

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 Program is prepared by staff and reviewed by the Administrator, Assistant Administrator and Finance Director. Departments are responsible for identifying capital projects which are then priorities based on need and availability of funding. The necessity of the capital acquisition or improvement is evaluated based on Village Board Goals, residents' concerns, current and future maintenance costs, revenue generation, ability to meet current levels of service, safety issues and legal requirements. Projects with currently available funding sources such as grant revenues may be prioritized. Following review the Capital Improvement Program is presented to the Village Board. The Program may be amended during the budget process as determinations are made for items to be moved forward or to be deferred based on current information.

Capital Improvement Categories

Capital Improvements included in the Fiscal Year 2017 budget total \$4,330,865 from the following categories:

Buildings and Improvements

Village facilities include Village Hall which houses Administration, Finance, Building, Police, and Fire operations as well as the Public Works Village Yard which is located in a separate facility. Improvements at the Water Pumping Station are identified under the Water and Sewer CIP section.

3 Facilities

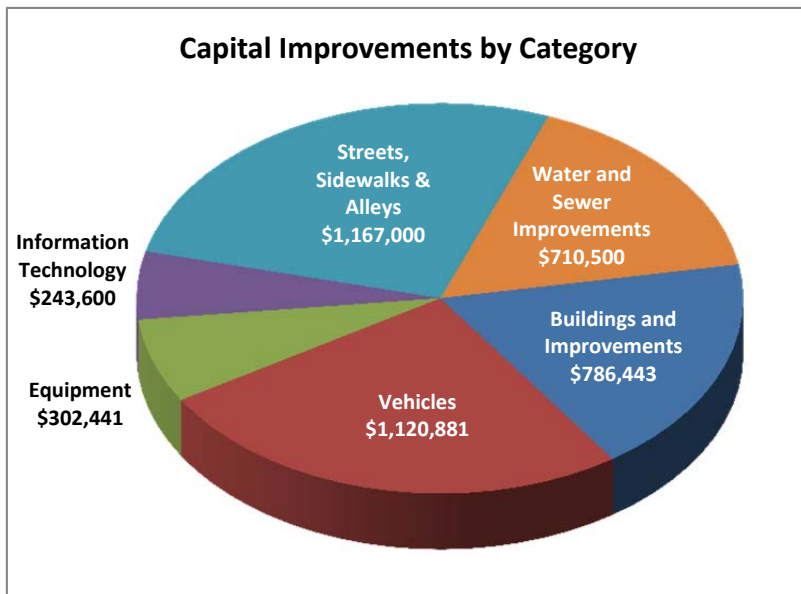
Vehicles

47 vehicles in the fleet

The vehicle section includes the replacement or acquisition of Village vehicles and is subdivided into police, fire, and public works sections. The detail page of each vehicle to be replaced in 2017 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 replaced or acquired over the next five years. This section addresses equipment for the Administration, Fire, Police and Public Works operations.



Information Technology (IT)

The Village updated the inventory and study of its information technology system in FY 2016. Current and previous recommendation from the IT studies are incorporated into the five-year CIP including upgrades to the Village's wireless network, power source, disaster recovery system, and storage area network for day-to-day operations as well as police arbitrator data. The Village will bring licensing up-to-date, create a schedule for regular personal computer replacements and make upgrades and security improvements to its network.

Streets, Sidewalks and Alleys

This section includes improvements to alleys, sidewalks, curbs and streets. The annual Street Improvement Program, formerly funded through bond proceeds, is currently funded through Motor Fuel Tax (MFT) Fund revenues.

31.6 miles

Capital Improvement Program

Water and Sewer Improvements

77.3 miles of sewer and water mains

The Village annually budgets for the improvements and maintenance of the sewer system, including sewer lining, rehabilitation and repairs. 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. The Village's water rate includes funding for water main improvements. Water main replacement is indicated when a history of line failure or a lack of adequate fire flow exists. Whenever possible, water main replacement is scheduled to coincide with street improvements to limit the impact of construction activity to a particular area. Water Pumping Station equipment is also included in this section.

Capital Improvement Funding Sources

The Five Year Capital Improvement Program (CIP) is financed through the following Village funds or specific revenue sources. The individual project sheet will indicate if a project is intended to be financed with a specific revenue source, such a grant, within the fund. The proposed FY 2017 funding sources are described below:

General Fund

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

Motor Fuel Tax Fund (MFT)

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

Water and Sewer Fund

The Water and Sewer Fund generates revenue via the water and sewer rates to assist in funding capital improvements. The Northside Stormwater Management Project, which is expected to be completed in FY 2016, was also funded via a bank and IEPA loan.

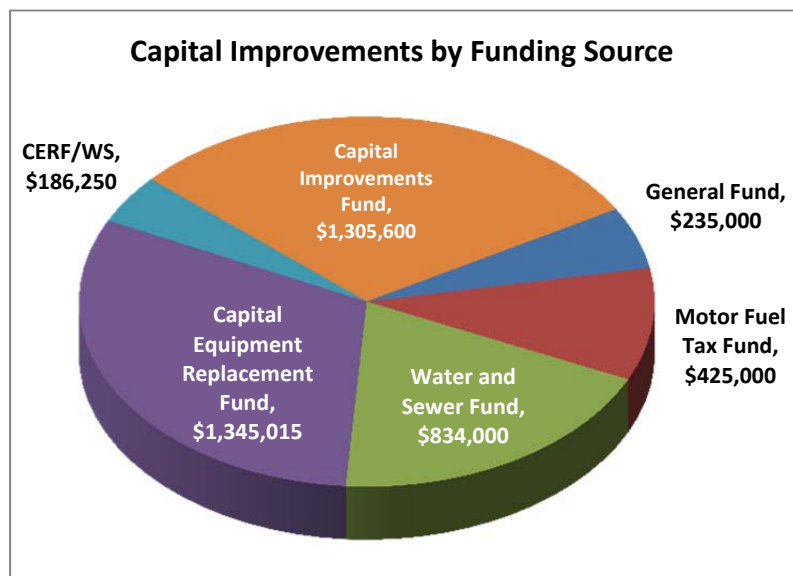
Capital Equipment Replacement Fund

The Capital Equipment Replacement Fund (CERF) is a capital projects fund that accumulates transfers from the General and Water and Sewer Funds for the eventual replacement of equipment and vehicles. The Building & Development, Police, Fire and Public Works departments in the General Fund and the Water and Sewer Fund transfer monies to the CERF fund annually to cover future replacements. These annual transfers are intended to avoid significant fluctuations in the operating budgets from year to year. Water and Sewer Fund Vehicles and equipment to be replaced is designated with a funding source of CERF/WS.

Capital Improvements Fund

The Capital Improvements Fund is used to account for improvements to buildings, parking lots, municipal lighting systems, alleys, streets and information technology. Revenue sources include red light camera revenue, parking lot fees, grants and transfers from other funds.

Five-Year Capital Improvement Program schedules and detailed project sheets for each capital item included in the FY 2017 Budget are included in this document.



**Village of River Forest, Illinois
Five Year Capital Improvement Program
Fiscal Year 2017 Budget**

CATEGORY	Fiscal Year					Five Year Total
	2017	2018	2019	2020	2021	
Buildings and Improvements	786,443	318,000	55,000	135,200	60,500	1,355,143
Vehicles	1,120,881	589,558	87,386	415,749	389,862	2,603,436
Equipment	302,441	46,000	172,500	33,000	150,000	703,941
Information Technology	243,600	55,000	25,000	25,000	180,000	528,600
Streets, Sidewalks & Alleys	1,167,000	670,400	625,000	655,000	610,000	3,727,400
Water and Sewer Improvements	710,500	679,500	637,500	617,000	620,500	3,265,000
Totals - All Categories	4,330,865	2,358,458	1,602,386	1,880,949	2,010,862	12,183,520

PROPOSED FUNDING SOURCE	Fiscal Year					Five Year Total
	2017	2018	2019	2020	2021	
General Fund (GF)	235,000	250,000	255,000	240,000	240,000	1,220,000
Motor Fuel Tax Fund (MFT)	425,000	250,000	250,000	250,000	250,000	1,425,000
Water and Sewer Fund (WS)	834,000	806,500	712,500	697,200	696,000	3,746,200
Capital Equipment Replacement Fund (CERF)	1,345,015	635,558	259,886	118,749	539,862	2,899,070
CERF/WS	186,250	-	-	330,000	-	516,250
Capital Improvements Fund (CIF)	1,205,600	416,400	125,000	200,000	285,000	2,232,000
CIF/Parking Reserve	100,000	-	-	45,000	-	145,000
Totals	4,330,865	2,358,458	1,602,386	1,880,949	2,010,862	12,183,520

Village of River Forest, Illinois
Five Year Capital Improvement Program
Buildings and Improvements
Fiscal Year 2017 Budget

This Project is:	Fiscal Year					Five Year Total	Funding Source
	2017	2018	2019	2020	2021		
Police							
Firing Range Rehab	Recommended	107,943	-	-	-	-	107,943 CERF
Village Hall							
Village Hall Improvements	Recommended	160,000	25,000	-	40,000	55,000	280,000 CIF
Public Works							
Garage Improvements	Critical	465,000	236,000	50,000	85,000	-	836,000 CIF
Pumping Station Improvements	Critical	53,500	57,000	5,000	10,200	5,500	131,200 WS
Total		786,443	318,000	55,000	135,200	60,500	1,355,143

Proposed Funding Source	Fiscal Year					Five Year Total
	2017	2018	2019	2020	2021	
Water and Sewer Fund (WS)	53,500	57,000	5,000	10,200	5,500	131,200
Capital Equipment Replacement Fund (CERF)	107,943	-	-	-	-	107,943
Capital Improvement Fund (CIF)	625,000	261,000	50,000	125,000	55,000	1,116,000
Totals	786,443	318,000	55,000	135,200	60,500	1,355,143

Buildings and Improvements-Police

Firing Range Rehab

FY 2017 \$ 107,943 CERF

Original Purchase Date FY 1998
 Funding History FY 2016 \$ 19,851



Critical Recommended Contingent on Funding

Description & Justification

The Firing Range located in the basement of Village Hall was installed in 1998 as part of the Village Hall construction project and is currently over 17 years old. The range is used over 200 times per year for handgun and less lethal training. The Village’s range requires upgrades in the bullet trap system, ventilation and the target rail systems. It was recommended FY 2015 that the project be consolidated as a comprehensive overhaul in FY 2016 and FY 2017 in lieu of four separate fiscal year phases. This will help ensure the Village’s ability to save in both parts and labor, as part of an economy of scale. With local, regional, and national focus on police officers use of firearms, this project will help ensure we are continuing to maintain professional standards and safeguard the public’s trust.

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	Fiscal Year
Ventilation Direct Digital Control System	\$ 15,954	FY2016
Ventilation VFD for Make-Up Air Unit	\$ 2,647	FY2016
Ventilation Start Up and Commissioning	\$ 1,250	FY2016
<i>FY 2016 Subtotal</i>	\$ 19,851	

Bullet Trap Conversion	\$ 24,805	FY 2017
Combat/Protective Wall System	\$ 13,581	FY2017
Ballistic Ceiling Baffles	\$ 13,633	FY2017
Ventilation Custom Radial Diffusers	\$ 1,808	FY2017
Ventilation Control Piping and Wiring	\$ 2,332	FY2017
Range Master Control System	\$ 4,920	FY2017
Network Interface	\$ 1,333	FY2017
Rail Repair and Target Encasements	\$ 2,870	FY2017
Lateral Target with base	\$ 7,431	FY2017
Target Turners	\$ 2,665	FY2017
Electronic Enclosures	\$ 3,434	FY2017
Shooting Stalls	\$ 9,533	FY2017

Air Filtration Unit	\$ 19,598	FY2017
<i>FY 2017 Subtotal</i>	\$107,943	
Total Project Cost	\$127,794	

The approximate life expectancy of the equipment, with recommended maintenance, is an additional 15-20 years.

Additional Justifications

FY 2016- Improvements addressed most ventilation system upgrades needed to ensure compliance with OSHA air quality standards for firing ranges.

FY 2017- Improvements addressed safety and integrity of the bullet trap system plus industry standard of ballistic walls for approximately 1/3 of range to protect against ricochet and shrapnel displacement. Items include upgraded ceiling baffles to protect plumbing, duct work, and other structural components. Other improvements will address mechanical and technology upgrades required with regard to target rail and control systems as well as the potential for critical failure of a 20-year old air filtration unit and 20-year old individual shooting stalls.

Project Alternative

The alternative to the replacement of the range equipment is to attempt continue to repair the current system. This is less desirable and less feasible as the range age increases. Key components and mechanical parts are not available new or on the secondary rebuilt market. The proposed improvement costs are based on estimates from current contracted 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 would be 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 plus additional training in other weapons tactics. The use of a firearm is one of the highest liabilities a police department can face. The Department currently requires quarterly firearms training and without a useable firing range, the Village would have to seek an alternate location to train. This would increase training, overtime, transportation, facility rental premiums and ammunition costs. A safety/operational concern would be the inability for officers to test fire duty weapons after general maintenance or armorer’s repairs were completed. The Department currently allows the Forest Park Police Department to conduct some periodic training and test firing on the range in consideration of other training opportunities and ammunition supplies. Oak Park Police Department has entered into a onetime paid contract to use our range, with future opportunities pending. Staff will continue to look for additional like-sized departments to potentially lease time for use. This project will improve overall efficiency and effectiveness of department range operations.

