

CITY OF MADISON
INTER-DEPARTMENTAL
CORRESPONDENCE

DATE: July 10, 2018

TO: David Schmiedicke, Finance Department

FROM: Yang Tao, Ph.D., P.E, Interim City Traffic Engineer and Parking Manager

SUBJECT: **Traffic Engineering 2019 Operating Budget Requests**

The Traffic Engineering 2019 operating budget reflects the goal of efficiently maintaining city infrastructure and facilities while providing a high level of customer service and improved safety to our customers.

The task of maintaining the agency's infrastructure is challenging as the city grows and technology expands. Consider the sheer number of signs, pavement markings, traffic signals, and streetlights has grown but new technologies such as cameras (signals), electronic display boards, LED Street lighting, specialized bike pavement markings, and overseeing 69 miles of fiber optic cable (MUFN) has made the task more challenging for TE staff going forward.

We are submitting a supplemental request asking for funding to pay for regular inspections of the city's sign bridges. Sign bridges are structures holding large overhead signs in high traffic areas and in the interest of public safety, they need to be inspected and repaired regularly to avoid damage to people and property.

We look forward to working with as a part of the 2019 operating budget process.

Agency: TE

Proposed Budget

	Cost to Continue	Proposed	Change
Revenue	-\$1,212,000	-\$1,206,960	\$5,040
<u>Expenditures</u>	<u>\$7,687,183</u>	<u>\$7,682,142</u>	<u>-\$5,041</u>
Net	\$6,475,183	\$6,475,182	-\$1
	2018	Proposed	Change
FTEs	65.6	65.6	0

Request Analysis

2017 Budget

Overbudget	No
2017 Analysis	

2018 Projection

Deficit	No
Projection Analysis	

2019 Request

Budget Request Changes	MUFN revenue was increased \$50,000 based on 2018 actual revenue and assumed growth. Revenue from private entities for traffic signals/lights was reduced \$47,000 based on historical trends. Additional costs of \$219,000 in Supplies and Purchased Services are funded by reducing ID Charges from Engineering (\$122,000) and Fleet (\$133,000).
Change in Service	No
Service Impact	N/A
Staffing Levels & Payroll Allocations	None.

Traffic Engineering

Function: Public Works & Transportation

Position Summary

	2018			Request		2019		Adopted	
	CG	FTEs	Amount	FTEs	Amount	FTEs	Amount	FTEs	Amount
ACCT TECH	20	1.00	54,191	1.00	58,629	-	-	-	-
ASST CITY TRAFFIC ENGR	18	1.00	118,574	1.00	121,276	-	-	-	-
BIC REGISTRATION COORD	20	0.60	31,003	0.60	31,845	-	-	-	-
CITY TRAFF ENGR/PKG MGR	21	1.00	145,425	1.00	148,904	-	-	-	-
CIVIL TECH	16	2.00	104,025	2.00	130,876	-	-	-	-
COM OPER LDWKR	16	1.00	65,036	1.00	71,139	-	-	-	-
COMMUNIC OPER SUPV	18	1.00	99,319	1.00	84,228	-	-	-	-
COMMUNIC TECH	16	6.00	409,254	6.00	390,655	-	-	-	-
COMMUNICATION WKR	16	2.00	121,338	2.00	121,805	-	-	-	-
COMP MAP/GIS COORD	18	1.00	89,686	1.00	100,561	-	-	-	-
ENGINEER	18	1.00	63,615	1.00	67,493	-	-	-	-
ENGR PROG SPEC	16	5.00	330,847	5.00	331,056	-	-	-	-
MAINT MECH	16	1.00	58,745	1.00	49,780	-	-	-	-
MAINT PAINTER	16	3.00	186,032	3.00	183,622	-	-	-	-
PED BICYCLE COORD	18	1.00	75,255	1.00	57,286	-	-	-	-
PED BICYCLE SAFETY ASST	20	1.00	57,256	1.00	45,555	-	-	-	-
PROG ASST	20	1.00	54,698	1.00	58,520	-	-	-	-
SECRETARY	20	1.00	54,188	1.00	58,520	-	-	-	-
SIGN PAINTER	16	2.00	118,508	2.00	121,571	-	-	-	-
STOREKEEPER	16	1.00	62,339	1.00	62,579	-	-	-	-
TRAFF CONT MAINT WKR	16	6.00	315,869	6.00	326,234	-	-	-	-
TRAFF ENGR	18	7.00	569,836	7.00	577,377	-	-	-	-
TRAFF OPER LDWKR	16	2.00	134,249	2.00	135,395	-	-	-	-
TRAFF OPER MGR	18	1.00	114,097	1.00	104,754	-	-	-	-
TRAFF OPER SUPV	18	1.00	84,790	1.00	81,063	-	-	-	-
TRAFF SIG ELECTR	16	8.00	551,857	8.00	548,274	-	-	-	-
TRAFF SIG MAINT WKR	16	4.00	229,318	4.00	218,102	-	-	-	-
TRAFF SIGNAL ELECT	16	1.00	76,504	1.00	76,094	-	-	-	-
TRAFF SYS/NET SPEC	16	1.00	92,641	1.00	84,136	-	-	-	-
TRANSP OPNS ANAL	18	1.00	85,471	1.00	86,738	-	-	-	-
TOTAL		65.60	\$ 4,553,969	65.60	\$ 4,534,066	-	\$ -	-	\$ -

