

# CAPITAL IMPROVEMENT PLAN



FY 2023 - 2027



# INTRODUCTION AND SUMMARY

## ***Village of River Forest***

### ***Five Year Capital Improvement Program***

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All Village programs and services are provided with three guiding principles in mind: providing a safe community, protecting property values in River Forest, and working to stabilize property taxes. The Village's annual budget is prepared by Village Staff and approved by the Village Board in service of those guiding principles and understanding that sound management of its finances, resources, and infrastructure is key to ensuring the long-term health of the organization and community.

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

#### **Buildings and Improvements**

*Number of Existing Facilities: 3*

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

#### **Vehicles**

*Number of Vehicles in Fleet: 48*

The Vehicles section includes all Village vehicles subdivided into building, police, fire, and public works vehicles. The detail page for each vehicle to be replaced within this five-year Capital Improvement Plan provides a photo of the vehicle, historical cost, repair information, a description of how the vehicle is used, and its life expectancy.

#### **Equipment**

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

#### **Information Technology**

*System Equipment: Approximately 100 computers/tablets, one physical server and several virtual servers*

The Information Technology (IT) section includes hardware, software, equipment, licenses, and consulting costs for supporting the robust computer network that supports the Village's day-to-day operations.

#### **Streets, Sidewalks, Alleys**

*Miles of Streets/Sidewalks/Alleys: 31.6 miles*

The Streets program includes annual street resurfacing, alley maintenance, sidewalk, curb maintenance, and general street patching and maintenance. The annual Street Improvement Program is funded through Motor Fuel Tax (MFT) revenues. The CIP also includes the final phase of implementing the Bicycle Plan recommendations, which was adopted during FY 2020.

## **Water and Sewer Improvements**

*Miles of Water/Sewer Mains: 76.5 miles*

The Village annually budgets for the maintenance and repair of the sewer system, including sewer lining, rehab, and main 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. Annual funding is recommended for water main replacement and rehabilitation. Water main replacement is recommended when a history of line failure or inadequate fire flow exists. Fire flow is the quantity of water available for fire suppression purposes over that which is required for other purposes. When possible, water main replacement is scheduled to coincide with street improvements to limit the impact of construction activity on a particular area. Equipment improvements at the Water Pumping Station can be found in this section.

## ***Village of River Forest***

### ***Financing the Five Year Capital Improvement Program***

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The Five Year Capital Improvement Program (CIP) is financed through the following Village funds or particular revenue sources. The individual project sheet will indicate when the project is funded from a specific revenue source, such as a grant, within the fund. The proposed FY 2023 funding levels for each fund or source can be found below.

**General Fund** **\$ 105,000**

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

**Motor Fuel Tax (MFT)** **\$ 510,000**

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

**Water & Sewer Fund** **\$ 908,000**

The Water and Sewer Fund includes the following revenue sources which assist in funding capital improvements: water and sewer charges, interest income, and bond proceeds.

**Capital Equipment Replacement Fund (CERF)** **\$ 726,764**

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

**Water & Sewer - CERF Fund** **\$ -**

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

**Capital Improvements Fund** **\$ 2,890,864**

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.

**Infrastructure Improvement Bond Fund** **\$ -**

The Infrastructure Improvement Bond Fund is a new fund that utilizes the proceeds from the 2020 General Obligation Bond issued using the Village's available debt service extension base. These funds may be used to finance the Street Improvement Project.

**Madison Street Tax Increment Financing (TIF) District Fund** **\$ -**

The Madison Street TIF is a fund that utilizes the Madison Street TIF District proceeds to pay for TIF-eligible projects.

**North Avenue Tax Increment Financing (TIF) District Fund** **\$ -**

The North Avenue TIF Fund is a fund that the North Avenue TIF District proceeds to pay for TIF-eligible projects.

**Village of River Forest, Illinois**  
**Five Year Capital Improvement Program**  
**Fiscal Year 2023 Budget**

CATEGORY	Fiscal Year					Five Year Total
	2023	2024	2025	2026	2027	
Buildings and Improvements	111,477	364,200	-	40,000	45,322	560,999
Vehicles	607,876	893,904	462,067	761,725	194,469	2,920,041
Equipment	215,555	946,190	233,450	361,456	371,988	2,128,639
Information Technology	386,720	220,000	122,000	122,000	60,000	910,720
Streets, Sidewalks & Alleys	2,981,000	1,599,279	735,000	715,000	715,000	6,745,279
Water and Sewer Improvements	838,000	1,105,000	585,000	585,000	604,198	3,717,198
<b>Total</b>	<b>5,140,628</b>	<b>5,128,573</b>	<b>2,137,517</b>	<b>2,585,181</b>	<b>1,990,977</b>	<b>16,982,876</b>

PROPOSED FUNDING SOURCE	Fiscal Year					Five Year Total
	2023	2024	2025	2026	2027	
General Fund (GF)	105,000	245,550	105,000	105,000	166,988	727,538
Motor Fuel Tax Fund (MFT)	510,000	1,206,279	490,000	490,000	490,000	3,186,279
Water and Sewer Fund (WS)	908,000	1,363,894	655,000	655,000	674,198	4,256,092
Capital Equipment Replacement Fund (CERF)	726,764	1,401,876	479,563	982,181	499,791	4,090,175
CERF/WS	-	297,830	120,870	91,000	-	509,700
Capital Improvements Fund (CIF)	2,740,864	539,544	267,084	262,000	160,000	3,969,492
Capital Improvements Fund/Parking Reserve (CIF/PR)	150,000	-	20,000	-	-	170,000
North Avenue TIF District (N-TIF)	-	73,600	-	-	-	73,600
<b>Totals</b>	<b>5,140,628</b>	<b>5,128,573</b>	<b>2,137,517</b>	<b>2,585,181</b>	<b>1,990,977</b>	<b>16,982,876</b>

# BUILDINGS AND IMPROVEMENTS

## ***Buildings and Improvements – Five Year Capital Improvement Program***

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

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

Improvements planned for FY 2023 include:

<b>Improvement</b>	<b>Cost of Improvement</b>	<b>Funding Source</b>	<b>Nature of Project</b>
Firing Range Rehab	\$ 33,477	CERF	Critical
Village Hall Improvements	\$ 43,000	CIF	Recommended
Garage Improvements	\$ 35,000	CIF	Contingent
<b>Total</b>	<b>\$ 111,477</b>		

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

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

Critical projects are highlighted in yellow.

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

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



**Village of River Forest, Illinois  
Five Year Capital Improvement Program  
Buildings and Improvements  
Fiscal Year 2023 Budget**

	This Project is:	Fiscal Year					Five Year Total	Funding Source
		2023	2024	2025	2026	2027		
<b>Police</b>							-	
Firing Range Rehab	Critical	33,477	-	-	-	45,322	78,799	CERF
<b>Village Hall</b>							-	
Village Hall Improvements	Recommended	43,000	344,200	-	40,000	-	427,200	CIF/CERF
<b>Public Works</b>							-	
Garage Improvements	Contingent	35,000	20,000	-	-	-	55,000	CIF
<b>Total</b>		<b>111,477</b>	<b>364,200</b>	<b>-</b>	<b>40,000</b>	<b>45,322</b>	<b>560,999</b>	

Proposed Funding Source	Fiscal Year					Five Year Total
	2023	2024	2025	2026	2027	
Water and Sewer Fund (WS)	-	-	-	-	-	-
General Fund	-	-	-	-	-	-
Capital Equipment Replacement Fund (CERF)	33,477	344,200	-	-	45,322	422,999
Capital Improvement Fund (CIF)	78,000	20,000	-	40,000	-	138,000
<b>Totals</b>	<b>111,477</b>	<b>364,200</b>	<b>-</b>	<b>40,000</b>	<b>45,322</b>	<b>560,999</b>

## Building and Improvements - Police

Firing Range Rehab	FY 2023	\$33,477	CERF
	FY 2027	\$45,322	CERF
	FY 2032	\$53,352	CERF

Critical

Recommended

Contingent on Funding

Original Purchase	FY 1998	
Funding History	FY 2016	\$19,851
	FY 2017	\$68,129
	FY 2018	\$0



### Project Description & Justification

The Firing Range located in the basement of Village Hall was installed in 1998 as part of the Village Hall construction project. In FY 2016 and 2017, the Firing Range was updated. The range is used over 200 times per year for handgun, shotgun, rifle, and less lethal training. The Village's range requires upgrades in the bullet trap system, ventilation, and the target rail systems. With local, regional, and national focus on police officers' use of firearms, this project will help ensure that the Village maintains professional standards and safeguards the public's trust. Use of force, judgment, de-escalation, and scenario-based training are part of a defensible firearms training program.

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
Range Master Control System	\$ 5,117	FY 2023
Network Interface	\$ 1,387	FY 2023
Rail and Target Encasements	\$ 2,985	FY 2023
Lateral Target with base	\$ 7,729	FY 2023
Target Turners	\$ 2,772	FY 2023
Electronic Enclosures	\$ 3,572	FY 2023
Shooting Stalls	\$ 9,915	FY 2023
Ventilation Direct Digital Control System	\$ 16,592	FY 2027
Ventilation VFD for Make-Up Air Unit	\$ 2,753	FY 2027
Ventilation Start Up and Commissioning	\$ 1,300	FY 2027
Ventilation Custom Radial Diffusers	\$ 1,880	FY 2027
Ventilation Control Piping and Wiring	\$ 2,425	FY 2027
Air Filtration Unit	\$ 20,382	FY 2027
Bullet Trap Conversion	\$ 25,049	FY 2032

Combat/Protective Wall System	\$ 14,125	FY 2032
Ballistic Ceiling Baffles	\$ 14,178	FY 2032
FY 2023 Sub-total	\$ 33,477	
FY 2027 Sub-total	\$ 45,332	
FY 2032 Sub-total	\$ 53,352	
<b>Total Project Cost</b>	\$ 132,161	

The approximate life expectancy of the equipment, with recommended maintenance, is an additional 10 to 20 years.

### **Additional Justifications**

FY 2023 - Equipment initially budgeted for replacement or repair in FY 2032 and FY 2037 are malfunctioning and need replacement sooner than anticipated. The Village has been setting aside funds in CERF for future range work. Sufficient funds exist to pay for the FY 2023 projects.

FY 2027 - Improvements will address most ventilation system upgrades needed to ensure compliance with the most recent OSHA air quality standards for firing ranges.

FY 2032 - Improvements will address the safety and integrity of the bullet trap system and industry-standard ballistic walls for approximately 1/3 of the range to protect against ricochet and shrapnel displacement. Items include upgraded ceiling baffles to protect plumbing, ductwork, and other structural components. Further improvements will address mechanical and technology upgrades required concerning target rail and master control systems.

### **Project Alternative**

The alternative to replacing the range equipment is to continue to repair the current system, which is less desirable and less feasible as the range age increases. Key components and mechanical parts are not available in new condition 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, increasing costs by approximately 40% to 50%. A second alternative would be to lease time at an offsite firing range; however, concerns regarding 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. Without a usable firing range, Village Staff must seek an alternate location to train, which would increase training, overtime, transportation, facility rental premiums, and ammunition costs. A safety/operational concern would be officers' inability to test-fire duty weapons after general maintenance or armorer repairs. The Department continues to look for other like-sized departments to potentially lease time for use. Ongoing project support will improve department range operations' overall efficiency and effectiveness.

<b>Annual \$ Impact on Operating Budget</b>	<b>Description of Operating Budget Impact</b>
\$1,000	Minimal-Ongoing Cleaning and Maintenance

## Buildings and Improvements

### Village Hall Improvements



FY 2023	\$43,000	CIF
FY 2024	\$344,200	CERF
FY 2025	\$0	CIF
FY 2026	\$40,000	CIF
FY 2027	\$0	CIF

Critical

Recommended

Contingent on Funding

### Spending History

FY 2022	\$44,272 (Dispatch roof replacement)
FY 2021	\$18,428 (HVAC compressor replacements and repairs)
FY 2020	\$5,806 (LED lighting upgrades)
FY 2019	\$2,870 (Repaired gutters and downspouts)
FY 2019	\$2,300 (Rewired controls to WSCDC HVAC unit)
FY 2018	\$7,303 (Repair to WSCDC HVAC unit)

### Project Description & Justification

The Village Hall, located at 400 Park Avenue, was constructed in 1999. It houses the Village's administrative Staff, 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. Tasks and functions that cannot be performed by in-house Staff are outsourced.

ComEd evaluated the energy efficiency of the building in FY 2019 to identify improvements to electrical systems/fixtures that would increase efficiency and be eligible for their incentive program. LED lighting upgrades were completed based on the analysis of the exterior lighting of the building and in the community room. The working condition of all Village Hall HVAC units is also monitored, and the HVAC contractors assist in determining if replacement is needed in the next five years. The replacement of fluorescent lighting on the 2nd floor, stairways, and 1st-floor common areas of Village Hall with energy-efficient LED lighting is planned for FY 2024. This is based on the recommendations of the ComEd facility assessment, and using their energy efficiency incentives saves approximately 30% off the purchase price of lighting fixtures. The front doors need replacement due to their current operating condition. This replacement will require compliance with ADA egress requirements and updated controls for opening and closing. Several interior doors are also planned for improvements to improve ADA egress.

A building envelope and roofing assessment were conducted in 2016 by the Garland company to provide thermal scans of the roof's condition. Their report recommended roof replacement for this facility in FY 2017 and the future need to replace the roof over the dispatch center in the near future. The dispatch center has experienced several leaks within the past year. These leaks have been surface patched temporarily, but complete replacement is needed within the next year. The Garland company recently reassessed this area recommends its replacement. A Facility Condition Assessment (FCA) of the Village Hall has been performed to analyze the areas of the building and provide a timeframe for any needed future repairs or replacements. The assessment evaluated the overall condition of the building and provided information regarding the condition and life expectancy of the major components.

The following facility improvements are recommended within the next five years with higher priority items listed first:

<b>Repair/Improvement</b>	<b>Estimated Cost</b>	<b>Year</b>
Replace front door and controls	\$11,000	FY 2023
Replace HVAC rooftop unit	\$32,000	FY 2023
Energy efficient lighting improvements (interior)	\$9,200	FY 2024
Interior door ADA access improvements	\$18,000	FY 2024
Replace Emergency Generator	\$317,000	FY 2024
Tuck-pointing improvements	\$40,000	FY 2026
<b>Total</b>	<b>\$427,200</b>	

**Project Impact**

<b>Annual \$ Impact on Operating Budget</b>	<b>Description of Operating Budget Impact</b>
None	None

## Buildings and Improvements - Public Works

### Public Works Garage Improvements



FY 2023	\$35,000	CIF
FY 2024	\$20,000	CIF
FY 2025	\$0	CIF
FY 2026	\$0	CIF
FY 2027	\$0	CIF

Critical

Recommended

Contingent on Funding

### Spending History

FY 2022	\$0
FY 2021	\$1,167 (Overhead Garage Door Repair, Lighting Replacements)
FY 2020	\$3,183 (Overhead Garage Door Repair, PW Garage Security Camera Upgrades)
FY 2019	\$111,529 (West Wall Repair and Replacement of Windows and Front Door)
FY 2018	\$265,189 (East, North, and South Wall Repair, Replacement of 38 Windows)

### 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, other materials (stone, asphalt, topsoil, etc.), and supplies necessary for Public Works Operations and Water/Sewer Divisions. Most janitorial and minor maintenance tasks and operations are performed and coordinated by Public Works personnel. Tasks and functions that cannot be performed in-house are outsourced. The rebuild of the salt storage shed is planned for FY 2023, and the replacement of two overhead garage doors is scheduled for FY 2024.

Based on current conditions and a facility site assessment, the following facility improvements are recommended within the next five years with higher priority items listed first:

Repair/Improvement	Estimated Cost	Year
Rebuild salt storage shed	\$ 35,000	FY 2023
Replace two overhead garage doors	\$ 20,000	FY 2024
Total	\$ 55,000	

### Project Impact

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

# VEHICLES

## **Vehicles – Five Year Capital Improvement Program**

The Village of River Forest recognizes the importance of maintaining, replacing, and purchasing new vehicles to guarantee public safety and the efficient delivery of services. The following is a breakdown of current vehicular levels for all vehicles owned by the Village and the replacement schedule for FY 2023:

<b>Department</b>	<b>Number of Vehicles to be Replaced in FY 2023</b>	<b>Cost of Vehicles to be Replaced in FY 2023</b>	<b>Total Number of Vehicles in Fleet</b>
Building	-	\$ -	1
Police	2	\$ 103,176	17
Fire	2	\$ 263,500	9
Public Works	2	\$ 241,200	21
<b>Total</b>	<b>6</b>	<b>\$ 607,876</b>	<b>48</b>

### **Financing**

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

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

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

These projects are highlighted in yellow.

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

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



**Village of River Forest, Illinois**  
**Five Year Capital Improvement Program**  
**Vehicles**  
**Fiscal Year 2023 Budget**

Vehicles	Fiscal Year					Five Year Total	Funding Source
	2023	2024	2025	2026	2027		
Building	-	-	29,500	-	-	29,500	CERF
Police	103,176	284,864	190,827	61,725	194,469	835,061	CERF
Fire	263,500	50,000	-	700,000	-	1,013,500	CERF
Public Works	241,200	559,040	241,740	-	-	1,041,980	CERF & CERF/WS
<b>Total</b>	<b>607,876</b>	<b>893,904</b>	<b>462,067</b>	<b>761,725</b>	<b>194,469</b>	<b>2,920,041</b>	

Proposed Funding Source	Fiscal Year					Five Year Total
	2023	2024	2025	2026	2027	
Capital Equipment Replacement Fund (CERF)	607,876	618,074	341,197	761,725	194,469	2,523,341
CERF- Water and Sewer (CERF/WS)	-	275,830	120,870	-	-	396,700
Water and Sewer Fund (WS)	-	-	-	-	-	-
<b>Totals</b>	<b>607,876</b>	<b>893,904</b>	<b>462,067</b>	<b>761,725</b>	<b>194,469</b>	<b>2,920,041</b>

**Village of River Forest, Illinois**  
**Five Year Capital Improvement Program**  
**Vehicles-Building**  
**Fiscal Year 2023 Budget**

Building Department	Year	Vehicle #	This Project is:	Fiscal Year					Five Year Total	Funding Source
				2023	2024	2025	2026	2027		
Ford Focus	2014	1	Recommended	-	-	29,500	-	-	29,500	CERF
<b>Total</b>				-	-	<b>29,500</b>	-	-	<b>29,500</b>	

Proposed Funding Source	Fiscal Year					Five Year Total
	2023	2024	2025	2026	2027	
Capital Equipment Replacement Fund (CERF)	-	-	29,500	-	-	29,500
<b>Totals</b>	-	-	<b>29,500</b>	-	-	<b>29,500</b>

## Vehicles - Building

### Administrative Vehicle

FY 2025

\$29,500

CERF

Critical

Recommended

Contingent on Funding

Make Ford  
 Model Focus  
 Year 2014  
 Cost \$14,483  
 Useful Life 10 years  
 Current Life 8 years



### Vehicle Description

This vehicle is utilized by the Building Official and Code Enforcement Officer for travel to/from various properties, primarily for inspections.

<b>Total Vehicle Miles</b>	7,072 as of 11/22/21
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Maintenance Costs	Cost
Routine Maintenance as of November, 2021 (e.g. oil change, tire repair)	\$225.00
Cost of Repairs	\$0.00
<b>Total</b>	<b>\$225.00</b>

### Project Alternative

- Sell this vehicle or move it to the Village's fleet of pool cars and replace it with an electric vehicle alternative, consistent with Village's sustainability goals.
- Utilize a car that is being taken out of the police, fire or public works fleet (if available) as a pool car instead of purchasing a new vehicle.
- Examine possible leasing strategies in lieu of purchasing a new vehicle.
- Defer vehicle replacement given its low mileage and low maintenance costs.

### Operational Impact

This unit is the primary vehicle for the Building Department. Historically the Department has relied on fully depreciated vehicles as "pool cars" shared with other Departments and will continue to do so. The Ford Focus has had minimal maintenance and no performance issues, and replacement can be deferred.

### Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$100	Oil changes as needed plus cost of fuel.

### Carryover History

This vehicle was scheduled for replacement in FY 2020; however, due to its low mileage, condition, and low maintenance costs, the replacement has been deferred to FY 2025.

**Village of River Forest, Illinois**  
**Five Year Capital Improvement Program**  
**Vehicles-Police**  
**Fiscal Year 2023 Budget**

Police Department	Year	Vehicle #	This Project is:	Fiscal Year					Five Year Total	Funding Source
				2023	2024	2025	2026	2027		
Marked Squad Car	2018	1	Recommended	-	-	61,586	-	-	61,586	CERF
Marked Squad Car	2019	2	Recommended	-	61,804	-	-	64,823	126,627	CERF
Marked Squad Car	2020	3	Recommended	-	61,804	-	-	64,823	126,627	CERF
Marked Squad Car	2019	4	Recommended	59,327	-	-	61,725	-	121,052	CERF
Marked Squad Car	2020	5	Recommended	-	61,804	-	-	64,823	126,627	CERF
Marked Squad Car	2017	6	Recommended	-	-	62,204	-	-	62,204	CERF
Unmarked Traffic/Patrol	2020	8	Recommended	-	-	67,037	-	-	67,037	CERF
Detectives Vehicle	2017	12	Recommended	-	44,698	-	-	-	44,698	CERF
Unmarked Tactical	2018	13	Recommended	-	54,754	-	-	-	54,754	CERF
Chief's Vehicle	2015	17	Recommended	43,849	-	-	-	-	43,849	CERF
Marked Patrol	2009	7	N/A	These vehicles are replaced with used police vehicles.					-	
Crime Prevention- Charger	2016	9	N/A						-	
Deputy Chief's Vehicle- Explorer	2013	11	N/A						-	
Admin Pool Vehicle	2016	14	N/A						-	
Covert Detective Ford Fusion	2015	15	N/A						-	
Patrol Commander-Charger	2015	16	N/A						-	
<b>Total</b>									<b>103,176</b>	<b>284,864</b>

Proposed Funding Source	Fiscal Year					Five Year Total
	2023	2024	2025	2026	2027	
Capital Equipment Replacement Fund (CERF)	103,176	284,864	190,827	61,725	194,469	835,061
<b>Totals</b>	<b>103,176</b>	<b>284,864</b>	<b>190,827</b>	<b>61,725</b>	<b>194,469</b>	<b>835,061</b>

## Vehicles - Police

<b>Marked Squad Car</b>	<b>FY 2025</b>	<b>\$61,586</b>	<b>CERF</b>
<b>Squad 1</b>	<b>FY 2028</b>	<b>\$65,115</b>	<b>CERF</b>

Critical

Recommended

Contingent on Funding

Make	Ford
Model	Explorer Hybrid
Year	2022
Cost	\$55,638
Useful Life	3 years
Current Life	0

### Project Description & Justification

The vehicle's estimated cost incorporates \$12,480 for equipment and installation, including exterior police markings, a light-emitting diode (LED) light bar, and miscellaneous items needed to facilitate the installation of major components. The vehicle was ordered in November 2021. The mileage is 0 as of 11/18/21. The average monthly miles driven is 1,000. Estimated mileage at the time of replacement: 60,000.

