

Traffic Engineering

Agency Number: **57**
Budget Function: **Public Works and Transportation**

The mission of the Traffic Engineering Division is to use the tools available in transportation planning and operations to ensure safe, efficient, affordable, reliable and convenient movement of people and goods. These tools include a wide range of traffic study techniques and countermeasures. Examples include: traffic control devices, geometric design, safety studies, noise studies, pedestrian and bicycle safety and communications.

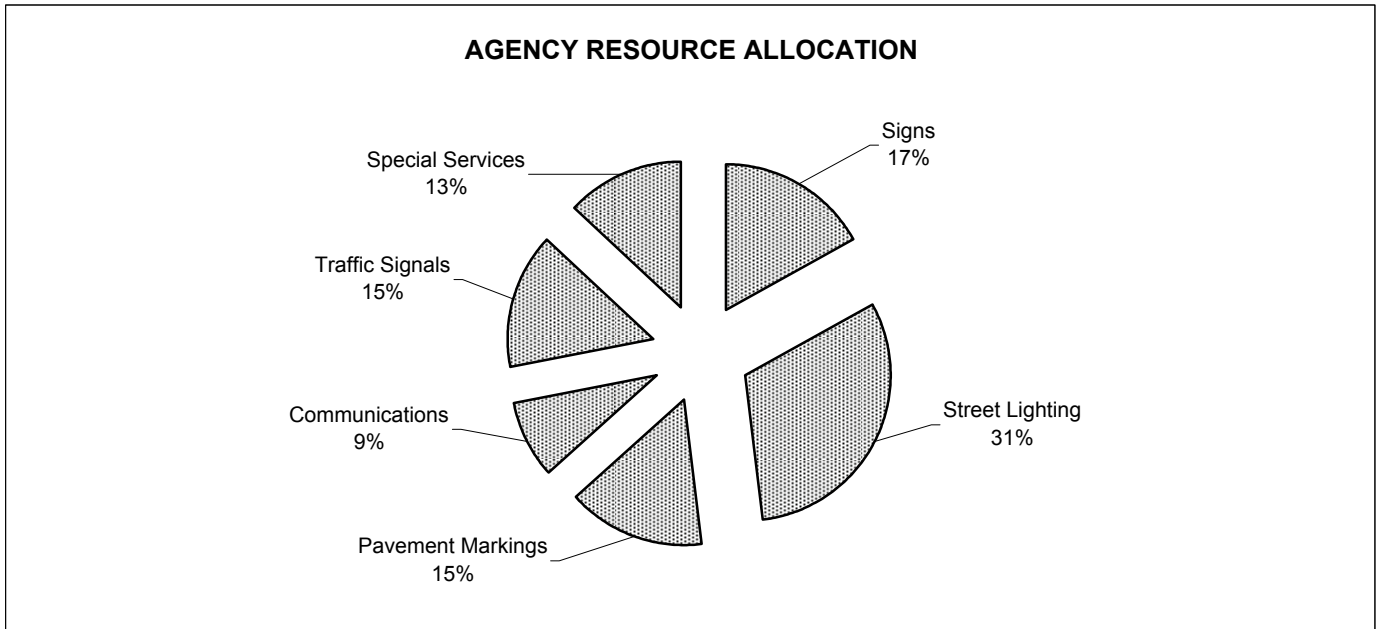
<u>Major Service</u>	<u>2007 Actual</u>	<u>2008 Budget</u>	<u>2008 Projected</u>	<u>2009 Request</u>	<u>2009 Executive</u>	<u>2009 Adopted</u>
Signs	\$ 369,336	\$ 1,017,151	\$ 1,017,151	\$ 902,432	\$ 876,854	\$ 0
Street Lighting	982,654	1,569,043	1,569,043	1,660,758	1,603,950	0
Pavement Markings	523,494	850,709	850,709	809,995	787,326	0
Communications	251,410	226,676	226,676	450,236	440,979	0
Traffic Signals	391,814	830,515	830,515	815,338	784,542	0
Special Services	1,811,352	735,972	735,972	632,514	668,898	0
Agency Total	<u>\$ 4,330,059</u>	<u>\$ 5,230,067</u>	<u>\$ 5,230,067</u>	<u>\$ 5,271,274</u>	<u>\$ 5,162,550</u>	<u>\$ 0</u>

Executive Budget Highlights

The Budget includes:

1. An increase of 4% in electrical costs for streetlights, traffic signals and facilities.
2. A delay in the replacement of a Traffic Signal Electrician in the event of an anticipated retirement which may occur mid-year 2009. If the incumbent retires, the position will be held open for the remainder of the year.
3. \$30,000 to support bicycle programs. Funding is to be derived from a restructuring of the current bicycle registration and licensing program as determined by the Platinum Bicycle Committee. An increase of \$30,000 associated with Bicycle Registration fees has been included in the City General Fund Revenues. The Platinum Bicycle Committee shall, by January 1, 2009, make recommendations regarding both the licensing and registration restructuring and expenditures in support of bicycle programs and infrastructure for approval by the Common Council.
4. A cut in expenditures for Overtime, representing a 19% reduction for this line item as compared to the 2008 Adopted Budget.
5. A cut in funding for hourly salaries for summer pavement marking crews, representing an 11% reduction for this line item as compared to the 2008 Adopted Budget.
6. The elimination of a Facility Maintenance Worker position.

Traffic Engineering



Budget Service Descriptions:

Signs

The Signs section is responsible for installing, fabricating, cleaning, repainting, straightening, replacing and relocating street signs. There are approximately 60,000 signs in the City. The service includes: an annual inventory of all signs as to condition and proper location (in process of being computerized); 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 guardrails. This section installs and removes barricades and signs for special events (Rhythm and Booms, Art Fair, etc.) and provides barricades and signs to individuals with street-use permits. Generally, signs have an average useful life of 7 - 10 years. All signs require continuous maintenance and eventual replacement. Many types of City signs are gradually being replaced with a higher quality reflective sheeting material. These signs have a higher impact value and a longer life, but have a higher initial cost. Painted signposts are being gradually replaced with galvanized posts.

Service Summary			
	2007	2008	2009
	Actual	Budget	Executive
Total Expenditures	\$ 1,121,068	\$ 1,389,331	\$ 1,380,038
Less Inter-Agency Billings	<u>751,732</u>	<u>372,180</u>	<u>503,184</u>
Net Total	<u>\$ 369,336</u>	<u>\$ 1,017,151</u>	<u>\$ 876,854</u>

Street Lighting

The Street Lighting section provides City-wide street lights including relamping and repairing of City-owned street light units as needed. Staff repair and maintain light poles, bases and luminaires, and repair all damage resulting from crashes. This unit is responsible for the design of new lighting installations. This service also evaluates the need for changes in the existing systems and lighting units for specific neighborhood needs. There are over 12,700 street lights in the City, all of which need continuous maintenance and eventual replacement. New installations are generally the style that directs all of the light downward to reduce lighting the night sky. The energy charges for the division are nearly \$1.2 million annually with street lighting accounting for 75% of this total. Street light energy efficiency has been improved by the virtual elimination of incandescent and mercury vapor lighting. Instead, high pressure sodium vapor and metal halide lamp types now account for 96% of street lighting.

Service Summary			
	2007 Actual	2008 Budget	2009 Executive
Total Expenditures	\$ 1,468,058	\$ 1,836,563	\$ 2,020,141
Less Inter-Agency Billings	485,404	267,520	416,191
Net Total	<u>\$ 982,654</u>	<u>\$ 1,569,043</u>	<u>\$ 1,603,950</u>

Pavement Markings

The Pavement Markings section performs an annual pavement marking inventory, plans, designs, prepares layouts and installs street and curb-side markings, utilizing both paint and semi-permanent marking materials such as preformed cold plastic, thermoplastic and epoxy. This unit is responsible for the maintenance of the following: the centerline, lane line and edge line markings (divide streets and provide guidance for vehicular traffic), the crosswalk markings (identify crossing areas for pedestrians), the curb-side markings (emphasize parking prohibition along a particular stretch of curb), bike path and ramp markings, speed hump markings, pavement arrows and stop lines (provide additional regulatory information to motorists) and other similar markings. The section develops and administers the annual pavement marking contract. All pavement marking materials require maintenance on a continual basis.

Service Summary			
	2007 Actual	2008 Budget	2009 Executive
Total Expenditures	\$ 568,630	\$ 850,709	\$ 787,326
Less Inter-Agency Billings	45,136	0	0
Net Total	<u>\$ 523,494</u>	<u>\$ 850,709</u>	<u>\$ 787,326</u>

Communications

The Communications section installs, repairs, calibrates, modifies and tests two-way radios and associated electronic equipment, and plans, designs and installs municipal communications systems. Services include: maintenance of the two-way radios used by all City agencies, Dane County and suburban police and fire agencies (radios are tested annually, and agencies and other entities are charged for this service); repair and servicing of intercom, public address and radar equipment for various public agencies; and filing of the necessary license applications and renewals, conducting scheduled frequency checks and compiling of reports required by the FCC. This section plans, designs, modifies and installs communications equipment for the City, the 911 Center, and other public entities. All communications equipment requires continuous maintenance and eventual replacement.

