

2010/11  
Budget

ENGINEERING

- *City Engineer*.....Steven J. Vandette
- *Deputy City Engineer/Traffic Engineer*.....William Huotari



City of  
**Troy**



## FUNCTIONAL ORGANIZATIONAL CHART

### • *Administration*

- ✓ Prepares and administers capital improvement budget for roads, sewers, water mains, drains and sidewalks
- ✓ Develops master plans for capital improvements
- ✓ Serves as liaison with federal, state and county agencies and other cities to implement projects, programs and permits
- ✓ Serves as liaison with developers to implement public improvements for new residential, commercial and industrial developments
- ✓ Serves as liaison with utility companies for private utility work in City right-of-way
- ✓ Prepares and maintains design standards for public and private improvements
- ✓ Prepares requests for proposals for consulting engineering services
- ✓ Manages consultants assigned to perform technical studies, project design and construction administration
- ✓ Recommends and implements policies for all City real estate, right-of-way and economic development activities

### • *Engineering*

- ✓ Designs public improvement projects such as roads, storm drains, sanitary sewers, stream bank stabilization and water mains
- ✓ Reviews public improvement plans for compliance with City of Troy standards and specifications
- ✓ Reviews site grading, drainage and soil erosion control plans for compliance with City of Troy, county and state requirements
- ✓ Maintains development standards, construction specifications and standard construction details
- ✓ Investigates concerns from the public regarding construction and development projects
- ✓ Provides utility and flood plain information
- ✓ Maintains the pavement management system

- ✓ Issues permits and performs inspections for soil erosion control, culverts and right-of-way activities
- ✓ Prepares special assessment district projects for paving, sanitary sewers and sidewalks

### • *Surveying and Inspection*

- ✓ Conducts surveys for design and construction of public improvements
- ✓ Maintains the City's global positioning and benchmark systems
- ✓ Participates in maintenance of the City's geographic information system
- ✓ Investigates drainage problems
- ✓ Inspects public improvements for compliance with development standards, construction specifications and soil erosion control requirements
- ✓ Inspects City road, water main and sewer projects

### • *Traffic Engineering*

- ✓ Maintains records of traffic crashes, signals and signs
- ✓ Conducts and maintains traffic volume counts
- ✓ Reviews plans of new developments for compliance with traffic standards
- ✓ Responds to requests for new traffic signals and signs
- ✓ Serves as liaison with Oakland County on traffic signal concerns
- ✓ Investigates traffic vision obstructions
- ✓ Provides staff support for Traffic Committee activities
- ✓ Processes sidewalk waiver requests
- ✓ Conducts traffic impact studies



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## FUNCTIONAL ORGANIZATIONAL CHART, CONTINUED

- ***Right-of-Way***

- ✓ Appraises and negotiates for acquisition or sale of City real estate and right-of-way
- ✓ Sells, leases, and licenses land and public property
- ✓ Facilitates the donation or acquisition of land and property for public use
- ✓ Coordinates vacation or sale of City land no longer needed
- ✓ Assists in relocating businesses and residences acquired as part of City road projects
- ✓ Provides real estate support services to the public, other City departments, utility companies and public agencies
- ✓ Assists in the litigation process regarding public property
- ✓ Maintains records for City-owned property, easements and other real estate documents at the County
- ✓ Researches and assures clear title to City-owned property and rights
- ✓ Performs real estate asset management activities
- ✓ Skilled and trained in federal and state laws and regulations as they pertain to real estate acquisition and capital improvement projects

- ***Storm Water Drainage***

- ✓ Evaluates storm water drainage systems
- ✓ Develops and implements projects to improve watersheds and storm water drainage systems
- ✓ Conducts illicit discharge detection and elimination program
- ✓ Monitors construction site runoff
- ✓ Conducts public education and outreach programs
- ✓ Serves as liaison with other storm water agencies to effectively manage watersheds in accordance with regulations and mandates



