

CITY OF WOOSTER
DIVISION OF ENGINEERING
2008 Annual Report



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March, 2009

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*Division of Engineering
City of Wooster
2008 Annual Report*

Summary & Narrative – Section 1

Division of Engineering 2008 Annual Report Executive Summary

The 2008 Annual Report for the Division of Engineering is contained in the following pages. The intent of this report is to summarize the major projects and activities accomplished by the Division of Engineering for the year ending December 31, 2008, as well as provide information that can be used for planning infrastructure improvements and development for the coming year.

The Division of Engineering has attempted to meet those needs in the most cost effective way possible. Most projects are designed, managed, and inspected in-house by Engineering Division staff, keeping fees for professional services at 4.2% of construction costs for 2008. The industry average for design and professional engineering costs is 8% to 11% of the estimated construction costs. This translates to a cost savings in engineering services of over \$400,000 in 2007 and over \$1,300,000 for 2008. We also strive to control the actual project costs and succeeded in 2008 having our final project costs 14% lower than our planned estimated costs.

The Engineering Division aggressively seeks outside funding sources in an effort to offset the high costs of infrastructure improvements. Over the last 5 years, more than \$5,000,000 has been obtained in grant money and over \$4,000,000 in zero or low interest loan money from various sources such as ODOT, EPA, OPWC and others. These funds have been applied to water system projects such as the water tanks, roadway projects such as Milltown Road and Larwill Street Bridge, and several waterline and sewer separation projects.

The Engineering Division managed 13 infrastructure projects in 2007 and 17 projects in 2008. The total dollar value of construction projects for 2007 was over \$7,000,000, and over \$22,000,000 in 2008. For projects completed or under construction in 2008, final construction costs are over \$250,000 below estimate.

Including construction and development in 2008, the City now has over 400 miles of piping in its utility system and over 130 miles of roadway in its transportation system. Over 75% of the utility infrastructure is greater than 20 years old. Over 77% of the sanitary sewer and 70% of the water systems are over 30 years old.

The Engineering Division also reviews and issues permits for all utility and site work construction activity in the City, as well as enforcing the City's Site development and Storm water Regulations. 93 permits were issued in 2008. The number of permits issued by this division indicates a steady rate of development over the last 3 to 4 years. Reasonable adjustments to the fees charged for permits and inspections have allowed the division to recover 95% of its general fund operating costs for 2007. Our division generated over \$200,000 in permit revenue over the past two years.

The Engineering Division is also the City's representative for the Ohio Utilities Protection Service, and is responsible for locating and marking all city owned utilities whenever requested by contractors. These requests have consistently numbered over 2000 each year since 1991. In 2008 we processed 2,241 OUPS requests with most utility locations being marked within 24 hours of the request.

The Engineering Division is also responsible for all mapping and utility information that is contained in the City's Geographic Information System, or GIS. This information is updated and used on a daily basis for project planning, design, and maintenance of the City's infrastructure.

Division of Engineering Mission Statement and Objectives

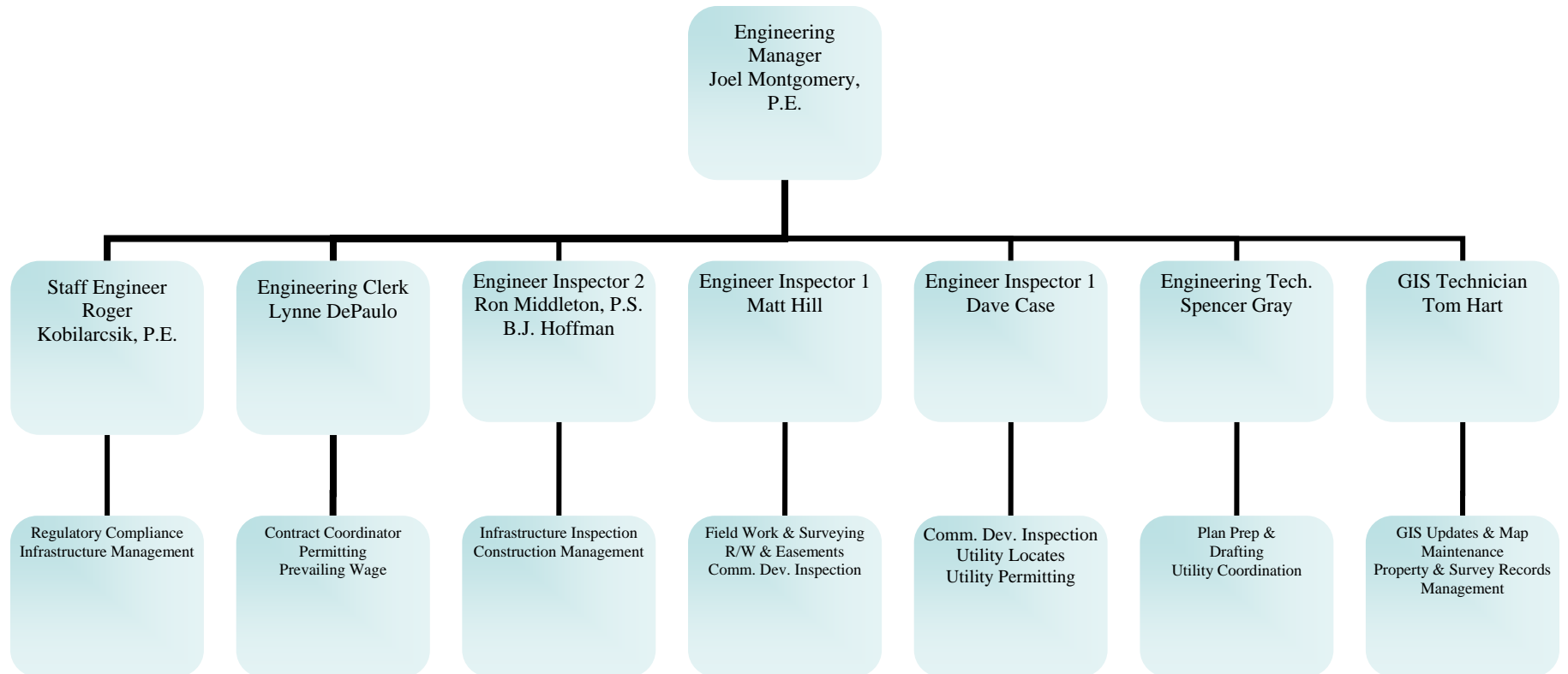
Mission: Our mission in the City of Wooster, Division of Engineering is to plan, advise, administer, oversee implementation of and document all public works improvements and subdivision development with the aim of providing these services cost effectively and timely while protecting the public health, safety and welfare.

2009 Objective: To continue to manage the City's infrastructure construction and documentation in a way that will provide adequate service to residents, sustain development, and allow for intelligent infrastructure planning. The Division of Engineering attempts to balance the infrastructure needs of the city with the financial resources available. At the same time, current and future development and its associated demands are considered when attempting to develop a strategic plan for infrastructure improvements.

Personnel:

	<i>Title</i>	<i>Years Experience</i>
Joel Montgomery	City Engineer, Licensed Professional Engineer	16
Roger Kobilarcsik	Staff Engineer, Licensed Professional Engineer	19
Ronald Middleton	Inspector II, Licensed Professional Surveyor	37
BJ Hoffman	Inspector II, B.S. Degree Construction Technology	21
Dave Case	Inspector I, Assoc. Degree Civil Eng. Technology	15
Matt Hill	Inspector I, ODOT Right-of-Way Certification	24
Spencer Gray	Engineering Technician/Drafter	24
Tom Hart	Engineering Technician/GIS Technician	26
Lynne DePaulo	Engineering Clerk/Prevailing Wage Coordinator	30

City of Wooster
Division of Engineering
Organizational Chart



**Division of Engineering
2008 Project Narrative
March, 2009**

INFRASTRUCTURE PROJECTS COMPLETED OR UNDER CONSTRUCTION IN 2008:

1. **Campbell Avenue & Minerva Street Waterline Improvement:** This work consisted of approximately 1350 linear feet of 6" and 8" ductile iron waterline, 14 gate vales, 4 fire hydrants and 30 water services. The engineer's estimate for this project was \$161,000. The project was bid in June 2007 and awarded to Jeff Cutlip Site Development in the amount \$132,146.50. The project was completed in March 2008 with a final construction cost of \$141,434.00.

2. **Intermediate Zone Water Tank:** This project was designed by the Engineering Division to meet current demands on the Intermediate and High Pressure Systems. The initial estimate for a 1,000,000-gallon water storage tank was \$2,366,000. The tank is located just south of Oldman Road, between Kean Elementary and Ida Sue schools. The tank is 110' high, 52' in diameter at the base and 74' in diameter at the top of the tank. The project was bid in August 2007 with CB&I Constructors awarded the bid at a price of \$1,820,000. Construction began in May 2008 and will continue into 2009.

3. **Oldman Road Waterline Improvements:** In conjunction with the Intermediate Zone Water Tank, this work consisted of approximately 1,440 linear feet of 12" ductile iron water pipe, 315 linear feet of 8" water pipe and associated appurtenances. The Engineer's estimated construction cost for this project was \$175,000. The contract was awarded to D.C. Berger Excavating in the amount of \$112,200. Construction began in October and was completed in June for a final cost of \$91,380.77. Costs of construction is funded through an Ohio EPA 0% interest loan.

4. **Beall Avenue Streetscape – Utility :** This project is the preliminary part of the Beall Avenue Streetscape project slated for construction in 2008. It is the actual relocation of the telephone, electric and cable lines along Beall Avenue by installation of underground conduit. The engineer's estimate was \$800,000. The bid opening was September 2007 with McClintock Electric being awarded the contract at a price of \$866,295.49. Construction began in November 2007. This project has been completed, however a final pay request has yet to be received. As of the end of 2008 the construction costs were \$791,780.08.

5. **Mindy Lane and Mechanicsburg Road Water Main:** This project consists of looping the waterline between the Mechanicsburg Booster Station and the Intermediate Pressure Zone constructing approximately 3100 linear feet of 12 inch water main and appurtenances on Mindy Lane and Mechanicsburg Road. The project was bid in conjunction with the Buckeye and Mechanicsburg Water Pumping Stations. The engineer's estimated costs for construction was \$287,600. The project was bid In September 2007 and awarded to Wenger Excavating for a bid price of \$201,480.90. Wenger completed the project Spring 2008 with a final cost of \$179,574.36.

