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.

Major Service	2003 Actual	2004 Budget	2004 Projected	2005 Request	2005 Executive	2005 Adopted
Sanitary Sewers	$ (1,508)	$ 38,664	$ 38,664	$ (62,674)	$ 0	$ 60,277
Storm Water Management	112,924	19,482	19,482	22,469	0	30,175
Mapping & Records	507,373	432,913	432,913	482,121	476,101	482,072
Streets, Highways & Path Systems	1,179,009	1,381,496	1,381,496	1,272,249	1,252,790	1,273,776
Sidewalks	256,171	221,347	221,347	314,466	309,307	314,390
Environmental Engineering	323,808	347,262	347,262	388,253	378,684	397,441
Agency Total	$ 2,377,776	$ 2,441,164	$ 2,441,164	$ 2,416,884	$ 2,416,882	$ 2,558,131

Adopted Budget Highlights

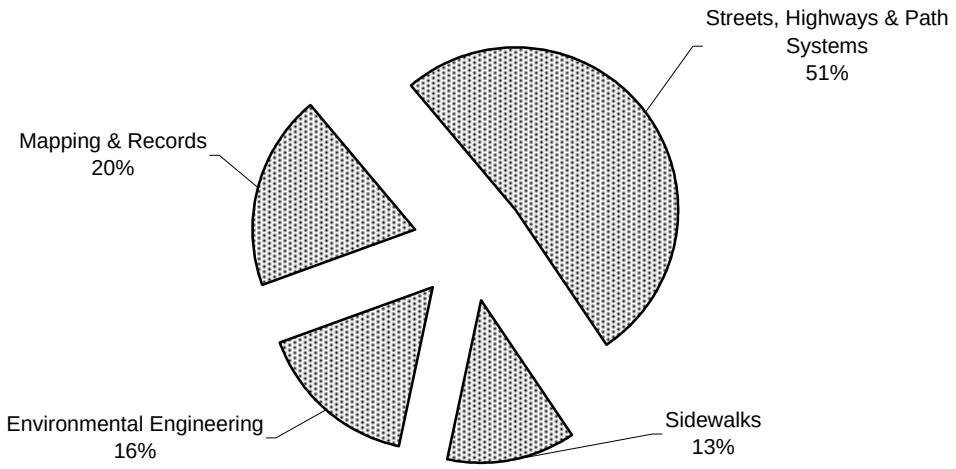
The Budget includes:

1. An additional $15,000 in landscaping services funding, to reflect additional maintenance for the East Washington Avenue project.

2. Additional funding of $20,000 for well drilling and plumbing expenses related to Merrill Springs Park. The purpose of this project is to restore the flow of water to the springs at Merrill Springs Park at the end of Spring Court on the shore of Lake Mendota through drilling a well. The springs have ceased to function due to near continuous operation of the Water Utility's high capacity, deep well pumps at Well No. 14. The historic 40-foot cistern constructed in 1933 formerly detained the spring water before it flowed to the lake. Formerly, the springs were a destination of the Park & Pleasure Drive route along the lake 100 years ago. This substitute amendment replaces a $25,000 study for designing a way to restore the flow of the springs, a precursor to a much greater expense when implementing the study's recommendations. The well more directly restores the ambiance created by the springs through maintaining the water level in the dry cistern that becomes filled with rotting vegetation since the spring's flow was stopped. Projects costs are partly offset by $10,000 from the Water Utility, as well as $5,000 to be derived from private sector donations. Implementation of this project is dependent upon receipt of the private sector contributions.

The agency submitted $18,887 in supplemental requests, of which $0 is included in the Adopted Budget.

AGENCY RESOURCE ALLOCATION



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 732 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.

Service Summary

	2003 Actual	2004 Budget	2005 Adopted
Total Expenditures	$ 3,488,476	$ 3,567,934	$ 3,791,614
Less Inter-Agency Billings	3,489,984	3,529,270	3,731,337
Net Total	$ (1,508)	$ 38,664	$ 60,277

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 360 miles of pipe and over 1100 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.

Service Summary

	2003 Actual	2004 Budget	2005 Adopted
Total Expenditures	$ 1,744,443	$ 1,854,458	$ 1,853,286
Less Inter-Agency Billings	1,631,519	1,834,976	1,823,111
Net Total	$ 112,924	$ 19,482	$ 30,175

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

	2003 Actual	2004 Budget	2005 Adopted
Total Expenditures	$ 558,732	$ 510,913	$ 560,072
Less Inter-Agency Billings	51,359	78,000	78,000
Net Total	$ 507,373	$ 432,913	$ 482,072

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 733.5 miles of streets and 45 bridges greater than 20 feet in length.

Service Summary

	2003 Actual	2004 Budget	2005 Adopted
Total Expenditures	$ 1,496,544	$ 1,706,707	$ 1,733,776
Less Inter-Agency Billings	317,535	325,211	460,000
Net Total	$ 1,179,009	$ 1,381,496	$ 1,273,776

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

	2003 Actual	2004 Budget	2005 Adopted
Total Expenditures	$ 416,343	$ 326,347	$ 419,390
Less Inter-Agency Billings	160,172	105,000	105,000
Net Total	$ 256,171	$ 221,347	$ 314,390

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.

Service Summary

	2003 Actual	2004 Budget	2005 Adopted
Total Expenditures	$ 661,066	$ 697,262	$ 757,731
Less Inter-Agency Billings	337,259	350,000	360,290
Net Total	$ 323,808	$ 347,262	$ 397,441

Engineering
Summary by Major Object of Expenditure

	2003 Actual	2004 Budget	2004 Projected	2005 Request	2005 Executive	2005 Adopted
Permanent Salaries	$ 4,797,055	$ 5,073,815	$ 5,073,815	$ 5,132,372	$ 5,132,371	$ 5,187,799
Hourly Employee Pay	272,644	263,853	263,853	320,000	320,000	323,456
Overtime Pay	260,778	246,167	246,167	290,000	290,000	293,132
Fringe Benefits	1,775,105	1,829,755	1,829,755	1,864,310	1,864,309	1,969,742
Purchased Services	481,232	483,481	483,481	553,121	553,121	533,121
Supplies	255,780	220,890	220,890	290,650	290,650	236,650
Inter-Departmental Charges	510,188	513,680	513,680	525,969	525,969	509,969
Debt/Other Financing Uses	0	0	0	0	0	0
Capital Assets	12,821	31,980	31,980	62,000	62,000	62,000
Total Expenditures	$ 8,365,603	$ 8,663,621	$ 8,663,621	$ 9,038,422	$ 9,038,420	$ 9,115,869
Inter-Agency Billings	5,987,827	6,222,457	6,222,457	6,621,538	6,621,538	6,557,738
Net Budget	$ 2,377,776	$ 2,441,164	$ 2,441,164	$ 2,416,884	$ 2,416,882	$ 2,558,131