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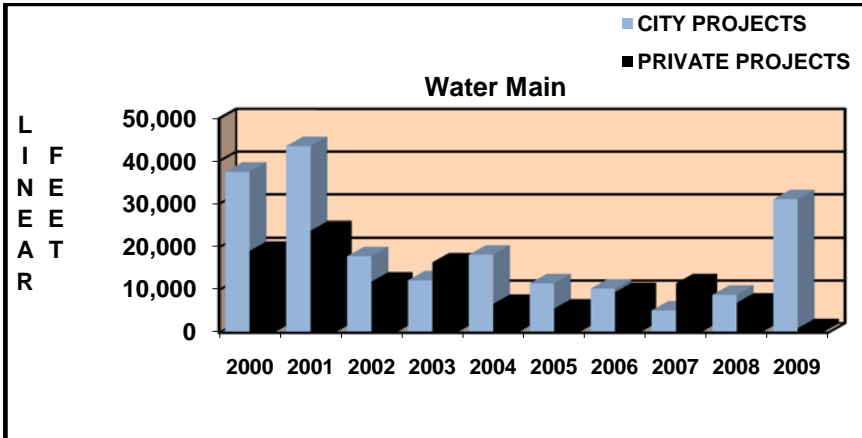
ENGINEERING

DEPARTMENT AT A GLANCE

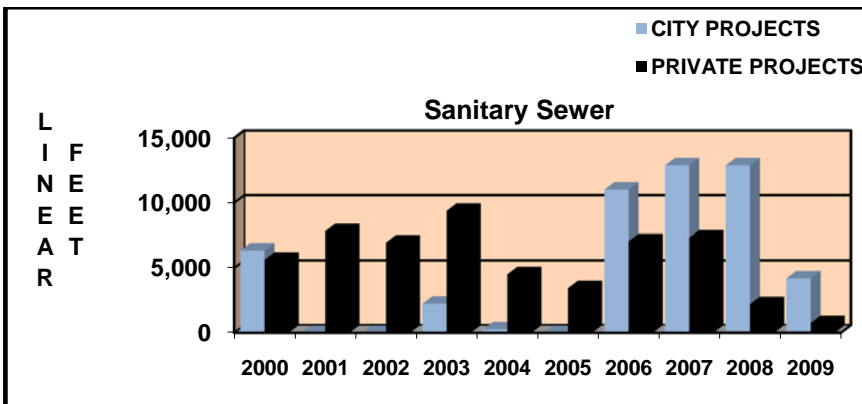
Funding Level Summary	2007/08		Estimated 2009/10		2010/11	% Of Change
	Actual	Actual	Budget	Budget	Budget	
Engineering	\$2,443,157	\$2,432,591	\$1,963,600	\$2,336,410	\$1,900,946	-19%
Traffic Engineering	233,689	92,524	52,770	78,010	51,051	-35%
<b>Total Department</b>	<b>\$2,676,846</b>	<b>\$2,525,115</b>	<b>\$2,016,370</b>	<b>\$2,414,420</b>	<b>\$1,951,997</b>	<b>-19%</b>
Personal Services	\$2,225,800	\$2,091,914	\$1,651,400	\$1,940,860	\$1,590,297	-18%
Supplies	27,321	19,967	22,050	27,000	22,000	-19%
Other Services/ Charges	423,725	413,234	342,920	446,560	339,700	-24%
<b>Total Department</b>	<b>\$2,676,846</b>	<b>\$2,525,115</b>	<b>\$2,016,370</b>	<b>\$2,414,420</b>	<b>\$1,951,997</b>	<b>-19%</b>

Personnel Summary	2007/08		2008/09		2009/10		2010/11	
	Full-Time	Part-Time	Full-Time	Part-Time	Full-Time	Part-Time	Full-Time	Part-Time
Engineering	21	4	20	4	16	3	13	1
Traffic Engineering	1	2	1	2	0	2	0	2
<b>Total Department</b>	<b>22</b>	<b>6</b>	<b>21</b>	<b>6</b>	<b>16</b>	<b>5</b>	<b>13</b>	<b>3</b>

