

CITY OF WOOSTER
DIVISION OF ENGINEERING
2012 Annual Report



Madison Gateway Project

Prepared by:
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February, 2013

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*Division of Engineering
City of Wooster
2012 Annual Report*

Summary & Narrative – Section 1

Division of Engineering 2012 Annual Report Executive Summary

The 2012 Annual Report for the Division of Engineering is contained in the following pages. The intent of this report is to summarize roles and responsibilities of the Division of Engineering, as well as describe the major projects and activities accomplished by the Division of Engineering for the year ending December 31, 2012. Hopefully, this report will provide information that can be used for City organizational, development and infrastructure planning for the coming years.

The Division of Engineering has attempted to meet the City's mission in the most cost effective way possible. Most infrastructure projects are designed, managed, and inspected in-house by Engineering Division staff, keeping average fees for professional services near 3% for 2012. The industry average for design and professional engineering costs is 8% to 11% of the estimated construction costs. The value of engineering services provided by the Engineering Division for major projects alone was \$1,048,833 in 2012.

The Engineering Division managed 17 infrastructure projects in 2012. The total dollar value of construction projects completed or under construction in 2012 was close to \$8,000,000. Final construction costs were 1.4% lower than the contracts awarded price. The division diligently tracks and records quantities, materials stored and other aspects of construction management to ensure the city does not incur unjustified overages.

The Engineering Division is responsible for managing the replacement and improvement of the City's infrastructure. Including construction and development in 2012, the City now has over 400 miles of piping in its utility system and over 130 miles of roadway in its transportation system; 70% of the utility infrastructure is greater than 20 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 Regulations and Storm Water Management Regulations. 231 permits were issued in 2012 compared to 211 in 2011. The increase in permit activity came from sanitary sewer permits. Wayne County and the City of Wooster have been working in cooperation with the Ohio EPA to connect the Batdorf Road area to the City's sanitary sewer system. There are 120 residents that had a May 2012 deadline to connect to the new main. Sewer permits issued for 2012 totaled 87; we anticipate that in 2013 that number will drop to fewer than 10 permits issued which is nearer the norm.

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 and proposed development. These requests have consistently numbered over 2000 each year since 1991. In 2012 we processed 2166 notifications with most utility locations being marked within 24 hours of the request.

The Engineering Division is also responsible for all mapping, parcel data, addressing, utility information, and traffic control data 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.

2013 Objectives: 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>Name</i>	<i>Title</i>	<i>Years Experience</i>
Roger Kobilarcsik	City Engineer, Licensed Professional Engineer	23
Ronald Middleton	Inspector II, Licensed Professional Surveyor	40 (retired Dec. 2012)
BJ Hoffman	Inspector II, B.S. Degree Construction Technology	25
Dave Case	Inspector II, Assoc. Degree Civil Eng. Technology	19
Matt Hill	Inspector II, ODOT Right-of-Way Certification	28
Spencer Gray	Engineering Technician/Drafter	28
Tom Hart	Engineering Technician/GIS Technician	30
Lynne DePaulo	Administrative Assistant/Contract Specialist	36
John Rice	Staff Engineer, Licensed Professional Engineer	7 (hired Jan. 2013)

Personnel costs were kept low by significantly reducing overtime, training and education to only that necessary to maintain required professional licensures. With Ron Middleton's retirement and Joel Montgomery's promotion, the Engineering Division lost a great deal of manpower and institutional knowledge. It was decided to hire a new Staff Engineer whose duties would include project inspections along with engineering in the effort to streamline personnel.

Operations:

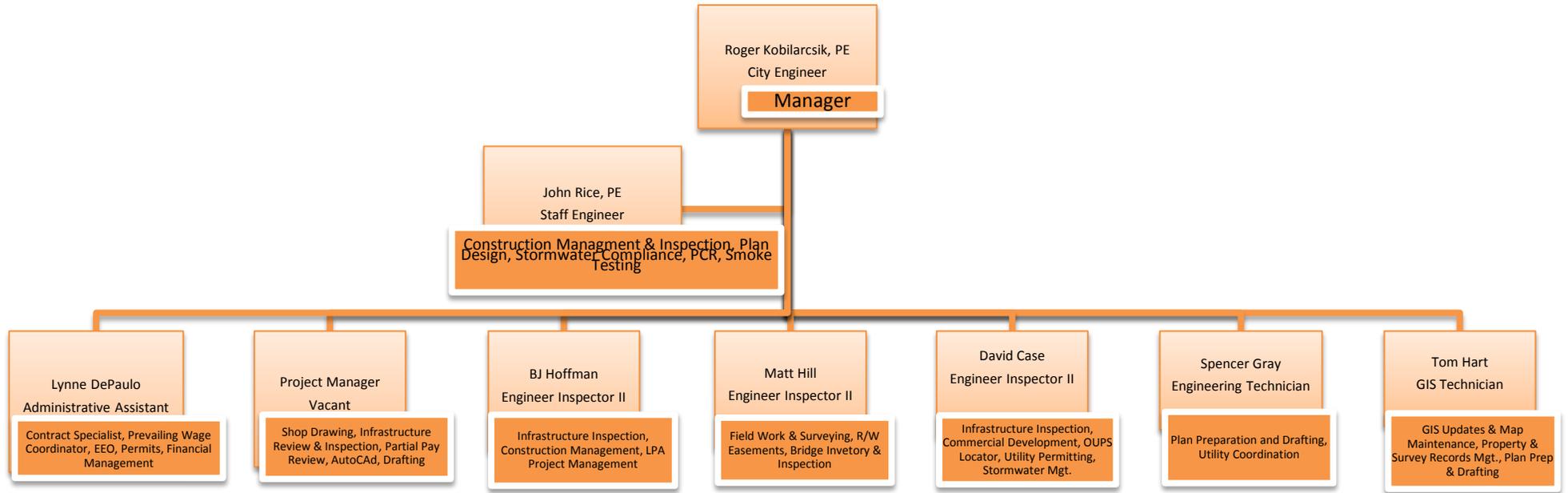
O&M costs have been reduced by reducing equipment, supplies and materials to only those items absolutely essential to perform job duties.