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

Buildings and Improvements-Public Works

Village Hall Improvements	FY 2017	\$160,000	CIF
	FY 2018	\$25,000	CIF
	FY 2020	\$40,000	CIF
	FY 2021	\$55,000	CIF

Critical Recommended Contingent on Funding

Spending History

FY 2015 \$12,000 (Repair foundation and eliminate seepage: basement level adjacent to Fire Dept.)

Project Description & Justification

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

In 2013, DTZ (a UGL Company) was contracted to conduct a Facility Condition Assessment (FCA) of the Village Hall (referred to in DTZ’s report as the Administration Building). The purpose of the assessment was to evaluate the overall condition of the buildings and sites, and provide information regarding the condition and life expectancy of the major components. A follow up to this assessment was conducted this past year by the Garland company to provide thermal scans of the current condition of the roof. Their report recommends one project for this facility in FY 2017.

The following facility improvement is recommended to be completed **in FY 2017**:

<u>Repair/Improvement</u>	<u>Estimated Cost</u>
1. Replace roof above 2 nd floor	\$160,000

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

<u>Repair/Improvement</u>	<u>Estimated Cost</u>	<u>Year</u>
1. FCA - Replace HVAC rooftop unit #3 (above WSCDC)	\$ 25,000	FY 2018
2. Tuck-pointing improvements	\$ 40,000	FY 2020
3. Replace roof above 2 nd floor (WSCDC area)	\$ 55,000	FY 2021
Total	\$120,000	

2017 Recommended Project

Replace roof above 2nd floor: This past year, the Garland Company provided an analysis of the current condition of the roof (the portion not covering the Fire Dept). This is an item that was on the DTZ report which was identified as in need of replacement. After performing thermal imaging scans it was determined that the roof above the 2nd floor (non-WSCDC area) is in poor condition and is holding excess moisture. This portion of the roof was put in in 1998 and is at the end of its useful life.

Project Alternative

The alternative to this project is to not make this replacement, however, this is an item that will need to be done as the condition of the roof continues to deteriorate.

Project Impact

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

Buildings and Improvements-Public Works

Public Works Garage Improvements			
	FY 2017	\$465,000	CIF
	FY 2018	\$236,000	CIF
	FY 2019	\$50,000	CIF
	FY 2020	\$85,000	CIF
	FY 2021	\$0	CIF

Critical
 Recommended
 Contingent on Funding

Spending History

FY 2016 \$10,000 (Structural Engineering Analysis)

Project Description & Justification

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

The property on which the Public Works Garage stands has been considered for redevelopment. As a result, the Village has been delaying needed improvements based on the possibility of site redevelopment.

Based on a recent structural engineering analysis and facility site assessment, the following critical and recommended facility improvements should be completed **in FY 2017**:

<u>Repair/Improvement</u>	<u>Estimated Cost</u>
1. Roof replacement	\$360,000
2. Rebuild west parapet wall	\$90,000
3. Project management	\$15,000
Total	\$465,000

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

<u>Repair/Improvement</u>	<u>Estimated Cost</u>	<u>Year</u>
1. Exterior wythe brick repair (east wall)	\$100,000	FY 2018
2. Grind & re-point remainder of all brick walls	\$90,000	FY 2018
3. Re-caulk window perimeters, copings, misc. areas	\$15,000	FY 2018
4. Replace single pane glass windows (26)	\$20,000	FY 2018
5. Replace two overhead garage doors	\$11,000	FY 2018
6. Replace salt storage shed	\$50,000	FY 2019
7. Resurface parking lot	\$85,000	FY 2020
Total	\$371,000	

2017 Recommended Projects

The following is a summary of the improvements that are proposed for FY 2017:

1. Roof Replacement: The roof is beyond its useful life and the current conditions contribute to problems on the adjacent walls by allowing poor drainage to worsen their condition as well.
2. Rebuild West Parapet Wall: This project includes tuck-pointing along the south and west elevation of the Public Works Garage, including the parapet wall located at the southwest corner of the roof. Sections of this portion 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.
3. Project Management: This is for the oversight of the large amount of work that needs to be accomplished with the roof replacement and rebuilding of exterior walls during an overlapping timeframe. Project management will be essential to the success of these needed improvements.

Project Alternative

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

Project Impact

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

Buildings and Improvements-Public Works

Pumping Station Improvements

Water & Sewer	FY 2017	\$53,500	WS
	FY 2018	\$57,000	WS
	FY 2019	\$5,000	WS
	FY 2020	\$10,200	WS
	FY 2021	\$5,500	WS

Critical
 Recommended
 Contingent on Funding

Spending History

FY 2016 \$47,000 (epoxy flooring and front door replacement)



Project Description & Justification

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

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

The following critical and recommended facility improvements should be completed **in FY 2017**:

<u>Repair/Improvement</u>	<u>Estimated Cost</u>	
1. Replace windows (2 nd Floor only)	\$40,000	FY 2017
2. Replace / add exterior lighting fixtures	\$9,000	FY 2017
3. <u>Replace security camera system and PC</u>	<u>\$4,500</u>	<u>FY 2017</u>
Total	\$53,500	

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

<u>Repair/Improvement</u>	<u>Estimated Cost</u>	<u>Year</u>
1. Replace lower roof	\$20,000	FY 2018
2. Replace boiler and radiator heater system	\$25,000	FY 2018
3. Paint soffit, fascia and metal work on exterior of building	\$12,000	FY 2018
4. Replace fire detection system	\$5,000	FY 2019
5. Replace interior electrical system	\$10,200	FY 2020
6. <u>Replace staircase</u>	<u>\$5,500</u>	<u>FY 2021</u>

Total

\$77,700

2017 Recommended Projects

The following is a summary of the improvements that are proposed for FY 2017:

1. Replace 2nd floor windows: Replace 2nd floor windows to complete the removal and replacement of all windows in the building.
2. Replace exterior lighting fixtures with LED luminaires: These eight replacement fixtures would be a mix of photo and motion controlled to increase security around the perimeter of the building. Motion controlled fixtures would be used to reduce spillover light on to neighboring properties.
3. Replace security cameras and computer: Replace all old security cameras with new high definition color cameras that are night vision capable and do not require proprietary video capture cards or software. These cameras would also have night vision capabilities, so the loss of light from the new motion controlled LED fixtures would not affect the ability to detect or record motion around the facility.

Project Alternative

There are essentially no alternatives to these improvements and maintenance projects as the Pumping Station is a critically important facility that houses the operations center for the Village’s water distribution system. Deferring these projects would result in emergency repairs that could increase project costs (compared to soliciting bids/proposals).

Project Impact

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

Village of River Forest, Illinois
Five Year Capital Improvement Program
Vehicles
Fiscal Year 2017 Budget

Vehicles	Fiscal Year					Five Year Total	Funding Source
	2017	2018	2019	2020	2021		
Police	111,131	168,058	87,386	85,749	219,862	672,186	CERF
Fire	599,750	64,500	-	-	-	664,250	CERF
Public Works	410,000	357,000	-	330,000	170,000	1,267,000	CERF & CERF/WS
Total	1,120,881	589,558	87,386	415,749	389,862	2,603,436	

Proposed Funding Source	Fiscal Year					Five Year Total
	2017	2018	2019	2020	2021	
CERF- General Fund (CERF)	965,881	589,558	87,386	85,749	389,862	2,118,436
CERF- Water and Sewer (CERF/WS)	155,000	-	-	330,000	-	485,000
Totals	1,120,881	589,558	87,386	415,749	389,862	2,603,436

Village of River Forest, Illinois
 Five Year Capital Improvement Program
 Vehicles-Police
 Fiscal Year 2017 Budget

Police Department	Year	Vehicle #	This Project is:	Fiscal Year					Five Year Total	Funding Source
				2017	2018	2019	2020	2021		
Marked Squad Car	2014	1	Recommended	-	42,510	-	-	45,698	88,208	CERF
Marked Squad Car	2015	2	Recommended	-	42,723	-	-	45,714	88,437	CERF
Marked Squad Car	2015	3	Recommended	-	44,663	-	-	47,789	92,452	CERF
Marked Squad Car	2013	4	Recommended	-	-	44,663	-	-	44,663	CERF
Marked Squad Car	2013	5	Recommended	-	-	42,723	-	-	42,723	CERF
Marked Squad Car	2013	6	Recommended	41,474	-	-	44,585	-	86,059	CERF
Community Service Vehicle	2007	10	Critical	31,365	-	-	-	-	31,365	CERF
Detectives Vehicle	2011	12	Recommended	38,292	-	-	41,164	-	79,456	CERF
Unmarked Surveillance	2012	13	Recommended	-	38,162	-	-	41,024	79,186	CERF
Chief's Vehicle	2015	17	Recommended	-	-	-	-	39,637	39,637	CERF
Patrol	2009	7	N/A	These vehicles are replaced with used police vehicles.					-	
Patrol	2009	8	N/A						-	
Crime Prevention- Tahoe	2009	9	N/A						-	
Deputy Chief's Vehicle	2007	11	N/A						-	
Admin Pool Vehicle	2000	14	N/A						-	
Dodge Durango	2006	15	N/A						-	
School Vehicle	2005	16	N/A						-	
Vehicle Equipment Set-Up			N/A						-	-
Total				111,131	168,058	87,386	85,749	219,862	672,186	

Proposed Funding Source	Fiscal Year					Five Year Total
	2017	2018	2019	2020	2021	
Capital Equipment Replacement Fund (CERF)	111,131	168,058	87,386	85,749	219,862	672,186
Totals	111,131	168,058	87,386	85,749	219,862	672,186

Vehicles-Police

Marked Squad Car	FY 2017	\$41,474	CERF
Squad 6	FY 2020	\$44,585	CERF

Critical Recommended Contingent on Funding

<i>Make</i>	Ford
<i>Model</i>	Explorer
<i>Year</i>	2013
<i>Cost</i>	\$38,580
<i>Useful Life</i>	3 yrs
<i>Current Life</i>	2 yrs

Project Description & Justification

An estimated cost to replace Squad #6 is \$41,474. 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. The current mileage is 53,511 (as of 11/01/15). Approximately 2,000 miles are driven per month and therefore the estimated mileage at time of replacement will be 77,000.

Vehicle Description

The recommended replacement model is a Ford Explorer. This vehicle would serve as a multi-purpose utility vehicle for deploying the speed trailer and carrying evidence technician equipment. It will also accommodate taller officers who have trouble fitting into the Ford Taurus. This vehicle will be a marked squad car also 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, video equipment will be removed and reinstalled in the new cars. The condition of these vehicles will be analyzed when they are removed from service to determine if they are suitable to be rotated to another department for administrative use, or if they should be disposed of at auction.

Maintenance Costs FY 2013-2017	
Routine Maintenance as of November, 2015	\$336 (14 @ \$24)
Cost of Repairs	\$2,927
Total Spent on Maintenance and Repairs	\$3,263

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
Approximately \$2,735	Routine maintenance and periodic repairs

Vehicles - Police

Community Service Vehicle	FY 2017	\$31,365	CERF
Squad 10	FY 2023	\$33,056	CERF

Critical
 Recommended
 Contingent on Funding

<i>Make</i>	Ford
<i>Model</i>	Ranger Pick-Up
<i>Year</i>	2007
<i>Cost</i>	\$22,500
<i>Useful Life</i>	7 yrs
<i>Current Life</i>	9 yrs

Project Description & Justification

An estimated cost to replace unit #10 is \$31,365. The estimated cost of the vehicle incorporates \$8,000/car for equipment and installation, which includes exterior Police markings, light emitting diode light bar, and miscellaneous items needed to facilitate the installation of major components.

Vehicle Description

This vehicle is a marked pick-up truck used for daily Community Service activities. The unit is equipped with a laptop computer and zebra printer. The Community Service Vehicle is used for daily parking violations, stray animals, large equipment transport and deploying the Speed Trailer. Depending on the condition of the vehicle at replacement time, this vehicle could be offered to another department or offered for sale at auction. The replacement vehicle will be a Ford Transit cargo van. This type of van has a lower rear cargo step allowing easier access to equipment as well as increasing the usable space to transport larger items. It will also have front wheel drive which will make handling in inclement weather safer and more reliable. The current mileage is 90,116 (as of 11/02/15). Estimated mileage at time of replacement: 97,370.

Maintenance Costs FY 2007-2016	
Routine Maintenance as of November, 2015	\$120 (5 @ \$24)
Cost of Repairs	\$4,220
Total Spent on Maintenance and Repairs	\$4,340*

*Includes two year history of maintenance and repairs

Project Alternative

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

Operational Impact

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

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
Approximately \$2,735	Routine maintenance and periodic repairs

Vehicles - Police

Ford F150 Detectives Vehicle	FY 2017	\$38,292	CERF
Squad 12	FY 2020	\$41,164	CERF

Critical Recommended Contingent on Funding

<i>Make</i>	Ford
<i>Model</i>	F150
<i>Year</i>	2011
<i>Cost</i>	\$34,037
<i>Useful Life</i>	5 yrs
<i>Current Life</i>	4 yrs

Project Description & Justification

An estimated cost to replace unit #12 is \$38,292. An estimated cost of the vehicle incorporates an all-wheel drive (AWD) Pick-up Truck, \$8,000 for covert equipment and installation, including hidden light emitting diode (LED) emergency lights, radio antennae, and miscellaneous items needed to facilitate the installation of major components.