Service Summary			
	2007 Actual	2008 Budget	2009 Executive
Total Expenditures	\$ 1,023,586	\$ 1,360,470	\$ 1,361,585
Less Inter-Agency Billings	<u>772,176</u>	<u>1,133,794</u>	<u>920,607</u>
Net Total	<u>\$ 251,410</u>	<u>\$ 226,676</u>	<u>\$ 440,979</u>

Traffic Signals

This section is responsible for the installation, operation and upkeep of traffic signals. Staff maintain, clean, relamp, paint, align and inspect signal units annually; check signal controllers and detectors bimonthly; and repair equipment damaged in crashes and storms. The electrical cost for each signalized intersection averages \$600/year when using Light Emitting Diode lamps and maintenance averages \$2,500/year. This unit performs studies, planning and design associated with new installations as well as the regular review, revision and modernization for 284 signalized intersections. Signalized intersections have increased by 62 (28%) in the past eight years. Some of this growth is due to maintenance services for non-Madison areas, such as Fitchburg, Oregon, Verona and Dane County. Thirty-eight signals are outside the City limits but are maintained by Madison. Agreements allow the City to recover all of its costs, including engineering and overhead. New work activity includes the installation and maintenance of fiber optics. The City's installed conduit backbone is essential for routing fiber, which allows lease revenue to continue to grow.

Service Summary			
	2007 Actual	2008 Budget	2009 Executive
Total Expenditures	\$ 1,172,953	\$ 1,251,755	\$ 1,249,892
Less Inter-Agency Billings	<u>781,139</u>	<u>421,240</u>	<u>465,350</u>
Net Total	<u>\$ 391,814</u>	<u>\$ 830,515</u>	<u>\$ 784,542</u>

Special Services

Special Services staff, 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. In conjunction with City Engineering, the Department of Planning, Community and Economic Development, and Dane County Regional Planning, staff develop land use plans and evaluate the impact of potential land uses upon the existing transportation patterns and facilities. Services include: transportation and traffic planning, transportation design, special projects, design studies and traffic counts; driveway and parking lot review; review of conditional use, plat and rezoning applications; and bicycle route and pedestrian plans and other related issues. Staff assist neighborhoods and other government entities in planning transportation improvements. The neighborhood traffic management program has become an increasingly important part of the section's work. This service also contains all pedestrian and bicycle programs.

Service Summary			
	2007 Actual	2008 Budget	2009 Executive
Total Expenditures	\$ 1,896,558	\$ 922,552	\$ 865,269
Less Inter-Agency Billings	<u>85,206</u>	<u>186,579</u>	<u>196,371</u>
Net Total	<u>\$ 1,811,352</u>	<u>\$ 735,972</u>	<u>\$ 668,898</u>

Traffic Engineering Summary by Major Object of Expenditure

	2007 Actual	2008 Budget	2008 Projected	2009 Request	2009 Executive	2009 Adopted
Permanent Salaries	\$ 3,245,329	\$ 3,479,960	\$ 3,479,960	\$ 3,571,072	\$ 3,507,014	\$ 0
Hourly Employee Pay	94,434	118,452	118,452	120,000	105,253	0
Overtime Pay	116,185	63,860	63,860	60,000	51,540	0
Fringe Benefits	1,250,861	1,340,431	1,340,431	1,374,345	1,346,926	0
Purchased Services	1,298,959	1,435,417	1,435,417	1,509,088	1,469,088	0
Supplies	678,971	536,000	536,000	533,350	563,350	0
Inter-Departmental Charges	566,112	631,760	631,760	621,080	621,080	0
Debt/Other Financing Uses	0	0	0	0	0	0
Capital Assets	<u>0</u>	<u>5,500</u>	<u>5,500</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Expenditures	\$ 7,250,852	\$ 7,611,380	\$ 7,611,380	\$ 7,788,935	\$ 7,664,251	\$ 0
Inter-Agency Billings	<u>2,920,793</u>	<u>2,381,313</u>	<u>2,381,313</u>	<u>2,517,662</u>	<u>2,501,702</u>	<u>0</u>
Net Budget	<u>\$ 4,330,059</u>	<u>\$ 5,230,067</u>	<u>\$ 5,230,067</u>	<u>\$ 5,271,274</u>	<u>\$ 5,162,550</u>	<u>\$ 0</u>