### Vehicle Description

This vehicle is a marked squad car used for daily patrol activities. The unit is equipped with laptop computers, moving radar units, and forward-facing video cameras. As the vehicles are rotated out of the fleet, the laptops, radars, and video equipment will be removed and reinstalled in the new cars. This vehicle also houses mission-critical equipment for response to active shooter and other life-threatening events.

Maintenance Costs	Average Cost per Repair	
Routine Maintenance as of May 2022	\$0.00	0
Cost of Repairs While Under Warranty (3-yr/36,000)	\$0.00	
<b>Total Spent on Maintenance and Repairs</b>	<b>\$0.00</b>	

### 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. Major vehicle manufacturers continue the development of All-Electric Vehicles for law enforcement patrol use. As their availability expands, the availability of the equipment needed to outfit the vehicles for patrol use will also need to expand. The price of these vehicles is high compared to traditional vehicles, but the price may reduce when the supply increases. The FY 2028 cost assumes the funding requirement anticipated for purchasing an All-Electric Vehicle. The Village will also pursue grant funding for the electrification of its fleet.

### Operational Impact

These cars are used extensively for patrol activities, so breakdowns directly impact 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

**Carryover History**

N/A

## Vehicles - Police

<b>Marked Squad Car</b>	<b>FY 2024</b>	<b>\$61,804</b>	<b>CERF</b>
<b>Squad 2</b>	<b>FY 2027</b>	<b>\$64,823</b>	<b>CERF</b>
<input type="radio"/> Critical	<input checked="" type="radio"/> Recommended	<input type="radio"/> Contingent on Funding	

Make	Chevy
Model	Tahoe PPV
Year	2019
Cost	\$44,073
Useful Life	4 years
Current Life	1.5 years

### Project Description & Justification

The vehicle's estimated cost incorporates \$12,480 for equipment and installation, including exterior police markings, a light-emitting diode (LED) light bar, and miscellaneous items needed to facilitate the installation of major components. The in-service date was March 20, 2019. The mileage is 43,700 as of 11/18/21. The average monthly miles driven is 1,700. Estimated mileage at the time of replacement: 80,000.

### Vehicle Description

This vehicle is a marked squad car used for daily patrol activities. The unit is equipped with laptop computers, moving radar units, and forward-facing video cameras. The vehicle carries several entry tools and protective equipment ready for immediate deployment by officers. As the vehicles are rotated out of the fleet, the laptops, radars, and video equipment will be removed and reinstalled in the new cars.

Maintenance Costs		Average Cost per Repair
Routine Maintenance as of March 2019	\$9,603.96	35 @ \$274.99
Cost of Repairs While Under Warranty	\$0.00	
<b>Total Spent on Maintenance and Repairs</b>	<b>\$9,603.96</b>	

### Project Alternative

Due to the nature of the use, deferral beyond three to four years is not recommended for patrol vehicles. The reliability decreases as age increases, and maintenance and repair costs often increase. At this time, staff believes the Chevy Tahoe will be deferred past FY 2023 due to the expected low mileage and heavy-duty pursuit rating. Major vehicle manufacturers continue the development of All-Electric Vehicles for law enforcement patrol use. As their availability expands, the availability of the equipment needed to outfit the vehicles for patrol use will also need to expand. The price of these vehicles is high compared to traditional vehicles, but the price may reduce when the supply increases. The FY 2027 cost assumes the funding requirement anticipated for purchasing an All-Electric Vehicle. The Village will also pursue grant funding for the electrification of its fleet.

### Operational Impact

These cars are used extensively for patrol activities, so breakdowns directly impact 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

**Carryover History**

This vehicle will be deferred from FY 2023 to FY 2024.



## Vehicles - Police

<b>Marked Squad Car</b>	<b>FY 2024</b>	<b>\$61,804</b>	<b>CERF</b>
<b>Squad 3</b>	<b>FY 2027</b>	<b>\$64,823</b>	<b>CERF</b>

Critical

Recommended

Contingent on Funding

Make	Ford
Model	Explorer PUV
Year	2020
Cost	\$45,490
Useful Life	3 years
Current Life	1 year

### Project Description & Justification

The vehicle's estimated cost incorporates \$12,480 for equipment and installation, including exterior police markings, a light-emitting diode (LED) light bar, and miscellaneous items needed to facilitate the installation of major components. The vehicle was put into service in July of 2020. The mileage is 33,100 as of 11/18/21. The average monthly miles driven is expected to be approximately 1,880. Estimated mileage at the time of replacement: 80,000.

### Vehicle Description

This vehicle is a marked squad car used for daily patrol activities. The unit is equipped with laptop computers, moving radar units, and forward-facing video cameras. As the vehicles are rotated out of the fleet, the laptops, radars, and video equipment will be removed and reinstalled in the new cars.

Maintenance Costs		Average Cost per Repair
Routine Maintenance as of July 2020	\$810.75	8 @ \$101.35
Cost of Repairs While Under Warranty	\$0.00	
<b>Total Spent on Maintenance and Repairs</b>	<b>\$810.75</b>	

### 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. Major vehicle manufacturers continue the development of All-Electric Vehicles for law enforcement patrol use. As their availability expands, the availability of the equipment needed to outfit the vehicles for patrol use will also need to expand. The price of these vehicles is high compared to traditional vehicles, but the price may reduce when the supply increases. The FY 2027 cost assumes the funding requirement anticipated for purchasing an All-Electric Vehicle. The Village will also pursue grant funding for the electrification of its fleet.

### 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

**Carryover History**

This vehicle will be deferred from FY 2023 to FY 2024.

## Vehicles - Police

<b>Marked Squad Car</b>	<b>FY 2023</b>	<b>\$59,327</b>	<b>CERF</b>
<b>Squad 4</b>	<b>FY 2026</b>	<b>\$61,725</b>	<b>CERF</b>

Critical
  Recommended
  Contingent on Funding

Make	Dodge
Model	Durango
Year	2019
Cost	\$41,910
Useful Life	3 years
Current Life	2 years

### Project Description & Justification

The vehicle's estimated cost incorporates \$12,480 for equipment and installation, which includes exterior Police markings, a light-emitting diode (LED) light bar, and miscellaneous items needed to facilitate the installation of major components. The in-service date was June 1, 2019, for Squad #4. The mileage as of 11/12/21 is 29,100. Estimated mileage at the time of replacement: 80,000. Once it has reached its useful life, the car will replace an older model in the fleet, be offered to another internal Village department, or be disposed of at auction.

### Vehicle Description

This vehicle is a marked squad car used for daily patrol activities. The unit is equipped with laptop computers, moving radar units, and forward-facing video cameras. As the vehicles are rotated out of the fleet, the laptops, radars, and video equipment will be removed and reinstalled in the new cars.

Maintenance Costs FY		Average Cost per Repair
Routine Maintenance as of June 2019	\$3,234.16	22 @ \$147.02
Cost of Repairs While Under Warranty	\$0.00	
<b>Total Spent on Maintenance and Repairs</b>	<b>\$3,234.16</b>	

### 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. Major vehicle manufacturers continue the development of All-Electric Vehicles for law enforcement patrol use. As their availability expands, the availability of the equipment needed to outfit the vehicles for patrol use will also need to expand. The price of these vehicles is high compared to traditional vehicles, but the price may reduce when the supply increases. The FY 2026 cost assumes the funding requirement anticipated for purchasing an All-Electric Vehicle. The Village will also pursue grant funding for the electrification of its fleet.

### Operational Impact

These cars are used extensively for patrol activities, so breakdowns directly impact 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

**Carryover History**

This vehicle was deferred from FY 2022 to FY 2023.

## Vehicles - Police

<b>Marked Squad Car</b>	<b>FY 2024</b>	<b>\$61,804</b>	<b>CERF</b>
<b>Squad 5</b>	<b>FY 2027</b>	<b>\$64,823</b>	<b>CERF</b>

Critical
  Recommended
  Contingent on Funding

Make	Dodge
Model	Charger AWD
Year	2020
Cost	\$40,192
Useful Life	3 years
Current Life	1 year

### Project Description & Justification

The vehicle's estimated cost incorporates \$12,480 for equipment and installation, which includes exterior police markings, a light-emitting diode (LED) light bar, and miscellaneous items needed to facilitate the installation of major components. The in-service date was August 15, 2020. The mileage is 26,350 as of 11/18/21. The average monthly miles driven is 1,750. Estimated mileage at the time of replacement: 80,000. This vehicle will be kept in the fleet as a secondary line vehicle for crime prevention or backup patrol vehicle.

### Vehicle Description

This vehicle is a marked squad car used for daily patrol activities. The unit is equipped with laptop computers, moving radar units, and forward-facing video cameras. As the vehicles are rotated out of the fleet, the laptops, radars, and video equipment will be removed and reinstalled in the new cars.

Maintenance Costs		Average Cost per Repair
Routine Maintenance as of November, 2019	\$1,334.33	6 @ \$222.38
Cost of Repairs While Under Warranty	\$0.00	
<b>Total Spent on Maintenance and Repairs</b>	<b>\$1,334.33</b>	

### 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. Major vehicle manufacturers continue the development of All-Electric Vehicles for law enforcement patrol use. As their availability expands, the availability of the equipment needed to outfit the vehicles for patrol use will also need to expand. The price of these vehicles is high compared to traditional vehicles, but the price may reduce when the supply increases. The FY 2027 cost assumes the funding requirement anticipated for purchasing an All-Electric Vehicle. The Village will also pursue grant funding for the electrification of its fleet.

### Operational Impact

These cars are used extensively for patrol activities, so breakdowns directly impact 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

**Carryover History**

This vehicle will be deferred from FY 2023 to FY 2024.

## Vehicles - Police

<b>Marked Squad Car</b>	<b>FY 2025</b>	<b>\$62,204</b>	<b>CERF</b>
<b>Squad 6</b>	<b>FY 2028</b>	<b>\$66,011</b>	<b>CERF</b>

Critical

Recommended

Contingent on Funding

Make	Ford
Model	Explorer AWD
Year	2022
Cost	\$56,404
Useful Life	3 years
Current Life	0 years

### Project Description & Justification

The vehicle's estimated cost incorporates \$12,480 for equipment and installation, which includes exterior police markings, a light-emitting diode (LED) light bar, and miscellaneous items needed to facilitate the installation of major components. The vehicle was ordered in November 2021. The mileage is 0 as of 11/18/21. The average monthly miles driven is 1,000. Estimated mileage at the time of replacement: 60,000.

### Vehicle Description

The recommended replacement model is a larger vehicle, such as a SUV. This vehicle serves as a multi-purpose utility vehicle for deploying the speed trailer and rapid deployment equipment. The vehicle houses the Automatic License Plate Reader System (ALPR), used for traffic and parking operations. This vehicle will be a marked squad car used for daily patrol activities. The unit is equipped with laptop computers, moving radar units, and forward-facing video cameras. As the vehicles are rotated out of the fleet, reusable laptops, radars, and video equipment will be removed and reinstalled in the new cars.

Maintenance Costs	Average Cost per Repair	
Routine Maintenance as of May 2022	\$0.00	0
Cost of Repairs While Under Warranty	\$0.00	
<b>Total Spent on Maintenance and Repairs</b>	<b>\$0.00</b>	

### 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. Major vehicle manufacturers continue the development of All-Electric Vehicles for law enforcement patrol use. As their availability expands, the availability of the equipment needed to outfit the vehicles for patrol use will also need to expand. The price of these vehicles is high compared to traditional vehicles, but the price may reduce when the supply increases. The FY 2028 cost assumes the funding requirement anticipated for purchasing an All-Electric Vehicle. The Village will also pursue grant funding for the electrification of its fleet.

### Operational Impact

These cars are used extensively for patrol activities, so breakdowns directly impact the department's ability to respond to requests from residents, provide traffic control, respond to complaints of criminal activity, and perform routine investigations. The ALPR equipment serves a mission-critical function for daily parking and other enforcement assignments.

**Project Impact**

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

**Carryover History**

N/A



## Vehicles - Police

<b>Marked Traffic/Patrol</b>	<b>FY 2025</b>	<b>\$67,037</b>	<b>CERF</b>
<b>Patrol 8</b>	<b>FY 2030</b>	<b>\$71,140</b>	<b>CERF</b>
<input type="radio"/> Critical	<input checked="" type="radio"/> Recommended	<input type="radio"/> Contingent on Funding	

Make	Ford
Model	F-150 Police Responder
Year	2020
Cost	\$48,500
Useful Life	5 years
Current Life	1.5 years

### Project Description & Justification

The new Car #8, a Ford F-150 Police Responder, was added to the front-line fleet in FY 2020 using General Reserve Funds and replaced the old Car #8, which had over 110,000 miles. Car #8 is used as a Traffic Enforcement/Accident Investigation unit and serves as the Department's primary Truck Enforcement vehicle. The mileage is 16,200 as of 11/18/2021. It is estimated that the vehicle averages 900 miles per month and serves as a front-line car until other operational needs or mechanical issues dictate its rotation or replacement. Staff anticipates the possible opportunity to defer the purchase of a replacement vehicle beyond FY 2025 due to the pursuit and heavy-duty ratings of the Ford F-150.

### Vehicle Description

The F-150 Police Responder is used for traffic enforcement, truck enforcement, accident investigation, radar/message board trailer deployment, police mountain bike deployment, evidence transport, and WESTAF Major Accident Team deployment. The unit has high water, severe winter conditions, and off-road capabilities to meet all mission-critical assignments. The vehicle has onboard storage for evidence technician equipment, entry tools, protective gear, and specialized hardware.

Maintenance Costs	Average Cost per Repair	
Routine Maintenance as of May 2020	\$102.00	3 @ \$34
Cost of Repairs While Under Warranty	\$0.00	
<b>Total Spent on Maintenance and Repairs</b>	<b>\$102.00</b>	

### Project Alternative

At this time, the Traffic Enforcement car is used to meet the community's number one citizen-driven complaint: speeding and reckless drivers. In addition, the vehicle is used for multiple operational applications. The Department will evaluate this unit's effectiveness and make recommendations to determine actual or deferred replacement. The development of All-Electric Vehicles for law enforcement patrol use continues by primary vehicle manufacturers. As their availability expands, the availability of the equipment needed to outfit the vehicles for patrol use will also need to expand. The price of these vehicles is high compared to traditional vehicles, but the price may reduce when the supply increases. The FY 2030 cost assumes the funding requirement anticipated for purchasing an All-Electric Vehicle. The Village will also pursue grant funding for the electrification of its fleet.

**Operational Impact**

As a front-line unit, the car is used for all patrol-related activities, plus its specialized applications. This vehicle needs to be properly maintained and replaced as necessary to further the community's expectations of prompt and professional police service.

**Project Impact**

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

**Carryover History**

N/A

## Vehicles - Police

<b>Dodge Durango Primary Detectives Vehicle</b>	<b>FY 2024</b>	<b>\$44,698</b>	<b>CERF</b>
<b>Squad 12</b>	<b>FY 2029</b>	<b>\$49,350</b>	<b>CERF</b>
<input type="radio"/> Critical	<input checked="" type="radio"/> Recommended	<input type="radio"/> Contingent on Funding	

Make	Dodge
Model	Durango
Year	2017
Cost	\$31,341
Useful Life	5 years
Current Life	5 years

### Project Description & Justification

The vehicle's estimated cost incorporates an all-wheel-drive SUV, \$10,000 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. The in-service date was October 1, 2016. The mileage is 23,150 as of 11/18/21. The average monthly miles driven is 313. Estimated mileage at the time of replacement: 38,000. Depending on the vehicle's condition at replacement time, this vehicle will be deferred or can be rotated as the secondary Detective Unit, a tactical vehicle, command vehicle, or training vehicle.

### Vehicle Description

This unmarked detective unit is used daily for criminal investigations, tactical patrol, and covert surveillance. It is equipped with hidden emergency lights, a laptop computer, and car radios. The vehicle is set up to store protective gear and additional weapons systems.

Maintenance Costs		Average Cost per Repair
Routine Maintenance as of October 1, 2016	\$1,477.00	7 @ \$211
Cost of Repairs While Under Warranty	\$0.00	
<b>Total Spent on Maintenance and Repairs</b>	<b>\$1,477.00</b>	

### Project Alternative

Due to the nature of the use, deferral beyond its estimated life is not recommended for a tactical vehicle. The reliability decreases as age increases, and maintenance and repair costs often increase. In addition, tactical or detective plainclothes units are eventually identified by the local criminal element and become somewhat ineffective for investigative purposes. Major vehicle manufacturers continue the development of All-Electric Vehicles for law enforcement patrol use. As their availability expands, the availability of the equipment needed to outfit the vehicles for patrol use will also need to expand. The price of these vehicles is high compared to traditional vehicles, but the price may reduce when the supply increases. The FY 2029 cost assumes the funding requirement anticipated for purchasing an All-Electric Vehicle. The Village will also pursue grant funding for the electrification of its fleet.

### Operational Impact

Breakdowns directly impact the department's ability to respond to and investigate criminal activity. In addition, the Department depends on unmarked/covert units to perform a myriad of surveillance, tactical, investigative and, and arrest functions for the community.

**Project Impact**

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

**Carryover History**

Deferred from FY 2022 to FY 2023. The vehicle will be deferred again to FY 2024.

## Vehicles - Police

<b>Unmarked Tactical</b>	<b>FY 2024</b>	<b>\$54,754</b>	<b>CERF</b>
<b>Squad 13</b>	<b>FY 2030</b>	<b>\$61,662</b>	<b>CERF</b>

Critical

Recommended

Contingent on Funding

Make	Dodge
Model	Charger
Year	2018
Cost	\$38,162
Useful Life	6 years
Current Life	4 years

### Project Description & Justification

The vehicle's estimated cost incorporates an all-wheel-drive (AWD) vehicle, \$12,480 for covert equipment and installation, including hidden light-emitting diode (LED) emergency lights, radio antenna, and miscellaneous items needed to facilitate the installation of major components. The 2018 Dodge Charger in-service date was January 1, 2018. The mileage is 27,100 as of 11/18/21. The average monthly miles driven is 565. Estimated mileage at the time of replacement: 50,000.

### Vehicle Description

This is an unmarked police unit used daily for tactical patrol and covert surveillance. The unit is equipped with hidden emergency lights, a laptop computer, a printer, and car radios. The unit is set up to store additional protective gear and weapons systems.

Maintenance Costs	Average Cost per Repair	
Routine Maintenance as of November, 2019	\$3,433.47	16 @ \$214.29
Cost of Repairs While Under Warranty	\$0.00	
<b>Total Spent on Maintenance and Repairs</b>	<b>\$3,433.47</b>	

### Project Alternative

Due to the nature of the use, deferral beyond its estimated life is not recommended for a tactical vehicle. The reliability decreases as age increases, and maintenance and repair costs often increase. Major vehicle manufacturers continue the development of All-Electric Vehicles for law enforcement patrol use. As their availability expands, the availability of the equipment needed to outfit the vehicles for patrol use will also need to expand. The price of these vehicles is high compared to traditional vehicles, but the price may reduce when the supply increases. The FY 2030 cost assumes the funding requirement anticipated for purchasing an All-Electric Vehicle. The Village will also pursue grant funding for the electrification of its fleet.

### Operational Impact

Breakdowns directly impact the department's ability to respond to and investigate criminal activity. The effectiveness of an unmarked/undercover vehicle can be diminished over time due to local criminal offenders having identified it as a police car. The car has covert out-of-state plates.

**Project Impact**

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

**Carryover History**

None

## Vehicles - Police

<b>Chief's Vehicle</b>	<b>FY 2023</b>	<b>\$43,849</b>	<b>CERF</b>
<b>Squad 17</b>	<b>FY 2029</b>	<b>\$49,381</b>	<b>CERF</b>

Critical
  Recommended
  Contingent on Funding

Make	Ford
Model	Explorer
Year	2015
Cost	\$31,196
Useful Life	6 years
Current Life	7 years

### Project Description & Justification

The estimated cost of the vehicle incorporates \$9,360 for equipment and installation. The in-service date was January 2015. The Chief will pass down the 2015 Ford Explorer to the Deputy Chief, Patrol Commander, or another internal division upon replacement. The mileage is 68,100 as of 11/12/21. The average monthly miles driven is 987. The estimated mileage at replacement is 88,000. Once replaced, this unit is used as a secondary unmarked vehicle or offered to the fire department or public works to use.

### Vehicle Description

The vehicle is used daily and is equipped with radios, hidden emergency lights, and storage for protective equipment and weapon systems. The unmarked squad car is used for emergencies and holds necessary command and tactical equipment.

Maintenance Costs		Average Cost per Repair
Routine Maintenance as of November, 2019	\$5,620.00	23 @ \$244.32
Cost of Repairs While Under Warranty	\$0.00	
<b>Total Spent on Maintenance and Repairs</b>	<b>\$5,620.00</b>	

### Project Alternative

As the vehicle ages, repair costs will increase, which is not desirable with a fixed maintenance budget. This vehicle will maintain the six-year replacement schedule. Major vehicle manufacturers continue the development of All-Electric Vehicles for law enforcement patrol use. As their availability expands, the availability of the equipment needed to outfit the vehicles for patrol use will also need to expand. The price of these vehicles is high compared to traditional vehicles, but the price may reduce when the supply increases. The FY 2029 cost assumes the funding requirement anticipated for purchasing an All-Electric Vehicle. The Village will also pursue grant funding for the electrification of its fleet.

### Operational Impact

Although this vehicle is not used as extensively as the front line squad cars, it is used to respond to emergencies and should be in good operational condition and meet industry standards.

### Project Impact

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

**Carryover History**

Due to low mileage and other budget considerations, the vehicle's replacement has been deferred from FY 2021 to FY 2022 and again to FY 2023.