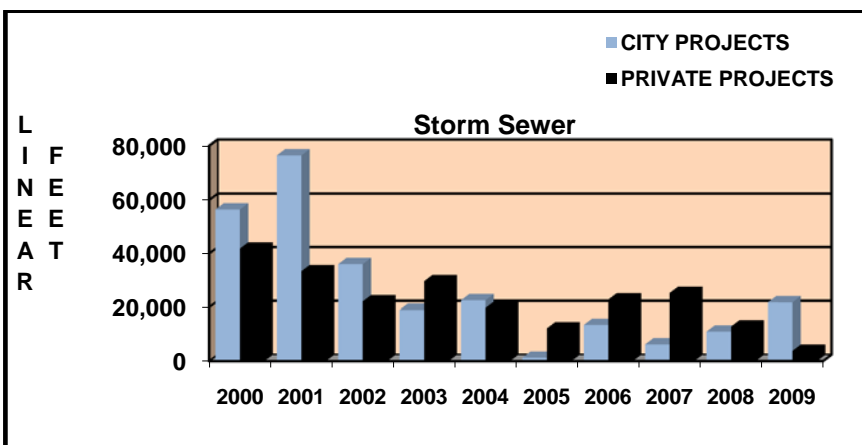
**KEY DEPARTMENTAL TRENDS**



Linear feet of water main installed on City projects versus private development.

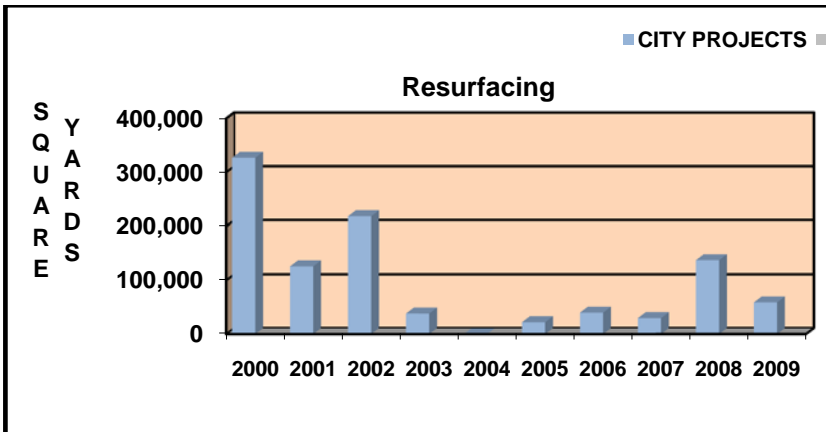


Linear feet of sanitary sewer installed on City projects versus private development.

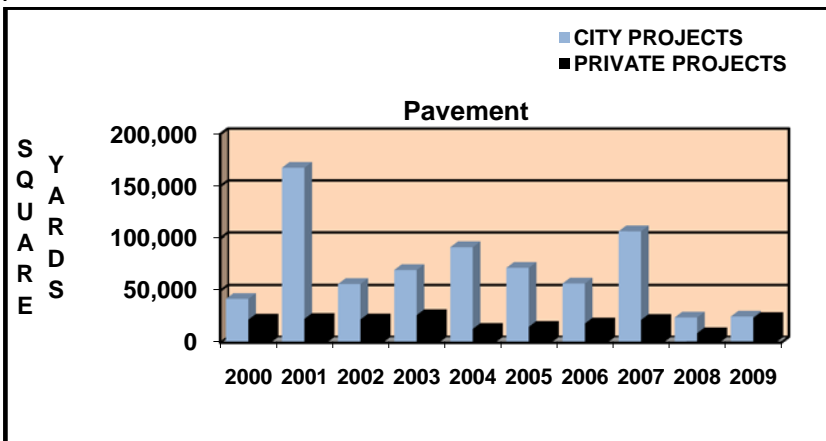


Linear feet of storm sewer installed on City projects versus private development.

