

Village of River Forest

Five Year Capital Improvement Program

The Five Year Capital Improvement Program (CIP) is a planning tool for the Village that seeks to identify major capital projects and a corresponding funding source for projects that are \$10,000 or more.

The Five Year Capital Improvement Plan is prepared by staff and reviewed by the Village Board as the initial step toward preparing the annual budget. The Plan is generally amended during the budget process as determinations are made for items to be moved forward or to be deferred based on current information.

The CIP is divided into the following sections:

Buildings and Improvements

3 Facilities

Village facilities include Village Hall which houses Administration, Finance, Building, Police, and Fire operations, the Public Works Garage and the Water Pumping Station, which are located in separate facilities.

Vehicles

47 vehicles in the fleet

The vehicle section includes an inventory of all of the Village vehicles and subdivided by police, fire and public works vehicles. The detail page of each vehicle to be replaced in 2016 provides a photo of the vehicle, historical cost and repair information, a description of how the vehicle is used, and its life expectancy.

Equipment

The Equipment section lists the capital equipment items that need to be repaired, replaced or acquired new over the next five years. This section includes equipment for the Administration, Fire, Police and Public Works operations.

Information Technology

38 computers and 7 servers

The Village completed a comprehensive study of its Information Technology System in FY 2012. Recommendations from the study are incorporated into the five-year CIP including replacement computers, laptops, servers (physical and virtual), disk space expansion, disaster recovery improvements, and network enhancements.

Streets, Sidewalks, Alleys

31.6 miles

The Streets program includes annual street resurfacing, alley maintenance, sidewalk and curb maintenance as well as general street patching and maintenance. The annual Street Improvement Program, formerly funded through bond proceeds, is now funded through Motor Fuel Tax (MFT) revenues.

Water and Sewer Improvements

73.1 miles of sewer and water mains

The Village annually budgets for the maintenance and repair of the sewer system, including sewer lining, rehab and main repairs. Work is underway on the Northside Stormwater Management Project. This phased project will create a new, separate stormwater utility on the north side of River Forest to significantly reduce the risk of flooding in this area.

The Village's water system serves a population of more than 11,000. Maintenance of the pumping station and distribution system is essential to the water utility's operation. Annual funding is recommended for water main replacement and rehabilitation. Water main replacement is recommended when a history of line failure or a lack of adequate fire flow exists. Fire flow is the quantity of water available for fire-suppression purposes in excess of that which is required for other purposes. When possible, water main replacement is scheduled to coincide with street improvements to limit the impact of construction activity to a particular area.

Equipment improvements at the Water Pumping Station can be found in this section.

Village of River Forest
Financing the Five Year Capital Improvement Program

The Five Year Capital Improvement Program (CIP) is financed through the following Village funds or particular revenue sources. The individual project sheet will indicate when the project is intended to be financed by a particular revenues source, such as a grant, within the fund. The proposed FY 2016 funding levels for each fund or source can be found below.

General Fund **\$254,500**

The General Fund is the major operating fund in the Village’s budget and provides for all activities not accounted for in other funds.

Motor Fuel Tax (MFT) **\$405,000**

The State of Illinois has imposed a gas tax on the privilege of operating motor vehicles on public highways in Illinois. MFT dollars are collected by the State of Illinois and remitted to the municipality on a per capita basis.

Water & Sewer Fund **\$14,498,000**

The Water and Sewer Fund includes the following revenue sources which assist in funding capital improvements: water and sewer charges and interest income. The Village has applied for a loan through the IEPA to fund the Northside Stormwater Management Project. The proceeds from the IEPA loan will be reported in the Water and Sewer Fund.

Capital Equipment Replacement Fund (CERF) **\$1,200,323**

The Capital Equipment Replacement Fund (CERF) is a capital projects fund where Administration, Police, Fire and Public Works Departments set aside funds each year for the eventual replacement of existing equipment and vehicles, and to avoid significant fluctuations in the operating budget from one year to the next. Revenues are provided by transfers from the General and Water and Sewer Funds.

Water & Sewer - CERF Fund **\$86,200**

The Water & Sewer - CERF Fund is part of the above mentioned CERF, only this portion is funded from Water & Sewer revenues and provides for the eventual replacement of Public Works vehicles utilized for sewer and water functions.

Capital Improvements Fund **\$1,291,537**

The Capital Improvements Fund is used to account for improvements to buildings, parking lots, municipal lighting systems, alleys, and streets. Revenue sources include red light camera revenue, parking lot fees, special service area taxes, ITEP and IGIG Grants as well as transfers from other funds.

Grant Revenues

The Village encourages all departments to seek and apply for grant funding that is in the best interests of the Village for capital projects, equipment and program needs. The Village has been awarded \$1,016,680 grants to be used in FY 2016 for Capital projects as follows:

- Illinois Transportation Enhancement Program (ITEP) funding - \$670,280
- Surface Transportation Program (STP – sometimes referred to as “STU”) - \$346,400

Village of River Forest, Illinois
Five Year Capital Improvement Program
Fiscal Year 2016 Budget

CATEGORY	Fiscal Year				Five Year Total	
	2016	2017	2018	2019		2020
Buildings and Improvements	347,060	245,000	222,000	128,000	195,680	1,137,740
Vehicles	872,818	426,990	441,688	87,148	460,334	2,288,978
Equipment	288,545	170,300	-	120,000	-	578,845
Information Technology	24,500	29,000	66,000	24,500	24,500	168,500
Streets, Sidewalks & Alleys	1,821,637	1,627,080	657,920	625,000	610,000	5,341,637
Water and Sewer Improvements	14,381,000	575,000	657,000	612,500	590,974	16,816,474
Totals - All Categories	17,735,560	3,073,370	2,044,608	1,597,148	1,881,488	26,327,174

PROPOSED FUNDING SOURCE	Fiscal Year				Five Year Total	
	2016	2017	2018	2019		2020
General Fund (GF)	254,500	264,000	316,000	274,500	264,500	1,373,500
Motor Fuel Tax Fund (MFT)	405,000	1,182,800	250,000	250,000	250,000	2,337,800
Water and Sewer Fund (WS)	14,498,000	645,000	739,000	697,500	675,974	17,255,474
Capital Equipment Replacement Fund (CERF)	1,200,323	552,290	423,188	207,148	130,334	2,513,283
CERF/WS	86,200	80,000	18,500	-	330,000	514,700
Capital Improvements Fund (CIF)	1,151,537	349,280	297,920	163,000	230,680	2,192,417
CIF/Parking Reserve	140,000	-	-	-	-	140,000
Totals	17,735,560	3,073,370	2,044,608	1,592,148	1,881,488	26,327,174

Buildings and Improvements – Five Year Capital Improvement Program

The Buildings and Improvements section of the Capital Improvement Program (CIP) identifies proposed improvements to the Village Hall, including the Police and Fire Department areas, as well as the Public Works Garage. Proposed improvements may include repair, replacement or the rehabilitation of Village buildings. Building improvements at the Water Pumping Station are also included.

As with other sections of the CIP, these improvements are targeted for specific years and are financed through various methods such as the General Fund, Water and Sewer Fund, Capital Equipment Replacement Fund and the Capital Improvement Fund (CIF).

Improvements planned for FY 2016 include:

Improvement	Cost of Improvement	Funding Source	This Project is:
Firing Range Rehab	\$125,160	CERF	Recommended
Village Hall Improvements	\$7,400	CIF	Recommended
Public Works Garage Improvements	\$167,500	CIF	Critical
Pumping Station Improvements	\$47,000	WS	Critical
Total	\$347,060		

Each project in the CIP is categorized by the requesting department as follows:

Critical- The project must be completed in the year recommended due to safety or operational needs or as mandated by law. **Critical projects are highlighted in yellow.**

Recommended- The project will significantly improve operations or safety. The project is strongly recommended for funding in the year recommended or the year after.

Contingent on Funding- The project would be a benefit to the Village and improve service levels but is only recommended if funds are available.

Village of River Forest, Illinois
 Five Year Capital Improvement Program
 Buildings and Improvements
 Fiscal Year 2016 Budget

This Project is:	Fiscal Year				Five Year Total	Funding Source
	2016	2017	2018	2019		
Police						
Firing Range Rehab	125,160	-	-	-	125,160	CERF
Village Hall						
Village Hall Improvements	7,400	125,000	25,000	40,000	237,400	CIF
Public Works						
Garage Improvements	167,500	85,000	185,000	73,000	140,680	CIF
Pumping Station Improvements	47,000	35,000	12,000	15,000	124,000	WS
Total	347,060	245,000	222,000	128,000	195,680	

Proposed Funding Source	Fiscal Year				Five Year Total	
	2016	2017	2018	2019		2020
Water and Sewer Fund (WS)	47,000	35,000	12,000	15,000	15,000	124,000
Capital Equipment Replacement Fund (CERF)	125,160	-	-	-	-	125,160
Capital Improvement Fund (CIF)	174,900	210,000	210,000	113,000	180,680	888,580
Totals	347,060	245,000	222,000	128,000	195,680	1,137,740

Buildings and Improvements-Police

Firing Range Rehab

FY 2016

\$ 125,160

CERF

Original Purchase Date FY 1998

Funding History N/A



Critical



Recommended



Contingent on Funding

Description & Justification

The Firing Range located in the basement of Village Hall was installed in 1998 as part of the Village Hall construction project and is currently over 16 years old. The range is used over 200 times per year for handgun and less lethal training. Triton College has proposed a training facility which includes a firing range. In combination with Triton’s facility, police personnel will have continuous access to the Village’s range for regular training and qualification and access to Triton’s range for specialized training such a high powered rifles, team movement training and other future opportunities. The Village’s range requires upgrades in the bullet trap system, ventilation and target rail system. It is recommended that the project be consolidated as a comprehensive overhaul in FY 2016 versus three separate phases, possibly saving money as part of an economy of scale.

The main components of the range are the following:

- Bullet Trap/Ballistic/Protective Wall System
- Ballistic Ceiling Baffle System
- Shooting Stalls/Target Turning Systems-stalls, rails, target retrievers, and master control system
- Range Ventilation System

Repair/Improvement	Estimated Cost
Bullet Trap Conversion	\$ 24,200
Combat/Protective Wall System	\$ 13,250
Ballistic Ceiling Baffles	\$ 13,300
Ventilation Direct Digital Control System	\$ 15,954
Ventilation VFD for Make-Up Air Unit	\$ 2,647
Ventilation Custom Radial Diffusers	\$ 1,764
Ventilation Control Piping and Wiring	\$ 2,275
Ventilation Start Up and Commissioning	\$ 1,250
Range Master Control System	\$ 4,800
Network Interface	\$ 1,300
Rail Repair and Target Encasements	\$ 2,800
Lateral Target with base	\$ 7,250
Target Turners	\$ 2,600
Electronic Enclosures	\$ 3,350
Shooting Stalls	\$ 9,300
Air Filtration Unit	\$ 19,120

Total Project Cost	\$125,160
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The approximate life expectancy of the equipment, with recommended maintenance, is an additional 15-20 years.

Additional Justifications

FY 2014-Improvements addressed safety and integrity of the bullet trap system plus industry standard of ballistic walls for approximately 1/3 of range to protect against ricochet and shrapnel displacement. Items include upgraded ceiling baffles to protect plumbing, duct work, and other structural components.

FY 2015-Improvements addressed minimal ventilation system upgrades needed to ensure compliance with OSHA air quality standards for firing ranges.

FY 2016-Improvements will address mechanical and technology upgrades required with regard to target rail and control systems as well as potential critical failure of a 20-year old air filtration unit and 20-year old individual shooting stalls.

Project Alternative

The alternative to the replacement of the range equipment is to attempt continue to repair the current system. This is less desirable and less feasible as the range age increases. The proposed improvement costs are based on estimates from current vendors. The utilization of alternate vendors would require the complete stripping out of all or most current equipment which could increase costs by approximately 40-50%. A second alternative is to lease time at an offsite firing range- problems associated with this alternative are discussed below.

Project Impact

The State of Illinois requires annual firearms certification. The use of a firearm is one of the highest liabilities a police department can face. The Department currently requires quarterly firearms training and without a useable firing range, the Village would have to seek an alternate location to train. This would increase training, overtime, transportation, facility rental premiums and ammunition costs. A safety/operational concern would be the inability for officers to test fire duty weapons after general maintenance or armorer’s repairs were completed. The Department currently allows the Forest Park Police Department to conduct some periodic training and test firing on the range in consideration of other training opportunities and ammunition supplies. Staff will continue to look for additional like-sized departments to potentially lease time for use.

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
TBD	TBD

Buildings and Improvements-Public Works

Village Hall Improvements	FY 2016	\$7,400	CIF
	FY 2017	\$125,000	CIF
	FY 2018	\$25,000	CIF
	FY 2019	\$40,000	CIF
	FY 2020	\$40,000	CIF

Critical
 Recommended
 Contingent on Funding

Project Description & Justification

The Village Hall, located at 400 Park Avenue, was constructed in 1999 and houses the Village’s administrative Staff, both the Police and Fire Departments, and the West Suburban Consolidated Dispatch Center (WSCDC). The majority of janitorial and maintenance tasks and operations are performed and coordinated by the Village’s Custodian. Those tasks and operations that cannot be performed by in-house Staff are outsourced.

In 2013, DTZ (a UGL Company) was contracted to conduct a Facility Condition Assessment (FCA) of the Village Hall (referred to in DTZ’s report as the Administration Building). The purpose of the assessment was to evaluate the overall condition of the buildings and sites, and provide information regarding the condition and life expectancy of the major components. The report recommends one project for this facility in FY 2015.

Also in 2013, AKT Peerless conducted a building energy audit (EA) of the Village Hall (including the Police and Fire areas). The purpose of this audit was to evaluate the current energy use in the facility and to identify modifications that will reduce the energy use and/or cost of operating the facility. It is important to note that per the franchise agreements with the utility companies, the Village does not pay for electricity for this facility and is afforded a certain number of therms of natural gas. As a result, the financial impact on the expenditure budget would be minimal. Staff recommends improvements in FY 2016 that offer the highest projected cost savings.

The following facility improvement is recommended to be completed **in FY 2016**:

<u>Repair/Improvement</u>	<u>Estimated Cost</u>
1. EA – Install variable frequency drives on rooftop units (HVAC)	\$7,400

The following facility improvements are recommended within the **next two to five years**:

<u>Repair/Improvement</u>	<u>Estimated Cost</u>	<u>Year</u>
1. FCA - Replace roof above 2nd floor	\$125,000	FY 2017
2. FCA - Replace HVAC rooftop unit #3 (above WSCDC)	\$25,000	FY 2018
3. FCA - Resurface parking lot	\$40,000	FY 2019
4. Tuck-pointing improvements	\$40,000	FY 2020
Total	\$230,000	

2016 Recommended Project

1. EA – Install variable frequency drive on rooftop units: All three of the rooftop HVAC units utilize Inlet Vortex Dampers to control the flow rate of air in the supply fan. This project would remove or abandon the inlet vortex dampers and replace them with Adjustable Speed Drives (ASD) to control airflow, and save substantial amounts of energy, reduce unnecessary usage of the units, and improve

flow control. Since Staff is proposing to replace the rooftop unit above WSCDC in FY 2018, this project is therefore recommended for the two units above the Village Hall.

Project Alternative

EA Project: The alternative to these projects is to not make these improvements and maintain the current level(s) of energy efficiency and usage level of the HVAC units.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Buildings and Improvements-Public Works

Public Works Garage Improvements	FY 2016	\$167,500	CIF
	FY 2017	\$85,000	CIF
	FY 2018	\$185,000	CIF
	FY 2019	\$73,000	CIF
	FY 2020	\$140,680	CIF

Critical
 Recommended
 Contingent on Funding

Project Description & Justification

The Public Works Garage, located at 45 Forest Avenue, is the facility that houses all vehicles, equipment, fuel (unleaded and diesel), road salt, and other materials (stone, asphalt, topsoil, etc.) and supplies necessary for Public Works Operations and Water/Sewer Divisions. The majority of janitorial and minor maintenance tasks and operations are performed and coordinated by Public Works personnel. Tasks and operations that cannot be performed in-house are outsourced.

The property on which the Public Works Garage stands has been considered for redevelopment along with the site directly to the south (former Hines Lumber site). As a result, the Village is exploring options for relocating the Public Works facility and its operations.

If Public Works remains at its current location, the following critical and recommended facility improvements should be completed **in FY 2016**:

<u>Repair/Improvement</u>	<u>Estimated Cost</u>
1. Tuck-pointing, brick restoration, & rebuild parapet wall (& cap)	
a. Structural engineering analysis	\$15,000
b. Construction (critical)	\$70,000
2. Replace gutters and downspouts (critical)	\$2,500
3. Demolish boiler and remove piping (recommended)	\$10,000
4. Install five gas-powered hanging heaters (recommended)	\$55,000
5. <u>Install commercial backflow prevention device (recommended)</u>	<u>\$15,000</u>
Total	\$167,500

If Public Works remains at its current location the following facility improvements are recommended in the **next two to five years**:

<u>Repair/Improvement</u>	<u>Estimated Cost</u>	<u>Year</u>
1. Roof replacement ¹	\$185,000	FY 2017
2. Upgrade interior and exterior lighting systems (to LED)	\$42,000	FY 2018
3. Replace single pane glass windows (26)	\$20,000	FY 2018
4. Replace two overhead garage doors	\$11,000	FY 2018
5. Replace salt storage shed	\$50,000	FY 2019
6. <u>Replace underground storage tanks</u>	<u>\$140,680</u>	<u>FY 2020</u>
Total	\$448,680	

¹ If this roof replacement project were to be completed in two phases, each phase would cost approximately \$115,000 with a total project cost of \$230,000. This project also includes the replacement of gutters and downspouts.