Capital:

Infrastructure expenditures have been reduced to only those items receiving outside funding. In addition, the City participation amounts have been reduced by eliminating contractual services where possible and providing surveying, design and construction administration services with in-house staff.

By utilizing over \$2,000,000 in grant money, the Engineering Division has been able to continue paving, roadway and sewer separation projects with minimal direct cost to the city. Melrose Drive Improvements, Akron Road Reconstruction, Pavement Rehab-Microsurfacing and Safe Routes to Schools are just a few examples of projects using grant money. We also actively pursue zero interest or low interest loans provided by various federal agencies. Currently we have 5 projects under or near construction that are being partially funded by ODOT.

Division of Engineering – Organizational Chart





**Division of Engineering
2012 Project Narrative
February, 2013**

INFRASTRUCTURE PROJECTS COMPLETED OR UNDER CONSTRUCTION IN 2012:

1. **SR585/Akron Road Reconstruction – Phase 1 :** This project was designed with the intent to reduce congestion and improve safety by installing storm sewers, curb and gutter, sidewalks, bike lane, adding a turn lane, flattening the curve and reconfiguring lane usage at Portage Road and providing a new surface coarse over the existing roadway between Old Airport Road and Gateway Drive. The project estimate for Phase 1 was \$1,700,000 and was partially funded by ODOT.

The project was bid in April, 2011 with a total of 5 contractors submitting bid proposals. Stout Excavating was awarded the contract with a price of \$1,751,087.88. Work was completed in the fall of 2012 with a final completion cost of \$1,791,694.

2. **Melrose Drive Improvements:** The Wooster Engineering Division completed the design to improve approximately 4,200 linear feet of Melrose Drive by widening the roadway, improving intersections and upgrading utilities. The construction estimated cost for this project was \$2,245,000 with OPWC providing a \$500,000 grant.

Seven contractors submitted bids in October, 2011 for the construction of this roadway improvement project. The contract was awarded to Terra Valley Excavating with a bid price of \$1,988,022. Utility relocations and clearing of the area began in November. Excavating for storm sewer and waterline placement began early spring of 2012. Construction was completed in December 2012 with a final project cost of \$1,958,739.

3. Burbank Road W/L – Phase 1: This project was designed by the Wooster Engineering Division and consists of replacing existing under-sized and corroded cast iron water mains, upgrading water services and replacing fire hydrants. The project limits were from the intersection of Burbank and Cleveland Road to the south and north to Elm Drive. Funding for this project was be a combination of local funds and OPWC funding. Construction cost estimate for this project was \$745,000.

The project was advertised for bidding in August, 2011. G.E. Baker was awarded the contract with a bid price of \$706,473.00. The project was completed in October 2012 with a final cost of \$659,217.

4. SR83/Friendsville Road Signal Improvement: Burgess & Niple designed the signal improvement project with an estimate of \$120,000. The work consists of furnishing labor, supplies, equipment, materials and performing all operations necessary for the installation of new traffic control devices.

The City received 5 bids for the work and awarded the contract to Lafayette Electric with a bid price of \$142,990.58. Work began in February, 2012 and was completed in August 2012 at a final price of \$145,681.

5. Merchant Block Parking Lot Improvements: The City of Wooster became involved in the Merchant Block development and divided the project into several contracts. Contract A, B, C covered the sidewalk, utilities, parking & site work and streetscape. The contract was bid in July, 2012 with Stout Excavating submitting the low bid of \$351,881.55. Work was completed by December 2012 with a final project cost of \$378,313.

Contract D,E,F was for landscaping, patio and dumpster enclosure. Stout Excavating was awarded the contract with a bid price of \$81,000. The work was substantially completed by the end of the year.

Contract G entails a traffic signal replacement at the Walnut and Liberty Street intersection. The project was bid in November, 2012 with Miller Cable submitting the low bid of \$144,000. Work will continue into Spring 2013.

6. Burbank Road Sanitary: This project was designed by the Wooster Engineering Division and consists of replacing two existing vitrified clay sanitary sewer lines with a new PVC sanitary sewer. The existing sanitary sewer will be converted to a storm sewer with additional catch basins added in preparation of resurfacing Burbank Road in 2013. Construction cost estimate for this project was \$730,000. Underground Utilities submitted the low bid of \$703,446 and began work in December 2012.