Salary amounts recorded on this page are for total budgeted salaries; this amount may differ from budgeted permanent wages as presented in the Line Item Detail due to payroll allocations to other funding sources (capital projects, grants, etc.) or inter-agency services are not reflected in this summary page.

2019 Operating Budget: Service Proposals

SERVICE IDENTIFYING INFORMATION

SELECT YOUR AGENCY:

Traffic Engineering

SELECT YOUR AGENCY'S SERVICE:

Bicycle & Pedestrian Services

SERVICE DESCRIPTION:

This service manages bicycle and pedestrian infrastructure improvements and program administration.

SERVICE BUDGET - ALL FUNDS

	2017 Budget	2018 Budget	2019 Cost to Continue	2019 Request	Change
Revenue	-42,095	7,999	-91,800		91,800
Expense	316,101	94,813	401,613		-401,613
Net Budget	274,005.79	102,812	309,813	0	-309,813

2019 PROPOSAL

1. Explain the budgetary changes proposed from 2019 Cost to Continue to the 2019 Request.

The Facility service charge for facility use was reduced as charges were reapportioned among the department's services. Also, this request assumes that TE will receive its annual grant for Ped Bike Education; however, it is not certain whether WIDOT will provide grant for this purpose. The MPO, the grant administrator, suggested that we assume we will receive in 2019.

2. Explain the operational impact of the proposed changes from 2019 Cost to Continue to 2019 Request.

If we do not receive the Ped Bike Education Grant, we would not hire for the Ped Bike Coordinator position. This position provides for Ped bike education to schools and communities and general Ped Bike safety oversight.

SERVICE GOALS

1. Who is the recipient of this service?

Customers include all users of the roadway system. Examples include but are not limited to: motorists, bicyclists, pedestrians, busses, commercial trucks, emergency vehicles, and trains.

2. What activities are you responsible for providing under this service?

This proposal would provide funding for maintaining, repairing and adjusting bicycle and pedestrian facilities. Also, this program provides pedestrian and bicycle education to children at schools and community centers.

3. How do you define success within this service?

Success would be a safe, efficient and accessible infrastructure and public awareness pedestrian and bicycle safety best practices

4. What strategies are planned for 2019?

Staff will continue to maintain pedestrian bicycle infrastructure and review the use of new Ped/Bike traffic control facilities to improve the City's transportation network.

2019 Operating Budget: Service Proposals

SERVICE IDENTIFYING INFORMATION

SELECT YOUR AGENCY:

Traffic Engineering

SELECT YOUR AGENCY'S SERVICE:

Communications

SERVICE DESCRIPTION:

This service installs, repairs, calibrates, modifies and tests two-way radios and associated electronic equipment; and plans, designs and installs municipal communications systems. This service also plans, designs, modifies and installs communications equipment for the City, the 911 Center, and other public entities.

SERVICE BUDGET - ALL FUNDS

	2017 Budget	2018 Budget	2019 Cost to Continue	2019 Request	Change
Revenue	-143,000	-133,000	-133,000		133,000
Expense	950,439	626,760	695,990		-695,990
Net Budget	807,438.87	493,760	562,990	0	-562,990

2019 PROPOSAL

1. Explain the budgetary changes proposed from 2019 Cost to Continue to the 2019 Request.

Communication budgeted were re-estimated for 2019 to reflect the services expenses.

