

City of Madison 2020 Capital Improvement Plan
Agency Request Summary

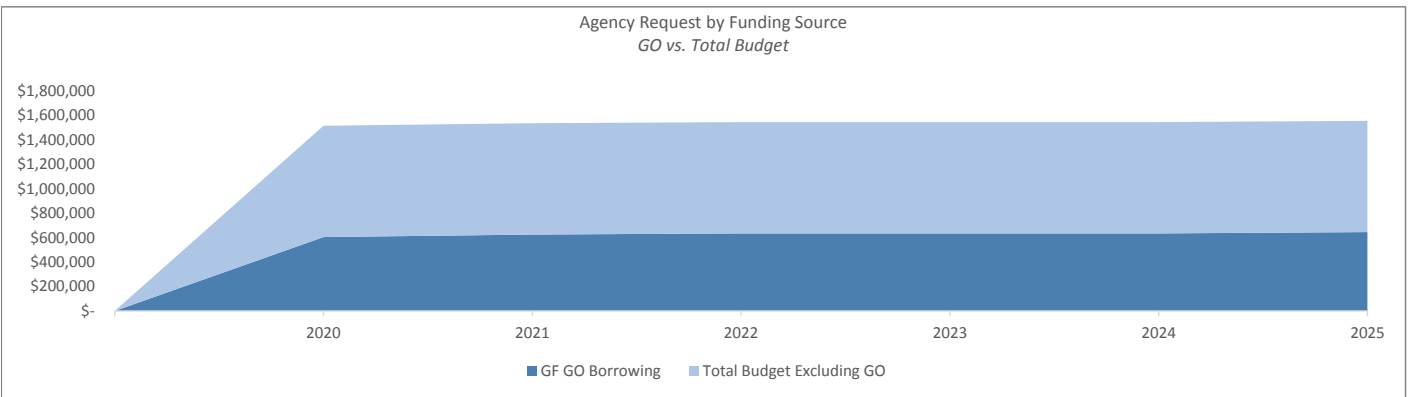
Agency : Traffic Engineering

Agency Request by Item (All Funds)

	2020	2021	2022	2023	2024	2025
Street Light Installation	595,000	610,000	615,000	615,000	615,000	620,000
Public Safety Radio System	50,000	50,000	50,000	50,000	50,000	50,000
Traffic Signal Installation	820,000	825,000	830,000	830,000	830,000	835,000
Traffic Safety Infrastructure	50,000	50,000	50,000	50,000	50,000	50,000
Total	\$ 1,515,000	\$ 1,535,000	\$ 1,545,000	\$ 1,545,000	\$ 1,545,000	\$ 1,555,000

Agency Request by Funding Source

Project	2020	2021	2022	2023	2024	2025
GF GO Borrowing	605,000	625,000	635,000	635,000	635,000	645,000
State Sources	100,000	100,000	100,000	100,000	100,000	100,000
County Sources	45,000	45,000	45,000	45,000	45,000	45,000
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
Developer Capital Funding	410,000	410,000	410,000	410,000	410,000	410,000
Total	\$ 1,515,000	\$ 1,535,000	\$ 1,545,000	\$ 1,545,000	\$ 1,545,000	\$ 1,555,000





Traffic Engineering Division

Yang Tao, PhD, PE, City Traffic Engineer

Madison Municipal Building
215 Martin Luther King Jr Blvd
Suite 109
P.O. Box 2986
Madison, Wisconsin 53701-2986
Phone: (608) 266-4761
Fax: (608) 267-1158
www.cityofmadison.com

Date: May 17, 2019

To: Mayor Satya Rhodes-Conway
David Schmiedicke, Finance Director

From: Yang Tao, City Traffic Engineer

Subject: Traffic Engineering Division 2019 Capital Budget

Traffic Engineering Division's 2020 capital budget reflects careful consideration of the City's fiscal situation in the face of growing infrastructure needs. The primary goal of our 2020 proposal is to upgrade our existing facilities that result where maintenance and repairs have become too costly to continue.