**Village of River Forest, Illinois**  
**Five Year Capital Improvement Program**  
**Vehicles-Fire**  
**Fiscal Year 2023 Budget**

Fire Department	Year	Vehicle #	This Project is:	Fiscal Year					Five Year Total	Funding Source
				2023	2024	2025	2026	2027		
Administrative Vehicle	2011	201	Recommended	33,500	-	-	-	-	33,500	CERF
Ambulance	2015	215	Recommended	230,000	-	-	-	-	230,000	CERF
Utility Pick-up Truck	2006	218	Contingent	-	50,000	-	-	-	50,000	CERF
Pumper	2001	222	Recommended	-	-	-	700,000	-	700,000	CERF
Ambulance	2006	214	-	This vehicle is a reserve and replaced with frontline upon purchase					-	
Fire Prevention Bureau Vehicle	2009	299	Contingent	This vehicle is replaced with used police vehicles					-	
<b>Total</b>				<b>263,500</b>	<b>50,000</b>	<b>-</b>	<b>700,000</b>	<b>-</b>	<b>1,013,500</b>	

Proposed Funding Source	Fiscal Year					Five Year Total
	2023	2024	2025	2026	2027	
Capital Equipment Replacement Fund (CERF)	263,500	50,000	-	700,000	-	1,013,500
<b>Totals</b>	<b>263,500</b>	<b>50,000</b>	<b>-</b>	<b>700,000</b>	<b>-</b>	<b>1,013,500</b>

## Vehicles - Fire

### Administrative Vehicle - C201

FY 2023

\$33,500

CERF

Critical

Recommended

Contingent on Funding

Make Ford  
 Model Escape  
 Year 2011  
 Cost \$19,058  
 Useful Life 10 years (6 frontline)  
 Current Life 11 years



### Vehicle Description

C201 is the administrative vehicle that is assigned to the Fire Marshal. This 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 equipped with emergency lights and a siren for emergency response and administrative functions. It can serve as an incident command vehicle at emergency scenes in the absence of the Chief.

Vehicle	Year	Date	Road Mileage
C-201	2011	11/2021	113,377

Maintenance Costs for Past 2.5 Years	
Routine Maintenance as of November, 2021	\$410 (3 items)
Cost of Repairs	\$257 (1 item)
<b>Total</b>	<b>\$667</b>

### Project Alternative

- Pursue the purchase of a hybrid vehicle consistent with the Village's sustainability goals.
- 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).
- Maintain current vehicle for another year and re-evaluate next budget.

### Operational Impact

This vehicle was initially scheduled for a six-year useful life. The requested vehicle will replace the 2011 Ford Escape, which will be used for travel to training and conferences, and provide an auxiliary vehicle in the Village fleet for other departments.

### Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
Normal reduction in maintenance costs; \$1,000 Preventative maintenance and repairs	Reduce fleet maintenance by providing new, warranty driven apparatus, replacing older, costlier

### Carryover History

This purchase has been deferred from FY 2020.

## Vehicles - Fire

### Ambulance - A215

FY 2023

\$230,000

CERF

Critical

Recommended

Contingent on Funding

Make Ford  
 Model F-450 Wheeled Coach  
 Year 2015  
 Cost \$172,906  
 Useful Life 8 years frontline +  
 4 years shared reserve  
 Current Life 7 years



### Vehicle Description

A-215 is a Type III (van style front chassis) and serves as an Advanced Life Support (ALS) transport vehicle. Staffed with two firefighter/paramedics, Ambulance 215 responds to an average of 1,100 EMS calls per year. This vehicle operates to treat and transport accident victims and patients of illness to local hospitals. An innovative lifting system (Stryker Power System) is included in the cost of the new vehicle as an additional resource to minimize firefighter injuries due to bariatric (heavy) patients.

Vehicle	Year	Date	Road Mileage
A-215	2014	11/2021	47,135
A-214	2006	11/2021	56,796

### Maintenance Costs for Past 2.5 Years

<i>Routine Maintenance</i>		
215		\$175 (1 item)
214 (Shared reserve unit)		\$510 (2 items)
<i>Cost of Repairs</i>		
215		\$3,315 (2 items)
214 (Shared reserve unit)		\$4,908 (4 items)
<b>Total</b>		
215		<b>\$3,490</b>
214 (Shared reserve unit)		<b>\$5,418</b>

### Repair Description

Ambulance 215 is in its sixth year of service. Ambulance 214 (Reserve) has experienced several mechanical issues that are resolved. This vehicle had its engine replaced in FY 2016.

### Project Alternative

- Eliminate the Stryker Power Lift system for a savings of \$40,000; however, this is not recommended as it could increase the risk of injury.

### Operational Impact

This vehicle is in the seventh year of a planned eight-year useful life expectancy. This ambulance will be moved to the reserve position, and the existing reserve engine will be sold. The reserve ambulance is shared with the Village of Forest Park.

**Project Impact**

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$3,563	Preventative maintenance and repairs

**Carryover History**

None

## Vehicles - Fire

### Administrative Vehicle – C218

FY 2024

\$50,000

CERF

Critical

Recommended

Contingent on Funding

Make Ford  
 Model F-250  
 Year 2006  
 Cost \$35,000  
 Useful Life 8 years  
 Current Life 15 years



### Vehicle Description

C218 is the utility vehicle assigned to Haz-Mat & Technical Rescue. This 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 a four-wheel drive for extreme weather conditions and is equipped with emergency lights and a siren for emergency response. It can tow safety trailers, including the Citizen Corps and MABAS trailers. Additionally, this vehicle serves as the Incident Command vehicle in disaster situations. This vehicle will be sold or become a pool car after it is replaced.

Vehicle	Year	Date	Road Mileage
C-218	2006	11/2021	16,343

Maintenance Costs for Past 2.5 Years		
Routine Maintenance as of November, 2021	\$828	(1 item)
Cost of Repairs	\$1,244	(1 item)
<b>Total</b>	<b>\$2,072</b>	

### Project Alternative

- Purchase an all-wheel-drive SUV to place in service for severe weather conditions, which provides better traction ability during fire response in extreme weather conditions (four-wheel vs. two-wheel drive).
- Purchase an electric or hybrid vehicle consistent with the Village's sustainability goals.
- Maintain current vehicle for another year and re-evaluate next budget.
- Continue to defer the purchase of this vehicle and when it is due for replacement, determine if there is a vehicle rotating out of the Public Works fleet that can be utilized and will meet the Fire Department's tow capacity needs instead of replacement.

### Operational Impact

This vehicle was initially scheduled for an eight-year useful life. When purchased, it will replace the current vehicle used by Haz-Mat & Technical Rescue and tow MABAS-11 assets. The replaced vehicle can be utilized for school, training, travel, and an auxiliary vehicle in the Village fleet for other departments or sold at auction.

### Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
Normal reduction in maintenance costs	Reduce fleet maintenance by providing new, warranty driven apparatus, replacing older, costlier vehicle
\$500 preventative maintenance	

**Carryover History**

This vehicle has been deferred since FY 2014 and is scheduled for replacement in FY 2024.

## Vehicles - Fire

### Pumper - E222

FY 2026

\$700,000

CERF

Critical

Recommended

Contingent on Funding

Make Darley  
 Model Pumper  
 Year 2001  
 Cost \$326,000  
 Useful Life 10 years front line +  
 10 years reserve  
 Current Life 21 years



### Vehicle Description

E-222 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 entails the following pumping requirements: 100% pump capacity at 150psi, 70% capacity at 200psi, and 50% at 250psi. Class B pumps were found on older apparatus. They developed 100% pump capacity at 120psi, 70% at 200psi, and 50% at 250 psi.

Vehicle	Year	Date	Road Mileage	Engine Hours	Actual Mileage
E-222	2001	11/2021	91,273	13,201	330,025

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

### Maintenance Costs for Past 2.5 Years

<i>Routine Maintenance</i>	
222	\$5,342 (6 items)
213	\$2,540 (4 items)
<i>Cost of Repairs</i>	
222	\$46,988 (13 items)
213	\$10,826 (6 items)
<b>Total</b>	
222	<b>\$52,330</b>
213	<b>\$13,366</b>

### Project Alternative

- Evaluate State of Illinois loan programs and federal grants.
- Delay the purchase of this vehicle and incur increased maintenance costs and out-of-service time.
- Sell this vehicle and purchase a newer used vehicle from another community.

### Operational Impact

This vehicle has been placed in reserve pumper status, with Engine 213 moved to front line 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 the apparatus to run multiple calls when the front-line pumper is in use. It also allows for mutual aid while maintaining a response pumper to provide adequate fire suppression within the Village. With the pump being rebuilt in FY 2021, this engine should provide useful service for several more years.

**Project Impact**

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$20,932 in maintenance and repairs	Reduce fleet maintenance by providing new, warranty-driven apparatus, replacing older, costlier vehicles, and placing E-213, a 20-year-old vehicle, in reserve status.

**Carryover History**

With the pump being rebuilt in FY 2021 and the frame being rebuilt a few years earlier, replacement is deferred from FY 2022 to FY 2026.




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

Public Works Department	Description	Vehicle		This Project is:	Fiscal Year					Five Year	Funding Source
		Year	#		2023	2024	2025	2026	2027	Total	
Street Sweeper	Elgin Pelican	2016	34	Critical	-	-	241,740	-	-	241,740	CERF/WS
Dump Truck	International 7400	2012	41	Critical	-	204,000	-	-	-	204,000	CERF/WS
Pick-Up Truck	F550 Super Duty	2011	42	Critical	-	69,010	-	-	-	69,010	CERF
Large Int'l Dump Truck	International 4000 Series	1998	44	Critical	200,000	-	-	-	-	200,000	CERF
Aerial Truck	International 4400	2003	46	Critical	-	168,300	-	-	-	168,300	CERF
Pick-Up Truck	Ford F350 Super Duty	2012	48	Critical	41,200	-	-	-	-	41,200	CERF
Pick-Up Truck	Ford F350 Super Duty	2015	49	Critical	-	45,900	-	-	-	45,900	CERF
Pick-Up Truck	Ford F350 Super Duty	2008	67	Critical	-	44,290	-	-	-	44,290	CERF/WS
Cargo Van	Ford Transit Connect	2015	68	Recommended	-	27,540	-	-	-	27,540	CERF/WS
<b>Total</b>					<b>241,200</b>	<b>559,040</b>	<b>241,740</b>	-	-	<b>1,041,980</b>	

Proposed Funding Source	Fiscal Year					Five Year
	2023	2024	2025	2026	2027	Total
Capital Equipment Replacement Fund (CERF)	241,200	283,210	120,870	-	-	645,280
CERF - Water and Sewer (CERF/WS)	-	275,830	120,870	-	-	396,700
Water and Sewer Fund (WS)	-	-	-	-	-	-
<b>Totals</b>	<b>241,200</b>	<b>559,040</b>	<b>241,740</b>	-	-	<b>1,041,980</b>

## Vehicles - Public Works

<b>Street Sweeper #34</b>	<b>FY 2025</b>	<b>\$120,870</b>	<b>CERF</b>
	<b>FY 2025</b>	<b>\$120,870</b>	<b>CERF/WS</b>
<input checked="" type="radio"/> Critical	<input type="radio"/> Recommended	<input type="radio"/> Contingent on Funding	
Make	Elgin		
Model			
Year	2016		
Purchase Cost	\$193,352		
Purchased	FY 2017		
Useful Life	8 years		
Current Life	6 years		

### Vehicle Description

The street sweeper is the only vehicle in the Village's fleet that sweeps Village streets and State routes. State routes are swept per the Intergovernmental Street Maintenance Agreement held between the Village and the Illinois Department of Transportation (IDOT).

The street sweeper performs a vital function as it removes debris (leaves, twigs, garbage, etc.) from Village streets and prevents such debris from entering the Village's combined sewer system. It also improves the appearance of the Village. Removing debris from Village streets and keeping it out of the Village's sewer system reduces blockages and prevents debris from being discharged into the Des Plaines River during combined sewer overflow events.

Total Equipment Miles	11,915	Date	10/19/2021
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### Recent Maintenance Costs

Date	Maintenance Performed	Cost
12/9/2016	Windshield wiper protection bar, wiring harness for LED's	\$275.00
12/11/2017	Fuel filters changed and outside air filters	\$192.90
3/1/2018	Changed windshield wiper arm and blade; replaced fill hose	\$365.00
6/27/2018	Replaced conveyor belt drive chain and gears	\$120.00
8/2/2018	Repaired leaking left front hub, rebuilt right front caliper and change brake pads.	\$2,757.76
9/3/2018	Replaced conveyor belt drive chain, gears and upper roller bearings	\$1,170.86
10/26/2018	Replaced fuel filters due to debris in fuel tank	\$258.76
10/30/2018	Removed and clean fuel tank and replace sending unit gasket	\$1,573.00
8/13/2019	Replaced fuel sensor	\$500.00
9/11/2019	Replaced main broom	\$392.26
9/18/2020	Replaced side brooms X 6	\$806.46
12/10/2020	Replaced side brooms X 5	\$672.05
4/8/2021	Replaced side brooms X 4	\$564.52
4/15/2021	Replaced main broom & runners	\$536.67
5/4/2021	Replaced belt drive motor hydraulic hoses	\$3,580.00
6/11/2021	Replaced side brooms	\$546.52
8/18/2021	Replaced deflector parts under hopper	\$318.17
8/24/2021	Replaced side brooms X 3, 2 short runners, main belt and splice kit	\$1,715.41

10/22/2021	Replaced side brooms x 4, one main broom	\$1,074.02
<b>Total</b>		<b>\$17,419.36</b>

**Project Alternative**

The alternative is to reconsider the potential outsourcing of sweeping 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**

<b>Annual \$ Impact on Operating Budget</b>	<b>Description of Operating Budget Impact</b>
None	None

**Carryover History**

None

## Vehicles - Public Works

Dump Truck #41

FY 2024

\$204,000

CERF/WS

Critical

Recommended

Contingent on Funding

Make International  
 Model 7400 6X4  
 Year 2012  
 Purchase Cost \$117,237  
 Purchased FY 2012  
 Useful Life 12 years  
 Current Life 11 years



### Vehicle Description

Various personnel in the Operations Division operate this truck. The vehicle has a 13-foot dump body, stainless steel v-box salt spreader with manual controls, liquid salt pre-wetting system, 11-foot power angling snowplow, dump body tarp, emergency lighting, and two-way radio. It is one of two tandem axle dump trucks capable of hauling heavy loads.

Total Vehicle Miles	29,151	Date	1/5/2021
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### Recent Maintenance Costs

Date	Maintenance Performed	Cost
5/16/2017	Repaired electrical problem	\$1,000.00
6/30/2017	Repaired fuel system	\$2,500.00
6/21/2018	Replaced brake chamber, air dryer, fuel gauge sending unit	\$1,328.00
11/10/2018	Replaced regen sensor	\$500.00
6/19/2020	Recharged AC, hydraulic filter and repair battery cables	\$473.00
6/18/2020	Replaced batteries	\$400.00
8/12/2020	Replaced left front brake chamber	\$272.00
11/17/2020	Replaced transmission	\$9,000.00
12/21/2020	Replaced fuel pump strainer	\$491.59
<b>Total</b>		<b>\$15,964.59</b>

### Project Alternative

The alternative is to defer the purchase to later years and explore the potential acquisition of alternative fuel or electric vehicles when they become available in the marketplace.

### Operational Impact

This truck 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 removed from the fleet.

### Project Impact

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

**Carryover History**

None

## Vehicles - Public Works

Pickup Truck #42

FY 2024

\$69,010

CERF

Critical

Recommended

Contingent on Funding

Make Ford  
 Model F550 Super Duty  
 Year 2011  
 Purchase Cost \$46,692  
 Purchased FY 2011  
 Useful Life 12 years  
 Current Life 12 years



### Vehicle Description

Various personnel in the Operations Division operate this truck. The vehicle has a dump body, v-box salt spreader, 250-gallon salt brine sprayer, nine-foot power angling snowplow, emergency lighting, and two-way radio. This vehicle applies salt brine solution to roadways, plow and salt alleys, and parking lots throughout the Village during snow removal operations and hauling miscellaneous raw materials.

Total Vehicle Miles	26,668	Date	7/16/2021
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### Recent Maintenance Costs

Date	Maintenance Performed	Cost
8/2016	Replaced battery	\$118.29
5/2017	Replaced front suspension parts	\$1,500.00
2/2018	Replaced rear rim	\$600.00
9/2018	Replaced plastic hydraulic tank	\$250.00
10/2018	Replaced rear brake pads and rotors	\$1,181.42
2/2020	Replaced rear strobe light	\$67.00
5/2020	Replaced passenger side mirror	\$700.00
1/2020	Replaced battery	\$120.00
3/2021	Replaced side mirror	\$270.00
4/2021	Replaced vibrator motor for salt box	\$752.92
<b>Total</b>		<b>\$5,559.63</b>

### Project Alternative

The alternative is to defer the purchase to later years and explore the potential acquisition of alternative fuel or electric vehicles when they become available in the marketplace.

### Operational Impact

This truck is one of ten primary snow plowing vehicles in the Village's snow and ice control fleet and one of two vehicles equipped with anti-icing equipment. A breakdown reduces the Village's snow removal response by a tenth and anti-icing capabilities by half. It also extends the time needed to complete snow removal operations. This unit is used for other operations (hauling materials), which would also be impacted if removed from the fleet.

**Project Impact**

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

**Carryover History**

This vehicle is being carried over to FY 2024.

## Vehicles - Public Works

Dump Truck #44 (previously #41)

FY 2023

\$200,000

CERF

Critical

Recommended

Contingent on Funding

Make International  
 Model 4000 Series  
 Year 1998  
 Purchase Cost \$62,000  
 Purchased FY 1998  
 Useful Life 12 years  
 Current Life 25 years



### Vehicle Description

Various personnel in the Operations Division operate this truck. The vehicle has a 13-foot dump body, 11-foot power angling snowplow, dump body tarp, emergency lighting, and two-way radio.

Total Vehicle Miles	92,929	Date	8/3/2021
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### Recent Maintenance Costs

Date	Maintenance Performed	Cost
3/2014	Replaced muffler, flexpipe, and slack adjusters	\$1,210.64
12/2014	Replaced turbo charger hose	\$606.78
5/2015	Replaced dump body lift cylinder	\$3,278.16
10/2015	Replaced hydraulic tank and weld crack in frame rail	\$1,877.02
12/2015	Changed oil and filters	\$101.26
9/2017	Replaced batteries	\$230.00
12/2017	Replaced steering gear box	\$2,624.85
6/2018	Replaced right front brake chamber	\$245.94
2/2019	Replaced rusted headlight bucket	\$150.00
2/2020	Replaced sensor and rear seal	\$790.00
3/2020	Repaired rusted and broken lift cylinder frame brace	\$3,000.00
4/2020	Replaced headlight and wheel hub oil cap	\$230.00
4/2020	Repaired power steering leak	\$130.00
8/2020	Replaced rusted and leaking air tank. Replaced one brake chamber, lube and adjusted brakes	\$1,270.00
10/2020	Replaced leaking fuel tank	\$1,770.00
11/2020	New front tires	\$600.00
2/2021	Replaced gas pedal	\$642.70
8/2021	Replaced tail gate switched	\$245.00
<b>Total</b>		<b>\$19,002.35</b>

### Project Alternative

This vehicle was replaced in FY 2012 by truck #41. Instead of purchasing a new full-size six-wheel dump truck, the vehicle was kept and refurbished. The Village will continue to explore the potential acquisition of alternative fuel or electric vehicles when they become available in the marketplace.



## Background

Recognizing that both of the Village's Packer trucks (used for leaf removal) were in mechanically poor condition, staff reevaluated the Village's leaf collection program and determined that hauling leaves utilizing the dump truck fleet is the most operationally efficient means for collecting and transporting leaves. As a result, staff recommended disposing of truck #31 and rehabilitating the larger tandem axle dump truck (old #41) based on the following reasons:

1. Although the cab and chassis in old truck #41 are in good operating condition, the dump body was rusted with significant deterioration. That was the primary reason it was replaced in FY 2012.
2. Old truck #41 is a tandem-axle truck that can transport a larger, heavier load than truck #31, a single axle dump truck.
3. The dump body on old truck #41 is approximately two feet longer and has higher sides than truck #31.
4. It was expected that truck #31 could be sold at public auction as surplus property for approximately \$10,000 to \$15,000. The vehicle actually sold for \$23,350.

Staff recommended that the cab and chassis on dump truck #41 be reconditioned/refurbished and that the dump body and some of the hydraulic controls be replaced. Costs associated with these improvements are as follows (CERF Expenditures):

- \$7,000-Cab and chassis recondition/refurbish
- \$19,153-Replace dump body and update hydraulic controls

Cost Comparison:

- Sale of truck #31: \$23,350
- Cost to recondition current truck \$26,153
- Purchase of a new dump truck: \$175,000

This alternative allowed Public Works to maintain two tandem axle dump trucks in the fleet and extended the life of the old truck #41 by approximately ten years (replacement is scheduled in FY 2023), which is approximately 80% of the life cycle of a new dump truck.

## Operational Impact

This truck 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 removed from the fleet.

## Project Impact

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

## Carryover History

This vehicle was scheduled for replacement in FY 2022; however, due to the COVID-19 pandemic, a new vehicle could not be sourced. As a result, the purchase of the new vehicle has been deferred to FY 2023.

## Vehicles - Public Works

**Aerial Truck #46**

**FY 2024**

**\$168,300**

**CERF**

Critical

Recommended

Contingent on Funding

Make International  
 Model 4400  
 Year 2003  
 Purchase Cost \$83,336  
 Purchased FY 2003  
 Useful Life 15 years  
 Current Life 20 years



### Vehicle Description

Various personnel in the Operations Division use this aerial truck. The vehicle is equipped with a 55-foot working height utility bucket, emergency lighting, and two-way radio. The vehicle is used for tree trimming, streetlight maintenance, traffic signal maintenance, and installing holiday decorations. The Operations Division has begun outsourcing tree trimming work, reducing the amount of strain on the vehicle.

	Mileage	Hours	Date
Total Vehicle Miles/Hours	18,719	13,257	9/1/2021

### Recent Maintenance Costs

Date	Maintenance Performed	Cost
12/2011	Repaired PTO	\$485.00
6/2012	Annual inspection	\$900.00
7/2013	Replaced AC blower motor	\$128.00
6/2013	Replaced PTO lines	\$647.00
8/2013	Certification inspection	\$900.00
1/2014	Replaced air filter and 2 belts	\$114.75
2/2014	Repaired heater module	\$364.42
10/2015	Replaced batteries	\$207.26
10/2015	Certification inspection	\$1,000.00
1/2017	Repaired fuel system	\$1,900.00
6/2017	Repaired antilock brake sensor and modulating valve	\$1,822.00
8/2017	Certification inspection	\$1,100.00
9/2017	Repaired brakes and leaking axle seal	\$2,200.00
10/2018	Annual inspection and associated repairs; replaced bucket liner	\$3,324.07
8/2018	Replaced LED light bar	\$387.68
3/2019	Replaced electronic gas pedal	\$840.00
9/2019	AC ESC module replaced and programmed	\$2,720.00
3/2021	Replaced ABS sensor	\$339.99
4/2021	Replaced seat bottom	\$445.00
7/2021	Replaced 2 batteries	\$598.00
<b>Total</b>		<b>\$20,423.17</b>

**Project Alternative**

This vehicle was originally scheduled for replacement in FY 2018. This vehicle continues to be in good mechanical condition; therefore, Staff recommends deferring its replacement to FY 2024. The vehicle will then be re-evaluated for replacement, and the Village will explore the potential acquisition of alternative fuel or electric vehicles when they become available in the marketplace.

**Operational Impact**

This vehicle is the only aerial bucket truck in the fleet. Its primary use is tree trimming and streetlight maintenance, and its secondary uses include building maintenance and assisting the Village with holiday decorating.