2. Explain the operational impact of the proposed changes from 2019 Cost to Continue to 2019 Request.

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SERVICE GOALS

1. Who is the recipient of this service?

Any resident, business or individual who works in the community are the may be recipients of a reliable emergency communications system. The largest users of this system are MFD and MPD.

2. What activities are you responsible for providing under this service?

This service installs, repairs, calibrates, modifies and tests twoway radios and associated electronic equipment; and plans, designs and installs municipal communications systems. This service also plans, designs, modifies and installs communications equipment for the City, the 911 Center, and other public entities.

3. How do you define success within this service?

This section will be able to maintain, repair the current emergency communication system and radios.

4. What strategies are planned for 2019?

The section is looking to increase repairing and installing emergency communication equipment in order to for outside agencies in order to gain additional revenue.

2019 Operating Budget: Service Proposals

SERVICE IDENTIFYING INFORMATION

SELECT YOUR AGENCY:

Traffic Engineering

SELECT YOUR AGENCY'S SERVICE:

Pavement Markings

SERVICE DESCRIPTION:

This service performs an annual pavement marking inventory. The service is also responsible for the maintenance of the following: centerline, lane line, crosswalk, bike path, speed hump, and other similar markings.

SERVICE BUDGET - ALL FUNDS

	2017 Budget	2018 Budget	2019 Cost to Continue	2019 Request	Change
Revenue	-8,608	0	0		0
Expense	631,593	925,075	916,184		-916,184
Net Budget	622,985	925,075	916,184	0	-916,184

2019 PROPOSAL

1. Explain the budgetary changes proposed from 2019 Cost to Continue to the 2019 Request.

Funding that was budgeted to purchase equipment in a prior year was moved to pavement marking supplies.

2. Explain the operational impact of the proposed changes from 2019 Cost to Continue to 2019 Request.

This additional supply budget will give city staff additional flexibility to maintain the growing number of citywide pavement markings.

SERVICE GOALS

1. Who is the recipient of this service?

The users of the public transportation system such as motorists, bicyclists and pedestrians are the recipients.

2. What activities are you responsible for providing under this service?

This service performs an annual pavement marking inventory. The service is also responsible for the maintenance of the following: centerline, lane line, crosswalk, bike path, speed hump, and other similar markings.

3. How do you define success within this service?

Provide greater clarity and consistent guidance on, over, or adjacent to a street, pedestrian facility or, bikeway by maintaining existing and installing new, where appropriate, traffic control pavement markings.

4. What strategies are planned for 2019?

The installation of greencolored pavement marking to highlight the path crossing at several new locations. Installation of additional bike lane marking. Installation of additional crosswalk marking.

2019 Operating Budget: Service Proposals

SERVICE IDENTIFYING INFORMATION

SELECT YOUR AGENCY:

Traffic Engineering

SELECT YOUR AGENCY'S SERVICE:

Services

SERVICE DESCRIPTION:

This service, in conjunction with the Pedestrian Bicycle Motor Vehicle Commission, provides overall leadership for traffic safety programs and assists on the overall transportation and traffic planning, design and transportation engineering for the City. Staff assist neighborhoods and other government entities in planning transportation improvements.

SERVICE BUDGET - ALL FUNDS

	2017 Budget	2018 Budget	2019 Cost to Continue	2019 Request	Change
Revenue	0	0	0		0
Expense	1,193,036	1,252,552	1,204,517		-1,204,517
Net Budget	1,193,036	1,252,552	1,204,517	0	-1,204,517

2019 PROPOSAL

1. Explain the budgetary changes proposed from 2019 Cost to Continue to the 2019 Request.

There was minimal change. The service charge for facility use was reduced as charges were reapportioned among the department's services.

2. Explain the operational impact of the proposed changes from 2019 Cost to Continue to 2019 Request.

no impact.

SERVICE GOALS

1. Who is the recipient of this service?

Customers include all transportation system users, neighborhoods, other City agencies, private developers, and other government entities such as Dane County Regional Planning and Madison Area Transportation Planning Board.

2. What activities are you responsible for providing under this service?

This service, in conjunction with the Pedestrian Bicycle Motor Vehicle Commission, provides overall leadership for traffic safety programs and assists on the overall transportation and traffic planning, design and transportation engineering for the City. Staff assist neighborhoods and other government entities in planning transportation improvements.