7. **Spring Street W/L:** This project was designed by the Wooster Engineering Division and consists of replacing an existing cast iron waterline with a new larger ductile iron waterline. Improvements include upgrading water services and new fire hydrants. The construction cost estimate for this project was \$570,000 and is partially funded through OPWC with a grant of \$300,000.

The project was bid in January 2013 and awarded to Fioritto Construction for a bid price of \$514,112.

8. **Wooster Gateway Projects:** The project is located at the intersection of SR 30 and Madison Avenue (SR 302) adjacent to downtown Wooster, Ohio. It consists of landscaping elements including trees, shrubs and wildflower plantings. Other design elements include identity and directional signage, minor sidewalk improvements, and site elements. Engineers estimate is \$325,000 and is funded by ODOT.

Stout Excavating was awarded the contract with a bid price of \$370,867. Work is continuing into 2013.

9. **Safe Routes to Schools:** The City of Wooster in conjunction with the Wooster City Schools has determined several areas within the city that will benefit from installation of sidewalks; enabling a greater number of students to safely walk to school which should help reduce traffic congestion at many of the elementary schools. With financing through ODOT, the first area to be improved was Melrose Drive from Portage Road to Melrose Elementary School.

The sidewalk project was designed by the Division of Engineering with an estimated cost of \$118,000. Terra Valley was awarded the contract with a bid price of \$68,489. Work will be completed in the spring of 2013.

Kean Elementary and Parkview Elementary are slated to have the SRTS project begin in 2013 for their areas.

10. **Market/Spruce Sewer Separation:** This project was designed by the Division of Engineering with a cost estimate of \$380,000 and a loan from OPWC in the amount of \$265,000 obtained. The project entails construction of approximately 1410' of storm sewer, catch basins and manholes. The project was bid in January 2013 and awarded to G.E. Baker Construction for a bid price of \$338,078.

11. **Geyers Chapel Sanitary Sewer:** The Engineering Division designed a new sanitary sewer along Geyers Chapel Road in preparation for the proposed Ohio Department of Transportation maintenance facility. ODOT is relocating their maintenance building from Old Lincoln Way to Geyers Chapel Road. The estimate was \$60,000. Stout Excavating completed the work for a price of \$49,241.

12. **2012 Microsurfacing Program:** This project was funded 80% by ODOT's Large City Funding program. The Engineering Division prepared construction plans for microsurfacing portions of Oak Hill Road (Wayne to Oldman) and Quinby Avenue (Bowman to Wayne).

The engineer's estimate was \$320,000. American Pavement was awarded the contract with a bid price of \$260,238. The project was finalized in the fall of 2012 for a final cost of \$234,898.

13. Columbus Avenue Resurfacing: The Engineering Division designed this project and estimated the project cost to be \$68,000. The project was funded by ODOT and needed to be completed by the end of November 2012. Kokosing was awarded the bid in late October with a bid price of \$75,529. Kokosing paved in early November and completed the project with a final cost of \$63,395.

14. University/Wayne Resurfacing: The Engineering Division designed this project with an estimated cost of \$185,000. The project was bid Fall, 2012 and Kokosing was awarded the contract for a bid price of \$182,894. The project is on hiatus until Spring 2013.

INFRASTRUCTURE PROJECTS SCHEDULED/PLANNED FOR 2013:

1. **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.

2. **SR585/Akron Road Reconstruction – Phase II:** This project is being designed with the intent to reduce congestion and improve safety by installing storm sewers, curb, gutter and sidewalks, bike path, adding a turn lane and providing a new surface coarse over the existing roadway between Gateway Drive and Long Road. The project estimate is \$2,529,940.00 and will be partially funded by ODOT.

Acquisition of right-of-way easements is in process. The project is scheduled to be bid late Summer 2013.

3. **Melrose Booster Station:** This project consists of construction of a booster station to pump water from the intermediate zone to the proposed north high zone tank. The station includes a pump building, pumps, electrical, telemetry, waterline piping and backup generator. Design of the project is being done by GGJ Engineering and the Division of Engineering. Construction cost estimate for this project is \$644,500.

4. **Friendsville Road Reconstruction:** This project is being designed by GPD Associates and consists of placing curb and gutter, sidewalks and widening the road to accommodate the additional traffic between Riffel and Milltown Roads. The construction cost estimate is \$2,000,000. Right-of-way acquisition is currently being obtained from residents; construction should begin summer 2013.

5. **OARDC – SR 302 Crosswalks:** This project is being coordinated with the OARDC/ATI to install crosswalks and sidewalks in the recently annexed area on SR 302 adjacent to the campus. Construction of these crosswalks is part of the annexation agreement between the OARDC with costs being shared. The engineer's estimate for this project is \$23,000.

6. **Spink Street (North of Bowman) Sewer Separation:** This project is another on the mandated OEPA sewer separation project list. It is being designed by the City of Wooster Division of Engineering and has a cost estimate of \$935,000. The project includes 3110' of storm sewer, catch basins and manholes. A \$500,000 OPWC loan was obtained to assist in funding this project.

7. **Water Tank Inspection:** The Water Storage Tanks located at the OARDC, Madison Avenue and Milltown Road are being evaluated for possible recoating. Burgess and Niple are providing the inspection services with a report due the first part of 2013.