**Project Impact**

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

**Carryover History**

This vehicle was carried over from FY 2018.

## Vehicles - Public Works

Pickup Truck #48

FY 2023

\$41,200

CERF

Critical

Recommended

Contingent on Funding

Make Ford  
 Model F350 Super Duty  
 Year 2012  
 Purchase Cost \$31,032  
 Purchased FY 2012  
 Useful Life 8 years  
 Current Life 11 years



### Vehicle Description

Various personnel in the Operations Division use this pickup truck to perform tasks throughout the Village. This truck is equipped with emergency lighting, two-way radio, and a nine-foot angling snowplow, used for plowing alleys and parking lots during snow events. The vehicle is also one of three pickup trucks outfitted with a large broom attachment and is used during leaf season to push piles of leaves.

Total Vehicle Miles	49,215	Date	11/18/2021
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### Recent Maintenance Costs

Date	Maintenance Performed	Cost
1/2015	Repaired rear bumper	\$365.00
12/2018	Replaced battery	\$200.00
11/2018	Replaced hydraulic pump and motor relay for plow/broom	\$1,500.00
4/2019	Body work and left rear backup sensor repaired	\$1,440.00
10/2019	Replaced rear brake pads and rotors	\$422.00
1/2020	Repaired auto 4X4 system	\$280.00
10/2020	Replaced outer tie rod end and aligned front end	\$400.00
<b>Total</b>		<b>\$4,607.00</b>

### Project Alternative

The alternative is to defer the purchase to later years. The Village will explore the potential acquisition of alternative fuel or electric vehicles when they become available in the marketplace.

### Operational Impact

This vehicle was initially scheduled for replacement in FY 2020 and has been deferred due to the vehicle's condition. Staff is recommending again deferring this replacement to FY 2023. This truck is one of ten primary snow plowing vehicles in the Village's snow and ice control fleet. It is also one of three vehicles necessary to push piles of leaves during leaf season. These two operations are very demanding on the drivetrain and suspension systems. A breakdown reduces the Village's snow removal response and extends the time needed to complete snow and leaf removal operations. This unit is used for other tasks that would also be impacted if removed from the fleet.

### Project Impact

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

**Carryover History**

Carried over from FY 2020.

## Vehicles - Public Works

Pickup Truck #49

FY 2024

\$45,900

CERF

Critical

Recommended

Contingent on Funding

Make Ford  
 Model F350 Super Duty  
 Year 2015  
 Purchase Cost \$26,676  
 Purchased FY 2016  
 Useful Life 8 years  
 Current Life 7 years



### Vehicle Description

Various personnel in the Operations Division use this pickup truck to perform tasks throughout the Village. This truck is equipped with emergency lighting, two-way radio, and a nine-foot angling snowplow, used for plowing alleys and parking lots during snow events. The vehicle is also one of three pickup trucks outfitted with a large broom attachment and is used during leaf season to push piles of leaves.

Total Vehicle Miles	27,005	Date	10/29/2021
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### Recent Maintenance Costs

Date	Maintenance Performed	Cost
10/2015	Replaced plow hydraulic manifold	\$410.00
1/2019	Replaced front wiring harness on plow	\$230.00
6/2020	Changed oil and replaced front brakes	\$1,100.00
7/2020	Replaced catalytic converters	\$1,700.00
<b>Total</b>		<b>\$3,440.00</b>

### Project Alternative

The alternative is to defer the purchase to later years or explore the potential acquisition of alternative fuel or electric vehicles when they become available in the marketplace.

### Operational Impact

This truck is one of ten primary snow plowing vehicles in the Village's snow and ice control fleet. It is also one of three vehicles necessary to push piles of leaves during leaf season. These two operations are very demanding on the drivetrain and suspension systems. A breakdown reduces the Village's snow removal response and extends the time needed to complete snow and leaf removal operations. This unit is used for other tasks that would also be impacted if removed from the fleet.

### Project Impact

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

### Carryover History

None.

## Vehicles - Public Works

Pickup Truck #67

FY 2024

\$44,290

CERF/WS

Critical

Recommended

Contingent on Funding

Make Ford  
 Model F350 Super Duty  
 Year 2015  
 Purchase Cost \$30,814  
 Purchased FY 2015  
 Useful Life 8 years  
 Current Life 8 years



### Vehicle Description

Various personnel in the Water Division use this pickup truck to respond to water service calls, JULIE locates, and water system emergencies. This truck is equipped with emergency lighting, two-way radio, and a nine-foot angling snowplow, used for plowing alleys and parking lots during snow events. The vehicle is also one of three pickup trucks outfitted with a large broom attachment and is used during leaf season to push piles of leaves.

Total Vehicle Miles	29,121	Date	9/1/2021
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### Recent Maintenance Costs

Date	Maintenance Performed	Cost
Various dates	Three oil changes	\$125.00
12/2017	Replaced battery	\$161.00
12/2018	Replaced tires	\$800.00
1/2019	Replaced plow wiring harness	\$230.00
6/2020	Replaced catalytic converters	\$1,700.00
<b>Total</b>		<b>\$3,016.00</b>

### Project Alternative

The alternative is to defer the purchase to later years. The Village will explore the potential acquisition of alternative fuel or electric vehicles when they become available in the marketplace.

### Operational Impact

This vehicle was scheduled for replacement in FY 2023 and is being deferred due to the vehicle's current condition. This truck is one of ten primary snow plowing vehicles in the Village's snow and ice control fleet. It is also one of three vehicles necessary to push piles of leaves during leaf season. These two operations are very demanding on the drivetrain and suspension systems. A breakdown reduces the Village's snow removal response and extends the time needed to complete snow and leaf removal operations. This unit is used for other tasks, which would also be impacted if removed from the fleet.

### Project Impact

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

**Carryover History**

This vehicle is being carried over from FY 2023 to FY 2024.



**Vehicles - Public Works**

**Transit Connect Van #68 (Engineering)                      FY 2024                      \$27,540                      CERF/WS**

Critical                       Recommended                       Contingent on Funding

Make                      Ford  
 Model                      Transit Connect Van  
 Year                      2015  
 Purchase Cost                      \$19,076  
 Purchased                      FY 2016  
 Useful Life                      8 years  
 Current Life                      6 years



**Vehicle Description**

Personnel in the Engineering Division use this vehicle. This vehicle was purchased as a replacement for Truck #62. The Village Engineer uses it to inspect Village infrastructure and monitor capital projects throughout the Village.

Total Vehicle Miles	6,525	Date	11/24/2021
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**Recent Maintenance Costs**

Date	Maintenance Performed	Cost
6/1/2018	Oil change	\$75.00
<b>Total</b>		<b>\$75.00</b>

**Project Alternative**

The alternative is to defer the purchase to later years or explore the potential acquisition of an alternative fuel or electric vehicle.

**Operational Impact**

This unit is the primary vehicle for the Engineering Division within the Public Works Department. It is used to monitor the maintenance and inspection of projects as they occur within the Village.

**Project Impact**

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

**Carryover History**

None.

# EQUIPMENT

## ***Equipment – Five Year Capital Improvement Program***

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

As with other sections of the CIP, these improvements are targeted for specific years and are usually financed through the Capital Equipment Replacement Fund (CERF). The following improvements are proposed for FY 2023:

<b>Equipment</b>	<b>Cost of Equipment</b>	<b>Funding Source</b>	<b>This Project is:</b>
Police Radios-Handheld and In-Car (PD)	\$ 40,411	CERF	Critical
Street Camera System Optimization (PD)	\$ 105,144	CIF/N-TIF	Critical
SCBA Breathing Air Compressor (FD)	\$ 45,000	CERF	Recommended
EV Station Planning	\$ 25,000	CIF	Recommended
<b>Total</b>	<b>215,555</b>		

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

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

These projects are highlighted in yellow.

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

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

Village of River Forest, Illinois  
Five Year Capital Improvement Program  
Equipment  
Fiscal Year 2023 Budget

	This Project is:	Fiscal Year					Five Year Total	Funding Source
		2023	2024	2025	2026	2027		
<b>Police Department</b>								
Automatic License Plate Reader	Recommended	-	48,934	-	-	-	48,934	CERF
Live Scan System	Recommended	-	26,010	-	-	-	26,010	CERF
Overweight Truck Scales	Recommended	-	18,926	-	-	-	18,926	CERF
Pole Mounted Radar	Recommended	-	-	48,658	-	-	48,658	CERF
Police Radios	Critical	40,411	42,027	43,708	45,456	47,274	218,876	CERF
Radar	Recommended	-	38,433	-	-	-	38,433	CERF
Speed Monitor Trailer	Recommended	-	-	-	-	18,064	18,064	CERF
Digital In-Car Cameras	Recommended	-	64,320	-	-	-	64,320	CERF
Street Camera System	Critical	-	-	-	-	194,662	194,662	CERF
Street Camera System Optimization	Critical	105,144	105,144	45,084	-	-	255,372	CIF/N-TIF
Taser-Less Lethal Equipment	Recommended	-	29,952	-	-	-	29,952	CERF
Body Worn Camera System	Critical	-	140,550	-	-	61,988	202,538	GF
<b>Fire Department</b>								
SCBA Air Compressor	Recommended	45,000	-	-	-	-	45,000	CERF
ALS Defibrillator 1	Recommended	-	28,000	-	-	-	28,000	CERF
Hydraulic Extrication Equipment	Contingent	-	45,000	-	-	-	45,000	CERF
Self-Contained Breathing Apparatus	Recommended	-	-	-	175,000	-	175,000	CERF
<b>Public Works</b>								
Stump Grinder	Recommended	-	50,000	-	-	-	50,000	CERF
Stainless Steel V-Box Salt Spreader (Large)	Critical	-	23,000	-	-	-	23,000	CERF
Stainless Steel V-Box Salt Spreader (Small #1)	Critical	-	-	20,000	-	-	20,000	CERF
Sewer Televising System	Critical	-	-	-	91,000	-	91,000	CERF/WS
Asphalt Kettle	Recommended	-	25,000	-	-	-	25,000	CERF
Permeable Pavement Maintenance System	Recommended	-	188,894	-	-	-	188,894	WS
Salt Brine Equipment	Recommended	-	-	26,000	-	-	26,000	CERF
6" Trash Pump #1	Critical	-	22,000	-	-	-	22,000	CERF/WS
EV Station Planning	Recommended	25,000	50,000	50,000	50,000	50,000	225,000	CIF
<b>Total</b>		<b>215,555</b>	<b>946,190</b>	<b>233,450</b>	<b>361,456</b>	<b>371,988</b>	<b>2,128,639</b>	

Proposed Funding Source	Fiscal Year					Five Year
	2023	2024	2025	2026	2027	Total
Capital Equipment Replacement Fund (CERF)	85,411	439,602	138,366	220,456	260,000	1,143,835
Capital Improvement Fund (CIF)	130,144	81,544	95,084	50,000	50,000	406,772
Capital Improvement Fund / Grant (CIF/Grant)	-	-	-	-	-	-
General Fund (GF)	-	140,550	-	-	61,988	202,538
Water/Sewer (WS)	-	188,894	-	-	-	188,894
CERF - Water and Sewer (CERF/WS)	-	22,000	-	91,000	-	113,000
Madison Street TIF Fund (M-TIF)	-	-	-	-	-	-
North Avenue TIF Fund (N-TIF)	-	73,600	-	-	-	73,600
<b>Totals</b>	<b>215,555</b>	<b>946,190</b>	<b>233,450</b>	<b>361,456</b>	<b>371,988</b>	<b>2,128,639</b>

## Equipment - Police

Automatic License Plate Reader Systems

FY 2024

\$48,934

CERF

Critical

Recommended

Contingent on Funding

Original Purchase Date

FY 2017-19

Cost

\$39,195

Funding History

N/A



### Project Description & Justification

The Automated License Plate Readers (ALPR) are a third-generation plate reader currently installed in squad cars #6, #10, and two fixed camera locations at Lake/Thatcher and Lake/Harlem. It consists of two cameras mounted on top of the car roof, identifying 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 car is wanted for the commission of a crime. All license plate data is stored on a server and can be plotted on a map and retrieved later as part of an investigation. In addition, investigators and officers can enter plates to identify cars currently on the Boot List or that are wanted locally for investigative purposes. As of FY 2020, the ALPRs are used as part of the Village's automated PassPort Parking Program, which notes vehicles in timed zones and determines Village parking permits in Village-owned lots/zones.

The ALPRs were purchased in FY 2017 and FY 2019. As of November 22, 2021, it has read 3,637,301 license plates. It has had 10,004 "hits" or alerts that determined something wrong with a particular vehicle (stolen, wanted, suspended, registered sex offenders, etc.). Staff also manually enter cars eligible for the Denver Boot. The ALPR identified one vehicle eligible for the boot in 2021, with over \$1,000 collected in fines/fees. Also, three Administrative Holds were identified using the ALPR, which led to \$1,500 in Administrative Fees to be collected. In addition, traffic stops initiated from an ALPR "hit" resulted in three arrests and were used to identify a vehicle used in a Vehicular Hijacking that occurred in a neighboring town.

Staff continues to monitor the performance of this technology to determine if it should be expanded for use on additional squad cars or to fixed-location ALPR cameras in the business, medical, school districts, and/or TIF districts. This technology has been successful with the Village's permit parking and parking enforcement program (PassPort). In addition, the ALPR Systems complement evidence located on the Village's Street Camera System.

### Project Alternative

The ALPR is a beneficial tool and has yielded results. With previous models, the useful life of this equipment is approximately five to seven years. Although replacement is recommended in FY 2024, if the system is still functioning correctly, replacement may be deferred for another year.

### Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None with extended warranty	\$1,000/year to continue annual maintenance after warranty period

### Carryover History

This project will be deferred from FY 2023 to FY 2024.

## Equipment - Police

Live Scan System

FY 2024

\$26,010

CERF

Critical

Recommended

Contingent on Funding

Original Purchase Date

FY 2018

Cost

\$0

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 are stored in their databases. This system is currently in use by, and connected to, all of the Cook County municipalities and streamlines the identification process. The life expectancy of the current system is six to eight years. The Village did not incur any costs for the initial system supplied by Cook County and the State of Illinois in 2004 or for the new system installed in November 2017.

### Project Alternative

Although the cost of replacement has been funded by Cook County and the State of Illinois in the past, there is no available information providing municipalities with future funding for this mission-critical automated fingerprint system. The Village should continue to fund this equipment in case the financial responsibility of the next system is passed on to the municipality. The Live Scan Equipment is considered mission-critical to daily police operations.

### Project Impact

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

### Carryover History

This item continues to be carried over for future fiscal years. Replacement is dependent on Cook County decisions, protocols for upgrading to a new system, and funding options.

## Equipment - Police

Overweight Truck Scales

FY 2024

\$18,926

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 enforcement officer who does periodic enforcement, separate from the planned missions. Overweight trucks are a detriment to Village streets because they decrease 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 ten years.

### Project Alternative

The enforcement officers will have to seek alternate weigh scales without the portable truck scales. This would require the truck enforcement officer to follow the truck to an alternate location outside the Village's jurisdiction, increasing the amount of time on the traffic stop and decreasing officers' availability. The purchase of this equipment may be deferred depending on the condition of the scales at the time of budget planning.

### Project Impact

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

### Carryover History

Although the scales have reached their useful life expectancy, replacement of these scales has been carried over from FY 2019. They are currently in full working order. Each year the scales are re-certified by the State of Illinois. They will require replacement only if found deficient by the State or if a newer, more efficient technology becomes available. The equipment will be carried over from FY 2023 to FY 2024.



**Equipment - Police**

**Pole Mounted Radar Speed Display Signs**      **FY 2025**      **\$48,658**      **CERF**

Critical

Recommended

Contingent on Funding

**Original Purchase Date**      FY 2020  
**Cost**      \$26,200  
**Funding History**      FY 2019 - FY 2020



**Project Description & Justification**

The Pole Mounted Radar Speed Display Signs are cost-effective solutions for traffic calming in residential neighborhoods, park areas, school zones, business districts, financial districts, and any location where vehicular, pedestrian, and bicyclist traffic is intermingled. These highly visible signs are strategically placed to get drivers' attention and provide an immediate reminder to slow down. These twelve (12) signs act as a 24-hour a day force multiplier to police patrol units and can be used to address/monitor citizen-driven complaints. The signs assist in the Village's mission to provide professional public safety services and reduce accidents. The Public Works and Police Departments work together to identify locations where vehicles are known to travel at higher rates of speed and where increased risks to the general public need mitigation. The new pole mounted signs have software to conduct traffic counts and calculate average speed traveled, which benefit both the Police and Public Works Departments for engineering and enforcement analysis. In addition, the use of this type of software assists with providing accurate data for grant writing opportunities.

The Pole Mounted Speed Radar Signs come with a dual-display with speed and message display and solar-powered. As of November 30, 2021, the solar-powered versions have been operating effectively.

**Project Alternative**

The alternatives to purchasing this equipment would be to increase the use of officers to monitor multiple areas for speeding violations and buy additional Speed Radar Trailers. Having speed radar equipment mounted permanently or for extended periods is a more effective and efficient use of Village resources. As the demand for pole mounted radar signs increases, a more comprehensive analysis of their strategic deployment throughout the community is in order.

**Project Impact**

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$1,200	Periodic maintenance - battery replacement

**Carryover History**

N/A

## Equipment - Police

Police Radios-Handheld and In-Car	FY 2023	\$40,411	CERF
	FY 2024	\$42,027	CERF
	FY 2025	\$43,708	CERF
	FY 2026	\$45,456	CERF
	FY 2027	\$47,274	CERF

Critical

Recommended

Contingent on Funding

Original Purchase Date	FY 2020-FY 2021
Cost	\$34,380
Funding History	FY 2010-FY 2021



### Project Description & Justification

The use of portable and in-car radios for public safety communication is imperative for rapid and effective response to any call for service. Radio communications allow the appropriate personnel and equipment to respond to an event. It enhances officer and citizen safety and provides immediate mission-critical information to be broadcast to individual officers or regional agencies monitoring the radio channel. Today's radios allow for many options such as analog/digital crossover, voice and data transmissions, Bluetooth, encryption, talk groups, priority channel scans, and GPS location tracking. Newer technology also allows for radio channel capacities that range from 32-300 channel allotment and can communicate with other local, county, state, and federal agencies. It is also possible to communicate across other discipline lines such as fire, public works, and emergency management.

The police radio program includes a mix of Village-owned single-band radios and dual-band radios owned exclusively by the Cook County Department of Homeland Security. Both types of radios are nearing or are past the end of life. In addition, Cook County can request the immediate return of their radio equipment at any time. Newer radio models and recent technology allows for tri-band radios in the handheld format and some dual-band in-car radios. The newer tri-band technology enhances interoperability over the VHF, UHF, and 800 MHz spectrums, improved voice clarity, and longer-lasting batteries. This multi-year project spans from FY 2021 - FY 2028.

Fiscal Year Projects include FY 2021 five (5) VHF-only handheld radios; FY 2022 no purchases; FY 2023 five (5) Tri-band handheld radios; FY 2024 five (5) Tri-band handheld radios; FY 2025 five (5) Tri-band handheld radios; and FY 2026 five (5) Tri-band handheld radios.

### Project Alternative

If the FY 2023-2026 WSCDC budgets allow for a group purchase for all WSCDC communities, it may reduce some costs to the Village. Public safety radios are mission-critical equipment used in day-to-day normal and emergency operations. A leasing option may be available for the handheld units but may not be supported for in-car mobile radios.

### Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$2,000	Periodic maintenance and battery replacement

### Carryover History

None

## Equipment - Police

**Radar-Vehicle and Handheld** **FY 2024** **\$38,433** **CERF**

Critical

Recommended

Contingent on Funding

**Original Purchase Date**

FY 2010-2020

**Cost**

N/A

**Funding History**

FY 2020-2021



### Project Description & Justification

Law enforcement vehicle-mounted and handheld radar units measure the speed of autos, trucks, and motorcycles on public roadways. This proven traffic enforcement and traffic calming technology have been an effective tool for police agencies for several decades. In River Forest, like other communities, the number one citizen-driven complaint is speeding vehicles on both the main and secondary streets within the Village. The industry standard for establishing probable cause and proving traffic violations in court has been the use of radar devices. This technology provides for the accurate measurement of speed.

The Police Department currently deploys seven in-car radar units and three handheld units. The in-car radar units are mounted in the six front-line squad cars and the dedicated traffic enforcement unit. The three handheld radar units are used by officers assigned to plainclothes units or secondary line squad cars. The addition of an eighth in-car radar unit will allow a system to be installed in the School Liaison Officer's marked squad car for use as part of his regular duties of ensuring school zones are safe for both vehicles and pedestrians. The current handheld and in-car radar units are past or near end of life. A recommended lifespan of these systems is five to seven years. The updated radar technologies draw less power which cuts down on vehicle battery and alternator maintenance. In addition, the new systems will improve the overall effectiveness and efficiency of traffic enforcement operations of the department.

The cost of eight in-car radar systems is \$22,179 (@ \$2,772 per unit). Installation is estimated at \$500 per unit. The cost of three (3) lidar/photo handheld radar units is \$9,945.

### Project Alternative

The use of radar for speed enforcement is an industry-standard. The use of pole mounted speed radar enforcement cameras as an alternative is prohibited under Illinois state law for small municipalities. Lidar, another speed enforcement technology, is cost-prohibitive because the costs are 30% to 50% more than the standard radar systems.

### Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
Under Warranty for one to three years	Periodic Maintenance and Battery Replacement

### Carryover History

This project was deferred from FY 2021 to FY 2022 and deferred to FY 2023. Due to the current budgetary and fiscal climates, the project will be deferred again to FY 2024 since the equipment remains functional.

**Equipment - Police**

**Speed Monitor/Message Board Trailer**      **FY 2027**      **\$18,064**      **CERF**

- Critical                     
  Recommended                     
  Contingent on Funding



**Original Purchase Date**                      FY 2017  
**Cost**    \$13,556  
**Funding History**                              N/A

**Project Description & Justification**

The Speed Monitor/Message Trailer monitors speed and alerts drivers traveling over the posted speed limit. The 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 can conduct traffic counts and calculate average speed traveled, which will benefit both the Police and Public Works Departments. The message board adds the ability to alert drivers to detours and reminds drivers to watch their speed. Some models can take photos of violators' vehicles. The lifespan of this equipment is approximately nine to 12 years.

**Project Alternative**

The alternative to purchasing this equipment would be to have an officer monitoring an area for speeding violations. Although this often happens (officers enforcing speed limits) as part of traffic enforcement missions, utilizing a speed trailer is an additional tool to control excessive speed. In addition, the purchase of stand-alone message boards without radar capability would have to be considered to provide the community with visible alerts on the street.

