

# VILLAGE OF MATTAWAN

## Capital Improvements Plan

2010/2011 - 2014/2015

# FINAL DRAFT

January, 2010

**VILLAGE OF MATTAWAN, MICHIGAN  
CAPITAL IMPROVEMENTS PLAN**

**ACKNOWLEDGEMENTS**

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The Village of Mattawan wishes to thank all those who contributed to the content and review of this Plan.

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**VILLAGE OF MATTAWAN, MICHIGAN  
CAPITAL IMPROVEMENTS PLAN**

**TABLE OF CONTENTS**

I.	INTRODUCTION.....	1
II.	WHAT IS A CAPITAL IMPROVEMENTS PLAN?.....	2
III.	EXECUTIVE SUMMARY.....	3
IV.	TRANSPORTATION AND STORM SEWER.....	6
V.	WATER.....	22
VI.	SANITARY SEWER.....	29
VII.	MOTOR POOL.....	32
VIII.	BUILDINGS AND GROUNDS.....	36
IX.	PARKS AND RECREATION.....	40
X.	FUNDING.....	42

**APPENDICES**

***Appendix A – Detailed Cost Estimates***

***Appendix B – Maps***

## ***I. INTRODUCTION***

This document serves as the Capital Improvements Plan for the Village of Mattawan for the fiscal year period starting July 1, 2010 and ending June 30, 2015. The main purpose of this plan is to develop a 5-year program that will address important capital needs within the Village. This program will be reviewed and updated annually to reflect changes in project priority, available funding and unexpected opportunities. This plan should be used as a tool to assist the various committees in planning and budgeting for each fiscal year.

## ***II. WHAT IS A CAPITAL IMPROVEMENTS PLAN?***

A Capital Improvements Plan (CIP) is a long-range plan, typically 5 years, which identifies capital projects and equipment purchases, provides a planning schedule and identifies options for financing the plan. The CIP includes not only the construction of new infrastructure, but also the maintenance, repair and rehabilitation of existing infrastructure. Capital improvement projects include roads, park and recreation facilities, water, storm and sanitary sewer infrastructure, buildings and grounds, and streetscape projects. Some communities also include fire and police department expenditures and general fund expenses that are over a predetermined cost. The basic function of a CIP is to provide government with a process for the planning and budgeting of capital needs, serve as a link in the planning process, prioritize current and future needs and present a description of proposed projects. It also assists in identifying projects that should be coordinated together to save time and money for the Village.

The CIP does not address all capital expenditures for the Village. It represents the major projects that the Village foresees in the future. Some operational and maintenance projects are also included when it is known in advance what service/equipment will be needed and/or has a cost that is more than typical operating and maintenance costs. Other projects that are considered operational, maintenance or recurring are excluded from the CIP, but are captured in the O&M budget of the annual Village budget.

Once all potential projects are identified, project costs are evaluated with need and funding availability and projects are broken into a 5 year Plan. A CIP is flexible and meant to be reviewed yearly to reassess the needs and goals of the Village. The Village is by no means committed to perform each item in this plan; however, the CIP is intended to be a useful guidance document for better management of the Village's system.

### ***III. EXECUTIVE SUMMARY***

The CIP for the Village for July 1, 2010 – June 30, 2015 incorporates several projects each year within the various departments of the Village. These projects have been chosen based on need, available funds, and the impact they will have on the community. Included on page 5 is a detailed spreadsheet showing each project by year and its cost by source of funding. A map of the Village showing the projects color-coded by the year they are planned is included in Appendix B. The spreadsheet and map summarize the contents of this plan.

The layout of the Village CIP is set up so that each project has a project profile sheet that provides information about that project. Project profile sheets are included in the department section that each project falls under and are in order by year, with projects that are included in multiple years appearing first. Each project is given a priority level of low, medium, or high. A low priority project is one that complies with all state and federal laws, does not contribute to the short-term needs of the community, and will not significantly improve the health, safety and welfare of citizens. A low priority project is not one that is absolutely required, but is worthwhile and should be completed if funding is available. A medium priority project is one that complies with all state and federal laws, provides a benefit to the community and should be done when funding is available. A high priority project is one that is urgent and either does not comply with all state and federal laws or provides a solution to a hazardous health, safety or welfare issue. Projects that have already been awarded funding or are anticipating funding may also appear as a high priority project because there will be little flexibility in schedule once funding is awarded. Funding from outside sources should be utilized as much as possible to spread the Village's funds across more projects and increase the number of projects the Village can afford to complete.

Some of the projects located in the CIP have detailed cost estimates that are included in Appendix A. If a project has a detailed cost estimate, it will be noted after the project cost on the project profile sheets. Not all projects include detailed cost estimates because they are either equipment or material purchases, or require preliminary engineering work beyond what is necessary for the purposes of this plan. Most of the project cost estimates used were provided from the Village Department of Public Works.

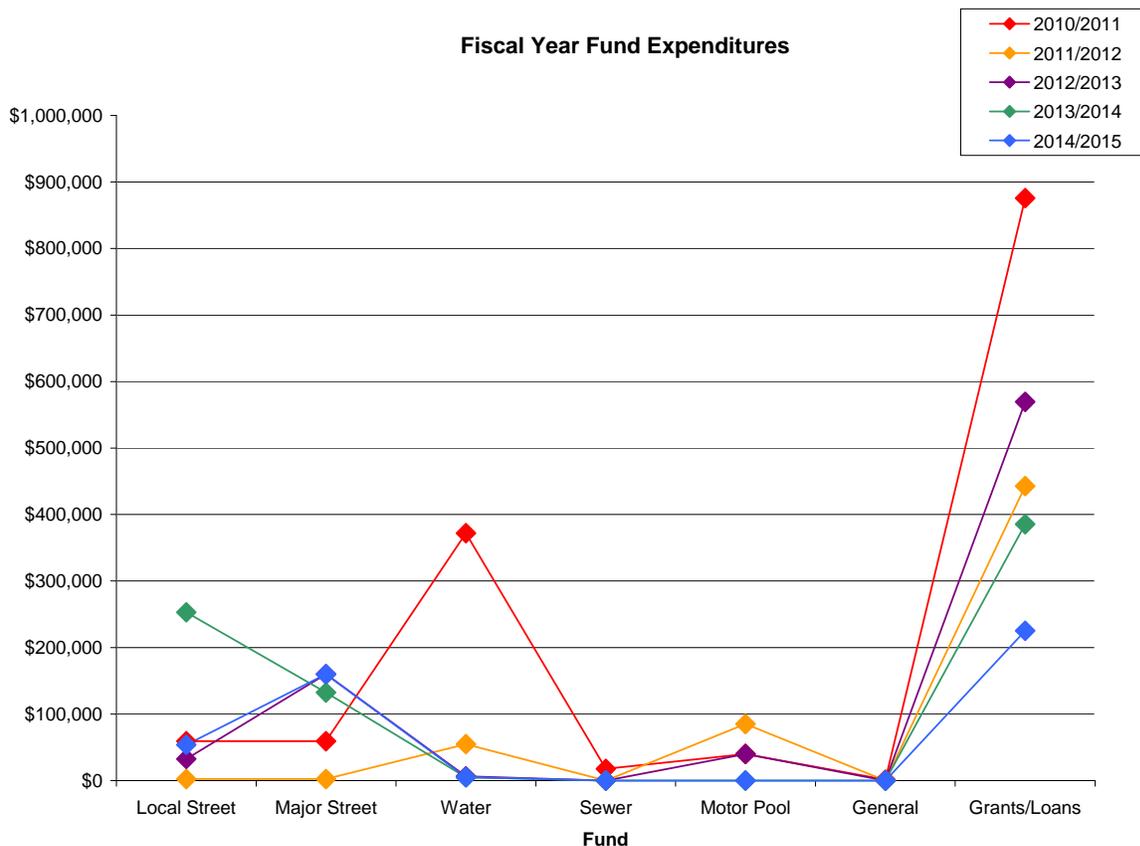
A budget table is included for each department section that shows a summary of historical revenues and expenses over the last 3 years with the current fiscal year budget. This data is used to calculate the annual net income after expenses available for projects. These figures can be used to pay for capital expenditures

**VILLAGE OF MATTAWAN  
CAPITAL IMPROVEMENTS PLAN**

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and are inserted into the spreadsheet on page 5. The buildings and grounds and park and recreation funds do not have budget tables because they are funded under the general fund.

The projects included in this plan will leave the Village with a positive fund balance for all departments after 5 years, however, the local and major street funds will have little funds on reserve unless the Village is able to bring in a larger net income or find additional funding than what is mentioned in this plan. Some projects were not included in the 5 year plan due to funding limitations or the current feasibility of the project, but project profile sheets are still included. This Plan will be used to plan future projects and identify available funding opportunities that the Village is eligible for. Yearly updates should begin in October of each year so there is sufficient time for field inspection, adding a fifth fiscal year and updating the plan. The plan is specifically set up with project profile sheets for each project so that there will be minimal consultant time involved in the process of updating the plan on an annual basis. Below is a chart that summarizes fund expenditures for each fiscal year.





## ***IV. TRANSPORTATION AND STORM SEWER***

The capital improvements program for transportation and storm sewer is broken up into roads, parking lots, sidewalk and curb and gutter, storm sewer improvements, and streetscape projects. These items fall into one of two departments: major streets and local streets. Major streets projects are eligible for Small Urban funding through the Michigan Department of Transportation and are shown in the Van Buren County National Functional Classification map in Appendix B. These locations in the Village of Mattawan include 25<sup>th</sup> Street, Main Street, Cole Avenue, Front Street, McGillen Avenue and Murray Street. Local streets projects include any roadway work performed on all other Village roads not mentioned under major streets. The following descriptions are listed to identify general roadway treatments the Village can use to maintain their transportation system:

### **Total Reconstruction:**

The most effective option for roadway improvements is total reconstruction, consisting of constructing a new road. The old HMA road surface, subbase, and subgrade materials would be removed. Grading would take place to reshape the earth's surface adequate for adding a new subgrade. The roadway cross section would consist of a 12 inch sand subgrade followed by a 6-8 inch class 22A aggregate base with 3 ½ to 6 inches of asphalt placed in a minimum of two lifts on the surface. This method generally provides for the longest lasting road surface and the strongest structural condition available. Cost can vary greatly depending on existing soils, size of the project, and the material costs. Total reconstruction is typically the most expensive roadway improvement option and has a life expectancy of 15 to 20 years.

### **Crush and Shape:**

HMA base crushing and shaping consists of completely crushing the existing HMA surface to an acceptable particle size and gradation. The crushed material is then mixed with the existing base material with grading and compacting methods performed until an acceptable base surface is obtained. The particle size of the crushed material is typically the same as a standard 22A gravel gradation with no particle size exceeding 4 inches. Following compaction, HMA asphalt would be placed. Because of the introduction of better base materials, this method improves the structural condition of the roadway cross section. This method typically can't be used on roads with existing curb and gutter or where multiple drive approaches are present, because it raises the elevation of the road. This method typically adds 10 to 15 years to the life of the pavement.

Mill and Resurface:

HMA milling and resurfacing consists of milling the existing road surface a predetermined depth, applying a tack coat, and then paving over the remaining HMA base material. This method is a popular maintenance procedure for roadways with existing curb and gutter. This is because the proposed roadway elevations will generally match the elevations of the existing roadway. Little to no structural support is gained with this method, but the roadway surface is new again. Existing full depth pavement cracks will typically reflect through the new overlay asphalt in about one year for every inch of new asphalt applied. A mill and resurface project has been shown to add 6 to 8 years to the life of the roadway. Please note that cracks will reflect through the new surface long before the pavement has reached the design life.