8. **W. Henry Street Waterline Replacement:** The City of Wooster's Engineering Division will design a new waterline to replace an old cast iron line which has a history of failures. The location of the line is between Minerva Street and Walnut Street. This line is part of a larger project to replace existing 2" galvanized waterlines with new ductile lines. The other streets include North, Pearl, Spring, Forest and Bechtel.

9. **ODOT Paving Projects:** With funding from ODOT, the Division of Engineering is completing design and construction specifications for the following area: Liberty Street (Larwill to Oak Hill), Burbank Road (Cleveland to Elm) and Oak Hill (Liberty to Wayne).

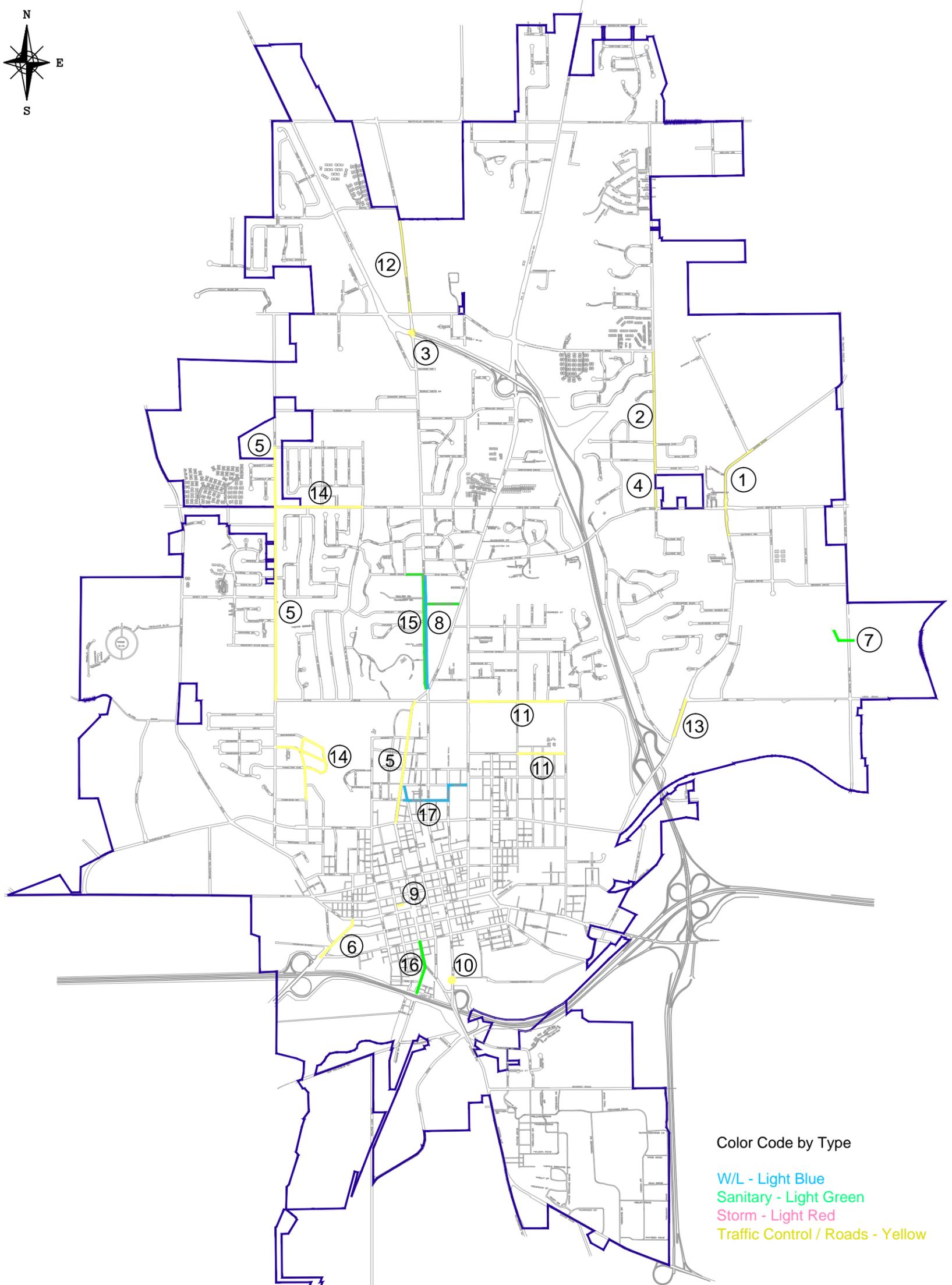
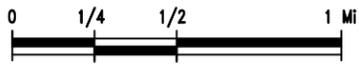
10. **Various Waterline Projects:** The Division of Engineering is in the process of designing waterline replacement projects for various areas of the city including Armstrong, Glenn Avenue and Hamilton.

11. **Sanitary Sewer Replacement:** The City of Wooster's Engineering Division will prepare construction plans and specifications for replacing the sanitary sewers on Catherine and Saybolt Streets.

12. **Storm Sewers:** There are various storm sewer projects that the Engineering Division will be designing and construction during 2013. They include culvert replacements at Oakley, Geyers Chapel and Melrose and storm sewer lining along Cleveland Road and Morgan Street.

