expenditures in the year this project is completed. After implementation it is anticipated that the annual O&M budget expenditures will decrease due to increased reliability.

### **EXPENDITURE SCHEDULE**

<b>FUND SOURCE</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>TOTAL</b>
O-P Operating Fund	\$0	\$0	\$0	\$150,000	\$0	\$0	\$150,000

**OAK POINTE 2010-2016 PROJECT DESCRIPTION**

Project Title: Redundant Water Main Loop to the Northshore Community  
Project Type: Water and Sewer Utilities  
Useful Life: 50 Years  
Re-submittal/New Project: New Project  
Classification: Preferred

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**PROJECT DESCRIPTION**

The Oak Pointe water system consists of an iron removal plant, an elevated water storage tank, a ground storage tank, four wells, and 79,000 linear feet of pipe. Geographically, the distribution system can be divided into two separate areas: 1) the Oak Pointe service area and, 2) the Northshore service area. Both the ground storage and elevated tank and the plant are located in the Oak Pointe service area. The Northshore service area is supplied with water via by a single water main from the Oak Pointe service area. The purpose of this project is to provide a redundant loop to the Northshore service area. Two options were evaluated, providing a loop to the east along Crooked Lake, Dorr Road, and Conrad (approximately 14,000 linear feet of pipe) and providing a loop to the west directly adjacent to the existing single feed line (approximately 4,500 linear feet of pipe). Due to the costs savings this project is anticipated to be installed via the western loop line. The attached figure shows the existing Oak Pointe water infrastructure, the Northshore and Oak Pointe service areas, the cost prohibitive easterly water main loop, and the proposed westerly loop line.

**JUSTIFICATION**

Water main loops provide increased reliability, increased pressure, increased fire protection, and increased water quality. The main goal of the westerly loop line is to provide increased reliability; so if the existing water main breaks there is a secondary means of providing potable drinking water to the Northshore service area. It is anticipated that a small increase in pressure and fire flow will also result from this improvement. The easterly loop would provide a greater increase in pressure, fire protection, and water quality; however it is cost prohibitive to construct

**SCHEDULE**

There is no funding available for this project at this time and funding through existing O&M rates would be cost prohibitive. However, this is a very important project to provide reliability to the Oak Pointe System. For budgeting purposes, it is anticipated that the project will be completed at the end of this capital improvement plan.



IMPACT ON OPERATING EXPENSES

This project will be likely be funded by a grant, or growth that could provide the funds to complete this loop.

**EXPENDITURE SCHEDULE**

<b>FUND SOURCE</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>TOTAL</b>
Grant or Growth	\$0	\$0	\$0	\$0	\$0	\$500,000	\$500,000

**OAK POINTE 2010-2016 PROJECT DESCRIPTION**

Project Title: MHOG Water to Oak Pointe  
Project Type: Water and Sewer Utilities  
Useful Life: 50 Years  
Re-submittal/New Project: New Project  
Classification: Preferred

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**PROJECT DESCRIPTION**

The Oak Pointe water system provides iron removal for a population of approximately 2,000 residents located in the Oak Pointe and Northshore Developments in south central Genoa Township. The Marion Howell Oceola Genoa (MHOG) water system provides softened water to approximately 15,000 customers throughout each of the four Townships. This project would consolidate the Oak Pointe and MHOG water systems. It is anticipated that approximately 8,000 linear feet of pipe will be required to connect to the two systems from Dorr Road and Brighton Pines Court to Crooked Lake Road and Sharp Drive. The existing system boundaries and the proposed water main are shown on the attached figure. Based on preliminary modeling, it is known that the existing MHOG system cannot effectively serve the existing Oak Pointe system without some distribution system improvements. It is assumed that Oak Pointe has sufficient storage capacity, but an additional booster station and looping of the water main within MHOG would have to be completed as part of this project.

**JUSTIFICATION**

Connection of the Oak Pointe water system to the MHOG water system will provide increase reliability, increased pressure, increased fire projection, and increased water quality. Additionally, the Oak Pointe water system is at capacity and the State of Michigan will not approve any expansions to the current system. Expansion of the existing well fields for Oak Pointe is not possible due to lack of a sufficient aquifer. Therefore, this project must be completed prior to adding any new users to the Oak Pointe water system. Lastly, the current treatment process provides iron removal only. The MHOG water treatment plant provides lime softening of the water, and can be effectively blended with the Oak Pointe water. This would provide an increase in water quality to the Oak Pointe water users. This project could also potentially eliminate the source of sodium and chloride to the Oak Pointe WWTP.

