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 Village Yard which is located in a separate facility and the Water Pumping Station.

Vehicles **45 vehicles in the fleet**

The vehicle section includes an inventory of all of the Village vehicles which is subdivided by public works, police and fire vehicles. The detail page of each vehicle to be replaced in 2015 provides a picture 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 those capital equipment items that need to be repaired, replaced or acquired new over the next five years. This section addresses 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 **73.32 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. The Village has recently begun the North Side Sewer Separation Project in order to alleviate flooding on the Village's North Side (Thatcher to Harlem and Division to North). This project will create a new, separate storm water utility 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. 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 2015 funding levels for each fund or source can be found below.

General Fund **$317,000**

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

Motor Fuel Tax (MFT) **$252,000**

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.

Water & Sewer Fund **$1,934,500**

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

Capital Equipment Replacement Fund (CERF) **$614,425**

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 Fund. Proceeds from the Assistance to Firefighters Grant are also included in this Fund. The Village has applied for this grant and it is intended to finance 95% of the cost of 18 Self-Contained Breathing Apparatus.

Water & Sewer - CERF Fund **38,000**

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 **$1,273,410**

The Capital Improvements Fund is used to account for improvements to buildings, parking lots, municipal lighting systems, alleys, and streets. Revenues sources include Red Light Camera Revenue, Parking Lot Fees, special service area taxes, ITEP and IGIG Grants and transfers from other funds.

Grant Revenues

The Village encourages all departments to seek and apply for grant funding that are in the best interests of the Village for capital projects, equipment and program needs. The Village has been awarded two grants to be used in 2015. An Illinois Environmental Protection Agency (IEPA) Illinois Green Infrastructure Grant (IGIG) to fund green alley improvements for the northeast portion of the Village and an Illinois Transportation Enhancement Program (ITEP) Grant for Madison Avenue streetscape improvements. Both of these grants are reported in the Capital Improvements Fund. In addition, the Village has applied for the Assistance to Firefighters Grant (AFG) to be used towards the purchase of 18 Self-Contained Breathing Apparatus. If awarded, this grant will be recorded in the CERF Fund.

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

CATEGORY	Fiscal Year 2015	2016	2017	2018	2019	Five Year Total
Buildings and Improvements	319,940	125,600	373,420	110,000	130,000	1,058,960
Vehicles	338,590	414,818	881,990	437,826	87,148	2,160,372
Equipment	239,195	295,650	71,800	-	120,000	726,645
Information Technology	57,000	24,500	15,000	61,000	7,500	165,000
Streets, Sidewalks & Alleys	1,642,610	652,400	1,432,290	1,247,290	707,200	5,681,790
Water and Sewer Improvements	1,832,000	12,540,000	479,000	477,000	427,500	15,755,500
Totals - All Categories	**4,429,335**	**14,052,968**	**3,253,500**	**2,333,116**	**1,479,348**	**25,548,267**

PROPOSED FUNDING SOURCE	Fiscal Year 2015	2016	2017	2018	2019	Five Year Total
General Fund	317,000	254,500	250,000	311,000	262,500	1,395,000
Motor Fuel Tax Fund	252,000	220,000	480,000	300,000	300,000	1,552,000
Water and Sewer Fund	1,934,500	12,618,500	609,000	559,000	512,500	16,233,500
CERF-General Fund	614,425	667,568	902,210	419,326	207,148	2,810,677
CERF-Water and Sewer	38,000	65,000	80,000	18,500	-	201,500
Capital Improvements Fund	1,273,410	227,400	932,290	725,290	197,200	3,355,590
Totals	**4,429,335**	**14,052,968**	**3,253,500**	**2,333,116**	**1,479,348**	**25,548,267**

Village of River Forest, Illinois
Five Year Capital Improvement Program
Buildings and Improvements
Fiscal Year 2015 Budget

	Fiscal Year					Five Year	Funding
	2015	2016	2017	2018	2019	Total	Source
Police							
Firing Range Rehab	74,640	22,100	28,420	-	-	125,160	CERF
Village Hall							
Village Hall Improvements	35,300	-	125,000	25,000	40,000	225,300	CIF
Public Works							
Garage Improvements	167,500	85,000	185,000	73,000	75,000	585,500	CIF
Pumping Station Improvements	42,500	18,500	35,000	12,000	15,000	123,000	WS
Total	**319,940**	**125,600**	**373,420**	**110,000**	**130,000**	**1,058,960**	

	Fiscal Year					Five Year
Proposed Funding Source	2015	2016	2017	2018	2019	Total
Water and Sewer Fund (WS)	42,500	18,500	35,000	12,000	15,000	123,000
CERF-General Fund (CERF)	74,640	22,100	28,420	-	-	125,160
Capital Improvement Fund (CIF)	202,800	85,000	310,000	98,000	115,000	810,800
Totals	**319,940**	**125,600**	**373,420**	**110,000**	**130,000**	**1,058,960**

Firing Range Rehab		FY 2015	$ 74,640	CERF
Original Purchase Date	FY 1998	FY 2016	$ 22,100	CERF
Funding History	N/A	FY 2017	$ 28,420	CERF

☐ 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. Since that time the range has experienced water leaks from foundation cracks causing periodic equipment malfunctions and decreasing the 10 – 12 year life expectancy of the equipment. With replacement parts no longer produced or available on the secondary market, maintenance and upgrades to components has been challenging. By FY2015, the range will be 16 years old. The range is used for pistol, shotgun and rifle training.

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	Planned FY
Bullet Trap Conversion	$ 24, 200	2015
Combat/Protective Wall System	$ 13,250	2015
Ballistic Ceiling Baffles	$ 13, 300	2015
Ventilation Direct Digital Control System	$ 15, 954	2015
Ventilation VFD for Make-Up Air Unit	$ 2,647	2015
Ventilation Custom Radial Diffusers	$ 1,764	2015
Ventilation Control Piping and Wiring	$ 2,275	2015
Ventilation Start Up and Commissioning	$ 1,250	2015
Range Master Control System	$ 4,800	2016
Network Interface	$ 1,300	2016
Rail Repair and Target Encasements	$ 2,800	2016
Lateral Target with base	$ 7,250	2016
Target Turners	$ 2,600	2016
Electronic Enclosures	$ 3,350	2016
Shooting Stalls	$ 9,300	2017
Air Filtration Unit	$ 19,120	2017

The approximate life expectancy of the equipment, with recommended maintenance, is an additional 18-26 years.

Additional Justifications

FY 14-Improvments address safety and integrity of 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 15-Improvments address minimal ventilation system upgrades needed to ensure compliance with OSHA air quality standards for firing ranges.

FY 16-Improvments address mechanical and technology upgrades required with regard to target rail and control systems.

FY 17-Improvments address potential critical failure of a 20-year old air filtration unit and 20-yearold 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 project uses, for consideration, 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 PD to conduct some periodic training and test firing on the range in consideration of other training opportunities and ammunition supplies.

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

Village Hall Improvements	FY 2015	$35,300	CIF
	FY 2016	$0	
	FY 2017	$125,000	CIF
	FY 2018	$25,000	CIF
	FY 2019	$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 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 budget would be minimal. Staff recommends three improvements in FY 2015 that offer the highest projected cost savings. According to the report, these improvements would result in a reduction in energy consumption along with an estimated savings of $11,700 in energy costs annually (if the Village paid for those utilities). The Department of Commerce and Economic Opportunity's Illinois Energy Now Public Sector program offers incentives for all three projects that would reduce the overall cost of each.

The following facility improvements are recommended to be completed **in FY 2015**:

	Repair/Improvement	**Estimated Cost**	**Est. Annual Savings**
1.	FCA - Repair foundation: basement level, adjacent to Fire Dept.		
	a. Structural engineer to analyze condition of foundation	$2,000	
	b. Repair damage foundation and eliminate seepage	$10,000	
2.	EA – Reduce lighting output	$4,000	$4,600
3.	EA – Install variable frequency drive on rooftop units (HVAC)	$7,400	$3,100
4.	EA – Install motion sensors with daylight override	$11,900	$4,000

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

	Repair/Improvement	**Estimated Cost**	**Year**
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

2015 Recommended Project

The following is a summary of the improvement that is proposed for FY 2015:

1. Repair foundation: The foundation located in the lower level telephone/electrical room (adjacent to the Fire Dept.) has experienced seepage for many years – particularly during periods of heavy rain. The brickwork above the foundation is experiencing efflorescence deposits that is likely associated with the seepage. Staff proposes to engage a structural engineer to identify the problem and develop a project scope to correct the problem and to avoid continued foundation and water damage to the area.
2. Reduce lighting output: In many areas of the facility, the consultant found light levels 2-6 times (or more) than the recommended lighting levels. This project proposes to install reduced wattage lamps (entails removing and re-using elsewhere approximately 426 32-watt T8 lamps and installing 213 25-watt reduced wattage T8 lamps) and delamp fixtures by 50% (entails removing and re-using elsewhere approximately 213 32-watt T8 lamps - leaving the existing ballast in place).
3. 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 with Adjustable Speed Drives (ASD) to control airflow, and save substantial amounts of energy while improving 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.
4. Install motion sensors: This project involves installing 21 motion sensors at various locations in the facility (Police and Fire Departments, bathrooms, etc.), and where applicable, installing motion sensors with integral daylight limits which will not turn on the fixture automatically if enough daylight is available to meet recommended light levels.