Overlay:

HMA overlaying consists of cleaning the existing roadway surface, sealing the cracks, applying a tack coat, and paving. This option is a good alternative to milling and resurfacing, and can be used on roadways that milling may not be possible due to existing asphalt thicknesses. An overlay is very similar to a mill and resurface application in that a new drive surface is obtained and cracks will typically reappear in about one year for every inch of asphalt applied. This option will actually provide additional support due to the added HMA thickness. An overlay project will add 5 to 7 years to the life of the roadway.

Microsurfacing and Slurry Seal:

A Slurry Seal consists of a mixture of fine sand and mineral filler mixed with an asphalt emulsion. The mixture is then spread over the cleaned roadway surface using a squeegee or spreader box. Microsurfacing is applied the same way, however, the mixture consists of a polymer modified emulsified asphalt, mineral aggregate, mineral filler, water and additives. Both methods provide no structural support, but do effectively seal the roadway surface. Microsurfacing has shown to be a longer lasting treatment than the slurry seal, but it also has been known to cost more. An estimated average cost for microsurfacing is \$15,000 per 12' wide lane mile and adds 4 to 7 years to the roadway life. Slurry Seal adds 3 to 5 years to the life of the roadway.

Crack Filling and Crack Sealing:

Crack filling and sealing consists of cleaning the existing pavement cracks and then filling and sealing the cracks with a thermo-plastic material. This method provides no structural strength and is effective at preventing water infiltration through the pavement surface. Crack filling/sealing has an estimated average cost of approximately \$1.50 per lb and can add 2 to 6 years to the roadway life.

Roadway Life Cycle Cost Analysis:

It is important to understand the life cycle cost analysis process of an HMA pavement. When a roadway is freshly constructed it will be in the best condition it will ever be in. As the roadway ages it will begin to deteriorate, and will continue to deteriorate until it reaches the design life. When aging first begins, minor cracks and raveling will start to occur. Some patches may be needed, but overall the structural strength of the road will be adequate. At this stage, it is extremely cost effective to pick a preventive maintenance option that will provide the necessary sealing requirements. This treatment will bring the quality of the roadway surface to just below that of a new road. As the roadway continues to age, more cracking, raveling, rutting, and edge cracking will occur. It is during this period that an overlay or resurfacing would be cost effective. This is because the roadway would still be structurally sound and most of the distresses should be on the surface level. If the deterioration has progressed to include any of the following: closely spaced longitudinal and transverse cracks, block cracking and alligator cracking is over more than 25% of the roadway surface, moderate rutting, and potholes are regularly appearing, then the structural stability of the roadway is lacking. At this stage it is not cost effective to invest in the non structural maintenance options. When you have reached this stage of pavement deterioration the best option is to simply do nothing and wait as long as possible before performing a major rehabilitation.

Sidewalk and Curb and Gutter:

A yearly sidewalk budget includes any new construction and maintenance of existing sidewalks. The Village's goal is to have sidewalk on at least one side of each road in the Village. All future sidewalks should follow ADA standards for handicap accessibility. New curb and gutter is included in projects where applicable and replacements are done at the same time as sidewalk projects.

Storm Sewer System:

The storm sewer system within the Village consists of piped storm sewer on Murray Street and several leaching basins located throughout the Village to address drainage. Areas in need of better drainage should be lumped together as a project or included with street projects if funding is available.

**VILLAGE OF MATTAWAN  
SUMMARY OF HISTORICAL REVENUE AND EXPENSES  
Local Streets Fund**

	2006/2007 Actual	2007/2008 Actual	2008/2009 Actual	2009/2010 Budgeted	2010/1011 Projected
Revenue	\$94,210.22	\$105,073.00	\$53,645.53	\$91,000.00	\$91,000.00
Administration	\$7,467.23	\$5,533.72	\$6,598.20	\$7,430.00	\$7,500.00
Construction	0.00	0.00	0.00	33,000.00	0.00
Maintenance	55,139.61	37,501.57	22,779.19	28,460.00	30,000.00
Winter Maintenance	19,854.66	24,166.61	22,275.72	20,940.00	22,000.00
Traffic Services	639.19	1,152.55	1,008.27	1,000.00	1,000.00
Total Expenses	\$83,100.69	\$68,354.45	\$52,661.38	\$90,830.00	\$60,500.00
Annual Income after Expenses Available for Capital Improvements					\$30,500.00

**VILLAGE OF MATTAWAN  
SUMMARY OF HISTORICAL REVENUE AND EXPENSES  
Major Streets Fund**

	2006/2007 Actual	2007/2008 Actual	2008/2009 Actual	2009/2010 Budgeted	2010/1011 Projected
Revenue	\$163,943.00	\$165,153.00	\$207,989.00	\$165,000.00	\$165,000.00
Administration	\$9,884.34	\$8,480.19	\$9,962.13	\$10,050.00	\$10,000.00
Construction	11,800.00	9,508.76	63,357.03	44,000.00	0.00
Maintenance	70,690.53	71,498.03	55,644.24	63,505.00	65,000.00
Winter Maintenance	39,826.84	45,923.90	44,657.46	43,465.00	45,000.00
Traffic Services	881.19	1,168.80	1,000.00	1,000.00	1,000.00
Total Expenses	\$133,082.90	\$136,579.68	\$174,620.86	\$162,020.00	\$121,000.00
Annual Income after Expenses Available for Capital Improvements					\$44,000.00

Project Profile Sheets of each project follows and detailed cost estimates can be found in Appendix A.

*Capital Improvement Project Profile*

**Department:**  
Local/Major Streets

**Project Category:**  
Capital Preventive Maintenance

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**Project Title:** Crack Fill

**Project Description:** A lump sum contract for crack fill on various streets throughout the Village. A budgeted amount is set each year and given to the streets with the highest priority until the budget is reached.

**Project Justification/Need:** Crack fill can prolong the life of a roadway by sealing off cracks in their early stages before they spread and start to deteriorate the roadway.

**Project Benefit/Impact:** Crack fill adds another 3-5 years of life to the roadway, though the added life also varies with the amount of traffic each roadway receives. It will save the Village money long term because the Village's roads will last longer and crack fill is very inexpensive compared to other treatments.

**Project Cost:** \$5,000 - \$6,000

**Project Funding Source:** Local street fund and major street fund

**Project Priority:** Medium

**Fiscal Year Funded:** Each year

*Capital Improvement Project Profile*

**Department:**  
Major/Local Streets

**Project Category:**  
Sidewalks

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**Project Title:** Safe Routes to School Phase I

**Project Description:** Install sidewalks in various locations to provide safer routes to the schools and promote healthier and more active lifestyles by encouraging kids to walk and ride their bikes to school. Phase I will include sidewalk in three locations at the most traveled locations for students. Descriptions for each project location are below:

- ◆ McGillen Avenue – Middle School northeast to McGillen Avenue and both sides from Murray Street to Main Street, including a stop light and crosswalk push buttons at the intersection of Murray Street
- ◆ Murray Street – East side from McGillen Avenue to the south to approximately 100’ northwest of Alvord Street and on west side across from Alvord Street, including a small creek crossing on east side near the elementary school
- ◆ School property – Western Avenue to Murray Street and on the west and north sides of the elementary school, including a small creek crossing northwest of the elementary school

**Project Justification/Need:** There are several locations within the Village that do not have sidewalks and kids are forced to use the roadway if they walk or ride their bikes to school.

**Project Benefit/Impact:** Sidewalk will be installed in areas where it is greatly needed and the Village will be able to promote a safer and more walkable community.

**Project Cost:** \$370,000 (see detailed cost estimate on appendix A – 1)

**Project Funding Source:** Safe Routes to School Program, Major and Local Streets fund

**Project Priority:** High - Village will move forward with project as soon as funding is available through the Safe Routes to School Program

**Fiscal Year Funded:** 2010/2011

*Capital Improvement Project Profile*

**Department:**  
Local/Major Streets

**Project Category:**  
Capital Preventive Maintenance

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**Project Title:** Tire Recycled Roadway Project

**Project Description:** 2.31 miles of roadway will be surfaced with a melted recycled tire mixture.

**Project Justification/Need:** The roadways included in this project cover a large part of the Village's street system and would not otherwise receive any form of treatment. The cost per mile is much lower than other roadway treatments and a portion of the cost is funded through the program.

**Project Benefit/Impact:** The Village will be one of the first communities to try this technology in a climate that experiences all four seasons. Regardless of how well the outcome is of the newer technology, the roads included in this project should receive some extended life.

**Project Cost:** \$76,200

**Project Funding Source:** \$38,100 Local/Major Streets, \$38,100 Grant

**Project Priority:** Medium

**Fiscal Year Funded:** 2010/2011

*Capital Improvement Project Profile*

**Department:**  
Major Streets/Water

**Project Category:**  
Reconstruction/Water System Improvements

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**Project Title:** Reconstruct Cole Avenue and Main Street Intersection and Water Main Installation

**Project Description:** Reconstruct the intersection of Cole Avenue and Main Street when MDOT constructs the 2 roundabouts on both sides of the I-94 bridge. Install 2,100 feet of water main upgrades along Cole Avenue.

**Project Justification/Need:** The roundabout that MDOT is constructing on the north side of the I-94 bridge in 2011 will be located at the intersection of Cole Avenue and Main Street. MDOT will fund the roundabouts; however, there are water main upgrades on Cole Avenue and roadway improvements at the Cole Avenue intersection that will be funded by the Village's Local Development Financing Authority.

**Project Benefit/Impact:** By reconstructing the Cole Avenue and Main Street intersection outside of the roundabouts, the truck stop entrance will be redefined so that it does not interfere with the roundabout movement, but still allow access for trucks. This is the best time to do water main work because the roadway will already be torn up.

**Project Cost:** \$442,800 (see detailed cost estimate on appendix A – 3)

**Project Funding Source:** Local Development Financing Authority (LDFFA)

**Project Priority:** High

**Fiscal Year Funded:** 2011/2012

*Capital Improvement Project Profile*

**Department:**  
Major/Local Streets

**Project Category:**  
Sidewalks

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**Project Title:** Safe Routes to School Phase II

**Project Description:** Install sidewalks in various locations to provide safer routes to the schools and promote healthier and more active lifestyles by encouraging kids to walk and ride their bikes to school. Phase II will include sidewalk in five locations. Descriptions for each project location are below:

- ◆ Front Avenue – North side from Farthing Drive to Main Street and on the south side from Glidden Street to Western Avenue, including flashing lights at Western Avenue and Farthing Street
- ◆ Scott Street – West side from 4<sup>th</sup> Avenue to Front Street
- ◆ Farthing Drive – North and west sides from Scott Street to Front Street
- ◆ 4<sup>th</sup> Avenue – South side from Scott Street to Murray Street
- ◆ Western Avenue – East side from Front Street to the school entrance

**Project Justification/Need:** There are several locations within the Village that do not have sidewalks and kids are forced to use the roadway if they walk or ride their bikes to school.

**Project Benefit/Impact:** Sidewalk will be installed in areas where it is greatly needed and the Village will be able to promote a safer and more walkable community.