3. How do you define success within this service?

Staff will continue to work to study and provide for efficient development with minimal negative impacts on traffic safety and efficiency on City streets and neighborhoods.

4. What strategies are planned for 2019?

This service provides for high quality transportation and traffic planning, design and engineering services for the City, collaborating with various stakeholders to achieve best development projects possible, and working closely with neighborhoods on neighborhood traffic management programs.

2019 Operating Budget: Service Proposals

SERVICE IDENTIFYING INFORMATION

SELECT YOUR AGENCY:

Traffic Engineering

SELECT YOUR AGENCY'S SERVICE:

Signals

SERVICE DESCRIPTION:

This service is responsible for the installation, operation and upkeep of traffic signals. This section performs studies, planning and design associated with new installations as well as the regular review, revision and modernization for the signalized intersections that Traffic Engineering maintains, including sixty-five signals that are paid for by other units of government. Other work activity includes the installation and maintenance of fiber optics.

SERVICE BUDGET - ALL FUNDS

	2017 Budget	2018 Budget	2019 Cost to Continue	2019 Request	Change
Revenue	-657,126	-735,000	-735,000		735,000
Expense	1,441,767	1,529,644	1,609,425		-1,609,425
Net Budget	784,641	794,644	874,425	0	-874,425

2019 PROPOSAL

1. Explain the budgetary changes proposed from 2019 Cost to Continue to the 2019 Request.

This request uses historic averages to better reflect the interagency charges (CE facility and Fleet Services) that are re-classified from TE operating budget to projects and other orgs. This request significantly increases budgeted electrical expenses to reflect projected actuals. The budget request for misc revenue was increased to reflect 2018 actual revenue for MUFN fiber rental and assumed revenue growth.

2. Explain the operational impact of the proposed changes from 2019 Cost to Continue to 2019 Request.

The request allows TE to have sufficient budget to increase budgeted expenses in other services.

SERVICE GOALS

1. Who is the recipient of this service?

Customers include all users of the roadway system. Examples include but are not limited to: motorists, bicyclists, pedestrians, busses, commercial trucks, emergency vehicles, and trains.

2. What activities are you responsible for providing under this service?

This service is responsible for the installation, operation (including electricity costs) and upkeep of traffic signals. This section performs studies, planning and design associated with new installations as well as the regular review, revision and modernization for the signalized intersections that Traffic Engineering maintains, including seventy signals that are paid for by other units of government. Other work activity includes the maintenance and repair of fiber optics and paying for.

3. How do you define success within this service?

This proposal would provide for safer intersections through maintenance and repair the City's traffic signals.

4. What strategies are planned for 2019?

In addition to the services described within the Service Description section, the Traffic Engineering Signal section plans to continue to add signal corridors onto our centralized Advanced Transportation Management System (ATMS).

2019 Operating Budget: Service Proposals

SERVICE IDENTIFYING INFORMATION

SELECT YOUR AGENCY:

Traffic Engineering

SELECT YOUR AGENCY'S SERVICE:

Signing

SERVICE DESCRIPTION:

This service is responsible for fabricating, installing, replacing, repairing, and maintaining street signs. The service performs an annual inventory of all signs as to condition and proper location; studies to evaluate the need for new signs or removal/alteration of existing signs; surveys and reports on sight distance problems and sign obstructions; and upkeep and maintenance of signs and guard rails. The service also installs and removes barricades and signs for special events and provides barricades and signs to individuals with street-use permits.

SERVICE BUDGET - ALL FUNDS

	2017 Budget	2018 Budget	2019 Cost to Continue	2019 Request	Change
Revenue	-213,542	-99,000	-99,000		99,000
Expense	1,319,539	1,345,273	1,114,413		-1,114,413
Net Budget	1,105,997	1,246,273	1,015,413	0	-1,015,413

2019 PROPOSAL

1. Explain the budgetary changes proposed from 2019 Cost to Continue to the 2019 Request.

The supplies budget was increased to reflect material cost increases and the growing number of signs that need to be replace or maintained. These expenses were offset with reductions in other services.

2. Explain the operational impact of the proposed changes from 2019 Cost to Continue to 2019 Request.

TE staff will better be able to maintain the city's signage.