CITY OF WOOSTER

Prepared By: DIVISION OF ENGINEERING



Color Code by Type

- W/L - Light Blue
- Sanitary - Light Green
- Storm - Light Red
- Traffic Control / Roads - Yellow

2012 - 2013 City Infrastructure Projects				
Completed, Proposed and In-Process 1/1/12 to 12/31/13				
#	Project Name	Description	Construction Dates	Primary Funding Source
Completed Projects				
1	Akron Road Phase 1 (WAY-585-1.54)	Roadway Airport to Gateway	Completed Summer 12	ODOT - Federal/State
2	Melrose Drive Reconstruction	Roadway & Sidewalk	Completed Winter 12	OPWC - State
3	SR 83/Friendsville Signal	SR 83 & Friendsville	Completed Summer 12	Local - Roadway
4	Safe Route To Schools	Melrose Elementary	Fall 12 - Spring 13	ODOT - Local
5	2012 Microsurfacing Program	Oak Hill/Quincy Avenue	Completed Fall 2012	ODOT - Local
6	Columbus Road Resurfacing	Roadway Resurfacing	Completed Fall 2012	ODOT - Local
7	Geyers Chapel Sanitary Sewer	Sanitary Sewer - ODOT facility	Summer 2012	Local
8	Burbank Road W/L - Phase 1	Water Line - Cleveland to Elm	Summer 11 - Spring 12	OPWC - State
Projects in Process				
9	Merchant Block Improvements	Parking/W/L/Patio/Dumpster	Summer 12 - Spring 13	Local, CDBG, OPWC
10	Wooster Gateway Projects	Signage, Landscaping	Summer 12 - Spring 13	ODOT - Local
11	University/Wayne Resurfacing	Roadway Resurfacing	Spring 2013	Local
12	Friendsville Road Reconstruction	Milltown to Riffel	Spring 13 - Spring 14	ODOT - Federal/State
13	Akron Road - Phase 2	Long Road to Montessori School	Summer 13 - Summer 14	ODOT - Federal/State
14	Safe Routes to Schools	Kean and Parkview Elementary	Summer 2013	ODOT - Local
15	Burbank Road Sanitary	Storm and Sanitary Sewer	Fall 12 - Summer 13	Local Storm/Sewer Funds
16	Market/Spruce Sewer Separation	Storm and Sanitary Sewer	Spring 13 - Summer 13	Local Storm/Sewer Funds
17	Spring Street W/L	Water Line Replacement	Spring 13 - Summer 13	OPWC - State

Private Developments

1. Private Subdivisions/Commercial Property under Construction:

Private development and expansion took quite an uptick in 2012. The City issued 13 development permits totaling close to \$160,000 in fees associated with those permits. A few projects from previous years were either completed or substantially completed in 2012. The College of Wooster Student Recreation Center was opened in the spring of 2012. Work continues on the Merchant Block complex on W. Liberty; several condominium units have been sold and LemonBerry Yogurt is slated to open spring 2013.