- 6. Buckeye and Mechanicsburg Water Pumping Stations:** This project consists of providing improvements to the existing Buckeye Street and Mechanicsburg Road Water Pumping Stations including piping modifications, pump replacements, structural and electrical modifications and yard piping modifications. The engineers estimate for construction was \$1,134,000. The project was bid in September and Bogner Construction was awarded the contract at a price of \$764,027.00. Bogner began construction in the spring and will continue into 2009. Construction costs so far have been \$603,050.17. Construction costs are being funded by the Ohio EPA with a 0% interest loan.
- 7. College Avenue Sewer Separation:** This project is part of the City's Master Plan for sewer separation and was designed by the Engineering Division. The project consists of approximately 2,300 linear feet of 12" through 30" storm sewer, manholes, catch basins, 850 linear feet of sanitary sewer, 2,500 linear feet of sanitary and storm sewer laterals, 1,000 linear feet of sanitary sewer cured-in-place pipe rehabilitation and 5 sanitary sewer manhole rehabilitations. The engineer's estimated costs for construction was \$737,000. Bid opening was November 2007 with the low bidder being Underground Utilities in the amount of \$696,633.00. Underground completed the project in July for a final cost of \$715,552.87.
- 8. Triway Lift Station Replacement:** This project was designed by the Engineering Division and consists of replacing the existing lift station on S.R. 226 to meet current sanitary sewer flows and Ohio EPA regulations. The work consisted of furnishing all materials and labor for removal of the existing lift station and the construction of a new backup generator building, wet well and valve vault. The engineer's estimated construction costs for this project was \$260,000. The project was awarded to G.E. Baker Construction with a bid amount of \$239,840.00. Final project cost was \$243,551.40.
- 9. 2007 Sanitary Sewer Rehabilitation:** Designed by the Engineering Division this project consisted of the repair and the cured-in-place pipe rehabilitation, 170' of 8" PVC sanitary sewer pipe and 3 new sanitary sewer manholes in various locations throughout the city. The engineer's estimate for the project is \$154,000. the contract was awarded to S & S Directional Boring with a bid price of \$133,206.00. The project was completed in June for a final cost of \$133,206.00.
- 10. Municipal Building Standby Power Generator:** This project consisted of furnishing and installing an emergency natural gas generator, transfer switch and associated electrical work at two separate locations, City Hall and the main Fire Station. The estimate for work was \$180,000. Spring Electric was awarded the project with a bid of \$174,980.00. The final project cost was \$174,980.00.
- 11. Normandy Sidewalk:** Bids were opened in December 2008 for the installation of approximately 6000 square feet of concrete sidewalk along Normandy Drive between Mindy Lane and Country Club Drive. The engineer's estimate was \$47,000. Thirteen bids were accepted with D.L. Smith Concrete being awarded the contract with a bid price of \$28,580.70.
- 12. Walnut Street Sidewalk:** This project was designed by the Wooster Engineering Division and was part of our summer intern's workload. The project consists of replacement of concrete walk and curb along Walnut Street with decorative concrete pavers. The engineer's estimate was \$75,225.00. The project is funded by CDBG grant money in the amount of \$79,000. T.R. Snyder was awarded the contract with a bid price of \$46,496.00 and began work in December 2008 with final completion slated for early spring 2009.

- 13. Secrest Road Reconstruction:** This project was designed by the Wooster Engineering Division in conjunction with OARDC and in anticipation of the upcoming BiOhio Research Facility. New roadway, concrete curb and gutter, sidewalk and bikeway are all included in the road improvement. The project also includes storm sewer and water lines. The engineer's estimate was \$2,960,000.00. The contract was awarded in September to Stout Excavating with a bid price of \$2,354,202.82. This project is being funded entirely by grant funds from the Ohio Department of Development, Job Ready Sites Program.
- 14. Cleveland Road/Portage Road Waterline Improvements:** This project consists of replacing waterline along both Portage Road and Cleveland Road and includes fire hydrants and water services. The engineer's estimate was \$930,000.00. Seventeen bids were opened in December with G. E. Baker submitting the low bid of \$680,496.59. Partial funding for this project is being provided by the Ohio Public Works Department and Ohio EPA in the amount of \$200,000.
- 15. Sherwood Drive:** This project called for replacement of approximately 415' of sanitary sewer on Sherwood Drive. The engineer's estimate was \$50,000.00. Stout Excavating was awarded the contract with a bid price of \$45,551.40. The final construction costs amounted to \$45,975.20.
- 16. Beall Avenue Streetscape:** This project consists of upgrading Beall Avenue from Liberty Street to Bloomington Avenue. New roadway will be constructed complete with curb and gutters, turn lanes, storm sewer and a boulevard section through the College of Wooster. Engineering plans were completed in 2006. The engineer's estimate for construction of this project is \$7,130,000.00. Funding for this project is being obtained from CDBG, ODOT, EPA, College of Wooster and local government. Northstar Asphalt was awarded the contract in July with a bid price of \$7,005,938.80. Work will continue along Beall Avenue throughout 2009.
- 17. SR 3/SR 302 Resurfacing:** This project includes pavement planning, pavement repair, resurfacing with asphalt and/or concrete and minor bridge rehabilitation. The project was designed by the Engineering Division and Ohio Department of Transportation with partial funding being provided by ODOT in the amount of \$505,000. The engineer's estimate is \$1,346,000.00. Kokosing Construction was awarded the contract in December with a bid price of \$1,225,520.36.
- 18. Larwill Street Bridge Replacement:** This project replaced the existing deteriorating concrete slab bridge with a new concrete poured in place structure. The project also consisted of the replacement of approximately 300 linear feet of water main and placing storm sewer catch basins and junction chamber in anticipation of a future sewer separation project on Larwill. Partially funded by ODOT, the estimated cost for this project is \$485,000. V.O. Menezes was awarded the contract with a bid price of \$474,530.00. As of December, the project is complete, however the final pay request has not been submitted.

INFRASTRUCTURE PROJECTS SCHEDULED/PLANNED FOR 2009:

1. **Mechanicsburg Road Sanitary Sewer:** This project will be designed by the Engineering Division and consists of upgrading the sanitary sewer which runs along Mechanicsburg Road then adjacent to Bell & Howell. This upgrade is necessary to meet the current and future demands from development along the western border of the City. Construction costs are estimated to be \$200,000.
2. **Parkview Waterline:** This project will be designed by the Engineering Division and consists of replacing the waterline on Parkview between Oak Hill and Northwestern. There have been a number of waterline breaks in this area in recent years. The project cost estimate is \$100,000.
3. **Point-of-View Lift Station Replacement:** This project will be designed by the Engineering Division and consists of replacing the existing lift station on Point-of-View Drive to meet current sanitary sewer flows and Ohio EPA regulations. The upgrade includes new non-clog submersible pumps, 8' diameter wet well, electric work, standby generator, and telemetry and control. The engineer's estimated construction costs for this project is \$700,000.
4. **North High Water Tank:** This project is under design by the Division of Engineering with a current estimate of \$1,605,000. This project will provide water storage in a portion of the City's water system which currently provides less than ½ day of storage based on current average water usage.
5. **Secondary Transmission Line:** This project will provide a secondary transmission line to provide increased water flow and circulation, as well as provide a back-up route for water to reach the city's distribution system from the city water treatment plant. The engineer's estimate for construction is \$800,000.
6. **Larwill Street Sewer Separation:** This project has been designed by the Wooster Engineering Division and will be advertised the first quarter of 2009. It consists of installation of storm sewer, sanitary sewer, laterals and pipe rehabilitation. The engineer's estimate for construction is \$690,000.00. Funding in the amount of \$260,000 is being provided by OPWC.
7. **Freedlander Building Demolition:** The Wooster Engineering Division is working with BCMS and the Wooster Growth Association to help coordinate the demolition of the Freedlander Building.
8. **SR585/Akron Road Reconstruction:** This project is being designed with the intent to reduce congestion and improve safety by installing storm sewers, curb, gutter and sidewalks, flattening the curve, reconfiguring lane usage at Portage Road and providing a new surface coarse over the existing roadway. The project estimate is \$2,529,940.00 and will be partially funded by ODOT.

9. **Gasche Street Sewer Separation:** This project will be designed by the Engineering Division and consist of the installation of storm sewer and storm laterals for the purpose of separating storm sewer flows from the sanitary sewer per Ohio EPA mandates. The engineer's estimate for construction is \$850,000.

10. **Kieffer Street Sewer Replacement:** This project will be designed by the Engineering Division and consists of replacing damaged sanitary sewer lines with new PVC replacements. The engineers estimated for construction is \$45,000.