SERVICE GOALS

1. Who is the recipient of this service?

The recipients are the users of the public transportation system including motorists, bicyclists and pedestrians.

2. What activities are you responsible for providing under this service?

This service is responsible for fabricating, installing, replacing, repairing, and maintaining street signs. The service performs an annual inventory of all signs as to condition and proper location; studies to evaluate the need for new signs or removal/alteration of existing signs; surveys and reports on sight distance problems and sign obstructions; and upkeep and maintenance of signs and guard rails. The service also installs and removes barricades and signs for special events and provides barricades and signs to individuals with streetuse permits.

3. How do you define success within this service?

Provide for a clearer, more concise and consistent guidance on, over, or adjacent to a street, pedestrian facility or, bikeway by maintaining existing and installing new, where appropriate, traffic control signage.

4. What strategies are planned for 2019?

TE is planning on installing: enhanced path crossing signage at several new locations; additional bike lanes signage; additional enhanced pedestrian crossing signage.

2019 Operating Budget: Service Proposals

SERVICE IDENTIFYING INFORMATION

SELECT YOUR AGENCY:

Traffic Engineering

SELECT YOUR AGENCY'S SERVICE:

Streetlighting

SERVICE DESCRIPTION:

This service manages all street lights within the City of Madison. Staff repair and maintain light poles, bases and luminaries, and repair all damage resulting from crashes. This service is responsible for the design of new lighting installations and evaluates the need for changes in the existing systems and lighting units for specific neighborhood needs.

SERVICE BUDGET - ALL FUNDS

	2017 Budget	2018 Budget	2019 Cost to Continue	2019 Request	Change
Revenue	-399,200	-245,000	-245,000		245,000
Expense	1,534,567	1,639,093	1,836,841		-1,836,841
Net Budget	1,135,367	1,394,093	1,591,841	0	-1,591,841

2019 PROPOSAL

1. Explain the budgetary changes proposed from 2019 Cost to Continue to the 2019 Request.

This request uses historic averages to better reflect the interagency charges (CE facility and Fleet Services) that are re-classed from TE operating budget to projects and other orgs. This request significantly increases budgeted electrical expenses to reflect projected actuals.

2. Explain the operational impact of the proposed changes from 2019 Cost to Continue to 2019 Request.

The request allows TE to have sufficient funds to pay the city's streetlighting expenses.

SERVICE GOALS

1. Who is the recipient of this service?

Customers include all night time users of the roadway and path system.

2. What activities are you responsible for providing under this service?

This service manages all street lights within the City of Madison. Staff repair and maintain light poles, bases and luminaries, and repair all damage resulting from crashes. This service is responsible for the design of new lighting installations and evaluates the need for changes in the existing systems and lighting units for specific neighborhood needs. In addition, this service pays for citywide streetlighting electrical expenses.

3. How do you define success within this service?

Maintain and repair streetlighting and bike path lighting infrastructure.

4. What strategies are planned for 2019?

The goal is to design and install LED lighting fixtures on all new arterial road and bike path construction projects where new lighting is to be installed. Work with MGE and Alliant Energy to include LED streetlights in new residential areas. LED lights use less electricity and require less maintenance than traditional high pressure sodium lights and help reduce electrical expenses.

Supplemental Request

Agency:

Traffic Engineering

Enter Your Agency's Service:

Signing

Supplement Title:

Funding to Hire Consultant to Annually Inspect Sign Bridges for Potential Safety Concerns

Amount: \$60,000.00

FTE: 0.00

- Expansion to Existing Service
- New Initiative

Provide an overview of the supplemental request.

TE is requesting funding to hire a structure engineering consultant to inspect the about 75 of the City's sign bridges (structures holding large overhead traffic signs) in high traffic areas. The agency had hired a consultant for this purpose (using one-time capital funds) who identified signs in need of repair and improvement. The agency believes that this inspection/repair should be an on-going in order to avoid structural failure leading to property damage or personal injury.

What is the desired outcome of the request?

TE wants to avoid structural failure with regular inspection, repair and maintenance. Structural issues identified in the Consultant's inspection reports will be addressed immediately to avoid potential structural failure. The department's goal is to have a 4 year inspection cycle for each sign bridge.

How will the desired outcome be measured?

Each time the consultant identifies a sign in need of repair potential structural failure may be avoided.