Vehicle Description

This is an unmarked detective unit used daily for tactical patrol and covert surveillance. The unit is equipped with a laptop computer and car radios, and a secure storage vault in the pick-up bed. Depending on the condition of the vehicle at replacement time, this vehicle could be offered to Public Works as a replacement for their department or offered for sale at auction. The current mileage is 25,549 (as of 11/5/15).

Maintenance Costs FY 2011-2015	
Routine Maintenance as of November, 2015	\$96 (4 @ \$24)
Cost of Repairs	\$810
Total Spent on Maintenance and Repairs	\$906*

*Includes 2 year history of maintenance and repairs

Project Alternative

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. In 2015, Cook County began charging a fee for any seized vehicle they process through their seizure court, thus reducing the attraction to seize vehicles for covert investigations. Due to the tactical use of this vehicle and limited mileage accumulation, replacement creates an opportunity to explore a cost saving lease program that allows the Village to exchange automobiles more regularly and maintain the undercover/covert nature of this vehicle.

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
Approximately \$2,735	Routine maintenance and periodic repairs

**Village of River Forest, Illinois
 Five Year Capital Improvement Program
 Vehicles-Fire
 Fiscal Year 2017 Budget**

Fire Department	Year	Vehicle #	This Project is:	Fiscal Year					Five Year Total	Funding Source
				2017	2018	2019	2020	2021		
Chief's Vehicle	2006	200	Recommended	24,750	-	-	-	-	24,750	CERF
Deputy Chief's Vehicle	2011	201	Contingent	-	26,500	-	-	-	26,500	CERF
Ambulance	2015	215	Recommended	-	-	-	-	-	-	CERF
Utility Pick-up Truck	2006	218	Contingent	-	38,000	-	-	-	38,000	CERF
105' Aerial Quint	2013	219	-	-	-	-	-	-	-	CERF
Pumper	2001	222	-	-	-	-	-	-	-	CERF
Ambulance	1999	224	-	-	-	-	-	-	-	CERF
Pumper	1992	226	Critical	575,000	-	-	-	-	575,000	CERF
Fire Prevention Bureau Vehicle	1999	299	-	-	-	-	-	-	-	CERF
Total				599,750	64,500	-	-	-	664,250	

Proposed Funding Source	Fiscal Year					Five Year Total
	2017	2018	2019	2020	2021	
Capital Equipment Replacement Fund (CERF)	599,750	64,500	-	-	-	664,250
Totals	599,750	64,500	-	-	-	664,250

Vehicles–Fire

Administrative Vehicle–C200

FY 2017

\$24,750

CERF

Critical

Recommended

Contingent on Funding

Make FORD
Model Crown Victoria
Year 2006
Cost \$23,145
Useful Life 6 years
 4 years fleet (training & pool)
 car
Current Life 10 years



Vehicle Description

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

Vehicle	Year	Date	Road Mileage
C-200	2006	11/13	120,624 as of 11/24/15

Maintenance/Repair Costs for Past 3.5 Years	
Routine Maintenance	\$1,002 (8 items)
Cost of Repairs	\$3,386
Total Spent on Maintenance and Repairs	\$4,388

Project Alternative

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

Operational Impact

This vehicle was originally scheduled for a five year useful life that is extended to nine years. This vehicle will be traded-in or sold at auction and removed from the Village fleet.

Project Impact

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

Carryover History

Carry over from FY 2016

Vehicles–Fire

Pumper–FD-211 (226)

FY 2017

\$575,000

CERF



Critical



Recommended



Contingent on Funding

Make

Darley

Model

Pumper

Year

1992

Cost

\$210,000

Useful Life

10 years front line +
10 years reserve.

Current Life

25 years



Vehicle Description

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

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

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

Vehicle	Year	Date	Road Mileage	Engine Hours	Actual Mileage
E-226	1992	11/12	48,097 as of 11/24/2015	7,381.4	184,535

*Fire and EMS vehicles use a conversion of 25 miles per engine hour due to the on scene time at an emergency call.

Maintenance/Repair Costs for Past 3.5 Years	
Routine Maintenance	
226	\$ 1,333 (4 items)
222	\$ 3,046 (11 items)
Cost of Repairs	
226	\$11,342
222	\$24,972
Total Spent on Maintenance and Repairs	

226	\$12,675
222	\$28,018

At the most recent preventative maintenance evaluation by Certified Fleet Service, mechanics found several deficiencies and have estimated repair costs at \$27,200, which includes the following: Multiple oil leaks (\$800-\$1,000), power steering leak (\$300), coolant leak at radiator neck (\$200), right rear spring broken (\$1,100), tires (seven years-\$1,800), rusted out frame for booster tank (\$5,000-\$7,000), pump not holding vacuum (will not pass NFPA pump test-\$12,000-\$15,000) and inoperable air conditioner (\$500-\$800). There are also unknown costs for repairs to the emergency generator and there is extensive rust corrosion to body and frame. A final tally of all costs will not be available unless and until all the work is performed.

Project Alternative

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

Operational Impact

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

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
Reduction of Front-line Engine repairs- between \$10,000 - \$22,000	Reduce maintenance on fleet by providing new, warranty driven apparatus, replacing older, costlier vehicle. Reduction in maintenance costs for first three years (warranty) on new vehicle and E222- reduced by placing in reserve status of 14 year old vehicle.

Carryover History

Carry over from FY 2016

Village of River Forest, Illinois
 Five Year Capital Improvement Program
 Vehicles-Public Works
 Fiscal Year 2017 Budget

Public Works Department	Description	Year	Vehicle #	This Project is:	Fiscal Year					Five Year Total	Funding Source
					2017	2018	2019	2020	2021		
Large Int'l Dump Truck	International 4000 Series	2002	30	Critical	145,000	-	-	-	-	145,000	CERF
Large Int'l Dump Truck	International	2004	32	Critical	-	150,000	-	-	-	150,000	CERF
Pick-up Truck w/ Dump Body	Ford F350 Super Duty	2006	33	Critical	-	57,000	-	-	-	57,000	CERF
Street Sweeper	Elgin Pelican	2003	34	Critical	220,000	-	-	-	-	220,000	CERF/WS
Large Int'l Dump Truck	International 4000 Series	2001	40	Critical	-	-	-	-	-	-	CERF
Large Int'l Dump Truck	International 4000 Series	1998	44	Critical	-	-	-	-	170,000	170,000	CERF
Aerial Truck	International 4400	2003	46	Critical	-	150,000	-	-	-	150,000	CERF
Skid Steer Loader	Bobcat 763	2000	N/A	Critical	-	-	-	-	-	-	CERF
Pick-Up Truck (Engineering)	Ford Ranger Super	2007	62	-	-	-	-	-	-	-	CERF/WS
Cargo Van	Dodge Sprinter	2006	64	Critical	45,000	-	-	-	-	45,000	CERF/WS
Sewer Truck	Vac-Con	2007	65	Critical	-	-	-	330,000	-	330,000	CERF/WS
Pick-Up Truck	Ford F350 Super Duty	2008	66	Critical	-	-	-	-	-	-	CERF/WS
Cargo Van	Ford Transit Connect	2015	68	Recommended	-	-	-	-	-	-	WS
Total					410,000	357,000	-	330,000	170,000	1,267,000	

Proposed Funding Source	Fiscal Year					Five Year Total
	2017	2018	2019	2020	2021	
Capital Equipment Replacement Fund (CERF)	255,000	357,000	-	-	170,000	782,000
CERF- Water and Sewer (CERF/WS)	155,000	-	-	330,000	-	485,000
Totals	410,000	357,000	0	330,000	170,000	1,267,000

Vehicles-Public Works

Dump Truck #30

FY 2017

\$145,000

CERF



Critical



Recommended



Contingent on Funding

Make International
Model 4000 SERIES
Year 2002
Purchase Cost \$67,350
Purchased FY 2002
Useful Life 12 years
Current Life 16 years



Vehicle Description

Various personnel in the Operations Division operate this truck. The vehicle is equipped with a 11' dump body, stainless steel v-box salt spreader (with manual controls), liquid salt pre-wetting system, 11' power angling snowplow, dump body tarp, emergency lighting, and two-way radio.

Total Vehicle Miles	39,954 (As of 11/16/2015)
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Recent Maintenance Costs

Date	Maintenance Performed	Cost
8/2013	Repair brakes	\$1,317.00
8/2013	Repair instrument cluster	\$1,338.00
1/2014	Replace oil hose	\$34.32
1/2014	Replace front and rear springs	\$1,930.06
1/2014	Oil and filter change	\$54.73
7/2014	Replace oil pan	\$1,788.40
1/2015	Replaced leaf springs	\$726.46
Total		\$7,188.97

Project Alternative

This vehicle was originally scheduled for replacement in FY 2014. Since this vehicle is in good mechanical condition, Staff recommends deferring its replacement to 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. This unit is used for other operations (hauling materials) which would also be impacted if it were removed from the fleet.

Project Impact

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

Carryover History

This vehicle is a carry-over from FY 2014

Vehicles-Public Works

Street Sweeper #34

FY 2017

\$110,000 CERF

\$110,000 WS



Critical



Recommended



Contingent on Funding

Make

Elgin

Model

Year

2003

Purchase Cost

\$124,212

Purchased

FY 2003

Useful Life

8 years

Current Life

14 years



Vehicle Description

This is the only vehicle in the Village’s fleet that sweeps Village streets and State routes. State routes are swept in accordance with the intergovernmental street maintenance agreement with the Illinois Department of Transportation.

The street sweeper performs an important function as it removes debris (leaves, twigs, garbage, etc.) from Village streets and prevents such debris from entering into the Village’s combined sewer system. It also improves the appearance of the Village. By removing debris from Village streets and keeping it out of the Village’s sewer system, street sweeping ultimately prevents debris from being discharged into the Des Plaines River during combined sewer overflow events.

Total Equipment Hours/Miles	6,530 /25,647 (As of October 15, 2015)
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Recent Maintenance Costs

Date	Maintenance Performed	Cost
4/2010	New hydraulic motor	\$638.00
5/2010	Replaced steering shaft – guide wheel fell off	\$8,582.00
5/2011	New conveyor belt	\$650.00
5/2012	Fuel tank straps	\$100.00
6/2012	New tires and new broom mandrel	\$1,900.00
8/2012	New fuel tank	\$700.00
9/2012	Numerous repairs (conveyor belt, bearings, variable shields)	\$8,500.00
12/2012	Replace windshield	\$125.00
6/2013	Replace main broom, passenger side window and track	\$854.00
3/2015	Replace fuel, oil and hydraulic filters. Replace door lift pistons	\$143.60
Total		\$22,192.60

Project Alternative

For FY 2014, Staff recommended outsourcing routine street sweeping and retaining the Village’s sweeper as a fully depreciated vehicle to be utilized for supplemental sweeping (leaves, special events,

storms, accidents, etc.). This outsourcing was intended to occur on a trial basis and allow for the replacement of the sweeper in FY 2015 if service level expectations were not met.

In FY 2015, the Village began contractual sweeping with Roy Strom Company at a cost of \$2,973.00 per sweep plus \$45.50 per ton for debris disposal costs. The weight of debris that is picked up can vary and is based on weather conditions (wet or dry) and the growth cycle of parkway trees, but generally averages 11 tons per month.

In conclusion, Staff recommended the following for FY 2016:

1. Retain the Village’s sweeper as a fully depreciated vehicle;
2. Budget \$27,788 for eight contractual sweepings during the year (\$2,973 + 11 tons of debris x eight events)

For FY 2017, staff recommends purchasing a new street sweeper and bringing the task of sweeping back in-house. Contractual sweeping with Roy Strom Company was not as efficient as anticipated. There were mechanical issues, inconsistent scheduling and the quality of the work was not as good as expected. Additionally, the cost for contractually sweeping the needed 16 times per year would cost \$48,000 (based on \$3,000 per sweep) not including the disposal cost. Based on this pricing, a new Village-owned sweeper will have paid for itself in 4.58 years and provide greater control over operations.

Operational Impact

The operational impact would be critical as the Village would lose its ability to perform in-house street sweeping on an as-needed or emergency basis.

Project Impact

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

Carryover History

This is a carryover from FY 2013.

Vehicles-Public Works/Water and Sewer

Cargo Van #64 FY 2017 \$45,000 CERF/WS

Critical Recommended Contingent on Funding

Make Dodge
Model Sprinter Cargo Van
Year 2006
Purchase Cost \$32,088
Purchased FY 2006
Useful Life 10 years
Current Life 11 years



Vehicle Description

Various personnel in the Water Division use this cargo van. The vehicle is equipped with emergency lighting, a 2000 watt AC converter and two-way radio.