**Project Cost:** \$357,000 (see detailed cost estimate on appendix A – 4)

**Project Funding Source:** Safe Routes to School Program, Major and Local Streets fund

**Project Priority:** High - Village will apply for funding for phase II after phase I is complete

**Fiscal Year Funded:** 2012/2013

*Capital Improvement Project Profile*

**Department:**  
Major Streets

**Project Category:**  
Construction

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**Project Title:** W. McGillen Avenue and Main Street Right Turn Lanes

**Project Description:** Construct two right turn lanes at the intersection of W. McGillen Avenue and Main Street, at Main Street turning right on to W. McGillen Avenue and on W. McGillen Avenue turning right on to Main Street.

**Project Justification/Need:** This roadway is a rural major collector and receives a lot of traffic. This intersection backs up at peak times during the day because there is currently only through lanes.

**Project Benefit/Impact:** The right turn lanes will help ease congestion at this intersection during peak hours of the day.

**Project Cost:** \$400,000 (see detailed cost estimate on appendix A – 7)

**Project Funding Source:** Major Streets Fund, MDOT CMAQ Fund

**Project Priority:** Medium

**Fiscal Year Funded:** 2012/2013

*Capital Improvement Project Profile*

**Department:**  
Local Streets

**Project Category:**  
Reconstruction

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**Project Title:** Concord Avenue Reconstruction

**Project Description:** Reconstruct Concord Avenue from Main Street to the eastern Village limits to include culvert improvements, grinding the existing asphalt, guardrail replacements, asphalt and restoration.

**Project Justification/Need:** This roadway is in need of an upgrade, but since it is a local street and is over 3,000 feet in length, it is hard to fund a project of this size with local street funds. Concord Avenue has several horizontal curves and there have been numerous slide-offs and accidents, especially during winter months. The roadway is only one lane over the large culvert, which should be widened to two lanes with the culvert upgrades.

**Project Benefit/Impact:** This project will provide a smoother and safer roadway to drivers by adjusting the curves, widening the roadway over the bridge and replacing the guardrails.

**Project Cost:** \$330,000

**Project Funding Source:** \$250,000 Local Streets, \$80,000 MEDC ICE Program Funding to upgrade the culvert, if funding other than local streets is available project will likely need to be split into two phases spread out over at least a few years.

**Project Priority:** Medium

**Fiscal Year Funded:** 2013/2014

*Capital Improvement Project Profile*

**Department:**  
Major Streets

**Project Category:**  
Reconstruction

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**Project Title:** E. McGillen Avenue Reconstruction Project

**Project Description:** Reconstruct approximately 4,000 feet of E. McGillen Avenue from east of Main Street to the eastern Village limits to include grinding the existing asphalt, roadway widening, asphalt, sidewalk, a bike path, and restoration.

**Project Justification/Need:** This roadway is a rural major collector and needs to be upgraded and widened to a major street for the Village to collect additional funding for this roadway.

**Project Benefit/Impact:** Once this roadway is reconstructed and meets the state's criteria for a major street, the Village will receive \$17,000 per mile instead of \$10,000 per mile on this roadway.

**Project Cost:** \$435,000 (see detailed cost estimate on appendix A – 8)

**Project Funding Source:** \$305,600 Small Urban Funds, \$129,400 Major Streets Fund

**Project Priority:** Medium

**Fiscal Year Funded:** 2013/2014

*Capital Improvement Project Profile*

**Department:**  
Major Streets

**Project Category:**  
Reconstruction

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**Project Title:** Reconstruct Concord Avenue and Main Street Intersection

**Project Description:** Reconstruct the intersection of Concord Avenue and Main Street to raise the intersection and improve sight distance at the Front Street intersection.

**Project Justification/Need:** Cars that stop at the intersection of Main Street and Front Street have minimal sight distance to the south because the bridge over the railroad on Main Street, which is directly south of the Front Street intersection, is at a higher elevation than the intersection at Concord Avenue, which is south of the railroad on Main Street. There have been numerous accidents that have occurred at the Front Street intersection due to limited sight vision south of the railroad bridge and this project will increase the overall safety at the Front Street intersection.

**Project Benefit/Impact:** This project will increase the safety at the Main Street and Front Street intersection by reducing the number of accidents that occur due to limited sight vision to the south of vehicles traveling north on Main Street.

**Project Cost:** \$150,000

**Project Funding Source:** This project would be eligible for funding through the MDOT Safety program.

**Project Priority:** High

**Fiscal Year Funded:** 2014/2015

*Capital Improvement Project Profile*

**Department:**  
Major/Local Streets

**Project Category:**  
Sidewalks

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**Project Title:** Safe Routes to School Phase III

**Project Description:** Install sidewalks in various locations to provide safer routes to the schools and promote healthier and more active lifestyles by encouraging kids to walk and ride their bikes to school. Phase III will include sidewalk in seven locations. Descriptions for each project location are below:

- ◆ Alvord Street – North side from Murray Street to Main Street and south side from Murray Street to Pine Grove Street
- ◆ Main Street – West side from Front Street to Concord Avenue and east side from Concord Avenue to Kinne Avenue
- ◆ 3<sup>rd</sup> Avenue – South side from Scott Street to Murray Street
- ◆ Pine Grove Street – West side from Alvord Street to 2<sup>nd</sup> Avenue
- ◆ Ryan Road – West side from Concord Avenue to Kinne Avenue
- ◆ Kinne Avenue – North side from Main Street to Webster Street
- ◆ Concord Avenue – South side from Main Street to approximately 2,000' east

**Project Justification/Need:** There are several locations within the Village that do not have sidewalks and kids are forced to use the roadway if they walk or ride their bikes to school.

**Project Benefit/Impact:** Sidewalk will be installed in areas where it is greatly needed and the Village will be able to promote a safer and more walkable community.

**Project Cost:** \$283,000 (see detailed cost estimate on appendix A – 9)

**Project Funding Source:** Safe Routes to School Program, Major and Local Streets fund

**Project Priority:** High - Village will apply for funding for phase III after phase II is complete

**Fiscal Year Funded:** 2014/2015

*Capital Improvement Project Profile*

**Department:**  
Major Street

**Project Category:**  
Reconstruction

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**Project Title:** Reconstruct Robinson Avenue and Main Street Intersection

**Project Description:** Reconstruct the intersection of Robinson Avenue and Main Street to remove the slope on Robinson Avenue and provide better sight distance when looking south on Main Street from Robinson Avenue. This project would require the purchase of right-of-way and the construction of a retaining wall.

**Project Justification/Need:** There is poor visibility to the south on Main Street, which can increase the likelihood of a car accident occurring at this location.

**Project Benefit/Impact:** The reconstruction of this intersection will provide optimal sight distance in all directions and minimize the amount of accidents at this location.

**Project Cost:** \$150,000

**Project Funding Source:** This project would be eligible for funding through the MDOT Safety program.

**Project Priority:** Medium

**Fiscal Year Funded:** Beyond 5 years

*Capital Improvement Project Profile*

**Department:**  
Local Streets

**Project Category:**  
Reconstruction

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**Project Title:** Ryan Road Reconstruction

**Project Description:** Reconstruct Ryan Road to upgrade from a gravel road to a paved road. Project will include addressing drainage issues and tree removals.

**Project Justification/Need:** Ryan Road costs approximately \$5,000 each year to maintain and control the dust on this gravel road. It would cost less to maintain it as a paved road.

**Project Benefit/Impact:** This project will eliminate the need to maintain dust and it will reduce the costs spent on maintaining this road each year. If municipal water/sewer services are anticipated in the future, including them in this project will reduce the overall costs and prevent tearing up the roadway in the future.

**Project Cost:** \$150,000

**Project Funding Source:** Local Streets Fund

**Project Priority:** Low

**Fiscal Year Funded:** Beyond five years

## **V. WATER**

The capital improvements program for water is designed to provide a reliable supply of high quality water to the community. The Village water system includes a 250,000 gallon elevated water tower located on Concord Avenue, a 300,000 gallon water tower located on French Avenue, three wells, over 18 miles of water mains and approximately 145 hydrants. The Village completed the installation of two iron treatment plants in 2008. The Village's water main system is comprised of approximately 50% asbestos cement pipe, 35% ductile iron pipe and 15% plastic pipe. Asbestos cement pipe is no longer used for new water main and can be more susceptible to breaking with age and when digging near the pipe, however, there are no health issues associated with it and there is no need to replace it. The Village continues to monitor the water supply to assure that the system provides water that is within the contaminant levels established by the MDEQ.

The Village last updated their water system reliability study in 2002 for a ten year duration. The MDEQ recommends an updated study every five years. Since most of the improvements recommended in the latest study have been completed and it has been over five years since the last study, the Village should budget to have this study updated in the next year.

**VILLAGE OF MATTAWAN  
SUMMARY OF HISTORICAL REVENUE AND EXPENSES  
Water Fund**

	2006/2007 Actual	2007/2008 Actual	2008/2009 Actual	2009/2010 Budgeted	2010/1011 Projected
Revenue	\$652,266.09	\$782,998.00	\$712,509.00	\$644,000.00	\$644,000.00
Administration	\$119,742.56	\$111,057.73	\$36,382.56	\$43,550.00	\$45,000.00
Distribution	208,561.43	175,839.01	224,460.86	309,100.00	250,000.00
Installations	9,783.49	23,810.69	62,529.61	66,733.00	66,550.00
Capital Improvements	64,130.56	5,223.70	161,870.31	55,000.00	0.00
Debt Service	29,550.00	33,842.36	57,939.98	45,450.00	45,450.00
Principal Payments	0.00	0.00	30,000.00	36,000.00	36,000.00
Total Expenses	\$431,768.04	\$349,773.49	\$573,183.32	\$555,833.00	\$443,000.00
Annual Income after Expenses Available for Capital Improvements					\$201,000.00

Project Profile Sheets of each project follows and detailed cost estimates can be found in Appendix A.

*Capital Improvement Project Profile*

**Department:**  
Water

**Project Category:**  
Hydrants

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**Project Title:** Hydrant Replacement

**Project Description:** Replace old Traverse City hydrants with new hydrants.

**Project Justification/Need:** There are 26 old hydrants that need to be replaced because the pin that connects the stem to the valve on each of these hydrants is rusted. As a result, the valve will open, but not always close.

**Project Benefit/Impact:** By replacing the old hydrants with new hydrants, the Village will be able to utilize and flush all hydrants without wasting water and using manpower to turn the hydrants off. Five hydrants will be replaced each year until all of the old hydrants have been replaced.

**Project Cost:** \$5,000

**Project Funding Source:** Water Fund

**Project Priority:** High

**Fiscal Year Funded:** Each year

*Capital Improvement Project Profile*

**Department:**  
Water

**Project Category:**  
Water Tower

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**Project Title:** Concord Avenue Water Tower Maintenance and Coating Repairs

**Project Description:** Provide routine maintenance and coating repair work as listed below.

**Project Justification/Need:** The Concord Avenue water tower was last repainted in 1997 and last inspected in 2009 by Dixon Engineering, Inc. The recommendations in the recent inspection report should be completed within 1-2 years. These recommendations include the following:

- ◆ High pressure water clean, spot power tool clean with vacuum attachments and recoat exterior with polyurethane system
- ◆ Spot power tool clean and spot coat dry interior using an epoxy polyamide system
- ◆ Install a floating-type cathodic protection system in the interior
- ◆ Seal the foundation surface with epoxy coating
- ◆ Install a screened flap gate on the overflow pipe
- ◆ Remove painter's rail that is inside the hand rail and weld plates with couplings at the safety grabs outside the hand rail
- ◆ Replace the 2 roof hatches with 30 in. hatches
- ◆ Replace condensate platform opening with 30 in. opening with lid
- ◆ Enlarge opening in top platform and install hinged lid over top
- ◆ Replace roof vent with new frost-free pressure-vacuum vent
- ◆ Install fall prevention device on wet interior ladder
- ◆ Install attachment lug to bottom of bowl
- ◆ Remove existing condensate drain line and install new drain line with check valve to overflow pipe
- ◆ Remove the dresser coupling expansion joint and replace with bellows-type joint
- ◆ Cover top 2 ft. of fill pipe insulation and area on back at top platform with aluminum cover

**Project Benefit/Impact:** The recommended improvements will help prolong the life of the water tower and minimize future maintenance costs.