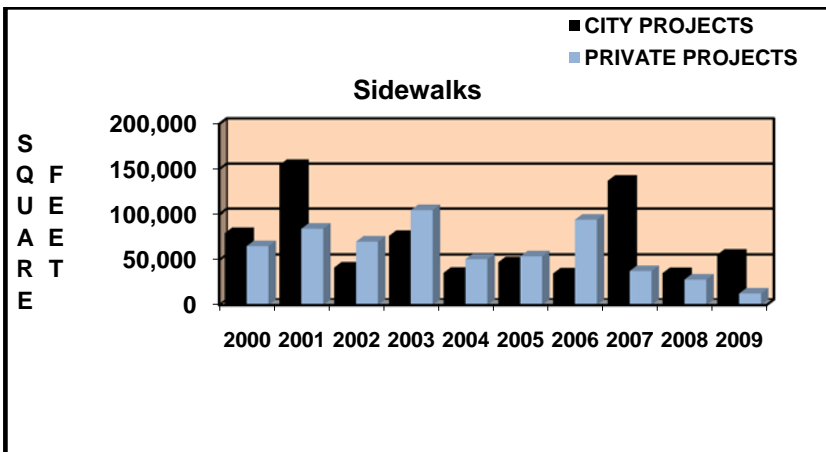
KEY DEPARTMENTAL TRENDS, CONTINUED



Square yards of resurfacing (asphalt pavement overlay) constructed on City projects.



Square yards of new pavement constructed on City projects versus private development.



Square feet of new sidewalks constructed on City projects versus private development.



## MISSION AND SERVICE STATEMENTS

- ***Mission Statement***

The mission of the Engineering Department is to design high quality, cost effective public improvements using sound engineering principles and cutting edge technology.

- ***Service Statement***

Engineering is responsible for planning, design, and construction of City projects such as roads, sewers, water mains, drains and soil erosion control.

Major responsibilities include in-house design of public works projects and oversight of consulting engineers that are engaged in design construction engineering, inspection and materials testing on City projects.

Engineering develops master plans, cost estimates and funding strategies for public improvement projects. Engineering reviews plans for public and private improvements in City right-of-ways to ensure compliance with City ordinances and development standards. Engineering maintains records of City utilities, local and major streets, pavement management, traffic counts and crashes, signal maintenance and control orders. Engineering handles requests for installation of new traffic control devices and sidewalk waivers, and processes these requests through the Traffic Committee and City Council.

Residents, property owners, developers, builders and consulting engineers obtain a variety of information from Engineering such as location and availability of utilities, wetland and floodplain locations, development standards, construction specifications, and permit and inspection requirements. Property owners can receive information on special assessment procedures for implementing road, water main, sewer and sidewalk improvements.

Engineering is responsible for setting right-of-way standards, issuing right-of-way construction permits, soil erosion control, soil removal and filling permits and all permit inspection. Plans for private development are submitted to Engineering to review for conformance with development and traffic requirements. Construction inspection is conducted to ensure quality and conformance with City of Troy, county, state and federal requirements.

Engineering develops and administers phase II storm water permit programs to improve and protect water quality in drains and rivers, educates the public and implements programs and projects to promote sustainable storm water management and reduce soil erosion.

The Right-of-Way section acquires all types of real estate interests needed for projects, from right-of-way and easements to open space. Staff makes contact with property owners, assures compliance with state and federal laws and regulations, obtains and reviews fee appraisals, title reports and environmental assessments for properties, establishes a fair market value for the properties for City offers, negotiates the purchase of property, initiates and monitors condemnation activities in the event of litigation and oversees the sale of excess property.

- ***Did You Know?***

- ✓ The City secured approximately \$22 million in state and federal funding for major road improvements from 2009 to 2014. Troy's required local match is 20% of these funds.
- ✓ Most of Troy's major roads are under the jurisdiction of the Road Commission for Oakland County, including Adams, Crooks, Livernois, John R, Dequindre, South Boulevard, Long Lake, Big Beaver, Maple and 14 Mile.