Total Vehicle Miles	45,460 (As of 11/16/2015)
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Recent Maintenance Costs

Date	Maintenance Performed	Cost
7/2011	New tires, brakes	\$650.00
7/2013	Repair headlight and change cabin air filter	\$153.00
10/2013	Replace driver's side wiper arm	\$57.00
6/2014	Replace fan belt	\$29.88
6/2014	Replace fan belt and pulleys	\$544.82
6/2015	Replace batteries	\$226.50
Total		\$1,661.20

Project Alternative

This vehicle was scheduled for replacement in FY 2016. Staff recommends replacing this vehicle in FY 2017 and retaining it as a fully depreciated vehicle until major repairs are necessary, at which time it would be sold at auction. The vehicle would be repurposed to carry additional water department equipment and can be used as a work station for the new sewer televising equipment.

Operational Impact

Used by the Water Department to carry all tools and equipment needed for water meter installations, meter reading, fire hydrant repairs, and water main breaks.

Project Impact

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

Carryover History

This vehicle is a carryover from FY 2016 to FY 2017

Village of River Forest, Illinois
Five Year Capital Improvement Program
Equipment
Fiscal Year 2017 Budget

	This Project is:	Fiscal Year					Five Year	Funding
		2017	2018	2019	2020	2021	Total	Source
Police Department								
Automatic License Plate Reader	Recommended	39,195	-	-	-	-	39,195	CERF
Live Scan System	Critical	25,000	-	-	-	-	25,000	CERF
Overweight Truck Scales	Recommended	20,750	-	-	-	-	20,750	CERF
Speed Monitor Trailer	Contingent	14,400	-	-	-	-	14,400	CERF
Digital In-Car Cameras	Critical	50,046	-	-	-	-	50,046	CERF
Street Camera System	Recommended	71,800	-	52,500	-	-	124,300	CERF
Fire Department								
SCBA Air Compressor	Recommended	25,000	-	-	-	-	25,000	CERF
ALS Defibrillator	Recommended	-	-	-	25,000	-	25,000	CERF
Public Works								
Stump Grinder	Recommended	-	46,000	-	-	-	46,000	CERF
Stainless Steel V-Box Salt Spreader	Critical	-	-	20,000	-	-	20,000	CERF
Chipper - 1800 Model	Critical	-	-	100,000	-	-	100,000	CERF
Tandem Axle Trailer	Recommended	-	-	-	8,000	-	8,000	CERF
Fuel System Improvements	Critical	-	-	-	-	150,000	150,000	CERF
Salt Brine Equipment	Recommended	25,000	-	-	-	-	25,000	CERF
Water Valve Operator	Critical	31,250	-	-	-	-	31,250	CERF/WS
Total		302,441	46,000	172,500	33,000	150,000	703,941	

Proposed Funding Source	Fiscal Year					Five Year
	2017	2018	2019	2020	2021	Total
Capital Equipment Replacement Fund (CERF)	271,191	46,000	172,500	33,000	150,000	672,691
CERF- Water and Sewer (CERF/WS)	31,250	-	-	-	-	31,250
Totals	302,441	46,000	172,500	33,000	150,000	703,941

Equipment-Police

Automatic License Plate Reader FY 2017 \$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 a first generation plate reader currently installed in squad car #6. It 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 11, 2015, it has read 3.2 million license plates and has 8,880 “hits”, or alerts that there is something wrong with a particular vehicle (stolen, wanted, suspended, etc.). Staff also manually enters vehicles eligible for the Denver Boot. The ALPR has identified over 20 vehicles eligible for the boot at a minimum fee of \$500 dollars (some boot fees are double or triple this fee) per vehicle. The ALPR the department currently has is one of the original versions and had limited vendors from which to choose. With new vendors available such as ELSAG, COBAN, Vigilant and others, the department will be in a better position to compare costs and negotiate a price that may be lower than estimated.

Project Alternative

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

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$ None w/ three year warranty	\$1,800/year to continue annual maintenance after warranty period.

Carryover History:

This Item is a carryover from a FY 2016 and with the replacement of squad #6 in FY 2017 will be an optimal time to upgrade to the new generation of ALPR and software.

Equipment-Police

Live Scan System

FY 2017

\$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 Police Department, and FBI and stored is in their databases. This system is currently in use by and connected to all of the Cook County municipalities and streamlines the identification process. The life expectancy of the current system is eight years.

Project Alternative

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

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

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$ None	Repairs covered by Cook County

Carryover History:

This item has been carried over for several fiscal years. Replacement is dependent on Cook County’s time frame for upgrading to a new system.

Equipment-Police

Overweight Truck Scales

FY 2017

\$20,750

CERF



Critical



Recommended



Contingent on Funding

Original Purchase Date FY 2006
Cost \$16,600
Funding History N/A



Project Description & Justification

The Police Department currently owns four truck scales. These scales are placed under each of the tires of a suspected overweight vehicle. If determined to be overweight, the fine could be substantial depending on the violation. The Police Department conducts annual overweight truck enforcement missions and the dayshift patrol has a trained overweight enforcement officer who does periodic enforcement, separate from the planned missions. Overweight trucks are a detriment to village streets by decreasing the life of the pavement through excessive wear. The scales are certified by the Illinois State Police annually. The useful life expectancy of the scales is 10 years.

Project Alternative

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

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$ 1,000/per year	Annual re-certification

Carryover History:

Although the scales have reached their useful life expectancy, replacement of these scales has been carried over from FY 2016 and they are currently in working order. Each year the scales are re-certified and will require replacement if found deficient by the State.

Equipment-Police

Speed Monitor Trailer

FY 2017

\$14,400

CERF



Critical



Recommended



Contingent on Funding

Original Purchase Date

FY 2004

Cost

\$12,000

Funding History

N/A



Project Description & Justification

The Speed Monitor Trailer is utilized to monitor speed and alert drivers who are traveling in excess of the posted speed limit. Public Works and Police Departments work together to identify locations where vehicles are known to travel at higher rates of speed and the trailer is placed in those areas. The trailer is also placed in areas based on complaints/requests from residents or police officers. The new speed trailers have the ability to conduct traffic counts and average speed traveled and will be beneficial to both the Police and Public Works Departments. The message board will have the ability to alert drivers to detours, and remind drivers to watch their speed. Some models have the ability to take photos of violator's vehicles.

Project Alternative

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

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$30/month for possible data package	Periodic maintenance- Battery Replacement

Carryover History:

This item has been carried over from FY 2016.

Equipment-Police

Digital In-Car Cameras

FY 2017

\$50,046 CERF



Critical



Recommended



Contingent on Funding

Original Purchase Date

FY 2010

Cost

\$35,425

Funding History

N/A



Project Description & Justification

The six front line vehicles and the unmarked traffic unit currently have digital cameras mounted to the dash board. The cameras/audio is used during traffic stops and arrests. Evidence obtained during a traffic arrest is utilized during a trial. The traffic stops are downloaded on a server and stored for a minimum of 30 days or longer depending on the type of incident. Upgrades to the In-Car camera system will require upgrades to the data storage system on the Village’s computer network. Corresponding funds appear in the IT Capital Plan under “Police Arbitrator Data Storage.”

The In-Car camera system is currently using outdated software that is no longer supported. New cameras will give the Department added abilities such as real-time remote viewing of critical incidents.

Project Alternative

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

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
One time cost of \$2,835 included in purchase	One time cost includes an extended warranty for 5 years.

Carryover History:

This item was carried over from FY 2016, with the recent upgrades to the wireless access point at the rear of the station improving downloading performance, and the unlimited wireless data support. The Village is now in a better position to upgrade the cameras.

Equipment-Police

Street Camera System

FY 2017 \$71,800 CERF
 FY 2019 \$52,500 CERF

Critical Recommended Contingent on Funding

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



Project Description & Justification

The Village currently has eight Pan-Tilt-Zoom (PTZ) digital cameras located along the business corridor on Lake Street and 37 fixed cameras in and around Village Hall. The camera system is supported by software, servers and a wireless antenna system. The cameras can be monitored by supervisors, the dispatch center as well as patrol officers, on their squad car laptops, desktops or video monitors. The digital images are stored for a minimum of 30 days and are used as evidence in criminal cases. The PTZ cameras have moving parts and are out in the elements; therefore they are prone to a shorter life expectancy than fixed cameras. The estimated life of the equipment is approximately four years and the fixed cameras nearly 20 years.

This program has been very successful as a force multiplier. Officers routinely refer to the cameras to assist in identifying suspects involved in criminal activity and the Detectives use the footage to create still shots of suspects for bulletins. Below are some images of suspects who were captured on the camera system and later identified as perpetrators of a crime.



Retail Theft



Retail Theft



Bike Theft



Burglary



Drug Deal



Robbery



Not only are the cameras used for helping to identify criminal suspects, the cameras have been used for situational awareness including the Blizzard of 2011 where the Public Works department was able to monitor the snow accumulation and effects on traffic along the Lake St. business corridor.

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

Repair/Improvement	Estimated Cost	Fiscal Year
Camera System Servers	\$36,800	FY 2017
Street Camera System	\$35,000	FY 2017
<i>FY 2017 Subtotal</i>	\$71,800	
Wireless Point to Point Antenna/Backhaul	\$52,500	FY 2019
<i>FY 2019 Subtotal</i>	\$52,500	
Total	\$124,300	

Project Alternative

Due to the nature of this system, there is no alternative if the project is not funded in the future. The continuation of this program is highly recommended.

Project Impact

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

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$ None	3 year warranty on parts and labor

Carryover History:

None

Equipment-Fire

SCBA Breathing Air Compressor

FY 2017

\$25,000

CERF

Critical

Recommended

Contingent on Funding

Original Purchase Date

FY 1999

Cost

\$17,200



Project Description & Justification

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

Project Alternative

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

Project Impact

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

Carryover History

Carry over from FY 2016

Equipment-Public Works

Salt Brine Equipment

FY 2017

\$25,000

CERF



Critical



Recommended



Contingent on Funding

Make SnowEx
Model Brine Pro 2000
Year 2017
Purchase Cost \$25,000
Purchased FY 2017
Useful Life 10 yrs
Current Life 0 yrs



Equipment Description

This equipment is used to produce a salt brine solution that is applied to roadways in advance of a winter weather event. The solution provides melting at the onset of an event and helps prevent snow and ice from bonding with the pavement. This proactive technique has become popular in recent years and is used to improve winter road conditions while reducing overall material and operating costs.

Project Alternative

Continue treating roadway surfaces on a reactive basis.

Operational Impact

The Village currently owns equipment that can be used to apply salt brine solution, so having the ability to produce the brine gives staff the ability to pre-treat pavement areas.

Project Impact

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

Carryover History

None

Equipment-Public Works/Water and Sewer

Water Valve Operator FY 2017 \$31,250 CERF/WS

Critical Recommended Contingent on Funding

Purchase Cost \$16,069
Purchased FY 2002
Useful Life 15 yrs
Current Life 15 yrs



Equipment Description

The water valve operator is utilized to exercise water main valves in order to keep the valves in good operating condition. Valves that are not exercised regularly have a tendency to freeze or lock up which could prevent proper closure of the valve during a water shut-off. There are approximately 390 valves in the Village’s water distribution system and the Village has established a four year cycle on valve exercising.

Water shut-offs are most often required during the repair of water main breaks and it is the Village’s goal to minimize the impact of these shut offs on residential and commercial properties.

Recent Maintenance Costs

- None in the past two years.

Project Alternative

In 2001 and 2002, the Village outsourced valve operating services for approximately two-thirds of the Village’s water system’s valves (one-third in each year). Subsequent to performing an analysis on outsourcing this program compared to purchasing the equipment and performing the service in-house, the Village opted to purchase the current valve operator. Alternatives to replacing the valve operating equipment in FY 2017 are as follows:

1. Defer replacing the equipment until it breaks down completely.
2. Purchase new or used equipment.
3. Lease valve operating equipment.
4. Outsource all valve operating services.

The current valve operator is mounted on a Public Works pickup truck. This truck-mounted configuration requires modifications to the truck that are expensive and ultimately reduce the resale value of the truck. The replacement valve operator should be replaced with a trailer mounted self-contained unit that is not dedicated to a specific truck and can be towed by different vehicles.

Operational Impact

Although there are alternatives for performing/providing this infrastructure maintenance program, not performing or providing this service would compromise the Village’s efforts to proactively maintain the Village’s water system valves that could result in water shut-offs affecting a significantly higher number of residents and/or businesses than desired or necessary.