Insert Project Map

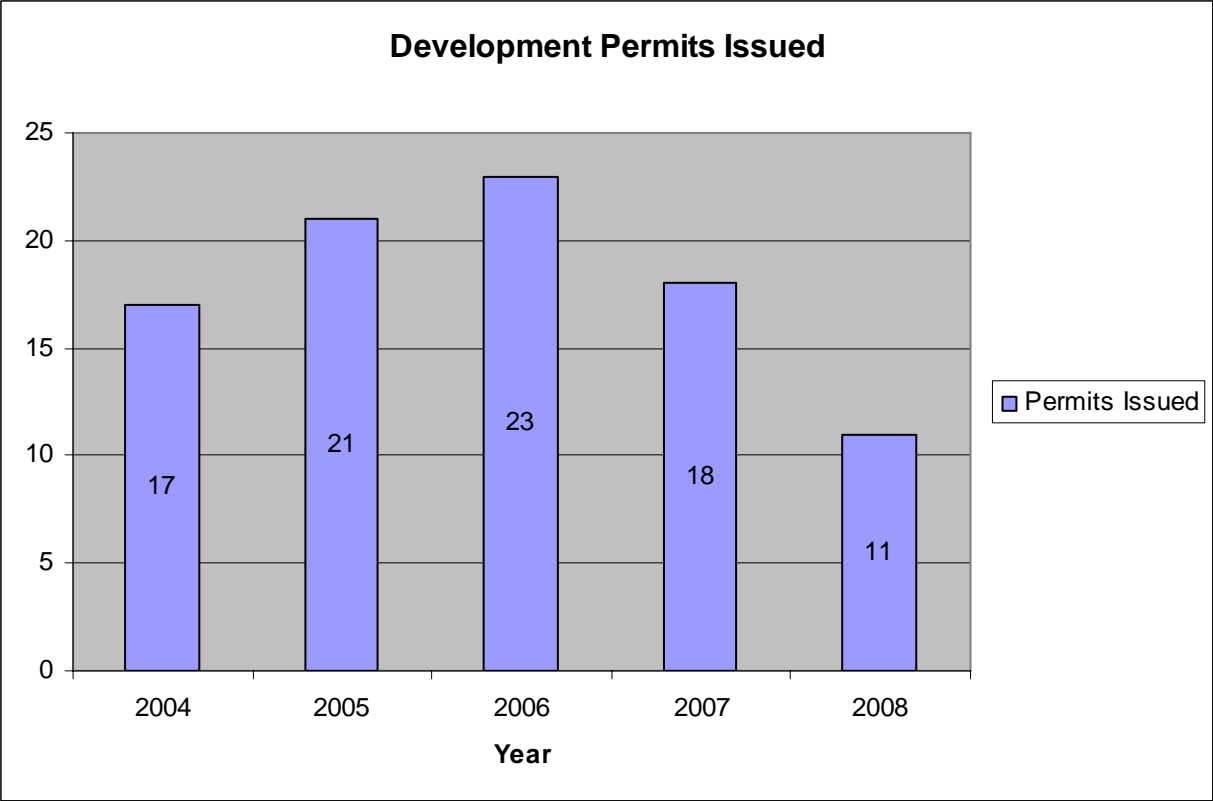
Private Developments

1. **Private Subdivisions/Commercial Property under Construction:** Development within the city dropped significantly in 2008 in number of permits issued.

Due to Technigraphics continued expansion the site improvements cost estimate figure is actually greater than 2007. However, the remaining improvements were mainly to existing facilities and much smaller in scope.

2. **Subdivision Plan Review Table:** The table below lists all subdivisions and developments submitted for review in 2008.

City of Wooster Engineering Development Permits						2008
DEVELOP. #	PERMIT NO.	PROJECT NO.	NAME / DESCRIPTION	SITE IMP.S COST ESTIMATE	PLAN REVIEW FEE	DATE RECEIVED
1	#08001	#083001	Farm Credit Parking	\$50,000.00	\$216.00	03/19/08
2	#08002	#073027	Oberle & Wiles	\$100,000.00	\$430.00	3/18/2008
3	#08003	#083008	Melrose Bus Loop	\$10,000.00	\$899.00	06/23/08
4	#08004	#083013	Technigraphics	\$4,200,000.00	\$6,347.50	industry waiver
5	#08005	#083010	Goodwill - Milltown	\$200,000.00	\$2,202.00	07/28/08
6	#08006	#083019	Auto Works	\$100,000	\$1,912.00	07/30/08
7	#08007	#083007	Wooster Tool	\$10,000.00	\$3,568.50	08/05/08
8	#08008		duplicate TGS			
9	#08009	#083017	STEPS - 245 Beall	\$16,000.00	\$486.50	09/04/08
10	#08010	#083006	Buckeye Oil Addition	\$120,000.00	\$554.80	09/17/08
11	#08011	#083026	Unitarian Universalist	\$10,000.00	\$472.00	12/15/08
12	#08012	#083027	Milltown Prof. Plaza	\$75,000	\$537.50	12/17/08
TOTALS				\$4,891,000.00	\$17,625.80	

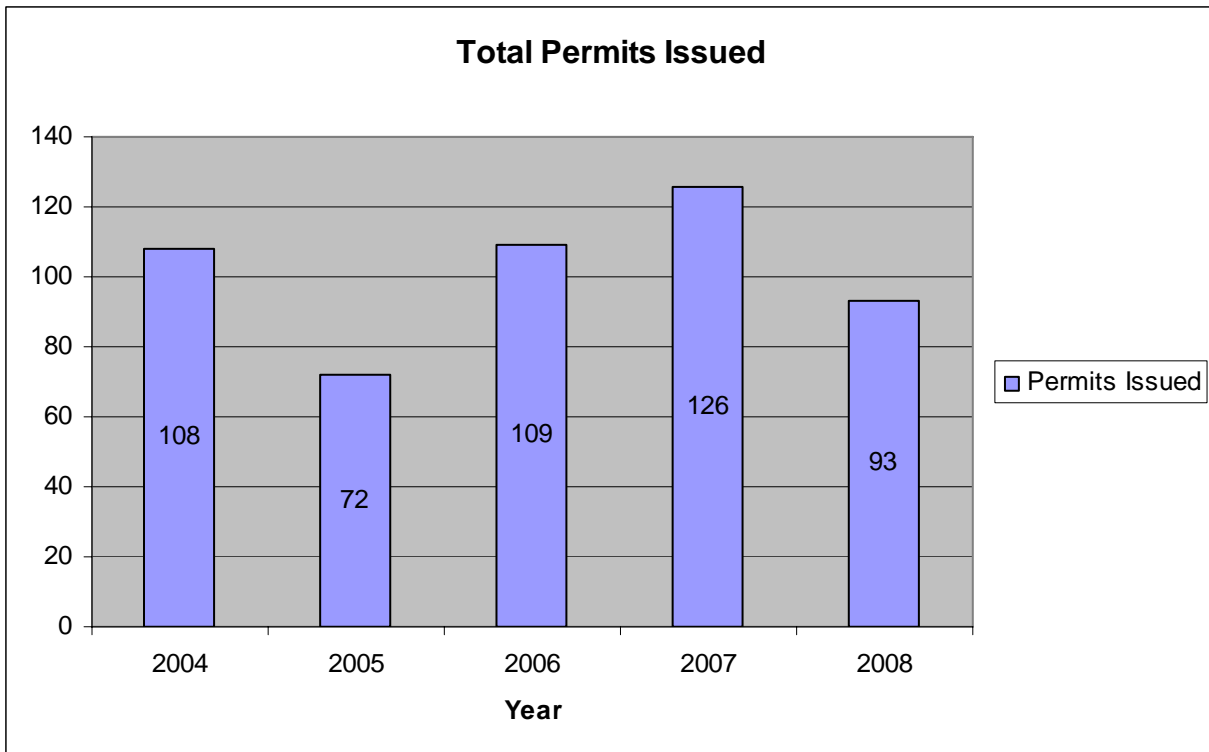


ENGINEERING FEES AND REVENUES FOR 2008:

The following breakdown details the revenues received in 2007 and 2008 by the Division of Engineering.

	<u>2007</u>	<u>2008</u>
Single Inspection	\$ 240.00	\$ 640.00
Construction Inspection	\$ 45,624.00	\$ 12,635.15
Plan Review Fee	\$ 66,628.00	\$ 18,910.80
Plan Copies	\$ 4,842.00	\$ 8,400.60
Yard Pipe Permit	\$ 400.00	\$ 120.00
Sanitary Sewer Permit	\$ 2,994.00	\$ 520.00
San. Sewer Availability Charge	\$ 19,635.00	\$ 13,037.00
Water Availability	\$ 8,144.00	\$ 12,840.00
Water Service Permit	\$ 5,604.00	\$ 760.00
Development Permit Waiver	(\$ 1,295.00)	\$(18,750.00)
Total Fees Collected:	\$162,816.00	\$ 49,113.55

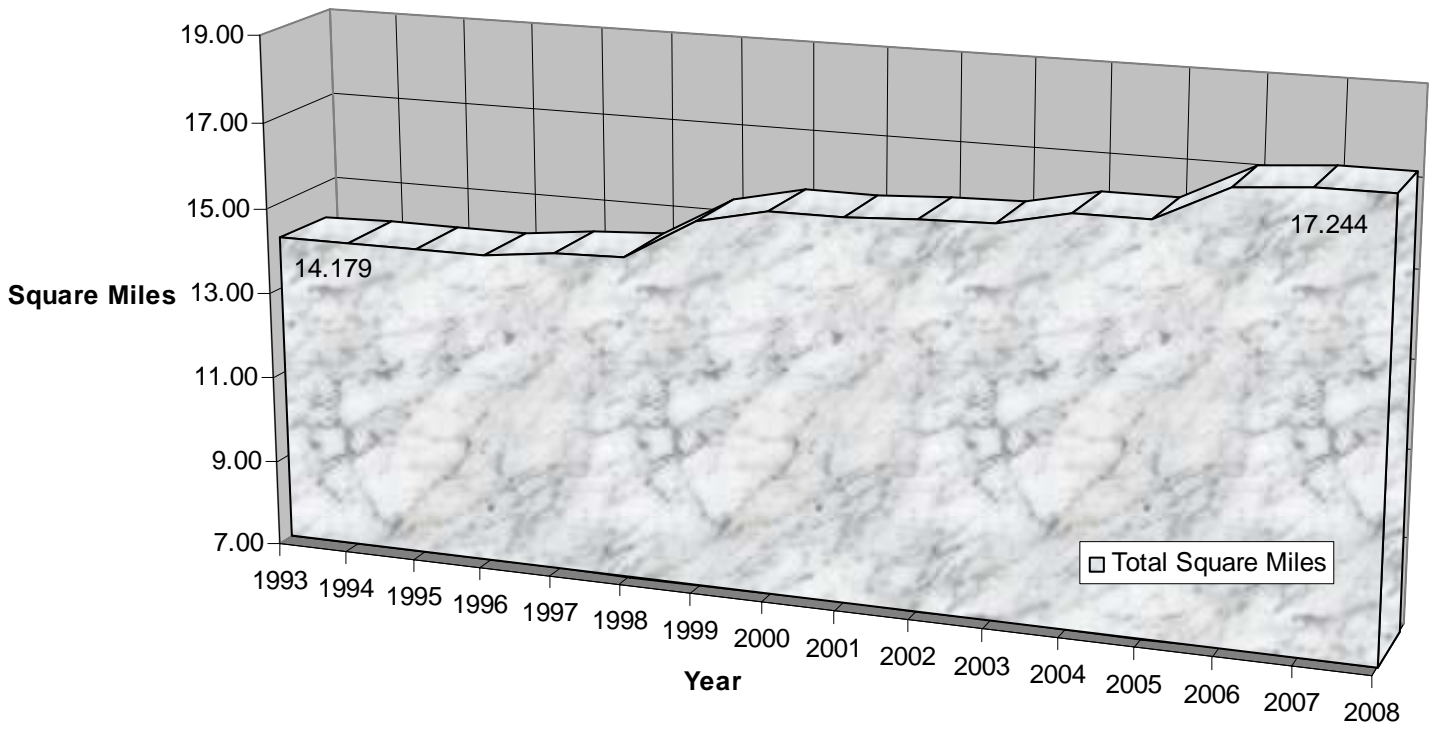
Total Permits for 2008 decreased with the main decrease seen in the development permit and sanitary sewer area. Revenue fell even though we began charging the utility companies right of way permit fees in October.