Project Alternative

FCA Project: The only alternative is to continue allowing the water to seep into the basement area. The seepage and presence of brick efflorescence will over time contribute to structural failure of the foundation wall and if it fails completely will require more expensive emergency repairs. Approximately 8 years ago, the Village retained a contractor that specializes in waterproofing foundations to assist with this area. The waterproofing reduced the amount of seepage, but did not solve the problem.

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

Project Impact

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

Public Works Garage Improvements

FY 2015	$167,500	CIF
FY 2016	$85,000	CIF
FY 2017	$185,000	CIF
FY 2018	$73,000	CIF
FY 2019	$75,000	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 is being 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 2015**:

	Repair/Improvement	Estimated Cost
1.	Tuck-pointing, brick restoration, & rebuild parapet wall (& cap)	
	a. Structural engineer	$10,000
	b. Construction (critical)	$75,000
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.	Install commercial backflow prevention device (recommended)	$15,000

If Public Works remains at its current location at 45 Forest Avenue, the following facility improvements are recommended in the **next 2 to 5 years**:

	Repair/Improvement	Estimated Cost	Year
1.	Resurface parking lot – south and east sides of facility	$85,000	FY 2016
2.	Roof replacement[1]	$185,000	FY 2017
3.	Upgrade interior and exterior lighting systems (to LED)	$42,000	FY 2018
4.	Replace single pane glass windows (26)	$20,000	FY 2018
5.	Replace two overhead garage doors	$11,000	FY 2018
6.	Build new garage addition[2]	$25,000	FY 2019
7.	Replace salt storage shed	$50,000	FY 2019

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

[2] Contingent upon needing additional storage for the Park District's equipment.

2015 Recommended Project

The following is a summary of the improvements that are proposed for FY 2015:

1. Tuck-pointing, Brick Restoration, & Rebuild Parapet Wall: This project involves 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 involves 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 that 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 be significantly more costly and more involved 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

Pumping Station Improvements			
Water & Sewer	FY 2015	$42,500	WS
	FY 2016	$18,500	WS
	FY 2017	$35,000	WS
	FY 2018	$12,000	WS
	FY 2019	$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. Although the CIP identifies major capital projects exceeding $10,000 in cost, several proposed projects that are individually projected to be less than $10,000 have been included on this form.

The following critical and recommended facility improvements should be completed **in FY 2015**:

Repair/Improvement	Estimated Cost
1. Remove interior wall efflorescence on 2nd floor (*critical*)	
a. Structural engineering & analysis	$5,000
b. Removal and coating walls (if necessary)	$30,000
2. Fire & Security Alarm Improvements (*critical*)	
a. Install smoke/heat detection system on the 2nd floor	$1,500
b. Replace leased alarm system equipment	$6,000

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

Repair/Improvement	Estimated Cost	Year
1. Replace front door	$10,000	FY2016
2. Paint exterior wooden trim (main building & vent house)	$3,500	FY2016
3. Replace service walk and vault cover in parkway	$5,000	FY2016
4. Replace windows (2nd Floor only)	$35,000	FY2017
5. Replace boiler and radiator heater system	$12,000	FY2018
6. Replace lower roof	$15,000	FY2019

2015 Recommended Project

The following is a summary of the improvements that are proposed for FY 2015:

1. Investigate/remove interior wall efflorescence (2nd Floor interior): Efflorescence is a powdery deposit of water-soluble salts left on the surface of the brick wall as moisture/water evaporates. This project involves retaining a structural engineer to analyze the efflorescence and removal of the efflorescence and possibly coating the interior walls. If this issue is not remedied, the brick walls on the 2nd floor will continue to deteriorate and result in significant future structural repairs to the facility. Efflorescence on the 1st floor was addressed approximately eight years ago.

2. Fire & Security Alarm Improvements: The 2nd floor and basement levels of the pumping station do not currently contain smoke/heat detection equipment. Due to the importance of this facility, detection devices should be installed and connected to the alarm system.

   The Village currently leases radio equipment that transmits alarm signals from an antiquated alarm panel (that interfaces with another antiquated panel with proprietary restrictions) to WSCDC. This proposed project will replace both alarm panels and leased radio equipment (approximately $1,160 annually). This project will also eliminate the possibility of an alarm signal inadvertently sent to the 3rd party alarm monitoring contractor.

Project Alternative

There are essentially no alternatives to these improvement 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

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

	Fiscal Year					Five Year
Vehicles	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**
Police	114,590	111,818	121,240	119,326	87,148	554,122
Fire	186,000	59,000	575,750	-	-	820,750
Public Works	38,000	244,000	185,000	318,500	-	785,500
Total	**338,590**	**414,818**	**881,990**	**437,826**	**87,148**	**2,160,372**

	Fiscal Year					Five Year
Proposed Funding Source	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**
CERF- General Fund (CERF)	300,590	414,818	836,990	419,326	87,148	2,058,872
CERF- Water and Sewer (CERF-WS)	38,000	-	45,000	18,500	-	101,500
Totals	**338,590**	**414,818**	**881,990**	**437,826**	**87,148**	**2,160,372**

Village of River Forest, Illinois
Five Year Capital Improvement Program
Vehicles-Police
Fiscal Year 2015 Budget

Police Department	Year	Veh #	Fiscal Year 2015	2016	2017	2018	2019	Five Year Total	Funding Source
Marked Squad Car	2013	1	-	-	41,474	-	-	41,474	CERF
Marked Squad Car	2011	2	39,545	-	-	42,511	-	82,056	CERF
Marked Squad Car	2011	3	39,545	-	-	42,515	-	82,060	CERF
Marked Squad Car	2009	4	-	40,534	-	-	43,574	84,108	CERF
Marked Squad Car	2009	5	-	40,534	-	-	43,574	84,108	CERF
Marked Squad Car	2013	6	-	-	41,474	-	-	41,474	CERF
Community Service Vehicle	2007	10	-	30,750	-	-	-	30,750	CERF
Detectives Vehicle	2011	12	-	-	38,292		-	38,292	CERF
Unmarked Surveillance	2012	13	35,500	-	-	-	-	35,500	CERF
Chief's Vehicle	2006	17	-	-	-	34,300	-	34,300	CERF
Patrol	2009	7	These vehicles are replaced with used police vehicles.					-	
Patrol	2006	8						-	
Crime Prevention- Tahoe	2005	9						-	
Deputy Chief's Vehicle	2006	11						-	
Admin Pool Vehicle	2000	14						-	
Dodge Durango	2006	15						-	
School Vehicle	2005	16						-	
Vehicle Equipment Set-Up			-	-	-	-	-	-	
Total			**114,590**	**111,818**	**121,240**	**119,326**	**87,148**	**554,122**	

Proposed Funding Source		Fiscal Year 2015	2016	2017	2018	2019	Five Year Total
CERF-General Fund (CERF)		114,590	111,818	121,240	119,326	87,148	554,122
Totals		**114,590**	**111,818**	**121,240**	**119,326**	**87,148**	**554,122**

Vehicles -Police

Marked Squad Car	FY 2015	$39,545	CERF
Squad 2	FY 2018	$42,511	CERF

☐ Critical ■ Recommended ☐ Contingent on Funding

Make	Ford
Model	Crown Victoria
Year	2011
Cost	$34,000
Useful Life	3 yrs
Current Life	3 yrs

Project Description & Justification

An estimated cost of $39,545 to replace Squad #2. 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. Estimated mileage at time of replacement: 34,000

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, and will replace an older fleet vehicle with higher mileage.

Breakdown/Repairs FY 2011-2014	
Number of Breakdowns/Repairs as of Nov. 2013	10
Average Repair Cost	$201.41

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

Marked Squad Car
Squad 3

FY 2015 $39,545 CERF
FY 2018 $42,515 CERF

☐ Critical ■ Recommended ☐ Contingent on Funding

Make	Ford
Model	Crown Victoria
Year	2011
Cost	$34,000
Useful Life	3 yrs
Current Life	3 yrs

Project Description & Justification
An estimated cost of $39,545 to replace Squad #3. 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. Estimated mileage at time of replacement: 75,000.

Breakdown/Repairs FY 2011-2014	
Number of Breakdowns/Repairs as of Nov. 2013	**25**
Average Repair Cost	**$137.65**

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

Ford Explorer PUV
Squad 13

FY 2015 $35,500 CERF

☐ Critical ■ Recommended ☐ Contingent on Funding

Make	Ford
Model	Explorer PUV
Year	2012
Cost	$31,500
Useful Life	5 yrs
Current Life	2 yrs

Project Description & Justification
An estimated cost of $35,500 to replace unit #13. An estimated cost of the vehicle incorporates an all-wheel drive (AWD) SUV, $8,000 for covert equipment and installation, including hidden light emitting diode (LED)emergency lights, radio antennae's, and miscellaneous items needed to facilitate the installation of major components.

Vehicle Description
This is an unmarked police unit used daily for tactical patrol and covert surveillance. The unit is equipped with a laptop computer and car radios. Depending on the condition of the vehicle at replacement time, this vehicle could be offered to Public Works as a replacement for their engineer department or offered for sale at auction. Estimated mileage at time of replacement: 50,000.

Breakdown/Repairs 2012-2013	
Number of Breakdowns/Repairs as of Nov. 2013	**4**
Average Repair Cost	**$95.48**

Project Alternative
Due to the nature of the use, deferral beyond its estimated life is not recommended for a tactical 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 and investigate criminal activity.