**Project Cost:** \$112,000 (see detailed cost estimate on appendix A – 12)

**Project Funding Source:** Water Fund

**Project Priority:** High

**Fiscal Year Funded:** 2010/2011

*Capital Improvement Project Profile*

**Department:**  
Water

**Project Category:**  
Well, Water Main

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**Project Title:** ICE Funded Project

**Project Description:** Drill and develop Well 4 at the 25<sup>th</sup> Street location in the same well field as Well 3. Install water main from dead end on West Robinson Avenue to west of Glidden Street to include bore and jack underneath the railroad.

**Project Justification/Need:** The existing three wells in the Village have a firm capacity of 1,100 gallons per minute, which was sufficient to meet the peak day demand in 2002 when the Village's Water System Master Plan was completed. The peak day demand at that time was anticipated to increase to 1,185 gallons per minute by 2012. The ISO recommended duration for fire flow is 3 hours for 3,000 gallons per minute fire flow, which could not be met in 2002. Additional well capacity is needed to resolve this deficiency. Water main dead ends should be looped into the water system whenever possible to provide customers with the greatest quality of water and improve the reliability of the water system.

**Project Benefit/Impact:** A new well will add additional capacity to the water system and meet ISO recommendations. This project will improve the water quality and increase the reliability of the water system on West Robinson Avenue.

**Project Cost:** \$788,000

**Project Funding Source:** MEDC ICE Funds - \$543,000, Water Fund - \$245,000

**Project Priority:** High

**Fiscal Year Funded:** 2010/2011

*Capital Improvement Project Profile*

**Department:**  
Water

**Project Category:**  
Water Tower

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**Project Title:** Altitude Valve

**Project Description:** Purchase and install altitude valve at Concord Avenue Water Tower.

**Project Justification/Need:** Since the French Avenue water tower was constructed, the top 3 feet of the Concord Avenue water tower has not been utilized because the water towers are not at the same elevation.

**Project Benefit/Impact:** An altitude valve will allow the Village to utilize the entire volume of the Concord Avenue water tower.

**Project Cost:** \$10,000

**Project Funding Source:** Water Fund

**Project Priority:** High

**Fiscal Year Funded:** 2010/2011

*Capital Improvement Project Profile*

**Department:** Water  
**Project Category:** Water Main Looping

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**Project Title:** Loop East McGillen Avenue with Freedom Lane

**Project Description:** Install 12” water main to loop East McGillen Avenue with Freedom Lane.

**Project Justification/Need:** Water main dead ends should be looped into the water system whenever possible to provide customers with the greatest quality of water and improve the reliability of the water system.

**Project Benefit/Impact:** This project will improve the water quality and increase the reliability of the water system on the end of East McGillen Avenue and in the business park located on Freedom Lane.

**Project Cost:** \$50,000

**Project Funding Source:** Water Fund

**Project Priority:** Medium

**Fiscal Year Funded:** 2011/2012

*Capital Improvement Project Profile*

**Department:**  
Water

**Project Category:**  
Water Tower

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**Project Title:** Concord Avenue Water Tower Concrete Slab

**Project Description:** Grade sand floor inside water tower base and pour a 6" thick concrete slab. Pour a concrete splash pad for the overflow.

**Project Justification/Need:** The inside of the Concord Avenue water tower has a sand base and there is dust on the walls and controls. The overflow on the outside of the water tower does not have a splash pad.

**Project Benefit/Impact:** A concrete slab will eliminate the dust problems inside the water tower and minimize dust and debris on and around the water tower controls. A splash pad will help guide water from the overflow away from the water tower and foundation and reduce the amount of soil erosion where the overflow outlets outside of the water tower.

**Project Cost:** \$1,500

**Project Funding Source:** Water Fund

**Project Priority:** Medium

**Fiscal Year Funded:** 2012/2013

## **VI. SANITARY SEWER**

The Village’s sanitary sewer system consists of 6 submersible lift stations and several miles of sanitary sewer and forcemain. The Village pumps its sanitary sewer to the City of Kalamazoo for treatment. The sanitary sewer capital improvements program provides for the repair, replacement and installation of the Village’s sanitary sewers and forcemain and necessary upgrades to the Village’s six lift stations.

**VILLAGE OF MATTAWAN  
 SUMMARY OF HISTORICAL REVENUE AND EXPENSES  
 Sewer Fund**

	2006/2007 Actual	2007/2008 Actual	2008/2009 Actual	2009/2010 Budgeted	2010/1011 Projected
Revenue	\$1,007,373.92	\$835,219.00	\$739,785.00	\$863,000.00	\$865,000.00
Administration	\$291,011.26	\$280,760.65	\$36,281.88	\$43,080.00	\$40,000.00
Distribution	272,682.15	358,342.41	360,893.27	321,979.00	350,000.00
Installations	2,265.58	2,442.64	8,094.70	10,280.00	10,000.00
Capital Improvements	0.00	0.00	244,093.03	15,000.00	0.00
Debt Service	308,037.50	303,762.50	301,530.00	357,490.00	357,490.00
Principal Payments	0.00	94,000.00	94,000.00	94,000.00	94,000.00
Total Expenses	\$873,996.49	\$1,039,308.20	\$1,044,892.88	\$841,829.00	\$851,490.00
Annual Income after Expenses Available for Capital Improvements					\$13,510.00

Project Profile Sheets of each project follows.

*Capital Improvement Project Profile*

**Department:**  
Sanitary Sewer

**Project Category:**  
Manholes

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**Project Title:** Chimney Seals for Sanitary Sewer Manholes

**Project Description:** Purchase and install chimney seals inside sanitary sewer manholes.

**Project Justification/Need:** When the sanitary sewer manholes were constructed, the adjustment rings to bring the manhole covers to road grade were not cemented when they were installed, which has resulted in fines being washed into the manholes. The outcome has been that the roadways are sinking at sanitary sewer manhole locations.

**Project Benefit/Impact:** The Village recently purchased 10 flexible frame chimney seals to test out this year and they each are anticipated to take approximately 2 hours to install. The chimney seals are expected to prevent the infiltration and corresponding settlement around the manholes. Once the chimney seals are tested, the Village will install 10 chimney seals each year if the Village decides to install in all sinking manholes.

**Project Cost:** \$2,500

**Project Funding Source:** Sanitary Sewer Fund

**Project Priority:** Medium

**Fiscal Year Funded:** 2010/2011

*Capital Improvement Project Profile*

**Department:**  
Sanitary Sewer

**Project Category:**  
Planning

---

**Project Title:** Feasibility Study

**Project Description:** Prepare a feasibility study on the sanitary sewer system to evaluate the costs and impacts for the Village to treat its own sewage.

**Project Justification/Need:** There have been discussions for Mattawan to have its own sanitary sewer treatment because of increasing costs to send the Village's sewage to the City of Kalamazoo. The City of Kalamazoo is planning to reline the forcemain from the Village to 12<sup>th</sup> Street in Kalamazoo where the Village's sewage enters the City's sanitary sewer system. The cost for relining will be billed to the Village of Mattawan upon completion. A feasibility study should be completed before the City of Kalamazoo has the forcemain relined.

**Project Benefit/Impact:** The study will evaluate the different alternatives for treating the Village's sewage long term and identify the direct and indirect impacts a sanitary sewer treatment system would have if the Village constructed its own facilities.

**Project Cost:** \$15,000

**Project Funding Source:** Sanitary Sewer Fund – If the Village decides to construct its own treatment facilities, funding should be applied for through the United States Department of Agriculture (USDA) Rural Development program or Michigan Department of Environmental Quality (MDEQ) State Revolving Fund program

**Project Priority:** High

**Fiscal Year Funded:** 2010/2011

## VII. MOTOR POOL

The capital improvements plan for motor pool the purchase of transportation and maintenance equipment for the use mainly by the Department of Public Works. Included would be purchases such as trucks, attachments for maintenance vehicles, snow plows, hauling equipment, and machinery used for maintenance.

**VILLAGE OF MATTAWAN  
 SUMMARY OF HISTORICAL REVENUE AND EXPENSES  
 Motor Pool Fund**

	2006/2007 Actual	2007/2008 Actual	2008/2009 Actual	2009/2010 Budgeted	2010/1011 Projected
Revenue	\$121,361.00	\$131,893.00	\$130,912.00	\$130,625.00	\$130,000.00
Administration	\$55,477.23	\$65,620.75	\$35,760.64	\$41,040.00	\$42,000.00
DPW Op. Expense	62,004.46	64,154.71	44,836.39	59,600.00	60,000.00
Total Expenses	\$117,481.69	\$129,775.46	\$80,597.03	\$100,640.00	\$102,000.00
Annual Income after Expenses Available for Capital Improvements					\$28,000.00

Project Profile Sheets of each project follows.

*Capital Improvement Project Profile*

**Department:**  
Motor Pool

**Project Category:**  
Transportation

---

**Project Title:** Purchase Pickup Truck

**Project Description:** Purchase a new truck for the Department of Public Works.

**Project Justification/Need:** This truck will replace a 2000 pickup truck that is in need of replacement.

**Project Benefit/Impact:** The purchase of a new truck will decrease the amount of money spent on maintaining the existing 2000 pickup truck. The new truck can be purchased with a bucket that will raise to help the maintenance crews trim tree branches and reach areas well above ground level.

**Project Cost:** \$40,000

**Project Funding Source:** Motor Pool Fund

**Project Priority:** Medium

**Fiscal Year Funded:** 2010/2011

*Capital Improvement Project Profile*

**Department:**  
Motor Pool

**Project Category:**  
Maintenance Equipment

---

**Project Title:** Bobcat or Hydrostatic Unit with Attachments

**Project Description:** Purchase a bobcat or hydrostatic unit for the Village Department of Public Works.

**Project Justification/Need:** The DPW currently has a 10 year old piece of Kubota equipment, which does not have all of the features and capabilities as a newer bobcat or other hydrostatic unit.

**Project Benefit/Impact:** A bobcat has various capabilities and different attachment pieces can be purchased for different uses.

**Project Cost:** \$85,000

**Project Funding Source:** Motor Pool Fund

**Project Priority:** Medium

**Fiscal Year Funded:** 2011/2012

*Capital Improvement Project Profile*

**Department:** Motor Pool  
**Project Category:** Maintenance Equipment

---

**Project Title:** Portable Hoist Unit

**Project Description:** Purchase a portable hoist unit for the DPW building.

**Project Justification/Need:** A portable hoist unit will allow the DPW to hoist up vehicles to perform maintenance on all of their vehicles and equipment.

**Project Benefit/Impact:** The DPW personnel will be able to better access the undercarriage of vehicles to provide routine maintenance services, which will save time. Also maintenance costs may be reduced by having the capability to do minor repairs in house.