**Project Impact**

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
Under warranty for one year	Periodic maintenance - battery replacement

**Carryover History**

None

**Equipment - Police**

Digital In-Car Cameras

FY 2024

\$64,320

CERF

Critical

Recommended

Contingent on Funding

**Original Purchase Date**

FY 2017

**Cost**

\$50,761

**Funding History**

N/A



**Project Description & Justification**

The seven front-line vehicles and the unmarked traffic unit currently have digital cameras mounted to the dashboard. The cameras/audio system is used during traffic stops and arrests for recording purposes. Evidence obtained during a traffic arrest is utilized during a trial. The traffic stop videos are downloaded on a server and stored for a minimum of 90 days or longer, depending on the type of incident. Any future upgrades to the in-car camera system may require upgrades to the data storage system on the Village’s computer network. The in-car cameras have an expected lifespan of seven years.

**Project Alternative**

Digital in-car cameras are a necessary tool that helps protect the Village and its officers from false accusations, obtain evidence to support criminal convictions, and increase police transparency for the public. Replacement is highly recommended.

**Project Impact**

There is no annual service fee for this program.

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$1,100	Repair/Replacement of equipment

**Carryover History**

None

## Equipment - Police

Street Camera System (Original Project)

FY 2027

\$194,662

CERF

Critical

Recommended

Contingent on Funding

Original Purchase Date

FY 2018

Cost

\$110,517

Funding History

N/A



### Project Description & Justification

The Village currently has 20 Pan-Tilt-Zoom (PTZ) digital cameras located along the business corridor on Lake Street and 38 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, and patrol officers on their squad car laptops, desktops, or video monitors. The digital images are stored for a minimum of 90 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 five to eight years. Future CIP processes may combine Village Hall, Street Cameras, and future camera expansion projects for planning and funding purposes. A strategic planning study by the Village's IT consultant in FY 2020 included a recommendation for future program expansion, equipment costs, infrastructure upgrades, IT costs, and maintenance costs. That information is in the Information Technology section of the CIP.

This program has been very successful as a force multiplier. Officers routinely refer to the cameras to identify 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 captured on the camera system and later identified as perpetrators of a crime. It also allows for 24-hour situational awareness of weather conditions and pedestrian/traffic flow.



Retail Theft



Retail Theft



Bike Theft



Burglary



Drug Deal



Robbery



Not only are the cameras used for helping to identify criminal suspects, but the cameras have also been used for situational awareness. For example, during the blizzard of 2011, the Public Works department monitored the snow accumulation and effects on traffic along the Lake Street business corridor.

<b>Repair/Improvement</b>	<b>Estimated Cost</b>	<b>Fiscal Year</b>
Camera System Servers	\$64,887	FY 2027
Street Camera System	\$64,887	FY 2027
Wireless Point to Point Antenna/Backhaul	\$64,887	FY 2027
<b>Total Project Cost</b>	<b>\$194,662</b>	

**Project Alternative**

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

**Project Impact**

There is no annual service fee for this program.

<b>Annual \$ Impact on Operating Budget</b>	<b>Description of Operating Budget Impact</b>
None	There is no recurring annual cost

**Carryover History**

During the past three fiscal years, the Village replaced most servers, drivers, storage, software, cables, backup batteries, antennas, mounting hardware, and cameras. Some equipment may have a longer lifespan, which may reduce some estimated costs or allow for partial carryover of some equipment. At this time, the project will be carried over from FY 2024 to FY 2027. During FY 2022, the Village's vendor will be reworking the project and presenting an updated plan for FY 2027 and FY 2028 to create two phases and provide an updated equipment and installation plan. It is believed that the overall costs will be reduced, and the project may be extended past FY 2027. The multi-year implementation of the Strategic Village Camera Expansion Plan is expected to run from FY 2022 to FY 2025. The Village's IT and camera vendor anticipate that replacement of both the Strategic Expansion Plan and the Original Camera System will be combined for future planning and funding purposes in the coming fiscal years.



## Equipment - Police

Street Camera System Strategic Plan		CIF	M-TIF	N-TIF
Implementation	FY 2023	\$105,144	\$0	\$0
	FY 2024	\$31,544	\$0	\$73,600
	FY 2025	\$45,084	\$0	\$0
	FY 2026	\$0	\$0	\$0
	FY 2027	\$0	\$0	\$0

Critical

Recommended

Contingent on Funding

Original Purchase Date	N/A
Cost	N/A
Funding History	New Project



### Project Description & Justification

The Village has improved and expanded its street camera system over the past few years. This asset serves as a force multiplier for the Police Department and is a constant tool for day-to-day operations. Due to the expanding needs for the wireless network, equipment, and storage, paired with the desire to continue to expand the system, the Village completed a review and planning process in FY 2020 to determine best practices and needs going forward. This plan formulated recommendations for future expansion and maintenance throughout the Village. During FY 2021, the Village completed upgrades to the storage and software system that operates the street cameras and entered into an agreement with a new vendor for maintenance service and future expansion. Phase 1 of the plan included expanding the Village's camera system to the south side of the Village, primarily along Madison Street and Washington Boulevard, in FY 2022.

### Recommended for FY 2023

#### Phase 2 - Middle Expansion - \$105,144

Phase 3 includes expanding the Village's camera system to the central corridors of town, primarily along Chicago Avenue and Augusta Street as they intersect Harlem Avenue, Lathrop Avenue, and Thatcher Avenue. In total, the expansion includes five camera sites consisting of seven cameras. The proposed cost consists of all hardware, software, licensing, radio equipment, electric work, and consulting labor.

### Recommended for FY 2024

#### Phase 3 - North Expansion - \$105,144 (North - TIF - \$73,600, Thatcher - CIF - \$31,544)

Phase 3 includes expanding the Village's camera system to the central corridors of town, primarily along North Avenue and Division Street as they intersect Harlem Avenue, Lathrop Avenue, and Thatcher Avenue. In total, the expansion includes five camera sites consisting of nine cameras. The proposed cost includes all hardware, software, licensing, radio equipment, electric work, and consulting labor. Five of the seven proposed work locations are within the North Avenue TIF and are a TIF-eligible public safety enhancement. TIF funds will be used to help fund this project.

### Recommended for FY 2025

#### Phase 4 - Optimization of Existing Infrastructure - \$45,084

Phase 4 includes the replacement and standardization of existing equipment at five locations in total. The proposed cost includes all hardware, software, licensing, radio equipment, electric work, and consulting labor.



**Project Alternative**

An alternative to this phasing plan would be to continue operating in a reactive manner and address issues as they arise. Additionally, the Village could elect to continue to expand on a case-by-case basis or not expand the system. These alternatives are not recommended due to difficulties created and efficiencies lost by completing the project piecemeal.

**Project Impact**

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$7,000	Projected annual maintenance contract.

## Equipment - Police

Taser-Less Lethal Equipment

FY 2024

\$29,952

CERF

Critical

Recommended

Contingent on Funding

Original Purchase Date

FY 2015-2017

Cost

\$16,700

Funding History

GF



### Project Description & Justification

The program was initiated in December 2014, and the Department currently has eight Tasers in service and currently deploys the Taser X26 model. The Taser is one of the several less-lethal force options that officers carry daily. Officers must attend training and complete ongoing certifications to carry this tool. The Department has several members certified as trainers. This device allows officers to maintain a safe distance when attempting to render a threat incapable of fighting back or attacking another individual.

The Taser X26 model is expected to be sunsetted in 18 to 36 months. The useful life of this model is five to seven years. In October 2019, Taser introduced model 7, which has an advanced flashlight, laser, accuracy, multiple shot deployment, and electronic reporting capabilities. The Taser 7 model costs \$3,744 per unit (with extended warranty and accessories).

### Project Alternative

There is no project alternative to this less-lethal conductive energy weapon (CEW) that offers options to the use of a lethal firearm or the close-quarter less-lethal OC Spray and standard baton. The Taser is recommended by IRMA, the Village's insurer, due to research data that show reductions in both offender and officer injuries and death.

### Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$2,020	Replacement batteries and cartridges.

### Carryover History

Carried over from FY 2022 to FY 2023. The project will be deferred to FY 2024.

**Equipment - Police**

<b>Body Worn Camera System</b>	<b>FY 2023</b>	<b>\$0</b>	<b>GF</b>
	<b>FY 2024</b>	<b>\$140,550</b>	<b>GF</b>
	<b>FY 2025</b>	<b>\$0</b>	<b>GF</b>
	<b>FY 2026</b>	<b>\$0</b>	<b>GF</b>
	<b>FY 2027</b>	<b>\$61,988</b>	<b>GF</b>

Critical
  Recommended
  Contingent on Funding

<b>Original Purchase Date</b>	N/A
<b>Cost</b>	N/A
<b>Funding History</b>	New Project



**Project Description & Justification**

The Illinois SAFE-T Act was enacted in 2021. The law requires that Law Enforcement Agencies in Illinois equip and train sworn law enforcement with Body Worn Camera systems by January 1, 2025. The Department does not currently have an entire Body Worn Camera System, including equipment, hardware, software, and storage. The project would receive funding for FY 2024 and purchase the whole system in FY 2024. The software licensing agreements are valid for three years. Funding in FY 2027 will be used to renew licensing. The licensing costs include access to the video and information stored on servers. A determination will need to be made if the video and information will be stored on a cloud server, local server, or other storage options. Additionally, licensing allows the use of redaction software required for privacy and FOIA restrictions.

**Project Alternative**

There is no project alternative to this equipment as State Law mandates that all Law Enforcement Agencies in Illinois must have Body Worn Cameras assigned to sworn law enforcement officers by January 1, 2025. The Village will pursue all available grant funding, including through its insurance carrier, to offset the cost of this purchase.

**Project Impact**

<b>Annual \$ Impact on Operating Budget</b>	<b>Description of Operating Budget Impact</b>
Under Extended Warranty for three years	Periodic Maintenance and Battery Replacement

**Carryover History**

None

## Equipment - Fire

SCBA Breathing Air Compressor

FY 2023

\$45,000

CERF

Critical

Recommended

Contingent on Funding

Original Purchase Date

FY 1999

Cost

\$17,200

Funding History

N/A



### Project Description & Justification

This project aims to upgrade and replace the Air Compressor that fills the self-contained breathing apparatus (SCBAs). 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 IDLH (immediately dangerous to life and health) atmosphere. Staff has delayed the scheduled purchase of a new SCBA air compressor because the current equipment continues to last longer than anticipated. However, this piece of equipment is critical during times of fire suppression and training when SCBA's are in use. A small equipment grant was submitted to the Illinois State Fire Marshal's Office in October 2021 for this item in the amount of \$26,000, which is the maximum amount allowed under grant guidelines. New standards requiring CO2 detection will accelerate the replacement of this equipment; however, its purchase is being deferred to FY 2023 while the Village's grant application is considered.

The Village purchased the original unit in 1999. This equipment continues to provide breathing air for SCBA needs. Since 1999, new safety components have been required on all new compressors that the current unit does not have. A new carbon monoxide (CO) monitoring system is needed to monitor the CO levels around the compressor and shut down if not in an acceptable range. Perhaps the most needed safety device is a total containment fill station. Currently, SCBA bottles are slid into two sleeves to contain the bottles in case of over-pressurization. The new compressor has a containment drawer where the SCBA bottles are slid into tubes within a drawer that closes and latches before filling operations are started.

### Project Alternative

An alternative to this purchase is to continue maintenance of the equipment and keep it usable for as long as possible; however, the immediate purchase would be required if the equipment fails and is not repairable. In the event of failure of this equipment, the River Forest Fire Department would be able to rely on neighboring communities to fill SCBA bottles until a new unit arrives.

### Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$1,500	Annual maintenance & flow testing after third year.

### Carryover History

This item has been carried over from FY 2017

## Equipment - Fire

ALS Defibrillator #1

FY 2024

\$28,000

CERF

Critical

Recommended

Contingent on Funding

Original Purchase Date

FY 2016

Cost

\$20,538

Funding History

N/A



### Project Description & Justification

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

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

### Project Alternative

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

The Village intends to purchase and place the new ALS defibrillator on the front line ambulance and move current frontline equipment to Ambulance 215.

### Project Impact

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

### Carryover History

None

## Equipment - Fire

Hydraulic Extrication Equipment

FY 2024

\$45,000

CERF

Critical

Recommended

Contingent on Funding

Original Purchase Date

FY 2013

Cost

\$32,640

Funding History

N/A



### Project Description & Justification

This project aims to upgrade and replace the hydraulic extrication tools on the frontline engine and Quint. Firefighting crews operate this equipment during vehicular accidents and technical rescue responses. The current tools have been in use for five years with a planned useful life of ten years. New technology allows for lighter weight tools and more powerful lifting, spreading, and cutting pressures. New power units may be all-electric (battery-powered) in the future, taking up less space on the apparatus. The Genesis extrication equipment has state-of-the-art tools, which are lighter, faster, and easier for personnel to operate, thereby reducing the potential for back injuries and strains.

### Project Alternative

Evaluate new technology as the useful life limit approaches.

### Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$550 after one year	Annual maintenance after first year warranty period expires.

### Carryover History

None

## Equipment - Fire

### Self-Contained Breathing Apparatus (SCBA)

FY 2026

\$175,000

CERF

Critical

Recommended

Contingent on Funding

Original Purchase Date

FY 2016

Cost

\$110,200

Repairs (through 11/30)

\$0



### Project Description & Justification

This project aims to upgrade and replace 20 self-contained breathing apparatus (SCBAs). This equipment is a critical part of the firefighter's personal protective equipment (PPE). The NFPA standard for SCBAs update is every five years. Upgrades enhance the safety of firefighters when operating in an IDLH (immediately dangerous to life and health) atmosphere.

### Project Alternative

The Village applies for grants through the Assistance to Firefighters Grant Program (AFG) for 18 SCBA's, which is the maximum number of units we can apply for under grant guidelines. The grant covers 95% of the cost of the equipment and the Village must contribute the remaining 5%. The Village would have to utilize the CERF to fund the cost of the remaining two SCBAs.

Purchasing new SCBAs will require the Village to contribute a one-time expense for seven SCBA face pieces and to equip all personnel and spare units on each vehicle. All compressed air bottles require hydrostatic testing every five years and the purchase of new equipment will provide a savings to cover those costs.

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

### Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$2,000 in maintenance costs for annual testing and \$1,000 in parts replacement.	Continue annual maintenance & flow testing after second year.

### Carryover History

None

**Equipment - Public Works**

<b>Stump Grinder</b>	<b>FY 2024</b>	<b>\$50,000</b>	<b>CERF</b>
<input type="radio"/> Critical <input checked="" type="radio"/> Recommended <input type="radio"/> Contingent on Funding			
Make	Carlton		
Model	7500		
Purchase Cost	\$20,000		
Purchased	FY 2000		
Useful Life	15 years		
Current Life	22 years		

**Project Description & Justification**

This equipment grinds tree stumps utilizing a rotating cutting disk that chips away the tree stump located on the Village right-of-way (typically the parkway). It is the only piece of equipment in the Village’s fleet that can perform this operation.

Total Equipment Hours	1,249	Date	10/12/2021
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**Recent Maintenance Costs**

Date	Maintenance Performed	Cost
7/2013	Replace fan belt	\$12.00
9/2013	Replace worn cutting teeth	\$150.00
8/2014	Replace worn cutting teeth	\$200.00
9/2014	Replace fan belt	\$825.00
9/2014	Replace worn cutting teeth	\$175.00
4/2015	Replace remote control	\$678.45
<b>Total</b>		<b>\$2,040.45</b>

**Project Alternative**

Alternatives to replacing the stump grinder are as follows:

1. Defer replacing the system until it breaks down completely.
2. Purchase a used stump grinder.
3. Lease a stump grinder.
4. Outsource all stump grinding services.
5. Incorporate stump grinding into the tree removal contract and maintain the current unit to grind stumps from in-house tree removals. This would reduce the workload on this piece of equipment by half or more and extend the life of the stumper.

Staff will analyze other alternatives and evaluate closer to the scheduled replacement of this equipment.

**Operational Impact**

Although there are alternatives for performing and/or providing for the removal of parkway tree stumps, not performing or providing this service would create trip hazard liabilities to the Village by eliminating the Village’s capacity to remove tree stumps.

**Project Impact**

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



**Carryover History**

The unit was originally scheduled for replacement in FY 2015, but since there have not been any significant maintenance issues, Staff recommends deferring its replacement to FY 2024.

**Equipment - Public Works**

**Stainless Steel V-Box Salt Spreader (Large)                      FY 2024                      \$23,000                      CERF**

Critical

Recommended

Contingent on Funding

Make                      Swenson  
 Model  
 Year                      2006  
 Purchase Cost                      \$14,424  
 Purchased                      FY 2007  
 Useful Life                      12 years  
 Current Life                      16 years



**Project Description & Justification**

The Village owns and utilizes three large front-line v-box salt spreaders that are used for snow fighting operations. This unit is also equipped with a liquid pre-wetting system that is used to melt snow and ice when temperatures are below twenty degrees.

Total Vehicle Miles	N/A
---------------------	-----

**Recent Maintenance Costs**

Date	Maintenance Performed	Cost
	None to date	
<b>Total</b>		<b>\$0.00</b>

**Project Alternative**

Contractual salting and snow removal.

**Operational Impact**

Not having this unit would reduce the Village’s ability to salt roadways by 33%.

**Project Impact**

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

**Carryover History**

The unit was initially scheduled for replacement in FY 2019, but since there have not been any significant maintenance issues, Staff recommends deferring its replacement to FY 2024. The spreader will then be re-evaluated for replacement.

**Equipment - Public Works**

**Stainless Steel V-Box Salt Spreader (Small #1)      FY 2025      \$20,000      CERF**

Critical                       Recommended                       Contingent on Funding

Make                      Swenson  
 Model  
 Year                      2013  
 Purchase Cost              \$13,749  
 Purchased              FY 2013  
 Useful Life              12 years  
 Current Life              9 years



**Project Description & Justification**

The Village owns and utilizes three large front-line v-box salt spreaders used for snow fighting operations. This unit is also equipped with a liquid pre-wetting system used to melt snow and ice when temperatures are below twenty degrees.

Total Vehicle Miles	N/A
---------------------	-----

**Recent Maintenance Costs**

Date	Maintenance Performed	Cost
11/2013	Replaced liquid holding tank	\$350.00
11/2015	Replaced rubber hose and fittings	\$70.00
9/2020	Rebuild Calcium chloride pump	\$250.00
<b>Total</b>		<b>\$670.00</b>

**Project Alternative**

Contractual salting and snow removal.

**Operational Impact**

Not having this unit would reduce the Village’s ability to salt roadways by 33%.

**Project Impact**

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

**Carryover History**

None

**Equipment - Public Works**

<b>Sewer Televising System</b>	<b>FY 2026</b>	<b>\$91,000</b>	<b>CERF/WS</b>
	<input checked="" type="radio"/> Critical	<input type="radio"/> Recommended	<input type="radio"/> Contingent on Funding
Make	Envirosight		
Model	Rover "X"		
Year	2016		
Purchase Cost	\$71,200		
Purchased	FY 2016		
Useful Life	10 years		
Current Life	6 years		

**Project Description & Justification**

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

**Recent Maintenance Costs**

Date	Maintenance Performed	Cost
9/2018	Repair camera cable	\$450.00
8/2019	Repair camera joystick	\$397.27
6/2020	Repair handheld controller	\$1,145.50
7/2020	Repair camera cable	\$600.00
9/2020	Repair camera reel	\$844.69
<b>Total</b>		<b>\$3,437.46</b>

**Project Alternative**

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

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

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

Alternatives to replacing the sewer televising equipment are as follows:

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

**Operational Impact**

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

**Project Impact**

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

**Carryover History**

None

## Equipment - Public Works

Asphalt Kettle

FY 2024

\$25,000

CERF

Critical

Recommended

Contingent on Funding

Make Stepp Manufacturing  
 Model SPH-2.0  
 Purchase Cost \$14,445  
 Purchased FY 2008  
 Useful Life 15 years  
 Current Life 15 years



### Project Description & Justification

This tandem axle trailer is used for transporting cold patch material. The trailer is equipped with a diesel fuel-fired burner capable of heating hot and cold patch material to the proper temperature.

### Recent Maintenance Costs

Date	Maintenance Performed	Cost
4/2016	Repair leaf springs	\$300.00
7/2017	Replace battery	\$100.00
12/2017	Replace tires	\$300.00
<b>Total</b>		<b>\$700.00</b>

### Project Alternative

Contract all pothole and permanent patching services.

### Operational Impact

Without this equipment, patching potholes would have to be done from the back of a dump truck. The Village would not have the ability to work with a hot patch (permanent) asphalt material.

### Project Impact

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

### Carryover History

This purchase was carried over from FY 2023 to FY 2024.

**Equipment - Public Works**

**Permeable Paver Maintenance System**

**FY 2024**

**\$188,894**

**WS**

Critical

Recommended

Contingent on Funding

Make Triverus  
 Model Municipal Cleaning Vehicle (MCV)  
 Purchase Cost \$188,894  
 Purchased New Equipment  
 Useful Life 12 years  
 Current Life n/a



**Project Description & Justification**

This permeable paver maintenance cleaning machine performs pervious pavement cleaning and restoration for alleys, parking lots, and other pervious concrete/asphalt/paver areas. It also includes multifunction capability since the cleaning platform and recovery module can be removed to allow other Bobcat attachments to be fitted for other operations. It has a high flow vacuum recovery system that provides water and debris recovery on pervious surfaces. Aggregate then needs to be swept back into the joints of the paver bricks once this cleaning is completed. This work has been performed in past years by a contractor.

Based on the number of pavers installed and planned in Village alleys and parking lots, costs will continue to rise for contractual maintenance. The most recent contractor charged \$225 per square foot. Since this maintenance should be done every two years at each location, this would equate to \$50,000 needed for contractual services each year. By purchasing and performing this maintenance in-house, there will be a return on investment for this purchase seen in less than four years.

**Project Alternative**

Use a contractor for all permeable paver maintenance services.

**Operational Impact**

Not having the ability for operations staff to perform maintenance on the permeable paver area of Village alleys and parking lots will continue to increase the cost to have this work done by a contractor as more alleys and parking lots are installed with permeable pavers.

**Project Impact**

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

**Carryover History**

None

## Equipment - Public Works

### Salt Brine Equipment

FY 2025

\$26,000

CERF

Critical

Recommended

Contingent on Funding

**Make** SnowEx  
**Model** Brine Pro 2000  
**Year** 2017  
**Purchase Cost** \$20,000  
**Purchased** FY 2017  
**Useful Life** 8 years  
**Current Life** 5 years



### Project Description & Justification

This equipment produces 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 improves winter road conditions while reducing overall material and operating costs.