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**PERFORMANCE OBJECTIVES**

**Output**

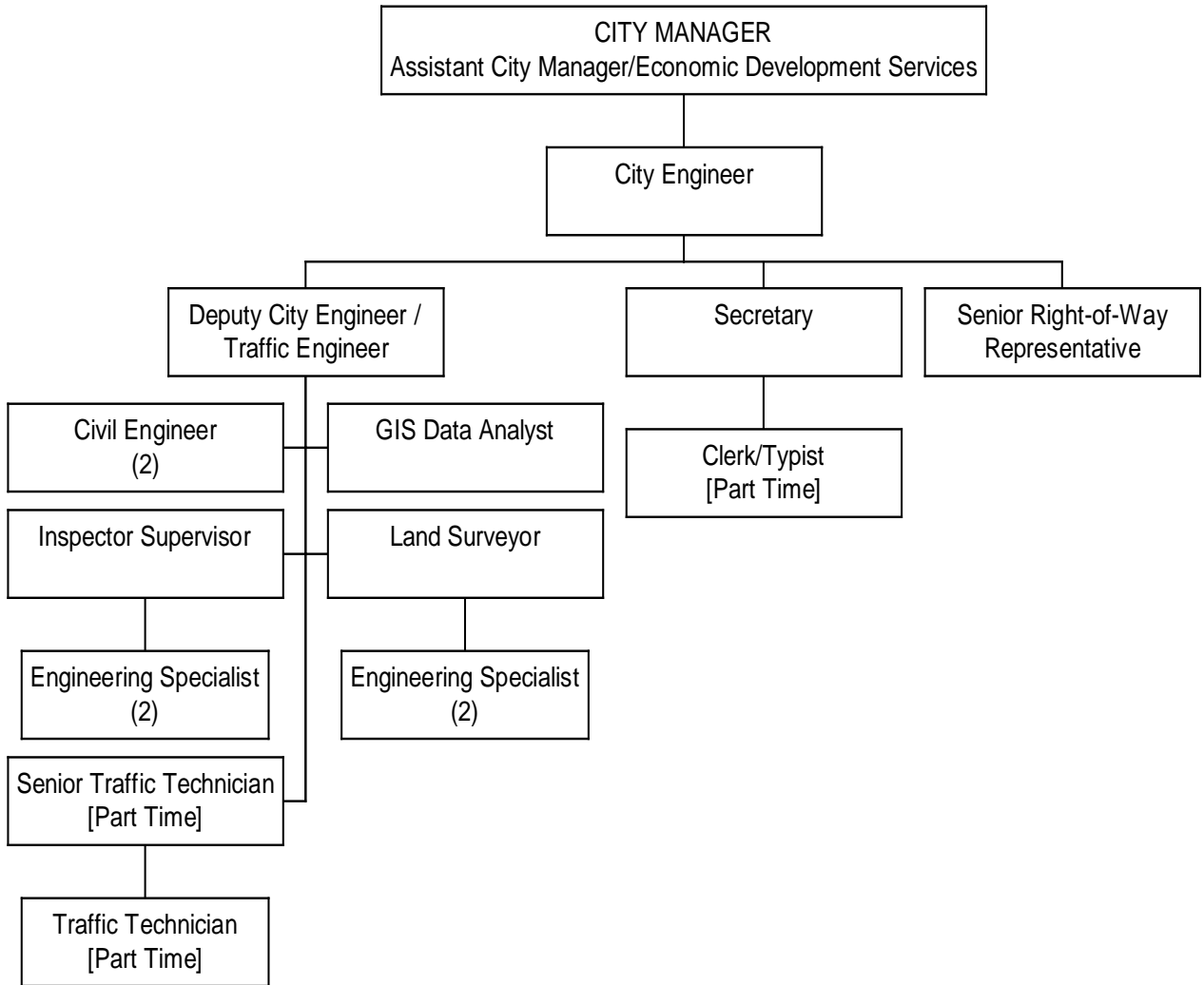
- ✓ Prioritize City road maintenance needs on major, local and industrial roads using the Hansen and Roadsoft pavement management systems (PMS). Prepare and execute annual maintenance plans. **(Output J)**
- ✓ Implement water system improvements as recommended in the water master plan update. **(Output B)**
- ✓ Construct intermodal transit center southwest of Maple and Coolidge. **(Output X)**
- ✓ Implement a 6-year capital improvement plan. **(Output C )**
- ✓ Acquire property and easements for continued water and sewer service, road improvement, sidewalk and storm drain projects to add value to properties through maintenance and upgrades of existing infrastructure. **(Output B)**

\*See the list of outputs as ranked by City Council in the [CITY-WIDE ACTION PLAN](#) on pages 15 and 16.