**SCHEDULE**

Currently, there is no funding available for this project. However, should growth or sodium chloride corrective actions be required, this project will have to be implemented earlier than anticipated.

IMPACT ON OPERATING EXPENSES

This project will be likely be funded by a grant, growth, or assessments against existing users in the event of regulatory requirements.

**EXPENDITURE SCHEDULE**

<b>FUND SOURCE</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>TOTAL</b>
Grant, Growth, or Special Assessment	\$0	\$0	\$0	\$0	\$0	\$2,000,000	\$2,000,000

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# Lake Edgewood Wastewater System

## Genoa Charter Township

2010 - 2016

### Capital Improvement Plan



**March 8, 2010**

## INTRODUCTION

Presented is the 2010 – 2016 Genoa Charter Township Capital Improvement Plan (CIP) for the Lake Edgewood Sanitary Sewer System. Capital improvements are defined as those physical facilities which involve a substantial investment and last a long time. This plan was developed to provide a tool to assess the long-term capital project requirements of the Lake Edgewood Sewer System and allow the Township to prioritize and plan for the investment in its infrastructure for long term sustainability.

## SYSTEM CHALLENGES

The Lake Edgewood wastewater system was originally privately constructed to serve an individual development. The Township took over this system to provide proper oversight and to provide protection to the residents. The original wastewater treatment plant (WWTP) was expanded in 2000 to a 0.5 MGD system to account for planned growth in the eastern portion of Genoa Township. Concurrently with the expansion, the State of Michigan became concerned with sodium and chloride from groundwater discharge plants. Sodium and chloride are introduced into the waste stream from the use of a sodium based water softener salt and the placement of regeneration brine into the wastewater system. Current wastewater treatment methods are incapable of removing these contaminants.

Upon investigation, it was determined that the Lake Edgewood Wastewater System impacted downstream groundwater and residential drinking water wells. As a result, the Township and the MDEQ entered into a consent judgment that dictated requirements and restrictions. Currently the Township is pursuing a federal appropriation to re-route the flows normally received at the Lake Edgewood wastewater treatment plant (WWTP) to the Genoa Oceola WWTP. Additional WWTP upgrades will be necessary, should federal appropriations not develop, to continue to adequately operate the system and reduce the labor involved in operation.

In addition the Lake Edgewood Wastewater system has unique challenges facing it, which include:

- Wastewater Treatment Plant is significantly under capacity;
- Small number of users connected to system resulting in a low annual operating budget;
- Limited amount of system owned and operated service equipment such as vactor trucks, flow meters, and cameras;
- Risk associated with the remote lift stations;
- Low replacement reserve funds;
- Difficulty maintaining compliance with the WWTP sodium and chloride effluent limitations; and,
- Sodium and chloride plume in local groundwater from historic discharge.

## GOALS

Developing a CIP for a small utility in the current economy is a difficult task. The system cannot rely on development or new users to fund capital improvements, and given its small size,

assessments and capital improvement charges against existing users are financially unfeasible. Therefore, the goals of the CIP are to address the existing system deficiencies within both reasonable budgets and the existing challenges. The specific goals of the Lake Edgewood CIP are:

- Work Towards Consolidation of the Wastewater System with the Genoa-Oceola Wastewater Treatment Plant
- Reduce the Risk of the Remote Lift Stations
- Perform Necessary Plant Improvements

### SUMMARY

Seven projects have been identified for the Lake Edgewood CIP for the calendar years 2010 – 2016. Each project has been classified as critical or important and the CIP is organized by this classification. Those projects which are classified as “Critical” are listed first. A critical project requires immediate attention, has a large financial risk, and/or has the ability to greatly improve system operation and reliability. Projects classified as “Important” are listed secondly. Important projects should be completed; however they do not pose an immediate risk to health safety and welfare. In addition, important projects may be funding dependent.