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 2015 Budget

Fire Department	Year	Veh #	Fiscal Year 2015	2016	2017	2018	2019	Five Year Total	Funding Source
Chief's Vehicle	2007	200	-	24,000	-	-	-	24,000	CERF
Ambulance	2006	214	186,000	-	-	-	-	186,000	CERF
Administrative Vehicle	2006	218	-	35,000	-	-	-	35,000	CERF
Pumper	1992	226	-	-	550,000	-	-	550,000	CERF
Deputy Chief's Vehicle	2011	201	-	-	25,750	-	-	25,750	CERF
Pumper	2001	222	Scheduled for replacement in 2022					-	CERF
Ambulance	1999	224	Vehicle is a reserve unit replaced with Ambulance #214					-	
Pool Vehicle	1999	299	Vehicle replaced with Chief's Vehicle #200					-	
105' Aerial Quint	2013	219	Scheduled for replacement in 2034						
Total			**186,000**	**59,000**	**575,750**	**-**	**-**	**820,750**	

Proposed Funding Source		Fiscal Year 2015	2016	2017	2018	2019	Five Year Total
CERF-General Fund (CERF)		186,000	59,000	575,750	-	-	**820,750**
Totals		**186,000**	**59,000**	**575,750**	**-**	**-**	**820,750**

Vehicles –Fire

Ambulance –214 FY 2015 $186,000 CERF

☐ Critical ■ Recommended ☐ Contingent on Funding

Make	FORD F-450
Model	Wheeled Coach
Year	2006
Cost	$119,500
Useful Life	8 years
	2 years fleet (shared reserve)
Current Life	8 years

Vehicle Description

A-214 is a Type III (van style front chassis) and serves as an Advance Life Support (ALS) transport vehicle. Staffed with two firefighter/paramedics, Ambulance 214 responds to an average of 1,000 EMS calls per year. This vehicle operates to treat and transport victims of accident and patients of illness to local hospitals. An innovative lifting system (Stryker Power System) is included in the cost of the new vehicle as an additional resource to minimize firefighter injuries due to bariatric (heavy) patients.

Vehicle	Year	Date	Road Mileage
A-214	2006	11/12	40,355 as of 11/26/2013

	A-214 Breakdown/Repairs Past 3 Years	
Number	214	20
	224 (Shared reserve unit)	7
Cost	214	$13,864
	224 (Shared reserve unit)	$2,761

Repair Description

Ambulance 214 has experienced several mechanical issues that are not completely resolved. This vehicle has been into two Ford dealerships for engine repair diagnosis with no determination at this time. This vehicle is quickly becoming unreliable as a frontline emergency transport ambulance. Ambulance 214 was out of service due to repairs for 47 days in the past 12 months.

Project Alternative

- Eliminate the Stryker Power Lift system for a savings of $40,000.
- Maintain current vehicle for another year and re-evaluate next budget.

Operational Impact

This vehicle is in the 8th year of a planned 8 year useful life expectancy. The reserve ambulance is shared with the Village of Forest Park and the Village must maintain the frontline ambulance in working order so that each community has access to the reserve unit. An evaluation will be made to determine its disposition as to keeping it as a reserved, shared vehicle.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
$500.00 after 1 year.	Preventative maintenance

Village of River Forest, Illinois
Five Year Capital Improvement Program
Vehicles-Public Works
Fiscal Year 2015 Budget

Public Works Department	Year	Vehicle #	Fiscal Year 2015	2016	2017	2018	2019	Five Year Total	Funding Source
Lage Int'l Dump Truck	2002	30	-	-	140,000	-	-	140,000	CERF
Lage Int'l Dump Truck	2004	32	-	-	-	150,000	-	150,000	CERF
Pick-up Truck w/ Dump Body	2006	33	-	57,000	-	-	-	57,000	CERF
Street Sweeper	2003	34	Replacement not Recommended ($175,000)						
Lage Int'l Dump Truck	2001	40	-	137,000	-	-	-	137,000	CERF
Aerial Truck	2003	46	-	-	-	150,000	-	150,000	CERF
Skid Steer Loader	2000	N/A	-	50,000	-	-	-	50,000	CERF
Pick-Up Truck (Engineering)	2007	62	-	-	-	18,500	-	18,500	CERF-WS
Cargo Van	2006	64	-	-	45,000	-	-	45,000	CERF-WS
Pick-Up Truck	2008	66	38,000	-	-	-	-	38,000	CERF-WS
Total			**38,000**	**244,000**	**185,000**	**318,500**	**0**	**785,500**	

Proposed Funding Source		Fiscal Year 2015	2016	2017	2018	2019	Five Year Total
CERF- General Fund (CERF)		-	244,000	140,000	300,000	-	684,000
CERF- Water and Sewer (CERF-WS)		38,000	-	45,000	18,500	-	101,500
Totals		**38,000**	**244,000**	**185,000**	**318,500**	-	**785,500**

Vehicles-Public Works/Water and Sewer

Pickup Truck #66 FY 2015 $38,000 CERF - W/S

■ Critical ☐ Recommended ☐ Contingent on Funding

Make	Ford
Model	F350 Super Duty
Year	2008
Purchase Cost	$26,403
Purchased	*FY 2009*
Useful Life	8 years
Current Life	6 years

Vehicle Description

Various personnel in the Water Division use this pickup truck to respond to water service calls, JULIE locates, water system emergencies. This truck is equipped with emergency lighting, a two-way radio, and an 8 ½-foot angling snowplow, which is used for plowing alleys and parking lots during snow events.

Total Vehicle Miles	25,840 (As of 10/15/2013)

Breakdowns for Last 2 Years

Date	Cause of Breakdowns	Cost	Repair Time
July-12	Emission control components	Warranty	10 Days
July-11	Emission control components	Warranty	7 Days
May-11	Emission control components	Warranty	7 Days
Jan-13	Replace steering gear box	$900	3 Days
June-13	Replace ball joints	$1,422	3 Days
Oct-13	Replace plow controller	$262	0
Nov-13	Replace power steering pump	$567	4 days
Total		$3,151	30 Days

Project Alternative

This pickup has had numerous engine emission control problems and steering component failures resulting in unusually high maintenance costs when compared to other pickup trucks in the Village's fleet. The current emission system requires the vehicle to de driven over 55 miles per hour for 20 minutes or more on a regular basis to complete a regeneration process and reset the cycle clock. Because vehicle maintenance costs and component failures are expected to continue, along with an approximate appraised resale value of $10,000, Staff seeks to replace this vehicle in FY 2015 (ahead of its scheduled useful life). This vehicle is scheduled for replacement in FY 2017.

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. The vehicle is also equipped to assist the Village during its leaf operations.

Project Impact

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

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

	Fiscal Year					Five Year	Funding
	2015	2016	2017	2018	2019	Total	Source
Police Department							
License Plate Reader	39,195	-	-	-	-	39,195	CERF
Camera System Software	15,800					15,800	CERF
Live Scan System	25,000	-	-	-	-	25,000	CERF
Overweight Truck Scales	-	20,750	-	-	-	20,750	CERF
Speed Trailer	-	14,400	-	-	-	14,400	CERF
Digital In-Car Cameras	-	38,000	-	-	-	38,000	CERF
Street Camera System	-	35,000	-	-	-	35,000	CERF
Wireless Antenna/Backhaul	-	52,500	-	-	-	52,500	CERF
Camera System Servers	-	-	36,800	-	-	36,800	CERF
Fire Department							
ALS Defibrillator	25,000	-	-	-	-	25,000	CERF
SCBA Air Compressor	24,200	-	-	-	-	24,200	CERF
SCBAs	110,000	-	-	-	-	110,000	CERF (Grant)
Public Works							
Fuel System Improvements	-	24,000	-	-	-	24,000	CERF
Sewer Televising System	-	65,000	-	-	-	65,000	CERF-WS
Stump Grinder	-	46,000	-	-	-	46,000	CERF
Water Valve Operator	-	-	35,000	-	-	35,000	CERF-WS
Brush Chipper 1800	-	-	-	-	100,000	100,000	CERF
V-Box Salt Spreader (2006)	-	-	-	-	20,000	20,000	CERF
Total	**239,195**	**295,650**	**71,800**	**-**	**120,000**	**726,645**	

	Fiscal Year					Five Year
Proposed Funding Source	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**
CERF- General Fund (CERF)	239,195	230,650	36,800	-	120,000	626,645
CERF- Water and Sewer (CERF-WS)	-	65,000	35,000	-	-	100,000
Totals	**239,195**	**295,650**	**71,800**	**-**	**120,000**	**726,645**

Equipment-Police

Automatic License Plate Reader FY 2015 $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 15th 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.). We also manually enter 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 5 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

Camera System Software FY 2015 $15,800 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 47 fixed and Pan-Tilt-Zoom digital cameras located in village hall and along the TIF district on Lake St. The camera system is supported by software, servers and a wireless point to point antenna array located on the roof of the 414 Clinton Place Condos building. The software controls the cameras and allows supervisors, dispatchers and officer's to view video on their squad car laptops, desktops or computers. The software also allows the retrieval of digital images that are stored on the servers and routinely used as evidence in criminal cases.

Project Alternative
This program to date has been very successful. 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-Police

Live Scan System FY 2015 $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 8 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-Fire

ALS Defibrillator FY-2015 $25,000 CERF

☐ Critical ■ Recommended ☐ Contingent on Funding

Original Purchase Date & Cost
2007 - $20,000.00

Project Description & Justification
Upgrade and replace the Advance Life Support (ALS) Defibrillator on our frontline ambulance. This piece of equipment is vital for our 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 we can. 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
$200.00 – 1 year after warranty period.	Continue annual maintenance after warranty period.