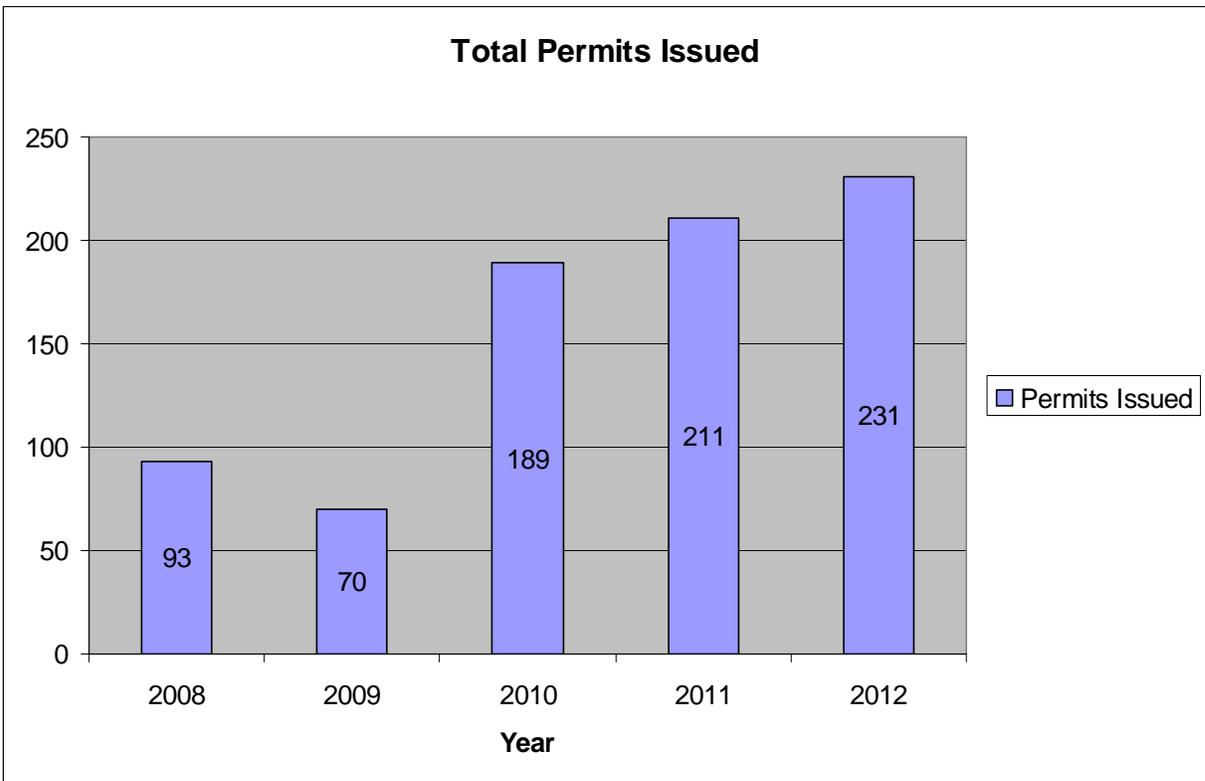
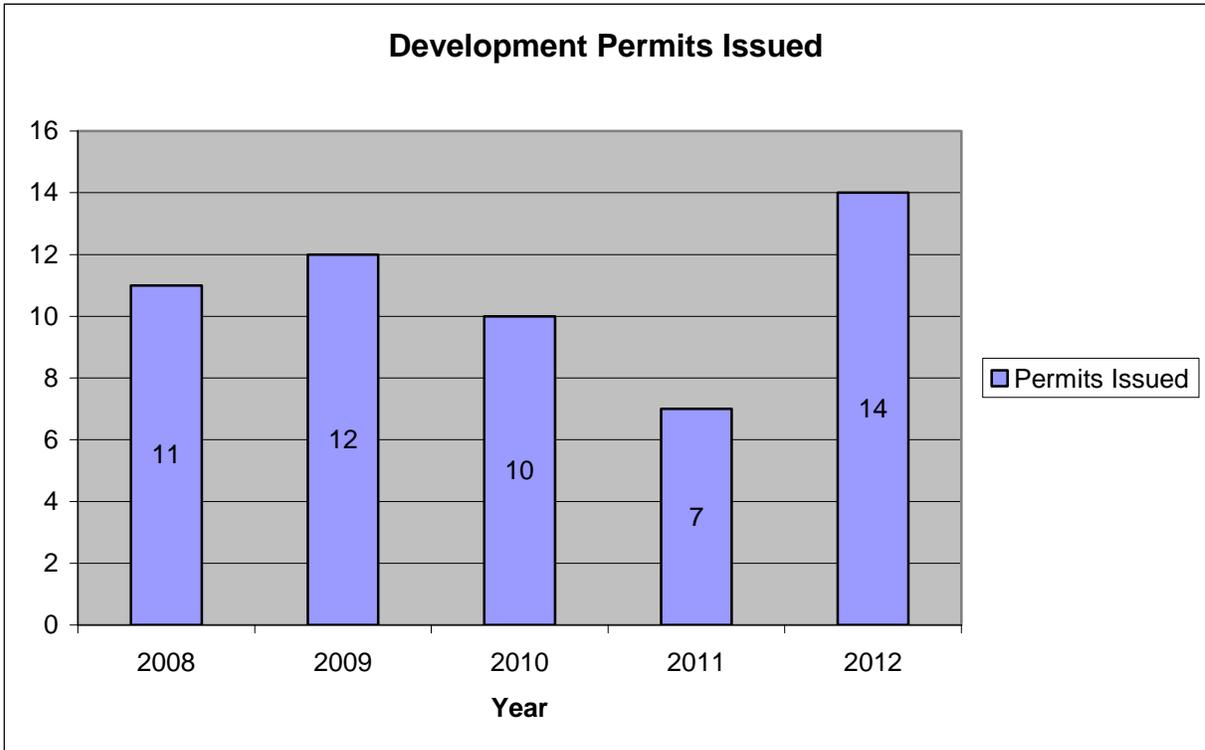
New construction for 2012 included some of the following:

- Pelican Place: A future home for persons with disabilities located on Portage Road
- Hospice: Office space and patient care facility on Akron Road
- ODOT Wayne County Maintenance and Garage: Geyers Chapel
- Cleveland Road Animal Hospital: New facility including rehab rooms

All private developments required oversight and permit approval from the City Engineering Division for compliance with the Wooster Site Development and Improvement Regulations. The Engineering Division reviews all plans and provided inspection of all these developments.

2. Subdivision Plan Review Table: The table below lists all subdivisions and developments submitted for review in 2012.

City of Wooster Engineering Development Permits					
DEVELOP. #	PERMIT NO.	PROJECT NO.	NAME / DESCRIPTION	SITE IMP.S COST ESTIMATE	PLAN REVIEW FEE
1	2012002	#123008	Pelican Place	\$1,500,000	\$ 2,710.00
2	2012003	#103017	Hospice	\$710,000	\$ 5,663.60
3	2012004	n/a	1600 Portage	\$500	\$ 200.00
4	2012005	#123015	Inktastic	\$150,000	\$ 908.00
5	2012006	#123014	Brasfond USA	\$20,000	\$ 1,950.00
6	2012007	#123018	Pizzazz	\$250,000	\$ 290.00
7	2012008	#123019	COW Baseball Field	\$25,000	\$ 280.00
8	2012009	#103005	ODOT Garage - Geyers Chapel	\$6,002,000	\$ 5,410.80
9	2012010	#123006	Cleveland Road Animal Hospital	\$1,700,000	\$ 1,172.10
10	2012011	#123021	StoneCraft Bldg. Addition	\$200,000	\$ 2,721.50
11	2012012	#123018	Pizzazz	\$0	\$ 344.10
12	2012013	#123023	COW Baseball Parking	\$60,000	\$ 236.73
13	2012014	n/a	Santmyer Oil Parking	\$0	\$ 200.00
				\$10,617,500	\$ 22,086.83