2016 Recommended Project

The following is a summary of the improvements that are proposed for FY 2016:

1. Tuck-pointing, Brick Restoration, & Rebuild Parapet Wall: This project includes tuck-pointing along the south and west elevation of the Public Works Garage, including the parapet wall located at the southwest corner of the roof. Some sections of the exterior walls are missing mortar between the bricks and many bricks are missing altogether which has, and will continue to, deteriorate the structural stability of the facility.
2. Replace gutters and downspouts: This project will prevent stormwater runoff from eroding/damaging the existing brick building by transporting and redirecting stormwater away from the facility.
3. Demolish boiler and remove piping: This project includes the demolition and replacement of the boiler with hanging unit heaters. The existing boiler, which provides heat for the garage/apparatus floor area, has recently required repairs involving the replacement of a float switch in the condensate tank. The tank itself is in poor condition and will need to be replaced in the near future along with several small leaks in the steam piping that will need to be repaired. The boiler is also significantly oversized for the size of the facility and uses far more natural gas energy than what is needed. Therefore, the replacement of this unit is recommended.
4. Install four hanging heating units: In conjunction with the removal of the boiler, these natural gas heating units will provide necessary heat to the garage floor/apparatus area more efficiently and with less maintenance than the current system.
5. Install commercial backflow prevention device (per current codes): The garage currently has a fire sprinkler system that incorporates a single check backflow device to prevent the cross contamination of the public water supply by backflow or back siphoning if a sudden drop in pressure were to occur. The current plumbing code requires a Reduced Pressure Detector Assembly (RPDA) which incorporates two forms of backflow protection. Without the RPDA, there is a continued risk of contamination to the Village's water distribution system from the rusty, stagnant water in the fire suppression piping at the Public Works Garage.

Project Alternative

The alternatives to projects #1 and #2 are either an expensive wall replacement project or delaying the work, which will result in further structural damage to the exterior walls. If this deterioration continues, a project involving the replacement of the entire walls, or sections of walls, will be necessary and significantly more costly as that work may impact load bearing walls/structures in the facility.

It is anticipated that the boiler will need additional repairs totaling an estimated \$19,000 within the next year or two. Considering the current boiler consumes 2.5 times the energy required to heat the facility, Staff believes that the best alternative is to replace it with more energy efficient hanging unit heaters. The room that houses the boiler could be converted to valuable indoor storage or demolished and converted to outdoor storage.

There is no alternative to installing an RPDA that is intended to protect/prevent cross-contamination to the Village's water distribution system.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Buildings and Improvements-Public Works

Pumping Station Improvements

Water & Sewer

FY 2016	\$47,000	WS
FY 2017	\$35,000	WS
FY 2018	\$12,000	WS
FY 2019	\$15,000	WS
FY 2020	\$15,000	WS

Critical
 Recommended
 Contingent on Funding

Project Description & Justification

The Pumping Station, located at 7525 Berkshire Street, is the facility that houses all pumps, piping, valves, and auxiliary equipment (including the SCADA controls) that are all central and critical to the operation of the Village’s water distribution system. The majority of janitorial and minor maintenance tasks and operations are performed and coordinated by Water Division personnel. Tasks and operations that cannot be performed in-house are outsourced.



In 2013, the Village retained the services of DTZ (a UGL Company) to conduct a Facility Condition Assessment of the Pumping Station. The purpose of the assessment was to evaluate the overall condition of the buildings and sites, and provide information regarding the condition and life expectancy of the major components. The report summarizes the recommended projects involving improvements and maintenance to this facility.

The following critical and recommended facility improvements should be completed **in FY 2016**:

<u>Repair/Improvement</u>	<u>Estimated Cost</u>
1. Replace front door	\$22,000
2. <u>Apply epoxy style floor coating on main level of building</u>	<u>\$25,000</u>
Total	\$47,000

The following facility improvements are recommended within the **next two to five years**:

<u>Repair/Improvement</u>	<u>Estimated Cost</u>	<u>Year</u>
1. Replace windows (2 nd Floor only)	\$35,000	FY 2017
2. Replace boiler and radiator heater system	\$12,000	FY 2018
3. Replace lower roof	\$15,000	FY 2019
4. <u>Replace / add exterior lighting fixtures</u>	<u>\$15,000</u>	<u>FY 2020</u>
Total	\$77,000	

2016 Recommended Project

The following is a summary of the improvements that are proposed for FY 2016:

1. Replace front door:

The front door of the pumping station is in poor condition and is deteriorating rapidly. It is a custom door which was originally varnished exposed mahogany; it has since been painted a salmon color to match the exterior trim. This replacement would bring the door closer to its original high quality appearance.



Project Alternative

The alternative to the replacement of the front door would be to replace the existing hardware, replace wooden boards on the existing door and rehab and repaint the current door. There are essentially no alternatives to the future improvements and maintenance projects as the Pumping Station is a critically important facility that houses the operations center for the Village’s water distribution system. Deferring these projects would result in emergency repairs that could increase project costs (compared to soliciting bids/proposals).

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Vehicles – Five Year Capital Improvement Program

The Village of River Forest recognizes the importance of maintaining, replacing and purchasing new vehicles to guarantee public safety and the efficient delivery of services. The following is a breakdown of current vehicular levels for all vehicles owned by the Village and the replacement schedule for FY 2016:

Department	Number of Vehicles to be Replaced in FY 2016	Cost of Vehicles to be Replaced in FY 2016	Total Number of Vehicles in Fleet
Building	0	\$0	2
Police	3	\$111,818	18
Fire	2	\$574,000	9
Public Works	2	\$187,000	18
TOTAL		\$872,818	47

In 2012, the Police squad car replacement cycle was changed so that the Village need not replace all squads at one time.

Financing

Projects in this section are financed through the Capital Equipment Replacement Fund (CERF).

Each project in the CIP is categorized by the requesting department as follows:

Critical- The project must be completed in the year recommended due to safety or operational needs or as mandated by law. **Critical projects are highlighted in yellow.**

Recommended- The project will significantly improve operations or safety. The project is strongly recommended for funding in the year recommended or the year after.

Contingent on Funding- The project would be a benefit to the Village and improve service levels but is only recommended if funds are available.

Village of River Forest, Illinois
 Five Year Capital Improvement Program
 Vehicles
 Fiscal Year 2016 Budget

Vehicles	Fiscal Year				Five Year Total	Funding Source
	2016	2017	2018	2019		
Police	111,818	121,240	123,188	87,148	130,334	CERF
Fire	574,000	63,750	-	-	-	CERF
Public Works	187,000	242,000	318,500	-	330,000	CERF & CERF/WS
Total	872,818	426,990	441,688	87,148	460,334	

Proposed Funding Source	Fiscal Year				Five Year Total
	2016	2017	2018	2019	
CERF- General Fund (CERF)	872,818	381,990	423,188	87,148	130,334
CERF- Water and Sewer (CERF/WS)	-	45,000	18,500	-	330,000
Totals	872,818	426,990	441,688	87,148	460,334
					1,895,478
					393,500
					2,288,978

Village of River Forest, Illinois
 Five Year Capital Improvement Program
 Vehicles-Police
 Fiscal Year 2016 Budget

Police Department	Year	Vehicle #	This Project is:	Fiscal Year					Five Year Total	Funding Source					
				2016	2017	2018	2019	2020							
Marked Squad Car	2014	1	Recommended	-	41,474	-	-	44,585	86,059	CERF					
Marked Squad Car	2015	2	Recommended	-	-	42,511	-	-	42,511	CERF					
Marked Squad Car	2015	3	Recommended	-	-	42,515	-	-	42,515	CERF					
Marked Squad Car	2013	4	Recommended	40,534	-	-	43,574	-	84,108	CERF					
Marked Squad Car	2013	5	Recommended	40,534	-	-	43,574	-	84,108	CERF					
Marked Squad Car	2013	6	Recommended	-	41,474	-	-	44,585	86,059	CERF					
Community Service Vehicle	2007	10	Recommended	30,750	-	-	-	-	30,750	CERF					
Detectives Vehicle	2011	12	Recommended	-	38,292	-	-	41,164	79,456	CERF					
Unmarked Surveillance	2012	13	Recommended	-	-	38,162	-	-	38,162	CERF					
Chief's Vehicle	2015	17	Recommended	-	-	-	-	-	-	CERF					
Patrol	2009	7	N/A	These vehicles are replaced with used police vehicles.					-	-					
Patrol	2009	8	N/A						-	-					
Crime Prevention- Tahoe	2009	9	N/A						-	-					
Deputy Chief's Vehicle	2007	11	N/A						-	-					
Admin Pool Vehicle	2000	14	N/A						-	-					
Dodge Durango	2006	15	N/A						-	-					
School Vehicle	2005	16	N/A						-	-					
Vehicle Equipment Set-Up			N/A						-	-	-	-	-	-	
Total									111,818	121,240	123,188	87,148	130,334	573,728	

Proposed Funding Source	Fiscal Year				Five Year	
	2016	2017	2018	2019	2020	Total
Capital Equipment Replacement Fund (CERF)	111,818	121,240	123,188	87,148	130,334	573,728
Totals	111,818	121,240	123,188	87,148	130,334	573,728

Vehicles - Police

Marked Squad Car	FY 2016	\$40,534	CERF
Squad 4	FY 2019	\$43,574	CERF

Critical Recommended Contingent on Funding

Make Ford
Model Taurus
Year 2013
Cost \$38,500
Useful Life 3 yrs
Current Life 3 yrs

Project Description & Justification

An estimated cost to replace Squad #4 is \$40,534. The estimated cost of the vehicle incorporates \$8,000/car for equipment and installation, which includes exterior Police markings, light emitting diode light bar, and miscellaneous items needed to facilitate the installation of major components.

Vehicle Description

This vehicle is a marked squad car used for daily patrol activities. The unit is equipped with laptop computers, moving radar units and forward facing video cameras. As the vehicles are rotated out of the fleet, the laptops, radars, and video equipment, will be removed and reinstalled in the new cars. This vehicle will be kept in the fleet as a secondary line vehicle to be used for crime prevention or back-up patrol vehicle. The current mileage is 58,232 (as of 10/30/14). Estimated mileage at time of replacement: 77,000.

Breakdown/Repairs FY 2012-2015	
Number of Breakdowns/Repairs as of Oct. 2014	27
Average Repair Cost	\$174.27

Project Alternative

Due to the nature of the use, deferral beyond three years is not recommended for patrol vehicles. The reliability decreases as age increases, and maintenance and repair costs often increase.

Operational Impact

These cars are used extensively for patrol activities, so breakdowns have a direct impact on the department’s ability to respond to requests from residents, provide traffic control, respond to complaints of criminal activity, and perform routine investigations.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Vehicles -Police

Marked Squad Car	FY 2016	\$40,534	CERF
Squad 5	FY 2019	\$43,574	CERF

Critical
 Recommended
 Contingent on Funding

<i>Make</i>	Ford
<i>Model</i>	Taurus
<i>Year</i>	2013
<i>Cost</i>	\$38,580
<i>Useful Life</i>	3 yrs
<i>Current Life</i>	3 yrs

Project Description & Justification

An estimated cost to replace Squad #5 is \$40,534. The estimated cost of the vehicle incorporates \$8,000/car for equipment and installation, which includes exterior Police markings, light emitting diode light bar, and miscellaneous items needed to facilitate the installation of major components.

Vehicle Description

This vehicle is a marked squad car used for daily patrol activities. The unit is equipped with laptop computers, moving radar units and forward facing video cameras. As the vehicles are rotated out of the fleet, the laptops, radars, and video equipment, will be removed and reinstalled in the new cars. This vehicle will be kept in the fleet as a secondary line vehicle to be used for crime prevention or back-up patrol vehicle. The current mileage is 53,571 (as of 10/30/14). Estimated mileage at time of replacement: 75,000

Breakdown/Repairs FY 2013-2016	
Number of Breakdowns/Repairs as of Oct. 2014	26
Average Repair Cost	\$195.31

Project Alternative

Due to the nature of the use, deferral beyond three years is not recommended for patrol vehicles. The reliability decreases as age increases, and maintenance and repair costs often increase.

Operational Impact

These cars are used extensively for patrol activities, so breakdowns have a direct impact on the department's ability to respond to requests from residents, provide traffic control, respond to complaints of criminal activity, and perform routine investigations.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Vehicles - Police

**Community Service Vehicle
Squad 10**

FY 2016 \$30,750 CERF
 FY 2023 \$33,056 CERF

Critical Recommended Contingent on Funding

Make Ford
Model Ranger Pick-Up
Year 2007
Cost \$22,500
Useful Life 7 yrs
Current Life 8 yrs

Project Description & Justification

An estimated cost to replace unit #10 is \$30,750. The estimated cost of the vehicle incorporates \$8,000/car for equipment and installation, which includes exterior Police markings, light emitting diode light bar, and miscellaneous items needed to facilitate the installation of major components.

Vehicle Description

This vehicle is a marked Pick-up truck used for daily Community Service activities. The unit is equipped with a laptop computer and zebra printer. The Community Service Vehicle is used for daily parking violations, stray animal, large equipment transport and deploying the Speed Trailer. Depending on the condition of the vehicle at replacement time, this vehicle could be offered to Public Works as a replacement for their current pick-up truck used by the Village Engineer or offered for sale at auction. The current mileage is 79,370 (as of 10/30/14). Estimated mileage at time of replacement: 88,370.

Breakdown/Repairs FY 2007-2015	
Number of Breakdowns/Repairs as of Oct. 2014	34
Average Repair Cost	\$263.52

Project Alternative

Due to the nature of the use, deferral beyond its estimated seven year useful life is not recommended for a CSO vehicle. The reliability decreases as age increases, and maintenance and repair costs often increase.

Operational Impact

Breakdowns have a direct impact on the department’s ability to respond to requests from residents, provide traffic control, respond to parking complaints, and perform other routine activities.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Village of River Forest, Illinois
 Five Year Capital Improvement Program
 Vehicles-Fire
 Fiscal Year 2016 Budget

Fire Department	Year	Vehicle #	This Project is:	Fiscal Year					Five Year Total	Funding Source
				2016	2017	2018	2019	2020		
Chief's Vehicle	2006	200	Recommended	24,000	-	-	-	-	24,000	CERF
Deputy Chief's Vehicle	2011	201	Contingent	-	25,750	-	-	-	25,750	CERF
Ambulance	2015	215	Recommended	-	-	-	-	-	-	CERF
Administrative Vehicle	2006	218	Contingent	-	38,000	-	-	-	38,000	CERF
105' Aerial Quint	2013	219	-	-	-	-	-	-	-	CERF
Pumper	2001	222	-	-	-	-	-	-	-	CERF
Ambulance	1999	224	-	-	-	-	-	-	-	CERF
Pumper	1992	226	Critical	550,000	-	-	-	-	550,000	CERF
Pool Vehicle	1999	299	-	-	-	-	-	-	-	CERF
Total				574,000	63,750	-	-	-	637,750	

Proposed Funding Source	Fiscal Year					Five Year Total
	2016	2017	2018	2019	2020	
Capital Equipment Replacement Fund (CERF)	574,000	63,750	-	-	-	637,750
Totals	574,000	63,750	-	-	-	637,750

Vehicles–Fire

Administrative Vehicle–C200

FY 2016

\$24,000

CERF

Critical

Recommended

Contingent on Funding

Make FORD
Model Crown Victoria
Year 2006
Cost \$23,145
Useful Life 6 years
 4 years fleet (training & pool)
 car
Current Life 9 years



Vehicle Description

C200 is the administrative vehicle assigned to the Fire Chief. The vehicle is purchased through the State of Illinois Central Management Service (CMS) program or at a local dealer that will match the cost in the State Purchasing program. This vehicle is outfitted with emergency lights and siren for emergency response and administrative function.

Vehicle	Year	Date	Road Mileage
C-200	2006	11/13	105,418 as of 10/20/14

C-200 Breakdown/Repairs Past 3 Years	
Number of Breakdowns/Repairs	11
Repair Cost	3,450.81

Project Alternative

- Purchase an all-wheel drive SUV to place in service for severe weather conditions. This provides better traction ability during response in extreme weather conditions (four wheel vs. two wheel drive).
- Purchase a Hybrid, Electric or Natural Gas vehicle for fuel efficiency. This will require the installation of a refueling/recharging system.
- Maintain current vehicle for another year and re-evaluate next budget.