Equipment-Fire

SCBA Breathing Air Compressor FY 2015 $24,200 CERF

☐ Critical ■ Recommended ☐ Contingent on Funding

Original Purchase Date FY 1999
Cost $17,200.00

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 our firefighters to enter an lDHL (immediately dangerous to life and health) atmosphere. We have delayed the scheduled purchase of a new SCBA air compressor because the current one we have 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 we can. 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
$1,000.00	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.

Self-Contained Breathing Apparatus (SCBA)

FY 2015 $110,000 CERF 20 units
(AFG Grant pending $94,050 @ 95% for 18)

■ Critical ☐ Recommended ☐ Contingent on Funding

Original Purchase Date	FY 2001
Cost	$71,200.00
Repairs	Past 3 years
(thru 11/30)	$6,343

Project Description & Justification

Upgrade and replace 20 self-contained breathing apparatus (SCBA's). New standards include: low air audible alarms for front and back of SCBA, visual air level indicator within mask and interoperable quick-fill valves for firefighters trapped and out of air. This piece of equipment is a critical part of the firefighter's personal protective equipment (PPE). The NFPA standard for SCBA's update is every 5 years. Extensive changes for breathing apparatus have pushed the next scheduled update to 2014. This is the third upgrade cycle for our SCBA's. Upgrades enhance the safety of our firefighters when operating in an IDHL (immediately dangerous to life and health) atmosphere. We have delayed the purchase of new SCBA's to first, take advantage of the new standards and second, to exhaust all possibilities of receiving a grant for the purchase of this equipment.

Project Alternative

Through the AFG, we applied for 18 SCBA's at a cost of $5,500 each. If we are awarded the AFG grant for SCBA's, the Village would have to utilize the CERF fund for 2 additional SCBAs' for a total cost of $11,000. The 5% share for RF through the grant would be $4,950. The total Village cost from CERF would be $15,950. Purchasing new SCBA's would provide the Village a one-time cost savings of approximately $1,100 ($55 X 20 SCBA's), because the new units would not need the required annual flow & PASS device tests. All compressed air bottles require hydrostatic testing every 5 years; by purchasing new this will provide a savings of $600.

The alternative to this purchase is to continue maintaining outdated, non-compliant (NFPA Standard) air packs that provide sufficient protection when operating properly.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
$2,200 savings by reducing testing costs of SCBA's in the first 2 years. $600 savings on hydrostatic testing.	Continue annual maintenance & flow testing after second 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.

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

	Fiscal Year					Five Year	Funding
	2015	2016	2017	2018	2019	Total	Source
Server Replacement	-	12,500	12,500	20,000	-	**45,000**	GF
Disk Space Expansion	22,500	-	-	-	-	**22,500**	GF
Disaster Recovery Enhancements	18,000		-	-	-	**18,000**	GF
Network Improvements	5,000	10,000	-	38,500	-	**53,500**	GF
Miscellaneous Improvements	11,500	2,000	2,500	7,500	7,500	**31,000**	GF
Total	**57,000**	**24,500**	**15,000**	**66,000**	**7,500**	**170,000**	

	Fiscal Year					Five Year
Proposed Funding Source	2015	2016	2017	2018	2019	Total
General Fund (GF)	57,000	24,500	15,000	66,000	7,500	170,000
Totals	**57,000**	**24,500**	**15,000**	**66,000**	**7,500**	**170,000**

Information Technology-Administration FUND THROUGH GENERAL FUND

Disk Space Expansion FY 2015 $22,500 General Fund

■ Critical ☐ Recommended ☐ Contingent on Funding

Funding History

N/A

Project Description & Justification

With increased use of digital cameras, police video and Laserfiche to digitize records, the Village's disk space is becoming limited and will require expansion. The Village's existing disk farm connects to two servers (file services and Police video). While this is cost effective, is has limited flexibility and prevents new servers from being connected to a disk farm. ClientFirst has recommended that the Village move to a storage area network (SAN) with internet protocol connectivity (uses the network) to maximize flexibility and allow for replication and snap shots of servers. ClientFirst further recommends that the Village retain the existing disk farm for backup to disk and Police video to enhance backup speeds and provide additional space for video storage.

Project Alternative

If this project is not funded, the Village will have to purge files (some police video and files cannot be purged) or have to purchase additional storage space on an ad-hoc basis.

Project Impact

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

Information Technology-Administration

Disaster Recovery FY 2015 $18,000 General Fund

☐ Critical ■ Recommended ☐ Contingent on Funding

Funding History

N/A

Project Description & Justification

The Village's IT Assessment conducted by ClientFirst recommended a number of disaster recovery initiatives. In 2012, the Village purchased a fireproof safe and now stores backup tapes offsite at the Public Works Garage. In 2015, ClientFirst recommends the purchase of a deduplication server for storage of backup data.

Project Alternative

If this project is not funded, the current disaster recovery program of moving tapes from Village Hall to Public Works will remain in place.

Project Impact

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

Information Technology-Administration

Network Improvements	FY 2015	$5,000	General Fund
	FY 2016	$10,000	General Fund
	FY 2018	$38,500	General Fund

☐ 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 will be 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.

Project Alternative

If this project is not funded in FY 2015 and 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 2015	$11,500	General Fund
	FY 2016	$2,000	General Fund
	FY 2017	$2,500	General Fund
	FY 2018	$7,500	General Fund
	FY 2019	$7,500	General Fund

☐ Critical ■ Recommended ☐ Contingent on Funding

Funding History

FY 2014 Budgeted	$12,860

Project Description & Justification

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

FY 2015	Inventory Alerts and Alarms	$5,000
	Wireless Expansion – Pumping Station	$1,000
	Remote Access Improvements	$3,000
	Document Management Upgrades	$2,500
FY 2016	Wireless Expansion- Public Works	$2,000
FY 2017	Document Management Upgrades	$2,500
FY 2018	To Be Determined	$7,500
FY 2019	To Be Determined	$7,500

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

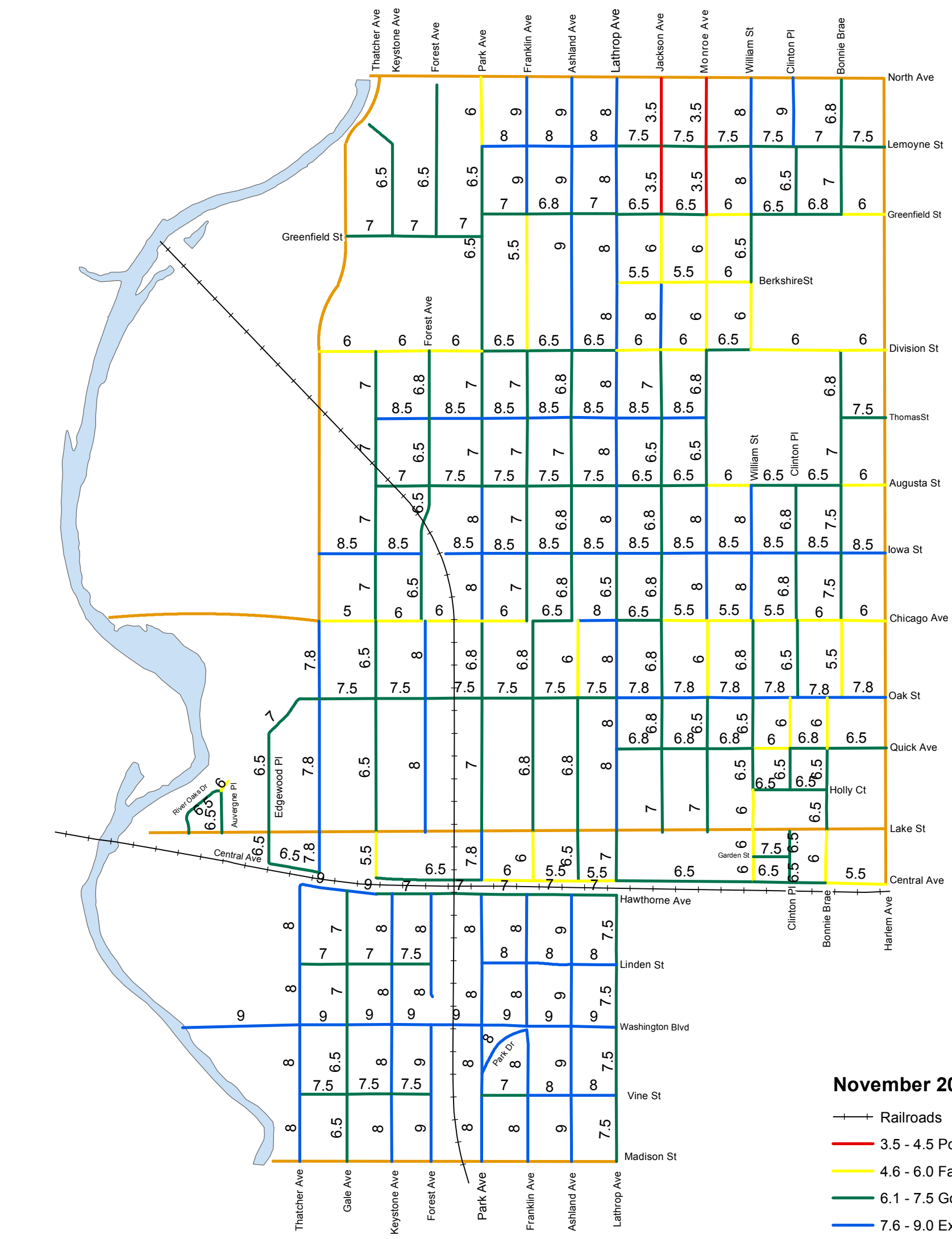
Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	