Project Impact

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

**Village of River Forest, Illinois
Five Year Capital Improvement Program
Information Technology
Fiscal Year 2017 Budget**

	This Project is:	Fiscal Year					Five Year Total	Funding Source
		2017	2018	2019	2020	2021		
Storage Area Network Upgrades	Critical	29,100	-	-	-	-	29,100	CIF
Network Improvements	Critical	35,900	-	-	-	-	35,900	CIF
Cloud Back-up	Critical	19,500	-	-	-	-	19,500	CIF
PC Replacements	Recommended	25,000	25,000	25,000	25,000	25,000	125,000	CIF
Licensing	Critical	39,000	15,000	-	-	-	54,000	CIF
Power Source Upgrades	Critical	10,550	-	-	-	-	10,550	CIF
Police Arbitrator Data Storage	Critical	49,000	-	-	-	-	49,000	CIF
Wireless Network Upgrades	Critical	35,550	-	-	-	-	35,550	CIF
AV System Replacement	Contingent	-	-	-	-	125,000	125,000	CIF
Server Replacement	Critical	-	15,000	-	-	30,000	45,000	CIF
Total		243,600	55,000	25,000	25,000	180,000	528,600	

Proposed Funding Source	Fiscal Year					Five Year Total
	2017	2018	2019	2020	2021	
Capital Improvement Fund (CIF)	243,600	55,000	25,000	25,000	180,000	528,600
Totals	243,600	55,000	25,000	25,000	180,000	528,600

Information Technology-Administration

Storage Area Network Upgrades

FY 2017

\$29,100

CIF



Critical



Recommended



Contingent on Funding

Funding History

N/A

Project Description & Justification

Servers function as the brain of the Village’s computer network handling all data processing needs. The servers store Village data on a SAN (Storage Area Network). A SAN is a group of smaller drives that are combined to create one or more larger drive(s).

The Village’s previous Server & SAN configuration was too small to handle the organization’s growing requirements, so a second SAN was added in FY 2016. Village Staff and its IT Consultant, ClientFirst, reconfigured existing resources, removed non-essential data from the network and modified staff practices to utilize space more efficiently until additional resources could be identified and funded.

When the Village outgrew the two SAN configuration, two new servers and a third SAN were added. The Village currently has servers and data storage stretched across multiple hardware and software platforms making support, maintenance and future growth a difficult and time consuming process. Now that the Village has multiple Servers and SAN’s, ClientFirst recommends restructuring the configuration to adhere to industry best practices and consolidate server and storage needs. To accomplish this, ClientFirst must first clear space off some of the existing equipment and must then expand the hardware to increase speed and storage. Once the expansion is complete, ClientFirst can start to build the solid foundation for the servers and begin migrating them onto the new hardware and software platforms.

8 Expansion Hard Drives (600 GB 15k) & 2 Server RAM (128 GB)	\$9,400
IT Consulting Hours (200 hours – IT support, 20 hours Network Engineer)	\$19,700
Total	\$29,100

Project Alternative

If storage resources are exhausted it could have an immediate effect on the organizations and halt computer operations. Deferral of this project is not recommended.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
N/A	N/A

Information Technology-Administration

Network Improvements

FY 2017

\$ 35,900

CIF



Critical



Recommended



Contingent on Funding

Funding History

N/A

Project Description & Justification

The Village’s network consists of numerous computing devices that are connected and exchange electronic information. This network is supported by various pieces of software and hardware that make these connections possible. Village operations are largely conducted on its computer network and require a stable, secure environment to ensure efficient and effective service delivery to the community.

Switches (\$19,950) - The Village utilizes switches to connect multiple devices together on the computer network. The Village currently has network switches that are at the end of their life, are no longer supported by the manufacturer and need to be replaced. The new switches will help to stabilize the network and improve its performance. They will also allow the isolation of data network and traffic between the servers, the storage area network (SAN) and other network devices in order to streamline communication paths. The additional network switches will also allow the Village to create a redundant core network that eliminates a critical single point of failure on the network. The Village’s IT consultant, ClientFirst, is recommending that the Village purchase four switches and 14 converters that will connect the switches to network devices. The cost also includes the time needed by the consultant to install and configure the new network switches.

4 Switches & 14 Converters	\$16,900
IT Consulting Hours	\$3,050
Total	\$19,950

Network Restructuring (\$15,950) - The Village and West Suburban Consolidated Dispatch Center (WSCDC) previously utilized the same IT support service provider and shared a single network infrastructure. Based on the unique needs of each organization, new IT consultants were selected in FY 2016. As WSCDC and the Village continue to grow, the existing network structure will no longer support both entities. ClientFirst recommends separating the organizations’ networks into two. Network redesign and separation will provide additional security for both organizations while improving response times. To enable additional services to share the same network without interfering with each other, ClientFirst recommends implementing industry best practice configurations by segmenting the Village network with TCP/IP and VLAN structure and standards. This new structure will allow for future expansion and stabilization of the local network. No new hardware or software will be needed for the restructuring and the cost consists strictly of consulting hours for the ClientFirst IT support team and Network Engineer.

Project Alternative

An alternative to these proposed projects would be to leave the existing switches in place and replace them as needed as they fail and the leave the existing shared network in place. As the Village improves its computer network performance and security, however, it is recommended that the Village follow industry standards and best practices as closely as possible.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
N/A	

Information Technology-Administration

Cloud Back-Up

FY 2017

\$19,500

CIF



Critical



Recommended



Contingent on Funding

Funding History

N/A

Project Description & Justification

Currently, all Village data is backed up locally, copied to a hard drive and stored in a safe at a Village-owned location. The primary and secondary backup storage locations are too close together to be effective. The Village's IT consultant, ClientFirst, recommends implementing a new Cloud based backup solution using Barracuda equipment. Village data would first be backed up locally on daily, cyclical basis. The Barracuda equipment would then push an encrypted copy of the backup to the Cloud in small amounts using the Village's existing bandwidth. Greater bandwidth would allow the encrypted data to be sent faster, allowing the data on the Cloud to be more current. The Village may seek to expand bandwidth in the future but it is not critical to the operation in FY 2017.

The Cloud backup will allow the Village to maintain complete control over its data retention policies without the need to purchase additional drive space to hold on to the revisions on site. The Village will then be able to restore current data locally and if needed, retrieve older data from the Cloud. This will also enhance the Village's disaster recovery preparedness and provide redundancy of data backups by storing the data in multiple locations. Staff and ClientFirst also expect that the Cloud-based backup process will eliminate time spent transferring backups offsite.

To achieve the Cloud backup, ClientFirst recommends the Village purchase a Barracuda storage device and annual license. The FY 2017 cost includes the first year licensing fee and the consultant's time to install and configure the new device.

Barracuda Equipment	\$12,000
First Year License Fee	\$4,000
IT Consulting Hours	\$3,500
Total	\$19,500

Project Alternative

Continue to utilize existing local devices to backup data, however, this solution is not recommended.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$4,000.00	Annual licensing fee.

Information Technology-Administration

PC Replacements	FY 2017	\$25,000	CIF
	FY 2018	\$25,000	CIF
	FY 2019	\$25,000	CIF
	FY 2020	\$25,000	CIF
	FY 2021	\$25,000	CIF

Critical Recommended Contingent on Funding

Funding History N/A

Project Description & Justification

The purpose of this program is to upgrade the central processing units (CPUs) of the Village desktop and laptop computer inventory. The estimated service life of a computer is four to six years; however, the Village generally does not recommend keeping equipment after its warranty has expired. Replacements are prioritized based upon the job responsibilities of employees and some workstations may be assigned older by serviceable PCs while other workstations may receive a new computer on a more frequent basis.

Village staff recommends the Village build a fund reserve for the purpose of replacing large quantities of computer equipment at one time. Staff and the Village’s IT consultant have been in the process of updating the inventory of Village-owned IT/communication equipment, identifying warranty periods for each piece and determining a replacement schedule. Based on that information, equipment can be rotated out when warranties expire. Funding IT replacements in this manner will standardize equipment throughout the organization, allow the Village to explore bulk purchase pricing, improve IT support service efficiency, improve staff efficiency with fewer projected system interruptions, enhance system security, and avoid spikes in IT expenditures.

Periodic replacement of peripheral equipment such as monitors, keyboards and printers may still be required on an ad hoc basis and money has been set aside for that purpose in the General Fund.

Project Alternative

If this project is not funded, PCs would continue to be replaced in smaller quantities and over a longer period of time, potentially reducing the productivity of the units and ability to support newer versions of software.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$1,000	Minor maintenance costs to update software, monitors and minor repairs

Information Technology-Administration

Licensing	FY 2017	\$39,000	CIF
	FY 2018	\$15,000	CIF

Critical
 Recommended
 Contingent on Funding

Funding History N/A

Project Description & Justification

In prior years, the Village’s former IT support service provider utilized their software licensing agreement with Microsoft to procure additional licenses for the Village. With a pending upgrade to the most current version of Microsoft server, this process must be revised, with the Village purchasing and registering software licenses as a unique entity. Some of the software licensing that will need to be purchased includes new 2012 Server Licensing and 2012 CALS. A CAL is a Client Access License. Many pieces of software will require one License for the Server and then a CAL for each workstation or user on the network. This budget for licensing will bring all Village services current and up to date on the required licensing. The cost of this item includes the cost of the licenses as well as the consultant’s time.

2012 Server	\$6,750
2012 Server User CALS	\$2,500
2012 SQL User CALS	\$21,000
2012 Exchange User CALS	\$6,000
IT Consulting Hours	\$2,750
Total	\$39,000

The Village uses Springbrook as its enterprise resource planning software to collect, organize, store, manage and interpret data from various operational activities such as utility billing, service requests, payroll, budgeting, building permits, licensing, code and compliance issues, etc. In FY 2018 the Village anticipates the need to upgrade to the Springbrook Sequel license, which will require purchasing the license and some IT consulting time to implement it. The cost of this upgrade is projected at \$15,000. This is not a version upgrade but a back-end licensing issue that should not impact staff or operations.

Project Alternative

Neither staff nor ClientFirst recommend deferral of licensing requirements.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
N/A	N/A

Information Technology-Administration

Power Source Upgrades

FY 2017

\$10,550

CIF



Critical



Recommended



Contingent on Funding

Funding History

N/A

Project Description & Justification

The Village's IT consultant, ClientFirst, recommends a base level UPS (uninterruptible power source) to provide emergency power when there is an outage. A UPS is a large battery that sits between computer hardware and the electrical outlet. If the power is ever interrupted for any reason, the UPS automatically switches the power onto the built in battery to protect the equipment that is plugged into it. The power supply from the UPS is used in the period of time that can elapse before the Village's generator begins supplying power. It also provides for proper shutdown of the system in order to prevent against data corruption and loss. A UPS can be connected to the network and monitored remotely, allowing IT staff to monitor it and be alerted to power loss, spikes, etc. The Village currently has two primary network racks in the server room. One of these racks contains the Servers and Data Storage devices and the other contains the Network Switches/Routers/Firewalls/Appliances, etc. ClientFirst is recommending the Village purchase two new UPS's and utilize one per Network Rack in the server room to help protect all the hardware listed above.

Rackmount UPS 3000 (2 @ \$3,000 each) & Network Access PDU	\$8,000
IT Consulting Hours	\$2,550
Total	\$10,550

Project Alternative

An alternative to this project is to defer purchase of the UPS and rely on generator power. The Village has been relying on generator power; however, it creates risks and could compromise the stability of the Village's computer network. Village staff ClientFirst recommend the Village improve both the reliability and security of its computer network.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
N/A	N/A

Information Technology-Administration

Police Arbitrator Data Storage	FY 2017	\$49,000	CIF
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Critical Recommended Contingent on Funding

Funding History

N/A

Project Description & Justification

The FY 2016 budget includes \$38,000 for the Police Department to purchase new digital in-car cameras, however, this purchase is being deferred as the next generation of technology enters the marketplace. These cameras record and store their data into the Arbitrator system. The new cameras will be recording in High Definition (HD) quality which will significantly increase the size of the data storage requirements. As an example, one hour of HD camera footage is equivalent to approximately six gigabytes of drive space. To accommodate these storage needs, the Village's IT consultant, ClientFirst, worked closely with the camera vendor, Panasonic, to design a storage system that can be implemented and expanded over time without having to replace the core hardware on a frequent basis.

ClientFirst initially identified a system that consisted of a Server and SAN that would allow the Village to satisfy existing requirements and increase storage 20% over the next five years without replacing the chassis. However, should officers be required to wear body cameras in the future, the storage needs will increase at significantly faster pace.

Server, SAN, 8TB Drives, 3 Years of Support	\$41,200
IT Consulting Hours	\$7,800
Total	\$49,000

Project Alternative

When the Village purchases new camera equipment it is not recommended that the storage system purchase be delayed or deferred as the Arbitrator storage needs could exhaust the storage space needed for other critical Village functions.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
N/A	N/A

Information Technology-Administration

Wireless Network Upgrades

FY 2017

\$35,550

CIF



Critical



Recommended



Contingent on Funding

Funding History

N/A

Project Description & Justification

Wireless Point to Point Connection – Pump House (\$12,500): Previously, VPN over internet was used to connect the Public Works Garage to the Village Hall through a Comcast X-finity connection. The connection to Public Works was extremely slow, making it difficult for Public Works employees to access information on the network. In FY 2016 the Village installed wireless point to point access. Village staff and its IT consultant, ClientFirst, recommend a similar upgrade for the Village's pump station to improve the connection between locations.

Wireless Antenna	\$10,000
IT Consulting Services	\$2,500
Total	\$12,500

Once the point to point connection is established and stabilized the Village may be able to turn off the Comcast service at the pump station, provided it is not used for anything else. However, if this connection remains it can be used as a back-up should the point to point connection be interrupted. ClientFirst recommends that the Village establish a redundant internet connection in the future for all Village facilities. These connections would allow the Village to split traffic, improve speeds and performance, and one merge traffic if one connection is interrupted.