Operational Impact

This vehicle was originally scheduled for a five (5) year useful life that is extended to nine (9) years. This vehicle will be redeployed and replace a 1999 Ford Crown Victoria that is used for school & training travel and as an auxiliary vehicle in the Village fleet for other departments.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$500	Preventative maintenance

Vehicles–Fire

Pumper–FD-211 (226)

FY 2016

\$550,000

CERF

Critical

Recommended

Contingent on Funding

Make Darley
Model Pumper
Year 1992
Cost \$210,000
Useful Life 10 years front line +
 10 years reserve.
Current Life 24 years



Vehicle Description

E-226 is a 1,500-gallon per minute fire pumper with a 750-gallon water tank and a full complement of fire hose, ladders and equipment. This vehicle meets NFPA 1901 and Insurance Services Office (ISO) criteria for a Class ‘A’ pumper. A Class ‘A’ pumper has the following pumping requirements: 100% pump capacity at 150psi, 70% capacity at 200psi, and 50% at 250 psi.

In 2002, the Village decided to improve efficiency and approved the purchase of E-222, a Class ‘A’ pumper with the addition of CAFS (compressed air foam system). With the introduction of a chemical foam concentrate, the frontline engine uses less water, which in turn allows firefighters to extinguish structure fires quicker and with less water damage. The replacement of E-226 (non-CAFS unit) will include the installation of CAFS to continue efficiency.

In addition to the ISO requirements this vehicle is designed to operate as an Advance Life Support (ALS) non-transport vehicle. It will respond with firefighter/paramedics to emergency medical calls and provide service to patient or victims prior to the arrival of a transport ambulance. This allows the Fire Department to handle multiple simultaneous calls in the community. Currently E-222 (frontline engine) responds on an average of 5.2 calls per day.

Vehicle	Year	Date	Road Mileage	Engine Hours	Actual Mileage
E-226	1992	11/12	47,795	7,302	182,550
*Fire and EMS vehicles use a conversion of 25 miles per engine hour due to the on scene time at an emergency call.					

E 226 Breakdown/Repairs Past 3 Years		
Number	226	4
	222	30
Cost	226	\$11,149
	222	\$20,180

At the most recent preventative maintenance evaluation by Certified Fleet Service, mechanics found several deficiencies and have estimated repair costs at \$29,150, which includes the following: Multiple oil leaks (\$800-\$1,000), power steering leak (\$300), coolant leak at radiator neck (\$200), right rear spring broken (\$1,100), tires (7 years-\$1,800), rusted out frame for booster tank (\$5,000-\$7,000), rear discharge valve leaking (\$1,000), pump not holding vacuum (will not pass NFPA pump test-\$12,000-

\$15,000) and inoperable air conditioner (\$500-\$800). There are also unknown costs for repairs to the emergency generator and there is extensive rust corrosion to body and frame. A final tally of all costs will be available unless and until all the work is performed.

Project Alternative

Evaluate State of Illinois loan programs, federal grants and lease / purchase programs. The Village may also delay the purchase of this vehicle and incur increased maintenance cost and increased out of service time (because this unit is recommended to be further deferred from a FY 2014 replacement to FY 2017 with the purchase of a Quint, this option is not recommended).

Another alternative is to sell this vehicle and purchase a used vehicle from another community that is newer. Maintenance efficiency is less with no warranties in any of the first three-five years and existing condition will be ‘as-is’.

Operational Impact

The replacement of this vehicle will be placed in front line service, with Engine 222 moved to reserve status. The need to maintain a reserve pumper exists when the front line Engine is down for maintenance or repair. It gives responding off-duty firefighters apparatus to respond with to run multiple calls when the front line pumper is in use. It also allows for a mutual aid while maintaining a response pumper to provide adequate fire suppression within the Village.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
Reduction of Front-line Engine repairs- between \$10,000 - \$22,000	Reduce maintenance on fleet by providing new, warranty driven apparatus, replacing older, costlier vehicle. Reduction in maintenance costs for first three years (warranty) on new vehicle and E222- reduced by placing in reserve status of 13 year old vehicle.

Village of River Forest, Illinois
 Five Year Capital Improvement Program
 Vehicles-Public Works
 Fiscal Year 2016 Budget

Public Works Department	Description	Year	Vehicle #	This Project is:	Fiscal Year				Five Year Total	Funding Source	
					2016	2017	2018	2019			2020
Lage Int'l Dump Truck	International 4000 Series	2002	30	Critical	-	140,000	-	-	-	140,000	CERF
Lage Int'l Dump Truck	International	2004	32	Critical	-	-	150,000	-	-	150,000	CERF
Pick-up Truck w/ Dump Body	Ford F350 Super Duty	2006	33	Critical	-	57,000	-	-	-	57,000	CERF
Street Sweeper	Elgin Pelican	2003	34	-	-	-	-	-	-	-	-
Lage Int'l Dump Truck	International 4000 Series	2001	40	Critical	137,000	-	-	-	-	137,000	CERF
Aerial Truck	International 4400	2003	46	Critical	-	-	150,000	-	-	150,000	CERF
Skid Steer Loader	Bobcat 763	2000	N/A	Critical	50,000	-	-	-	-	50,000	CERF
Pick-Up Truck (Engineering)	Ford Ranger Super	2007	62	Recommended	-	-	18,500	-	-	18,500	CERF/WS
Cargo Van	Dodge Sprinter	2006	64	Critical	-	45,000	-	-	-	45,000	CERF/WS
Sewer Truck	Vac-Con	2007	65	Critical	-	-	-	-	330,000	330,000	CERF/WS
Total					187,000	242,000	318,500	-	330,000	1,077,500	

Proposed Funding Source	Fiscal Year				Five Year Total	
	2016	2017	2018	2019		2020
Capital Equipment Replacement Fund (CERF)	187,000	197,000	300,000	-	-	684,000
CERF- Water and Sewer (CERF/WS)	-	45,000	18,500	-	330,000	393,500
Totals	187,000	242,000	318,500	-	330,000	1,077,500

Vehicles-Public Works

Dump Truck #40

FY 2016

\$137,000

CERF



Critical



Recommended



Contingent on Funding

Make International
Model 4000 SERIES
Year 2001
Purchase Cost \$66,399
Purchased FY 2001
Useful Life 12 years
Current Life 15 years



Vehicle Description

Various personnel in the Operations Division use this truck. The vehicle is equipped with an 11' dump body, 11' power angling snowplow, dump body tarp, emergency lighting, and two-way radio. The dump body on this vehicle is in fair condition and has rust holes in the floor of the bed.

Total Vehicle Miles	41,634 (As of 10/15/2014)
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Recent Maintenance Costs

Date	Maintenance Performed	Cost
4/2012	Replace passenger side mirror	\$100.00
6/2013	Replace oil hose	\$45.00
7/2013	Replace right front tire	\$250.00
1/2014	Repair windshield wiper motor and linkage	\$684.42
3/2014	Replace ignition switch and repair ABS brakes	\$855.23
7/2014	Repair electrical problem	\$441.70
Total		\$2,376.35

Project Alternative

This vehicle was originally scheduled for replacement in FY 2013. Since this vehicle was in good mechanical condition, staff recommended deferring its replacement to FY 2016. Staff feels that the age of the vehicle, recent increase in mechanical problems and overall condition of the vehicle warrant its replacement as planned in FY 2016.

Operational Impact

This is one of ten primary snow plowing vehicles in the Village's snow and ice control fleet. A breakdown reduces the Village's snow removal response by a tenth and extends the time needed to complete snow removal operations. This unit is used for other operations (hauling materials) which would also be impacted if it were removed from the fleet.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Vehicles -Public Works

Skid-Steer Loader

FY 2016

\$50,000

CERF



Critical



Recommended



Contingent on Funding

Purchase Cost \$28,154
 Purchased FY 2000
 Useful Life 12 years
 Current Life 16 years



Equipment Description

The Village's skid-steer loader is a versatile unit that allows Public Works personnel to load and relocate various materials and for plowing sidewalks during snow removal. The Village owns the following attachments for this unit: bucket (loading various materials such as sand, stone, and topsoil), broom (sweeping), forks (loading pallets and other large items/water and sewer main repairs), and v-plow (plowing snow on sidewalks).

The Village also owns a flat-bed trailer that is used to transport the skid-steer loader when it is used on projects that are located a significant distance from the Public Works Garage.

Total Equipment Hours	1,721 (As of 10/15/2014)
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Recent Maintenance Costs

Date	Maintenance Performed	Cost
5/2011	Suction tube in fuel tank	\$100.00
8/2013	Comprehensive service and misc. repairs	\$2,300.00
1/2014	Replaced battery	\$166.88
Total		\$2,566.88

Project

The unit was originally scheduled for replacement in FY 2012. In FY 2014 the skid-steer loader received comprehensive service by a factory authorized repair facility and is currently considered to be in fair operating condition. Because of the age of the equipment, a hydraulic cylinder used to level loads was obsolete and could not be replaced. Given the age of this piece of equipment and the fact that the unit has to be trailered when moved around town, staff recommends replacing it as scheduled with a new two speed unit that is capable of being driven to job sites.

Alternative

- Keep the current unit until it fails.
- Rent a skid steer from a local equipment supplier as needed.

Operational Impact

Not having the Skid Steer fully operational greatly reduces the Village's ability to load/move materials, repair water and sewer mains, and plow some of the Village's public sidewalks.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Equipment – Five Year Capital Improvement Program

The Equipment section of the Capital Improvement Program (CIP) identifies which capital equipment items need to be repaired, replaced or acquired new over the next five years. This section of the CIP identifies all equipment other than vehicles, which are noted in their own section of the CIP.

As with other sections of the CIP, these improvements are targeted for specific years and are usually financed through the Capital Equipment Replacement Fund (CERF). The following improvements are proposed for FY 2016:

Equipment	Cost of Equipment	Funding Source	This Project is:
Automatic License Plate Reader (PD)	\$39,195	CERF	Recommended
Live Scan System (PD)	\$25,000	CERF	Critical
Overweight Truck Scales (PD)	\$20,750	CERF	Recommended
Speed Monitor Trailer	\$14,400	CERF	Contingent on Funding
Digital In-Car Cameras (PD)	\$38,000	CERF	Recommended
Street Camera System	\$15,800	CERF	Recommended
SCBA Breathing Air Compressor (FD)	\$25,000	CERF	Recommended
ALS Defibrillator	\$24,200	CERF	Recommended
Sewer Televising System (PW)	\$71,200	CERF/WS	Critical
Leak Correlation Equipment (PW)	\$15,000	CERF/WS	Recommended
Total	\$288,545		

Each project in the CIP is categorized by the requesting department as follows:

Critical- The project must be completed in the year recommended due to safety or operational needs or as mandated by law. Critical projects are highlighted in yellow.

Recommended- The project will significantly improve operations or safety. The project is strongly recommended for funding in the year recommended or the year after.

Contingent on Funding- The project would be a benefit to the Village and improve service levels but is only recommended if funds are available.

Village of River Forest, Illinois
 Five Year Capital Improvement Program
 Equipment
 Fiscal Year 2015 Budget

	This Project is:	Fiscal Year				Five Year Total	Funding Source
		2016	2017	2018	2019		
Police Department							
Automatic License Plate Reader	Recommended	39,195	-	-	-	-	39,195 CERF
Live Scan System	Critical	25,000	-	-	-	-	25,000 CERF
Overweight Truck Scales	Recommended	20,750	-	-	-	-	20,750 CERF
Speed Monitor Trailer	Contingent	14,400	-	-	-	-	14,400 CERF
Digital In-Car Cameras	Recommended	38,000	-	-	-	-	38,000 CERF
Street Camera System	Recommended	15,800	124,300	-	-	-	140,100 CERF
Fire Department							
SCBA Air Compressor	Recommended	25,000	-	-	-	-	25,000 CERF
ALS Defibrillator	Recommended	24,200	-	-	-	-	24,200 CERF
Hydraulic Extrication Equipment	Contingent	-	-	-	-	-	- CERF
SCBAs	Critical	-	-	-	-	-	- CERF (Grant)
Public Works							
Sewer Televising System	Critical	71,200	-	-	-	-	71,200 CERF/WS
Leak Correlation Equipment	Recommended	15,000	-	-	-	-	15,000 CERF/WS
Stump Grinder	Recommended	-	46,000	-	-	-	46,000 CERF
V-Box Salt Spreader (2006)	Critical	-	-	-	20,000	-	20,000 CERF
Brush Chipper 1800	Critical	-	-	-	100,000	-	100,000 CERF
Total		288,545	170,300	-	120,000	-	578,845

Proposed Funding Source	Fiscal Year				Five Year Total	
	2016	2017	2018	2019		2020
Capital Equipment Replacement Fund (CERF)	202,345	170,300	-	120,000	-	492,645
CERF- Water and Sewer (CERF/WS)	86,200	-	-	-	-	86,200
Totals	288,545	170,300	-	120,000	-	578,845

Equipment-Police

Automatic License Plate Reader FY 2016 \$39,195 CERF

Critical Recommended Contingent on Funding

Original Purchase Date FY 2010
Cost \$34,840
Funding History N/A



Project Description & Justification

The Automated License Plate Reader (ALPR) is currently installed in squad car #6 and consists of four cameras mounted on top of the car roof which identifies license plates through recognition software. The license plate is compared to a database of wanted vehicles (Hit List) and alerts the user that a particular vehicle is wanted for a commission of a crime. All license plates are stored on a server and can be retrieved at a later date as part of an investigation and also plotted on a map.

The ALPR was purchased in FY 2010. As of November 15, 2013 it has read 2.3 million license plates and has 6,467 “hits”, or alerts that there is something wrong with a particular vehicle (stolen, wanted, suspended etc.). Staff also manually enters vehicles eligible for the Denver Boot. The ALPR has identified over 10 vehicles eligible for the boot at a minimum fee of \$500 dollars (some boot fees are double or triple this fee) per vehicle.

Project Alternative

This is a beneficial tool and has yielded results. The useful life of this equipment is five years. Although replacement is recommended, if the system is still functioning properly, replacement may be deferred for another year.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$ Nothing Substantial	Periodic maintenance

Equipment-Police

Live Scan System

FY 2016

\$25,000

CERF



Critical



Recommended



Contingent on Funding

Original Purchase Date

FY 2006

Cost

\$25,000

Funding History

N/A



Project Description & Justification

The Live Scan System is an automated fingerprint system that creates digital images of an arrestee’s fingerprints. Once digitized the prints are sent to several entities including the Illinois Bureau of Identification, Chicago PD and FBI and stored in their databases. This system is currently in use by and connected to all of the Cook County municipalities and streamlines the identification process. The life expectancy of the current system is eight years.

Project Alternative

Although the cost of replacement is the responsibility of the municipality the controlling agency for this system is Cook County. Unless the County goes to a different system in the future there is no alternative to Live-Scan.

The Live Scan System is critical to the Police Department’s operations and should the project be deferred and the system malfunction, immediate replacement would be required.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$ Nothing Substantial	Periodic maintenance

Equipment-Police

Overweight Truck Scales

FY 2016

\$20,750

CERF



Critical



Recommended



Contingent on Funding

Original Purchase Date

FY 2006

Cost

\$16,600

Funding History

N/A



Project Description & Justification

The police department currently owns four truck scales. These scales are placed under each of the tires of a suspected overweight vehicle. If determined to be overweight, the fine could be substantial depending on the violation. Staff conducts annual overweight truck enforcement missions and the dayshift patrol has a trained overweight enforcement officer who does periodic enforcement, separate from the planned missions. The scales are certified by the Illinois State Police annually. This program brings in approximately \$19,000 per year in annual revenue. The useful life expectancy of the scales is ten years.

Project Alternative

Without the portable truck scales the enforcement officers will have to seek alternate weigh scales. This would require that the truck enforcement officer following the truck to an alternate location outside the Village, which increases the amount of time on the traffic stop and increasing the unavailability of the officer. The purchase of this equipment may be deferred for one year depending on the condition at the time.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$ Nothing Substantial	Periodic maintenance

Equipment-Police

Speed Monitor Trailer

FY 2016

\$14,400

CERF

Critical

Recommended

Contingent on Funding

Original Purchase Date

FY 2004

Cost

\$12,000

Funding History

N/A



Project Description & Justification

The Speed Monitor Trailer is utilized to monitor speed and alert drivers who are traveling in excess of the posted speed limit. Public Works in conjunction with the police department identifies locations where historically vehicles are known to historically travel at higher rates of speed or places the trailer in an area based on complaints/requests from residents or police officers.

Project Alternative

The alternative to this equipment would be an officer monitoring an area for speeding violations. Although this happens often (officers enforcing speed limits) as part of traffic enforcement missions, utilizing a speed trailer is an additional tool to control excessive speed.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$ Nothing Substantial	Periodic maintenance- Battery Replacement

Equipment-Police

Digital In-Car Cameras

FY 2016

\$38,000 CERF



Critical



Recommended



Contingent on Funding

Original Purchase Date

FY 2010

Cost

\$35,425

Funding History

N/A



Project Description & Justification

The six front line vehicles and the unmarked traffic unit currently have digital cameras mounted to the dash board. The cameras/audio is used during traffic stops and arrests. Evidence obtained during a traffic arrest is utilized during a trial. The traffic stops are downloaded on a server and stored for a minimum of thirty days or longer depending on the type of incident.