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City Growth Statistics – Section 2

City Growth Total City Area



City Area Statistics				
City Area				
Year	Increases (Acres)	Total Acres	Total Square Miles	% Increase
1965	0.000	4,966.400	7.760	0.000
1966	648.890	5,615.290	8.774	13.066
1967	0.000	5,615.290	8.774	0.000
1968	0.000	5,615.290	8.774	0.000
1969	331.550	5,946.840	9.292	5.904
1970	62.470	6,009.310	9.390	1.050
1971	0.000	6,009.310	9.390	0.000
1972	181.810	6,191.120	9.674	3.025
1973	54.380	6,245.500	9.759	0.878
1974	173.858	6,419.358	10.030	2.784
1975	4.000	6,423.358	10.036	0.062
1976	19.532	6,442.890	10.067	0.304
1977	25.032	6,467.922	10.106	0.389
1978	79.990	6,547.912	10.231	1.237
1979	56.819	6,604.731	10.320	0.868
1980	3.000	6,607.731	10.325	0.045
1981	135.195	6,742.926	10.536	2.046
1982	2.730	6,745.656	10.540	0.040
1983	47.046	6,792.702	10.614	0.697
1984	148.203	6,940.905	10.845	2.182
1985	0.000	6,940.905	10.845	0.000
1986	45.319	6,986.224	10.916	0.653
1987	0.000	6,986.224	10.916	0.000
1988	187.711	7,173.935	11.209	2.687
1989	1,031.835	8,205.770	12.822	14.383
1990	0.000	8,205.770	12.822	0.000
1991	541.763	8,747.533	13.668	6.602
1992	166.072	8,913.605	13.928	1.899
1993	160.949	9,074.554	14.179	1.806
1994	1.080	9,075.634	14.181	0.012
1995	0.000	9,075.634	14.181	0.000
1996	23.626	9,099.260	14.218	0.260
1997	123.047	9,222.307	14.410	1.352
1998	40.564	9,262.871	14.473	0.440
1999	610.865	9,873.736	15.428	6.595
2000	217.389	10,091.125	15.767	2.202
2001	2.781	10,093.906	15.772	0.028
2002	64.491	10,158.397	15.872	0.639
2003	24.120	10,182.517	15.910	0.237
2004	226.640	10,409.157	16.264	2.226
2005	11.090	10,420.247	16.282	0.107
2006	537.062	10,957.309	17.121	5.154
2007	78.780	11,036.089	17.244	0.719
2008	0.000	11,036.089	17.244	0

2008 Annexations

No.	Description	Date	Area
	None		

City Growth Information

Year	City Population	City Area	City Streets
1990	22, 427 (a)	12.8222 Sq. Mi.	106.42 Miles
2000	24,811 (a)	15.767 Sq. Mi.	120.41 Miles
2001	25,047 (b)	15.772 Sq. Mi.	120.79 Miles
2002	25,342 (b)	15.872 Sq. Mi.	121.55 Miles
2003	25,420(b)	15.910 Sq. Mi.	122.87 Miles
2004	25,801 (b)	16.264 Sq. Mi.	125.39 Miles
2005	26,166 (b)	16.282 Sq. Mi.	127.20 Miles
2006	26,411(b)	17.126 Sq. Mi.	129.76 Miles
2007	26,527 (b)	17.244 Sq. Mi	131.98 Miles
2008	27,112 (b)	17.244 Sq. Mi	132.67 Miles

(a) Census

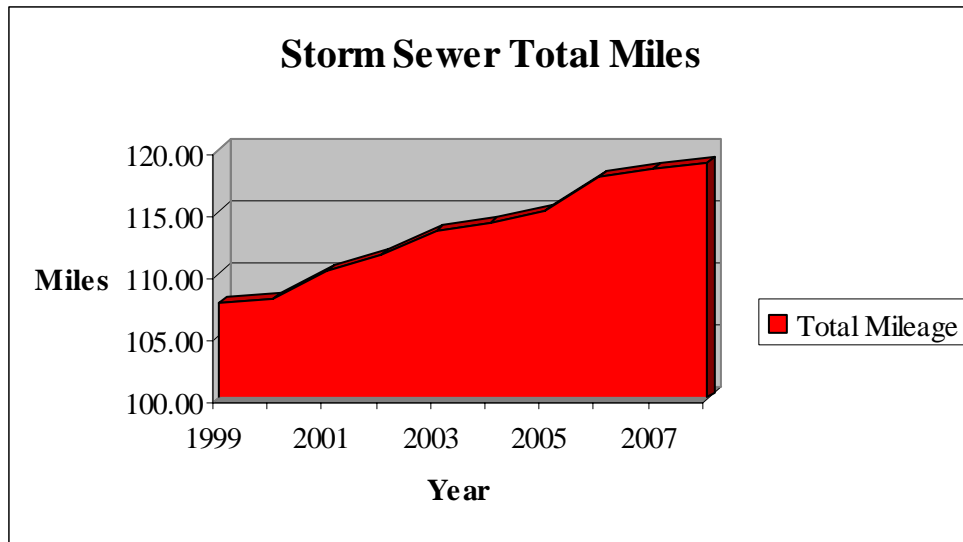
(b) Estimated

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Utility Statistics – Section 3

Storm Sewer Mileage

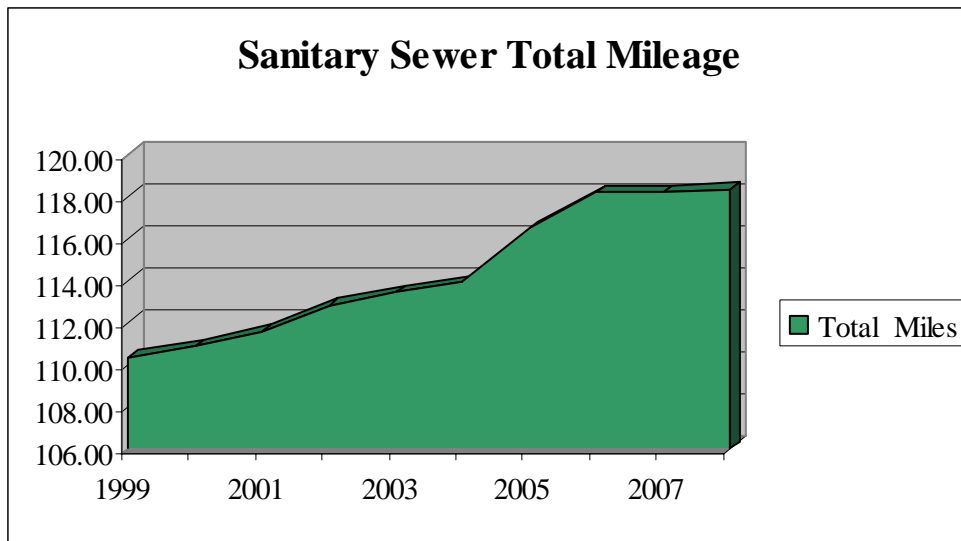
Year	Increase in Miles	Total Mileage	% Increase
1999	0.38	107.71	0.00%
2000	0.305	108.02	0.28%
2001	2.285	110.30	2.12%
2002	1.239	111.54	1.12%
2003	1.891	113.43	1.70%
2004	0.715	114.15	0.63%
2005	0.964	115.11	0.84%
2006	2.7	117.81	2.35%
2007	0.64	118.45	0.54%
2008	0.52	118.97	0.44%



The substantial increase in storm sewer mileage since 2003 and the rate of increase over the past 5 years is the result of the aggressive implementation of the City’s sanitary and storm sewer separation plan. It should be noted that an additional effect of the separation program has been the decrease of peak flows to the Water Pollution Control Plant during rain events.

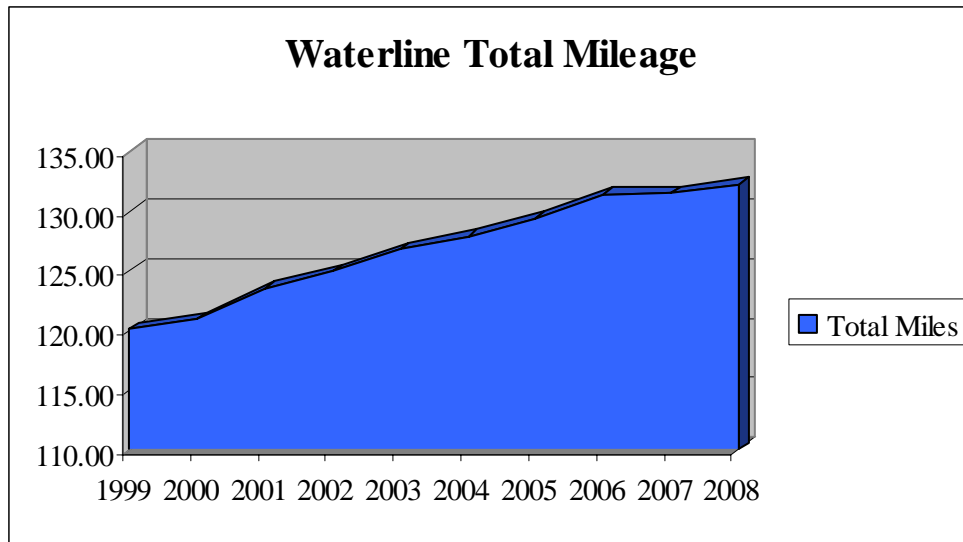
Sanitary Sewer Mileage

Year	Increase in Miles	Total Miles	% Increase
		109.87	
1999	0.48	110.35	0.44%
2000	0.53	110.88	0.48%
2001	0.68	111.56	0.61%
2002	1.23	112.79	1.10%
2003	0.62	113.41	0.55%
2004	0.50	113.91	0.44%
2005	2.56	116.47	2.25%
2006	1.71	118.18	1.47%
2007	0.00	118.18	0.00%
2008	0.14	118.32	0.12%