Wireless Enterprise Solution (\$23,050): A wireless access point provides local Wi-Fi for anyone in that area. The Village currently uses a residential grade wireless network that was installed several years ago and doesn't support many of the new features currently available such as faster speeds, improved security, and improvements in manageability. ClientFirst recommends the Village implement a new Cloud-based, enterprise grade wireless solution from Cisco called Meraki. This new wireless network technology is already in use at the Police Department for the police cars to off load the video data and expansion of the network will be seamless. This will allow for the Village to have two wireless networks at the Village Hall. One network will be dedicated solely for staff use and the second network will provide basic internet access on a guest network. Even if staff eliminated the guest network the upgrade is still recommended to improve security on the network for Village operations. An enterprise-wide solution would also give the ability to identify the devices that are connected to the Village's network.

The guest network traffic will be segmented from the rest of the Village's network to provide a safe, secure barrier between guests and the Village's local network traffic. The Village staff's wireless network will be secured with the latest security enhancements and will follow industry best practices. ClientFirst recommends installing 11 access points and a switch to accommodate this upgrade. The cost of the project includes IT consulting services.

Wireless Access Points and POE Switch	\$20,000
IT Consulting Services	\$3,050
Total	\$23,050

Project Alternative

An alternative to this project would be to completely remove the Village’s wireless connection and require that all devices use their data plan for internet access. A wireless connection would still be provided to police personnel so that they can offload in-car camera videos. The Village would also have to install a cable in the Community Room so that equipment could connect during Board/Commission meetings as well as Red Light Camera Hearings. The Village could also target specific areas in the building for connections, expand the system as the needs grow and leave other areas as “dead zones”. If internet access is critical to certain emergency functions the existence of dead zones could impact operations.

If funding becomes limited, that Meraki system upgrades can be deferred to FY 2018, however, staff recommends that the pump station improvements be implemented in FY 2017. The internet and network connection has become increasingly unreliable and has impacted the efficiency of operations for the Village’s Public Works staff.

Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
N/A	N/A

Village of River Forest, Illinois
Five Year Capital Improvement Program
Streets, Sidewalks, Alleys
Fiscal Year 2017 Budget

	This Project is:	Fiscal Year					Five Year	Funding Source
		2017	2018	2019	2020	2021	Total	
Street Patching Program	Critical	90,000	95,000	100,000	85,000	85,000	455,000	GF/WS
50/50 Sidewalk, Curb & Gutter	Critical	65,000	65,000	65,000	65,000	65,000	325,000	GF/WS
Alley Improvement Program	Recommended	230,000	50,000	50,000	50,000	50,000	430,000	CIF
Parking Lot Improvements	Recommended	100,000	-	-	45,000	-	145,000	CIF/Parking Reserve
Street Improvement Program (SIP)	Critical	200,000	300,000	300,000	300,000	300,000	1,400,000	MFT /WS
Street Maintenance Program	Critical	100,000	110,000	110,000	110,000	110,000	540,000	GF
Surface Transportation Program (STP)	Critical	275,000	-	-	-	-	275,000	MFT
Municipal Lighting Systems	Recommended	107,000	50,400	-	-	-	157,400	CIF
Total		1,167,000	670,400	625,000	655,000	610,000	3,727,400	

Proposed Funding Source	Fiscal Year					Five Year
	2017	2018	2019	2020	2021	Total
General Fund (GF)	235,000	250,000	255,000	240,000	240,000	1,220,000
Motor Fuel Tax (MFT)	425,000	250,000	250,000	250,000	250,000	1,425,000
Water and Sewer Fund (WS)	70,000	70,000	70,000	70,000	70,000	350,000
Capital Improvement Fund (CIF)	337,000	100,400	50,000	50,000	50,000	587,400
CIF/Parking Reserve	100,000	-	-	45,000	-	145,000
Totals	1,167,000	670,400	625,000	655,000	610,000	3,727,400

Streets, Sidewalks, Alleys-Public Works

Street Patching Program	FY 2017	\$80,000	GF	\$10,000	WS
Streets and Alleys	FY 2018	\$85,000	GF	\$10,000	WS
	FY 2019	\$90,000	GF	\$10,000	WS
	FY 2020	\$75,000	GF	\$10,000	WS
	FY 2021	\$75,000	GF	\$10,000	WS

Critical
 Recommended
 Contingent on Funding

Spending History	GF	WS	Total
FY 2016	\$66,465	\$8,860	\$75,325
FY 2015	\$36,906	\$10,000	\$46,906
FY 2014	\$83,970	\$10,000	\$93,970
FY 2013	\$51,732	\$7,342	\$59,074
FY 2012	\$42,799	\$2,330	\$45,129

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 is provided to the Village’s contractor. Village Staff now also includes alleys in their inspections and identifies patching needs throughout the Village. Pavement Street patching utilizes hot mix asphalt (HMA), the standard material approved by the Illinois Department of Transportation for surface repairs. Two inches (thickness) of the failing surface pavement is milled and replaced with new HMA. This patching process is more permanent and resilient than the use of asphalt “cold” patch. The ideal timing for this maintenance project is when streets are evaluated with a good condition rating, but showing signs of early deterioration (potholes, etc.)

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

FY 2017 Recommended Project

Due to the amount of streets that have been resurfaced as part of the Northside Stormwater Management Project and funding received for the resurfacing of Division Street, Staff recommends a slight reduction in this maintenance project for FY 2017. Various locations to be patched are identified on a continual basis.

Program Alternative

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

Project Impact

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

Streets, Sidewalks, Alleys-Public Works

50/50 Sidewalk, Curb & Gutter Sidewalks, Aprons, and Curb	FY 2017	\$55,000	GF	\$10,000	WS
	FY 2018	\$55,000	GF	\$10,000	WS
	FY 2019	\$55,000	GF	\$10,000	WS
	FY 2020	\$55,000	GF	\$10,000	WS
	FY 2021	\$55,000	GF	\$10,000	WS

Critical
 Recommended
 Contingent on Funding

Spending History	GF	W & S	Total
	(sidewalk & aprons)	(curb & gutter)	
FY 2016	\$47,979	\$8,482	\$56,461
FY 2015	\$60,735	\$4,503	\$65,238
FY 2014	\$47,507	\$1,829	\$49,336
FY 2013	\$43,648	\$15,360	\$59,008
FY 2012	\$44,001	\$4,615	\$48,616

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 sidewalks in each of these three areas over three-year periods. Sidewalks are rated according to the displacement of adjoining sidewalk squares that pose a potential for trip hazard. The following table identifies the sidewalk condition ratings, description of condition, and the recommended action:

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

During annual inspections, the Village offers participation in the 50/50 sidewalk replacement cost share program for sidewalk with a "B" rating upon request. 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 2017:

General Fund:

Sidewalk – Condition C (100% Village):	\$42,500
Sidewalk – Condition A or B (50/50):	\$20,000 (revenue - \$10,000)
Driveway Aprons (100% Resident):	\$5,000 (revenue - \$5,000)
Detectable Warning Pads (100% Village)	\$2,500

Water and Sewer Fund:

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

<u>Area No.</u>	<u>Area Limits</u>	<u>Inspection Years</u>
1	Des Plaines River to Harlem /Hawthorne to Chicago	2018, 2021, 2024
2	Thatcher to Harlem / Chicago to Greenfield	2016, 2019, 2022
3	Thatcher to Harlem / Greenfield to North Thatcher to Lathrop / Madison to Hawthorne	2017, 2020, 2023

In addition to the annual inspection of the aforementioned designated areas, Village Staff inspects all sidewalks 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 and private courtesy walks 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 settling concrete. The Village does not currently own equipment to perform this mud-jacking operation.

Project Impact

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

Streets, Sidewalks, Alleys-Public Works

Alley Improvement Program

FY 2017	\$ 230,000	CIF
FY 2018	\$ 50,000	CIF
FY 2019	\$ 50,000	CIF
FY 2020	\$ 50,000	CIF
FY 2021	\$ 50,000	CIF

Critical Recommended Contingent on Funding

Spending History

FY 2016	\$59,153 (Alleys incorporated into SIP)
FY 2015	\$508,901 (Green Alleys - projected)
FY 2013	\$14,745 (Lake/Edgewood Alley-SSA)

Program Description & Justification

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

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

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

FY 2017 Recommended Projects

1. 7200 Block of Quick Alley: This east-west alley, which connects the 600 blocks of Harlem Avenue and Bonnie Brae, consists of a concrete surface that has severely deteriorated. Replacing this concrete with asphalt (which most alleys consist of) or any other surface will necessitate a full reconstruction of the alley. Because of this increased scope of work, the reconstruction will cost significantly more than a typical "grind and overlay" treatment which is more commonly used in alleys. In order to alleviate the stormwater problems previously indicated, the intent of this project is to install permeable pavers within the alley. This project was identified in previous years but was not completed and has subsequently been moved to FY 2017.
2. Local Alley Project – Staff has received multiple complaints regarding the alley south of North Avenue, between William Street and Clinton Place. The problem is that the west end of the alley contains slopes that do not allow for efficient stormwater drainage. In addition, multiple

downspouts from the adjacent properties drain to this area and create ponding and icy conditions during the winter months. This alley was originally scheduled for reconstruction as part of the Village’s “Green Alleys Project” with help from an Illinois Green Infrastructure Grant (IGIG) however, funding levels were insufficient and this alley had to be removed from the scope of work. This project will involve reconstruction of approximately 150 feet of the west end of the alley to more efficiently drain stormwater out to William Place.

FY 2017 Cost Summary for Alley Improvement Program

Full reconstruction of the alley at 7200 Quick Avenue with permeable pavers will cost approximately \$195,000. Prior to design and bidding of this project, Staff will research additional materials that may be used in construction instead of asphalt, namely permeable materials that will help offset any existing or new drainage issues.

Reconstruction of the west end of the William Street alley will cost approximately \$35,000. Survey of the area was already completed as part of the Green Alleys Project. Staff will utilize this survey to design the reconstruction of the west end over the winter.

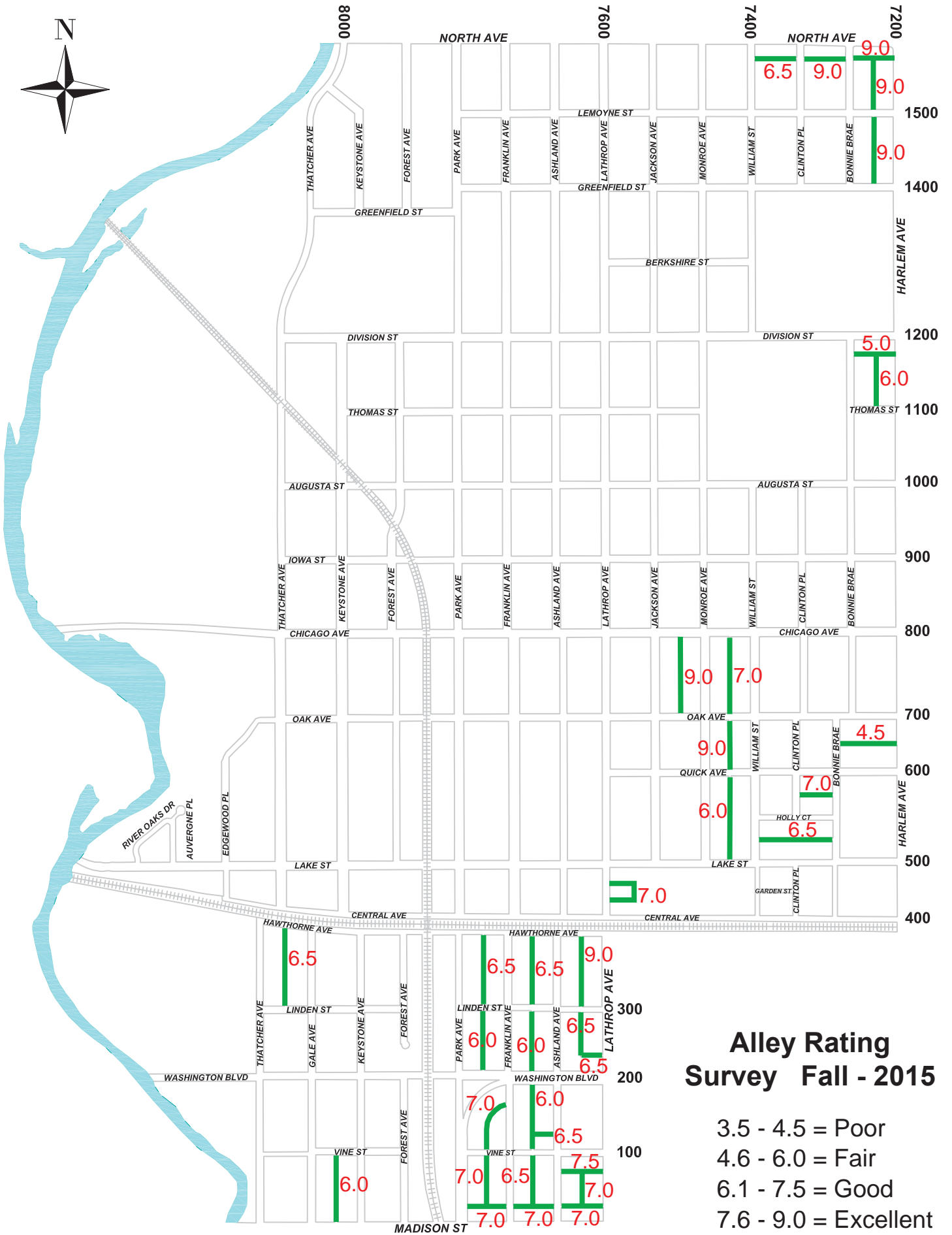
Program Alternative

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

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

Project Impact

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



Streets, Sidewalks, Alleys-Public Works

Parking Lot Improvements	FY 2017	\$100,000	Capital Imp Fund/Parking Reserve
	FY 2020	\$45,000	Capital Imp Fund/Parking Reserve

Critical
 Recommended
 Contingent on Funding

Original Purchase Date & Cost

N/A

Spending History

FY 2013 \$3,920 (Lot A, sealcoating)
FY 2012 \$2,998 (Lot E, sealcoating)

Program Description & Justification

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

- A. Village Hall – 400 Park Avenue – **Resurfacing Scheduled for FY 2020**
- B. Public Works Garage – 45 Forest Avenue
- C. Southeast corner of Lake Street and Park Avenue
- D. West Commuter Lot – 400 block of Thatcher Avenue – **Reconstruction Scheduled for FY 2017**
- E. East Commuter Lot – 400 block of Thatcher Avenue
- F. Lot on south side of 7915-7919 North Avenue – contiguous to CVS parking lot

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

FY 2017 Recommended Project

The West Commuter Lot was previously scheduled for resurfacing during FY 2015. 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. Staff has 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 - \$40,000. While this represents a significant reduction in initial project costs, a permeable paver installation would reduce costs over the life of the project by reducing the ongoing maintenance (patching, crack sealing, and sealcoating) required and extending the life-span of the pavement.