Project Alternative

This is a necessary tool which helps protect the Village and officer from false accusations and for obtaining evidence to support a criminal conviction. The useful life of this equipment is five years. Replacement is highly recommended.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$ Nothing Substantial	Periodic maintenance

Equipment-Police

Street Camera System

FY 2016 \$15,800 CERF
 FY 2017 \$124,300 CERF

Critical Recommended Contingent on Funding

Original Purchase Date FY 2009
Cost \$350,000 +
Funding History N/A



Project Description & Justification

The village currently has eight Pan-Tilt-Zoom (PTZ) digital cameras located along the business corridor on Lake Street and 37 fixed cameras in and around Village Hall. The camera system is supported by software, servers and a wireless antenna system. The cameras can be monitored by supervisors, the dispatch center as well as patrol officers, on their squad car laptops, desktops or video monitors. The digital images are stored for a minimum of thirty days and are routinely used as evidence in criminal cases. The PTZ cameras have moving parts and are out in the elements; therefore they are prone to a shorter life expectancy than fixed cameras. The estimated life of the equipment is approximately four years and the fixed cameras nearly 20.

The entire system is covered under a maintenance agreement until May 2016. The replacement of the current software in FY 2016 to an upgraded version will allow integration with District 90's camera system. The timing of the upgrade in the second half of FY 2016 will also coincide with the FY 2017 anticipated upgrades to the street PTZ cameras.

Repair/Improvement	Estimated Cost	Fiscal Year
Camera System Software	\$15,800	FY 2016
Wireless Point to Point Antenna/Backhaul	\$52,500	FY 2017
Camera System Servers	\$36,800	FY 2017
Street Camera System	\$35,000	FY 2017
Total	\$140,100	

Project Alternative

This program has been very successful to date. Numerous crimes have been captured via video surveillance. As with any technology the hardware and software becomes outdated and should be replaced with newer technology. The continuation of this program is highly recommended.

Project Impact

The cameras are currently maintained under the original maintenance agreement which extends the warranty until May 2016.

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$ Nothing Substantial	Periodic maintenance-

Equipment-Fire

SCBA Breathing Air Compressor FY 2016 \$25,000 CERF

Critical Recommended Contingent on Funding

Original Purchase Date FY 1999
Cost \$17,200



Project Description & Justification

Upgrade and replace the Air Compressor that fills the self-contained breathing apparatus (SCBA's). This piece of equipment is a specialized compressor with a specific filtering system necessary to fill the breathing air required for firefighters to enter an IDHL (immediately dangerous to life and health) atmosphere. Staff has delayed the scheduled purchase of a new SCBA air compressor because the current equipment is lasting longer than anticipated. However this piece of equipment is critical during times of fire suppression and training when SCBA's are in use.

Project Alternative

The alternative to this purchase is to continue maintenance of the piece of equipment and keep it usable for as long as possible; however, if the equipment fails and is not repairable immediate purchase would be required.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$1,000	Annual maintenance & flow testing after third year. We intend to send two maintenance personnel to the SCBA workshops to training on maintenance of air pack in an attempt to further reduce our costs.

Equipment-Fire

ALS Defibrillator #2

FY 2021

\$24,200 CERF

Critical

Recommended

Contingent on Funding

Original Purchase Date

FY 2013

Cost

\$23,200



Project Description & Justification

Upgrade and replace the Advance Life Support (ALS) Defibrillator on the frontline ambulance. This piece of equipment is vital for the paramedics to provide life support care to cardiac and trauma patients. The new 12-lead cardiac monitor provides critical information to the paramedic in the field and emergency doctor in the hospital. Besides monitoring cardiac rhythms, the Life Pac 15 monitors carbon monoxide levels, pulse, blood pressures and delivers defibrillation (electric shock) to convert dangerous dysrhythmias.

Defibrillation is a common treatment for life-threatening, cardiac dysrhythmias. Defibrillation consists of delivering electrical energy to the affected heart through a set of affixed chest pads. Defibrillators are the only proven way to resuscitate a person who has had cardiac arrest who is still in ventricular fibrillation (V-fib) or ventricular tachycardia (V-tach). The success rate for V-fib patients receiving a first shock treatment is greater than 90%.

Project Alternative

The alternative to this purchase is to continue maintenance of the current piece of equipment and keep it usable for as long as possible. However, if the equipment fails and is not repairable, immediate purchase would be required. Lead time for defibrillators is approximately two months from purchase to receipt of units

The Village’s intent is to purchase and place the new ALS defibrillator on the front line ambulance and move current frontline equipment to ALS Engine 222.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$200 – 1 year after warranty period.	Continue annual maintenance after warranty period.

Equipment-Fire

ALS Defibrillator #1

FY 2016 \$24,200 CERF

Critical Recommended Contingent on Funding

Original Purchase Date FY 2011
Cost \$20,000



Project Description & Justification

Upgrade and replace the Advance Life Support (ALS) Defibrillator on the frontline ambulance. This piece of equipment is vital for the paramedics to provide life support care to cardiac and trauma patients. The new 12-lead cardiac monitor provides critical information to the paramedic in the field and emergency doctor in the hospital. Besides monitoring cardiac rhythms, the Life Pac 15 monitors carbon monoxide levels, pulse, blood pressures and delivers defibrillation (electric shock) to convert dangerous dysrhythmias.

Defibrillation is a common treatment for life-threatening, cardiac dysrhythmias. Defibrillation consists of delivering electrical energy to the affected heart through a set of affixed chest pads. Defibrillators are the only proven way to resuscitate a person who has had cardiac arrest who is still in ventricular fibrillation (V-fib) or ventricular tachycardia (V-tach). The success rate for V-fib patients receiving a first shock treatment is greater than 90%.

Project Alternative

The alternative to this purchase is to continue maintenance of the current piece of equipment and keep it usable for as long as possible. However, if the equipment fails and is not repairable, immediate purchase would be required. Lead time for defibrillators is approximately two months from purchase to receipt of units

The Village’s intent is to purchase and place the new ALS defibrillator on the front line ambulance and move current frontline equipment to ALS Engine 222.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$200 – 1 year after warranty period.	Continue annual maintenance after warranty period.

Equipment-Public Works / Water and Sewer

Sewer Televising System

FY 2016

\$71,200

CERF/WS



Critical



Recommended



Contingent on Funding

Purchase Cost

\$49,250

Purchased

FY 2005

Useful Life

10 years

Current Life

11 years



Equipment Description

This equipment is used by Public Works personnel to televise and visually inspect the interior of the Village's sewer mains for the purpose of identifying cracks, breaks, and failing sections. This maintenance program is performed during routine and emergency televising situations. The process of sewer televising involves first cleaning the sewer pipe (sewer jetting) and then lowering a motorized camera into a manhole. Using the controls handset, the motorized and lighted camera system then travels through the cleaned pipe, documenting the condition of the interior of the sewer pipe and where visible, private lateral connections.

This equipment is also used in emergency situations where a sewer problem can be quickly televised, analyzed, and documented.

The Village's existing equipment contains several key features that the previous system did not:

- Unit is self-propelled
- Includes a "pan and tilt" camera head which can be used to inspect lateral connections.
- All equipment is contained within a cabinet that can be lifted into the back of a cargo van. The cabinet includes drawers for accessory parts, video tapes, sewer maps etc.

Due to the age of the equipment, recent electrical issues, antiquated recording system and scarcity of repair parts, staff recommends replacing this unit with a new unit that utilizes digital recording and wireless control system.

The pricing received from Standard Equipment Company came directly from the National Joint Powers Alliance or NJPA. NJPA creates national cooperative contract purchasing opportunities and solutions on behalf of its members which include all government, education and non-profit agencies nationwide. These cooperative contract purchasing opportunities present both time and money savings for their users by

consolidating numerous individually prepared solicitations to one cooperatively shared process and by the aggregation of demand from members nationwide.

Recent Maintenance Costs

Date	Maintenance	Cost
7/2012	Short circuit in power cable for remote camera unit	\$1,200
7/2014	Repair camera, seals and short in power cord	\$2,000
Total		\$3,200

Project Alternative

During the mid-1990’s, the Village outsourced production televising of nearly all sewer mains in the Village. Those videos (VHS tape recordings that were later converted to CD) were used to identify and prioritize sewer point repairs (remove/replace sewer sections in poor condition) and candidates for sewer relining.

In 2011, after addressing nearly all of the sewer problems via point repairs and relining, Public Works initiated an in-house sewer televising program to identify problems with the Village’s sewer system that have developed since the 1990’s. 2012 was the first year Public Works tracked how many lineal feet of sewer has been televised in-house.

Considering that the Village’s combined sewer system is critically important infrastructure, visually inspecting the sewer system (during emergency and non-emergency situations) on a routine schedule is critical to maintaining the pipes in a good condition so that the pipes can effectively convey storm and sanitary flow.

Alternatives to replacing the sewer televising equipment are as follows:

1. Defer replacing the system until it breaks down completely.
2. Purchase a new televising system.
3. Lease a televising system.
4. Outsource all sewer televising services.

Operational Impact

Although there are alternatives for performing/providing this infrastructure maintenance program, not performing or providing this service would compromise the Village’s efforts to proactively eliminate cracks, breaks, and failing sections of Village sewers that could result in sewer backups into homes and businesses.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Equipment-Public Works

Leak Correlation Equipment

FY 2016

\$15,000

CERF/WS

Critical

Recommended

Contingent on Funding

Purchase Cost \$15,000
Purchased N/A
Useful Life 12 years
Current Life N/A



Equipment Description

A leak noise correlator is an electronic device used for leak detection and as a leak locator to find leaks in pressurized water or gas lines. Microphones or acoustic sound sensors are placed in contact with the pipe at two or more points to record the sound emitted by a leak somewhere between the points. The sound data is processed through a mathematical algorithm which compares or correlates the two recordings to determine the difference in the times it takes noise to travel from the site of the leak to each of the sensors. If the distance between the sensors is known in advance, this timing information can be used to determine the location of the leak.

Purchasing this equipment directly from Fluid Conservation Systems would give staff the ability to reduce water loss by locating leaks quickly and save money by not using a locating service. Staff is currently using an outside contractor to locate water main leaks and the minimum charge per four hour call-out is \$750. In FY 2014 the Village spent \$11,227.25 to locate emergency leaks contractually.

Project alternative

The alternative is to continue using an outside service to locate water main leaks.

Operational Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Information Technology– Five Year Capital Improvement Program

The Village’s Information Technology (IT) function is responsible for purchasing and maintaining all computer systems and personal computers, providing technical support to all systems and supervision of village hired consultants and vendors. The Village has contracted with the Village of Oak Park for day-to-day IT support.

In FY 2012, the Village retained the services of ClientFirst to prepare a strategic information technology business plan. This plan evaluated the Village’s hardware and software capabilities to determine any possible improvements that could be made in order to fully meet the Village’s business needs, including:

- A comprehensive evaluation of the Village’s hardware and software systems to determine the extent of the Village’s capabilities.
- An inventory on the current hardware and software systems in the Village to determine what additional functions the Village should have as measured by industry best practices.
- A 5 year replacement schedule to provide the Village with realistic recommendations for its IT system needs.
- Evaluation of the Village’s bandwidth capacity.
- Redundancy recommendations to ensure continuity of service.
- Disaster recovery capabilities.

The Village issued an RFP for IT support services and anticipates a January 2015 transition to a new IT consultant. More extensive Capital Planning for FY 2018 and beyond will be undertaken by Village staff and its new service provider.

The following improvements, as recommended by ClientFirst, are proposed for FY 2016:

Equipment	Cost of Equipment	Funding Source	This Project is:
Network Improvements	\$10,000	GF	Recommended
Miscellaneous Improvements	\$2,000	GF	Recommended
Server Replacement	\$12,500	GF	Critical
Total	\$24,500		

Each project in the CIP is categorized by the requesting department as follows:

Critical- The project must be completed in the year recommended due to safety or operational needs or as mandated by law. **Critical projects are highlighted in yellow.**

Recommended- The project will significantly improve operations or safety. The project is strongly recommended for funding in the year recommended or the year after.

Contingent on Funding- The project would be a benefit to the Village and improve service levels but is only recommended if funds are available.

Village of River Forest, Illinois
 Five Year Capital Improvement Program
 Information Technology
 Fiscal Year 2016 Budget

	This Project is:	Fiscal Year				Five Year		Funding Source
		2016	2017	2018	2019	2020	Total	
Network Improvements	Recommended	10,000	-	38,500	4,500	4,500	57,500	GF
Miscellaneous Improvements	Recommended	2,000	2,500	7,500	7,500	7,500	27,000	GF
Server Replacement	Critical	12,500	12,500	20,000	12,500	12,500	70,000	GF
PC Replacements	Recommended	-	14,000	-	-	-	14,000	GF
Total		24,500	29,000	66,000	24,500	24,500	168,500	

Proposed Funding Source	Fiscal Year				Five Year	
	2016	2017	2018	2019	2020	Total
General Fund (GF)	24,500	29,000	66,000	24,500	24,500	168,500
Totals	24,500	29,000	66,000	24,500	24,500	168,500

Information Technology-Administration

Network Improvements	FY 2016	\$10,000	GF
	FY 2018	\$38,500	GF
	FY 2019	\$4,500	GF
	FY 2020	\$4,500	GF

Critical
 Recommended
 Contingent on Funding

Funding History

N/A

Project Description & Justification

The Village’s IT Assessment conducted by ClientFirst recommended a number of network improvements including:

FY 2015	New Core Switch	\$5,000
FY 2016	New Edge Swtiches (2)	\$10,000
FY 2018	Public Works Wireless	\$38,500*

*Currently, VPN over internet is used to connect the Public Works Garage and Water Pumping Station to Village Hall (there had previously been a wireless connection which was disabled during a storm and never re-installed). The connection to Public Works is extremely slow, making it difficult for Public Works employees to access information on the Village network. To address this issue in the interim, a Terminal Server has been installed and Staff is monitoring whether this is an effective solution.

In the alternative, ClientFirst recommended that the Village consider the installation of a wireless connection between Village Hall and Public Works (\$38,500) or the installation of high speed fiber (\$24,000 annual cost). Staff will continue to explore solutions in the hopes of eliminating a large expenditure in FY 2018.

The Village issued an RFP for IT Support Services in November 2014 and anticipates an agreement with a new service provider in January 2015. Recommendations regarding network and equipment maintenance and upgrades will be provided by the new service provider. The funds budgeted in FY 2018-2020 may be modified as the new service provider refines costs further.

Project Alternative

If this project is not funded in FY 2016, switches will have to be replaced as they fail, resulting in lost productivity (in FY 2011 an internet switch failed and Staff was without internet access for two days). As noted above, alternatives will continue to be explored for the Public Works internet connections.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$24,000 beginning in FY 2018	Cost of high speed fiber for public works connectivity (if this alternative is chosen)
\$4,500 beginning in 2018	Cost of wireless maintenance

Information Technology-Administration

Miscellaneous Improvements	FY 2016	\$2,000	GF
	FY 2017	\$2,500	GF
	FY 2018	\$7,500	GF
	FY 2019	\$7,500	GF
	FY 2020	\$7,500	GF

Critical
 Recommended
 Contingent on Funding

Funding History

FY 2015	Inventory Alerts and Alarms	\$5,000
	Wireless Expansion – Pumping Station	\$1,000
	Remote Access Improvements	\$3,000
	Document Management Upgrades	\$2,500

Project Description & Justification

The Village’s IT Assessment conducted by ClientFirst recommended a number of miscellaneous improvements over the next several years:

FY 2016	Wireless Expansion- Public Works	\$2,000
FY 2017	Document Management Upgrades	\$2,500
FY 2018-20	To Be Determined	\$7,500

The Village issued an RFP for IT Support Services in November 2014 and anticipates an agreement with a new service provider in January 2015. Recommendations regarding network and equipment maintenance and upgrades will be provided by the new service provider. The funds budgeted in FY 2018-2020 may be modified as the new service provider refines costs further.

Project Alternative

While none of the above projects are mission critical, they will ensure that the Village continues to implement best management practices and properly maintains its IT infrastructure. Should projects not be funded, they will be rescheduled for future years.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	

Information Technology-Administration

Server Replacement	FY 2016	\$12,500	GF
	FY 2017	\$12,500	GF
	FY 2018	\$20,000	GF
	FY 2019	\$12,500	GF
	FY 2020	\$12,500	GF

Critical
 Recommended
 Contingent on Funding

Funding History

FY 2013	\$12,000
FY 2014	\$16,000

Project Description & Justification

This program is designed to upgrade the Village’s server inventory:

Server	Type	Applications	Purchased	Warranty	Replacement
Sisko	Physical	Print Server	9/2006		N/A- Reuse existing servers
Pine	Physical	File, Application, SQL, 2 nd DC	12/2008	12/2015	FY 2016
Crusher	Physical	Intranet, GIS	5/2008		FY 2014
Leo	Virtual	Domain Controller, Anti-Virus	5/2011	5/2014	FY 2017
Pegasus	Virtual	Exchange	5/2011	5/2014	FY 2017
Phoenix	Virtual	Web Server	5/2011	5/2014	FY 2017
Orion	Virtual	IT, Springbrook	8/2012	8/2015	FY 2018

The Orion server was purchased in FY 2012 per the recommendation of ClientFirst as existing servers were at capacity. Per the ClientFirst recommendations, the Village website was moved offsite in 2012 to ensure non-interrupted communications in the event of a disaster.