A summary of the total cost for each classification is listed below:

<b>Classification</b>	<b>Budget Amount</b>
Critical	\$113,000
Important	\$1,735,000

The table on the next page outlines each of the seven capital improvement projects, a timetable for each project, and the anticipated funding source. Following the project summary table is a brief report for each project, which describes the project and provides the justification for completing the project.



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TABLE P: LAKE EDGEWOOD CAPTIAL IMPROVEMENT PROJECT SUMMARY 2010-2016

N o.	Project	Classificati on	Trigger	Budget Amount	2010		2011		2012		2013		2014		2015	
					O&M	Other	O&M	Other	O&M	Other	O&M	Other	O&M	Other	O&M	Other
1	Valve Actuators at WWTP	Critical	Ongoing	\$60,000	\$0	\$0	\$0	\$60,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	Muffin Monster at WWTP (complete)	Critical	Aging	\$23,000	\$23,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	Improved Alum Addition	Critical	Performance	\$30,000	\$0	\$0	\$30,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	WWTP Additional Blowers (2 Total)	Important	More Flow	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100,000
5	Pump Station Standby Generators (3 Total)	Important	Funding	\$120,000	\$0	\$0	\$0	\$0	\$40,000	\$0	\$40,000	\$0	\$40,000	\$0	\$0	\$0
6	New Roof on Old side of WWTP	Important	Age	\$15,000	\$0	\$0	\$15,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7	Re-Route LE WWTP Flows to GO WWTP	Important	Funding/Regulat ory	\$1,500,000	\$0	\$0	\$0	\$250,000	\$0	\$1,250,000	\$0	\$0	\$0	\$0	\$0	\$0
Total				\$1,848,000	\$23,000	\$0	\$45,000	\$310,000	\$40,000	\$1,250,000	\$40,000	\$0	\$40,000	\$0	\$0	\$100,000

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**LAKE EDGEWOOD 2010-2016 PROJECT DESCRIPTION**

Project Title: Valve Actuators at Wastewater Treatment Plant  
Project Type: Water and Sewer Utilities  
Useful Life: 20 Years  
Re-submittal/New Project: New Project  
Classification: Critical

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**PROJECT DESCRIPTION**

This project involves the installation of six (6) new automated valve actuators at the Lake Edgewood Wastewater Treatment Plan (WWTP). These actuators will allow operation of all three of the sequencing batch reactor tanks (SBRs) at the WWTP.

**JUSTIFICATION**

Valve actuators are important components of the SBR treatment process, opening and closing valves that allow for the fill, decant, and wasting processes to occur in each of the SBRs. Currently, only two of the three SBRs at the WWTP are operable due to failure of the existing automated valve actuators. Failure of the valves to operate properly is a dangerous situation as tanks cannot be taken down for service or placed in operation in the event of a plant upset.

**SCHEDULE**

Due to limited funds in the operating budget, there is not existing funds on hand to replace the actuators. It is planned to replace the actuators in 2011. It should be noted that the Township is currently pursuing a federal appropriation request to consolidate this plant with the Genoa-Oceola WWTP. If this funding is obtained, the additional valve actuators will not be installed.

**IMPACT ON OPERATING EXPENSES**

The installation of new actuators has the potential to lower operating expenses in the event of a plant upset as the system can more readily respond to permit excursions. Additionally, the actuators can assist in routine maintenance. However, with only a \$300,000 annual operating budget, it is difficult to budget for a \$60,000 expenditure. If operating expenses can match revenue, then the existing new user funds can be used to fund this improvement.

**EXPENDITURE SCHEDULE**

<b>FUND SOURCE</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>TOTAL</b>
New User Funds	\$0	\$60,000	\$0	\$0	\$0	\$0	\$60,000

**LAKE EDGEWOOD 2010-2016 PROJECT DESCRIPTION**

Project Title: Muffin Monster at Wastewater Treatment Plant  
Project Type: Water and Sewer Utilities  
Useful Life: 10 Years  
Re-submittal/New Project: New Project  
Classification: Critical

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**PROJECT DESCRIPTION**

A Muffin Monster<sup>®</sup> is a grinder that macerates large incoming solid objects in wastewater to prevent these objects from interfering with the Sequencing Batch Reactor (SBR) process. This project involves the installation of a refurbished muffin monster influent grinder at the Lake Edgewood WWTP.