**Project Cost:** \$40,000

**Project Funding Source:** Motor Pool Fund

**Project Priority:** Medium

**Fiscal Year Funded:** 2012/2013

## ***VIII. BUILDINGS AND GROUNDS***

The capital improvements plan for buildings and grounds includes the upgrade, expansion and renovation of Village owned properties and buildings. Included would be projects such as landscaping, HVAC improvements and building expansion.

Project Profile Sheets of each project follows.

*Capital Improvement Project Profile*

**Department:**  
Buildings and Grounds

**Project Category:**  
Building Improvements

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**Project Title:** Village Energy Consumption Evaluation

**Project Description:** Each of the Village buildings, with the exception of the old DPW building, will be evaluated to determine if the Village is spending more on their bills than they should be. Past Village utility bills will be reviewed with the costs that are typical for buildings of the same size and recommendations will be provided.

**Project Justification/Need:** The Village has been paying much higher energy bills since the DPW moved into their new building. The new building is much larger than their previous building and the Village is concerned that they are overpaying on their bills.

**Project Benefit/Impact:** An initial walkthrough of the Village buildings determined that energy efficient improvements done on the Village buildings would take longer to pay for themselves, but further evaluation would be required. Projects performed to reduce energy costs have the potential to pay for themselves over the course of 3-5 years on average. By minimizing the amount of energy used, the Village will also reduce their carbon footprint. There are also grants available to help pay for energy efficient projects.

**Project Cost:** \$1,200

**Project Funding Source:** General Fund

**Project Priority:** Medium

**Fiscal Year Funded:** 2010/2011

*Capital Improvement Project Profile*

**Department:**  
Buildings and Grounds

**Project Category:**  
Building Improvements

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**Project Title:** Old DPW Building Energy Audit

**Project Description:** Conduct an energy audit for the old DPW building.

**Project Justification/Need:** An energy audit will evaluate energy consumption for the old DPW building to determine what can be done to reduce costs due to loss of energy in the event the Village wishes to utilize the building for future office space.

**Project Benefit/Impact:** Projects performed to reduce energy costs usually pay for themselves over the course of 3-5 years on average. By minimizing the amount of energy used, the Village will also reduce their carbon footprint. There are also grants available to help pay for energy efficient projects.

**Project Cost:** \$1,500

**Project Funding Source:** General Fund

**Project Priority:** Low

**Fiscal Year Funded:** Not included in 5 year CIP, however, should be done if the Village wishes to utilize the old dpw building.

*Capital Improvement Project Profile*

**Department:**  
Buildings and Grounds

**Project Category:**  
Building Improvements

---

**Project Title:** Old DPW Building Renovation

**Project Description:** Renovation and upgrade of the old DPW building to be used for additional office space, restroom facilities, a trailhead or other use as determined by the needs of Village staff and the community.

**Project Justification/Need:** The old DPW building currently does not provide a use other than storage as needed for the police patrol cars. It may be cheaper to renovate the building as opposed to expanding or constructing another building.

**Project Benefit/Impact:** A Village owned building that currently does not serve a purpose will be utilized. The building is located adjacent to Village Hall, downtown, and a walkable distance to Mattawan Memorial Park.

**Project Cost:** To be determined

**Project Funding Source:** General Fund

**Project Priority:** Low

**Fiscal Year Funded:** Not included in 5 year CIP, however, should be considered if the Village wishes to utilize the old DPW building or funding becomes available.

## ***IX. PARKS AND RECREATION***

The capital improvements program for parks and recreation reflects the desire of the community to maintain and enhance the quality of life for the citizens of Mattawan. The Village adopted a 5-year Community Recreation Plan in 2009 that has been approved by the Michigan Department of Natural Resources (MDNR). By having a Community Recreation Plan approved by the MDNR, the Village can apply for funding for various types of recreational projects. The deadline for the Michigan Natural Resources Trust Fund is April 1 of each year and requires a minimum local match of 25%. Grants can be applied for either land acquisition or development projects.

Three goals were identified in the Community Recreation Plan. The first goal was to encourage recreational use by providing open space and trail systems that provide a range of recreational opportunities and enhances the overall image and appearance in Mattawan. This can be achieved by preserving and enhancing existing open space resources, encouraging developers to include parks and trail segments in new developments and acquiring vacant land for recreational use.

Another goal is to provide a non-motorized trail system within the Village that encourages walking and biking throughout the community. This can be achieved by constructing non-motorized trail segments within the Village as part of large projects along proposed future trail routes, working with Mattawan Schools to provide a paved walk and bike path that provides easier access to the schools for students, connecting existing sidewalk to the proposed future trail system, and connecting the north and south parts of the Village by constructing a crossing over I-94 as part of the bridge widening project in 2015. The Village has completed the requirements of MDOT's Safe Routes to School funding program to be eligible to apply for funding for new sidewalks and pedestrian safety improvements at roadway crossings. The project was broken into 3 phases and funding has been applied for phase 1 of this project. Project profile sheets were included for all three phases in the Transportation section of this Plan.

The final goal that resulted from the Village's Community Recreation Plan was to acquire land for a new park within the Village that can be used for a variety of recreational uses that can not currently be met with the existing size and resources available at Mattawan Memorial Park. The property that is selected shall be large enough to develop a new park that has all of the proposed future recreational features as outlined in the Action Plan section of the Community Recreation Plan and with room for additional amenities in the future. The Village will consider seeking funding through the MDNR unless the land is donated.

*Capital Improvement Project Profile*

**Department:**  
Parks and Recreation

**Project Category:**  
Land Acquisition

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**Project Title:** Land Purchase

**Project Description:** Purchase a parcel of land that is large enough to accommodate the development of a new park for the Village.

**Project Justification/Need:** The Village's existing park, Mattawan Memorial Park, is very small in size and is limited in the recreational opportunities it can offer. The development of a new park was one of the main goals identified in the Village's 5 year Community Recreation Plan.

**Project Benefit/Impact:** The project will make it possible for the Village to provide the community with other recreational opportunities that just are not possible with the existing park, such as sports field, a water spray park, or a large picnic pavilion. The wellbeing and health of the community will benefit greatly with additional recreational choices.

**Project Cost:** To be determined

**Project Funding Source:** General Fund or Michigan Natural Resources Trust Fund

**Project Priority:** Medium

**Fiscal Year Funded:** Not included in the current 5 year CIP, however, should be considered if the right property becomes available.

## ***X. FUNDING***

Listed below are various funding opportunities, with descriptions and project examples that the Village can apply for. There are several other sources of funding not listed below, but the ones included are the programs the Village would most likely seek funding from.

### MDOT Small Urban Program:

The Village of Mattawan is included in the Paw Paw Small Urbanized Area Task Force which also includes the Villages of Lawton and Paw Paw. Road projects located on federal aid eligible routes are eligible for funding. These routes include all streets in the Village's major streets department. A local match of 20 percent is required and up to \$375,000 can be requested per project. The Village must compete with the other projects within the Paw Paw Small Urbanized Area Task Force for funding priority.

### MDOT Transportation Enhancement Program:

Eligible projects for funding include non-motorized transportation, transportation aesthetics, and historic preservation. A local match of at least 20 percent is required, though the average match is 32 percent and the match amount is a factor in determining which applications are selected for funding. Projects that the Village of Mattawan would be eligible to apply for would include non-motorized trails, streetscapes and new sidewalk.

### MDOT Safe Routes to School Program:

This program is typically administered by the school, but a team of members from the community are involved in the process. Projects eligible for funding would include sidewalk, pedestrian and bicycle crossing improvements, public awareness campaigns and traffic education. The purpose of this federal program is to make it safe, convenient and fun for children to bicycle and walk to school. There is no local match for this program but a school-based planning process must be completed as a prerequisite for funding. The Village is already participating in this program and has applied for funding for the first phase of improvements.

### MDNR Michigan Natural Resources Trust Fund:

Eligible park and recreational projects for funding include land acquisition, picnic areas, playgrounds, and trails. A local match of at least 25 percent is required, but projects with higher matches may rate more

***VILLAGE OF MATTAWAN  
CAPITAL IMPROVEMENTS PLAN***

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favorably. There is a minimum \$15,000 grant request on all development projects. The funding application is due April 1 of each year for development and land acquisition projects. A second deadline for land acquisition projects is August 1 of each year. Beginning in 2010, applications for land acquisition projects will be encouraged to be submitted for the April 1 deadline and may have a better chance of receiving funding over projects submitted by the August 1 deadline.

**MDNR Land and Water Conservation Fund:**

Eligible park and recreational projects for funding include trailways, picnic areas, playgrounds, tennis courts and skate parks. A local match of exactly 50 percent is required. There is a minimum \$30,000 and maximum \$75,000 grant request. The funding application is due March 1 of each year.

**MEDC Community Development Block Grant:**

Eligible projects for funding include infrastructure improvements that will directly lead to the creation of permanent jobs for low-to-moderate income persons. At least 10 full-time equivalent jobs must be created as a result of a project and up to \$10,000 will be provided in funds for each job. The Village should consider applying for funds if a new business plans to open within the Village. Projects the Village could apply for would include streetscapes and water and sanitary sewer upgrades or expansion.

**MEDC Infrastructure Capacity Enhancement (ICE) Grant:**

The Village of Mattawan is an eligible community where 51 percent of the population is comprised of low- and moderate-income residents as defined by the U.S. Department of Housing and Urban Development (HUD). The funds may be used to upgrade existing public water and sewer infrastructure systems by replacing deteriorating or obsolete systems or by adding capacity to existing but burdened systems. A grant request up to \$750,000 can be applied for and projects are awarded more favorably to communities with greater match funds. The Village received this grant in 2009 that will be used for a new well and several water main upgrades in the fiscal year 2010/2011.

**MDOT Congestion Mitigation and Air Quality (CMAQ) Improvement Program:**

CMAQ funding is intended to reduce emissions from transportation-related sources. CMAQ can be used for a wide variety of projects including: traffic signal modifications, the construction of dedicated turn lanes, the construction of roundabouts, non-motorized trails. Most CMAQ projects require a 20% local match, however, there are some projects that do not require a match such as signal retiming and roundabouts. There is a yearly call for projects and Van Buren County receives its own pot of money. The next call for projects is for 2012 and should be in early 2010.

## APPENDIX A

### DETAILED COST ESTIMATES

◆ Safe Routes to School - Phase 1	A - 1
◆ Cole Avenue and Main Street Intersection	A - 3
◆ Safe Routes to School - Phase 2	A - 4
◆ W. McGillen Avenue Turn Lanes	A - 7
◆ E. McGillen Avenue Reconstruction	A - 8
◆ Safe Routes to School - Phase 3	A - 9
◆ Concord Avenue Water Tower Improvements	A - 12
◆ ICE Funded Water System Improvements	A - 13

**VILLAGE OF MATTAWAN**  
**SAFE ROUTES TO SCHOOL - PHASE I**  
**PRELIMINARY COST ESTIMATE**  
**August 19, 2009**

**School Property**

5' wide sidewalk from Western Avenue to Murray Street and on the west and north sides of the elementary school, including a small creek crossing northwest of the elementary school.