Project Alternative

If this project is not funded, servers will need to be replaced as they fail.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Streets Improvements – Five Year Capital Improvement Program

The Village of River Forest recognizes the importance of consistently maintaining its streets, sidewalks and alleys to ensure the safety of drivers and pedestrians.

Street System Overview

The Village has 31.6 miles of centerline streets. The recommended funding level for the next five years will maintain the average street rating in a good or excellent condition. The Village conducts an annual pavement inventory study and has implemented a microsurfacing and crack sealing program to prevent degradation of the streets. The Village rates streets as follows:

Streets		
Surface Condition	Pavement Ranking	Estimated Remaining Life
Excellent	7.6 – 9.0	15 to 20 years
Good	6.1 – 7.5	10 to 15 years
Fair	4.6 – 6.0	6 to 10 years
Poor	1.0 – 4.5	2 to 5 years

Sidewalk & Curb System Overview

The Village of River Forest recognizes the need to have a network of safe pedestrian accesses throughout the community. The primary emphasis of the sidewalk program is to ensure the safety of the Village’s sidewalks. To that end, the Village funds 100% of the replacement cost of sidewalk in immediate need of replacement.

The following improvements are proposed for FY 2016:

Improvement	Cost	Funding Source	Nature of Project
Street Patching	\$85,000	GF - \$75,000 WS - \$10,000	Critical
50/50 Sidewalk, Curb & Gutter	\$65,000	GF - \$55,000 WS - \$10,000	Critical
Alley Improvement Program	\$180,000	CIF	Recommended
Parking Lot Improvements	\$100,000	CIF/Parking Reserve	Recommended
Madison Street ITEP Grant	\$510,000	CIF	Recommended
Street Improvement Program (SIP)	\$400,000	MFT - \$350,000 WS - \$50,000	Critical
Street Maintenance Program	\$100,000	GF	Critical
Surface Transportation Program (STP)	\$55,000	MFT	Critical
Municipal Lighting Systems	\$286,637	GF	Recommended
Roosevelt Traffic Safety Improvements	\$40,000	CIF	Critical
Total:	\$1,821,637		

Each project in the CIP is categorized by the requesting department as follows:

Critical- The project must be completed in the year recommended due to safety or operational needs or as mandated by law. **These projects highlighted in yellow.**

Recommended- The project will significantly improve operations or safety. The project is strongly recommended for funding in the year recommended or the year after.

Contingent on Funding- The project would be a benefit to the Village and improve service levels but is only recommended if funds are available.

Village of River Forest, Illinois
 Five Year Capital Improvement Program
 Streets, Sidewalks, Alleys
 Fiscal Year 2016 Budget

This Project is:	Fiscal Year				Five Year		Funding Source
	2016	2017	2018	2019	2020	Total	
Street Patching Program	85,000	90,000	95,000	100,000	85,000	455,000	GF/WS
50/50 Sidewalk, Curb & Gutter	65,000	65,000	65,000	65,000	65,000	325,000	GF/WS
Alley Improvement Program	180,000	50,000	50,000	50,000	50,000	380,000	CIF
Parking Lot Improvements	100,000	-	-	-	-	100,000	CIF/Parking Reserve
Madison Street ITEP Project	510,000	-	-	-	-	510,000	CIF
Street Improvement Program (SIP)	400,000	300,000	300,000	300,000	300,000	1,600,000	MFT /WS
Street Maintenance Program	100,000	100,000	110,000	110,000	110,000	530,000	GF
Surface Transportation Program (STP)	55,000	932,800	-	-	-	987,800	MFT
Municipal Lighting Systems	286,637	89,280	37,920	-	-	413,837	CIF
Roosevelt Traffic Safety Improvements	40,000	-	-	-	-	40,000	CIF
Total	1,821,637	1,627,080	657,920	625,000	610,000	5,341,637	

Proposed Funding Source	Fiscal Year				Five Year	
	2016	2017	2018	2019	2020	Total
General Fund (GF)	230,000	235,000	250,000	250,000	240,000	1,205,000
Motor Fuel Tax (MFT)	405,000	1,182,800	250,000	250,000	250,000	2,337,800
Water and Sewer Fund (WS)	70,000	70,000	70,000	70,000	70,000	350,000
Capital Improvement Fund (CIF)	976,637	139,280	87,920	50,000	50,000	1,303,837
CIF/Parking Reserve	140,000	-	-	-	-	140,000
Totals	1,821,637	1,627,080	657,920	620,000	610,000	5,336,637

Streets, Sidewalks, Alleys-Public Works

Street Patching Program	FY 2016	\$75,000	GF	\$10,000	WS
Streets and Alleys	FY 2017	\$80,000	GF	\$10,000	WS
	FY 2018	\$85,000	GF	\$10,000	WS
	FY 2019	\$90,000	GF	\$10,000	WS
	FY 2020	\$75,000	GF	\$10,000	WS

Critical
 Recommended
 Contingent on Funding

Spending History	GF	WS	Total
FY 2015	\$36,906	\$10,000	\$46,906
FY 2014	\$83,970	\$10,000	\$93,970
FY 2013	\$51,732	\$7,342	\$59,074
FY 2012	\$42,799	\$2,330	\$45,129
FY 2011	\$63,776	\$7,901	\$71,677

Program Description & Justification

The purpose of this program is to maintain and improve surface conditions of Village streets and alleys by patching defective areas. This program is intended for streets and alleys of all condition ratings to prolong their useful lives. To accomplish this goal, an annual funding level of \$85,000-\$100,000 over the next five years is recommended. These funding levels are estimates and reflect inflationary increases for construction.

Historically, Village Staff inspected all streets annually and the areas of pavement failure were placed on a patching list which was provided to the Village’s contractor. Village Staff inspects alleys and schedules patching as needed in alley locations. Pavement Street patching utilizes hot mix asphalt (HMA), the standard material approved by the Illinois Department of Transportation for surface repairs. Two inches (thickness) of the failing surface pavement is milled and replaced with new HMA. This patching process is more permanent and resilient than the use of asphalt “cold” patch. The ideal timing for this maintenance project is when streets are evaluated with a good condition rating, but showing signs of early deterioration (potholes, etc.)

Included in this street patching program are Water and Sewer funds (\$10,000 annually) to install HMA patches on street openings created for the repair of the Village’s water and sewer systems.

2016 Recommended Project

Due to the amount of streets that will be resurfaced as part of the Northside Stormwater Management Project and funding received for the resurfacing of Division Street, Staff recommends a slight reduction in this maintenance project for FY 2016. Various locations to be patched are identified on a continual basis.

Program Alternative

The primary alternative is to resurface the street. Resurfacing, which is a more costly process, involves not only the replacement of defective surface but also additional surface areas that have not begun to deteriorate.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Streets, Sidewalks, Alleys-Public Works

50/50 Sidewalk, Curb & Gutter	FY 2016	\$55,000	GF	\$10,000	WS
Sidewalks, Aprons, and Curb	FY 2017	\$55,000	GF	\$10,000	WS
	FY 2018	\$55,000	GF	\$10,000	WS
	FY 2019	\$55,000	GF	\$10,000	WS
	FY 2020	\$55,000	GF	\$10,000	WS

Critical
 Recommended
 Contingent on Funding

Spending History	GF	W & S	Total
	(sidewalk & aprons)	(curb & gutter)	
FY 2015	\$60,735	\$4,503	\$65,238
FY 2014	\$47,507	\$1,829	\$49,336
FY 2013	\$43,648	\$15,360	\$59,008
FY 2012	\$44,001	\$4,615	\$48,616
FY 2011	\$34,831	\$5,712	\$40,543

Program Description & Justification

The purpose of this program is to improve the overall condition of public sidewalks and curb/gutters throughout the Village. The objective is to eliminate all trip hazards for pedestrians. To accomplish this objective, an annual funding level of \$50,000-\$74,000 is recommended. Failure to implement a sidewalk improvement program to repair deteriorated/damaged sidewalk can expose the Village to liability resulting from trips and falls.

For the purposes of this program, the Village is divided into three geographical areas. Village Staff conducts annual inspections of all public sidewalk in each of these three areas over three-year periods. Sidewalks are rated according to the displacement of adjoining sidewalk squares that pose a potential for trip hazard. The following table identifies the sidewalk condition ratings, description of condition, and the recommended action:

Sidewalk Condition	Joint Displacement	Recommended Action
A	> 1/2" but < or = 1"	Consider Replacement
B	>1" but < 1 1/2"	Recommend Replacement
C	>1 1/2" with loose/missing pieces	Replace immediately

During annual inspections, the Village solicits participation in the 50/50 sidewalk replacement cost share program for sidewalk with a "B" rating. A copy of the inspection form is delivered to property owners describing the sidewalk's condition and requests their participation. The Village replaces all sidewalk with a condition "C" rating. The Village also installs detectable warning pads, located at street crossings and intersections, that are designed for the visually impaired to feel the raised, truncated domes with their feet. The following is a summary of proposed expenditures for FY 2016:

General Fund:

Sidewalk – Condition C (100% Village):	\$40,000
Sidewalk – Condition A or B (50/50):	\$20,000 (revenue - \$10,000)
Driveway Aprons (100% Resident):	\$5,000 (revenue - \$5,000)
Detectable Warning Pads (100% Village)	\$2,500

Water and Sewer Fund:

Curb/gutter (100% Village):	\$10,000
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Sidewalk and Curb Annual Inspection Areas:

<u>Area No.</u>	<u>Area Limits</u>	<u>Inspection Years</u>
1	Des Plaines River to Harlem /Hawthorne to Chicago	2015, 2018, 2021
2	Thatcher to Harlem / Chicago to Greenfield	2016, 2019, 2022
3	Thatcher to Harlem / Greenfield to North Thatcher to Lathrop / Madison to Hawthorne	2017, 2020, 2023

In addition to the annual inspection of the aforementioned designated areas, Village Staff inspects all sidewalk in close proximity to schools, parks, and commercial/retail areas on an annual base.

The Village also allows property owners to replace their driveway aprons through this program at 100% cost to the property owner (full payment due to the Village prior to commencement of work). The primary benefit to the property owner is that they receive competitively bid pricing for their improvement.

Program Alternatives

Although the preferred option is sidewalk replacement, alternatives to this program involve the installation of asphalt cold patch in the displaced joints and/or grinding off the edge of the raised sidewalk. Not only is the patching option aesthetically unattractive, the asphalt can break loose and re-expose the displaced sidewalk that re-establishes liability to the Village and increases maintenance costs.

Another option is mud-jacking which is a process of filling cavities or voids beneath concrete. The Village does not currently own equipment to perform this mud-jacking operation.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Streets, Sidewalks, Alleys-Public Works

Alley Improvement Program	FY 2016	\$ 180,000	CIF
	FY 2017	\$ 50,000	CIF
	FY 2018	\$ 50,000	CIF
	FY 2019	\$ 50,000	CIF
	FY 2020	\$ 50,000	CIF

Critical
 Recommended
 Contingent on Funding

Spending History

FY 2015	\$508,901 (Green Alleys - projected)
FY 2014	\$0
FY 2013	\$14,745 (Lake/Edgewood Alley-SSA)

Program Description & Justification

The purpose of this program is to improve the condition of Village alleys. To accomplish this objective, a minimum annual funding level of \$50,000 over the next five years is recommended. These funding levels are estimates based on the resurfacing of one or two alleys per year. They also reflect inflationary increases for construction as the actual projects have yet to be identified. In past years, the Village’s Alley Improvement Projects utilized a Special Service Area process, which requires a 50/50 cost share with the adjoining property owners. These projects typically involved removal of the top of the asphalt surface (typically 1 ½ inches) and replacement with new asphalt.

Given the Village’s recent success with the permeable paver alleys installed with additional funding from the Illinois Green Infrastructure Grant (IGIG), Staff will be conducting further analysis on various permeable surfaces. Many homeowners adjacent to existing alleys experience stormwater drainage problems on a regular basis. To simply replace the impermeable surface with another impermeable surface will not alleviate these issues. Due to the inadequacy of the Village’s existing sewer system, the addition of sewers to convey runoff away from the alleys is also not a feasible option. The most economical way to mitigate these issues and provide a new alley surface is through the use of permeable materials.

While Staff was conducting the annual Street Rating Survey, the alleys were also rated. This was completed utilizing the same rating system as the streets. And will be used annually to determine the alley(s) that require resurfacing/reconstruction in a given year.

2016 Recommended Projects

1. 7200 Block of Quick Alley: This east-west alley, which connects the 600 blocks of Harlem Avenue and Bonnie Brae, consists of a concrete surface that has severely deteriorated. Replacing this concrete with asphalt (which most alleys consist of) or any other surface will necessitate a full reconstruction of the alley. Because of this increased scope of work, the reconstruction will cost significantly more than a typical "grind and overlay" treatment which is more commonly used in alleys. This project was identified in FY 2015 but was not completed and has subsequently been moved to FY 2016.
2. Local Alley Project – Due to the added cost required to fully reconstruct the Quick Avenue Alley, an additional alley will not be resurfaced during FY 2016.

FY 2016 Cost Summary for Alley Improvement Program

Full reconstruction of the alley at 7200 Quick Ave with asphalt will cost approximately \$180,000. Prior to design and bidding of this project, Staff will research additional materials that may be used in construction instead of asphalt, namely permeable materials that will help offset any existing or new drainage issues.

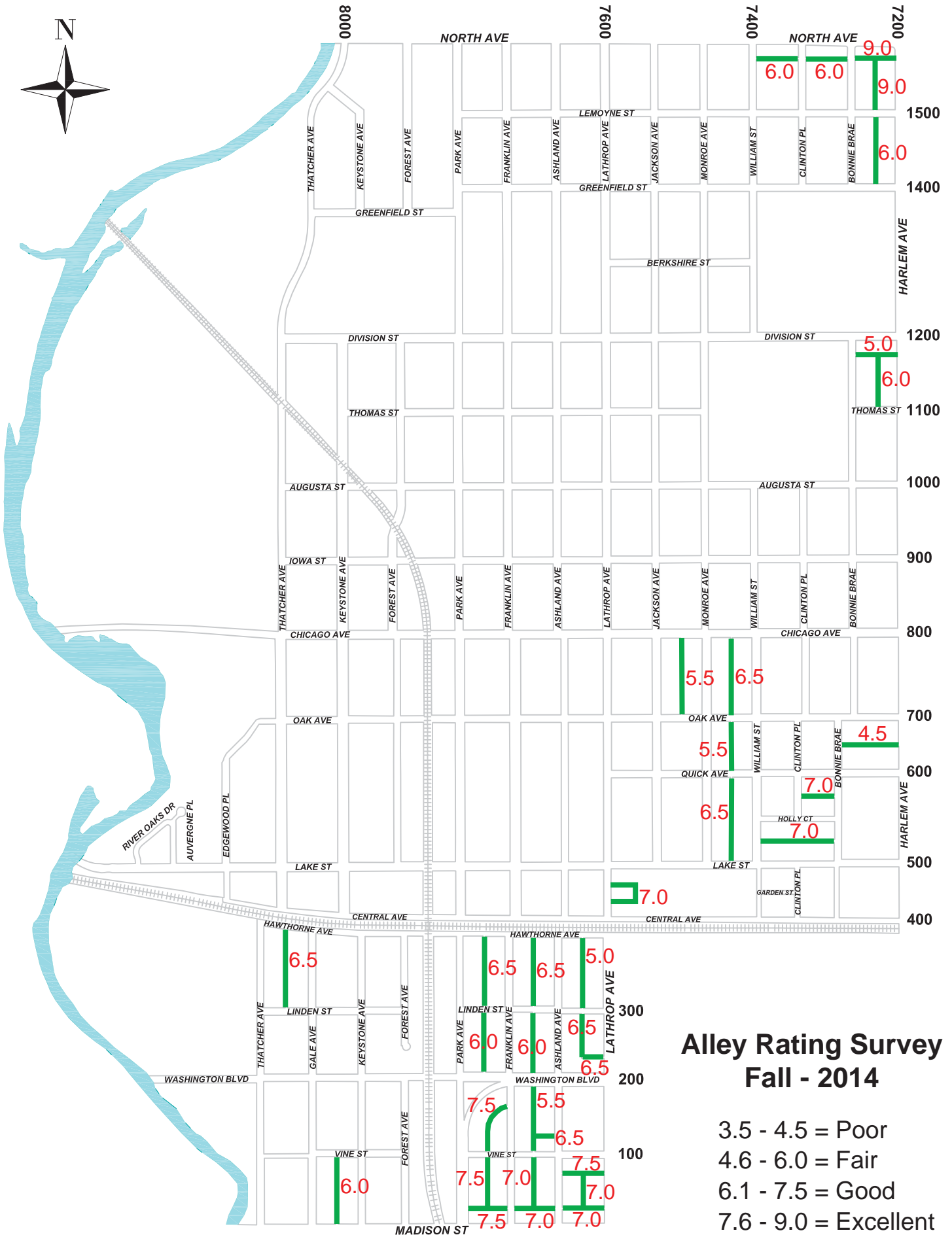
Program Alternative

Not performing any surface maintenance, particularly for alleys in deteriorating conditions, will result in total pavement failure and require reconstruction (of base and surface) which is significantly higher in cost compared to resurfacing.