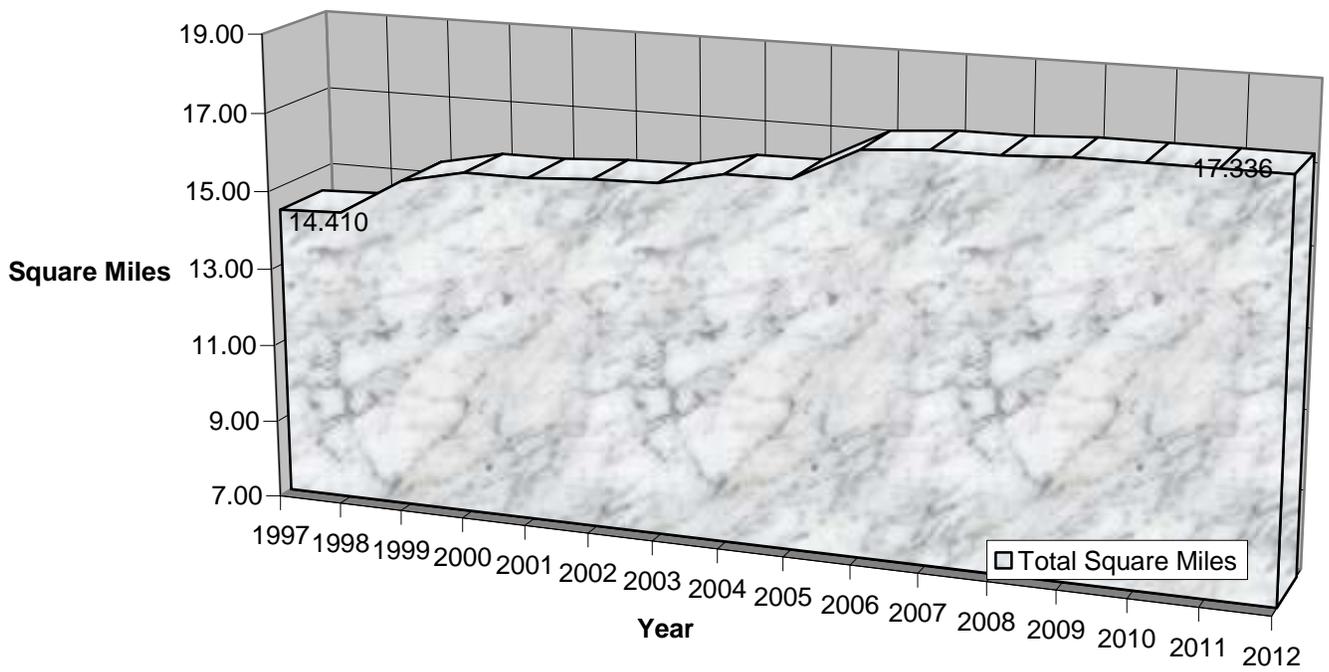


Sewer Permits issued for the Batdorf Road Sanitary Improvement Project accounted for a significant portion of the permits issued in 2012.

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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	0.000
2009	57.450	11,093.539	17.334	0.521
2010	0.000	11,093.539	17.334	0.000
2011	0.000	11,093.539	17.334	0.000
2012	1.61	11,095.149	17.336	0.015

2012

No.	Description	Date	Area
1	Melrose Dr. North of Portage	5/7/2012	.92 acre
2	Geyers Chapel S. of Benden	11/5/2012	.69 acre

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
2010	26,119 (a)	17.334 Sq. Mi	133.10 Miles
2011	26,397 (b)	17.334 Sq. Mi	133.10 Miles
2012	26,677 (b)	17.336 Sq. Mi	133.10 Miles