Village of River Forest, Illinois
Five Year Capital Improvement Program
Streets, Sidewalks, Alleys
Fiscal Year 2015 Budget

	Fiscal Year					Five Year	Funding
	2015	2016	2017	2018	2019	Total	Source
Street Maintenance Program-Crack Sealing & Microsurfacing	115,000	100,000	100,000	110,000	110,000	535,000	GF
Street Patching Program	100,000	85,000	90,000	95,000	100,000	470,000	GF/WS
Sidewalk, Curb & Gutter	65,000	65,000	65,000	65,000	65,000	325,000	GF/WS
Alley Improvement Program	774,610	25,000	25,000	30,000	30,000	884,610	CIF
Parking Lot Improvements	100,000	-	-	-	-	100,000	CIF
Madison Street ITEP Project	196,000	-	-	-	-	196,000	CIF
Street Improvement Program (SIP)	280,000	245,000	525,000	350,000	350,000	1,750,000	MFT /WS
Street & Other Lighting Systems	-	117,400	597,290	597,290	52,200	1,364,180	CIF
Traffic Signal System	12,000	15,000	30,000	-	-	57,000	MFT
Total	**1,642,610**	**652,400**	**1,432,290**	**1,247,290**	**707,200**	**5,681,790**	

	Fiscal Year					Five Year
Proposed Funding Source	2015	2016	2017	2018	2019	Total
General Fund (GF)	260,000	230,000	235,000	250,000	255,000	1,230,000
Motor Fuel Tax (MFT)	252,000	220,000	480,000	300,000	300,000	1,552,000
Water and Sewer Fund (WS)	60,000	60,000	95,000	70,000	70,000	355,000
Capital Improvement Fund (CIF)	1,070,610	142,400	622,290	627,290	82,200	2,544,790
Totals	**1,642,610**	**652,400**	**1,432,290**	**1,247,290**	**707,200**	**5,681,790**

Village of River Forest
Street Rating Map



Street Maintenance Program	FY 2015	$115,000	General Fund
Streets	FY 2016	$100,000	General Fund
	FY 2017	$100,000	General Fund
	FY 2018	$110,000	General Fund
	FY 2019	$110,000	General Fund

■ Critical ☐ Recommended ☐ Contingent on Funding

Spending History	Crack Sealing	Microsurfacing	Total
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
FY 2010	$0	$0	$0

Program Description & Justification

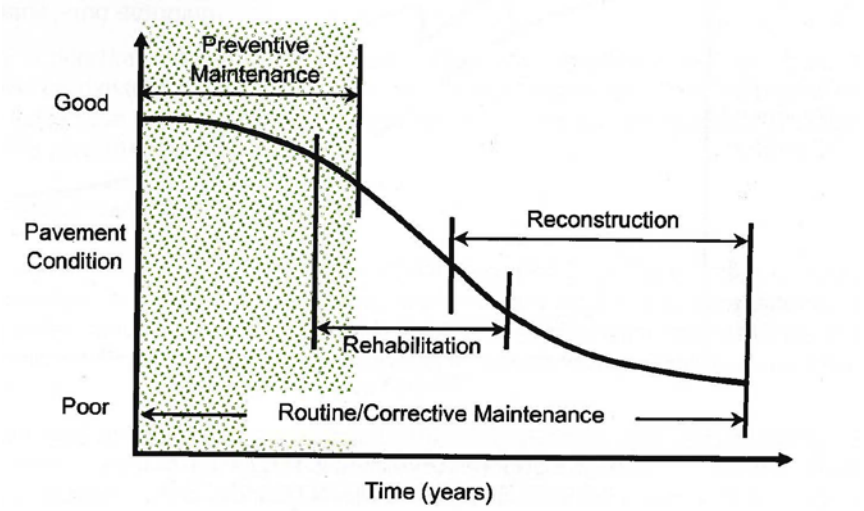
The purpose of this preventative maintenance program, which includes joint crack sealing and microsurfacing, is to extend the useful lives of Village streets and to provide an economic alternative to conventional street resurfacing. The objective is to maintain all streets at a "Good" condition rating or better and extend the life of each crack sealed and microsurfaced street by 5 to 7 years. To accomplish this objective, a minimum annual funding level of $65,000 is 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.

To identify the streets for crack sealing and microsurfacing, Village Staff inspects all streets on an annual schedule and utilizes the Condition Rating Survey (also utilized by IDOT). Ratings of Poor, Fair, Good, or Excellent are assigned to each street segment.

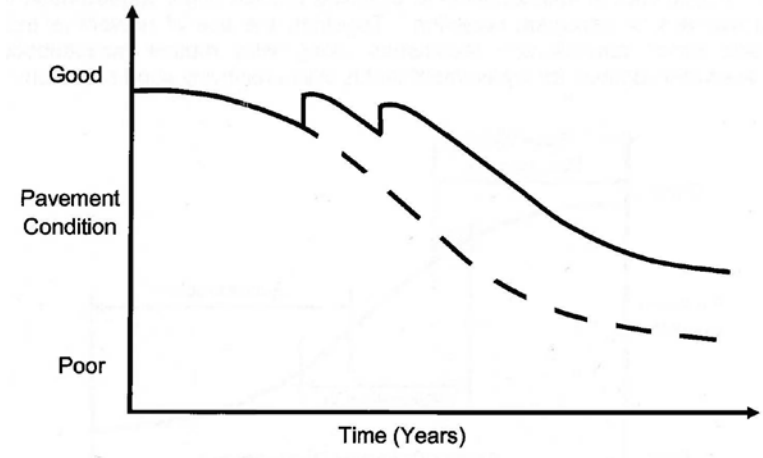
Microsurfacing is the process of covering the existing pavement surface with a petroleum-based sealant. Once this sealant cures, it creates a water-tight resilient surface. The life expectancy of a microsurfaced street is highly dependent on the condition of the existing pavement. This is why it is crucial to replace all failing areas of asphalt with new hot asphalt patching followed by the sealing of all joints (prevents water from infiltrating through cracks in the streets).

Village Staff identifies the streets that are suitable for the economical microsurfacing process rather than a more costly resurfacing of the street. Streets that are ideal candidates for microsurfacing are streets in "Good" and "Fair" condition where daily traffic volumes are moderate to low. Streets of all ratings that have cracks are automatically eligible for joint 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:



2015 Recommended Projects

Due to the reduced number of streets included in the proposed FY 2015 Street Improvement Project, Staff recommends expanding the microsurfacing and crack sealing maintenance projects in FY 2015 (along with street patching that is presented on a separate form). The ideal timing for these maintenance projects is when streets are evaluated with a "Good" and "Fair" condition rating:

Microsurfacing:

Street	Condition Rating	Proposed Cost
Augusta St from Lathrop to Harlem	Good	$22,500
Edgewood Pl from Lake to Central	Good	$3,500
Central Ave from Edgewood to Thatcher	Good	$5,000
Forest Ave from Chicago to Division	Good	$21,000
Gale Ave from Madison to Washington	Good	$13,000
		$65,000

Crack sealing: Staff recommends increasing this project to $50,000 in FY 2015. This increase, compared to previous years, is necessary due to the increased amount of street patching that is proposed in FY 2015 as well as the increased number of streets that are exhibiting early stages of deterioration through cracking. By crack sealing these areas, their useful life will be lengthened for an extended period of time.

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 one 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

Street Patching Program	FY 2015	$90,000	GF	$10,000	WS
Streets and Alleys	FY 2016	$75,000	GF	$10,000	WS
	FY 2017	$80,000	GF	$10,000	WS
	FY 2018	$85,000	GF	$10,000	WS
	FY 2019	$90,000	GF	$10,000	WS

■ Critical ☐ Recommended ☐ Contingent on Funding

Spending History	**GF**	**WS**	**Total**
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
FY 2010	$47,148	$8,000	$55,148

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.

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.

Subsequent to the completion of pavement patching, the joint crack sealing operation is engaged to fill the joint along the perimeter of each patch. This operation, performed under a separate contract, is intended to prevent moisture from infiltrating the perimeter of the patch and expediting its failure.

2015 Recommended Project

Due to the reduced number of streets included in the proposed FY 2015 Street Improvement Project, Staff recommends expanding the street patching maintenance project in FY 2015 (along with microsurfacing and crack sealing - presented on a separate form). 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.). Various locations throughout the Village will be identified in the Spring of 2014.