Extensive pavement patching may be somewhat cost effective initially for alleys with better condition ratings, and may slow down the progression of potholes, but the pavement patching needs will be ongoing and likely promote the continued deterioration of the pavement’s base that will significantly increase eventual resurfacing costs.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	None



Streets, Sidewalks, Alleys-Public Works

Parking Lot Improvements	FY 2016	\$100,000	CIF/ Parking Reserve
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<input type="checkbox"/> Critical	<input checked="" type="checkbox"/> Recommended	<input type="checkbox"/> Contingent on Funding
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Original Purchase Date & Cost

N/A

Spending History

FY 2014-15	\$0
FY 2013-14	\$0
FY 2012-13	\$3,920 (Lot A, sealcoating)
FY 2011-12	\$2,998 (Lot E, sealcoating)

Program Description & Justification

The purpose of this program is to improve the condition of the parking/driving surfaces of Village-owned parking lots. The Village owns and/or maintains six parking lots:

- A. Village Hall – 400 Park Avenue
- B. Public Works Garage – 45 Forest Avenue
- C. Southeast corner of Lake Street and Park Avenue
- D. West Commuter Lot – 400 block of Thatcher Avenue – **Reconstruction Scheduled for FY 2016**
- E. East Commuter Lot – 400 block of Thatcher Avenue
- F. Lot on south side of 7915-7919 North Avenue – contiguous to CVS parking lot

Several options for improving parking lots include full reconstruction, resurfacing, asphalt patching, seal-coating, and crack sealing. In FY 2012 and 2013, the conditions of the asphalt surfaces on the two parking lots that were improved (Lots A and E) were considered to be in good condition which allowed seal-coating as an improvement option.

FY 2016 Recommended Project

The West Commuter Lot was previously scheduled for resurfacing during FY 2014. Staff delayed this improvement as this area was identified to be an ideal location for the incorporation of “green” infrastructure in the form of permeable pavers, possibly in conjunction with a rain garden or bio-swale. Staff developed an estimated project cost of \$100,000. This will provide the benefits of pollutant reduction as well as stormwater storage. During rain events, a substantial volume of the stormwater runoff will be stored within a stone base that will ultimately be allowed to percolate into the surrounding subsoil. This will help alleviate the currently over-taxed combined sewer system and help reduce the amount of sewer back-ups and combined sewer overflows.

Program Alternative

An alternative to reconstruction with permeable pavers would be to resurface this area using traditional asphalt. The cost of this type of improvement would be approximately \$40,000. While this represents a significant reduction in initial project costs, a permeable paver installation would reduce costs over the life of the project by significantly reducing the ongoing maintenance (patching, crack sealing, and sealcoating) required and extending the life-span of the pavement.

Not performing any surface maintenance, particularly for lots in deteriorating conditions, will result in total pavement failure and require reconstruction (of base and surface) which is significantly higher in cost compared to resurfacing. Extensive pavement patching, crack sealing, and seal-coating is a cost effective

option and may slow down the progression of potholes, but the pavement patching needs will be ongoing and could allow for the continued deterioration of the pavement's base that will significantly increase eventual resurfacing costs.

Staff plans to design the project during the upcoming winter in the event that grant funding becomes available for this improvement.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Streets, Sidewalks, Alleys-Public Works

Madison Street ITEP Project FY 2016 \$ 510,000 CIF

Critical Recommended Contingent on Funding

Program Description & Justification

The purpose of this program is to improve the streetscape in the Madison Street commercial corridor from Des Plaines Avenue to Van Buren Street (railroad tracks). This is a joint grant application between the Villages of Forest Park and River Forest made to the Illinois Department of Transportation’s Illinois Transportation Enhancement Program (ITEP). The project will consist of the replacement of sidewalk, installation of brick pavers, pedestrian scale lighting, intersection bump outs to protect parking areas and better accommodate pedestrian travel, planter boxes and benches.

The previously constructed Madison Streetscape has been instrumental in the redevelopment of a significant portion of the downtown area within Forest Park. This redevelopment has revitalized business and provided economic benefit to the community. Similar economic benefits from the proposed improvements are anticipated. Additionally, the proposed project will enhance the pedestrian activity and safety, and provide a more attractive gateway into the Villages of River Forest and Forest Park.

The total cost of the project is \$3,281,980 (including previously completed design work). This reflects an increase in previously estimated costs based on an increased scope of work. During the design process, it was determined that the project will require full-reconstruction rather than a simple grind and overlay. Due to the increase in the total project cost, additional funding will be pursued after the letting. The remaining local share of the project is estimated to be \$1,248,620 which will be split between the Village of River Forest and the Village of Forest Park. The remaining cost to Village of River Forest is approximately \$510,000. If additional funding is procured, the Village of River Forest portion will be reduced.

Program Alternative

Because the project is grant funded, there are no other reasonable project alternatives at this time.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Streets, Sidewalks, Alleys-Public Works

Street Improvement Program	FY 2016	\$350,000	MFT	\$50,000	WS
	FY 2017	\$250,000	MFT	\$50,000	WS
	FY 2018	\$250,000	MFT	\$50,000	WS
	FY 2019	\$250,000	MFT	\$50,000	WS
	FY 2020	\$250,000	MFT	\$50,000	WS

Critical
 Recommended
 Contingent on Funding

<u>Spending History</u>	<u>MFT/GF</u>	<u>WS</u>	<u>Total</u>
FY 2015	\$169,558	\$20,460	\$190,018
FY 2014	\$233,610	\$108,000	\$341,610
FY 2013	\$283,860	\$115,369	\$399,229
FY 2012	\$438,531	\$205,899	\$644,430
FY 2011	\$254,325	\$80,275	\$334,600

Program Description & Justification

The purpose of this program is to improve the condition of local streets. The objective is to improve all streets with condition ratings of “Fair” or “Poor” to condition ratings of “Good” to “Excellent.” This program does not include capital improvements on state routes.

Each year, Village Staff visually inspects all local streets and rates them according to the condition of the pavement, curb and gutters, and drainage. Streets rated “Poor” or “Fair” are prioritized for one of the construction options (rehabilitation, resurfacing, or reconstruction) or the microsurfacing maintenance option depending on their condition, location, and estimated traffic volumes. The timing in improving streets is critical. Waiting too long to address some streets in the poor to fair condition will result in the condition deteriorating to a point where a more expensive reconstruction will be necessary versus a resurfacing.

The following tables summarize the street rating systems:

Streets		
Surface Condition	Pavement Ranking	Estimated Remaining Life¹
Excellent	7.6 – 9.0	15 to 20 years
Good	6.1 – 7.5	10 to 15 years
Fair	4.6 – 6.0	6 to 10 years
Poor	1.0 – 4.5	2 to 5 years

¹ Life estimate is based upon time frame needed for resurfacing assuming a regular maintenance program.

FY 2016 Recommended Projects

<u>Street</u>	<u>Pavement Rating</u>
1. Central Ave from Lathrop to Harlem	Fair
2. William St from Central to Lake	Fair
3. Garden St from William to Clinton	Good
4. Jackson Ave from Greenfield to North	Poor
5. Monroe Ave from Greenfield to North	Poor

The projected cost to resurface these streets is \$300,000.

Several streets within the Northside Stormwater Management Project (NSMP) have been given a condition rating of “Fair” and have been identified as being in need of resurfacing. As it is currently designed, the NSMP will include the resurfacing of these streets from curb-to-curb. For this reason, Staff has decided not to include resurfacing within the NSMP area as part of the Street Improvement Project.

While the Capital Improvement Plan proposes funding for street improvements through FY 2020, these locations have not yet been determined. Staff recommends a funding level of \$300,000 for each of those years with the specific locations selected based on annual street ratings surveys.

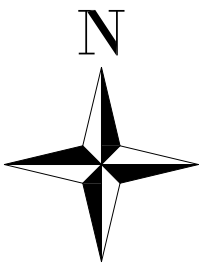
Program Alternative

Not performing any roadway maintenance, particularly for streets in “Poor” condition, will result in total pavement failure and require reconstruction (of base and surface) which is significantly higher in cost compared to resurfacing.

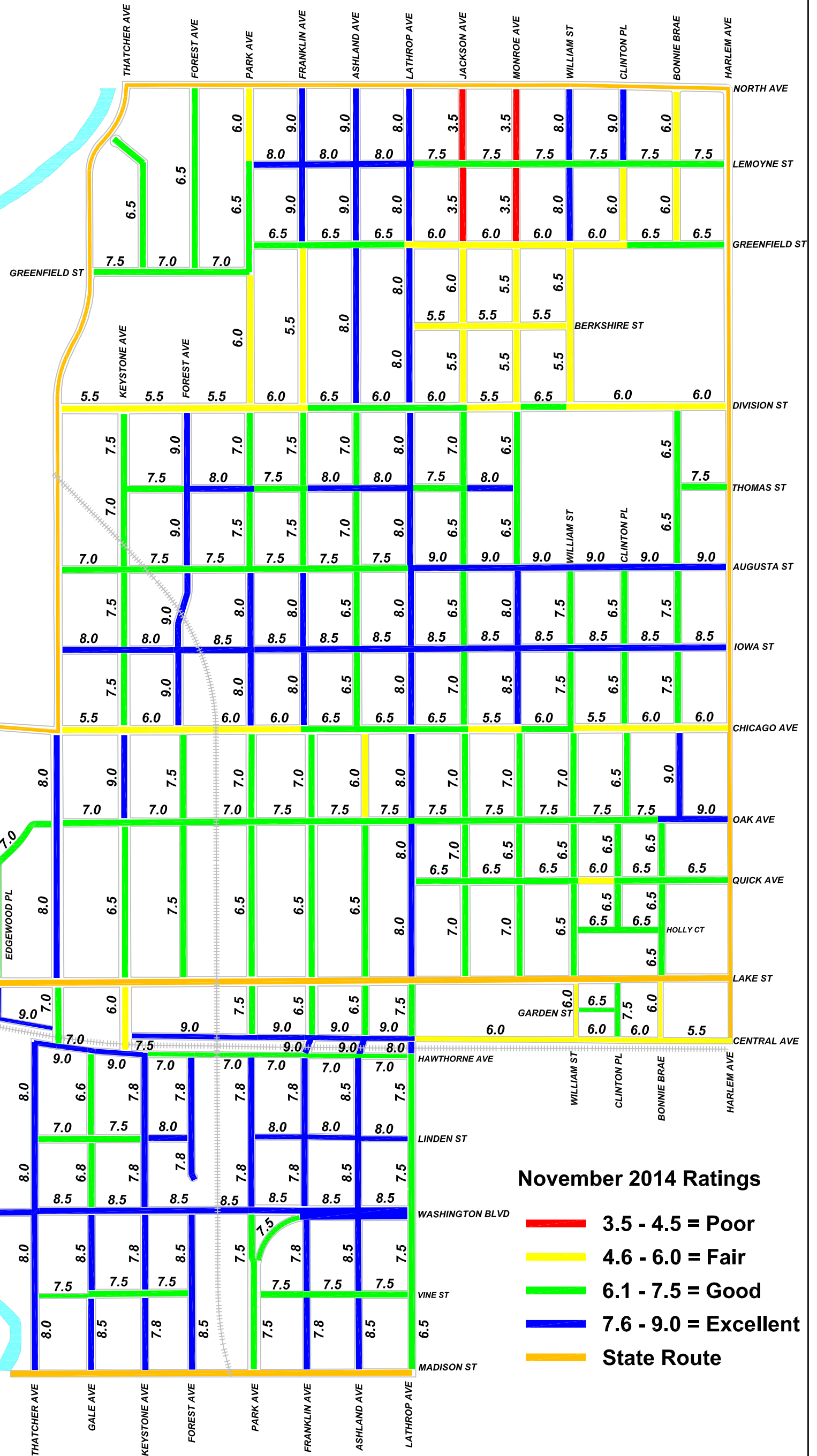
Extensive pavement patching may be somewhat cost effective initially for streets with a “Fair” condition rating, and may slow down the progression of potholes, but the pavement patching needs will be ongoing and likely promote the continued deterioration of the street’s base that will significantly increase eventual resurfacing costs.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	None



Village of River Forest Street Rating Map



November 2014 Ratings

- █ 3.5 - 4.5 = Poor
- █ 4.6 - 6.0 = Fair
- █ 6.1 - 7.5 = Good
- █ 7.6 - 9.0 = Excellent
- █ State Route

Streets, Sidewalks, Alleys-Public Works

Street Maintenance Program	FY 2016	\$100,000	GF
Streets	FY 2017	\$100,000	GF
	FY 2018	\$110,000	GF
	FY 2019	\$110,000	GF
	FY 2020	\$110,000	GF

Critical
 Recommended
 Contingent on Funding

Spending History	Crack Sealing	Microsurfacing	Total
FY 2015	\$32,473	\$56,642	\$89,115
FY 2014	\$22,900	\$51,724	\$74,624
FY 2013	\$22,933	\$58,282	\$81,215
FY 2012	\$14,268	\$18,003	\$32,271
FY 2011	\$20,377	\$69,848	\$90,225

Program Description & Justification

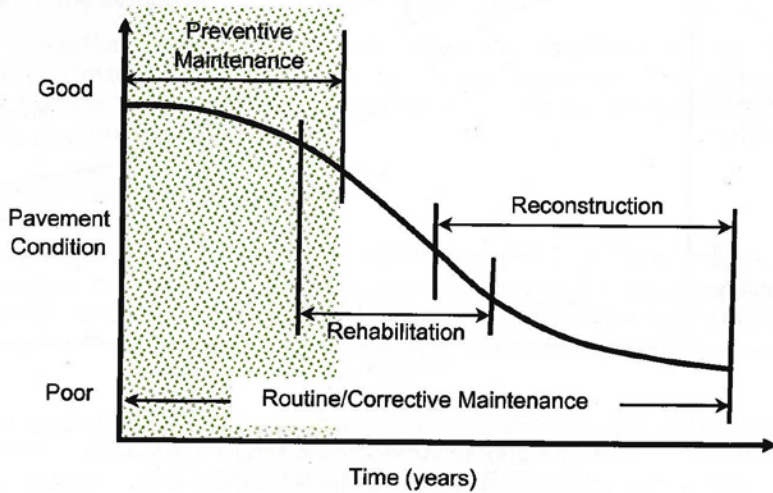
The purpose of this preventative maintenance program, which has previously included joint crack sealing and microsurfacing, is to extend the useful lives of Village streets and to provide an economic alternative to conventional street resurfacing. The objective is to maintain all streets at a “Good” condition rating or better and extend the life of each crack sealed and microsurfaced street by five to seven years. To accomplish this objective, a minimum annual funding level of \$65,000 has, in the past, been recommended for microsurfacing and \$25,000 for crack sealing. These funding levels are estimates, and reflect inflationary increases for construction, as actual project quantities are identified prior to construction.

In recent years, the practice of microsurfacing has been analyzed to determine its effectiveness. While creating an aesthetically pleasing surface, this type of treatment does nothing to rejuvenate/rehabilitate the existing pavement course. The microsurfacing layer can also create an uneven driving surface at manholes and other locations and can be dislodged due to cracking or during winter plowing activities. For these reasons, Staff will be researching pavement rejuvenation materials during the winter which will be constructed during FY 2016. This type of treatment helps revive the existing pavement to prolong its life as compared to adding a thin layer of material on top of a structurally failing pavement.

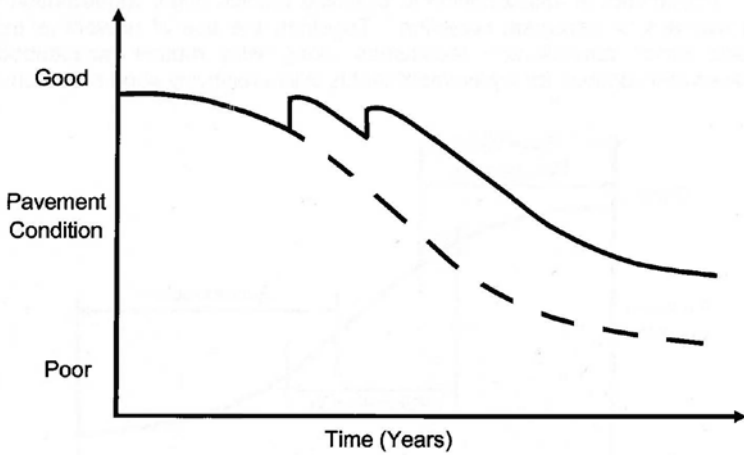
Conversely, Village Staff believes the practice of Crack Sealing to be invaluable. Ideally, this work is completed when the pavement is still in good condition with minimal cracking. Village Staff will continue to bid this work jointly with the Village of Oak Park in an effort to optimize unit pricing.

