

Engineering

Agency Number: **53**
 Budget Function: **Public Works and Transportation**

The Engineering Division is responsible for the design, supervision and inspection of all street, highway, sidewalk and bike path construction; all City surveying and mapping operations including maintenance of the City's Official Map, street and utility records; management of the Madison Storm Water and Sanitary Sewer Utilities including the design, operation and maintenance of sanitary sewer facilities and storm sewer systems; the review of land use changes for public works feasibility; the research and development services supporting the solid waste management program; and the preparation of various studies relating to Public Works. The City Engineer also serves as Team Leader of the Department of Public Works and Transportation.

<u>Major Service</u>	<u>2005 Actual</u>	<u>2006 Budget</u>	<u>2006 Projected</u>	<u>2007 Request</u>	<u>2007 Executive</u>	<u>2007 Adopted</u>
Sanitary Sewers	\$ 74,205	\$ 128,944	\$ 159,900	\$ 0	\$ 0	\$ 0
Storm Water Management	173,799	114,524	94,400	0	0	0
Mapping & Records	354,751	519,309	529,239	439,330	439,330	0
Streets, Highways & Path Systems	1,351,407	1,392,284	1,375,930	1,743,832	1,743,832	0
Sidewalks	478,085	357,388	357,328	339,849	339,849	0
Environmental Engineering	265,570	452,044	447,857	352,538	437,761	0
Agency Total	<u>\$ 2,697,816</u>	<u>\$ 2,964,493</u>	<u>\$ 2,964,654</u>	<u>\$ 2,875,549</u>	<u>\$ 2,960,772</u>	<u>\$ 0</u>

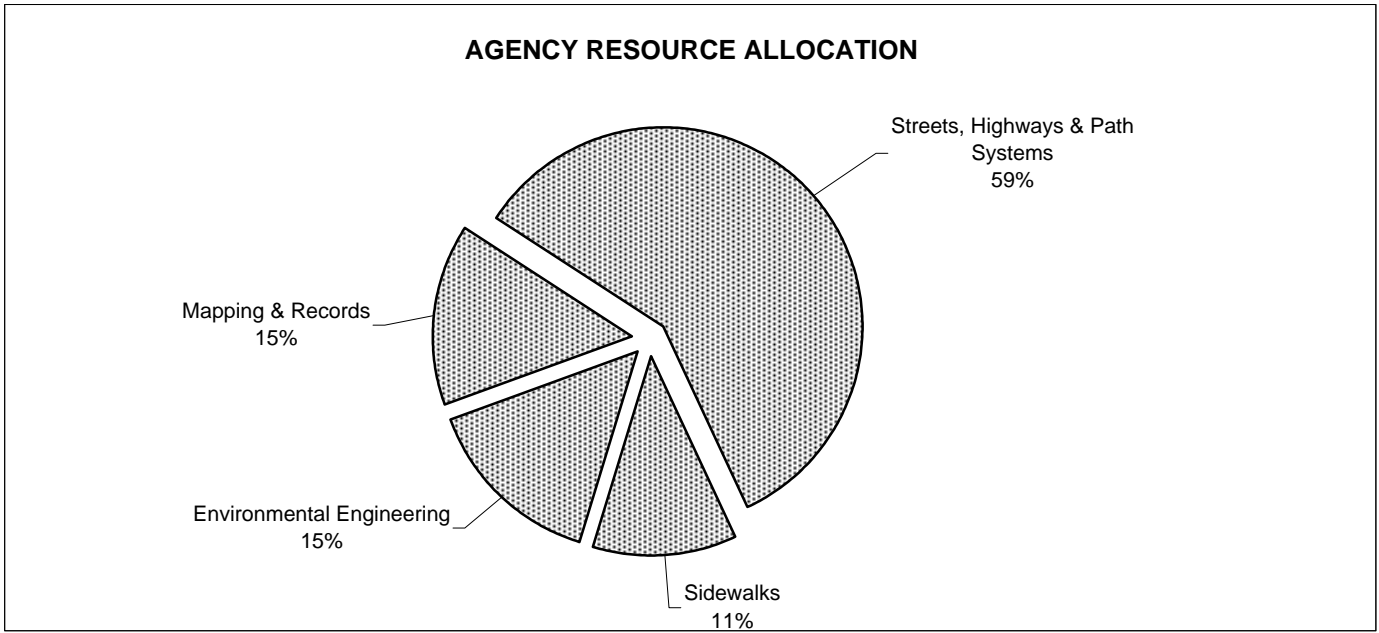
Executive Budget Highlights

The Budget includes:

1. Addition of one Street and Sewer Maintenance Worker 1. This position will fill out one of the maintenance crews, and enable the Division to better keep pace with sewer maintenance. Costs of \$47,858 will be shared equally by the Sanitary Sewer and Stormwater Utilities.
2. The creation of a Facilities and Sustainability Manager position and a related budget service in the Engineering Division, which will oversee City architectural, maintenance and building-related activities. The architects and building maintenance services currently budgeted in the Building Inspection Unit will move to this new service. This change will be fully integrated into the Adopted Budget document. A total of \$85,222 in salary and benefits is provided to fund the new Facilities and Sustainability Manager position, which is to begin on April 1, 2007.