**JUSTIFICATION**

The Lake Edgewood WWTP was placed in operation in 2000. The original Muffin Monster<sup>®</sup> is still in operation at the WWTP and has surpassed its useful life. As a result, excess solids are impacting operations by causing rag build-up on floats and mixers. Installation of a refurbished grinder will improve system operation.

**SCHEDULE**

Due to age and poor performance, it is necessary to replace the Muffin Monster<sup>®</sup> as soon as possible.

**IMPACT ON OPERATING EXPENSES**

It will be necessary to fund this improvement with existing operation and maintenance fees, which may cause an increase in rates. The installation of a new muffin monster has the potential to lower operating expenses due to improved operation.

**EXPENDITURE SCHEDULE**

<b>FUND SOURCE</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>TOTAL</b>
L.E. Operating Fund	\$23,000	\$0	\$0	\$0	\$0	\$0	\$23,000

**LAKE EDGEWOOD 2010-2016 PROJECT DESCRIPTION**

Project Title: Improved Alum Addition at Wastewater Treatment Plant  
Project Type: Water and Sewer Utilities  
Useful Life: 20 Years  
Re-submittal/New Project: New Project  
Classification: Critical

---

**PROJECT DESCRIPTION**

The Lake Edgewood WWTP utilizes chemical feed alum addition to assist in phosphorous removal. This project involves the installation of an updated alum system that will introduce alum in the proper reaction phase and result in reduced chemical addition and cost.

**JUSTIFICATION**

The Lake Edgewood WWTP was placed in operation in 2000 and utilizes alum addition, in conjunction with biological phosphorous removal, to reduce phosphorous concentrations to levels that comply with the facility's groundwater discharge permit. The optimum time to introduce alum in a SBR process cycle is at the end of the react phase. The current alum system introduces alum during the entire cycle, resulting in chemical addition for over 5 hours per batch. Revising the chemical feed system to only introduce alum at the optimum phase would reduce the total chemical addition time to approximately one hour per batch. This improvement would greatly reduce alum usage and would save over \$5,000 per year in chemical costs.

**SCHEDULE**

The schedule to implement this improvement is during 2011.

**IMPACT ON OPERATING EXPENSES**

The installation of an updated alum addition system has the potential to significantly reduce chemical usage and cost at the Lake Edgewood WWTP. In 2010 a project cost analysis will be performed to evaluate the savings that can be utilized to fund the improvement with no impact on operation and maintenance rates. The improvement will be implemented in the 2011 budget cycle.

**EXPENDITURE SCHEDULE**

<b>FUND SOURCE</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>TOTAL</b>
L.E. Operating Funds	\$0	\$30,000	\$0	\$0	\$0	\$0	\$30,000

## **LAKE EDGEWOOD 2010-2016 PROJECT DESCRIPTION**

Project Title: Waste Water Treatment Plant Additional Blowers  
Project Type: Water and Sewer Utilities  
Useful Life: 30 Years  
Re-submittal/New Project: New Project  
Classification: Important

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### **PROJECT DESCRIPTION**

The existing Lake Edgewood WWTP consists of a sequencing batch reactor (SBR) process. The SBR process for treating wastewater consists of alternating between cycles of filling, aeration, anoxic reaction, settling, and decanting. The aeration process encourages the multiplication of aerobic bacteria, which are necessary to consume the nutrients in the wastewater and facultative anaerobic bacteria that reduce nitrate. Blowers are used for aeration to increase dissolved oxygen concentrations for the oxidation of ammonia to nitrate. This project involves the purchase of two additional blowers for the WWTP site to reduce cycle times and increase dissolved oxygen concentrations to assist in ammonia oxidation.

### **JUSTIFICATION**

The existing blowers at the WWTP are not large enough to introduce enough air to the process if additional flow is treated at this site. It should be noted that Lake Edgewood is seeking federal appropriations to decommission the Lake Edgewood WWTP site. Therefore, the additional blowers at Lake Edgewood will only be necessary if the plant is not decommissioned and flow increases greater than 33% more than the existing daily average of 150,000 gpd.