### Recent Maintenance Costs

Date	Maintenance Performed	Cost
12/2018	Add aux. filter	\$125.00
12/2019	Rebuilt pump and replaced bearings	\$250.00
<b>Total</b>		<b>\$375.00</b>

### Project Impact

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

### Carryover History

None



**Equipment - Public Works / Water and Sewer**

<b>6" Trash Pump #1</b>	<b>FY 2024</b>	<b>\$22,000</b>	<b>CERF/WS</b>
<input checked="" type="radio"/> Critical	<input type="radio"/> Recommended	<input type="radio"/> Contingent on Funding	
Make	Wacker		
Model			
Purchase Cost	\$9,600	*Purchased used	
Purchased	FY 2009		
Useful Life	15 years		
Current Life	13 years		



**Project Description & Justification**

The Village owns two six-inch trash pumps capable of pumping water at up to 1,300 gallons per minute. These pumps dewater streets and sewers during flood events.

Total Equipment Hours	310	Date	10/12/2020
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**Recent Maintenance Costs**

Date	Maintenance Performed	Cost
8/2020	Replace batteries	\$300.00
<b>Total</b>		<b>\$300.00</b>

**Project Alternative**

The alternative is to rent this pump as needed; however, supplies of this pump are limited and may not be available when needed.

**Operational Impact**

Not having this equipment limits the Village's ability to respond to flood events. That may impact multiple residents.

**Project Impact**

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

**Carryover History**

None

**Equipment - Public Works**

Electric Vehicle Charging Station - Fleet Planning	FY 2023	\$25,000	CIF
	FY 2024	\$50,000	CIF
	FY 2025	\$50,000	CIF
	FY 2026	\$50,000	CIF
	FY 2027	\$50,000	CIF

- Critical
  Recommended
  Contingent on Funding

Make  
 Model  
 Purchase Cost  
 Purchased  
 Useful Life  
 Current Life            New equipment



**Project Description & Justification**

The Village purchased and installed a Level 2 electric vehicle charging station behind Village Hall on Central Avenue in FY 2022. In FY 2023, the Village plans to complete a study to identify viable locations for future stations throughout the Village. The Police Department is also planning to replace a portion of its fleet with electric vehicles in FY 2024. As such, the Village will need to install an additional charging station for these vehicles. It is anticipated that a Level 3 charger will be required based on continuous vehicle usage, and \$50,000 is budgeted for this purpose. The budget also anticipates the installation of a new Level 3 charger in future years, pending the results of the Village-wide study.

**Recent Maintenance Costs**

Date	Maintenance Performed	Cost
	No Maintenance to date	
<b>Total</b>		<b>\$0.00</b>

**Project Alternative**

The alternative is to continue to replace Village vehicles with standard combustion engine vehicles.

**Operational Impact**

There is no current impact to Village Operations related to this project.

**Project Impact**

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

**Carryover History**

None

# INFORMATION TECHNOLOGY

## ***Information Technology – Five Year Capital Improvement Program***

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The Village's Information Technology (IT) function includes purchasing and maintaining all computer systems and personal computers, providing technical support to all systems, and supervising Village consultants and vendors. The Village outsources its day-to-day and project-specific IT support services to its current vendor, ClientFirst. In FY 2019, ClientFirst updated the Village's IT Strategic Plan with recommendations from that plan incorporated into the CIP. This plan evaluated the Village's hardware and software capabilities to determine any recommended improvements that could be made to meet the Village's business needs fully.

The following improvements are proposed for FY 2023:

<b>Equipment</b>	<b>Cost of Equipment</b>	<b>Funding Source</b>	<b>This Project is:</b>
Network Improvements	\$ 161,620	CIF	Recommended
Software Upgrades	\$ 145,100	CIF	Recommended
Computer Replacements	\$ 47,000	CIF	Contingent
IT Security Initiatives	\$ 33,000	CIF	Contingent
<b>Total</b>	<b>\$ 386,720</b>		

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

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

These projects are highlighted in yellow.

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

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

**Village of River Forest, Illinois**  
**Five Year Capital Improvement Program**  
**Information Technology**  
**Fiscal Year 2023 Budget**

	This Project is:	Fiscal Year					Five Year Total	Funding Source
		2023	2024	2025	2026	2027		
Network Improvements	Recommended	161,620	-	-	-	13,000	174,620	CIF
Software Upgrades	Recommended	145,100	95,000	75,000	75,000	-	390,100	CIF
Computer Replacements	Contingent	47,000	125,000	47,000	47,000	47,000	313,000	CIF
IT Security Initiatives	Contingent	33,000	-	-	-	-	33,000	CIF
<b>Total</b>		<b>386,720</b>	<b>220,000</b>	<b>122,000</b>	<b>122,000</b>	<b>60,000</b>	<b>910,720</b>	

Proposed Funding Source	Fiscal Year					Five Year Total
	2023	2024	2025	2026	2027	
Capital Improvement Fund (CIF)	386,720	220,000	122,000	122,000	60,000	910,720
<b>Totals</b>	<b>386,720</b>	<b>220,000</b>	<b>122,000</b>	<b>122,000</b>	<b>60,000</b>	<b>910,720</b>

## Information Technology

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<b>Network Improvements</b>	<b>FY 2023</b>	<b>\$161,620</b>	<b>CIF</b>
	<b>FY 2024</b>	<b>\$0</b>	<b>CIF</b>
	<b>FY 2025</b>	<b>\$0</b>	<b>CIF</b>
	<b>FY 2026</b>	<b>\$0</b>	<b>CIF</b>
	<b>FY 2027</b>	<b>\$13,000</b>	<b>CIF</b>

Critical

Recommended

Contingent on Funding

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### Spending History

FY 2022	\$	-
FY 2021	\$	37,000
FY 2020	\$	12,500
FY 2019	\$	18,300
FY 2018	\$	20,300

### Project Description & Justification

#### Recommended for FY 2023

##### Hyperconverged Infrastructure System - \$115,000

The Village's current server system was upgraded in FY 2019 but needs to be replaced. The replacement scheduling in FY 2022 was consistent with the recommended seven-year lifespan, but the project was deferred due to funding. The recommendation is to now replace it in FY 2023. This initiative will provide the Village with a stable and responsive platform for all computer-related tasks and help ensure minimal downtime.

A SAN (storage area network) is a high-performance shared data storage solution. The SAN allows all servers to access the same data and provide server redundancy. The Village currently has one SAN with two expansion shelves in the production environment. The Village then utilizes its other SANs for backup storage to extend the useful life of the hardware. This project was proposed to complement the server replacement project in FY 2022.

Systems that include processing power and disk in a single unit have been introduced to replace servers, SANs, and the network equipment interconnecting the two. These systems are called hyperconverged infrastructure (HCI). The consolidation of three components reduces IT support and management time. The move to HCI also reduced the original projected budget for the server and SAN replacement by \$45,000.

##### Switch Replacement - \$43,900

A switch is a piece of hardware that connects other devices, including servers and computers, by using packet switching to receive and forward data to the destination device. The Village has three sets of switches, two edge switches, and one core switch. Best practice is to replace these switches on a seven-year cycle. The two edge switches were scheduled for replacement in FY 2022 but deferred. The core switch will be eight years old and is due for replacement in FY 2023. This cost includes the replacement of all switches and required patch cables and labor to install and properly configure.

UPS (Uninterruptible Power Supply) Replacement - \$2,720

Uninterruptible Power Supply (UPS) devices provide reliable power for resilient computer systems and are critical to ensure uninterrupted and stable operations. The Village has three UPS devices, two at Village Hall and another off-site for a backup server. The UPS at the backup server contains a battery at the end of its life that was scheduled for replacement in FY 2022 but was deferred to FY 2023.

**Recommended for FY 2027**

Camera Switch Replacement - \$13,000

A switch is a piece of hardware that connects other devices, in this case, servers and computers, by using packet switching to receive and forward data to the destination device. The set of switches dedicated to the Village's camera system will require replacement in FY 2027.

**Five-Year Network Capital Project Cost Summary**

Hyperconverged Infrastructure System	
Hardware/Software/Licensing	\$110,000
Consulting	\$5,000
Switch Replacement	
Hardware/Software/Licensing	\$33,000
Consulting	\$10,900
UPS (Uninterruptible Power Supply) Replacement	
Hardware/Software/Licensing	\$1,700
Consulting	\$1,020
Camera Switch Replacement	
Hardware/Software/Licensing	\$11,000
Consulting	\$2,000
Total	\$174,620

**Project Alternative**

Alternatives to all projects include continuing with the status quo or deferring the projects to a later date; however, it is not recommended. Projects deferred from FY 2022 to FY 2023 are now critical to avoid network outages and the potential for expensive repairs with the current server system. The Village continues to move toward managing its computer network based on best practices, and these recommendations are consistent with that approach.

**Project Impact**

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$0	N/A

## Information Technology

Software Upgrades	FY 2023	\$145,100	CIF
	FY 2024	\$95,000	CIF
	FY 2025	\$75,000	CIF
	FY 2026	\$75,000	CIF
	FY 2027	\$0	CIF

Critical

Recommended

Contingent on Funding

### Spending History

FY 2022	\$	-
FY 2021	\$	423,100
FY 2020	\$	230,600
FY 2019	\$	40,000
FY 2018	\$	85,500

### Project Description & Justification

#### Recommended for FY 2023

##### ERP System Sustainability Planning Contribution - \$75,000

The Village utilizes Springbrook as its ERP tool. Currently, this system supports budgeting, payroll, accounts payable and receivable, building permits, and more. Use of the system is critical for day-to-day and long-term Village operations. It is recommended that the Village make annual contributions to prepare for and fund the enhancement, improvement, or replacement of the ERP system in the next one to four years. Scheduled contributions of \$75,000 in FY 2021 and FY 2022 were deferred to FY 2025 and FY 2026.

##### Laserfiche Gap Analysis and Improvement Plan - \$13,100

This project has been in the CIP since FY 2020 but is being deferred again to FY 2023 due to funding requests for priority projects. The Village has been utilizing the Laserfiche document imaging program for several years to store Village records electronically. This has reduced physical storage needs at the Village Hall and improved productivity by making records easier to locate and reproduce when needed. While leveraged heavily by the Village today, Laserfiche can serve more purposes in the future. These services include an online web portal to improve records searches, online form expansion, and better integration with GIS. Due to the complexity of some parts of the system and the scope of the work, a plan is recommended to outline best practices and workflows for the Village to use moving forward.

##### Office 365 Upgrade - \$51,000

The Village is currently using an on-premise Microsoft Exchange server for Village email that has reached the end of its useful life. The recommendation is to migrate from the on-premise Exchange server to a cloud-based Office 365. The cloud-based service will provide more reliable service regardless of on-site server performance. The estimated cost is based on 100 users at the G3 Licensing level, including Exchange, One Drive, SharePoint, Teams, MS Word, Excel, PowerPoint, Outlook, Publisher, Access, Self Service Portal, eDiscovery tools, and more.



Training for Office 365 - \$6,000

The migration to Office 365 will bring a change in the user experience for employees who use the Microsoft suite of products daily. To ensure a smooth transition and to help employees create efficiencies in their work by utilizing improved software tools, training is being recommended to compliment the recommended upgrade to Office 365.

**Recommended for FY 2024**

Laserfiche Upgrades - \$20,000

The Village anticipates implementing improvements and upgrades to the Laserfiche system in FY 2024 that are products of the improvement plan. Various upgrades to the Laserfiche system, over time, will allow the Village to achieve efficiencies and improve access to records.

**Five-Year Software Capital Project Cost Summary**

ERP System Sustainability Planning Contribution	
Hardware/Software/Licensing	\$75,000
Consulting	\$0
Laserfiche Gap Analysis and Improvement Plan	
Hardware/Software/Licensing	\$10,100
Implementation Services	\$3,000
Office 365 Upgrade	
Hardware/Software/Licensing	\$36,000
Implementation Services	\$15,000
Training for Office 365	
Hardware/Software/Licensing	\$0
Consulting	\$6,000
Laserfiche Upgrades	
Hardware/Software/Licensing	\$18,000
Consulting	\$2,000
Total	\$165,100

**Project Alternative**

Office 365 Upgrades have become critical after being deferred in FY 2022. The Village could continue using its on-premise Microsoft servers but will continue to experience times of unreliable email service and costs associated with the extensive maintenance and repairs. ERP contributions could be deferred or lowered but could increase the cost if left to be a one-time payment. Laserfiche improvements could also be deferred to proceed with more critical projects. Staff can continue to utilize the current functions of Laserfiche as is today.

**Project Impact**

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$5,550 in FY 2023, \$8,550 in FY 2024	<i>Laserfiche:</i> Annual maintenance and licensing fee for Laserfiche is currently \$5,550. Adding features such as WebLink would increase the annual cost by \$3,000.
\$36,000	<i>Office 365:</i> Annual subscription fees are projected to

## Information Technology

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<b>Computer Replacements</b>	<b>FY 2023</b>	<b>\$47,000</b>	<b>CIF</b>
	<b>FY 2024</b>	<b>\$125,000</b>	<b>CIF</b>
	<b>FY 2025</b>	<b>\$47,000</b>	<b>CIF</b>
	<b>FY 2026</b>	<b>\$47,000</b>	<b>CIF</b>
	<b>FY 2027</b>	<b>\$47,000</b>	<b>CIF</b>

Critical

Recommended

Contingent on Funding

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### Spending History

FY 2022	\$	-
FY 2021	\$	38,000
FY 2020	\$	124,070
FY 2019	\$	38,000
FY 2018	\$	43,490

### Project Description & Justification

#### Recommended for FY 2023

##### PC Replacement - \$47,000

This program aims 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 costs of maintaining a machine can increase after its warranty has expired. Replacements are prioritized based upon employee job responsibilities, and some workstations may be assigned older but serviceable PCs. In contrast, other workstations may receive a new computer more frequently. Currently, the Village owns approximately 50 desktop computers and 50 laptop computers.

Staff and the Village's IT consultant updated an inventory of Village-owned IT/communication equipment, identified warranty periods for each piece, and determined a replacement schedule. Based on that information, equipment is rotated out when warranties expire. Funding IT replacements in this manner standardizes equipment throughout the organization, allows the Village to obtain bulk purchase pricing, improves IT support service efficiency, improves staff efficiency with fewer projected system interruptions, enhances system security and avoids unnecessary spikes in IT expenses.

The Village has identified additional users that will be assigned laptops to replace their desktop computers as they are cycled out. While laptop computers are more expensive than desktop computers, this will allow more access to work remotely if needed or appropriate.

#### Recommended for FY 2024

##### Public Safety In-Vehicle Laptops - \$125,000

Funding in FY 2024 is higher than other years due to replacing Police and Fire Department in-vehicle ruggedized laptops. Laptops in public safety vehicles are specialized Panasonic Toughbooks tailored to the operating environment (a vehicle) and nearly constant usage for 24-hour shift operations. These machines are recommended to be replaced every four years to maintain a stable and responsive platform for public safety personnel and ensure minimal downtime. It is recommended that the entire fleet of computers be replaced at one time to avoid differences in models that can cause operational issues for both the Public Safety Departments and IT. This cost also includes accessory items such as in-car mounts.

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.

**Five-Year Computer Replacement Capital Project Cost Summary**

PC Replacement	
Hardware/Software/Licensing	\$37,000
Consulting	\$10,000
Public Safety In-Vehicle Laptops	
Hardware/Software/Licensing	\$108,000
Consulting	\$17,000
Total	\$172,000

**Project Alternative**

Funding for this project in FY 2022 was deferred. If this project is not funded, computers will continue to be replaced in smaller quantities over a longer time period, potentially reducing the productivity of the units and the ability to support newer versions of software. A possible alternative to the spike in FY 2024 is splitting the cost of the public safety in-vehicle laptops over two fiscal years. This is not recommended due to the complications created by having multiple models in the field; however, if this option is selected, staff will work to ensure that the number of models is minimized.

**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

IT Security Initiatives	FY 2023	\$33,000	CIF
	FY 2024	\$0	CIF
	FY 2025	\$0	CIF
	FY 2026	\$0	CIF
	FY 2027	\$0	CIF

Critical

Recommended

Contingent on Funding

### Spending History

FY 2022	\$	-
FY 2021	\$	25,500
FY 2020	\$	-
FY 2019	\$	-
FY 2018	\$	52,360

### Project Description & Justification

#### Recommended for FY 2023

##### Artificial Intelligence Tool - \$25,000

Artificial Intelligence (AI) tools would learn the Village's network over time (usually a few days) and then alert Staff to changes in behavior that may indicate a security breach. Security tools currently employed by the Village either analyze internet traffic and block malicious items (firewalls) or protect a specific device from attack (anti-virus). The Village does not have a tool that takes a holistic view of the IT infrastructure and detects potential issues. One such product in this category is called Artic Wolf, though the Village will evaluate several choices in this budget range if approved. This project was deferred in FY 2022 and is being recommended again in FY 2023.

##### Active Directory Security Audit Tool - \$8,000

The Village uses Active Directory to manage user rights and permissions throughout the network. Completing a security audit of the Active Directory will assist in discovering any irregularities that could lead to a security weakness. This audit will also include a review of all users' rights and permissions structures on the shared drives. The purchase of a tool to assist in the audit and continued maintenance would further strengthen the security. Upgrading this in FY 2023 should coincide with and will complement the Office 365 upgrade.

#### Five-Year Security Initiative Capital Project Cost Summary

Artificial Intelligence Tool		
Hardware/Software/Licensing		\$20,000
Consulting		\$5,000
Active Directory Security Audit Tool		
Hardware/Software/Licensing		\$5,000
Consulting		\$3,000
Total		\$33,000

### Project Alternative

Security projects are integral in the Village's continual effort to secure its IT network. An alternative to the project would be to prioritize initiatives and implement them as funds allow over a more extended period.

**Project Impact**

<b>Annual \$ Impact on Operating Budget</b>	<b>Description of Operating Budget Impact</b>
Annual Maintenance Fees - Artificial Intelligence Tool	Depending on the tool selected, the yearly maintenance fee is expected to be approximately 10% of the projected \$20,000 purchase, recurring annually.
Annual Maintenance Fees - Active Directory Security Audit Tool	Depending on the tool selected, the yearly maintenance fee is expected to be approximately \$2,000.

# STREETS, SIDEWALKS AND ALLEYS

**Streets Improvements – Five Year Capital Improvement Program**

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

**Street System Overview**

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

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

**Sidewalk & Curb System Overview**

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

The following improvements are proposed for FY 2023:

Improvement	Cost	Funding Source	Nature of Project
Street Patching	\$ 100,000	MFT - \$90,000 WS - \$10,000	Critical
50/50 Sidewalk, Curb & Gutter	\$ 65,000	GF - \$55,000 WS - \$10,000	Critical
Alley Improvement Program	\$ 2,100,000	CIF	Recommended
Parking Lot Improvements	\$ 150,000	CIF	Contingent
Street Improvement Program (SIP)	\$ 400,000	MFT - \$350,000 WS - \$50,000	Critical
Street Maintenance Program	\$ 100,000	GF - \$50,000 MFT - \$50,000	Critical
Bicycle Plan Implementation	\$ 46,000	CIF	Recommended
REBUILD Illinois Project	\$ 20,000	MFT	Recommended
<b>Total</b>	<b>\$ 2,981,000</b>		

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

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

Critical projects are highlighted in yellow.

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

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



**Village of River Forest, Illinois**  
**Five Year Capital Improvement Program**  
**Streets, Sidewalks, Alleys**  
**Fiscal Year 2023 Budget**

	This Project is:	Fiscal Year					Five Year	Funding Source
		2023	2024	2025	2026	2027	Total	
Street Patching Program	Critical	100,000	100,000	100,000	100,000	100,000	500,000	MFT/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	2,100,000	50,000	50,000	50,000	50,000	2,300,000	CIF
Parking Lot Improvements	Contingent	150,000	85,000	20,000	-	-	255,000	CIF & CIF/PR
Street Improvement Program (SIP)	Critical	400,000	400,000	400,000	400,000	400,000	2,000,000	MFT/WS
Street Maintenance Program	Critical	100,000	100,000	100,000	100,000	100,000	500,000	GF/MFT
Traffic Signals	Recommended	-	83,000	-	-	-	83,000	CIF
Bicycle Plan Implementation	Recommended	46,000	-	-	-	-	46,000	CIF
REBUILD Illinois Project	Recommended	20,000	716,279	-	-	-	736,279	MFT
<b>Total</b>		<b>2,981,000</b>	<b>1,599,279</b>	<b>735,000</b>	<b>715,000</b>	<b>715,000</b>	<b>6,745,279</b>	

Proposed Funding Source	Fiscal Year					Five Year
	2023	2024	2025	2026	2027	Total
General Fund (GF)	105,000	105,000	105,000	105,000	105,000	525,000
Motor Fuel Tax (MFT)	510,000	1,206,279	490,000	490,000	490,000	3,186,279
Water and Sewer Fund (WS)	70,000	70,000	70,000	70,000	70,000	350,000
Capital Improvement Fund (CIF)	2,146,000	218,000	50,000	50,000	50,000	2,514,000
CIF/Parking Reserve (CIF/PR)	150,000	-	20,000	-	-	170,000
Infrastructure Improvement Bond Fund (IIBF)	-	-	-	-	-	-
<b>Totals</b>	<b>2,981,000</b>	<b>1,599,279</b>	<b>735,000</b>	<b>715,000</b>	<b>715,000</b>	<b>6,745,279</b>

## Streets, Sidewalks, Alleys - Public Works

### Street Patching Program

Streets, Alleys and Parking Lots

	MFT	WS
FY 2023	\$90,000	\$10,000
FY 2024	\$90,000	\$10,000
FY 2025	\$90,000	\$10,000
FY 2026	\$90,000	\$10,000
FY 2027	\$90,000	\$10,000

Critical

Recommended

Contingent on Funding

### Spending History

Year	GF	WS	Total
FY 2022	\$ 67,000	\$ 10,000	\$ 77,000 (Projected)
FY 2021	\$ 80,421	\$ 10,000	\$ 90,421
FY 2020	\$ 72,600	\$ 10,000	\$ 82,600
FY 2019	\$ 48,976	\$ 10,000	\$ 58,976
FY 2018	\$ 54,212	\$ 10,000	\$ 64,212

### Program Description & Justification

This program aims to maintain and improve surface conditions of Village streets, alleys, and parking lots by patching defective areas. This program is intended for pavements of all condition ratings to prolong their useful lives. An annual funding level of \$90,000 to \$100,000 over the next five years is recommended to accomplish this goal. These funding levels are estimates and reflect inflationary increases for construction.

Village Staff annually inspects all streets and areas of pavement failure are placed on a patching list, which is provided to the Village's contractor. Village Staff also includes alleys and parking lots in their inspections and identifies patching needs on all pavements throughout the Village. Asphalt pavement 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 unless deeper patches are required. This patching process is more permanent and resilient than an 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 (cracking, potholes, etc.).

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

### FY 2023 Recommended Project

In FY 2023, a total of \$100,000 is recommended for this maintenance project. On a continual basis, various locations are identified for patching.