1	L.S.	Mobilization	@	\$15,000.00	\$15,000.00
1	L.S.	Traffic Maintenance and Control	@	1,000.00	1,000.00
20	EA	Tree Removal	@	300.00	6,000.00
1,000	FT	Silt Fence	@	3.00	3,000.00
5,600	FT	Bicycle Path, Grading	@	4.00	22,400.00
28,000	SFT	Concrete Sidewalk, 4"	@	3.00	84,000.00
70	SFT	ADA Ramps	@	10.00	700.00
1	L.S.	Creek Crossing (approximately 10' span)	@	10,000.00	10,000.00
25	Ton	HMA, 36A	@	250.00	6,250.00
<b><i>SUBTOTAL ESTIMATED CONSTRUCTION COST - SCHOOL PROPERTY</i></b>					<b><i>\$148,350.00</i></b>

**McGillen Avenue**

5' wide sidewalk from the middle school northeast to McGillen Avenue and on the south side of McGillen Avenue from the school entrance to Main Street, including a small creek crossing on the south side of McGillen Avenue, east of the school entrance.

1	L.S.	Mobilization	@	\$10,000.00	\$10,000.00
1	L.S.	Traffic Maintenance and Control	@	2,000.00	2,000.00
300	SYD	Pavement Removal	@	3.50	1,050.00
50	FT	Curb and Gutter Remove	@	8.00	400.00
500	FT	Silt Fence	@	3.00	1,500.00
3,000	FT	Bicycle Path, Grading	@	4.00	12,000.00
15,000	SFT	Concrete Sidewalk, 4"	@	3.00	45,000.00
175	SFT	ADA Ramps	@	10.00	1,750.00
50	FT	Conc Curb and Gutter Replacement	@	20.00	1,000.00
3,000	SFT	Conc Driveway Replacement	@	5.00	15,000.00
10	Ton	HMA Driveway Replacement	@	125.00	1,250.00
1	L.S.	Creek Crossing (approximately 10' span)	@	10,000.00	10,000.00
2	Ton	HMA, 36A	@	250.00	500.00
200	FT	Striping	@	3.25	650.00
<b><i>SUBTOTAL ESTIMATED CONSTRUCTION COST - MCGILLEN AVENUE</i></b>					<b><i>\$102,100.00</i></b>

**Murray Street**

5' wide sidewalk on the east side of Murray Street from McGillen Avenue to the south, to approximately 100' northwest of Alvord Street, and on the west side across from Alvord Street, including a small creek crossing on the east side of Murray Street near the elementary school.

1	L.S.	Mobilization	@	\$4,400.00	\$4,400.00
1	L.S.	Traffic Maintenance and Control	@	1,500.00	1,500.00
200	FT	Silt Fence	@	3.00	600.00
1,300	FT	Bicycle Path, Grading	@	4.00	5,200.00
6,500	SFT	Concrete Sidewalk, 4"	@	3.00	19,500.00
175	SFT	ADA Ramps	@	10.00	1,750.00
1	L.S.	Creek Crossing (approximately 10' span)	@	10,000.00	10,000.00
2	Ton	HMA, 36A	@	250.00	500.00
200	FT	Striping	@	3.25	650.00
<b><i>SUBTOTAL ESTIMATED CONSTRUCTION COST - MURRAY STREET</i></b>					<b><i>\$44,100.00</i></b>

**VILLAGE OF MATTAWAN**  
**SAFE ROUTES TO SCHOOL - PHASE I**  
**PRELIMINARY COST ESTIMATE**  
*August 19, 2009*

<i>TOTAL ESTIMATED CONSTRUCTION COST</i>	\$294,550.00
Contingency (10%+/-)	30,450.00
Design Engineering	21,000.00
Construction Engineering	24,000.00
<b><i>TOTAL ESTIMATED PROJECT COST</i></b>	<b><i>\$370,000.00</i></b>

Fiscal Year Funded	2010/2011
203 - Local Street	\$37,725.00
202 - Major Street	\$37,725.00
591 - Water	
590 - Sewer	
661 - Motor Pool	
101 - General	
Safe Routes 2 School Grant	\$294,550.00
Total	\$370,000.00

***VILLAGE OF MATTAWAN  
 COLE AVENUE AND MAIN STREET  
 RECONSTRUCT INTERSECTION  
 PRELIMINARY COST ESTIMATE  
 January 7, 2010***

Grinding	\$9,800.00
Grading	17,600.00
Gravel	28,000.00
HMA, 2" (Base)	53,000.00
HMA, 2" (Top)	53,000.00
HMA, 3" (Bike path)	12,000.00
Striping	1,600.00
Tree Replacement	1,500.00
Traffic Lights	72,000.00
Restoration	6,000.00
2100 Ft 12" Water Main	105,000.00
6" Hydrant Valve and Box	14,000.00
Ductile Iron Fittings	2,500.00
12" Valves	6,000.00
Restoration	10,500.00
Traffic Control	10,000.00
<b><i>TOTAL ESTIMATED CONSTRUCTION COST</i></b>	<b><i>\$402,500.00</i></b>
<i>TOTAL ESTIMATED CONSTRUCTION COST</i>	
<i>Contingency (10%+/-)</i>	<i>40,300.00</i>
<b><i>TOTAL ESTIMATED PROJECT COST</i></b>	<b><i>\$442,800.00</i></b>

\* The estimated construction costs were provided by the Village

Fiscal Year Funded	2011/2012
203 - Local Street	
202 - Major Street	
591 - Water	
590 - Sewer	
661 - Motor Pool	
101 - General	
Local Development Financing Authority	\$442,800.00
Total	\$442,800.00

**VILLAGE OF MATTAWAN**  
**SAFE ROUTES TO SCHOOL - PHASE II**  
**PRELIMINARY COST ESTIMATE**  
**August 19, 2009**

**Farthing Drive**

5' wide sidewalk on the north and west sides of Farthing Drive from Scott Street to Front Street.

1	L.S.	Mobilization	@	\$2,900.00	\$2,900.00
1	L.S.	Traffic Maintenance and Control	@	1,000.00	1,000.00
20	SYD	Pavement Removal	@	3.50	70.00
3	EA	Tree Removal	@	300.00	900.00
100	FT	Silt Fence	@	3.00	300.00
900	FT	Bicycle Path, Grading	@	4.00	3,600.00
4,500	SFT	Concrete Sidewalk, 4"	@	3.00	13,500.00
70	SFT	ADA Ramps	@	10.00	700.00
25	Ton	HMA Driveway Replacement	@	125.00	3,125.00
10	Ton	HMA, 36A	@	250.00	2,500.00
75	FT	Striping	@	3.25	243.75
<b><i>SUBTOTAL ESTIMATED CONSTRUCTION COST - FARTHING DRIVE</i></b>					<b><i>\$28,838.75</i></b>

**4th Avenue**

5' wide sidewalk on the south side of 4th Avenue from Scott Street to Murray Street.

1	L.S.	Mobilization	@	\$1,600.00	\$1,600.00
1	L.S.	Traffic Maintenance and Control	@	500.00	500.00
1	EA	Tree Removal	@	300.00	300.00
60	SYD	Pavement Removal	@	3.50	210.00
50	FT	Silt Fence	@	3.00	150.00
400	FT	Bicycle Path, Grading	@	4.00	1,600.00
2,000	SFT	Concrete Sidewalk, 4"	@	3.00	6,000.00
70	SFT	ADA Ramps	@	10.00	700.00
400	SFT	Conc Driveway Replacement	@	5.00	2,000.00
20	Ton	HMA Driveway Replacement	@	125.00	2,500.00
2	Ton	HMA, 36A	@	250.00	500.00
150	FT	Striping	@	3.25	487.50
<b><i>SUBTOTAL ESTIMATED CONSTRUCTION COST - 4TH AVENUE</i></b>					<b><i>\$16,547.50</i></b>

**VILLAGE OF MATTAWAN**  
**SAFE ROUTES TO SCHOOL - PHASE II**  
**PRELIMINARY COST ESTIMATE**  
*August 19, 2009*

**Scott Street**

5' wide sidewalk on the west side of Scott Street from 4th Avenue to Front Street.

1	L.S.	Mobilization	@	\$3,000.00	\$3,000.00
1	L.S.	Traffic Maintenance and Control	@	1,000.00	1,000.00
10	EA	Tree Removal	@	300.00	3,000.00
30	SYD	Pavement Removal	@	3.50	105.00
100	FT	Silt Fence	@	3.00	300.00
850	FT	Bicycle Path, Grading	@	4.00	3,400.00
4,300	SFT	Concrete Sidewalk, 4"	@	3.00	12,900.00
140	SFT	ADA Ramps	@	10.00	1,400.00
40	Ton	HMA Driveway Replacement	@	125.00	5,000.00
2	Ton	HMA, 36A	@	250.00	500.00
75	FT	Striping	@	3.25	243.75
<b><i>SUBTOTAL ESTIMATED CONSTRUCTION COST - SCOTT STREET</i></b>					<b><i>\$30,848.75</i></b>

**Front Street**

5' wide sidewalk on the north side of Front Street from Farthing Street to Main Street and on the south side from Glidden Street to Western Avenue, including flashing lights at Western Avenue and at Farthing Street.

1	L.S.	Mobilization	@	\$16,800.00	\$16,800.00
1	L.S.	Traffic Maintenance and Control	@	3,000.00	3,000.00
20	EA	Tree Removal	@	300.00	6,000.00
150	SYD	Pavement Removal	@	3.50	525.00
850	SYD	Sidewalk, Rem	@	8.00	6,800.00
150	FT	Curb and Gutter Remove	@	8.00	1,200.00
500	FT	Silt Fence	@	3.00	1,500.00
4,600	FT	Bicycle Path, Grading	@	4.00	18,400.00
23,000	SFT	Concrete Sidewalk, 4"	@	3.00	69,000.00
385	SFT	ADA Ramps	@	10.00	3,850.00
150	FT	Conc Curb and Gutter Replacement	@	20.00	3,000.00
100	SFT	Conc Driveway Replacement	@	5.00	500.00
200	Ton	HMA Driveway Replacement	@	125.00	25,000.00
5	Ton	HMA, 36A	@	250.00	1,250.00
450	FT	Striping	@	3.25	1,462.50
2	EA	Flashing Sign	@	5,000.00	10,000.00
<b><i>SUBTOTAL ESTIMATED CONSTRUCTION COST - FRONT STREET</i></b>					<b><i>\$168,287.50</i></b>

**VILLAGE OF MATTAWAN**  
**SAFE ROUTES TO SCHOOL - PHASE II**  
**PRELIMINARY COST ESTIMATE**  
**August 19, 2009**

Western Avenue

5' wide sidewalk on the east side of Western Avenue from Front Street to the school entrance.