### **SCHEDULE**

This project is strictly dependent on flows increasing significantly in the next five years and concurrently the inability to combine this facility with the Genoa-Oceola WWTP. For budgeting purposes, this project is budgeted for 2015.

### **IMPACT ON OPERATING EXPENSES**

These improvements will be funding out of operation and maintenance, which will result in an increase in expenditures. The increase in flow will off-set the expenditure as additional flow will generate additional revenue. After implementation it is assumed that electrical costs will increase.



**EXPENDITURE SCHEDULE**

<b>FUND SOURCE</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>TOTAL</b>
LE Operating Fund	\$0	\$0	\$0	\$0	\$0	\$100,000	\$100,000

**LAKE EDGEWOOD 2010-2016 PROJECT DESCRIPTION**

Project Title: Lake Edgewood Pump Station Standby Generators  
Project Type: Water and Sewer Utilities  
Useful Life: 25 Years  
Re-submittal/New Project: New Project  
Classification: Important

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**PROJECT DESCRIPTION**

The Lake Edgewood collection system consists of 58,000 linear feet of pipe and 5 pump stations. Two of the five pump stations have on-site stand by generators. This project would involve the installation of natural gas standby generators at the remaining three pump stations in the Lake Edgewood System; known as PS-39, PS-62, and PS-68.

**JUSTIFICATION**

Permanent standby generators run the pump stations in the event of a power outage. Permanent generators at the pump station sites provide reduced liability for the municipality and reduce overtime during power outages.

**SCHEDULE**

Due to limited funds in the operating budget, one generator per year, with an average installation price of \$40,000 will be purchased and installed. This will result in the three generators being installed by 2015.

**IMPACT ON OPERATING EXPENSES**

Since the funding source is operation and maintenance fees, the project will have a short term increase in Operation and Maintenance Rates to cover the cost of installation. However, after project implementation, the project will result in reduced overtime and reduced liability, resulting in savings on insurance coverage. Additionally, there will be immeasurable savings from the protection to personal property from preventing a sewer backup event.

**EXPENDITURE SCHEDULE**

<b>FUND SOURCE</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>TOTAL</b>
L.E. Operating Fund	\$0	\$0	\$40,000	\$40,000	\$40,000	\$0	\$120,000

**LAKE EDGEWOOD 2010-2016 PROJECT DESCRIPTION**

Project Title: New Roof on Old Portion of Wastewater Treatment Plant  
Project Type: Water and Sewer Utilities  
Useful Life: 20 Years  
Re-submittal/New Project: New Project  
Classification: Important

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**PROJECT DESCRIPTION**

The Lake Edgewood WWTP was constructed in two phases. The original plant was constructed in the late 1980s. In 2000, a new WWTP was built to accommodate growth and anticipated future flows. This project involves replacement of the roof on the original WWTP, which has been converted into a storage facility for all systems associated with Genoa-Township Utilities, including MHOG, G-O, and Oak Pointe.

**JUSTIFICATION**

The existing roof at the facility has exceeded its useful life. A new roof is required to prevent leaks and damage to the building support structure and the equipment stored inside.

**SCHEDULE**

The schedule to implement this improvement is during the 2011/2012 budget cycle.

**IMPACT ON OPERATING EXPENSES**

The old portion of the WWTP has been converted into a storage facility that is used for all systems. The building is used to store pumps, safety equipment, repair bands, couplings, and valves. This equipment is used for all systems, and therefore the roof costs will be shared by all systems based on the proportion of customers in each system. Therefore, the Lake Edgewood operating expenses will not be impacted by this improvement.

**EXPENDITURE SCHEDULE**

<b>FUND SOURCE</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>TOTAL</b>
All System Funds	\$0	\$15,000	\$0	\$0	\$0	\$0	\$15,000

## **LAKE EDGEWOOD 2010-2016 PROJECT DESCRIPTION**

Project Title: Re-Route Lake Edgewood WWTP Flows to the Genoa-Oceola  
WWTP  
Project Type: Water and Sewer Utilities  
Useful Life: 50 Years  
Re-submittal/New Project: New Project  
Classification: Important

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### **PROJECT DESCRIPTION**

The Lake Edgewood WWTP discharges to groundwater and the effluent contains elevated concentrations of sodium and chloride. In 1999, Genoa Township began an investigation to monitor the sodium and chloride plume. Currently the plume is delineated by the existing monitoring well network and the Township conducts annual groundwater sampling and provides reverse osmosis units to those private wells impacted by the plume. The Township's goal is to eliminate the source of sodium and chloride in WWTP effluent. This will be accomplished by re-routing the effluent from the Lake Edgewood WWTP to the Genoa Oceola WWTP.