### Program Alternative

The primary alternative is to resurface the street. Resurfacing, which is a more costly process, involves not only the replacement of defective surfaces 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

	GF	WS
FY 2023	\$55,000	\$10,000
FY 2024	\$55,000	\$10,000
FY 2025	\$55,000	\$10,000
FY 2026	\$55,000	\$10,000
FY 2027	\$55,000	\$10,000

Critical

Recommended

Contingent on Funding

### Spending History

Year	GF	WS	Total
FY 2022	\$ 54,636	\$ 10,000	\$ 64,636
FY 2021	\$ 55,579	\$ 10,000	\$ 65,579
FY 2020	\$ 55,089	\$ 10,000	\$ 65,089
FY 2019	\$ 55,658	\$ 10,000	\$ 65,658
FY 2018	\$ 53,734	\$ 10,000	\$ 63,734
FY 2017	\$ 51,710	\$ 10,000	\$ 61,710

### Program Description & Justification

This program aims to improve the overall condition of public sidewalks and curb/gutters throughout the Village. The objective is to eliminate all trip hazards for pedestrians and bring all sidewalk ramps into compliance with the Americans with Disabilities Act (ADA) requirements. An annual funding level of \$50,000-\$75,000 is recommended to accomplish these objectives. Failure to implement a sidewalk improvement program to repair deteriorated/damaged sidewalks can expose the Village to liability resulting from trips and falls.

For this program, the Village is divided into three geographical areas. Village Staff inspects one area each year. Over a three-year period, all public sidewalks are inspected. Additionally, Staff has begun analyzing sidewalk ramp criteria at as many locations as time allows, optimizing the replacement of sidewalk ramps over time to ensure compliance with ADA requirements. Trip hazards are rated according to the displacement of adjoining sidewalk squares.

Furthermore, Staff intends to investigate the possibility of including mud-jacking to remove trip hazards. This is a more cost-effective means of removing trip hazards as compared to full replacement, which is the current practice. The following table identifies the sidewalk condition ratings, description of condition, and the recommended action:

Sidewalk	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

The Village offers participation in the 50/50 sidewalk replacement cost-share program during annual inspections upon request for sidewalks with a “B” rating. A copy of the inspection form is delivered to property owners describing the sidewalk’s condition and requesting their participation. The Village replaces all sidewalks with a condition “C” rating. The Village also installs detectable warning pads located at street crossings and intersections designed for the visually impaired. The following is a summary of proposed expenditures for FY 2023:

General

Fund

Sidewalk – Condition C (100% Village):	\$35,000	
Sidewalk – Condition A or B (50/50):	\$10,000	(revenue - \$5,000)
Driveway Aprons (100% Resident):	\$5,000	(revenue - \$5,000)
Detectable Warning Pads (100% Village):	\$5,000	

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 Avenue/Hawthorne Avenue to Chicago Avenue	2021, 2024, 2027
2	Thatcher Avenue to Harlem Avenue/Chicago Avenue to Greenfield Street	2022, 2025, 2028
3	Thatcher Avenue to Harlem Avenue/Greenfield Street to North Avenue Thatcher Avenue to Lathrop Avenue/Madison Street to Hawthorne Avenue	2020, 2023, 2026

In addition to the annual inspection of the aforementioned designated areas, Village Staff inspects all sidewalks close to schools, parks, and commercial/retail areas every year.

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

**Program Alternative**

Although the preferred option is sidewalk replacement, alternatives to this program involve the installation of an 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, but the asphalt can also break loose and re-expose the displaced sidewalk, which 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**

<b>Annual \$ Impact on Operating Budget</b>	<b>Description of Operating Budget Impact</b>
None	None

## ***Streets, Sidewalks, Alleys - Public Works***

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<b>Alley Improvement Program</b>	<b>FY 2023</b>	<b>\$2,100,000</b>	<b>CIF</b>
	<b>FY 2024</b>	<b>\$50,000</b>	<b>CIF</b>
	<b>FY 2025</b>	<b>\$50,000</b>	<b>CIF</b>
	<b>FY 2026</b>	<b>\$50,000</b>	<b>CIF</b>
	<b>FY 2027</b>	<b>\$50,000</b>	<b>CIF</b>

Critical

Recommended

Contingent on Funding

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### **Spending History**

FY 2022	\$1,671,115	Projected (construction of 7 alleys & design of remaining 14)
FY 2021	\$230,767	(Thatcher Ave Alley)
FY 2020	\$860,079	(Green Alley [3] and Thomas St. Alley Improvements)
FY 2019	\$193,740	(Gale Ave Alley)
FY 2018	\$0	

### **Project Description & Justification**

This program aims to improve the condition of Village alleys. A minimum annual funding level of \$250,000 has traditionally been budgeted each year over the past several years to accomplish this objective. This program has allowed one alley to be reconstructed on an annual basis. In recent years, the level of funding has been substantially increased to reconstruct all remaining Village alleys over the next 1-2 years.

To date, 17 alleys have been reconstructed with some permeable materials to help mitigate stormwater impacts. As additional alleys are reconstructed, permeable materials continue to be utilized as they have proven effective in reducing ongoing stormwater issues for adjacent residents. Though minor elements of the design of these alleys occasionally change, the general application of an inward-sloping pavement with a 3'-4' width of permeable pavers along the alley centerline continues to be utilized throughout the Village.

### **FY 2023 Recommended Projects**

The Village Board has committed to reconstructing all remaining alleys throughout the Village in FY 2023, and the Village is in the process of issuing a bond to fund this project. This project includes 14 locations, all of which are south of Chicago Avenue and most of which are south of Hawthorne Avenue. Some of these remaining alleys experience stormwater issues, and some have pavement in poor condition. Most consist of asphalt pavement, with a few having concrete pavement. Their reconstruction is intended to provide for a better driving surface and increased stormwater mitigation.

Design is currently being completed for all of these remaining alleys during FY 2022. It is anticipated that three of these alleys will be constructed in late FY 2022, with the remaining 11 to be built in FY 2023. Staff has recommended this two-year phasing plan to allow all alleys to be completed by the end of FY 2023. Project locations have been strategically selected to minimize resident impacts and conflicts with other CIP projects (e.g., roadway resurfacing, pavement preservation, etc.).

Paver joints act as filters as the stormwater is conveyed beneath the pavers. Once all alleys are reconstructed with some portion of permeable materials, the Village's annual maintenance budget will be increased to fund the cleaning of paver joints every two years. Annual maintenance costs will need to be increased to an estimated \$50,000 if the current practice of outsourced maintenance continues. This amount would not need to be budgeted if the Village purchases equipment for in-house maintenance. This equipment is currently listed in the Equipment section of the CIP and is scheduled for purchase in FY 2024.

**FY 2023 Cost Summary for Alley Improvement Plan**

The estimated cost for this work includes the following:

- \$1,889,099 for construction
- \$210,901 for construction engineering services

**Program Alternative**

Design work for all alleys will be complete in late FY 2022. With all remaining alleys being considered "shovel ready" at that time, the Village could opt to return to the practice of reconstructing a smaller number of alleys on an annual basis. While this would extend the total project duration and minimize impacts on surrounding residents, it would also prolong stormwater and flooding issues for those that experience these impacts due to the design of the existing alley pavements.

**Project Impact**

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



## Streets, Sidewalks, Alleys - Public Works

Parking Lot Improvements	FY 2023	\$150,000	CIF
	FY 2024	\$85,000	CIF
	FY 2025	\$20,000	CIF/Parking Reserve
	FY 2026	\$0	CIF
	FY 2027	\$0	CIF

Critical

Recommended

Contingent on Funding

### Spending History

FY 2022	\$	-	
FY 2021	\$	-	
FY 2020	\$	56,500	(East Thatcher Commuter Lot)
FY 2019	\$	-	
FY 2018	\$	-	

### Program Description & Justification

This program aims 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 2024**
- B. Public Works Garage – 45 Forest Avenue - **Reconstruction Scheduled for FY 2023**
- C. Southeast corner of Lake Street and Park Avenue
- D. West Commuter Lot – 400 block of Thatcher Avenue
- E. East Commuter Lot – 400 block of Thatcher Avenue
- F. Lot at 7915-7919 North Avenue – adjacent to CVS parking lot - **Reconstruction Scheduled for FY 2025**

Several options are available for improving parking lots, including complete reconstruction, resurfacing, asphalt patching, seal-coating, and crack sealing.

### FY 2023 Recommended Projects

The parking lot at the Village Public Works Garage (45 Forest Ave) is scheduled for reconstruction in FY 2023. This parking lot endures a great deal of stress due to the heavy equipment associated with the Public Works Operations Team. As such, the pavement has severely deteriorated over time and requires repair.

### Program Alternative

Not performing any surface maintenance, particularly for lots with deteriorating conditions, will result in total pavement failure and require reconstruction (of base and surface), which is significantly higher in cost than resurfacing. Extensive pavement patching, crack sealing, and seal-coating are cost-effective options. They 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. This deterioration 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 Improvement Program

	MFT	WS	IIBF
FY 2023	\$350,000	\$50,000	\$0
FY 2024	\$350,000	\$50,000	\$0
FY 2025	\$350,000	\$50,000	\$0
FY 2026	\$350,000	\$50,000	\$0
FY 2027	\$350,000	\$50,000	\$0

Critical

Recommended

Contingent on Funding

### Spending History

Year	MFT	WS	IIBF	Total
FY 2022	\$ 326,058	\$ 50,000	\$ 205,219	\$ 581,277
FY 2021	\$ 412,000	\$ 50,000	\$ 275,000	\$ 737,000
FY 2020	\$ 230,658	\$ 50,000	\$ 283,902	\$ 564,561
FY 2019	\$ 150,000	\$ 50,000	\$ 181,689	\$ 381,689
FY 2018	\$ 188,000	\$ 38,000	\$ -	\$ 226,000

### Program Description & Justification

This program aims to improve the condition of local streets. Its 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.

In years past, Village Staff would visually inspect all local streets and rate them according to the pavement condition. In 2018, however, Staff began utilizing a consultant to help analyze Village roadways for the sole purpose of pavement ratings. This consultant uses cell phone images of the road (taken at 10' intervals) to evaluate roadway conditions. The analysis at each point is compiled with others along the same block, and a rating is established. Streets rated "Poor" or "Fair" are prioritized for one of the construction options (rehabilitation, resurfacing, or reconstruction) depending on the condition, location, and estimated traffic volumes. The timing in improving streets is critical. Waiting too long to address street repairs will result in further deterioration, at which time a more costly repair becomes necessary.

The following table summarizes the general street rating system:

Streets		
Surface Condition	Pavement Rating	Estimated Remaining Life*
Excellent	0-1.5	15 to 20 years
Good	1.6-2.5	10 to 15 years
Fair	2.6-3.5	6 to 10 years
Poor	3.6-4.5	2 to 5 years

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

**FY 2023 Recommended Projects**

<u>Street</u>	<u>Replacement Cost</u>
1. Iowa Street (Dead End east of Park Ave to Harlem Ave)	\$245,000.00
2. Monroe Avenue (Augusta to Chicago)	\$78,000.00
3. William Street (Augusta to Chicago)	\$77,000.00

The projected cost to resurface these streets and make other associated improvements is \$400,000.

The budget for this project also includes an anticipated cost of \$40,000 for construction engineering services to be contracted out to an engineering firm.

While the Capital Improvement Plan proposes funding for street improvements through FY 2027, these locations have not yet been determined. Staff recommends a minimum funding level of \$400,000 each year, with specific locations selected based on annual street rating surveys.

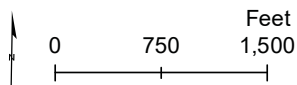
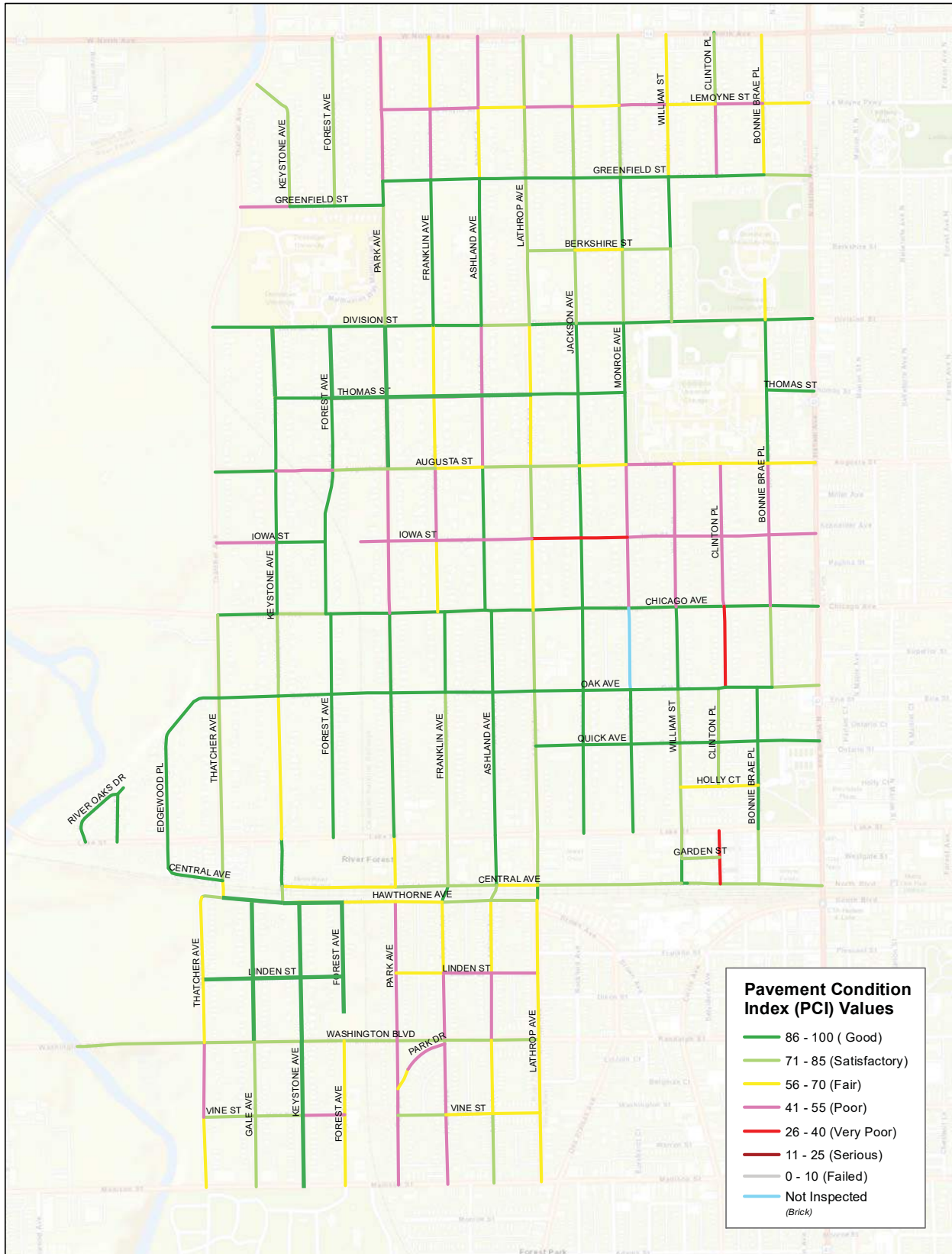
**Program Alternative**

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 than resurfacing.

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

**Project Impact**

<b>Annual \$ Impact on Operating Budget</b>	<b>Description of Operating Budget Impact</b>
None	None



Map A-3:  
Pavement Condition Index  
(PCI) Values

## River Forest, Illinois

Pavement Management Program



Gorrondona &  
Associates, Inc.



Urban GIS  
your world, your way

## Streets, Sidewalks, Alleys - Public Works

Street Maintenance Program	FY 2023	\$50,000	GF	\$50,000	MFT
	FY 2024	\$50,000	GF	\$50,000	MFT
	FY 2025	\$50,000	GF	\$50,000	MFT
	FY 2026	\$50,000	GF	\$50,000	MFT
	FY 2027	\$50,000	GF	\$50,000	MFT

Critical

Recommended

Contingent on Funding

### Spending History

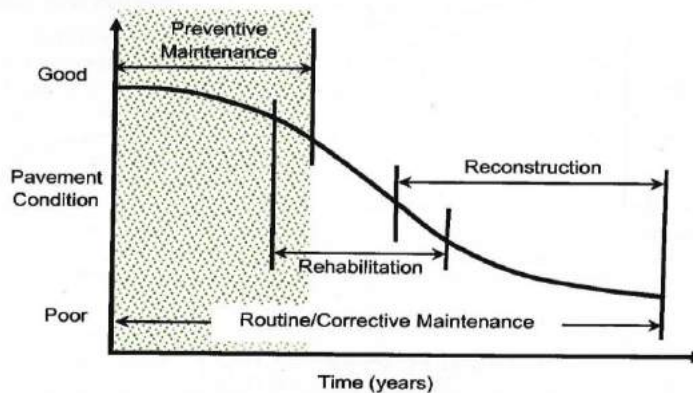
	Crack Sealing	Preservation	Total
FY 2022	\$ 49,298	\$ -	\$ 49,298
FY 2021	\$ 43,400	\$ 50,000	\$ 93,400
FY 2020	\$ 29,553	\$ 51,905	\$ 81,458
FY 2019	\$ 45,900	\$ 43,722	\$ 89,622
FY 2018	\$ 41,844	\$ 37,258	\$ 79,102

### Program Description & Justification

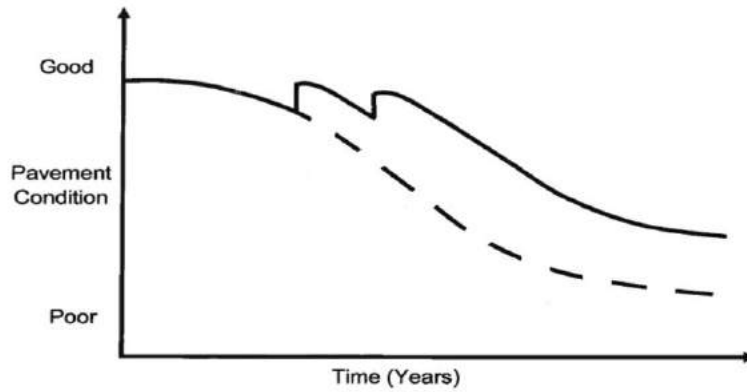
Over the past two years, the Village has utilized a High-Density Mineral Bond known as HA5 to help prolong the life of selected roadways as part of a Pavement Preservation Project. As this approach helps to extend the life of the pavement, it ultimately minimizes the overall cost of the pavement life cycle. As a result, Staff will be specifying the same product again in FY 2023.

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. This approach enables a pavement in good condition to remain as such for longer, which ultimately extends the life of the pavement and minimizes the overall cost of the pavement life cycle.

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 2023 Recommended Projects**

With the Village continuing to resurface a significant number of streets on an annual basis, Staff recommends maintaining a budget of \$50,000 for crack sealing and \$50,000 for pavement preservation. This budget will enable Staff to maintain these recently resurfaced pavements in good condition in hopes of preventing them from deteriorating as rapidly as they otherwise would.

Streets that are candidates for crack sealing and pavement preservation will be determined in late winter/early spring to maximize each application's efficiency.

**Program Alternative**

The alternative is to defer this project to minimize disruption to residents who are working from home due to the ongoing COVID-19 pandemic. Another alternative is a reactive maintenance program that will accelerate the 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 removing and replacing the existing worn pavement and minimal base improvement. This type of construction is typically completed over several weeks. On the other hand, rejuvenation can be completed in a few hours.
- Reconstruction: This is a significantly more costly improvement that is necessary when surface pavement and extensive base failure occur.

**Project Impact**

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

## Streets, Sidewalks, Alleys - Public Works

### Traffic Signals

FY 2024

\$83,000

CIF

Critical

Recommended

Contingent on Funding

### Spending History

FY 2020	\$164,190 (Lake and Thatcher Signal Upgrade Project)
FY 2020	\$5,046.30 (IDOT engineering coordination)
FY 2019	\$13,065.78 (Traffic Signal Engineering Design)
FY 2018	\$4,893.36 (Traffic Evaluation of Signaled Intersections)

### Project Description & Justification

A Traffic Signal Evaluation was performed in FY 2018 to determine if the left-turn arrow indicators were needed at the traffic signals in the Village where they currently are not in place. Modifications were recommended at the intersections of Thatcher Avenue with Chicago Avenue and Lake Street. The accommodation of left-turn arrows at both intersections was outlined by the Traffic Signal Evaluation completed by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) in July 2017. The traffic signal upgrade project for the Lake and Thatcher intersection was completed in April 2020 and included the addition of turn signals for vehicles turning in each direction.

Staff proposes the following project to upgrade this portion of the traffic signal system within the Village:

### FY 2024 Recommended Project

Chicago Avenue at Thatcher Avenue Construction: Traffic signal modifications, add pedestrian crossings on north and west legs, add left-turn arrows for East and West. Sidewalk/ADA and pavement marking upgrades, new ramps in NW corner, revise crosswalks to high-visibility markings, traffic control & protection. This project was previously planned for FY 2022 and is now scheduled for FY 2024. However, due to a change in IDOT requirements after the original permit submittal, the engineering design must be updated before the work can be approved and constructed.

Engineering Costs	\$ 8,000
Construction Costs	\$ 75,000
Total	\$ 83,000

### Project Alternative

The alternative to this project is not to complete the recommendation project, which may cause higher congestion levels during peak travel times. This project can be deferred if deemed too costly to be implemented in the immediate future.

### Project Impact

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

## **Streets, Sidewalks, Alleys - Public Works**

**Bicycle Plan Implementation**

**FY 2023**

**\$46,000**

**CIF**

Critical

Recommended

Contingent on Funding

### **Spending History**

FY 2022            \$0

FY 2021            \$131,410.74 (Bike Plan phase I)

### **Project Description & Justification**

This project aims to implement the proposed improvements recommended as part of the Village Bicycle Plan that was prepared in 2019. The bike plan was established to provide a safe, comfortable, and defined network of bicycle facilities that serves all ages and abilities and connects to key destinations in the Village, the adjoining communities, and the nearby Forest Preserves and regional trails. As part of this plan, many traffic control sign installations and pavement marking improvements were recommended.

### **FY 2023 Recommended Project**

Implementing portions of the Bicycle Plan on certain IDOT routes is scheduled for FY 2023, including any signage and striping installations. Locations along Thatcher Avenue, North Avenue, and Harlem Avenue areas would not be included in this portion of the implementation due to the feasibility of sidepaths that are no longer being considered and to avoid duplicative work with the ongoing design of a potential bike trail along Thatcher Avenue adjacent to the Des Plaines River by the Intergovernmental Coalition Phase I Study Trail Advisory Group. This implementation phase includes Lake Street and the eastern portion of Madison Street.

### **Project Alternative**

The alternative to this project is to maintain the status quo, and/or implementation could be delayed and phased over time.