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

50/50 Sidewalk, Curb & Gutter

Sidewalks, Aprons, and Curb

FY 2015	$55,000	GF	$10,000 WS
FY 2016	$55,000	GF	$10,000 WS
FY 2017	$55,000	GF	$10,000 WS
FY 2018	$55,000	GF	$10,000 WS
FY 2019	$55,000	GF	$10,000 WS

■ Critical ☐ Recommended ☐ Contingent on Funding

Spending History	GF (sidewalk & aprons)	W & S (curb & gutter)	Total
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
FY 2010	$40,030	$8,193	$48,223

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 ½"	Recommend Replacement
C	>1 ½" 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 15:

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

Sidewalk and Curb Annual Inspection Areas:

Area No.	Area Limits	Inspection Years
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	2014, 2017, 2020

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

Alley Improvement Program			
	FY 2015	$ 774,610	Capital Imp Fund (Grant)
	FY 2016	$ 25,000	Capital Imp Fund
	FY 2017	$ 25,000	Capital Imp Fund
	FY 2018	$ 30,000	Capital Imp Fund
	FY 2019	$ 30,000	Capital Imp Fund

☐ Critical ■ Recommended ☐ Contingent on Funding

Spending History

FY 2014	$0
FY 2013	$14,745 (Lake/Edgewood Alley-SSA)
FY 2012	$0
FY 2011	$0
FY 2010	$0

Program Description & Justification

The purpose of this program is to improve the condition of Village alleys. To accomplish this objective, an annual funding level of $25,000-$30,000 over the next five years is recommended. These funding levels are estimates, and reflect inflationary increases for construction, as the actual projects have yet to be identified. The Village alley improvement program utilizes the Special Service Area process, with a 50-50 cost share with the adjoining property owners, to resurface alleys. The resurfacing phase involves grinding off approximately 1½ inches of the existing surface, repairing the alley's base as necessary, and paving a hot mix asphalt overlay of approximately 1½ inches.

A Special Service Area (SSA) is a taxing mechanism used to fund infrastructure improvements such as roadway resurfacing. Subsequent to the completion of the improvement project, the property owner's proportional share (50/50 funding split with the Village) of construction and other incidental costs (legal and administrative) in the form of SSA taxes would be levied and appear on each of the property owner's real estate tax bills over a one or two year period. The SSA would require the approval of a simple majority of property owners.

The SSA process is initiated by 51% (or more) of the property owners filing a petition expressing their interest in the resurfacing of the alley. All property owners will have an opportunity to express their support or opposition to the SSA during the public hearing and/or the required 60-day period following the public hearing.

The following tables summarize the alley rating system:

Alleys		
Rating	**Pavement Condition**	**Drainage**
A	Like New	Excellent
B	Minor Cracking	Minor Standing Water
C	Pronounced Cracking	Standing Water
D	Major Cracking and Pavement Settling	Major Standing Water
E	Failed Pavement – Needs Immediate Repair	Flooding & Hazardous Conditions

2015 Recommended Projects

1. Local Alley Project – Although no alley has been specifically identified at this time, the proposed FY 2015 budget includes $25,000 for the construction phase of an alley improvement should the need arise during the fiscal year. In the instance that Staff identifies an alley requiring improvements, a Special Service Area (SSA) process will be utilized to coordinate the improvements. An additional $5,000 is proposed for the legal/administrative costs associated with this project that is budgeted under a separate line item.
2. 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) 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. The Village's policy for improving alleys requires the creation of a SSA and a 50/50 cost share between the Village and the adjacent property owners. However, given the unique condition of this alley as it currently exists, it is recommended that the Village waive the SSA requirement and reconstruct the alley at 100% cost to the Village.
3. Green Alleys Project: The Village has been awarded a $484,169 grant through the IEPA's IGIG grant program. The Village's required local match is approximately $85,441. The IEPA has approved this grant and an Intergovernmental Agreement has been approved by both parties. While the design portion of this project will take place in FY 2014, the construction phase will commence in the spring/summer of 2014 (FY 2015).

FY 2015 Cost Summary for Alley Improvement Program

1. $25,000 Local alley project – construction
2. $180,000 7200 Block of Quick – Alley
3. $484,169 Green Alleys Project - IGIG grant

   $ 85,441 Green Alleys Project - Village/local grant match

   $774,610 Total Alley Projects Cost

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

Parking Lot Improvements FY 2015 $ 100,000 Capital Imp Fund/ Parking Reserve

☐ Critical ■ Recommended ☐ Contingent on Funding

Original Purchase Date & Cost
N/A

Spending History

2013-14	$0
2012-13	$3,920 (Lot A, sealcoating)
2011-12	$2,998 (Lot E, sealcoating)
2010-11	$0
2009-10	$0

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 FY15**
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 fiscal years 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.

2015 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 $35,000. 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

Madison Street ITEP Project FY 2014 $ 196,000 Capital Imp Fund

☐ 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 $1,833,260. The local share of the project is $492,652 which will be split 50/50 with the Village of Forest Park. Approximately $50,000 of River Forest's $246,325 share of the project is projected to be expended in FY 2014 for engineering services. The balance of the project, which primarily involves the construction phase, will be expended in FY 2015.

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

Street Improvement Program	FY 2015	$240,000	MFT	$40,000	WS
	FY 2016	$205,000	MFT	$40,000	WS
	FY 2017	$450,000	MFT	$75,000	WS
	FY 2018	$300,000	MFT	$50,000	WS
	FY 2019	$300,000	MFT	$50,000	WS

■ Critical ☐ Recommended ☐ Contingent on Funding

Spending History	MFT/GF	WS	Total
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
FY 2010	$293,321	$52,794	$346,115

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.

In addition, as the Village improves streets such that they are in the good to excellent condition, the need for a regular maintenance program of crack filling, patching and curb and gutter repairs is necessary. Such a maintenance program is intended to keep water from entering the pavement base section which is the main cause for pavement failure. Implementing such a maintenance program will extend the life of the improvement.

The following tables summarize the street rating systems:

Streets		
Surface Condition	**Pavement Ranking**	**Estimated Remaining Life**[1]
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.

2015 Recommended Project

Street	Pavement Rating
1. Central Avenue from Keystone Avenue to Lathrop Avenue	Fair
2. Monroe Avenue from Chicago Avenue to Oak Avenue (spot repair-pavers)	Fair
3. Bonnie Brae from Chicago Avenue to Oak Avenue	Fair

The projected cost to resurface these streets is $280,000.

The following streets have condition ratings of "Fair" and are targeted for resurfacing:

FY 2016: *Franklin Avenue from Division Street to Greenfield Street
*Jackson Avenue from Greenfield Street to North Avenue
Total project cost = $250,000

FY 2017: *Monroe Avenue from Division Street to North Avenue
*William Street from Division Street to Greenfield Street
*Jackson Avenue from Division Street to Greenfield Street
*Berkshire Street from Lathrop Avenue to William Street
Total project cost = $525,000

*Although these streets have possessed condition ratings of "Fair" and are continuing to deteriorate towards the "Poor" condition rating, their resurfacing has been deferred until future years as the Village has decided to pursue a sewer improvement project that will affect several or all of the streets located north of Division Street. As the Village has decided to pursue a comprehensive sewer project, these streets will be resurfaced subsequent to the completion of sewer improvements on each street. A substantial amount of patching has taken place in these areas to help maintain existing pavement conditions until resurfacing takes place.

The Capital Improvement Plan proposes funding for street improvements in FY 2018 and FY 2019, however streets needing improvement have not yet been determined. Staff recommends a funding level of $350,000 for each of those years.

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

Traffic Signal System

FY 2015	$12,000	MFT
FY 2016	$15,000	MFT
FY 2017	$30,000	MFT
FY 2018	$0	
FY 2019	$0	

☐ Critical ■ Recommended ☐ Contingent on Funding

Project Description & Justification

The Village's traffic signal system is comprised of the following seven signaled intersections:

Intersection	Lamp Type	Pedestrian Signals
1. Washington Blvd & Lathrop Ave	Incandescent	no countdown timers
2. Franklin Ave & Washington Blvd	LED	no countdown timers
3. Lake Street & Bonnie Brae	Incandescent	no countdown timers
4. Lake Street & Lathrop Ave	LED	countdown timers
5. Lake Street & Thatcher Ave	Incandescent	countdown timers
6. Chicago Ave & Lathrop Ave	LED	countdown timers
7. Chicago Ave & Thatcher Ave	Incandescent	no countdown timers

All traffic signal systems along North Avenue (Thatcher Ave, Lathrop Ave, and Harlem Ave) and Harlem Avenue (Division St, Augusta St, Chicago Ave, Lake St, and Central Ave) are owned and maintained by the Illinois Department of Transportation (IDOT).

Per the Village's franchise agreement with ComEd, the Village is not responsible for energy costs associated with its traffic signal systems. However, the Village and IDOT have an intergovernmental agreement regarding the maintenance of the traffic signals at the following intersections:

1. Lathrop Ave & Washington Blvd: Ownership of this traffic signal system is as follows: 50% River Forest and 25%, Village of Forest Park, and 25% IDOT. Washington Boulevard, east of Lathrop Ave and known as Randolph Street, is a state route. Therefore the Villages of River Forest and Forest Park reimburse IDOT for our share of the maintenance costs (approximately $203/month for River Forest).
2. Lake Street & Bonnie Brae: The Village owns and is responsible for the maintenance of the traffic signals at this intersection. Since electricity and the wiring to the signals is connected to the Harlem Ave traffic signal system (which is owned and maintained by IDOT), maintenance is performed by IDOT's lighting contractor as the Village reimburses IDOT approximately $407 per month for such maintenance.

Past Projects

In 2010, the Village coordinated a project involving the removal of pedestrian push buttons and incandescent pedestrian signal heads, the installation of light emitting diode (LED) pedestrian signal heads with countdown timers, new pedestrian push buttons and the striping of stop bars and pedestrian crosswalks along Lake Street at the intersections of Harlem, Lathrop and Thatcher Avenues. The total cost of this project was $54,174.

In 2010, the Village coordinated a project involving essentially the same scope of work described in the previous project (installation of pedestrian signal heads with countdown timers) at the intersection of Lathrop Ave and Chicago Ave. The total cost of this project was $11,785.