Village Staff has identified the streets that are ideal candidates for rejuvenation and crack sealing during the annual Street Rating Survey. These streets are typically in good condition, with the idea being to maintain this condition for an extended period of time. Streets of all ratings that have cracks are eligible for crack sealing.

The following figure demonstrates the relationship between pavement condition and typical types of pavement preservation and /or street improvements:



The following figure demonstrates how preventative maintenance can extend pavement performance:



FY 2016 Recommended Projects

Due to the amount of streets being resurfaced as part of the Northside Stormwater Management Project and funding received for the resurfacing of Division Street, Village Staff recommends changing the past budget amounts (identified above) to \$70,000 for crack sealing and \$30,000 for a pavement rejuvenation method.

Pavement Rejuvenation

The following streets have been identified for rejuvenation:

<u>Street</u>	<u>Condition Rating</u>	<u>Proposed Cost</u>
Franklin Ave (Central to Oak)	Good	\$6,300
Ashland Ave (Central to Oak)	Good	\$6,900
Park Ave (Lake to Oak)	Good	\$8,100
Keystone Ave (Lake to Oak)	Good	\$8,700

Crack sealing

In addition to the streets to be rejuvenated, additional streets will be identified for crack sealing during late winter/early spring of 2015.

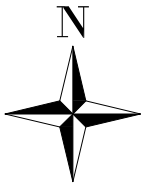
Program Alternative

The alternative is a reactive maintenance program that will accelerate deterioration of Village streets. These maintenance programs, along with pavement patching, will prolong the useful life of Village streets. By not pursuing these maintenance programs, the following infrastructure improvements will be necessary at more frequent intervals:

- Resurfacing: This is a more costly improvement that requires the removal and replacement of the existing worn pavement and minimal base improvement. This type of construction is normally completed over a several week period while microsurfacing can be completed in a single day.
- Reconstruction: This is a significantly more costly improvement that is necessary in situations of surface pavement failure along with extensive base failure.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	None



Village of River Forest Street Map

Streets, Sidewalks, Alleys-Public Works

Surface Transportation Program (STP)

FY 2016	\$55,000	MFT
FY 2017	\$932,800	MFT

Critical
 Recommended
 Contingent on Funding

Spending History

N/A

Program Description & Justification

The Federal Highway Administration (FHWA) administers the **Surface Transportation Program (STP)** program, which is funded through Congress from Federal Gas Tax Revenue. The money is allocated to each state which is then split between the State and local agencies. The funding for suburban Cook County is divided into smaller groups of communities based on geography. The Village of River Forest is part of the North Central Council of Mayors, which establishes policy and programs for the annual funding allocations.

In order for a street to be eligible for STP funding it must serve as a collector or arterial (those with higher traffic volumes and typically connect to other high-volume roads). Per North Central Council of Mayors policy, this does not include roadways under the jurisdiction of IDOT or Cook County. The streets within River Forest that are eligible for this type of funding are Division Street, Chicago Avenue, Washington Avenue, Thatcher Avenue, and Lathrop Avenue.

The purpose of the Village's STP program is to improve the condition of collector and arterial roads and staff most often utilizes the scope of work involving simple resurfacing along with minor curb and gutter replacement. We will apply for the option which involves 80% federal funding for the construction and construction engineering costs (remaining 20% to the Village).

FY 2016 Recommended Project

<u>Street</u>	<u>Pavement Rating</u>
1. Division Street from Thatcher Ave to Harlem Ave	Fair

The preliminary estimate to resurface this street is \$932,800, with the Village's share being approximately \$186,560.

Currently, Division Street has a street rating of "Fair" with some sections experiencing a greater rate of deterioration than others. If existing road conditions are not improved, further damage to the street's base may occur, which will create a structural deficiency.

Program Alternative

Not performing any roadway maintenance, particularly for streets in "Poor" condition, will result in total pavement failure and require reconstruction (of base and surface) which is significantly higher in cost compared to resurfacing.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Public Works

Municipal Lighting Systems	FY 2016	\$286,637	CIF
	FY 2017	\$89,280	CIF
	FY 2018	\$37,920	CIF

Critical Recommended Contingent on Funding

Project Description & Justification

- I. **Street lighting:** This system is comprised of approximately 1,100 street poles, 22 street light control cabinets, and 16 parking lot poles with light fixtures. The following is a summary of the types and styles of poles, fixtures, and bulbs that the Village owns and maintains:
Pole Type: Concrete (streets) and Aluminum (parking lots)
Pole Height: 12 and 30 foot (streets), various (parking lots)
Fixture Style: Post-top, overhead (davit arm, mast arm) and wall pack
Bulb/Lamp: Light emitting diode (LED), mercury vapor, metal halide, induction
- II. **Parking lot lighting:** The Village own and maintains a total of 16 fixtures. Six light fixtures are located at the Village Hall that illuminate the front and south parking lots and ten light fixtures located at the east and west Thatcher Ave commuter parking lots.
- III. **Viaduct lighting:** The Village owns and maintains 55 wall pack fixtures (10/viaduct) located beneath six Union Pacific Railroad viaducts - Thatcher Ave, Keystone Ave, Franklin Ave, Ashland Ave, Lathrop Ave, and the west side of Harlem Ave (five beneath viaduct).

The Village is responsible for energy consumption costs associated with these lighting systems. In 2012, the Village's energy broker solicited bids for the purchase of electricity for the street light system. The Village entered into a two-year agreement with Constellation (formerly known as Exelon) that expires in December 2014.

Past Projects

Street Lighting: In 2010/2011, the Village initiated a project involving the replacement of 126 street lights and 16 parking lot lights with **more energy-efficient** LED street light luminaires. A portion of this project was funded by the Tax Increment Financing District and the balance using grant funds from the American Recovery and Reinvestment Act. The Village received an Energy Efficiency and Conservation Block Grant of \$100,000 (through Cook County) for this project. The total cost of this project was \$140,584 (excludes disposal of old lamps).

Viaduct Lighting: All 55 of these fixtures were replaced and upgraded (utilizing Village Staff) to the LED lamp type in FY 2013. Through an energy rebate program with the State of Illinois' Department of Commerce and Economic Opportunity (DCEO), the Village was reimbursed for approximately 58% of the costs to purchase these fixtures. The total cost of this project was \$27,589 and we received \$15,988 in grant reimbursements from the Illinois Department of Commerce and Economic Opportunity.

Accidents: On the average, five street lights are struck by cars each year – many of which require replacement which is coordinated contractually as soon as possible following the accident. The approximate contractual cost to replace a knockdown is \$4,500.

Staff proposes the following projects to upgrade the remainder of the Village's street light system:

2016 Recommended Project

Phase I (FY 2016): Mercury vapor style bulbs are used on post-top fixtures typically found on side streets and lower volume streets throughout the Village, and will be addressed in this Phase. Staff has identified a retrofit for side street (100 watt) fixtures that will reduce to overall cost of the project and maintain the current fixture. Pricing for a new fixture came in at \$1,600 per unit verses \$325.00 for a retrofit unit.

The retrofit of 675 post-top fixtures (with LED lamps) at \$325 per fixture and an estimated \$100 per fixture for labor is projected to cost \$286,637 (\$219,137 material and \$67,500 labor) before energy rebates and DCEO grant funds are received. Rebates from DCEO are expected to cover 45% of the cost of material and an additional 15% in grant funds is expected to be received after staff attends a DCEO trade show in December 2014. Attendees are given a coupon for an additional 15% rebate on qualifying energy reduction projects. The combined incentives should reduce the cost of this project to \$155,155.

Staff proposes that this project be completed in FY 2016 to maintain uniformity in equipment and take advantage of the current DCEO rebate rates. It is rumored the current rebate of \$1.30 per kwh reduced will be decreased to .87 per kwh in 2016, so pre approval of this project may be necessary to complete the project before the rate is reduced.

Phase II (FY 2017): Staff proposes to replace 128 mercury vapor fixtures (175 watt) on Thatcher Avenue (north of Chicago Ave), Chicago Avenue, and Division Street. Staff also proposes to replace 86 metal halide fixtures (250 watt) on Lake Street between Harlem Ave and the Des Plaines River. All of these fixtures (including the lamp) will be upgraded to fixtures that accommodate LED lamps. In summary, the recommended project for this year involves the replacement of 214 overhead fixtures/lamps with LED fixtures at an estimated cost of \$89,280.

Fixtures 214 X \$400 = \$85,600

Labor 214 X \$100 = \$21,400

Total \$107,000 without DCEO rebates

Total \$89,280 with DCEO rebates*

(*total figured at a 45% DCEO rebate)

Phase IV (FY 2018): The final phase will entail replacing approximately 96 higher wattage (250 and 400 watt) metal halide and mercury vapor overhead fixtures currently found along state (IDOT) routes such as Madison Street, North Ave, and Harlem Ave. IDOT is evaluating the use of LED fixtures on state routes but does not currently allow the use of such fixtures. Staff is hopeful that by 2018, IDOT's research will be complete and they will encourage the changeover to LED technology. It is estimated that the cost of that project will be approximately \$37,920. Fixtures 96 X \$450 = \$43,200

Labor 96 X \$125 = \$12,000

Total \$55,000 without DCEO rebates

Total \$37,920 with DCEO rebates*

(*total figured at a 40% DCEO rebate)

Project Alternative

The alternatives to these improvement and maintenance projects to the Village's municipal lighting systems, which is a critically important system for the general safety of the community, are limited due to

the obsolescence of the equipment. Deferring this multi-phased project will result in a lack of available repair parts and bulbs for current fixtures. As a result, we should expect repair costs to the existing fixtures to escalate as parts become scarce.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Streets, Sidewalks, Alleys-Public Works

Roosevelt Middle School Traffic Safety Improvements

FY 2016

\$40,000

CIF



Critical



Recommended



Contingent on Funding

Spending History

N/A

Program Description & Justification

In response to proposed changes at Roosevelt Middle School, Village Staff has proposed to refresh or replace much of the thermoplastic pavement markings on the streets immediately adjacent to the school. The existing parking and crosswalk striping has severely deteriorated over time and needs to be replaced. As the aforementioned changes to traffic patterns within the school property are scheduled to take place within the near future, corresponding changes to the pavement markings also need to be made during FY16.

In addition to this work, the Jackson Ave sidewalk (between Chicago Avenue and Quick Avenue) is scheduled to be replaced with a wider (seven to eight feet) walk. These actions are necessary to improve the safety of the numerous pedestrians and drivers as they move through this heavily congested area on a daily basis.

FY 2016 Recommended Project

The recommended Project for FY16 involves the replacement of all thermoplastic pavement markings on the following streets:

- Chicago Avenue, Oak Avenue, and Quick Avenue between Lathrop Avenue and Jackson Avenue
- Lathrop Avenue and Jackson Avenue between Chicago Avenue and Quick Avenue

The thermoplastic pavement markings currently include striping to define parking areas and no-parking zones as well as crosswalks at all intersections. This work is estimated to cost approximately \$5,000.

The Jackson Avenue sidewalk will be replaced with a seven to eight feet wide sidewalk that is capable of conveying an increased amount of pedestrians without forcing some to walk along the adjacent grass as these areas are often muddy and become difficult to maintain. This work is estimated to cost \$35,000.

Program Alternative

Not performing this work will result in further deterioration of the existing pavement markings and green space adjacent to the Jackson Avenue sidewalk. Driver and pedestrian safety will continue to decrease over time until this work is completed.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Water and Sewer Improvements – Five Year Capital Improvement Program

This section of the Capital Improvement Plan identifies funding for sewer and water improvements, which are scheduled to continue through FY 2018. The Village’s sewer and water system is comprised of the following:

Type of Sewer	Number of Miles
Combined Sanitary Sewer	33.13
Storm Sewer	0.19
Water Main	40

The following improvements are proposed for FY 2016:

Improvement	Cost	Funding Source	Nature of Project
Sewer Relining	\$140,000	WS	Critical
Sewer Point Repairs	\$35,000	WS	Critical
Northside Stormwater Management Project	\$13,789,000	WS	Critical
Water Distribution System – Pumping Station	\$25,000	WS	Critical
Water Meter Replacement Program	\$24,000	WS	Critical
Water Main Replacement	\$350,000	WS	Critical
Hydrant Replacement	\$18,000	WS	Recommended
Total	\$14,381,000		

Each project in the CIP is categorized by the requesting department as follows:

Critical- The project must be completed in the year recommended due to safety or operational needs or as mandated by law. **Critical projects are highlighted in yellow.**

Recommended- The project will significantly improve operations or safety. The project is strongly recommended for funding in the year recommended or the year after.

Contingent on Funding- The project would be a benefit to the Village and improve service levels but is only recommended if funds are available.

Village of River Forest, Illinois
 Five Year Capital Improvement Program
 Water and Sewer Improvements
 Fiscal Year 2016 Budget

	This Project is:	Fiscal Year				Five Year		Funding Source
		2016	2017	2018	2019	2020	Total	
Sewer System								
Sewer Relining	Critical	140,000	140,000	140,000	140,000	140,000	700,000	WS
Sewer Point Repairs	Critical	35,000	15,000	15,000	15,000	15,000	95,000	WS
Northside Stormwater Management Project	Critical	13,789,000	-	-	-	-	13,789,000	WS
Pumping Station								
Water Distribution System	Critical	25,000	36,000	15,000	22,500	15,000	113,500	WS
Water Distribution Improvements								
Water Meter Replacements	Critical	24,000	16,000	19,000	17,000	2,974	78,974	WS
Water Main Replacement	Critical	350,000	315,000	450,000	400,000	400,000	1,915,000	WS
Water Valve Operator	Critical	-	35,000	-	-	-	35,000	CERF/WS
Hydrant Replacement	Recommended	18,000	18,000	18,000	18,000	18,000	90,000	WS
Total		14,381,000	575,000	657,000	612,500	590,974	16,816,474	

Proposed Funding Source	Fiscal Year				Five Year	
	2016	2017	2018	2019	2020	Total
Water and Sewer Fund (WS)	14,381,000	540,000	657,000	612,500	590,974	16,781,474
Capital Equipment Replacement Fund/WS (CERF/WS)	-	35,000	-	-	-	35,000
Totals	14,381,000	575,000	657,000	612,500	590,974	16,816,474

Water and Sewer Improvements-Public Works

Sewer Relining Program	FY 2016	\$140,000	WS
Public Sewers	FY 2017	\$140,000	WS
	FY 2018	\$140,000	WS
	FY 2019	\$140,000	WS
	FY 2020	\$140,000	WS

Critical Recommended Contingent on Funding

Spending History

FY 2015	\$92,100 (Projected)
FY 2014	\$57,992
FY 2013	\$79,466
FY 2012	\$50,779
FY 2011	\$23,598

Program Description & Justification

The purpose of this program is to improve the Village's sewer system and prevent costly repairs associated with failing sewer mains (collapsed, cracked, etc.). The objective is to evaluate the conditions of sewer mains (via televising), identify those in the worst condition, and perform relining of as many sections as possible. In some situations, sewer mains may have failed beyond the ability to reline and a point repair (or replacement of a section) may be necessary. The Village's sewer system is a critically important infrastructure system.

The Water and Sewer Rate Study completed by Baxter & Woodman in FY 2012 recommends an annual funding level of \$140,000 for this program. This increase in budget will allow for both the relining of damaged sewer main as well as to start a systematic approach to relining *all* sewers throughout the village, regardless of their condition.

The process of relining consists of inserting a sleeve made of flexible material in the existing pipe. The sleeve is then filled with steam or water heated to a high temperature for curing and hardening. This process provides the existing failing pipes with the structural support needed to continue their service and avoid a costly complete replacement.

Since the Village's first sewer relining project, over 34,000 lineal feet of sewers have been relined. This represents approximately 20% of the total sewer mains owned / maintained by the Village (approximately 171,000 lineal feet). All sewers that were rated either poor or fair (condition ratings "D" and "C") during the sewer televising program from the late 1990's have been relined. Relining all unlined combined sewers that are less than 33 inches in diameter would cost approximately \$9 million.

In 2011, Public Works developed an in-house sewer televising program. Public Works Staff reviews the video recordings and the sections of failing sewer mains will be identified and prioritized. This in-house sewer televising program has identified sewer mains in poor condition that will be relined in the coming years. Extreme weather conditions and the on-going root growing of trees have accelerated the rate of deterioration of the Village's combined sewers.