This project will include the installation of approximately 16,000 linear feet of force main, a new pump station, upgrades to the Lake Edgewood WWTP to convert the plant to an equalization basin and pumping facility, and upgrades to the Genoa Oceola WWTP to create additional sludge handling capacity. To avoid additional collection system upgrades, this project shall be completed in conjunction with the re-routing of the Oak Pointe WWTP effluent. The attached figure shows the location of the proposed improvements.

### **JUSTIFICATION**

This project is required to eliminate the source of sodium and chloride in the groundwater near the Lake Edgewood WWTP site. In addition, the Genoa Oceola WWTP is a newer plant with a superior treatment process. Lastly, consolidation of the Township's WWTPs provides the benefits of reduced labor costs, reduced energy use, reduced chemical use, reduced O&M fees due to a larger system and customer base, and reduced points of discharge to the environment.

### **SCHEDULE**

The Township will continue to pursue funding for the re-routing of Lake Edgewood to Genoa Oceola. This schedule assumes a State and Tribal Assistance Grant (STAG) is obtained in FY 2011 for design and FY 2012 for construction.

**IMPACT ON OPERATING EXPENSES**

There is no funding available for this project at this time. It is assumed that a STAG grant will be obtained to fund this project. After implementation it is anticipated that the annual O&M budget expenditures will decrease due to the elimination of the existing reverse osmosis program, due to chemical cost reduction, labor savings, and energy savings. These O&M reductions will be utilized to provide the Township's match for the STAG grant. It should be noted that if this project is not completed in conjunction with the re-routing of the Oak Pointe WWTP effluent, the project costs will increase by approximately \$3,000,000.

**EXPENDITURE SCHEDULE**

<b>FUND SOURCE</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>TOTAL</b>
STAG Grant	\$0	\$250,000	\$1,250,000	\$0	\$0	\$0	\$1,500,000

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**Utility Department**  
**Genoa Charter Township**  
**2010 - 2016**  
**Capital Improvement Plan**



**March 8, 2010**



## INTRODUCTION

Presented is the 2010 – 2016 Genoa Charter Township Capital Improvement Plan (CIP) for the Genoa Township Utility Department (Department). Capital improvements are defined as those physical facilities which involve a substantial investment and last a long time. This plan was developed to allow the Utility Department to better serve the public by improving internal capabilities and service.

## UTILITY DEPARTMENT

The Genoa Township Utility Department is responsible for the operation, maintenance, billing, planning, data management, financial management, and oversight of four municipal water and sanitary sewer districts:

- Marion Howell Oceola Genoa (MHOG) Water
- Genoa Oceola (GO) Sanitary Sewer
- Oak Pointe Water and Sanitary Sewer
- Lake Edgewood Sanitary Sewer

This service to four separate sewer and/or water districts allows the Department to efficiently serve many residents which provides those individual district residents rate savings by having their costs for professional services shared by a larger population.

## GOALS

The goal of the Utility Department CIP is to purchase equipment that will:

- Replace individual home grinder pumps that have exceeded their useful life and provide a new pump in place of rebuilding services that will cost less money over time; and
- Reduce labor time, reduce costs from outside vendors, and assist with maintenance of each of the systems.

## SUMMARY

Four capital improvement expenditures have been identified for the Utility Department CIP for the calendar years 2010 – 2016. Each project has been classified as critical or preferred, and the CIP is organized by this classification. Those projects which are classified as “Critical” are listed first. A critical project requires immediate attention, has a large financial risk, and/or has the ability to greatly improve system operation and reliability. Projects classified as “Preferred” are listed secondly. Preferred projects should be completed; however they do not pose an immediate risk to health safety and welfare. In addition, preferred projects may be funding dependent.