In 2010/2011, the Village coordinated a project involving additional traffic signal improvements at the intersection Lake Street and Lathrop Avenue. These improvements include the implementation of left turn detection on all four legs of the intersection, the removal and replacement of all incandescent traffic signal heads with new LED traffic signal heads, and the removal and replacement of four painted traffic signal posts with new galvanized steel posts. The total cost of this project was $30,668.

2015 Recommended Project

IDOT is proposing to upgrade nine intersections in River Forest and along Harlem Avenue. These upgrades include upgrading the traffic signals to LED modules, installing uninterruptible power supply (i.e battery backup) systems, and countdown pedestrian signals. Five of the seven intersections in the above table (intersection #'s 1, 3, 4, 5, & 7) are those that will be included in this project. The battery backup improvements are particularly important and will allow the signals to operate during the numerous power outages that affect the Village's traffic signals each year.

IDOT is incurring approximately 90% of the costs for these improvements and the balance will be split between River Forest, Oak Park, and possibly Forest Park. IDOT has requested that the Village participate in a cost share for these improvements. Therefore, Staff recommends an approximate expenditure of $12,000 for this project.

Improvements involving upgrading the signals to LED modules and installing battery backup systems and countdown pedestrian signals are proposed for intersections #2 (FY 2017) and #6 (FY 2016).

Project Alternative

The Village's traffic signal systems are important for providing safer commuting environments for vehicles and pedestrians. Annual maintenances costs are relatively low as lamp/bulb replacements comprise the primary maintenance needs. An alternative to this program is to not budget/plan for LED upgrades, installation of battery backup systems, pedestrian countdown timers.

Project Impact

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

Village of River Forest, Illinois
Five Year Capital Improvement Program
Water and Sewer Improvements
Fiscal Year 2015 Budget

	Fiscal Year					Five Year	Funding
	2015	2016	2017	2018	2019	Total	Source
Sewer System							
Sewer Lining	140,000	70,000	70,000	70,000	70,000	420,000	WS
Sewer Point Repairs	15,000	15,000	15,000	15,000	15,000	75,000	WS
North Side Sewer Project	1,000,000	12,000,000	-	-	-	13,000,000	WS
Pumping Station							
Water Distribution System	70,000	23,000	36,000	15,000	22,500	166,500	WS
Water System Efficiency Improvements	6,000	108,000	44,000	60,000	-	218,000	WS
Water Distributribution Improvements							
Water Meter Replacements	21,000	26,000	16,000	19,000	17,000	99,000	WS
Water Main Replacement	562,000	280,000	280,000	280,000	280,000	1,682,000	WS
Elevated Water Storage Tank	-	-	-	-	5,000	5,000	WS
Hydrant Replacement	18,000	18,000	18,000	18,000	18,000	90,000	WS
Total	**1,832,000**	**12,540,000**	**479,000**	**477,000**	**427,500**	**15,755,500**	

	Fiscal Year					Five Year
Proposed Funding Source	2015	2016	2017	2018	2019	Total
Water and Sewer Fund (WS)	1,832,000	12,540,000	479,000	477,000	427,500	15,755,500
Totals	**1,832,000**	**12,540,000**	**479,000**	**477,000**	**427,500**	**15,755,500**

Sewer Relining Program
Public Sewers

FY 2015	$140,000	WS
FY 2016	$70,000	WS
FY 2017	$70,000	WS
FY 2018	$70,000	WS
FY 2019	$70,000	WS

■ Critical ☐ Recommended ☐ Contingent on Funding

Spending History

FY 2014	$57,992
FY 2013	$79,466
FY 2012	$50,779
FY 2011	$23,598
FY 2010	$106,873

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 12 recommends an annual funding level of $140,000 for this program. This increase in budget will both allow for 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 32,000 lineal feet of sewers have been relined. This represents approximately 19% 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

2015 Recommended Project

Segment No.	Location/Address	Present Condition
1	Oak St to 616 Bonnie Brae	C
2	602 to 550 Forest Ave	C
3	616 to 554 Thatcher Ave	C
4	401 Thatcher Ave to 7985 Lake St	C
5	7222 to 7214 Quick (beneath alley)	C
6	7222 to 7234 Quick (beneath alley)	C

Public Works Staff projects a total project cost of $70,000 for these recommended relining locations. The remaining portion of the budgeted amount ($70,000) in FY 2015 will be used to re-line sewers within the north side sewer project area as these combined sewers will be converted to sanitary sewers once the storm sewer separation project is completed. The actual relining locations, in the area north of Division Street, will be determined prior to the beginning of the new fiscal year.

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

Sewer Point Repairs	FY 2015	$15,000	W/S
Public Sewers	FY 2016	$15,000	W/S
	FY 2017	$15,000	W/S
	FY 2018	$15,000	W/S
	FY 2019	$15,000	W/S

■ Critical ☐ Recommended ☐ Contingent on Funding

Spending History

FY 2014	$11,500 (projected)
FY 2013	$7,337
FY 2012	$2,650
FY 2011	$5,603
FY 2010	$7,497 (Estimates based on Springbrook)

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). Our 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 12 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

North Side Sewer Separation Project	FY 2015	$ 1,000,000 W/S Fund
Phase 1	FY 2016	$12,000,000 W/S Fund

■ Critical ☐ Recommended ☐ Contingent on Funding

Project Description & Justification

The Village Board has decided to proceed with the North Side Sewer Separation Project. This is a phased project that creates a new separate stormwater utility on the north side of River Forest from Harlem to Thatcher and North to Division. The project is intended to be financed with an Illinois Environmental Protection Agency (IEPA) low interest loan. The loan will be paid via an increase in the sewer rate.

In Phase 1, the following will occur:

1. Install new sanitary sewer mainline along Greenfield Street, from Forest Avenue to William Street.
2. Install new storm sewer mainline along Greenfield Street. Also install the new storm laterals south of Greenfield Street.
3. Disconnect ALL clear water flow from the combined sewers and connect to the new storm sewers, as the new storm sewer and new sanitary sewer systems are completed. This will take place starting at Forest Avenue and proceeding upstream one street at a time. A backflow preventer will be placed at the connection of the new sanitary sewer mainline to the combined sewer at the intersection of Greenfield Street and Forest Avenue.
4. Resurface Greenfield Street and the side streets south of Greenfield Street.

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
$829,957	Principle and Interest on IEPA Loan

Water Distribution System - Pumping Station	2015	$70,000	W/S
	2016	$23,000	W/S
	2017	$36,000	W/S
	2018	$15,000	W/S
	2019	$22,500	W/S

■ 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; 1540 gallons per minute
  - Pump #2: 150 horsepower; 2350 gallons per minute
  - Pump #3: 125 horsepower; 1750 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 2015**:

Repair/Improvement	Estimated Cost
1. Replace programming and logic controls (includes wireless communication system)	$43,000
2. Upgrade SCADA software	$7,000
3. Replace four water valves in basement of Pumping Station	$15,000
4. Replace 480-volt line to 2.0 MG reservoir sump pump	$5,000

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**:

Repair/Improvement	Estimated Cost	Year
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
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

2015 Recommended Project

The following facility improvements are considered critical and should be completed in FY 2015:

Replace programming and logic controls (PLC): A Programmable Logic Controller, or PLC is a digital computer used for automation of electromechanical processes, such as control of pumps and pump motors. PLCs are used in many industries and machines. Unlike general-purpose computers, the PLC is designed for multiple inputs and output arrangements, extended temperature ranges, immunity to electrical noise, and resistance to vibration and impact. Programs to control machine operation are typically stored in battery-backed-up or non-volatile memory.

The current PLC and related hardware was installed as part of a Pumping Station improvement project in 1987-88 and has become obsolete. Electronic components used in the current control system limit functionality and compatibility with newer technology making it difficult to integrate, upgrade or repair the different parts. Repair parts for the current system are also becoming increasingly scarce and expensive, when available.

The SCADA system at the Pumping Station receives water levels in the water tower via telephone (AT&T) infrastructure. The land line near the Public Works Garage was recently damaged by Nicor Gas and resulted in loss of communication between the tower and station for an extended period of time. Considering this liability, along with the potential relocation of the Public Works facility which would involve the demolition of the facility and the existing telephone infrastructure, Staff recommends the installation of a wireless communication system between the water tower and the Pumping Station. The wireless system between the water tower and Pumping Station will eliminate the need for the current dedicated land line that is currently utilized and paid for by the Village at an estimated savings of $45 per month ($540 annually).

Upgrade SCADA software: Supervisory Control and Data Acquisition (SCADA) refers to industrial control systems (ICS) that are employed to control and keep track of equipment or a plant in industries like water and waste control, telecommunications, energy, transport, and oil and gas refining. SCADA is a computer system used to gather and analyze real-time data. This data is processed by the computer and is presented on a regular basis. SCADA also saves and make logs for every event into a log file that is saved on a hard drive or is sent to a printer. SCADA gives warnings by sounding alarms if situations develop into hazardous scenarios.

Upgrading the SCADA software ensures compatibility and increased functionality with the new logic controls described in the preceding section. The current software (SoftPLC) was first installed in approximately 2008 and is not widely recognized in the industry. Currently, there is only one firm in Illinois that services this software brand.