We have included requests for city funding to install new infrastructure in locations where public safety improvements are vital and where the city could leverage other funding sources: assessment districts, funding from private developers, federal and state grants, and funding from other municipalities for new signals and lighting. We have also included requests for funding for new projects such as transit signal priority pilot (within the existing Traffic Signals Installation Program) to help improve bus on-time performance and public safety radio tower relocation (Black Hawk Water Tower) to maintain reliable radio communication for critical public safety needs in a more cost-effectively manner.

Our agency developed the capital projects through the lenses of the Citywide Elements and have included measures to be used to understand the problems we are seeking to resolve and the way capital investment helps resolve these problems.

1. Street Light Installation
2. Traffic Signals Installation
3. Public Safety Radio System
4. Traffic Safety Infrastructure
5. Black Hawk Water Tower Relocation

I look forward to further discussing our capital proposal in the coming weeks.

Sincerely,

A handwritten signature in cursive script that reads "Yang Tao".

Yang Tao, PhD, PE
City Traffic Engineer

2020 Capital Improvement Plan Program Budget Proposal

Identifying Information

Agency **Project Name**

Project Number 10418 **Project Type** Program

Project Category Transportation **Priority**

2020 Munis Project Number

Description

This program funds upgrades or replacements 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. The goal of the program is to provide adequate lighting on streets for motorists, pedestrians and bicyclists. Progress will be measured by the number of street light outages and emergency repairs. Funding in 2019 is for converting lighting fixtures on Mineral Point Road from Grand Canyon Drive to High Point Road, knockdown repair and replacement, and fixtures for street reconstruction and new development.

Budget Information

Prior Appropriation* **Prior Year Actual***

*Based on Fiscal Years 2015-2018

Budget by Funding Source

Funding Source	2020	2021	2022	2023	2024	2025
GF GO Borrowing	155,000	170,000	175,000	175,000	175,000	180,000
Developer Capital Funding	300,000	300,000	300,000	300,000	300,000	300,000
State Sources	20,000	20,000	20,000	20,000	20,000	20,000
Other Govt Pmt For Services	30,000	30,000	30,000	30,000	30,000	30,000
County Sources	15,000	15,000	15,000	15,000	15,000	15,000
Special Assessment	75,000	75,000	75,000	75,000	75,000	75,000
Total	\$595,000	\$610,000	\$615,000	\$615,000	\$615,000	\$620,000

Insert Funding Source

Budget by Expenditure Type

Expense Type	2020	2021	2022	2023	2024	2025
Streetlighting	595,000	610,000	615,000	615,000	615,000	620,000
Total	\$595,000	\$610,000	\$615,000	\$615,000	\$615,000	\$620,000

Insert Expense Type

Performance

Metric

Data Source

Baseline Data

2017 Actual	2018 Actual	2019 Projected	Target
374	521	500	550

Priority

Citywide Element

Strategy

Describe how this project advances the Citywide Element:

The purposes of street lighting are to assist drivers, pedestrians, and cyclists in avoiding traffic hazards. Many business and residents believe that lighting helps prevent crime and helps resident feel safer. MPD has requested new lighting in high pedestrian use area to aid in crowd control.

Project Schedule & Location

2020 Projects

Project name	Est Cost	Location
2020 LED lighting conversion	\$75,000	E. Washington, High Point, Bike path lighting
2020 State Street Streetlighting Replacement	\$30,000	State Street/ Capitol Square

Insert item

Explain the justification for selecting projects planned for 2020:

These projects will improve public safety for neighborhoods and business areas and reduce energy use.

2021 Projects

Project Name	Est Cost	Location
2021 LED lighting conversion	\$80,000	Packers Ave (First St to Northport), International Lane, Anderson Road

Insert item

Explain the justification for selecting projects planned for 2021:

These projects will improve public safety for neighborhoods and business areas and reduce energy use.

2022 Projects

Project Name	Est Cost	Location
2022 LED lighting conversion	\$80,000	Old Sauk Road (from west of Pleasant View to Westfield), High Point Rd north of Old Sauk Rd, Junction Road (Old Sa...

Insert item

Explain the justification for selecting projects planned for 2022:

These projects will improve public safety for neighborhoods and business areas and reduce energy use.