The following table identifies the sewer condition ratings, description of condition, and the recommended action:

Condition Rating	Condition Description	Recommended Action
A	Random cracking / some roots	Continue monitoring
B	Medium cracking / Medium root problem	Reline in 1 to 3 years
C	Heavy cracking / Heavy root problem	Reline immediately
D	Structural damage / Fully blocked by roots	Requires replacement

2016 Recommended Project

<u>Segment No.</u>	<u>Location/Address</u>	<u>Present Condition</u>
1	Gale Ave, 310 to 240	C
2	Gale Ave, 222 to 202	C
3	Thatcher Ave, 313 to 239	C
4	Forest Ave, between Ashland and Lathrop	C
5	Lathrop Ave, 316 to Linden St	C
6	Park Ave, 1201 to 1223	B

Public Works Staff projects a total project cost of \$140,000 for these recommended relining locations. While the Park Ave sewer is not a condition “C” sewer, Staff will be identifying sewers to line within the Northside Stormwater Management Project (NSMP) area on an ongoing basis. The purpose of this work is to line the existing combined sewers within the NSMP area as they will ultimately be converted to sanitary sewers upon completion of the NSMP.

Program Alternative

Once the structural integrity of the pipe is severely affected, beyond the ability to reline, the sole option is to perform an open-trench point repair that will require heavy street construction, temporary interruption of traffic flow, and costs associated with restoring the street’s driving surface. The preferred and more cost effective option to improving sewer mains is sewer relining.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Water and Sewer Improvements-Public Works

Sewer Point Repairs	FY 2016	\$35,000	WS
Public Sewers	FY 2017	\$15,000	WS
	FY 2018	\$15,000	WS
	FY 2019	\$15,000	WS
	FY 2020	\$15,000	WS

Critical
 Recommended
 Contingent on Funding

Spending History

FY 2015	\$32,800
FY 2014	\$0
FY 2013	\$7,337
FY 2012	\$2,650
FY 2011	\$5,603

Program Description & Justification

The purpose of this program is to improve the Village’s sewer system by replacing failing (collapsed, cracked, etc.) sections of sewer main (also referred to as point repairs). Staff’s objective is to evaluate the conditions of sewer mains (via televising), identify those in the worst condition, and perform relining of as many sections as possible. In some situations, sewer mains may have failed beyond the ability to reline and a point repair may be necessary. The majority of point repairs are made on an emergency basis and can be costly. The Water and Sewer Rate Study that was completed by Baxter & Woodman in FY 2012 recommends an annual funding level of \$15,000 for this program.

In 2011, Public Works began an ongoing in-house sewer televising program. Village Staff reviews the video recordings to identify sections of failing sewer mains for repair.

Program Alternative

Once the structural integrity of the pipe is severely affected, beyond the ability to reline, the sole option is to perform an open-trench point repair.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Water and Sewer Improvements-Public Works

Northside Stormwater Management Project	FY 2016	\$13,789,000	WS
	TBD	\$6,600,000	WS

Critical
 Recommended
 Contingent on Funding

Project Description & Justification

In September 2014, the Village Board approved a contract to proceed with the construction of the Northside Stormwater Management Project (NSMP). This is a phased project that will create a separation between a (new) stormwater sewer and the existing sanitary sewer in the area bound by Division Street, Harlem Avenue, North Avenue, and Thatcher Avenue. The project is intended to be financed with an Illinois Environmental Protection Agency (IEPA) low interest loan, which will be repaid via an increase in the sewer rate.

Upon realizing that the Illinois Department of Transportation planned to have Thatcher Ave closed to traffic between Greenfield Avenue and North Avenue, Staff worked with Christopher Burke Engineering to expedite the portion of the NSMP that would involve construction along Thatcher Ave. This work was identified as “Phase 0” and was completed in FY 2015. By moving this construction forward, no additional closures of Thatcher Avenue will be needed for the NSMP.

Phase 1 (FY 2016) includes the installation of a large-diameter storm sewer on Keystone Avenue and Greenfield Avenue (up to William Street). New storm sewers will also be installed on Forest Avenue and all streets between Greenfield Avenue and Division Street. Phase 2 (timeframe TBD) includes the continuation of the large-diameter storm sewer between William Street and Harlem Avenue as well as storm sewers on all remaining streets north of Greenfield Avenue.

The scope of work for both Phase 1 and Phase 2 also includes some water main installation and adjustments as well as small portions of new sanitary sewer installation. This work is necessary due to the numerous utility conflicts created by the installation of the new storm sewer.

Project Alternative

The alternative is to continue to maintain the existing combined system which causes significant street flooding and sewer backup during large rain events.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$926,276	Principle and Interest on IEPA Loan

Water and Sewer Improvements-Public Works

Water Distribution System - Pumping Station	Year	Estimated Cost	Category
	2016	\$25,000	WS
	2017	\$36,000	WS
	2018	\$15,000	WS
	2019	\$22,500	WS
	2020	\$15,000	WS

Critical
 Recommended
 Contingent on Funding

Project Description & Justification

The Village purchases all of its potable water (for both general consumption and fire suppression) from the City of Chicago. The water received from Chicago is treated before arriving to the Village’s water distribution system where it is stored and treated (once again) before entering the water distribution system for consumption. The Pumping Station is where the following components of the Village’s water distribution system are located:

- SCADA (Supervisory Control and Data Acquisition) system: computer system that monitors and controls various components and equipment
- Three Pumps
 - Pump #1: 100 horsepower; 1,540 gallons per minute
 - Pump #2: 150 horsepower; 2,350 gallons per minute
 - Pump #3: 125 horsepower; 1,750 gallons per minute
- Forty valves
- Four meters: two for incoming water from the City of Chicago (located at an off-site location) and two for incoming/outgoing water at the Pumping Station
- Water treatment system (sodium hypochlorite)
- Two underground storage reservoirs
 - 2.0 million gallon storage capacity
 - 0.5 million gallon storage capacity
- Emergency generator: backup power source in the event of a power outage (see CERF)

The following facility improvements are considered critical and should be completed **in FY 2016**:

<u>Repair/Improvement</u>	<u>Estimated Cost</u>	<u>Year</u>
Replace vent house door (2.0 MG storage reservoir)	\$8,000	FY 2016
Replace four water valves in basement of Pumping Station	\$15,000	FY 2016
<u>Replace/Install village supplied check valve in ½ MG reservoir</u>	<u>\$2,000</u>	<u>FY 2016</u>
Total	\$25,000	

In FY 2014, the Village contracted the services of Dixon Engineering to perform preliminary maintenance inspections on both underground water storage reservoirs. The purpose was to evaluate the interior and exterior, and to establish maintenance programs and schedules. Dixon Engineering developed a report that included recommendations for re-inspecting each reservoir in five years.

The following facility improvements are will be necessary within the **next two to five years**:

<u>Repair/Improvement</u>	<u>Estimated Cost</u>	<u>Year</u>
Replace 6 roof access hatches (4-2.0 MG & 2-0.5 MG reservoirs)	\$21,000	FY 2017
Replace four water valves in basement of Pumping Station	\$15,000	FY 2017
Replace four water valves in basement of Pumping Station	\$15,000	FY 2018
2.0 MG Underground Reservoir: re-inspect exterior/interior	\$4,000	FY 2019
0.5 MG Underground Reservoir: re-inspect exterior/interior	\$3,500	FY 2019
Replace four water valves in basement of Pumping Station	\$15,000	FY 2019
Replace four water valves in basement of Pumping Station	\$15,000	FY 2020
Total	\$88,500	

Valve replacement: During the piping upgrade project (efficiency improvements) that were completed in FY 2014, it was determined that four water control valves in the basement of the Pumping Station were not operating properly. These valves are likely original to the facility. Staff recommends replacing four valves in FY 2016 and initiating a ten-year program to replace all 40 valves in the system (replace four valves annually). Proper function of these valves is critical since the valves give us the ability to change or re-route suction and discharge piping in case of emergencies or while maintenance is being performed on our pumps. The following four valves are recommended for replacement:

	<u>Description</u>	<u>Problem</u>
Valve #9	Main Dump Valve/ Size 10"	Leaking
Valve #11	Pump #1 Suction Line Valve / Size 8"	Leaking
Valve #22	Pump #3 Suction Line Valve / Size 8"	Leaking
Valve #23	Pump #3 Dump Valve / Size 8"	Leaking

Project Alternative

There are no alternatives to maintaining the Village’s water distribution system as it is the system that provides potable water to the entire community. Deferring these projects would result in emergency repairs that could increase project costs (compared to soliciting bids/proposals).

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Water and Sewer Improvements-Public Works

Water Meter Replacement Program			
	FY 2016	\$24,000	WS
	FY 2017	\$16,000	WS
	FY 2018	\$19,000	WS
	FY 2019	\$17,000	WS
	FY 2020	\$2,974	WS

Critical
 Recommended
 Contingent on Funding

Spending History

FY 2016	\$24,000	continuation of program to replace all meters over 20 years of age
FY 2015	\$24,092	continuation of program to replace all meters over 20 years of age
FY 2014	\$24,092	continuation of program to replace all meters over 20 years of age
FY 2013	\$23,917	replaced meters greater than 20 years of age
FY 2012	\$39,207	replaced larger meters (1.5" – 4") & 1000 c.f. meters w/100 c.f. meters
FY 2011	\$8,890	replaced 2-inch and 3-inch meters
FY 2010	\$46,450	replaced/upgraded meters compatible with radio read technology

Program Description & Justification

The purpose of this program is to improve the metering accuracy of Village-owned commercial and residential water meters. Water Division employees tested meters in the 15 – 20 year age category and found that some did not meet AWWA (American Water Works Association) standards for meter accuracy. Although not a standard, studies recommend that residential water meters be replaced every 15-20 years. Water meters can be damaged and deteriorate with age, thus producing inaccurate readings. Inaccurate readings will give misleading information regarding water usage, make leak detection difficult, and result in lost revenue for the system.

FY 2016 Recommended Project

The Village proposes to continue replacing all water meters over 20 years of age to maintain accurate metering of business and residential accounts. A summary of the meters proposed to be replaced is listed below. All of the 160 meters will be replaced in-house utilizing Water Division personnel.

Meters greater than 20 years old (> 6/1/94 and <5/1/95)

Qty.	Size	Ea.	
126	0.625	\$115.00	\$14,490.00
29	0.75	\$134.00	\$3,886.00
19	1	\$168.00	\$3,192.00
2	1.5	\$465.00	\$930.00
1	2	\$653.00	\$653.00
160			\$23,151.00 Total

Program Alternative

As the Village's water metering system is critically important as a source of revenue, it is important to plan/budget for the replacement of water meters that have reached or exceeded the end of their useful

service life. The primary alternative to this program is to not budget/plan for water meter replacements and respond to metering failures and inaccuracies as they occur.

An alternative to the Village incurring the costs of the new meters is requiring that the building/property owners incur a portion or all of the new meter costs.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Water and Sewer Improvements-Public Works

Water Main Replacement Program	FY 2016	\$350,000	WS
	FY 2017	\$315,000	WS
	FY 2018	\$450,000	WS
	FY 2019	\$400,000	WS
	FY 2020	\$400,000	WS

Critical
 Recommended
 Contingent on Funding

Spending History

FY 2015	\$491,175 (Projected)
FY 2014	\$0
FY 2013	\$116,416
FY 2012	\$175,887
FY 2011	\$258,302

Program Description & Justification

The purpose of this program is to improve the condition of the Village’s water mains by replacing aging and deteriorating water system infrastructure. This is accomplished by replacing deteriorating segments of water mains before they break which will necessitate costly repairs and the experience of significant water loss with associated water consumption costs. The Village’s water distribution system is a critically important infrastructure system.

The Village has approximately 40 miles of water main. The majority of the water mains are between 50 and 80 years old. On average, there are seven water main breaks per year. It has been proven that as water mains become old and reach the end of their useful lives, performance deteriorates resulting in high maintenance costs, loss of hydraulic capacity and water quality, and a significant increase in customer complaints. The AWWA recommends replacing one-percent of the distribution system every year.

Each year, Village Staff conducts an analysis of failing or problematic sections of water main for the purpose of determining the need to replace specific water mains based on history and number of breaks, outdated size, or any other defective condition. A typical water main project involves an open trench installation of the new water main pipe and the transfer of all fire hydrants and private water services to the new main before the old main is abandoned. Water main projects are typically followed by a resurfacing project of the street’s surface.

FY 2016 Recommended Project

<u>Location</u>	<u>Pipe Length (FT)</u>
Thatcher Avenue – From Chicago to Augusta	1,325

The proposed water main replacement project will include the lining of the existing eight-inch water main in Thatcher Avenue from Chicago Avenue to Augusta Street. Staff attempted to get a traditional water main replacement project permitted through the Illinois Environmental Protection Agency (IEPA) and the Illinois Department of Transportation (IDOT) for this area in 2013. Due to conflicting requirements by the IEPA and IDOT, Staff was unable to procure permits from both agencies for a project scope that also met the best interests of the Village.

In researching project alternatives, it was discovered that water main lining is an option that will dramatically extend the life of the water main infrastructure as well as reduce installation costs and disturbance (as compared to a traditional open-cut water main replacement project). Similar to the Village's annual Sewer Lining Improvements, water main lining involves the installation of a flexible sleeve into the existing water main which is then filled with the liner material (between the sleeve and the water main). Pressurized water or steam is then pumped into the sleeve to force the sleeve and liner material to expand and create a smooth liner just inside the existing water main. Once the liner material has cured, the sleeve is removed and the water main has received a smooth-walled structural liner with a lifespan of approximately 50 years which doesn't start until the existing water main structurally fails.

The cost estimate for this project is as follows:

- \$25,000 for design engineering
- \$25,000 for construction engineering
- \$300,000 for construction

There is an additional valve at Hawthorne, just west of Lathrop that has, at times, demonstrated faulty operations and Staff is concerned that it cannot be relied upon in emergency situations. Therefore, it is recommended that this valve also be replaced:

The cost to replace this valve is approximately \$7,500.

Future Water Main Projects

Staff evaluates the Village's water distribution system and trends in water main breaks on an annual basis to identify and prioritize future projects. Staff has identified the following water system improvement projects for possible future fiscal years:

- Barring any major problems with the proposed water main lining project, Staff would recommend lining the eight-inch Thatcher Avenue water main between Augusta Street and Division Street. This four-block stretch of water main (between Chicago Avenue and Division Street) has experienced eight breaks since 1995; three of which have occurred in the last two years.

Estimated project cost:

\$300,000 construction

- Replace the existing four-inch water main beneath Keystone Avenue (which currently extends from Lake Street to Central Avenue) with an eight-inch water main (proposed to extend from Lake Street to Hawthorne Avenue). The purpose of this is to eliminate an existing dead-end water main (not connected to a loop) with a new main that loops the existing ten-inch on Lake Street with the six-inch main on Hawthorne Avenue. This will help to improve flow and pressure between the water distribution systems north and south of the railroad.

Estimated project cost:

\$225,000 construction (excludes surface restoration)

- Replace the eight-inch water main beneath River Oaks Drive and Auvergne Place. This water main loop has experienced five breaks since 2007.

Estimated project cost:

\$425,000 construction (includes curb-to-curb pavement restoration)

Program Alternative

As the Village’s water distribution system is a critically important infrastructure system, it is important to plan/budget for the replacement of water mains that have reached or exceeded the end of their useful service life. The primary alternative to this program is to not budget/plan for water main replacement projects and respond to water main breaks as they occur. These repairs, which are typically conducted on an emergency basis, involve an open-trench that will require heavy street construction, temporary interruption of traffic flow, and costs associated with restoring the street’s driving surface.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Water and Sewer Improvements-Public Works

Hydrant Replacement Program	FY 2016	\$18,000	WS
	FY 2017	\$18,000	WS
	FY 2018	\$18,000	WS
	FY 2019	\$18,000	WS
	FY 2020	\$18,000	WS

Critical
 Recommended
 Contingent on Funding

Spending History

FY 2015	\$7,400
FY 2014	\$0
FY 2013	\$14,590
FY 2012	\$28,708
FY 2011	\$29,325

Program Description & Justification

The Village’s fire hydrant system is a critically important infrastructure system. The Village owns and operates approximately 446 fire hydrants.

The purpose of this program is to maintain all of the Village’s fire hydrants in excellent operating condition. The Village’s Fire Department conducts two hydrant flushing programs each year. During the Village-wide hydrant flushing events, Fire Department personnel identify hydrants in need of repair and provide a list of those hydrants to Public Works to coordinate and/or make the necessary repairs. Hydrants that are not in operating condition are prioritized for immediate repair.

FY 2016 Recommended Project

The Public Works and Fire Departments have identified the following hydrants as operational, but “too low” (which is defined as less than 18 inches from the ground to port), which prevents the hydrant wrench from rotating freely around the main/steamer port and slows the time required connect the fire hose to the hydrant:

1. 1246 Lathrop
2. 1322 Lathrop

Due to the type of hydrant (Eddy), repair parts to raise the hydrant are not available.

Program Alternative

The Village’s fire hydrant system is a critically important infrastructure and it is important to budget for the replacement of hydrants that have reached or exceeded the end of their useful service lives. The primary alternative to this program is to not budget/plan for hydrant replacement and make more costly emergency repairs.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	None