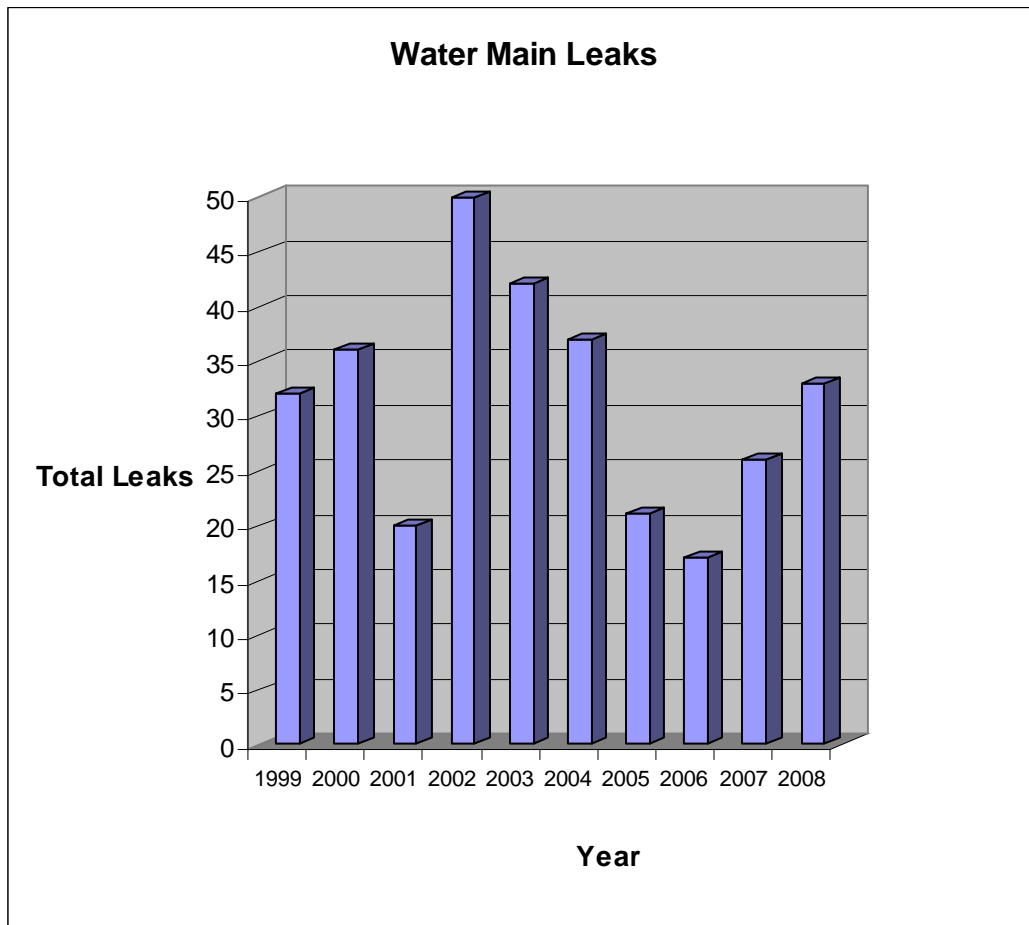
Waterline Mileage

Year	Increase in Miles	Total Miles	% Increase
		118.61	
1999	1.49	120.10	1.26%
2000	0.78	120.88	0.65%
2001	2.61	123.49	2.16%
2002	1.43	124.92	1.16%
2003	1.88	126.80	1.50%
2004	1.11	127.91	0.88%
2005	1.45	129.36	1.13%
2006	2.06	131.42	1.59%
2007	0.10	131.52	0.08%
2008	0.71	132.23	0.54%



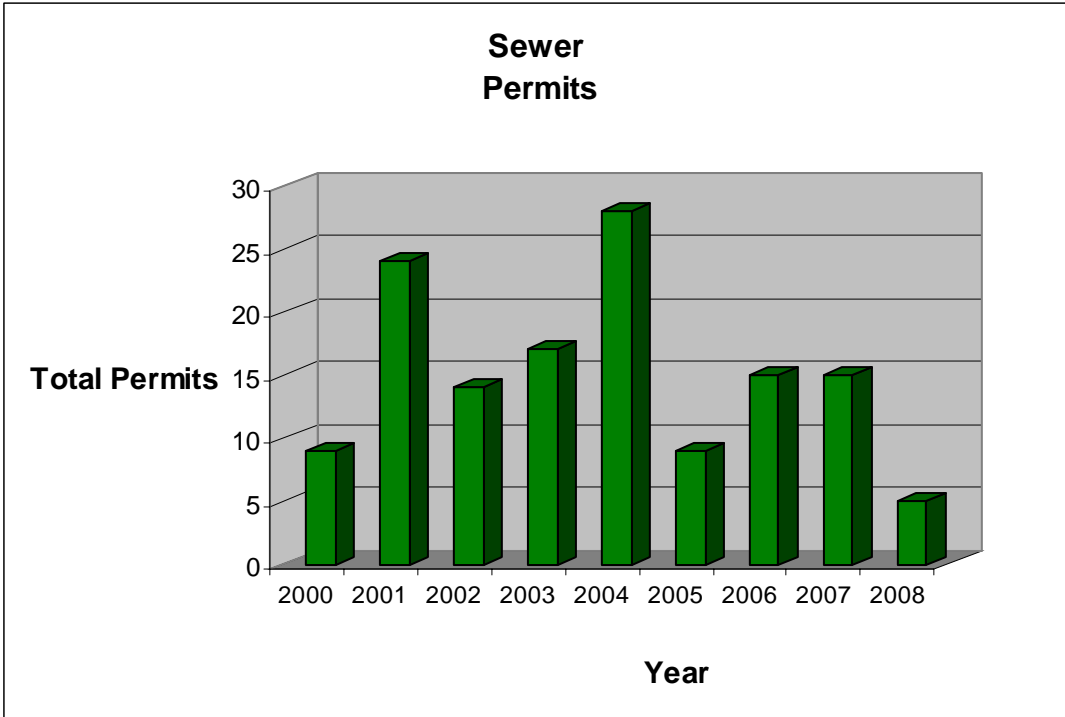
Water Main Leaks

<u>Year</u>	<u>Number</u>
1999	32
2000	36
2001	20
2002	50
2003	42
2004	37
2005	21
2006	17
2007	26
2008	33