Not performing any surface maintenance, particularly for lots in deteriorating conditions, will result in total pavement failure and require reconstruction (of base and surface) which is significantly higher in cost compared to resurfacing. Extensive pavement patching, crack sealing, and seal-coating is a cost effective option and may slow down the progression of potholes, but the pavement patching needs will be ongoing

and could allow for the continued deterioration of the pavement's base that will significantly increase eventual resurfacing costs.

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

Project Impact

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

Streets, Sidewalks, Alleys-Public Works

Street Improvement Program	FY 2017	\$150,000	MFT	\$50,000	WS
	FY 2018	\$250,000	MFT	\$50,000	WS
	FY 2019	\$250,000	MFT	\$50,000	WS
	FY 2020	\$250,000	MFT	\$50,000	WS
	FY 2021	\$250,000	MFT	\$50,000	WS

Critical
 Recommended
 Contingent on Funding

Spending History	MFT/GF	WS	Total
FY 2016	\$393,243	\$47,964	\$441,207
FY 2015	\$169,558	\$20,460	\$190,018
FY 2014	\$233,610	\$108,000	\$341,610
FY 2013	\$283,860	\$115,369	\$399,229
FY 2012	\$438,531	\$205,899	\$644,430

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) depending on their condition, location, and estimated traffic volumes. The timing in improving streets is critical. Waiting too long to address some streets in the poor to fair condition will result in the condition deteriorating to a point where a more expensive reconstruction will be necessary versus a resurfacing.

The following tables summarize the street rating systems:

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

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

FY 2017 Recommended Projects

<u>Street</u>	<u>Pavement Rating</u>
1. Berkshire St from Lathrop to William	Fair
2. Keystone Ave from Lake to Central	Fair
3. Holly Ct from William to Bonnie Brae	Fair
4. William St from Quick to Lake	Good/Fair
5. Clinton Pl from Quick to Holly	Good

The projected cost to resurface these streets is \$200,000.

It is worth noting that due to the amount of streets resurfaced as part of the Northside Stormwater Management Project, the budget for the FY 2017 Street Improvement Project has been substantially reduced from that of previous years.

While the Capital Improvement Plan proposes funding for street improvements through FY 2021, these locations have not yet been determined. Staff recommends a funding level of \$300,000 for each of those years with the specific locations selected based on annual street ratings surveys.

Program Alternative

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

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

Project Impact

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

Streets, Sidewalks, Alleys-Public Works

Street Maintenance Program	FY 2017	\$100,000	GF
Streets	FY 2018	\$110,000	GF
	FY 2019	\$110,000	GF
	FY 2020	\$110,000	GF
	FY 2021	\$110,000	GF

Critical
 Recommended
 Contingent on Funding

Spending History	Crack Sealing	Microsurfacing	Total
FY 2016	\$48,390	\$23,056(rejuvenation)	\$71,446
FY 2015	\$32,473	\$56,642	\$89,115
FY 2014	\$22,900	\$51,724	\$74,624
FY 2013	\$22,933	\$58,282	\$81,215
FY 2012	\$14,268	\$18,003	\$32,271

Program Description & Justification

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

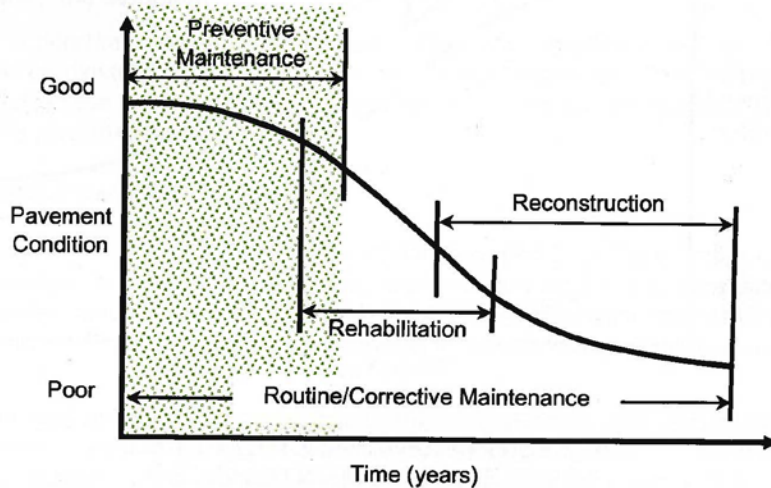
In recent years, the practice of microsurfacing has been analyzed to determine its effectiveness. While creating an aesthetically pleasing surface, this type of treatment does nothing to rejuvenate/rehabilitate the existing pavement course. The microsurfacing layer can also create an uneven driving surface at manholes and other locations and can be dislodged due to cracking or during winter plowing activities. For these reasons, Staff conducted research of pavement rejuvenation materials during FY 2016 and bid a project to install a product called GSB-88. This type of treatment helps revive the existing pavement to prolong its life as compared to adding a thin layer of material on top of a structurally failing pavement. The project went well and Staff anticipates continuing with this type of application in FY 2017.

In addition to GSB-88, an additional product was researched and the contractor provided a test application on Central Avenue behind Village Hall. The product is called Biorestor, a 100% natural and agricultural-based product. Allegedly, it is as effective as GSB-88 but requires less time to dry and is even more environmentally friendly. Staff will continue to review this product (and others) to determine the best applications for our pavements.

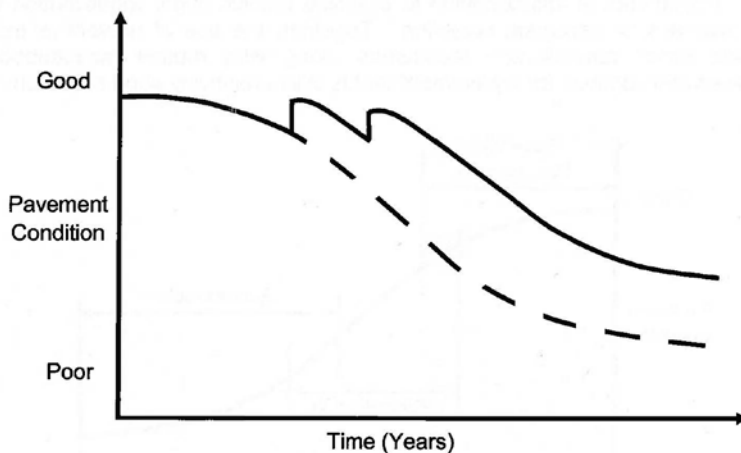
Conversely, Village Staff believes the practice of Crack Sealing to be invaluable. Ideally, this work is completed when the pavement is still in good condition with minimal cracking. Village Staff will continue to bid this work jointly with the Village of Oak Park in an effort to optimize unit pricing.

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

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



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



FY 2017 Recommended Projects

Due to the amount of streets being recently resurfaced as part of the Northside Stormwater Management Project and funding received for the resurfacing of Division Street, Village Staff recommends changing the past budget amounts (identified above) to \$50,000 for crack sealing and \$50,000 for a pavement rejuvenation method.

Pavement Rejuvenation

The following streets have been identified for rejuvenation:

<u>Street</u>	<u>Condition Rating</u>	<u>Proposed Cost</u>
LeMoyne St (Harlem to Park)	Good	\$17,000
Park Ave (Division to Chicago)	Good	\$10,100
Franklin Ave (Division to Chicago)	Good	\$10,100
FY 2017 SIP Streets	Excellent	\$12,800

Crack sealing

In addition to the streets to be rejuvenated, additional streets will be identified for crack sealing during late winter/early spring of 2016.

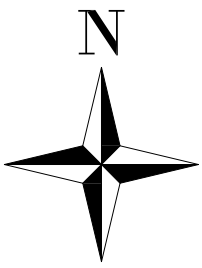
Program Alternative

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:

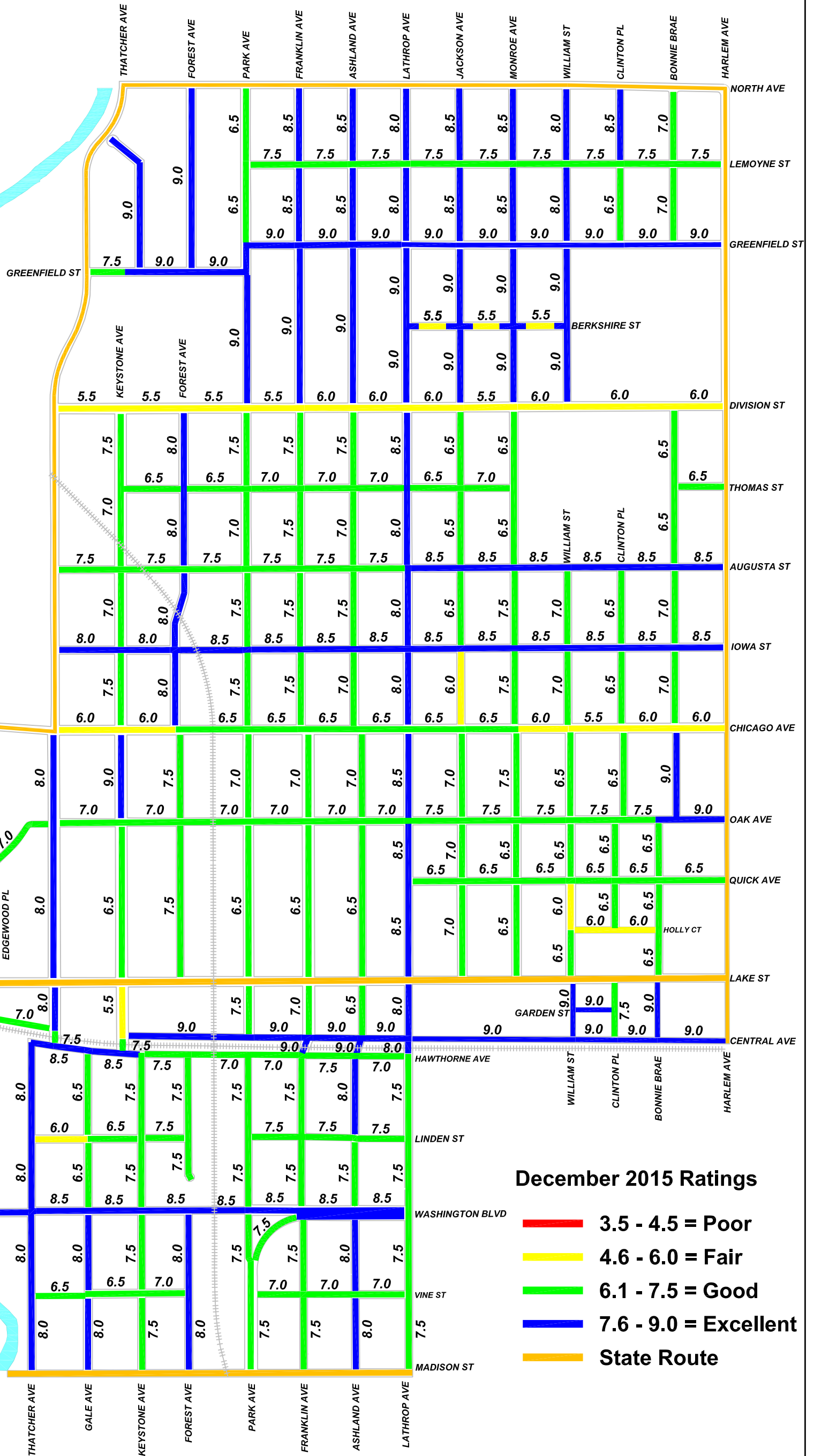
- Resurfacing: This is a more costly improvement that requires the removal and replacement of the existing worn pavement and minimal base improvement. This type of construction is normally completed over a several week period while rejuvenation can be completed in a few hours.
- Reconstruction: This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

Project Impact

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



Village of River Forest Street Rating Map



December 2015 Ratings

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

Streets, Sidewalks, Alleys-Public Works

Surface Transportation Program (STP) FY 2017 \$275,000 MFT

Critical Recommended Contingent on Funding

Spending History **N/A**

Program Description & Justification

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

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

The purpose of the Village’s STP program is to improve the condition of collector and arterial roads and staff most often utilizes the scope of work involving simple resurfacing along with minor curb and gutter replacement. Staff typically applies for the option that involves 80% federal funding of the construction and construction engineering costs, with the remaining 20% being the responsibility of the Village.