1	L.S.	Mobilization	@	\$4,000.00	\$4,000.00
1	L.S.	Traffic Maintenance and Control	@	1,500.00	1,500.00
20	EA	Tree Removal	@	300.00	6,000.00
	FT	Silt Fence	@	3.00	0.00
1,400	FT	Bicycle Path, Grading	@	4.00	5,600.00
7,000	SFT	Concrete Sidewalk, 4"	@	3.00	21,000.00
70	SFT	ADA Ramps	@	10.00	700.00
2	Ton	HMA, 36A	@	250.00	500.00
<b><i>SUBTOTAL ESTIMATED CONSTRUCTION COST - WESTERN AVENUE</i></b>					<b><u>\$39,300.00</u></b>

<i>TOTAL ESTIMATED CONSTRUCTION COST</i>	\$283,822.50
Contingency (10%+/-)	29,177.50
Design Engineering	20,000.00
Construction Engineering	23,000.00
<b><i>TOTAL ESTIMATED PROJECT COST</i></b>	<b><u>\$356,000.00</u></b>

Fiscal Year Funded	2012/2013
203 - Local Street	\$29,592.77
202 - Major Street	\$42,584.73
591 - Water	
590 - Sewer	
661 - Motor Pool	
101 - General	
Safe Routes 2 School Grant	\$283,822.50
Total	\$356,000.00

**VILLAGE OF MATTAWAN**  
**W. MCGILLEN AVENUE TURN LANES**  
**PRELIMINARY COST ESTIMATE**  
*January 18, 2010*

Add Turn Lane Base Course	\$53,300.00
Grinding	18,000.00
Grading	11,000.00
Overlay	89,200.00
Sidewalk	0.00
Striping	2,250.00
Tree Replacement	7,500.00
Cross Walk Indicator	0.00
New Tube	100,000.00
Curb Removal	1,000.00
Curb Replacement	2,000.00
Tree Removal	15,000.00
Restoration	25,000.00
<b>TOTAL ESTIMATED CONSTRUCTION COST</b>	<b>\$324,250.00</b>

<i>TOTAL ESTIMATED CONSTRUCTION COST</i>	<i>\$324,250.00</i>
Contingency (10%+/-)	32,750.00
Engineering (12%+/-)	43,000.00
<b>TOTAL ESTIMATED PROJECT COST</b>	<b>\$400,000.00</b>

\* The estimated construction costs were provided by the Village

Fiscal Year Funded	2012/2013
203 - Local Street	
202 - Major Street	\$114,400.00
591 - Water	
590 - Sewer	
661 - Motor Pool	
101 - General	
MDEQ CMAQ Funding	\$285,600.00
Total	\$400,000.00

**VILLAGE OF MATTAWAN**  
***E. MCGILLEN AVENUE - EASTERN LIMITS***  
***PRELIMINARY COST ESTIMATE***  
***January 18, 2010***

Grinding	\$19,000.00
Grading	35,500.00
HMA (Base)	110,000.00
HMA (Top)	83,000.00
HMA (Bike path)	60,000.00
Striping	1,500.00
Tree Replacement	7,250.00
Tree Removal	7,250.00
Restoration	16,000.00
Location	7,250.00
<b><i>TOTAL ESTIMATED CONSTRUCTION COST</i></b>	<b><i>\$346,750.00</i></b>

<b><i>TOTAL ESTIMATED CONSTRUCTION COST</i></b>	<b><i>\$346,750.00</i></b>
Contingency (10%+/-)	35,250.00
Engineering (15%+/-)	53,000.00
<b><i>TOTAL ESTIMATED PROJECT COST</i></b>	<b><i>\$435,000.00</i></b>

\* The estimated construction costs were provided by the Village

Fiscal Year Funded	2013/2014
203 - Local Street	
202 - Major Street	\$129,400.00
591 - Water	
590 - Sewer	
661 - Motor Pool	
101 - General	
Funding	\$305,600.00
Total	\$435,000.00

**VILLAGE OF MATTAWAN**  
**SAFE ROUTES TO SCHOOL - PHASE III**  
**PRELIMINARY COST ESTIMATE**  
**August 19, 2009**

Alvord Street

5' wide sidewalk on the north side of Alvord Street from Murray Street to Main Street, and on the south side from Murray Street to Pine Grove Street.

1	L.S.	Mobilization	@	\$5,100.00	\$5,100.00
1	L.S.	Traffic Maintenance and Control	@	1,000.00	1,000.00
120	SYD	Pavement Removal	@	3.50	420.00
500	SYD	Sidewalk, Rem	@	8.00	4,000.00
200	FT	Silt Fence	@	3.00	600.00
1,400	FT	Bicycle Path, Grading	@	4.00	5,600.00
7,000	SFT	Concrete Sidewalk, 4"	@	3.00	21,000.00
70	SFT	ADA Ramps	@	10.00	700.00
600	SFT	Conc Driveway Replacement	@	5.00	3,000.00
75	Ton	HMA Driveway Replacement	@	125.00	9,375.00
2	Ton	HMA, 36A	@	250.00	500.00
125	FT	Striping	@	3.25	406.25
<b><i>SUBTOTAL ESTIMATED CONSTRUCTION COST - ALVORD STREET</i></b>					<b><u>\$51,701.25</u></b>

Pine Grove Street

5' wide sidewalk on the west side of Pine Grove Street from Alvord Street to 2nd Avenue.

1	L.S.	Mobilization	@	\$1,700.00	\$1,700.00
1	L.S.	Traffic Maintenance and Control	@	500.00	500.00
5	EA	Tree Removal	@	300.00	1,500.00
10	SYD	Pavement Removal	@	3.50	35.00
50	FT	Silt Fence	@	3.00	150.00
500	FT	Bicycle Path, Grading	@	4.00	2,000.00
2,500	SFT	Concrete Sidewalk, 4"	@	3.00	7,500.00
140	SFT	ADA Ramps	@	10.00	1,400.00
15	Ton	HMA Driveway Replacement	@	125.00	1,875.00
2	Ton	HMA, 36A	@	250.00	500.00
75	FT	Striping	@	3.25	243.75
<b><i>SUBTOTAL ESTIMATED CONSTRUCTION COST - PINE GROVE STREET</i></b>					<b><u>\$17,403.75</u></b>

Main Street

5' wide sidewalk on the west side of Main Street from Front Street to Concord Avenue and on the east side from Concord Avenue to Kinne Avenue.

1	L.S.	Mobilization	@	\$2,800.00	\$2,800.00
1	L.S.	Traffic Maintenance and Control	@	1,000.00	1,000.00
10	EA	Tree Removal	@	300.00	3,000.00
100	FT	Silt Fence	@	3.00	300.00
950	FT	Bicycle Path, Grading	@	4.00	3,800.00
4,800	SFT	Concrete Sidewalk, 4"	@	3.00	14,400.00
140	SFT	ADA Ramps	@	10.00	1,400.00
2	Ton	HMA, 36A	@	250.00	500.00
150	FT	Striping	@	3.25	487.50
<b><i>SUBTOTAL ESTIMATED CONSTRUCTION COST - MAIN STREET</i></b>					<b><u>\$27,687.50</u></b>

**VILLAGE OF MATTAWAN**  
**SAFE ROUTES TO SCHOOL - PHASE III**  
**PRELIMINARY COST ESTIMATE**  
*August 19, 2009*

**3rd Avenue**

5' wide sidewalk on the south side of 3rd Avenue from Scott Street to Murray Street.

1	L.S.	Mobilization	@	\$1,400.00	\$1,400.00
1	L.S.	Traffic Maintenance and Control	@	500.00	500.00
15	SYD	Pavement Removal	@	3.50	52.50
50	FT	Silt Fence	@	3.00	150.00
450	FT	Bicycle Path, Grading	@	4.00	1,800.00
2,200	SFT	Concrete Sidewalk, 4"	@	3.00	6,600.00
70	SFT	ADA Ramps	@	10.00	700.00
20	Ton	HMA Driveway Replacement	@	125.00	2,500.00
2	Ton	HMA, 36A	@	250.00	500.00
75	FT	Striping	@	3.25	243.75
<b><i>SUBTOTAL ESTIMATED CONSTRUCTION COST - 3RD AVENUE</i></b>					<b><i>\$14,446.25</i></b>

**Concord Avenue**

5' wide sidewalk on the south side of Concord Avenue from Main Street to approximately 2,000' east.

1	L.S.	Mobilization	@	\$6,500.00	\$6,500.00
1	L.S.	Traffic Maintenance and Control	@	1,500.00	1,500.00
10	EA	Tree Removal	@	300.00	3,000.00
70	SYD	Pavement Removal	@	3.50	245.00
200	FT	Silt Fence	@	3.00	600.00
2,000	FT	Bicycle Path, Grading	@	4.00	8,000.00
10,000	SFT	Concrete Sidewalk, 4"	@	3.00	30,000.00
175	SFT	ADA Ramps	@	10.00	1,750.00
100	Ton	HMA Driveway Replacement	@	125.00	12,500.00
2	Ton	HMA, 36A	@	250.00	500.00
125	FT	Striping	@	3.25	406.25
					<b><i>\$65,001.25</i></b>

**Ryan Road**

5' wide sidewalk on the west side of Ryan Road from Concord Avenue to Kinne Avenue.

1	L.S.	Mobilization	@	\$1,400.00	\$1,400.00
1	L.S.	Traffic Maintenance and Control	@	500.00	500.00
2	EA	Tree Removal	@	300.00	600.00
10	SYD	Pavement Removal	@	3.50	35.00
50	FT	Silt Fence	@	3.00	150.00
450	FT	Bicycle Path, Grading	@	4.00	1,800.00
2,250	SFT	Concrete Sidewalk, 4"	@	3.00	6,750.00
70	SFT	ADA Ramps	@	10.00	700.00
15	Ton	HMA Driveway Replacement	@	125.00	1,875.00
2	Ton	HMA, 36A	@	250.00	500.00
<b><i>SUBTOTAL ESTIMATED CONSTRUCTION COST - RYAN ROAD</i></b>					<b><i>\$14,310.00</i></b>

**VILLAGE OF MATTAWAN**  
**SAFE ROUTES TO SCHOOL - PHASE III**  
**PRELIMINARY COST ESTIMATE**  
**August 19, 2009**

**Kinne Avenue**

5' wide sidewalk on the north side of Kinne Avenue from Main Street to Webster Street.

1	L.S.	Mobilization	@	\$3,400.00	\$3,400.00
1	L.S.	Traffic Maintenance and Control	@	1,000.00	1,000.00
6	EA	Tree Removal	@	300.00	1,800.00
30	SYD	Pavement Removal	@	3.50	105.00
100	FT	Silt Fence	@	3.00	300.00
1,100	FT	Bicycle Path, Grading	@	4.00	4,400.00
5,500	SFT	Concrete Sidewalk, 4"	@	3.00	16,500.00
140	SFT	ADA Ramps	@	10.00	1,400.00
40	Ton	HMA Driveway Replacement	@	125.00	5,000.00
2	Ton	HMA, 36A	@	250.00	500.00
75	FT	Striping	@	3.25	243.75
<b><i>SUBTOTAL ESTIMATED CONSTRUCTION COST - KINNE AVENUE</i></b>					<b><i>\$34,648.75</i></b>

<i>TOTAL ESTIMATED CONSTRUCTION COST</i>	<i>\$225,198.75</i>
Contingency (10%+/-)	22,801.25
Design Engineering	16,000.00
Construction Engineering	19,000.00
<b><i>TOTAL ESTIMATED PROJECT COST</i></b>	<b><i>\$283,000.00</i></b>

Fiscal Year Funded	2014/2015
203 - Local Street	\$50,865.10
202 - Major Street	\$6,936.15
591 - Water	
590 - Sewer	
661 - Motor Pool	
101 - General	
Safe Routes 2 School Grant	\$225,198.75
Total	\$283,000.00

***VILLAGE OF MATTAWAN  
CONCORD AVENUE WATER TOWER  
MAINTENANCE AND COATING REPAIRS  
PRELIMINARY COST ESTIMATE  
December 21, 2009***

1	LS	Exterior Overcoat	@	\$50,000.00	\$50,000.00
1	LS	Dry Interior Spot Repair	@	3,000.00	3,000.00
1	LS	Cathodic Protection System	@	16,000.00	16,000.00
1	LS	Wet Interior Ladder Fall Prevention Device	@	2,000.00	2,000.00
1	LS	Access Tube Manway	@	3,000.00	3,000.00
1	LS	Wet Interior Roof Manway	@	3,000.00	3,000.00
1	LS	Condensate Platform Opening	@	2,500.00	2,500.00
1	LS	Top Platform Opening	@	2,500.00	2,500.00
1	LS	Expansion Joint Replacement	@	6,000.00	6,000.00
1	LS	Replace Roof Vent	@	5,000.00	5,000.00
1	LS	Condensate Drain Line	@	1,000.00	1,000.00
<b><i>TOTAL ESTIMATED CONSTRUCTION COST*</i></b>					<b><i>\$94,000.00</i></b>
<i>TOTAL ESTIMATED CONSTRUCTION COST</i>					<i>\$94,000.00</i>
<i>Contingency (10%+/-)</i>					<i>18,000.00</i>
<b><i>TOTAL ESTIMATED PROJECT COST</i></b>					<b><i>\$112,000.00</i></b>

\* The estimated construction costs were provided by Dixon Engineering, Inc.