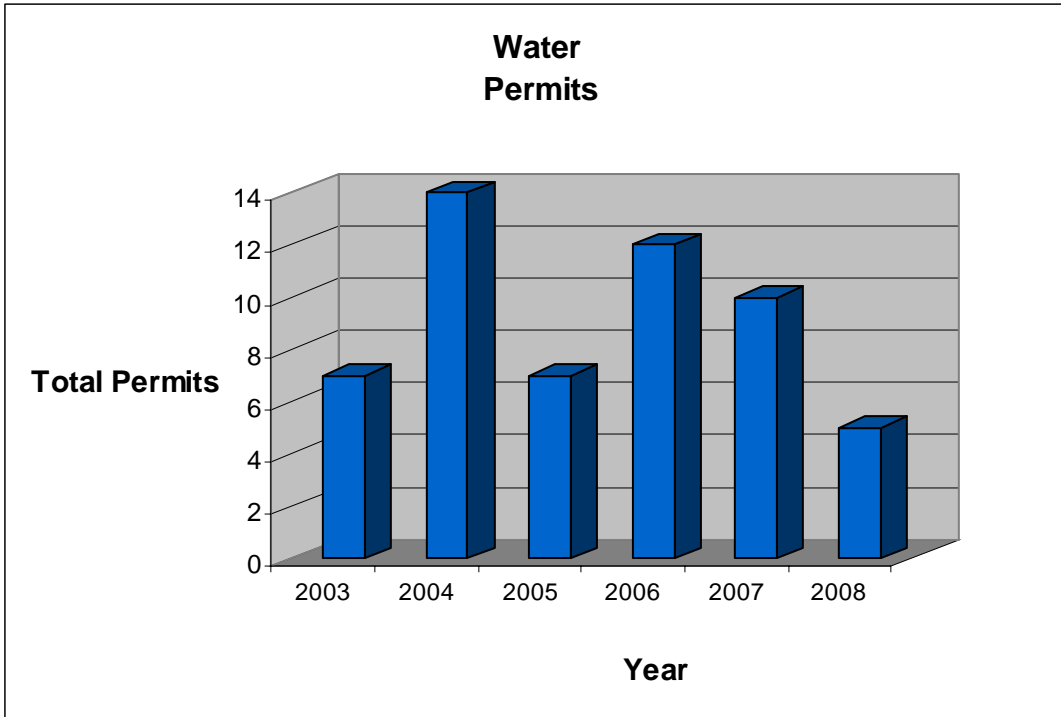
Sewer Permits

Year	Number
2000	9
2001	24
2002	14
2003	17
2004	28
2005	9
2006	15
2007	15
2008	5



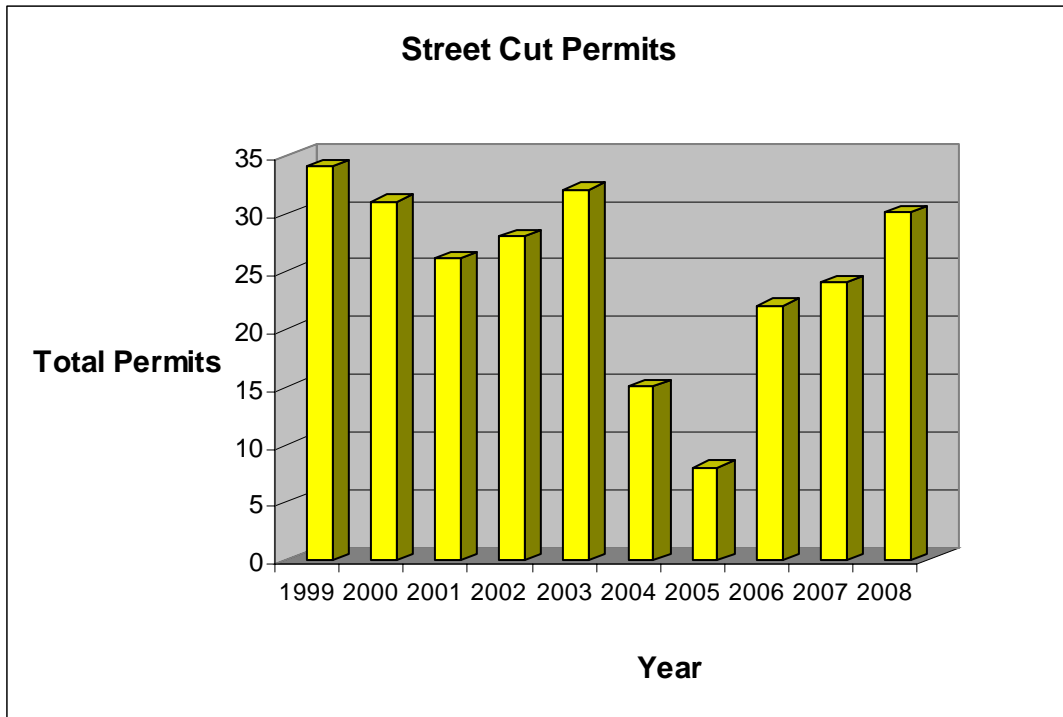
Water Permits

Year	Number
2003	7
2004	14
2005	7
2006	12
2007	10
2008	5



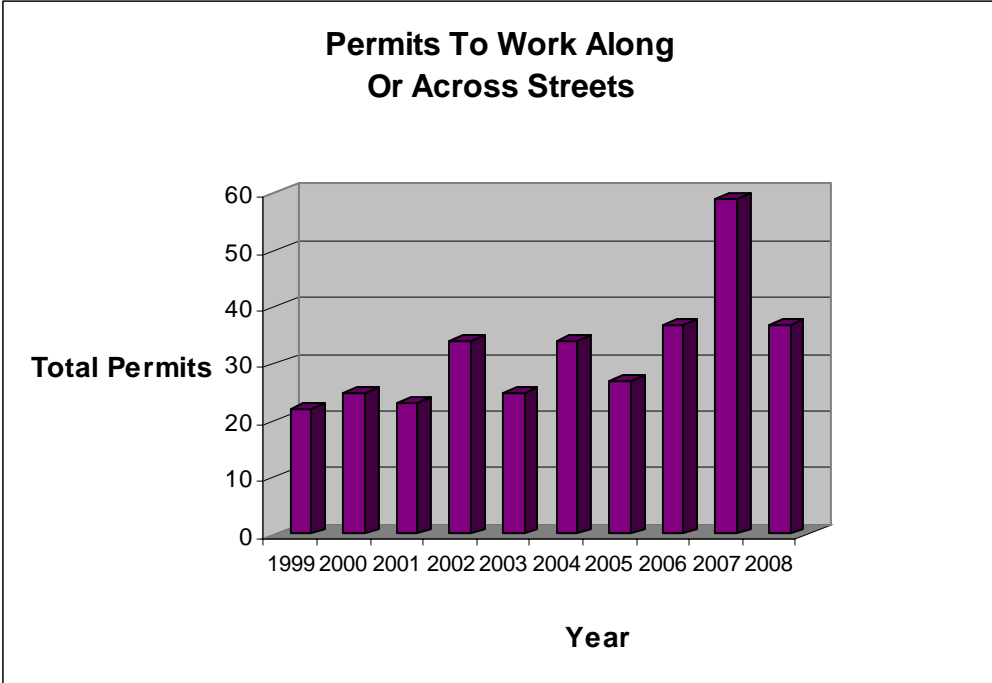
Street Cut Permits

<u>Year</u>	<u>Number</u>
1999	34
2000	31
2001	26
2002	28
2003	32
2004	15
2005	8
2006	22
2007	24
2008	30



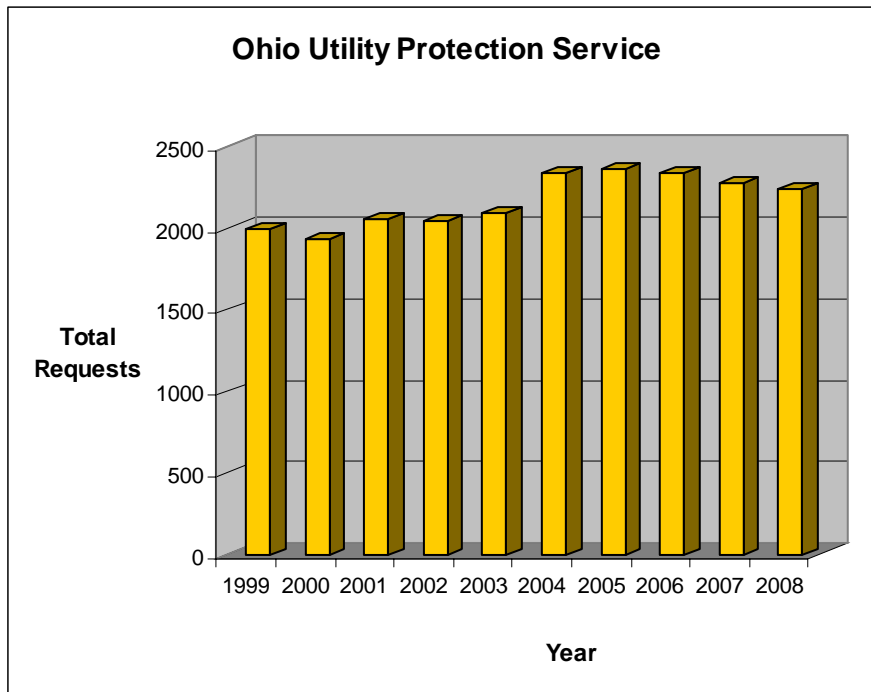
**Permits To Work Along
Or Across Streets**

Year	Number
1999	22
2000	25
2001	23
2002	34
2003	25
2004	34
2005	27
2006	37
2007	59
2008	37



Ohio Utility Protection Service
Location Requests

<u>Year</u>	<u>Number</u>
1999	1992
2000	1932
2001	2047
2002	2043
2003	2087
2004	2334
2005	2356
2006	2332
2007	2270
2008	2241