FY 2017 Recommended Project

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

The preliminary estimate to resurface this street is \$1,250,000 for construction and \$125,000 for Construction Engineering, with the Village’s share being approximately \$275,000.

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

Program Alternative

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

Project Impact

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

Public Works

Municipal Lighting Systems	FY 2017	\$107,000	CIF
	FY 2018	\$50,400	CIF

Critical Recommended Contingent on Funding

Project Description & Justification

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

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

Past Projects:

- **Street Lighting:** In 2010/2011, the Village initiated a project involving the replacement of 126 street lights and 16 parking lot lights with more energy-efficient LED street light luminaires. A portion of this project was funded by the Tax Increment Financing District and the balance using grant funds from the American Recovery and Reinvestment Act. The Village received an Energy Efficiency and Conservation Block Grant of \$100,000 (through Cook County) for this project. The total cost of this project was \$140,584 (excludes disposal of old lamps).
- **Viaduct Lighting:** All 55 of these fixtures were replaced and upgraded (utilizing Village Staff) to the LED lamp type in FY 2013. Through an energy rebate program with the State of Illinois' Department of Commerce and Economic Opportunity (DCEO), the Village was reimbursed for approximately 58% of the costs to purchase these fixtures. The total cost of this project was \$27,589 and we received \$15,988 in grant reimbursements from the Illinois Department of Commerce and Economic Opportunity.
- **Side Street Lighting:** Phase I (FY 2016) all side street post top light fixtures using mercury vapor bulbs were retrofitted with LED luminaires. This project consisted of retrofitting approximately 675 fixtures.
- **Accidents:** On the average, five street lights are struck by cars each year – many of which require replacement which is coordinated contractually as soon as possible following the accident. The approximate contractual cost to replace a knockdown is \$4,500.

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

2017 Recommended Project

Phase II (FY 2017): Staff proposes to replace 128 mercury vapor fixtures (175 watt) on Thatcher Avenue (north of Chicago Ave), Chicago Avenue, and Division Street. Staff also proposes to replace 86 metal halide fixtures (250 watt) on Lake Street between Harlem Ave and the Des Plaines River. All of these fixtures (including the lamp) will be upgraded to LED. In summary, the recommended project for this year involves the replacement of 214 overhead fixtures/lamps with LED fixtures at an estimated cost of \$107,000 . Staff will seek to reduce the cost of this project by seeking out grant funds from DCOE and ICE.

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

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

Total \$107,000

Phase III (FY 2018): The final phase will entail replacing approximately 96 higher wattage (250 and 400 watt) metal halide and mercury vapor overhead fixtures currently found along state (IDOT) routes such as Madison Street, North Ave, and Harlem Ave. It is estimated that the cost of that project will be approximately \$50,400. Staff will seek to reduce the cost of this project by seeking out grant funds from DCOE and ICE.

Fixtures 96 X \$400 = \$38,400

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

Total \$50,400

Project Alternative

The alternatives to these improvement and maintenance projects to the Village’s municipal lighting systems, which is a critically important system for the general safety of the community, are limited due to the obsolescence of the equipment. Deferring this multi-phased project will result in a lack of available repair parts and bulbs for current fixtures. As a result, we should expect repair costs to the existing fixtures to escalate as parts become scarce.

Project Impact

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

Village of River Forest, Illinois
Five Year Capital Improvement Program
Water and Sewer Improvements
Fiscal Year 2017 Budget

	This Project is:	Fiscal Year					Five Year Total	Funding Source
		2017	2018	2019	2020	2021		
Sewer System								
Sewer Relining	Critical	140,000	140,000	140,000	140,000	140,000	700,000	WS
Sewer Point Repairs	Critical	35,000	35,000	35,000	35,000	35,000	175,000	WS
Northside Stormwater Management Project	Critical	-	-	-	-	-	-	WS
Pumping Station								
Water Distribution System	Critical	19,000	18,000	26,500	19,000	20,000	102,500	WS
Water Distribution Improvements								
Water Meter Replacements	Critical	16,000	18,500	18,000	5,000	7,500	65,000	WS
Water Main Replacement	Critical	482,500	450,000	400,000	400,000	400,000	2,132,500	WS
Hydrant Replacement	Recommended	18,000	18,000	18,000	18,000	18,000	90,000	WS
Total		710,500	679,500	637,500	617,000	620,500	3,265,000	

Proposed Funding Source		Fiscal Year					Five Year Total
		2017	2018	2019	2020	2021	
Water and Sewer Fund (WS)		710,500	679,500	637,500	617,000	620,500	3,265,000
Totals		710,500	679,500	637,500	617,000	620,500	3,265,000

Water and Sewer Improvements-Public Works

Sewer Relining Program	FY 2017	\$140,000	WS
Public Sewers	FY 2018	\$140,000	WS
	FY 2019	\$140,000	WS
	FY 2020	\$140,000	WS
	FY 2021	\$140,000	WS

Critical
 Recommended
 Contingent on Funding

Spending History

FY 2016	\$69,956
FY 2015	\$92,100 (Projected)
FY 2014	\$57,992
FY 2013	\$79,466
FY 2012	\$50,779

Program Description & Justification

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

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

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

In addition to the typical sewer lining completed each year, Village Staff has researched potential options for lining manholes. Many manholes throughout the Village consist of brick construction and when exposed to sewer gases over several decades, the mortar between bricks starts to decay. While not an emergency, this decay can lead to holes in the manhole which will eventually lead to a sinkhole in the street. In order to prevent this from occurring, Staff will be including some manhole lining work within this year’s sewer lining project.

Since the Village’s first sewer relining project, over 36,000 lineal feet of sewers have been relined. This represents approximately 21% 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.

Water and Sewer Improvements-Public Works

Sewer Point Repairs	FY 2017	\$35,000	WS
Public Sewers	FY 2018	\$35,000	WS
	FY 2019	\$35,000	WS
	FY 2020	\$35,000	WS
	FY 2021	\$35,000	WS

Critical
 Recommended
 Contingent on Funding

Spending History

FY 2016	\$28,875
FY 2015	\$32,800
FY 2014	\$0
FY 2013	\$7,337
FY 2012	\$2,650

Program Description & Justification

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

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

Program Alternative

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

Project Impact

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

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 growth 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

FY 2017 Recommended Projects

<u>Segment No.</u>	<u>Location/Address</u>	<u>Present Condition</u>
1	Park Ave, 926 to Iowa St	C
2	Franklin Ave, 1112 to Thomas St	B-
3	Forest Ave, Division St to 1135	B-
4	Forest Ave, 926 to 900	C
5	Keystone Ave, 1144 to 1120	C
6	Keystone Ave, 924 to Iowa St	B-
7	Forest Ave, 1434 to 1424	B-
8	North Ave, 7827 to Park Ave	B
9	Park Ave, 1335 to 1319	C

Public Works Staff has also identified the need to line combined sewer manholes. As these manholes are subject to the same corrosion as the piping, they too need to be replaced or lined before they are corroded to the point where their structural integrity is sacrificed. It is the intent of staff to line as many manholes as possible within this project budget based on any funds remaining after the sewer lining costs are established.

Program Alternative

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

Project Impact

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

Water and Sewer Improvements-Public Works

Water Distribution System - Pumping Station	2017	\$19,000	WS
	2018	\$18,000	WS
	2019	\$26,500	WS
	2020	\$19,000	WS
	2021	\$20,000	WS

Critical
 Recommended
 Contingent on Funding

Project Description & Justification

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

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

The following facility improvements are considered critical and should be completed **in FY 2017**:

<u>Repair/Improvement</u>	<u>Estimated Cost</u>	<u>Year</u>
Replace four water valves in basement of Pumping Station	\$19,000	FY 2017
Total	\$19,000	

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

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

<u>Repair/Improvement</u>	<u>Estimated Cost</u>	<u>Year</u>
Replace four water valves in basement of Pumping Station	\$19,000	FY 2017
Replace four water valves in basement of Pumping Station	\$18,000	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	\$19,000	FY 2019
Replace four water valves in basement of Pumping Station	\$19,000	FY 2020
Replace four water valves in basement of Pumping Station	\$20,000	FY 2021
Total	\$102,500	

Valve replacement: During the piping upgrade project (efficiency improvements) that were completed in FY 2014, it was determined that four water control valves in the basement of the Pumping Station were not operating properly. These valves are likely original to the facility. Staff recommended replacing four valves in FY 2015 and initiated 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 Staff the ability to change or re-route suction and discharge piping in case of emergencies or while maintenance is being performed on our pumps. The following four valves are recommended for replacement:

	<u>Description</u>	<u>Problem</u>
Valve #5	12" Main shutoff for the Chicago supply	Leaking
Valve #18	8" Discharge valve for pump #2	Leaking
Valve #20	8" Discharge valve for pump #3	Leaking
Valve #21	8" Discharge valve for pump #3	Leaking

Project Alternative

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

Project Impact

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

Water and Sewer Improvements-Public Works

Water Meter Replacement Program	FY 2017	\$16,000	WS
	FY 2018	\$18,500	WS
	FY 2019	\$18,000	WS
	FY 2020	\$5,000	WS
	FY 2021	\$7,500	WS

Critical
 Recommended
 Contingent on Funding

Spending History

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

Program Description & Justification

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

FY 2017 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 98 meters will be replaced in-house utilizing Water Division personnel.

Meters greater than 20 years old (>4/30/1995 and <5/1/1996)

Qty.	Size	Ea.		
66	0.625	\$115.00	\$7,590.00	
19	0.75	\$134.00	\$2,546.00	
9	1	\$168.00	\$1,512.00	
4	1.5	\$479.00	\$1,916.00	
0	2	\$673.00	\$0	
98			13,564.00	Total

Program Alternative

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

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

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

Project Impact

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

Water and Sewer Improvements-Public Works

Water Main Replacement Program	FY 2017	\$482,500	WS
	FY 2018	\$450,000	WS
	FY 2019	\$400,000	WS
	FY 2020	\$400,000	WS
	FY 2021	\$400,000	WS

Critical
 Recommended
 Contingent on Funding

Spending History

FY 2016	\$17,600
FY 2015	\$491,175 (Projected)
FY 2014	\$0
FY 2013	\$116,416
FY 2012	\$175,887

Program Description & Justification

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

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

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

FY 2017 Recommended Project

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

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

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

This project was originally scheduled for construction during FY 2016. The project has been designed and was advertised for public bid in August, 2015, however, all bids came in substantially higher than the project budget and the project was cancelled. The intent is to review the bids that were submitted to determine what caused the increase in unit pricing. By bidding the project at a more opportune time (late winter or spring of 2016) the hope is that more attractive unit pricing will be submitted.

The cost estimate for this project is as follows:

- \$25,000 for construction engineering
- \$450,000 for construction

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

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

Future Water Main Projects

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

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

Estimated project cost: \$400,000 construction

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

Estimated project cost: \$225,000 construction (excludes surface restoration)

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

Estimated project cost: \$450,000 construction (includes curb-to-curb pavement restoration)

Program Alternative

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

Project Impact

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

Water and Sewer Improvements-Public Works

Hydrant Replacement Program	FY 2017	\$18,000	WS
	FY 2018	\$18,000	WS
	FY 2019	\$18,000	WS
	FY 2020	\$18,000	WS
	FY 2021	\$18,000	WS

Critical
 Recommended
 Contingent on Funding

Spending History

FY 2016	\$23,606
FY 2015	\$7,400
FY 2014	\$0
FY 2013	\$14,590
FY 2012	\$28,708

Program Description & Justification

The Village’s fire hydrant system is a critically important infrastructure system. The Village owns and operates approximately 446 fire hydrants. The purpose of this program is to maintain all of the Village’s fire hydrants in excellent operating condition. The Village’s Fire Department conducts two hydrant flushing programs each year. During the Village-wide hydrant flushing events, Fire Department personnel identify hydrants in need of repair and provide a list of those hydrants to Public Works to coordinate and/or make the necessary repairs. Hydrants that are not in operating condition are prioritized for immediate repair.

FY 2017 Recommended Project

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

1. 633 Ashland
2. 7350 Oak
3. 1448 Park Ave

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

Program Alternative

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

Project Impact

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