A summary of the total cost for each classification is listed below:

<b>Classification</b>	<b>Budget Amount</b>
Critical	\$225,000
Preferred	\$400,000

The table on the next page outlines each of the four capital improvement projects and a timetable for each project. Following the project summary table is a brief report for each project, which describes the project and provides the justification for completing the project.

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TABLE Q: UTILITY DEPARTMENT EQUIPMENT CAPTIAL IMPROVEMENT PROJECT SUMMARY 2010-2016

No.	Project	Classification	Trigger	Budget Amount	2010	2011	2012	2013	2014	2015
1	Grinder Pump Replacement	Critical	Age	\$225,000	\$15,000	\$25,000	\$35,000	\$50,000	\$50,000	\$50,000
2	Vactor Truck	Preferred	Ongoing/Cost Analysis	\$250,000	\$0	\$0	\$250,000	\$0	\$0	\$0
3	Sewer Line Camera	Preferred	Age	\$120,000	\$0	\$0	\$0	\$0	\$0	\$120,000
4	Flow Meters	Preferred	Performance	\$30,000	\$8,000	\$7,000	\$5,000	\$5,000	\$5,000	\$0
Total				\$625,000	\$23,000	\$32,000	\$290,000	\$55,000	\$55,000	\$170,000

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## **UTILITY DEPARTMENT EQUIPMENT 2010-2016 PROJECT DESCRIPTION**

Project Title: Grinder Pump Replacement in Sanitary Systems  
Project Type: Water and Sewer Utilities  
Useful Life: 20 Years  
Re-submittal/New Project: New Project  
Classification: Critical

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### **PROJECT DESCRIPTION**

A portion of the Genoa-Oceola, Oak Pointe, and Lake Edgewood Sanitary Sewer Systems utilize grinder pumps to convey wastewater from the homes to the collection system. Many of these grinder pumps were initially installed in the mid-1990s and are exceeding 15 years of age. This project involves the replacement of the original grinder pumps.

### **JUSTIFICATION**

Typically, a residential grinder unit can operate for five years prior to requiring any service. These systems, with minor parts, are able to be repaired and returned to service many times, with continued reliable operation. However, due to advances in pump design and parts manufacturing, many components of the original pump systems have become obsolete and very expensive to repair. Therefore, due to the expense of parts versus a new pump (\$1,200 vs 1,500 respectively), it has become more cost effective to replace the grinder pumps rather than to rebuild and repair them.

### **SCHEDULE**

The schedule to implement this improvement is ongoing, based on pump service. Pumps will be replaced during the course of this capital improvement plan.

### **IMPACT ON OPERATING EXPENSES**

The installation of new pumps will be performed within the existing operating budgets for the sanitary sewer systems.

### **EXPENDITURE SCHEDULE**

<b>FUND SOURCE</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>TOTAL</b>
All System Funds	\$15,000	\$25,000	\$35,000	\$50,000	\$50,000	\$50,000	\$225,000

## **UTILITY DEPARTMENT EQUIPMENT 2010-2016 PROJECT DESCRIPTION**

Project Title: Vactor Truck Purchase for Sewer and Water Systems  
Project Type: Water and Sewer Utilities  
Useful Life: 10 Years  
Re-submittal/New Project: New Project  
Classification: Preferred

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### **PROJECT DESCRIPTION**

The Genoa-Oceola, Oak Pointe, and Lake Edgewood Sanitary Sewer Systems utilize outside contracted vactor truck services to assist in emergency response activities and to perform maintenance on gravity sewers and pump stations, including removal of grease, grit, and debris. Additionally, the MHOG Water System utilizes vactor services for hydro-excavation during water service leads to safely identify other closely installed utilities. This project involves the purchase of a vactor truck to be shared by the combined utilities, and operated by existing staff.

### **JUSTIFICATION**

In an average year, the utility systems expend over \$60,000 for outside vactor services. There are additional costs associated with extended timeframes between cleaning maintenance, delays in waiting for outside services to arrive, and additional property and environmental damage due to delays in response.

### **SCHEDULE**

The schedule to implement this improvement is dependent upon performance of a cost / benefit analysis of the annual cost for purchase of a vactor truck compared to utilization of outside services. It is assumed that budgetary numbers for this analysis would be obtained from the 2009-2010 budget years and if favorable the vactor purchase would occur in the 2011 budget cycle.