Fiscal Year Funded	2010/2011
203 - Local Street	
202 - Major Street	
591 - Water	\$112,000.00
590 - Sewer	
661 - Motor Pool	
101 - General	
Grants/Loans	
Total	\$112,000.00

***VILLAGE OF MATTAWAN  
ICE FUNDED WATER PROJECT  
PRELIMINARY COST ESTIMATE  
January 7, 2010***

<u>Well #4</u>						
1	L.S.	Well Drilling/Development/Pump Test	@	60,000.00	60,000.00	
1	L.S.	Well Pump Equipment	@	10,000.00	10,000.00	
1	L.S.	Electrical/Controls	@	15,000.00	15,000.00	
1	L.S.	Water Main Piping	@	30,000.00	30,000.00	
1	L.S.	Wellhouse/Site Work	@	75,000.00	75,000.00	
1	L.S.	Analytical Testing	@	4,850.00	4,850.00	
1	L.S.	Chemical Feed System with Modifications	@	10,000.00	10,000.00	

Robison/Glidden Water Main Loop Closure

1,500	LFT	12" Dia Water Main	@	50.00	75,000.00	
3	EA	12" Dia Gate Valves	@	1,800.00	5,400.00	
6	EA	Water Main Fittings	@	800.00	4,800.00	
3	EA	Fire Hydrant Assemblies	@	2,500.00	7,500.00	
2	EA	Connection to Existing Main	@	2,500.00	5,000.00	
150	LFT	RR Bore & Jack	@	250.00	37,500.00	
1	L.S.	RR Flag Control	@	3,000.00	3,000.00	
1	L.S.	Pavement Removal/Replacement	@	5,000.00	5,000.00	
150	TON	Should Gravel Replacement	@	18.00	2,700.00	
2,500	SYD	Restoration	@	2.50	6,250.00	

McGillen Water Main Relocation/Capacity Enhancement

3,000	LFT	12" Dia Water Main	@	50.00	150,000.00	
4	EA	12" Dia Gate Valves	@	1,800.00	7,200.00	
18	EA	Water Main Fittings	@	800.00	14,400.00	
4	EA	Fire Hydrant Assemblies	@	2,500.00	10,000.00	
7	EA	Connection to Existing Main	@	2,500.00	17,500.00	
10	EA	Water Service Reconnects	@	1,000.00	10,000.00	
6	EA	Pavement Removal/Replacement	@	1,500.00	9,000.00	
300	TON	Should Gravel Replacement	@	18.00	5,400.00	
5,000	SYD	Restoration	@	2.50	12,500.00	

<i>TOTAL ESTIMATED CONSTRUCTION COST</i>	593,000.00
Contingency (10%+/-)	60,000.00
Administration/Legal	25,000.00
Engineering	110,000.00
<b><i>TOTAL ESTIMATED PROJECT COST</i></b>	<b>788,000.00</b>

\* The estimated construction costs were provided by the Fleis & Vandenbrink

Fiscal Year Funded	2010/2011
203 - Local Street	
202 - Major Street	
591 - Water	\$245,000.00
590 - Sewer	
661 - Motor Pool	
101 - General	
MEDC ICE Grant	\$543,000.00
Total	\$788,000.00

## APPENDIX B

### MAPS

- ◆ **5 Year Capital Improvements Plan Projects**
- ◆ **Village Zoning Map**
- ◆ **Van Buren County Federal-Aid Eligible Roadways**

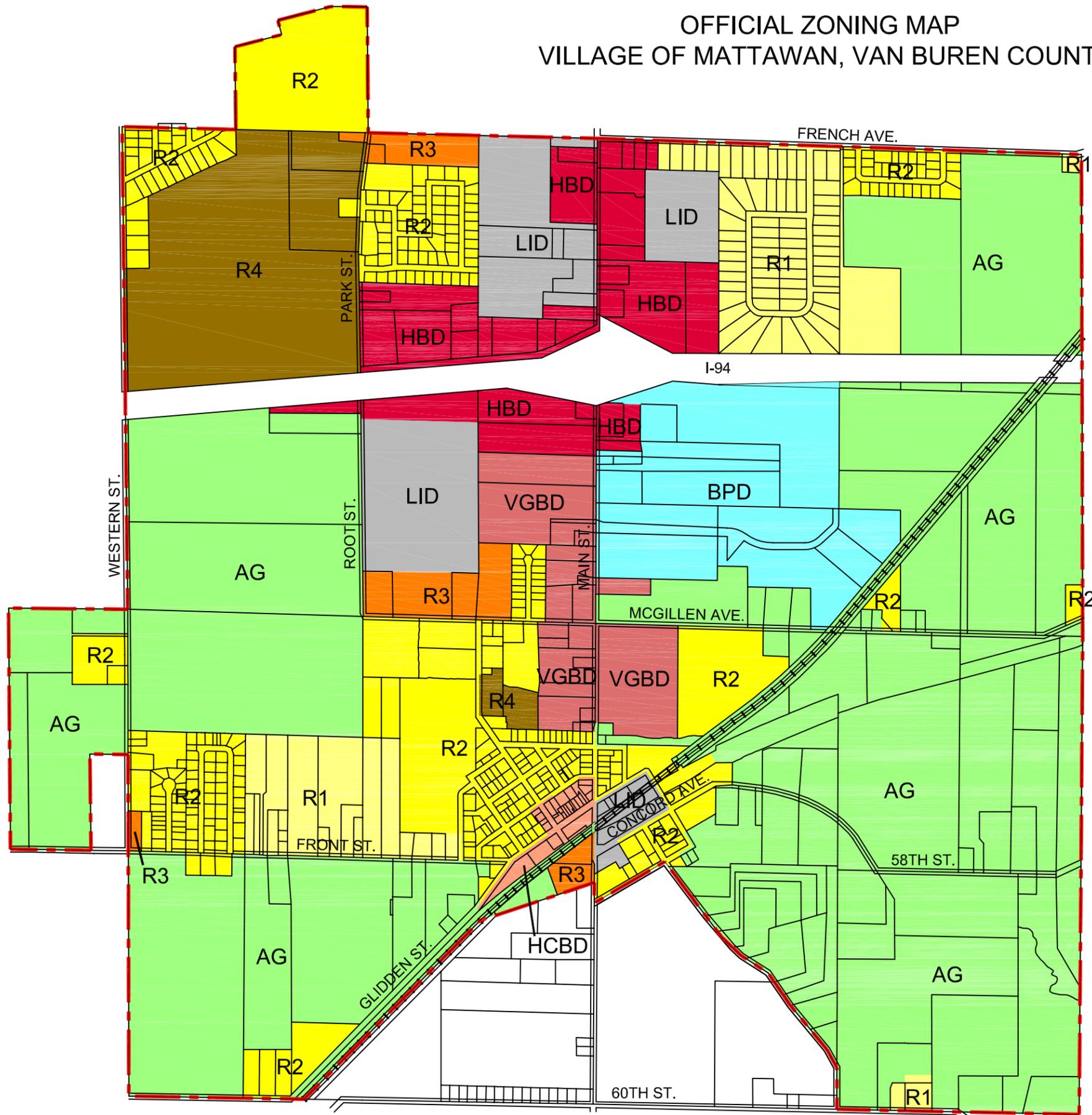
\\p01\proj\mattawan\090364n\mattawan\090364n.dwg (1/27/2010 3:41:17 PM) 090364.dwg



LEGEND	
<span style="color: red;">■</span>	PROPOSED 2010/2011 IMPROVEMENTS
<span style="color: orange;">■</span>	PROPOSED 2011/2012 IMPROVEMENTS
<span style="color: purple;">■</span>	PROPOSED 2012/2013 IMPROVEMENTS
<span style="color: green;">■</span>	PROPOSED 2013/2014 IMPROVEMENTS
<span style="color: blue;">■</span>	PROPOSED 2014/2015 IMPROVEMENTS

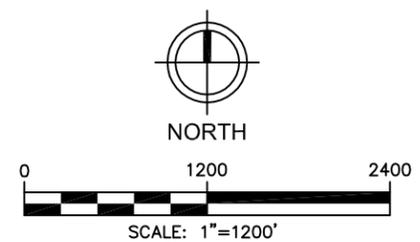
<b>VILLAGE OF MATTAWAN CAPITAL IMPROVEMENT PLAN</b>		2010/2011 - 2014/2015 PROJECT IMPROVEMENTS	
JOB NO. 090364N		SCALE 1" = 600'	
APPROVED BY J.L. HARMON	CHECKED BY J.L.H.	DATE JANUARY, 2010	SCALE 1" = 600'
DRAWN BY H.J.C.		DATE JANUARY, 2010	
2303 PIPESTONE ROAD BENTON HARBOR, MI 49022 PHONE: (269) 927-0100 FAX: (269) 927-1300 WWW.WIGHTMAN-ASSOC.COM			
REV. 1		DESCRIPTION	
REV. 2		DESCRIPTION	
REV. 3		DESCRIPTION	
REV. 4		DESCRIPTION	
REV. 5		DESCRIPTION	
REV. 6		DESCRIPTION	
REV. 7		DESCRIPTION	
REV. 8		DESCRIPTION	
REV. 9		DESCRIPTION	
REV. 10		DESCRIPTION	
REV. 11		DESCRIPTION	
REV. 12		DESCRIPTION	
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REV. 97		DESCRIPTION	
REV. 98		DESCRIPTION	
REV. 99		DESCRIPTION	
REV. 100		DESCRIPTION	
X6203			

# OFFICIAL ZONING MAP VILLAGE OF MATTAWAN, VAN BUREN COUNTY



### ZONING DISTRICTS

- Agricultural - AG
- Low Density Residential - R-1
- Medium Density Residential - R-2
- Multiple Family Residential - R-3
- Manufactured Housing Park - R-4
- Business Park - BPD
- Historic Central Business - HCB
- Village General Business - VGBD
- Highway Business - HBD
- Limited Industrial - LID



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REVISED FEBRUARY 17, 2009

# MICHIGAN GEOGRAPHIC FRAMEWORK NATIONAL FUNCTIONAL CLASSIFICATION (NFC) VAN BUREN



- | NFC                                     | FUTURE NFC |
|---|------------|
| Rural or Urban Interstate               |            |
| Rural or Urban Other Freeway            |            |
| Rural or Urban Other Principal Arterial |            |
| Rural or Urban Minor Arterial           |            |
| Rural Major or Urban Collector          |            |
| Rural or Urban Collector                |            |
| Rural or Urban Local                    |            |
| Federal-aid Urban Boundary              |            |



TSC: Coloma  
REGION: Southwest  
80 - VAN BUREN