The agency submitted \$70,962 in supplemental requests, of which an upgraded allotment of \$85,222 is included in the Executive Budget.

Engineering



Budget Service Descriptions:

Sanitary Sewers

Sanitary Sewer service manages, operates, constructs and maintains the Madison Sewer Utility. The Sewer Utility directs the planning, design, construction and repair of public sanitary sewer facilities. All proposed land use changes are reviewed for sanitary sewer impact prior to approval. Extensions to the public sewerage system are financed by the owners of lands directly benefiting from the improvements, or through construction by private developers. Developers construct sewers at their own expense in accordance with City design standards and specifications. The Sewer Utility assumes ownership and responsibility for maintenance and operation of these sewers upon acceptance of the improvements by the Common Council. Maintenance efforts include the repair, cleaning, televising and removal of blockages in over 755 miles of sewer main managed by the Sewer Utility. In recent years, an emphasis has been given to the replacement of old, substandard sewer facilities and elimination of sources of infiltration and inflow, and reducing the number of sewer main backups. The Sewer Utility is aggressively pursuing new technology for extending the life of existing sewers, in the most cost efficient manner.

Service Summary			
	2005	2006	2007
	Actual	Budget	Executive
Total Expenditures	\$ 3,716,445	\$ 3,957,582	\$ 3,764,461
Less Inter-Agency Billings	3,642,239	3,828,638	3,764,461
Net Total	\$ 74,205	\$ 128,944	\$ 0

Storm Water Management

The Storm Water Management function provides services for design, review, construction and maintenance of a storm water management system consisting of about 384 miles of pipe and over 1279 acres of greenways and ponds for flood control and runoff water quality improvement. The City's Wisconsin Pollutant Discharge Elimination System permit requires the system to reduce non-point source pollution to area lakes and streams. This is done using an expanding system of more than 50 wet ponds and other best management practices, including street sweeping, erosion control, illicit discharge investigation and control, and catch basin cleaning. Maintenance of this system is an increasingly important and costly component of this service as the average age of the system increases and rehabilitation of parts of the system becomes necessary. This function also provides City residents access to professional review of drainage problems which occur on or adjacent to their property. Engineering staff review the existing conditions, act as a mediator for multiple party problems, and provide possible solutions. In recent years, storm water runoff has become increasingly regulated, which shall lead to increasing costs to the City. Engineering staff administer and enforce erosion control and stormwater management requirements for all development in the City. Additionally, Engineering staff report annually to the Common Council on the status of our receiving waters, current efforts to improve water quality, and possible future activities. The report is titled "Clean Lakes Water Quality Plan."

Service Summary			
	2005 Actual	2006 Budget	2007 Executive
Total Expenditures	\$ 2,266,739	\$ 1,941,381	\$ 2,060,685
Less Inter-Agency Billings	<u>2,092,941</u>	<u>1,826,857</u>	<u>2,060,685</u>
Net Total	<u>\$ 173,799</u>	<u>\$ 114,524</u>	<u>\$ 0</u>

Mapping & Records

Mapping and Records service reviews new subdivisions, land divisions, conditional use permits, parking lot plans, applications for building permits and applications for new public land in general. This service also prepares legal descriptions for acquisition, street rights-of-way and street vacations. It also maintains the City's Official Maps, Assessors' Parcel Maps, Fire Department Run Maps, Police Sector Maps, storm sewer records, sanitary sewer records, and assigns street names and addresses. The map records are in digital form and are available from the Mapping/GIS system. This service also provides all hardware and software support for the Mapping/GIS system network. The next phase of GIS is to develop a data base to maintain City buildings. This service provides geospatial analysis, using "intelligent" maps for the Engineering Division and various other City agencies.