### **IMPACT ON OPERATING EXPENSES**

The purchase of a vactor truck would only occur if it resulted in a positive impact on operating expenses. This cost would be spread amongst all systems associated with Genoa Township Utility Department based on system size and demand for truck usage.

### **EXPENDITURE SCHEDULE**

<b>FUND SOURCE</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>TOTAL</b>
All System Funds	\$0	\$0	\$250,000	\$0	\$0	\$0	\$250,000



## **UTILITY DEPARTMENT EQUIPMENT 2010-2016 PROJECT DESCRIPTION**

Project Title: Sewer Line Camera  
Project Type: Water and Sewer Utilities  
Useful Life: 10 Years  
Re-submittal/New Project: New Project  
Classification: Preferred

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### **PROJECT DESCRIPTION**

This project includes the purchase of a sewer line camera. A sewer line camera will be used to inspect the inside of gravity sewer line pipes. This is a useful tool for finding sewer lines, identifying where leads tie into the sewer, identifying areas of Inflow & Infiltration, and identifying areas that need replacement, repair or cleaning.

### **JUSTIFICATION**

Currently the Utility Department utilizes outside services to camera sewer lines, which is primarily performed only on an emergency basis. It is anticipated that there will be a cost savings over time if this service is brought in-house, by allowing for preventative maintenance. It is also anticipated that there would be an increase in use of the sewer line camera, allowing the municipality to better manage the system by prioritizing repairs.

### **SCHEDULE**

The schedule to implement this improvement is dependent upon performance of a cost / benefit analysis of the annual cost for purchase of a sewer camera compared to utilization of outside services. In addition, funds are limited for this larger capacity purchase. Therefore, it is assumed that the camera will be purchased in 2015.

### **IMPACT ON OPERATING EXPENSES**

The purchase of a sewer line camera will only occur if it resulted in a positive impact on operating expenses. This cost would be spread amongst all systems associated with Genoa Township Utilities.

### **EXPENDITURE SCHEDULE**

<b>FUND SOURCE</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>TOTAL</b>
All System Funds	\$0	\$0	\$0	\$0	\$0	\$120,000	\$120,000

## **UTILITY DEPARTMENT EQUIPMENT 2010-2016 PROJECT DESCRIPTION**

Project Title: Collection System Flow Meters  
Project Type: Water and Sewer Utilities  
Useful Life: 10 Years  
Re-submittal/New Project: New Project  
Classification: Preferred

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### **PROJECT DESCRIPTION**

Rainwater and groundwater enter the Township's three sanitary sewer collection systems, which is classified as inflow and infiltration (I&I). Flow meters are a useful tool to evaluate the collection system to identify areas of the system that are impacted by I&I. The Utility Department currently has one flow meter. This project includes the purchase of four additional flow meters.

### **JUSTIFICATION**

Additional flow meters will allow the Utility Department to study different areas of the collection system during the same time period. This is necessary to evaluate the collection system's I&I. In addition, the municipal sanitary sewer systems pay to convey and treat I&I. Lastly, I&I flows utilize capacity within both the collection systems and the wastewater treatment plants.

### **SCHEDULE**

Due to limited staff to manage, plan, and maintain both the flow meters and the subsequent data, it is assumed the flow meters will be purchased on an annual basis. This will allow time for staff to improve efficiency of installation and data management. Additionally, meters become less expensive over time as software and large bands do not have to be purchased. Even if staff levels do not increase for full implementation, the meters will provide a savings on rental fees from outside consultants.

### **IMPACT ON OPERATING EXPENSES**

Currently, the DPW equipment annual budget is \$10,000, therefore the purchase of the flow meters will result in a slight increase in the expenditures from the DPW budget that are spread amongst the three sanitary systems. Additionally, this capital purchase has the ability to save money over time, as it will allow in-house staff to study areas rather than outside consultants. For example, a single, 1-month study by an outside firm costs \$35,000, which would cover the total capital purchase of all of the flow meters.

**EXPENDITURE SCHEDULE**

<b>FUND SOURCE</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>TOTAL</b>
All System Funds	\$8,000	\$7,000	\$5,000	\$5,000	\$5,000	\$0	\$30,000

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