2023 Projects

Project name	Est Cost	Location

Insert item

Explain the justification for selecting projects planned for 2023:

2024 Projects

Project name	Est Cost	Location

Insert item

Explain the justification for selecting projects planned for 2024:

2025 Projects

Project name	Est Cost	Location

Insert item

Explain the justification for selecting projects planned for 2025:

Operating Costs

What are the estimated annual operating costs associated with the projects planned within this program?

Personnel

# of FTEs	Annual Cost	Description
		N/A

Non-Personnel

Major	Amount	Description
45200		LED lights are more energy efficient than traditional streetlights and as more LEDs are added the City's electrical expenses per street light are reduced, however the addition of new streetlights in City offsets these LED savings making it difficult to predict citywide annual electrical expenses.

Insert item

Notes

Notes:

v. 5-22-2019

Save and Close

Submitted

2020 Capital Improvement Plan Program Budget Proposal

Identifying Information

Agency **Project Name**

Project Number 10420 **Project Type** Program

Project Category Transportation **Priority**

2020 Munis Project Number

Description

This program funds the purchase of digital emergency communication equipment. The goal of the program is to be compliant with the Dane County Emergency communication system and improve the satisfaction of 911 users. Progress will be measured by feedback from public safety officials and the public. Funding is for routine upgrades of digital emergency communication equipment.

Budget Information

Prior Appropriation* **Prior Year Actual***

*Based on Fiscal Years 2015-2018

Budget by Funding Source

Funding Source	2020	2021	2022	2023	2024	2025
GF GO Borrowing	50,000	50,000	50,000	50,000	50,000	50,000
Total	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000

Insert Funding Source

Budget by Expenditure Type

Expense Type	2020	2021	2022	2023	2024	2025
Machinery and Equipment	50,000	50,000	50,000	50,000	50,000	50,000
Total	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000

Insert Expense Type

Performance

Metric

Data Source

Baseline Data

2017 Actual	2018 Actual	2019 Projected	Target

Priority

Citywide Element

Strategy

Describe how this project advances the Citywide Element:

Project Schedule & Location

2020 Projects

Project name	Est Cost	Location
Office furniture for new Nakoosa Facility- funding not included in construction project	\$50,000	4141 Nakoosa Trail, Madison WI

Insert item

Explain the justification for selecting projects planned for 2020:

Communication Staff are relocating to a new facility. Funding for furniture was not including in the project. TE will forgo replacement of conflict monitor this year (budgeted in CIP) in order to fund this project.

2021 Projects

Project Name	Est Cost	Location

Insert item

Explain the justification for selecting projects planned for 2021:

2022 Projects

Project Name	Est Cost	Location

Insert item

Explain the justification for selecting projects planned for 2022:

2023 Projects

Project name	Est Cost	Location

Insert item

Explain the justification for selecting projects planned for 2023:

2024 Projects

Project name	Est Cost	Location

Insert item

Explain the justification for selecting projects planned for 2024:

2025 Projects

Project name	Est Cost	Location

Insert item

Explain the justification for selecting projects planned for 2025:

Operating Costs

What are the estimated annual operating costs associated with the projects planned within this program?

Personnel

# of FTEs	Annual Cost	Description
<input type="text"/>	<input type="text"/>	n/a

Non-Personnel

Major	Amount	Description
<input type="text"/>	<input type="text"/>	n/a

Insert item

Notes

Notes:

v. 5-22-2019

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2020 Capital Improvement Plan Program Budget Proposal

Identifying Information

Agency **Project Name**

Project Number 10427 **Project Type** Program

Project Category Transportation **Priority**

2020 Munis Project Number

Description

This program funds replacing and modernizing the City's traffic signal network. The goal of the program is to provide energy efficient dynamic traffic signals that are readily adaptable to provide for safe, efficient traffic flow for vehicles, bicycles, and pedestrians. Progress is measured by analyzing traffic and crash data using industry standards and best practices. In 2019, the funding is for repairs for signal knockdowns and upgrades to pedestrian and traffic signals.