### **Project Impact**

<b>Annual \$ Impact on Operating Budget</b>	<b>Description of Operating Budget Impact</b>
None	None

## Streets, Sidewalks, Alleys - Public Works

### REBUILD Illinois Project

FY 2023	\$20,000	MFT
FY 2024	\$716,279	MFT
FY 2025	\$0	MFT
FY 2026	\$0	MFT
FY 2027	\$0	MFT

Critical

Recommended

Contingent on Funding

### Program Description & Justification

This project is based on newly available funding from the Illinois Department of Transportation (IDOT), known as the REBUILD Illinois capital program. These grants will be made available to the Village over three years (FY 2021-FY 2023) through a series of six disbursements. Each disbursement is in the amount of \$122,713.13.

While these grants are received and designated similar to the Village's annual Motor Fuel Tax (MFT) disbursements, they must be accounted for separately. In addition, the funds must be used for a bondable capital improvement with an average useful life of greater than or equal to 13 years. Funding must be associated with an identified project (or projects) within one year of receipt, but funding does not have to be expended until July 1, 2025.

### FY 2023 Recommended Projects

Staff anticipates working with a consultant to establish an allowable scope of work in FY 2023. This project will be expected to be in the form of roadway resurfacing work, not unlike the Village's annual Street Improvement Project. The FY 2024 construction season will see a single resurfacing project bid and constructed. MFT funds can also be used to supplement REBUILD funds for this project.

At the completion of this project, all REBUILD funds amounting to \$736,279 will have been expended.

### Program Alternative

If these funds are not spent by the IDOT-designated deadline of July 1, 2025, they will be forfeited by the Village. Based on the types of construction allowed by IDOT and the type of work typically conducted in the Village, a roadway resurfacing project appears to be the most feasible project to be completed with these funds.

### Project Impact

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



# WATER AND SEWER IMPROVEMENTS

## ***Water and Sewer Improvements – Five Year Capital Improvement Program***

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This section of the Capital Improvement Plan identifies funding for sewer and water improvements, which are scheduled to continue through FY 2027. The Village’s sewer and water system is comprised of the following:

<b>Type of Sewer</b>	<b>Number of Miles</b>
Combined Sanitary Sewer	33.13
Storm Sewer	3.37
Water Main	40

Improvements planned for FY 2023 include:

<b>Improvement</b>	<b>Cost</b>	<b>Funding Source</b>	<b>Nature of Project</b>
Sewer Lining	140,000	WS	Critical
Sewer Point Repairs	35,000	WS	Critical
Water Distribution System – Pumping Station	110,000	WS	Contingent
Water Tower Improvements	10,000	WS	Critical
0.5 MG Underground Reservoir Improvements	18,000	WS	Critical
Water Main Replacement	425,000	WS	Critical
Hydrant Replacement	10,000	WS	Critical
Lake Street Berm Extension	90,000	WS	Recommended
<b>Total</b>	<b>838,000</b>		

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

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

Critical projects are highlighted in yellow.

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

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

Village of River Forest, Illinois  
 Five Year Capital Improvement Program  
 Water and Sewer Improvements  
 Fiscal Year 2023 Budget

This Project is:	Fiscal Year					Five Year Total	Funding Source
	2023	2024	2025	2026	2027		
<b>Sewer System</b>							
Sewer Lining	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
<b>Pumping Station</b>							
Water Distribution Improvements	Contingent	110,000	75,000	-	-	-	185,000 WS
<b>Water Distribution Improvements</b>							
Water Tower Improvements	Critical	10,000	-	-	-	-	10,000 WS
0.5 MG Underground Reservoir Improvements	Critical	18,000	-	-	-	-	18,000 WS
Water Meter Replacements	Critical	-	-	-	-	19,198	19,198 WS
Water Main Replacement	Critical	425,000	600,000	400,000	400,000	400,000	2,225,000 WS
Hydrant Replacement	Critical	10,000	10,000	10,000	10,000	10,000	50,000 WS
Keystone Ave Sewer Improvements	Recommended	-	245,000	-	-	-	245,000 WS
Lake Street Berm Extension	Recommended	90,000	-	-	-	-	90,000 WS
<b>Total</b>		<b>838,000</b>	<b>1,105,000</b>	<b>585,000</b>	<b>585,000</b>	<b>604,198</b>	<b>3,717,198</b>

Proposed Funding Source	Fiscal Year					Five Year Total
	2023	2024	2025	2026	2027	
Water and Sewer Fund (WS)	838,000	1,105,000	585,000	585,000	604,198	3,717,198
<b>Totals</b>	<b>838,000</b>	<b>1,105,000</b>	<b>585,000</b>	<b>585,000</b>	<b>604,198</b>	<b>3,717,198</b>

## **Water and Sewer Improvements - Public Works**

<b>Sewer Lining Program</b>	<b>FY 2023</b>	<b>\$140,000</b>	<b>WS</b>
Public Sewers	<b>FY 2024</b>	<b>\$140,000</b>	<b>WS</b>
	<b>FY 2025</b>	<b>\$140,000</b>	<b>WS</b>
	<b>FY 2026</b>	<b>\$140,000</b>	<b>WS</b>
	<b>FY 2027</b>	<b>\$140,000</b>	<b>WS</b>

Critical

Recommended

Contingent on Funding

### **Spending History**

FY 2022	\$	149,349	
FY 2021	\$	125,163	
FY 2020	\$	113,207	
FY 2019	\$	150,545	(including MH lining)
FY 2018	\$	125,767	(including MH lining)

### **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 the lining of as many sections as possible. In some situations, sewer mains may have failed beyond the ability to line, 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 2017 recommends an annual funding level of \$140,000 for this program. This allows the relining of damaged sewer main and the start of a systematic approach to relining all sewers throughout the village, regardless of their condition. The Village is undergoing an update to the Water and Sewer Rate Study, and the recommended funding level may increase in the future as a result.

The sewer lining process includes 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. This product has a life expectancy of 50-100 years.

In addition to the typical sewer lining completed each year, Village Staff also identifies locations for manhole lining and bench repairs, if needed. As part of the lining operation, potential locations are researched throughout the winter and work is completed in the summer. This work allows the manholes to be sealed and stabilized without requiring excavation. This work intends to prevent sinkholes and other pavement failures from occurring due to the decay of the interior walls and base of existing manholes.

Since the Village's first sewer lining project, nearly 54,235 lineal feet of sewers have been lined, representing approximately 32% of the total sewer mains owned/maintained by the Village (approximately 171,000 lineal feet).

In 2011, the Public Works Department developed an in-house sewer televising program. Public Works Staff reviews the video recordings, and the sections of failing sewer mains are identified and prioritized. This in-house sewer televising program has identified sewer mains in poor condition that will be lined in the coming years. Extreme weather conditions and the ongoing 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:

<b>Condition Rating</b>	<b>Condition Description</b>	<b>Recommended Action</b>
A	Random cracking/Some roots	Continue monitoring
B	Medium cracking/Medium root problem	Line in one to three years
C	Heavy cracking/Heavy root problem	Line immediately
D	Structural damage/Fully blocked by roots	Requires replacement

**FY 2023 Recommended Project**

Specific project locations will be determined during the winter months. Public Works Staff will review all sewer televising completed throughout the year by the Operations Department. Each televised sewer line will be rated with the most severely deteriorated sewers selected for lining. Other sections may also be lined based on the need for a point repair.

**Program Alternative**

Once the pipe's structural integrity is severely affected, beyond the ability to line, 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 for improving sewer mains is sewer lining.

**Project Impact**

<b>Annual \$ Impact on Operating Budget</b>	<b>Description of Operating Budget Impact</b>
None	None

## **Water and Sewer Improvements - Public Works**

<b>Sewer Point Repairs</b>	<b>FY 2023</b>	<b>\$35,000</b>	<b>WS</b>
Public Sewers	<b>FY 2024</b>	<b>\$35,000</b>	<b>WS</b>
	<b>FY 2025</b>	<b>\$35,000</b>	<b>WS</b>
	<b>FY 2026</b>	<b>\$35,000</b>	<b>WS</b>
	<b>FY 2027</b>	<b>\$35,000</b>	<b>WS</b>

Critical

Recommended

Contingent on Funding

### **Spending History**

FY 2022	\$	18,000
FY 2021	\$	28,800
FY 2020	\$	29,270
FY 2019	\$	23,445
FY 2018	\$	39,600

### **Program Description & Justification**

The purpose of this program is to improve the Village's sewer system by replacing failing (collapsed, cracked, etc.) sections of the 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 completed by Baxter & Woodman in FY 2017 recommends an annual funding level of \$15,000 for this program. Due to rising costs of underground work, the Village regularly budgets \$35,000 for point repairs. The Village is undergoing an update to the Water and Sewer Rate Study, and it is anticipated that the recommended funding level will increase as a result.

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

### **Project Impact**

<b>Annual \$ Impact on Operating Budget</b>	<b>Description of Operating Budget Impact</b>
None	None

**Water and Sewer Improvements - Public Works**

<b>Water Distribution System - Pumping Station</b>	<b>FY 2023</b>	<b>\$110,000</b>	<b>WS</b>
	<b>FY 2024</b>	<b>\$75,000</b>	<b>WS</b>
	<b>FY 2025</b>	<b>\$0</b>	<b>WS</b>
	<b>FY 2026</b>	<b>\$0</b>	<b>WS</b>
	<b>FY 2027</b>	<b>\$0</b>	<b>WS</b>

Critical

Recommended

Contingent on Funding

**Spending History**

FY 2022	\$	
FY 2021	\$	17,200
FY 2020	\$	7,800
FY 2019	\$	16,825
FY 2018	\$	19,000

**Project Description & Justification**

The Village purchases all of its potable water from the City of Chicago for general consumption and fire suppression). The water received from Chicago is treated before arriving at the Village’s water distribution system, where it is stored and treated 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: a 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
- 40 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 critical and recommended facility improvements should be completed in FY 2023:

<b>Repair/Improvement</b>	<b>Estimated Cost</b>	<b>Year</b>
1. Replace pump #1 and associated piping as suggested in Baxter and Woodman efficiency study performed 11/2010. (see excerpt below)	\$110,000	FY 2023
<b>Total</b>	<b>\$110,000</b>	

The following prioritized facility improvement is recommended in the next two to five years:

Repair/Improvement	Estimated Cost	Year
1. Add VFD to pump #2	\$75,000	FY 2024
Total	\$75,000	

Pump Replacement - Pump No. 1 should be replaced with a higher capacity pump. The pump capacity is too small to be used to meet the maximum daily demand and would have to operate for more than 17 hours to meet the average daily demand. Pump No. 3 can easily meet the average daily demand but cannot meet the maximum daily demand. The station is only capable of supporting three pumps; a minimum of two should meet the maximum daily demand in the event one is out of service.

**Project Alternative**

There are no salient 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 Tower Improvements

Water & Sewer



<b>FY 2023</b>	<b>\$10,000</b>	<b>WS</b>
<b>FY 2024</b>	<b>\$0</b>	<b>WS</b>
<b>FY 2025</b>	<b>\$0</b>	<b>WS</b>
<b>FY 2026</b>	<b>\$0</b>	<b>WS</b>
<b>FY 2027</b>	<b>\$0</b>	<b>WS</b>

Critical

Recommended

Contingent on Funding

### Spending History

FY 2022	\$	
FY 2021	\$	
FY 2020	\$	274,915 (Water Tower Re-Painting Project)
FY 2019	\$	-
FY 2018	\$	-

### Project Description & Justification

Cathodic protection systems are installed in steel water tanks to protect and extend the life of the interior coatings by controlling surface corrosion. It was recommended by the painting contractor that recoated the tower in FY 2020 that the Village reinstall a cathodic protection system after the water tower was repainted.

The following critical and recommended facility improvements should be completed in FY 2023:

Repair/Improvement	Estimated Cost	Year
1. Reinstall cathodic protection system	\$10,000	FY 2023
Total	\$10,000	

### Project Alternative

There are no salient alternatives to these improvements and maintenance projects as the water tower is a critically important part of the Village's water distribution system. Deferring these projects would result in emergency repairs that could increase project costs (compared to soliciting bids/proposals).

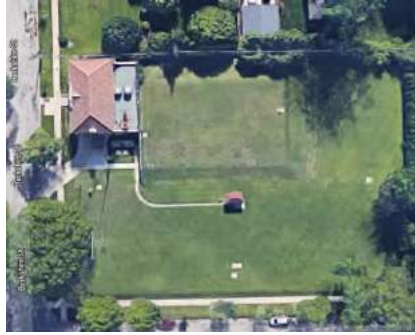
### Project Impact

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

## Water and Sewer Improvements - Public Works

### .5 & 2 MG Underground Reservoir Improvements

Water & Sewer



FY 2023	\$18,000	WS
FY 2024	\$0	WS
FY 2025	\$0	WS
FY 2026	\$0	WS
FY 2027	\$0	WS

Critical

Recommended

Contingent on Funding

#### Spending History

FY 2022	\$	
FY 2021	\$	-
FY 2020	\$	-
FY 2019	\$	8,000
FY 2018	\$	-

#### Project Description & Justification

On August 14, 2018, Dixon Engineering Inc. performed a maintenance inspection on the 500,000 and 2,000,000 gallon underground storage reservoirs owned by the Village of River Forest. The purpose of the inspection was to evaluate the interior piping, surfaces, and appurtenances, review safety and health aspects and make budgetary recommendations for continued maintenance of the reservoir. Inspections are recommended every five years.

The following critical and recommended facility improvement should be completed in FY 2023:

Repair/Improvement	Estimated Cost	Year
Abrasive blast clean the wet interior piping and steel appurtenances on both reservoirs to a near-white metal (SSPC-SP10) condition and repaint with a three-coat epoxy polyamide system. The estimated cost is \$18,000. Best pricing can be obtained if work is performed with another tank painting project.	\$18,000	FY 2023
Total	\$18,000	

#### Project Alternative

There are no salient alternatives to these improvements and maintenance projects as the water reservoir is a critically important part of 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

## Water and Sewer Improvements - Public Works

Water Meter Replacement Program	FY 2023	\$0	WS
	FY 2024	\$0	WS
	FY 2025	\$0	WS
	FY 2026	\$0	WS
	FY 2027	\$19,198	WS

Critical

Recommended

Contingent on Funding

### Spending History

FY 2022	\$0	costs incorporated into AMI project
FY 2021	\$7,500	continuation of program to replace all meters over 20 years of age
FY 2020	\$22,000	continuation of program to replace all meters over 20 years of age
FY 2019	\$16,000	continuation of program to replace all meters over 20 years of age
FY 2018	\$17,500	continuation of program to replace all meters over 20 years of age

### Program Description & Justification

This program aims to improve the metering accuracy of Village-owned commercial and residential water meters. Water Division employees tested meters in the 15 to 20 year age category and found some did not meet AWWA (American Water Works Association) standards for meter accuracy. Although not a standard, studies recommend replacing residential water meters every 15 to 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. Funds requested over the spreadsheet total below are for accessories associated with meter replacements (nuts, bolts, gaskets, seals and sealing wire, flanges, and meter couplings).

Qty.	Size	Ea.	Cost
15	0.625	\$123.00	\$1,845.00
18	0.75	\$142.00	\$2,556.00
16	1	\$177.00	\$2,832.00
11	1.5	\$505.00	\$5,555.00
3	2	\$710.00	\$2,130.00
1	3	\$1,822.00	\$1,822.00
64		<b>Meter cost</b>	\$16,740.00
		<b>Add'l Equip</b>	\$2,458.00
		<b>Total cost</b>	\$19,198.00

### Program Alternative

As the Village's water metering system is critically important as a source of revenue, it is vital to plan/budget for replacing 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***

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<b>Water Main Replacement Program</b>	<b>FY 2023</b>	<b>\$425,000</b>	<b>WS</b>
	<b>FY 2024</b>	<b>\$600,000</b>	<b>WS</b>
	<b>FY 2025</b>	<b>\$400,000</b>	<b>WS</b>
	<b>FY 2026</b>	<b>\$400,000</b>	<b>WS</b>
	<b>FY 2027</b>	<b>\$400,000</b>	<b>WS</b>

Critical

Recommended

Contingent on Funding

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### **Spending History**

FY 2022	\$	200,000	(Projected - based on current LSLR Program Participation)
FY 2021	\$	575,000	(FY 2020 and FY 2021 Projects both completed in FY 2021)
FY 2020	\$	-	
FY 2019	\$	318,712	
FY 2018	\$	396,000	

### **Program Description & Justification**

This program aims to improve the condition of the Village's water distribution system by replacing aging and deteriorating infrastructure or by installing new infrastructure where a need becomes apparent. This approach helps reduce costly water main breaks and the associated water loss. 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 approximately 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 and results 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 analyzes failing or problematic sections of water main to determine the need to replace specific water mains based on history and number of breaks, outdated size, or any other defective condition. This analysis is reviewed along with all identified needs for improvement based on the Water Distribution Model Report performed by Strand Associates Engineering in 2018.

### **FY 2023 Recommended Projects**

The proposed project for FY 2023 includes the installation of an 8" water main on two alternating blocks of LeMoyné, between Park Avenue and Franklin Avenue, as well as between Ashland Avenue and Lathrop Avenue as identified in the 2018 Strand Water Distribution System Modeling Report. This budget includes anticipated design and construction engineering services and funding for the Village's Lead Service Line Replacement Program.

The cost estimate for this project is as follows:

- \$325,000 for construction
- \$50,000 for project engineering (design and construction)
- \$50,000 for Lead Service Line Replacement Program

**Future Water Main Projects**

Staff reviews the modeling report and evaluates the Village’s water distribution system and trends in water main breaks annually to identify and prioritize future projects. Staff has identified the following water system improvement project(s) for possible future fiscal years:

- FY 2024 - Install an 8" water main on the remaining three alternating blocks of LeMoyne (from Jackson Avenue to Monroe Avenue, William Street to Clinton Place, and Bonnie Brae to Harlem Avenue) as identified in the 2018 Strand Water Distribution System Modeling Report. This budget also includes \$50,000 for the Village's Lead Service Line Replacement Program.

**Program Alternative**

As the Village’s water distribution system is a critically important infrastructure system, it is vital to plan/budget for replacing lead water services and 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 lead service replacements or water main replacement projects and respond to state mandates and water main breaks as they occur, which could lead to more significant budget impacts.

**Project Impact**

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

## ***Water and Sewer Improvements - Public Works***

<b>Hydrant Replacement Program</b>	<b>FY 2023</b>	<b>\$10,000</b>	<b>WS</b>
	<b>FY 2024</b>	<b>\$10,000</b>	<b>WS</b>
	<b>FY 2025</b>	<b>\$10,000</b>	<b>WS</b>
	<b>FY 2026</b>	<b>\$10,000</b>	<b>WS</b>
	<b>FY 2027</b>	<b>\$10,000</b>	<b>WS</b>

Critical

Recommended

Contingent on Funding

### **Spending History**

FY 2022	\$	-	
FY 2021	\$	6,000	Hydrant and two valves installed by in-house staff.
FY 2020	\$	-	
FY 2019	\$	-	
FY 2018	\$	8,758	

### **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 a Village-wide hydrant flushing program each year. During the hydrant flushing events, Fire Department personnel identify hydrants in need of repair and provide a list of those hydrants to the Public Works Department to coordinate and/or make the necessary repairs. Hydrants that are not in operating condition or are identified as being too low for proper operation are prioritized for immediate repair or replacement.

### **FY 2023 Recommended Project**

The Public Works and Fire Departments identify hydrants as operational but "too low" (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 to connect the fire hose to the hydrant. Hydrants with a low flow rate due to a small supply line are also identified. Each year Village Staff attempts to replace these hydrants to eliminate any that do not operate efficiently or provide high flow rates. Public Works staff can often "rebuild" existing hydrants instead of replacement. This process involves the replacement of the inner workings of the hydrant and is more cost-effective than a complete replacement.

### **Program Alternative**

The Village's fire hydrant system is critically important infrastructure. It is essential to budget for replacing 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**

<b>Annual \$ Impact on Operating Budget</b>	<b>Description of Operating Budget Impact</b>
None	None

## Water and Sewer Improvements - Public Works

### Keystone Ave Sewer Improvements

FY 2024

\$245,000

WS

Critical

Recommended

Contingent on Funding

#### Project Description & Justification

The 1100 block of Keystone Avenue (from Division to Thomas) occasionally experiences on-street flooding during heavy rain events. This situation was created by design as the sewers were separated, and flow restriction was added to the catch basins in the roadway. In doing so, stormwater entry into the combined sewer system is slowed to reduce the frequency of sewer back-up for those further "downstream."

In addition to the occurrences of on-street flooding increasing over the last few years, the rain event in May 2020 caused a significant amount of flooding that took a substantial amount of time to dissipate. Through investigation of the existing combined sewer system, Staff determined several areas of significant flow restriction caused by tree root infiltration. These obstructions were removed, and the sewer was lined to prevent further root infiltration along pipe joints. Staff also worked with an engineering consultant to conceptually design a sewer improvement to mitigate the on-street flooding issues.

The conceptual design of this improvement includes multiple options that will allow for an iterative approach. Ultimately, sewer installation may need to be installed up to the Northside Stormwater Management Project (NSMP) system. However, Staff has identified a potential option that is much less invasive and less expensive that may provide an adequate level of flood reduction. This project will include re-routing two catch basins at the Division/Keystone intersection into an adjacent Metropolitan Water Reclamation District (MWRD) pipe. This will substantially reduce the amount of water flowing through the Keystone Avenue sewer and help prevent on-street flooding.

The cost associated with this project includes anticipated construction costs of \$225,000 and construction engineering costs of \$20,000.

#### Project Alternative

The alternative is to continue to allow water to flow through the existing (restricted) catch basins, which may continue to cause on-street flooding during heavy rain events.

#### Project Impact

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

## Water and Sewer Improvements - Public Works

### Lake Street Berm Extension

FY 2023

\$90,000

WS

Critical

Recommended

Contingent on Funding

#### Project Description & Justification

Over the years, Village Staff has established a set routine of actions during flooding events to help prevent overland flooding from the Des Plaines River. Staff utilizes existing berms along Thatcher Avenue (at Chicago Avenue) and along the north side of Lake Street behind the homes of River Oaks Drive to help create a barrier that prevents the rising river from continuing eastward into the Village inundating residential properties and the municipal sewer system.

One of the techniques used to prevent this type of flooding is to effectively extend the end of the berm along Lake Street (westward, toward the bridge) using stone and plastic sheeting. This work requires a significant amount of effort and time to ensure the barrier is built at the suitable locations and elevations needed. Once the flooding event has subsided, the material then needs to be removed, and the area restored to pre-flood conditions.

This project will permanently extend the berm toward the bridge in a manner that matches the elevations and aesthetics of the existing berm. This will free up Village Staff before, during, and after flood events to help address other issues that might occur throughout the Village.

The cost associated with this project includes anticipated construction costs of \$35,000, and Cook County Forest Preserve's license fee of \$55,000. The Forest Preserves is also seeking an additional \$20,000 in "off-site improvements" in exchange for approving the license.

#### Project Alternative

The alternative is not to extend the berm and leave the responsibility of installing additional material needed during each flood event to the Public Works Operations Staff.

#### Project Impact

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