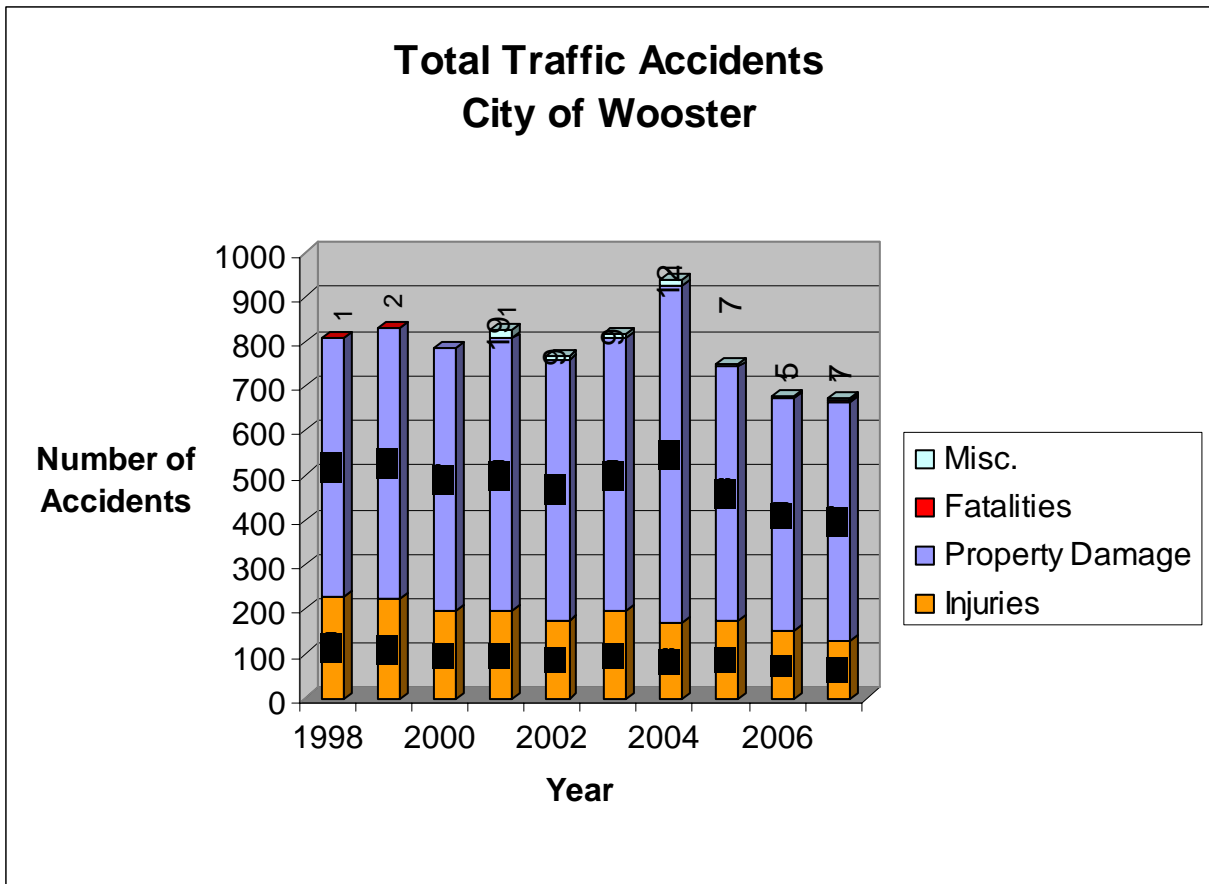


*Division of Engineering
City of Wooster
2008 Annual Report*

Traffic Statistics – Section 4

City of Wooster
Traffic Accidents

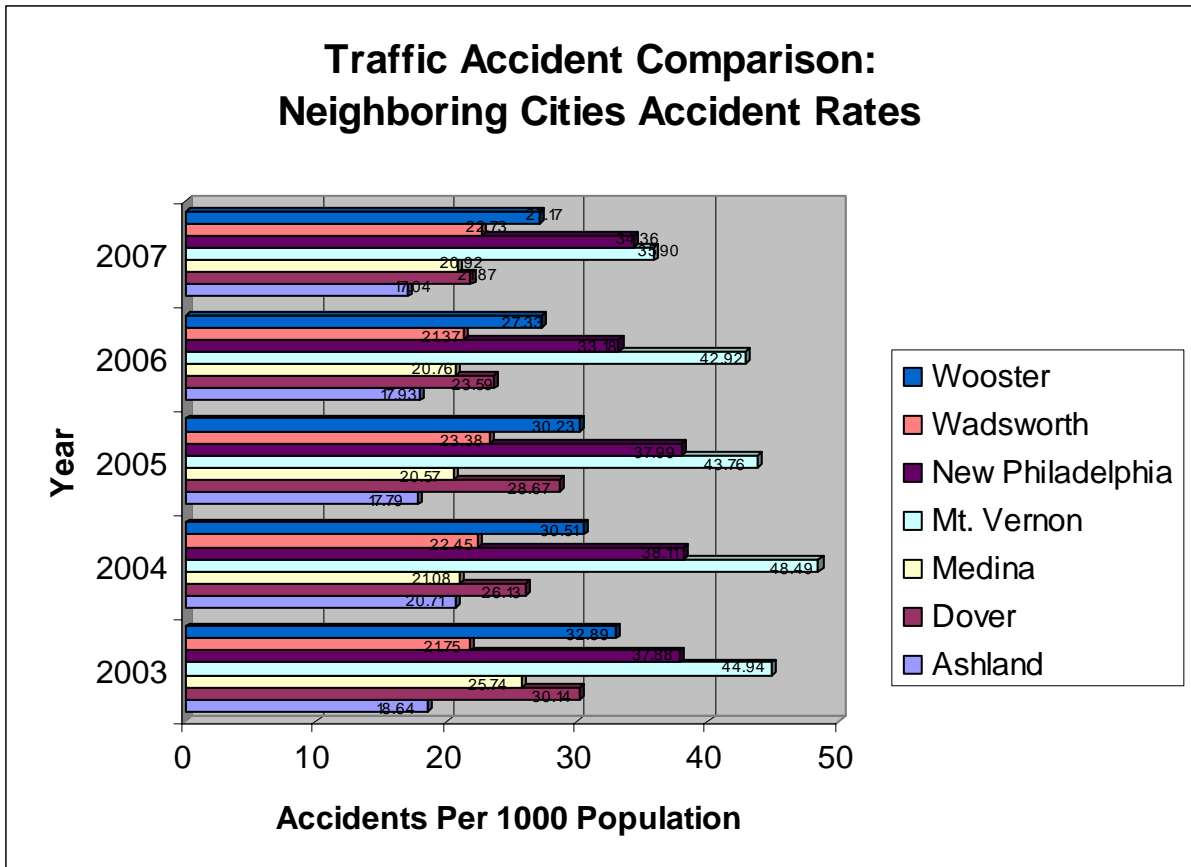
Year	Injuries	Property Damage	Fatalities	Misc.
1998	229	580	1	
1999	224	606	2	
2000	197	587		
2001	197	609	1	19
2002	175	582		9
2003	198	609		9
2004	168	757	1	12
2005	175	568		7
2006	151	521	1	5
2007	129	537	1	7



Traffic Accident Comparison Rates By Neighboring Cities

Accidents Per 1000 People

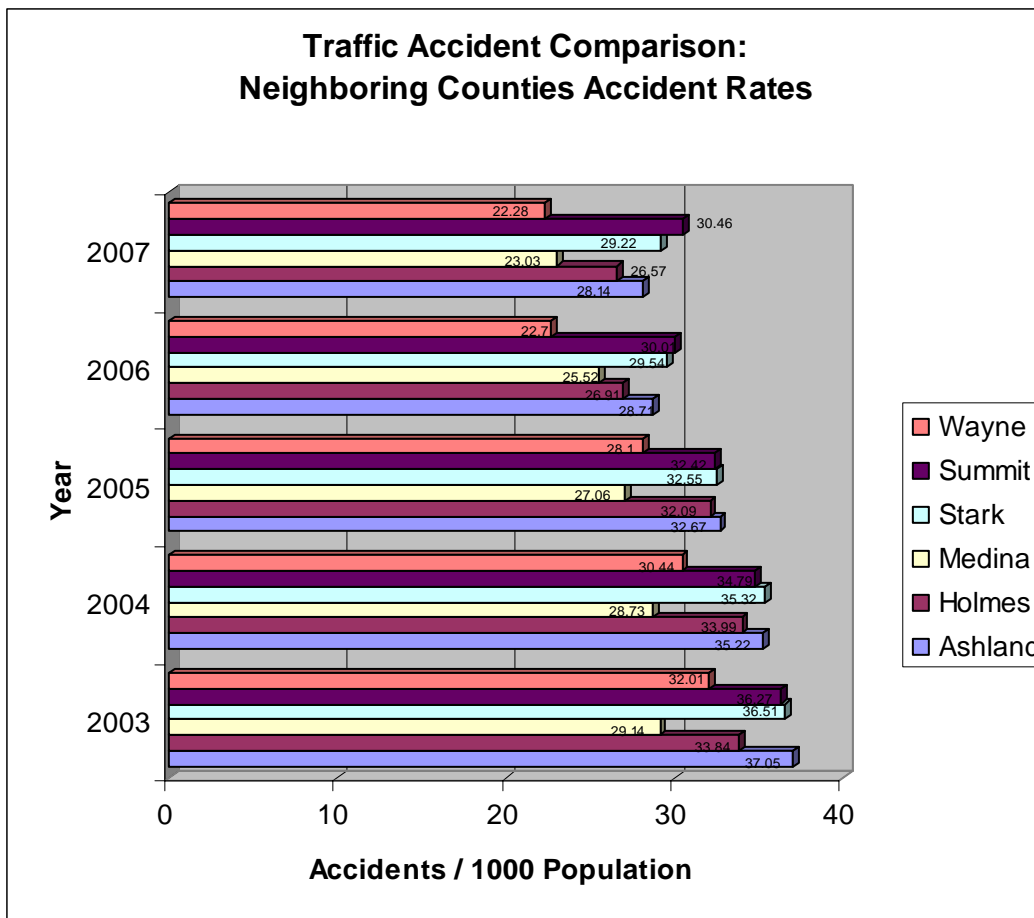
Year	Ashland	Dover	Medina	Mt. Vernon	New Philadelphia	Wadsworth	Wooster
(2000 Pop.)	21249	12210	25139	14375	17056	18437	24811
2000	24.61	29.57	23.59	51.83	39.46	19.74	31.68
2001	20.28	28.58	25.98	52.38	40.10	20.45	33.29
2002	22.73	32.60	25.02	46.82	40.45	18.93	30.87
2003	18.64	30.14	25.74	44.94	37.88	21.75	32.89
2004	20.71	26.13	21.08	48.49	38.11	22.45	30.51
2005	17.79	28.67	20.57	43.76	37.99	23.38	30.23
2006	17.93	23.59	20.76	42.92	33.18	21.37	27.33
2007	17.04	21.87	20.92	35.90	34.36	22.73	27.17



Traffic Accident Comparison Rates by Neighboring Counties

Accidents Per 1000 People

Year	Ashland	Holmes	Medina	Stark	Summit	Wayne
1998	35.78	28.73	26.61	34.64	36.1	28.99
1999	36.16	31.13	27.68	34.29	38.45	30.37
2000	38.67	31.51	26.81	34.75	27.97	30.36
2001	34.37	30.35	26.55	31.13	36.19	28.12
2002	38.26	31.02	28.12	35.28	36.59	29.26
2003	37.05	33.84	29.14	36.51	36.27	32.01
2004	35.22	33.99	28.73	35.32	34.79	30.44
2005	32.67	32.09	27.06	32.55	32.42	28.1
2006	28.71	26.91	25.52	29.54	30.01	22.7
2007	28.14	26.57	23.03	29.22	30.46	22.28