Budget Information

Prior Appropriation* **Prior Year Actual***

*Based on Fiscal Years 2015-2018

Budget by Funding Source

Funding Source	2020	2021	2022	2023	2024	2025
GF GO Borrowing	350,000	355,000	360,000	360,000	360,000	365,000
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
State Sources	80,000	80,000	80,000	80,000	80,000	80,000
Special Assessment	200,000	200,000	200,000	200,000	200,000	200,000
Total	\$820,000	\$825,000	\$830,000	\$830,000	\$830,000	\$835,000

Insert Funding Source

Budget by Expenditure Type

Expense Type	2020	2021	2022	2023	2024	2025
Machinery and Equipment	820,000	825,000	830,000	830,000	830,000	835,000
Total	\$820,000	\$825,000	\$830,000	\$830,000	\$830,000	\$835,000

Insert Expense Type

Performance

Metric

Data Source

Baseline Data

2017 Actual	2018 Actual	2019 Projected	Target
5.4	7.25	7	6

Priority

Citywide Element

Strategy

Describe how this project advances the Citywide Element:

Modernizing signal infrastructure and management system helps maintain/improve mobility of existing transportation infrastructure. Equipment upgrades are also necessary for compatibility with the City's traffic signal management system.

Project Schedule & Location

2020 Projects

Project name	Est Cost	Location
Transit signal priority pilot	\$120,000	Critical intersections along major transit corridors such as University Ave, E Washington Ave and Park St
Dedicated traffic signals for transit use	\$24,000	Bus Queue Jumps at critical intersections along major transit corridors such as University Ave, E Washington Ave an...
2020 Upgrade traffic control cabinets	\$70,000	Various

Insert item

Explain the justification for selecting projects planned for 2020:

Improve transit operation by minimizing delay at signalized intersections, and upgrading traffic signal cabinets to be compatible with the City's traffic signal management system

2021 Projects

Project Name	Est Cost	Location

Insert item

Explain the justification for selecting projects planned for 2021:

2022 Projects

Project Name	Est Cost	Location

Insert item

Explain the justification for selecting projects planned for 2022:

2023 Projects

Project name	Est Cost	Location

Insert item

Explain the justification for selecting projects planned for 2023:

2024 Projects

Project name	Est Cost	Location

Insert item

Explain the justification for selecting projects planned for 2024:

2025 Projects

Project name	Est Cost	Location

Insert item

Explain the justification for selecting projects planned for 2025:

Operating Costs

What are the estimated annual operating costs associated with the projects planned within this program?

Personnel

# of FTEs	Annual Cost	Description
<input type="text"/>	<input type="text"/>	<input type="text"/>

Non-Personnel

Major	Amount	Description
<input type="text"/>	<input type="text"/>	Additional traffic signal equipment does slightly increase our electrical usage, however our past years experience has shown that the new upgraded equipment is more energy efficient resulting in a net zero to near zero energy cost increase.

Insert item

Notes

Notes:

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v. 5-22-2019

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2020 Capital Improvement Plan Program Budget Proposal

Identifying Information

Agency **Project Name**

Project Number 10428 **Project Type** Program

Project Category Transportation **Priority**

2020 Munis Project Number

Description

This program funds traffic control devices and the design of the local share of the State Highway Hazard Elimination program, signs, and traffic safety studies. The goal of the program is to improve traffic safety and accessibility for pedestrians, bicyclists, motorists and transit users. Progress is measured by analyzing crash and traffic data using federal standards and professional expertise to determine if improvements are successful and/or if other improvements are required. This program was increased by \$150,000 in GO Borrowing in 2019 by Finance Committee amendment 13. A portion of the funds budgeted in 2019 will be used to purchase two mobile speed boards as identified by Finance Committee amendment 14.

Budget Information

Prior Appropriation* **Prior Year Actual***

*Based on Fiscal Years 2015-2018

Budget by Funding Source

Funding Source	2020	2021	2022	2023	2024	2025
GF GO Borrowing	50,000	50,000	50,000	50,000	50,000	50,000
Total	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000

Insert Funding Source

Budget by Expenditure Type

Expense Type	2020	2021	2022	2023	2024	2025
Land Improvements	50,000	50,000	50,000	50,000	50,000	50,000
Total	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000

Insert Expense Type

Performance

Metric

Data Source

Baseline Data

2017 Actual	2018 Actual	2019 Projected	Target

Priority

Citywide Element

Strategy

Describe how this project advances the Citywide Element:

Project Schedule & Location

2020 Projects

Project name	Est Cost	Location
<input type="text"/>	<input type="text"/>	<input type="text"/>

Insert item

Explain the justification for selecting projects planned for 2020:

2021 Projects

Project Name	Est Cost	Location
<input type="text"/>	<input type="text"/>	<input type="text"/>

Insert item

Explain the justification for selecting projects planned for 2021:

2022 Projects

Project Name	Est Cost	Location
<input type="text"/>	<input type="text"/>	<input type="text"/>

Insert item

Explain the justification for selecting projects planned for 2022:

2023 Projects

Project name	Est Cost	Location
<input type="text"/>	<input type="text"/>	<input type="text"/>

Insert item

Explain the justification for selecting projects planned for 2023:

2024 Projects

Project name	Est Cost	Location
<input type="text"/>	<input type="text"/>	<input type="text"/>

Insert item

Explain the justification for selecting projects planned for 2024:

2025 Projects

Project name	Est Cost	Location
<input type="text"/>	<input type="text"/>	<input type="text"/>

Insert item

Explain the justification for selecting projects planned for 2025:

Operating Costs

What are the estimated annual operating costs associated with the projects planned within this program?

Personnel

# of FTEs	Annual Cost	Description
<input type="text"/>	<input type="text"/>	<input type="text"/>

Non-Personnel

Major	Amount	Description
<input type="text"/>	<input type="text"/>	<input type="text"/>

Insert item

Notes

Notes:

v. 5-22-2019

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2020 Capital Improvement Plan Project Budget Proposal

Identifying Information

Agency **Project Name**

Project Number 12477 **Project Type** Project

Project Category Other **Priority**

Description

This project funds the relocation of equipment (generator, antennas, and coax) and the construction of a new shelter for the equipment at the Blackhawk Water Tank. With pending lease agreement changes with the University of Wisconsin it is cost effective to move the equipment to a City owned facility. Construction is planned for 2024.

Is this project currently included in the 2019 CIP?

Budget Information

Total Project Budget **Prior Appropriation**

Budget by Funding Source

Funding Source	2020	2021	2022	2023	2024	2025
<input type="text"/>					350,000	
Total	\$0	\$0	\$0	\$0	\$350,000	\$0

Insert Funding Source

Budget by Expenditure Type

Expense Type	2020	2021	2022	2023	2024	2025
<input type="text"/>					350,000	
Total	\$0	\$0	\$0	\$0	\$350,000	\$0

Insert Expense Type

Performance

Metric

Data Source

Baseline **Target**

Priority

Citywide Element

Strategy

Describe how this project advances the Citywide Element:

A radio tower location located on the City's far westside is an essential link for citywide coverage of City's Emergency Radio Communications System. The city currently leases tower space from the University of Wisconsin (near West Towne Mall). The City had pre-paid UW \$250,000 for a 25 years lease for this location. This lease expires in Oct. 2020 and in discussions with the UW, they have indicated that annual lease fee would like be from \$40,000 to \$50,000 annually. For the long run, it will be more cost effective for the City to relocate its tower to the City-owned Blackhawk water tower.

What is the justification for this project?

The relocation of the Tower to Blackhawk would be a more cost effective option than continuing to pay rent to the UW. The UW has not been able to inform the city what it plans to charge the city in the long or short term. The construction costs would be offset in about 8 to 9 years. Also, the relocation would provide the City control as there have been much discussion of relocation of the UW tower due to development. This location meets the technical requirements to replace the UW tower.

Project Schedule & Location

What is the total time frame for this project?

Start Date: 1/1/2024

End Date: 12/31/2025

	2020	2021	2022	2023	2024	2025
Project Status					Construction	

Can this project be mapped?

Yes No

What is the location of the project?

Blackhawk Water Tower

Is this project on the Project's Portal?

Yes No

Operating Costs

What are the estimated annual operating costs associated with the project?

Personnel

# of FTEs	Annual Cost	Description
<input type="text"/>	<input type="text"/>	<input type="text"/>

Non-Personnel

Major	Amount	Description
<input type="text"/>	<input type="text"/>	This relocation of this tower would reduce rental costs paid to the UW. The specific rental charges are unknown at this time.

Insert item

Notes

Notes: