

Traffic Engineering

Capital Improvement Plan (CIP) Overview

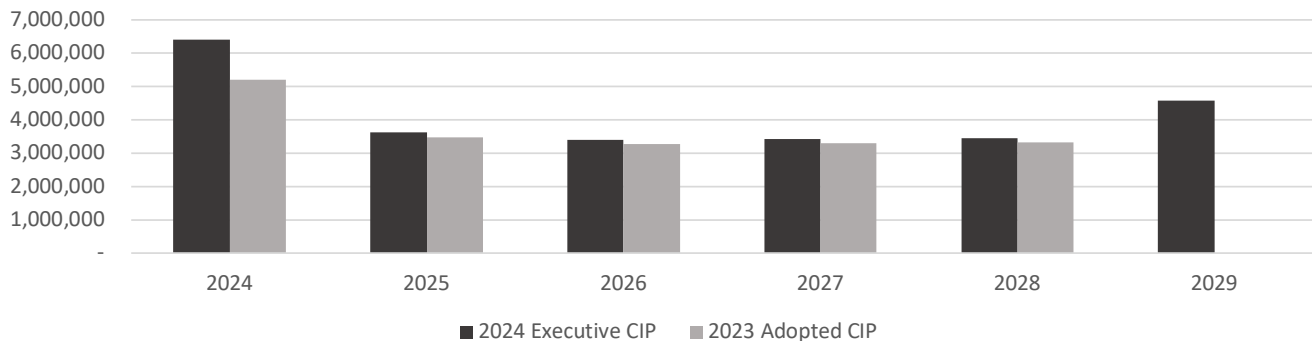
Budget Phase: Executive

Summary Table

	2024	2025	2026	2027	2028	2029
2024 Pedestrian Bicycle						
Counters	185,000	-	-	-	-	-
Camera Lifecycle Management	55,000	55,000	55,000	55,000	55,000	55,000
Citywide LED Conversion	892,500	157,500	-	-	-	-
Field Equipment Replacement	52,500	26,250	-	-	-	-
John Nolen Drive Lighting	1,845,000	-	-	-	-	-
Public Safety Radio System	157,500	157,500	157,500	157,500	157,500	1,200,000
Safe Streets Madison	1,627,500	1,642,200	1,661,100	1,683,150	1,683,150	1,767,308
Street Light Installation	615,000	615,000	620,000	620,000	630,000	630,000
Town of Madison Annexation - Signing and Pavement Markings						
Pavement Markings	60,000	50,000	-	-	-	-
Town of Madison Annexation - Street Lighting						
Lighting	20,000	-	-	-	-	-
Traffic Safety Infrastructure						
Infrastructure	78,750	78,750	78,750	78,750	78,750	82,688
Traffic Signal Installation	830,000	835,000	835,000	840,000	840,000	845,000
	\$ 6,418,750	\$ 3,617,200	\$ 3,407,350	\$ 3,434,400	\$ 3,444,400	\$ 4,579,996

Changes from 2023 Adopted CIP

2024 Capital Improvement Plan
2024 Executive Compared to 2023 Adopted



Traffic Engineering

Capital Improvement Plan (CIP) Overview

Description of Major Changes

2024 Pedestrian Bicycle Counters

- New Project. Includes \$185,000 in GF GO borrowing in 2024 to replace bicycle and pedestrian counters.

Camera Lifecycle Management

- \$55,000 in annual GF GO borrowing represents Traffic Engineering's portion of the Information Technology capital program to maintain the City's digital security cameras and traffic cameras.

Citywide LED Conversion

- Project budget increased by \$50,000 in GF GO borrowing from 2024 to 2025 and reflects a 5% increase.

Field Equipment Replacement

- No major changes compared to 2023 CIP.

John Nolen Drive Lighting

- Project budget increased by \$845,000 in GF GO borrowing in 2024 to accommodate increased scope and updated construction costs. This reflects an 84.5% increase.

Public Safety Radio System

- Program budget increased by \$37,500 in GF GO borrowing from 2024 to 2028 and reflects a 5% increase.
- \$1.2 million of GF GO borrowing added in 2029 for anticipated system improvements.

Safe Streets Madison

- Program budget increased by \$395,100 in GF GO borrowing from 2024 to 2028 and reflects a 5% increase.

Street Light Installation

- No major changes compared to 2023 Adopted CIP.

Town of Madison Annexation - Signing and Pavement Markings

- No major changes compared to 2023 Adopted CIP.

Town of Madison Annexation - Street Lighting

- No major changes compared to 2023 Adopted CIP.

Traffic Safety Infrastructure

- Program budget increased by \$18,750 in GF GO borrowing from 2024 to 2028 and reflects a 5% increase.

Traffic Signal Installation

- No major changes compared to 2023 Adopted CIP.

Traffic Engineering

Summary of Expenditures and Revenues

2024 CIP by Expenditure Type

	2024	2025	2026	2027	2028	2029
Building	1,845,000	-	-	-	-	-
Machinery and Equipment	1,358,750	1,152,500	1,126,250	1,131,250	1,131,250	2,182,688
Other	250,000	150,000	150,000	150,000	150,000	150,000
Street	1,437,500	1,542,200	1,511,100	1,533,150	1,533,150	1,617,308
Streetlighting	1,527,500	772,500	620,000	620,000	630,000	630,000
	\$ 6,418,750	\$ 3,617,200	\$ 3,407,350	\$ 3,434,400	\$ 3,444,400	\$ 4,579,996

2024 CIP by Funding Source

	2024	2025	2026	2027	2028	2029
GF GO Borrowing	5,428,750	2,657,200	2,497,350	2,524,400	2,534,400	3,669,996
County Sources	45,000	45,000	45,000	45,000	45,000	45,000
Developer Capital Funding	410,000	410,000	410,000	410,000	410,000	410,000
Other Govt Pmt For Services	80,000	80,000	80,000	80,000	80,000	80,000
Special Assessment	275,000	275,000	275,000	275,000	275,000	275,000
State Sources	100,000	100,000	100,000	100,000	100,000	100,000
TIF Increment	80,000	50,000	-	-	-	-
	\$ 6,418,750	\$ 3,617,200	\$ 3,407,350	\$ 3,434,400	\$ 3,444,400	\$ 4,579,996

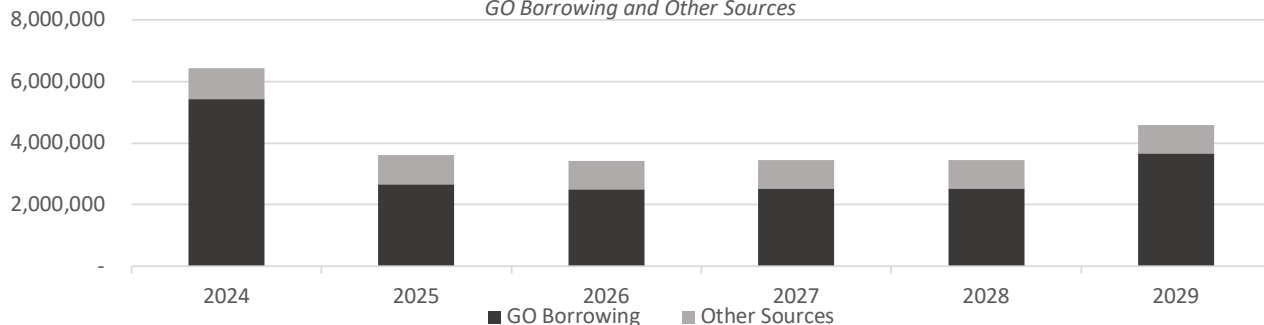
Borrowing Summary

	2024	2025	2026	2027	2028	2029
General Fund GO Borrowing	5,428,750	2,657,200	2,497,350	2,524,400	2,534,400	3,669,996
Non-General Fund GO Borrowing	-	-	-	-	-	-
	\$ 5,428,750	\$ 2,657,200	\$ 2,497,350	\$ 2,524,400	\$ 2,534,400	\$ 3,669,996

Annual Debt Service

	2024	2025	2026	2027	2028	2029
General Fund GO Borrowing	705,738	345,436	324,656	328,172	329,472	477,099
Non-General Fund GO Borrowing	-	-	-	-	-	-
	\$ 705,738	\$ 345,436	\$ 324,656	\$ 328,172	\$ 329,472	\$ 477,099