Performance		2008/09	2009/10	2009/10	2010/11
Indicators		Actual	Projected	Budget	Budget
Output	✓ Site Plans Approved	86	76	80	76
	✓ Right-of-way Permits Issued	253	220	200	200
	✓ Value of Construction Contracts Awarded and Supervised	\$12.1M	\$5.1M	\$22.5 M	\$16.2M
	✓ Soil Erosion Control Permits	144	86	65	75
	✓ Soil Erosion Control Inspections	1,296	1,356	1,800	1,300
	✓ Machine Traffic Counts	96	125	110	120
	✓ Traffic Studies	174	215	220	190
	✓ Collision Diagrams and Analysis	74	82	78	80
Efficiency	✓ Engineering Plans Reviewed within 8 Weeks	85%	85%	80%	85%
	✓ Right-of-Way Permits Issued within 10 Days	90%	93%	85%	90%
	✓ Soil Erosion Control Permits Issued within 5 Days	93%	94%	85%	95%
	✓ Contracts Completed within 10% of Bid Award	82%	83%	85%	85%



ORGANIZATIONAL CHART



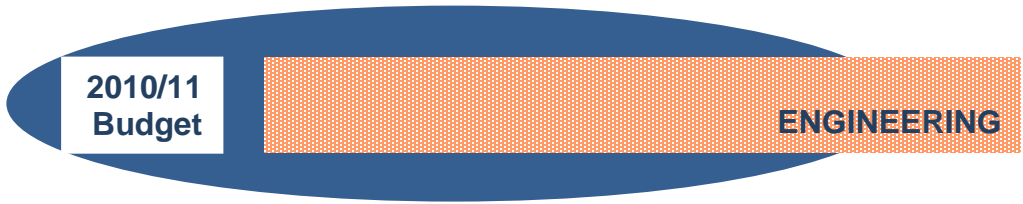


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ORGANIZATIONAL CHART, CONTINUED

Staff Summary	Approved 2008/09	Approved 2009/10	Recommended 2010/11
City Engineer	1	1	1
Deputy City Engineer/Traffic Engineer	2	1	1
Civil Engineer	3	2	2
Clerk/Typist [Part-Time]	1	1	1
Engineering Assistant	1	1	0
Engineering Intern [Part-Time]	3	2	0
Engineering Specialist	6	5	4
Engineering Technician	1	0	0
Environmental Specialist	1	1	0
GIS Data Analyst	1	1	1
Inspector	1	0	0
Inspector Supervisor	1	1	1
Land Surveyor	1	1	1
Secretary	1	1	1
Senior Traffic Tech [Part-Time]	1	1	1
Survey Supervisor	1	1	0
Traffic Technician [Part-Time]	1	1	1
Senior Right-of-Way Representative	0	0	1
<b>Total Department</b>	<b>27</b>	<b>21</b>	<b>16</b>



**SUMMARY OF BUDGET CHANGES**

• **Significant Notes – 2010/11 Budget Compared to 2009/10 Budget**

The overall 2010/11 Engineering Department operating budget decreased **\$462,423 (19%)** as compared to 2009/10.

Personal Services decreased **\$350,563 (18%)** over last year due to laying off 3 full-time employees, the retirement of 1 full-time employee and the elimination of 2 part-time employee positions. The Senior Right-of-Way Representative position was moved to the Engineering Department as a result of eliminating the Real Estate & Development Department.

Economic Development Services has been moved to the City Manager's Office and right-of-way functions have been assimilated into the Engineering Department.

Other Services/Charges decreased **\$106,860 (24%)** from last year due primarily to significant decreases in the following accounts: Equipment Maintenance, Computer Service – Internal, Communications – Mobile Phones, Vehicle Rental – Motor Pool and Education & Training.

• **Operating Budget History**