Service Summary			
	2005 Actual	2006 Budget	2007 Executive
Total Expenditures	\$ 433,055	\$ 597,309	\$ 527,882
Less Inter-Agency Billings	<u>78,304</u>	<u>78,000</u>	<u>88,552</u>
Net Total	<u>\$ 354,751</u>	<u>\$ 519,309</u>	<u>\$ 439,330</u>

Streets, Highways & Path Systems

Streets, Highways and Path Systems service provides for the review and design of streets, bridges, and bikeways and the review of design work by consultants. Citizen involvement in projects undertaken is a high priority as is quality design of Streets, Highways and Path Systems. Maintaining the safety of the City's bridges through biannual inspections, routine maintenance and scheduled rehabilitation and replacement is part of this program. This program involves local streets, collector streets, arterial streets, bikeways, and other path systems. Other services provided include review of Plats and Certified Survey Maps, conditional use applications, and planned unit developments to ensure that they are compatible with future transportation needs. The City now maintains approximately 748 miles of streets and 45 bridges greater than 20 feet in length.

Service Summary			
	2005 Actual	2006 Budget	2007 Executive
Total Expenditures	\$ 1,779,841	\$ 1,900,284	\$ 2,151,202
Less Inter-Agency Billings	428,433	508,000	407,370
Net Total	<u>\$ 1,351,407</u>	<u>\$ 1,392,284</u>	<u>\$ 1,743,832</u>

Sidewalks

The responsibility of this service is to maintain sidewalks through the general sidewalk repair and rehabilitation program; construct accessible ramps in the designated repair areas or in specific locations as requested; inspect sidewalk and drive apron construction by private contractors who must be licensed by the City and must obtain permits before doing the work; inform the public and other governmental agencies about sidewalks damaged by private contractors, illegal street encroachments, underground vaults in the streets, injury claims resulting from unsafe sidewalks, and legislation for accessible facilities on construction projects; administer a rebate program where the City will reimburse a property owner \$2.00/ sq. ft. of sidewalk repaired; and repair sidewalk, curb and gutter as requested by property owners. The work is prioritized using a 10 year sidewalk replacement plan.

Service Summary			
	2005 Actual	2006 Budget	2007 Executive
Total Expenditures	\$ 478,442	\$ 432,388	\$ 540,487
Less Inter-Agency Billings	358	75,000	200,638
Net Total	<u>\$ 478,085</u>	<u>\$ 357,388</u>	<u>\$ 339,849</u>

Environmental Engineering

This service provides all of the environmental engineering and planning for the City. Responsibilities include management of closed landfills and fuel tanks, environmental audits, siting of new landfills and long range waste management plans. Most work is required by State law. Operation and maintenance of large landfill gas and leachate collection systems are significant tasks and require engineers to be available 24 hours per day.

	<u>2005 Actual</u>	<u>2006 Budget</u>	<u>2007 Executive</u>
Total Expenditures	\$ 603,076	\$ 797,334	\$ 763,554
Less Inter-Agency Billings	<u>337,506</u>	<u>345,290</u>	<u>325,793</u>
Net Total	<u>\$ 265,570</u>	<u>\$ 452,044</u>	<u>\$ 437,761</u>

Engineering Summary by Major Object of Expenditure

	<u>2005 Actual</u>	<u>2006 Budget</u>	<u>2006 Projected</u>	<u>2007 Request</u>	<u>2007 Executive</u>	<u>2007 Adopted</u>
Permanent Salaries	\$ 5,311,452	\$ 5,502,109	\$ 5,530,679	\$ 5,518,169	\$ 5,614,885	\$ 0
Hourly Employee Pay	344,673	310,799	310,799	310,002	310,002	0
Overtime Pay	317,887	259,000	259,000	320,000	320,000	0
Fringe Benefits	1,973,413	2,150,843	2,150,843	2,167,770	2,204,136	0
Purchased Services	543,015	581,901	570,602	706,873	706,873	0
Supplies	269,996	262,750	306,970	269,400	269,400	0
Inter-Departmental Charges	484,167	513,546	482,546	346,305	346,305	0
Debt/Other Financing Uses	0	0	0	0	0	0
Capital Assets	<u>32,994</u>	<u>45,330</u>	<u>15,000</u>	<u>36,670</u>	<u>36,670</u>	<u>0</u>
Total Expenditures	\$ 9,277,598	\$ 9,626,278	\$ 9,626,439	\$ 9,675,189	\$ 9,808,271	\$ 0
Inter-Agency Billings	<u>6,579,781</u>	<u>6,661,785</u>	<u>6,661,785</u>	<u>6,799,640</u>	<u>6,847,499</u>	<u>0</u>
Net Budget	<u>\$ 2,697,816</u>	<u>\$ 2,964,493</u>	<u>\$ 2,964,654</u>	<u>\$ 2,875,549</u>	<u>\$ 2,960,772</u>	<u>\$ 0</u>