Executive Budget by Funding Source
GO Borrowing and Other Sources



Traffic Engineering

Carryforward General Obligation Borrowing

	Unused Appropriation Authority	Reauthorized GO Borrowing
14356 CAMERA LIFECYCLE MANAGEMENT	21,889	23,000
13065 CITYWIDE LED LIGHTING CONVERSION	955,717	975,000
13835 CTH M	339	-
10245 MCKEE RD (CTH PD) IMPROVEMENTS	902	-
12730 MONONA TERRACE/JOHN NOLEN DR LIGHT	1,944,279	2,055,000
10420 PUBLIC SAFETY RADIO SYSTEM	43	-
14149 SAFE STREETS FOR ALL FEDERAL GRANT	20,000,000	4,000,000
13778 SAFE STREETS MADISON	2,853,057	3,063,402
13119 SNOW EMERGENCY ZONE EXP/CSCL	99,987	-
10418 STREET LIGHT INSTALLATION	1,786,725	342,500
14162 TOWN OF MADISON: PAVEMENT/SIGN IMPR	13,620	-
14163 TOWN OF MADISON: STREET LIGHT IMPRO	20,000	-
10428 TRAFFIC SAFETY INFRASTRUCTURE	254,634	50,000
10427 TRAFFIC SIGNAL INFRASTRUCTURE	4,004,400	1,210,368
13573 TWENTY IS PLENTY	608,076	613,026
12733 VISION ZERO TRAFFIC SAFETY INFRASTR	133,102	-
17071 WAYFINDING SIGNAGE	76,669	-
13066 ZERO VISION PROGRAM	137,532	-
	\$ 32,910,972	\$ 12,332,296

Traffic Engineering

Project & Program Details

Project	2024 Pedestrian Bicycle Counters	Project #	14700
Citywide Element	Land Use and Transportation	Project Type	Project

Project Description

This project is for the replacement and installation of bicycle and pedestrian counters used on sidewalks, roadways, and shared use paths across the City. The goal of this project is to provide quality data to evaluate facilitate usage over time, inform project prioritization, provide quantifiable evidence to support investment decisions, and improve transportation planning. Counters currently installed in areas such as State Street and the Southwest Bike Path are at the end of their life cycle and need to be replaced/upgraded to continue to provide quality data.

	2024	2025	2026	2027	2028	2029
GF GO Borrowing	185,000	-	-	-	-	-
Total	\$ 185,000	\$ -	\$ -	\$ -	\$ -	\$ -

Project	Camera Lifecycle Management	Project #	14356
Citywide Element	Land Use and Transportation	Project Type	Program

Project Description

This program represents Traffic Engineering's portion of the Camera Lifecycle Management program shown in Information Technology's capital budget. Traffic Engineering's share of the program supports the replacement and maintenance of the City's traffic cameras. The goal of the program is to provide a strong and secure traffic camera network that improves traffic flow, facilitates efficient network operations, and improves traffic safety.

	2024	2025	2026	2027	2028	2029
GF GO Borrowing	55,000	55,000	55,000	55,000	55,000	55,000
Total	\$ 55,000	\$ 55,000	\$ 55,000	\$ 55,000	\$ 55,000	\$ 55,000

Project	Citywide LED Conversion	Project #	13065
Citywide Element	Green and Resilient	Project Type	Project

Project Description

This project provides funding to convert all remaining City streetlights to LED. The goal of this project is to replace streetlight fixtures with more energy efficient LED fixtures, reducing energy usage and costs. The project's scope includes equipment costs for the replacement of all non-LED streetlight fixtures.

	2024	2025	2026	2027	2028	2029
GF GO Borrowing	892,500	157,500	-	-	-	-
Total	\$ 892,500	\$ 157,500	\$ -	\$ -	\$ -	\$ -

Traffic Engineering

Project & Program Details

Project	Field Equipment Replacement	Project #	13779
Citywide Element	Effective Government	Project Type	Program

Project Description

This program is for the purchase and replacement of equipment used to support Traffic Engineering field operations including the City's fiber optic network, signing, streetlighting and signal operations. The goal of this program is to improve efficiency and reduce delays in providing or restoring services to City agencies and partners. Funding in 2024 and 2025 will be used to fund cable locators and magnetic detectors to support the City's underground facility marking programs.