*Division of Engineering
City of Wooster
2008 Annual Report*

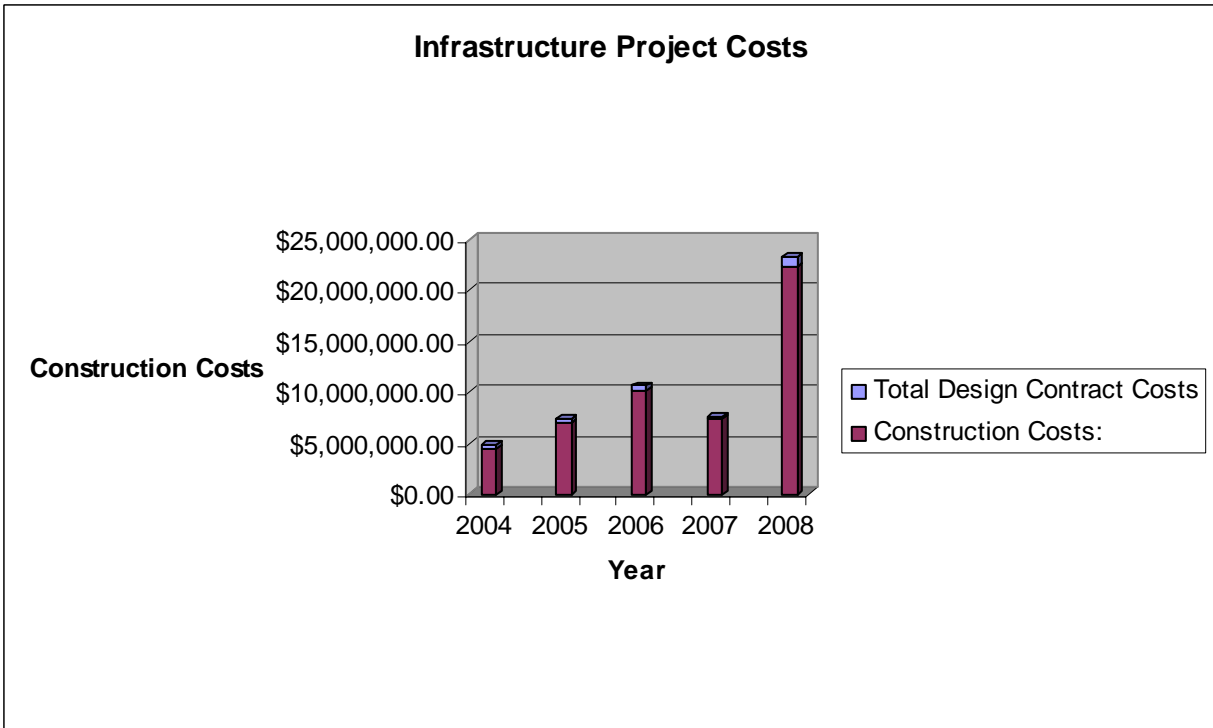
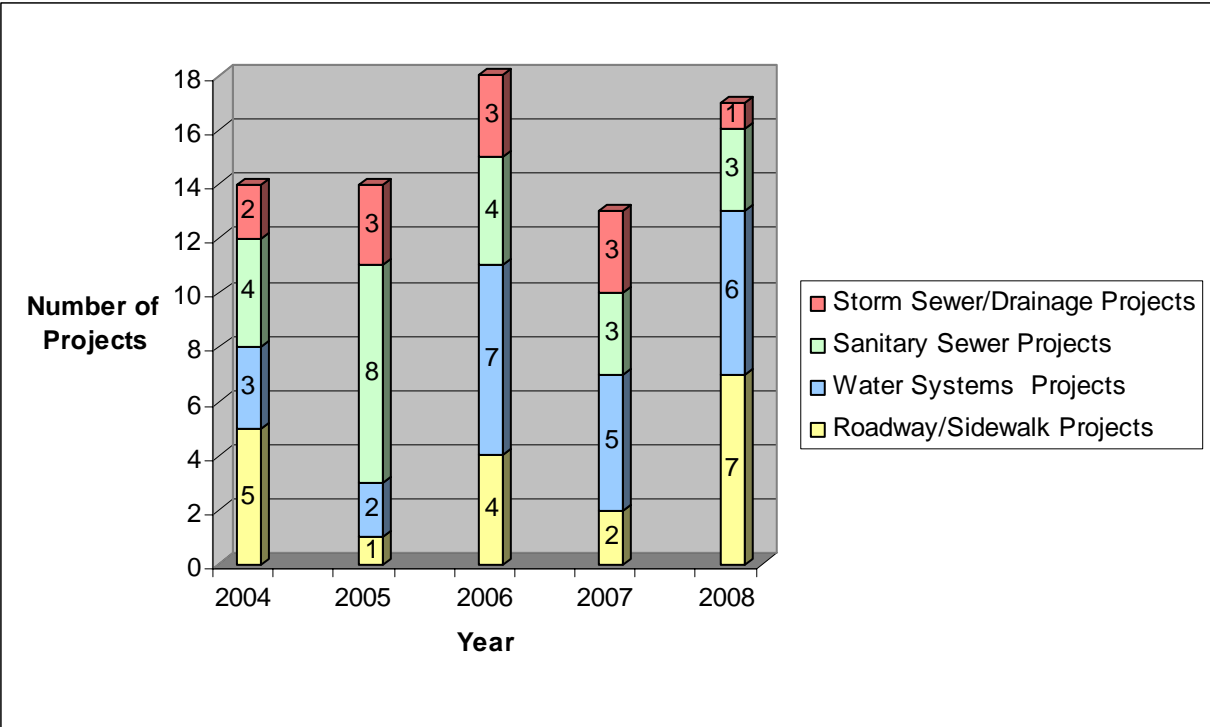
Engineering Design Statistics – Section 5

DIVISION OF ENGINEERING
2008 Annual Report - Project Summary
(Projects Designed or Constructed in 2008)

PROJECT	DESIGNER/CONSULTANT	DESIGN COST	CONTRACTOR	ESTIMATED CONST. COST	BID PRICE	FINAL COST	Contract		Retainage
							Balance	% Complete	
GIS Mapguide	Imaginit Technologies		Imaginit Technologies		N/A				
Campbell/Minerva W/L	Wooster Engineering Div.	\$0.00	Jeff Cutlip	\$161,000.00	\$132,146.50	\$141,434.00	\$0.00	100%	
Intermediate Zone WaterTank	Wooster Engineering Div.	\$0.00	CB&I	\$2,366,000.00	\$1,820,000.00	UC	\$1,158,511.71	68%	\$72,800.00
Oldman Road Waterline	Wooster Engineering Div.	\$0.00	DC Berger	\$175,000.00	\$112,200.00	\$91,380.77	\$0.00	100%	
Beall Avenue - Utility	Brandstetter & Carroll	\$52,000.00	McClintock	\$800,000.00	\$866,295.49	UC	\$109,116.75	90%	\$34,601.34
Mindy Lane/Mechanicsburg W/L	Arcadis	\$18,400.00	Wenger	\$287,600.00	\$201,480.90	\$179,574.36	\$0.00	100%	
Buckeye/Mechanicsburg PS	Arcadis	\$128,700.00	Bogner	\$1,134,000.00	\$764,027.00	UC	\$160,976.82	80%	\$36,203.08
College Avenue	Wooster Engineering Div.	\$0.00	Underground Utilities	\$737,000.00	\$696,633.00	\$715,552.87	\$0.00	100%	
Triway Lift Station	Wooster Engineering Div.	\$0.00	G.E. Baker	\$260,000.00	\$234,900.00	\$243,551.40	\$0.00	100%	
2007 Sanitary Sewer Rehab	Wooster Engineering Div.	\$0.00	S & S Directional	\$154,000.00	\$133,206.00	\$133,206.00	\$0.00	100%	
Municipal Bldg. Generator	State Electrical	\$15,000.00	Spring Electric	\$180,000.00	\$174,980.00	\$174,980.00	\$0.00	100%	
Normandy Sidewalk	Wooster Engineering Div.	\$0.00	D.L. Smith	\$47,000.00	\$28,580.70	UC	\$28,580.70	0%	
Walnut St. Sidewalk	Wooster Engineering Div.	\$0.00	T.R. Snyder	\$75,225.00	\$46,496.00	UC	\$16,199.84	70%	\$1,859.84
Larwill St. Bridge Replacement	Engineering Associates, Inc.	\$76,305	V.O. Menuez	\$680,000.00	\$474,530.00	UC	\$48,585.37	100%	
Beall Avenue Streetscape	Brandstetter, Carroll Inc.	\$645,000.00	Northstar Asphalt	\$10,046,750.00	\$7,005,938.80	UC	\$6,897,265.92	2%	\$9,449.82
302/SR3 Resurfacing	ODOT/Wooster Engineering	\$0.00	Kokosing	\$1,346,000.00	\$1,225,520.30	UC	\$1,225,520.00	0%	
Secrest Road Reconstruction	Wooster Engineering Div.	\$4,000.00	Stout	\$2,960,000.00	\$2,354,202.82	UC	\$1,993,205.88	18%	\$31,391.04
Portage/Cleveland Rd. W/L	Wooster Engineering Div.	\$0.00	G.E. Baker	\$930,000.00	\$680,496.59	UC	\$680,496.59	0%	
Sherwood Drive Sanitary	Wooster Engineering Div.	\$0.00	Stout	\$50,000.00	\$45,551.40	\$45,975.20	\$0.00	100%	
Subtotals		\$939,405.00	5.53%	\$22,389,575.00	\$16,997,185.50				
Freedlander Bldg. Demolition	Wooster Engineering	\$0.00	N/A			DC			
Secondary Transmission	GGJ	\$45,100.00	N/A			DC			
Larwill St. Sewer Separation	Wooster Engineering	\$0.00	N/A	\$700,000.00		DC			
Subtotals		\$45,100.00		\$700,000.00					
Akron Rd - Phase 1	Engineering Associates	\$255,000.00	N/A	\$2,500,000.00	N/A	UD			
Point-of-View Lift Station	Wooster Engineering Div.	\$0.00	N/A	\$600,000.00	N/A	UD			
Mechanicsburg Rd. SS	Wooster Engineering Div.	\$0.00	N/A	\$200,000.00	N/A	UD			
WTP CL2 Storage	EMHT	\$15,000.00	N/A	\$30,000.00	N/A	UD			
North High Water Tank	Wooster Engineering Div.	\$0.00	N/A	\$1,500,000.00	N/A	UD			
Melrose Booster Station	GGJ	\$44,500.00	N/A	\$0.00	N/A	UD			
Parkview Waterline	Wooster Engineering Div.	\$0.00	N/A	\$100,000.00	N/A	UD			
Gasche St. Sewer Separation	Wooster Engineering Div.	\$0.00	N/A	\$850,000.00	N/A	UD	UD = Under Design		
Kieffer St. Sewer Replacement	Wooster Engineering Div.	\$0.00	N/A	\$45,000.00	N/A	UD	DC = Design Complete		
Subtotals		\$314,500.00		\$5,825,000.00			UC = Under Construction		

**Major Public Works
Projects**

Project Information	2004	2005	2006	2007	2008
Roadway/Sidewalk Projects	5	1	4	2	7
Water Systems Projects	3	2	7	5	6
Sanitary Sewer Projects	4	8	4	3	3
Storm Sewer/Drainage Projects	2	3	3	3	1
Total Projects	14	14	18	13	17
Projects Designed In-House	3	7	8	9	12
Consultant Designed Projects	11	11	7	4	6
Total Design Contract Costs	\$291,700.00	\$424,100.00	\$481,515.00	\$232,100.00	\$939,405.00
Construction Costs:	\$4,480,225.77	\$6,950,852.87	\$10,155,522.00	\$7,319,600.00	\$22,389,575.00
Engineering Costs as % of Construction Cost	6.5%	6.1%	4.7%	3.2%	4.2%



The City had \$22,389,575 of infrastructure projects in 2008 and associated design contracts of \$939,405. The Division of Engineering designed 12 of the 2008 projects resulting in an overall design cost of 4.2% of construction costs. Industry averages for design fees are 7% to 11% of construction costs. The reduced design costs are the result of performing design service with the Engineering Division staff.