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 2015 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:

#6	12"Chicago Supply Prime Valve / bent stem
#10	8" Pump #1 Prime Valve / leaks past valve
#21	8" Pump #3 Discharge Valve / leaks past valve
#8	8" 0.5 mg suction line for pump #1 / leaks past valve

Replace 480-volt line:
Currently, there is a 48- volt electrical line that runs underground from the Pumping Station to a junction box inside the vent house (approximately 150' to the south and west). This line continues a short distance to a concrete vault that houses a large underground sump pump. This sump pump dewaters drainage tiles that surround the footings of the 2mg reservoir and is turned on monthly when temperatures are above freezing to drain any water that has collected in the system.

This past summer, the pump malfunctioned and upon inspection by an electrician, it was determined that the electrical junction boxes and associated disconnects were deteriorated and in very poor condition. Upon further inspection, the electrician noted that the supply wires that run underground from the station to the pump were old lead-coated wires that were buried directly in the ground and did not run through a protective conduit. The electrician was able to provide a temporary solution and get the pump back in service, but recommended that the wires and associated equipment be replaced. Staff recommends that the entire electrical supply line (and junction boxes) be replaced since 480 volts is considered high voltage (potentially hazardous) and estimated that the electrical line may be original to the construction of the 2.0 MG reservoir (1920's).

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 System Efficiency Improvements – Pumping Station

FY 2015	$6,000	W/S
FY 2016	$108,000	W/S
FY 2017	$44,000	W/S
FY 2018	$60,000	W/S
FY 2019	$0	W/S

☐ Critical ☐ Recommended ■ Contingent on Funding

Spending History

FY 2014	$56,300 (projected for phase I construction)
FY 2013	$0
FY 2012	$0
FY 2011	$16,871 (efficiency study)
FY 2010	$0

Program Description & Justification

In 2010, the Village approved a professional services agreement with Baxter & Woodman, Inc. to study the Village's water pumping system. The goal of this Energy Efficiency Study was to determine alternatives the Village can employ to reduce the overall electrical energy required to deliver water to the community by evaluating the hydraulic (mechanical), electrical, and operational aspects of the pumping station. It is important to note that the quantity of electricity required to deliver water is not limited to pumping and includes lighting, chemical feed, heating, air conditioning, ventilation, as well as building consumption.

Although Baxter & Woodman's final report indicated that the Village's Pumping Station and distribution system appear to be operating in an efficient manner, they included recommendations for actions to improve the overall pumping and operating efficiency of the Station and distribution system. The following is a summary of their recommendations:

Recommended Improvement	Estimated Project Costs[1]	Estimated Yearly Energy Cost Savings
Lighting Fixture Replacement	completed FY 14	$215
Relocate Pump Foot Valves	completed FY 14	$340
Discharge Check Valve Removal	completed FY 14	$820
Interconnect Suction Pipes	completed FY 14	$120
Replace first floor windows	completed FY 14	Not known
Replace Pump No. 1 [2]	$89,000 (FY 16)	N/A
Pump No. 1 Pipe and Valve Changes [3]	$19,000 (FY 16)	N/A
Reservoir Turbine Generator	$44,000 (FY 17)	$8,000

Reservoir Operations (fill valve repl.)	$20,000 (FY 18)	$1,500
Geothermal Heat Pump	$40,000 (FY 18)	$3,300

[1] Estimated Project Costs were developed by Baxter & Woodman in 2010. Estimated projects costs for fiscal years 16, 17, and 18 reflect inflationary increases.

[2] The improvements completed in FY 14 may decrease friction on the suction side of the pump to the point where the replacement of pump no. 1 may not be necessary.

[3] Completed in conjunction with Replacement of Pump No. 1

2015 Recommended Project

Due to delays in completing the design of the project, which subsequently delayed the competitive bidding and start of the project, the project was completed in the fall of 2013 (FY 2014).

In last year's CIP, Staff recommended deferring additional improvements recommended by Baxter & Woodman until the initial (or phase I) improvements were completed and subsequently evaluated/analyzed. Since first phase was delayed and completed in FY 2014, Staff recommends analyzing the first phase of improvements in FY 2015 and allocate funding for the next construction phase of improvements (if they are determined to be necessary) for FY 2016. The proposed amount of $6,000 for FY 2015 is for a consultant to assist Staff with analyzing the improvements completed in FY 2014.

Program Alternative

The alternative to these projects is to not make these improvements and maintain the current level(s) of energy efficiency.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
$8,000 Savings in 2016 $4,800 Savings in 2017	Savings realized from reduced energy consumption

Water Meter Replacement Program

FY 2015	$21,000	W/S
FY 2016	$26,000	W/S
FY 2017	$16,000	W/S
FY 2018	$19,000	W/S
FY 2019	$17,000	W/S

■ Critical ☐ Recommended ☐ Contingent on Funding

Spending History

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.

2015 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 109 meters will be replaced in-house utilizing Water Division personnel.

Meters greater than 20 years old (> 6/1/93 and <5/1/94)

Quantity	Size	Each	Total
70	0.625	$115	$8,050
15	0.75	$134	$2,010
15	1	$168	$2,520
7	1.5	$465	$3,255
2	2	$653	$1,306
109			**$17,141.00**

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 Main Replacement Program	FY 2015	$562,000	W/S
	FY 2016	$280,000	W/S
	FY 2017	$280,000	W/S
	FY 2018	$280,000	W/S
	FY 2019	$280,000	W/S

■ Critical ☐ Recommended ☐ Contingent on Funding

Name of Project	**Spending History**	
Thatcher Avenue Water Main	FY 2014	$305,000 (projected)
Washington Boulevard Water Main	FY 2013	$116,416
Monroe Avenue Water Main	FY 2012	$175,887
Park Avenue Water Main	FY 2011	$258,302 (estimated)
Lathrop Avenue Water Main	FY 2010	$347,304

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.

2015 Recommended Project

Location: Keystone Ave – From Chicago Ave to Oak Ave
Project Length: Approximately 800 feet
This proposed water main replacement project (proposed for FY 15) will replace the existing 8-inch water main with a new ductile iron 8-inch water main. This project will also include replacing a valve

at the north end of the project (just south of Chicago Avenue). As the existing water main is located under the west side of the roadway and there is a combined sewer in the middle of the roadway, the proposed water main will likely be located along the east side of the pavement. This 800-foot length of water main has experienced 7 water main breaks since 1995. The cost estimate for this project, which includes replacing fire hydrants on this block, is as follows:

- $250,000 for construction (design and construction engineering to be performed in-house)
- $30,000 for the installation of concrete base and asphalt patch along water main trench (if new water main installed beneath the pavement)

Location: Oak Ave – Bonnie Brae to Harlem Ave
Project Length: Approximately 600 feet
This proposed water main replacement project (proposed for FY 15) will consist of the installation of a new ductile iron 8-inch water main in Oak Avenue between Bonnie Brae and Harlem Avenue. This will allow the Village to abandon approximately 1,200 feet of existing water main that is currently located in the alley and behind the Garden Apartments (privately owned property). Relocating this water main to the Village-owned right-of-way will make it easier for staff to conduct future repairs and inspections. This project will also reduce the amount of water main that the Village is responsible for by approximately 400 feet. The proposed water main will likely be placed along the south side of the pavement in Oak Avenue. The cost estimate for this project is as follows:

- $250,000 for construction (construction engineering to be performed in-house)
- $25,000 for the installation of concrete base and asphalt patch along water main trench (if new water main installed beneath the pavement)

There is a valve located at Park & Chicago (8-inch diameter) which has, at times, demonstrated faulty operations and Staff is concerned that it cannot be relied upon in emergency situations. Staff also recommends the replacement of this valve in FY 2015 at a cost of $7,000.

Cost summary for recommended improvements in FY 2015:

Construction (Keystone)	$280,000
Construction (Bonnie Brae)	$275,000
Additional Valve	$7,000
	$562,000

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:

- Replace 4-inch main beneath Keystone Avenue (from Lake Street and Central Avenue) with 8-inch water main (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 10-inch on Lake Street with the 6-inch main on Hawthorne to improve flow and pressure between the water distribution systems north and south of the railroad.

  Estimated project costs in FY 16:

  $180,000 construction (excludes surface restoration)
  $27,000 engineering (design and construction oversight)
  $7,000 replace valve at Park & Chicago (see previous page)

Staff recommends an annual allocation of $280,000 for future water main replacement projects. Future project locations will be determined by Staff based on the following factors: age, condition, and location of the main.

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

Hydrant Replacement Program			
	FY 2015	$18,000	W/S
	FY 2016	$18,000	W/S
	FY 2017	$18,000	W/S
	FY 2018	$18,000	W/S
	FY 2019	$18,000	W/S

☐ Critical ■ Recommended ☐ Contingent on Funding

Spending History		
	FY 2014	$30,000 (projected)
	FY 2013	$14,590
	FY 2012	$28,708
	FY 2011	$29,325
	FY 2010	$41,833
	FY 2009	$75,480

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 these Village-wide hydrant flushing events, Fire Department personnel identify hydrants in need of repair and provides a list of those hydrants to Public Works to coordinate and/or make the necessary repairs. Those hydrants that are not in operating condition are prioritized for immediate repair and those hydrants that cannot be repaired in-house are done so contractually either on an emergency basis or coordinated with another project.

Staff recommends the replacement of 3 hydrants per year. To accomplish this objective, a minimum annual funding level of $18,000 is recommended. This is equal to $6,000 per hydrant for labor and materials.

2015 Recommended Project

The Public Works and Fire Departments have identified the following hydrants as operable 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 which slows down the time required to connect the fire hose to the hydrant:

1. 526 Franklin Ave
2. 26 Forest Ave
3. 22 Keystone Ave

Due 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 system 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