	2024	2025	2026	2027	2028	2029
GF GO Borrowing	52,500	26,250	-	-	-	-
Total	\$ 52,500	\$ 26,250	\$ -	\$ -	\$ -	\$ -

Project	John Nolen Drive Lighting	Project #	12730
Citywide Element	Land Use and Transportation	Project Type	Project

Project Description

This project funds replacing the current tunnel lighting on John Nolen Drive under Monona Terrace. The goal of the project is to improve safety along the existing roadway by replacing the existing lighting that has been damaged by snow and stormwater runoff. The initial scope of the project was to replace lighting in the Monona Terrace tunnel on John Nolen Drive and to study the existing components of Fire, Life and Safety. After completing the preliminary design study, it was determined that the highest priority Fire-Life-Safety tunnel components need to be repaired and replaced. The 2024 budget updates the scope to include upgrading the entire tunnel lighting system, rehabilitating the existing highest priority Fire-Life-Safety tunnel components, and associated design and construction costs.

	2024	2025	2026	2027	2028	2029
GF GO Borrowing	1,845,000	-	-	-	-	-
Total	\$ 1,845,000	\$ -	\$ -	\$ -	\$ -	\$ -

Project	Public Safety Radio System	Project #	10420
Citywide Element	Health and Safety	Project Type	Program

Project Description

This program is for digital radio communication equipment to serve over 5,000 users across multiple public safety, public works, and transportation agencies. The program's goal is to provide reliable 24/7 radio communication and build redundancy to ensure the continuation of operations in case of major disruptions. The program's scope is focused on purchasing equipment and the corresponding software to operate the equipment. Annual funding from 2024 to 2028 is associated with equipment costs to keep the system updated. Funding in 2029 is for anticipated system improvements and entering into new contracts with the system vendor.

	2024	2025	2026	2027	2028	2029
GF GO Borrowing	157,500	157,500	157,500	157,500	157,500	1,200,000
Total	\$ 157,500	\$ 157,500	\$ 157,500	\$ 157,500	\$ 157,500	\$ 1,200,000

Traffic Engineering

Project & Program Details

Project	Safe Streets Madison	Project #	13778
Citywide Element	Land Use and Transportation	Project Type	Program

Project Description

The Safe Streets Madison program funds Vision Zero projects focused on eliminating serious and fatal crashes. This program also provides funding to close gaps in the pedestrian and bicycle network to ensure accessibility for people of all ages and abilities. Projects are selected using the Safe Streets prioritization metric that was approved August 2021. Typical projects include proven safety countermeasures such as Rectangular Rapid Flashing Beacons, pedestrian islands, curb extensions, improved pavement markings and signs, and new/improved bike lanes.

	2024	2025	2026	2027	2028	2029
GF GO Borrowing	1,627,500	1,642,200	1,661,100	1,683,150	1,683,150	1,767,308
Total	\$ 1,627,500	\$ 1,642,200	\$ 1,661,100	\$ 1,683,150	\$ 1,683,150	\$ 1,767,308

Project	Street Light Installation	Project #	10418
Citywide Element	Health and Safety	Project Type	Program

Project Description

This program is for improvements to outdated street lighting systems, including computer support; replacement or painting/refurbishing of older poles, fixtures, cable and other major street light equipment; and installation of new street lights. This program's goal is to provide adequate lighting on streets for motorists, pedestrians, and bicyclists. Projects planned in 2024 include adding lighting to existing paths and replacement of standard signal poles including poles on State Street.

	2024	2025	2026	2027	2028	2029
GF GO Borrowing	175,000	175,000	180,000	180,000	190,000	190,000
County Sources	15,000	15,000	15,000	15,000	15,000	15,000
Developer Capital Funding	300,000	300,000	300,000	300,000	300,000	300,000
Other Govt Pmt For Services	30,000	30,000	30,000	30,000	30,000	30,000
Special Assessment	75,000	75,000	75,000	75,000	75,000	75,000
State Sources	20,000	20,000	20,000	20,000	20,000	20,000
Total	\$ 615,000	\$ 615,000	\$ 620,000	\$ 620,000	\$ 630,000	\$ 630,000

Traffic Engineering

Project & Program Details

Project	Town of Madison Annexation - Signing and Pavement Markings	Project #	14162
Citywide Element	Health and Safety	Project Type	Project

Project Description

The City of Madison took over a portion of the Town of Madison in an annexation effective in October 2022. Traffic Engineering has reviewed the existing Town of Madison roadway signs and pavement markings in the annexation areas. The majority of the signs and pavement markings will need to be updated to meet current Manual on Uniform Traffic Control Devices standards and/or City of Madison standards and expectations. Additional signing and pavement markings will also be required to meet current standards and needs of the community. Traffic Engineering has divided the annexation areas in to sub areas. A three year phased approach (2023 – 2025) is being used to update existing and to add new signing and pavement marking infrastructure to meet current standards.

	2024	2025	2026	2027	2028	2029
TIF Increment	60,000	50,000	-	-	-	-
Total	\$ 60,000	\$ 50,000	\$ -	\$ -	\$ -	\$ -

Project	Town of Madison Annexation - Street Lighting	Project #	14163
Citywide Element	Land Use and Transportation	Project Type	Project

Project Description

The City of Madison took over a portion of the Town of Madison in an annexation effective in October 2022. Traffic Engineering has reviewed the existing Town of Madison street lighting in the annexation areas. It is estimated that the City of Madison will need to install 10 new street lights to meet current City standards and expectations.

	2024	2025	2026	2027	2028	2029
TIF Increment	20,000	-	-	-	-	-
Total	\$ 20,000	\$ -	\$ -	\$ -	\$ -	\$ -

Project	Traffic Safety Infrastructure	Project #	10428
Citywide Element	Health and Safety	Project Type	Program

Project Description

This program is for traffic control devices used in the design for the local share of the State Highway Hazard Elimination program, signs, and traffic safety studies. The goal of this program is to improve traffic safety and accessibility for pedestrians, bicyclists, motorists, and transit users. A portion of funding starting in 2024 will support replacement of signs that show retroreflectivity degradation due to wear over time. The Federal Manual on Uniform Traffic Control Devices for streets and highways provides retroreflectivity standards and this funding will help bring sign inventory to these standards and enhance public safety.

	2024	2025	2026	2027	2028	2029
GF GO Borrowing	78,750	78,750	78,750	78,750	78,750	82,688
Total	\$ 78,750	\$ 78,750	\$ 78,750	\$ 78,750	\$ 78,750	\$ 82,688

Traffic Engineering

Project & Program Details

Project	Traffic Signal Installation	Project #	10427
Citywide Element	Land Use and Transportation	Project Type	Program

Project Description

This program is for replacing and modernizing the City's traffic signal network. The goal of the program is to provide energy efficient and dynamic traffic signals that are readily adaptable to provide for safe, efficient traffic flow for pedestrians, bicycles and vehicles. Projects planned for 2024 include replacement and upgrade of the traffic signals at the intersection of Atwood Ave & Hudson St.

	2024	2025	2026	2027	2028	2029
GF GO Borrowing	360,000	365,000	365,000	370,000	370,000	375,000
County Sources	30,000	30,000	30,000	30,000	30,000	30,000
Developer Capital Funding	110,000	110,000	110,000	110,000	110,000	110,000
Other Govt Pmt For Services	50,000	50,000	50,000	50,000	50,000	50,000
Special Assessment	200,000	200,000	200,000	200,000	200,000	200,000
State Sources	80,000	80,000	80,000	80,000	80,000	80,000
Total	\$ 830,000	\$ 835,000	\$ 835,000	\$ 840,000	\$ 840,000	\$ 845,000

Traffic Engineering

2024 Appropriation Schedule

2024 Appropriation

	Request	Executive Budget		Total
		GO Borrowing	Other	
2024 Pedestrian Bicycle Counters	185,000	185,000	-	185,000
Camera Lifecycle Management	55,000	55,000	-	55,000
Citywide LED Conversion	892,500	892,500	-	892,500
Field Equipment Replacement	52,500	52,500	-	52,500
John Nolen Drive Lighting	1,845,000	1,845,000	-	1,845,000
Public Safety Radio System	157,500	157,500	-	157,500
Safe Streets Madison	1,905,000	1,627,500	-	1,627,500
Street Light Installation	615,000	175,000	440,000	615,000
Town of Madison Annexation - Signing and Pavement Markings	60,000	-	60,000	60,000
Town of Madison Annexation - Street Lighting	20,000	-	20,000	20,000
Traffic Safety Infrastructure	78,750	78,750	-	78,750
Traffic Signal Installation	830,000	360,000	470,000	830,000
	\$ 6,696,250	\$ 5,428,750	\$ 990,000	\$ 6,418,750