(a) Census

(b) Estimated from Housing Starts

NOTES

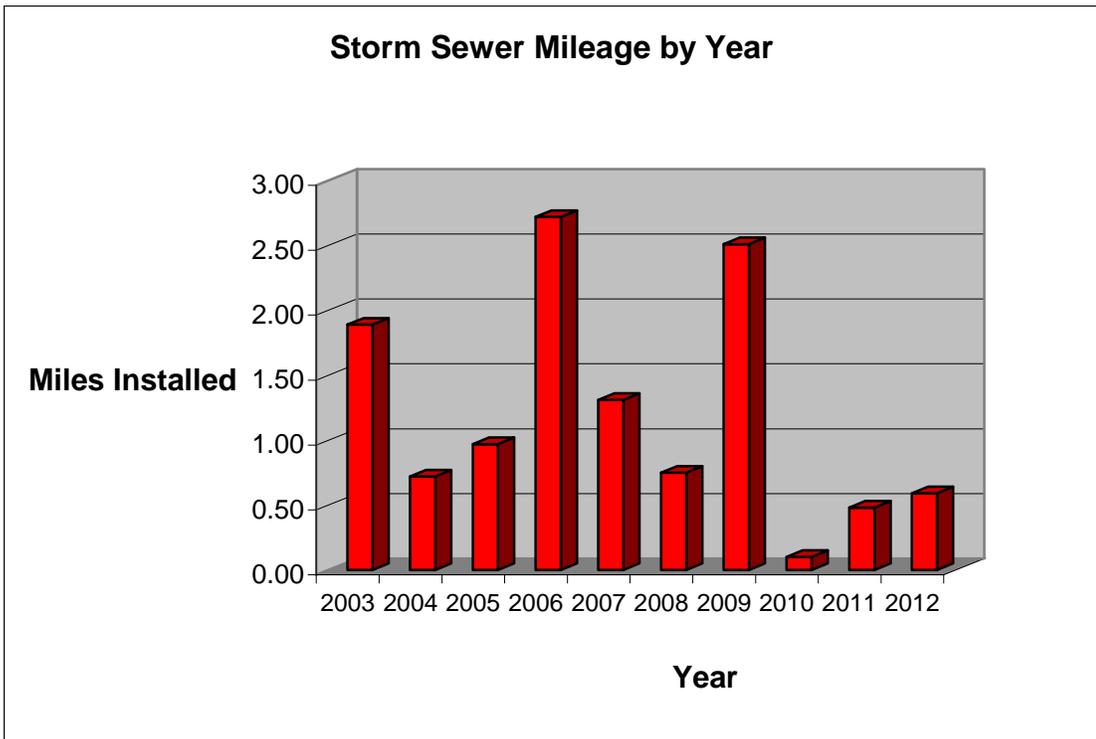
- 1) Population growth saw a 5.27% increase from 2000 to 2010 based on actual census figures.

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Utility Statistics – Section 3

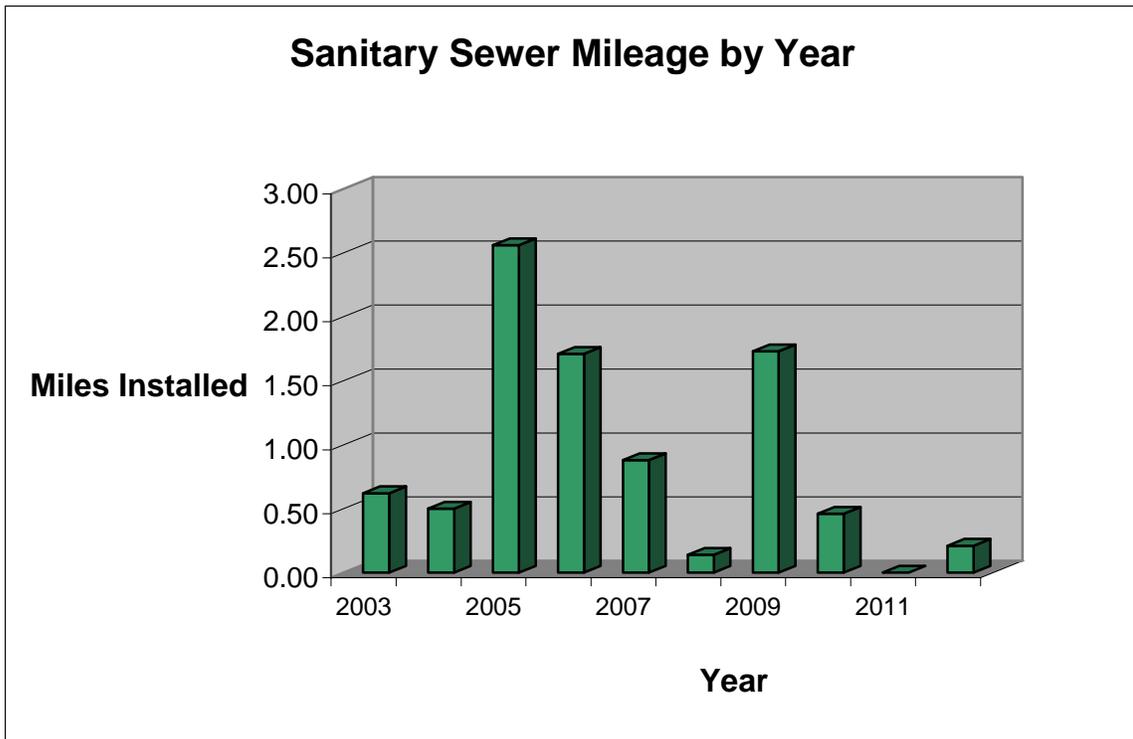
Storm Sewer Mileage

Year	Increase in Miles	Total Mileage	% Increase
		108.95	
2003	1.89	110.84	0.00%
2004	0.72	111.56	1.71%
2005	0.97	112.53	0.65%
2006	2.72	115.25	0.86%
2007	1.31	116.56	2.36%
2008	0.75	117.31	1.12%
2009	2.51	119.82	0.64%
2010	0.10	119.92	2.09%
2011	0.48	120.40	0.08%
2012	0.59	120.99	0.40%



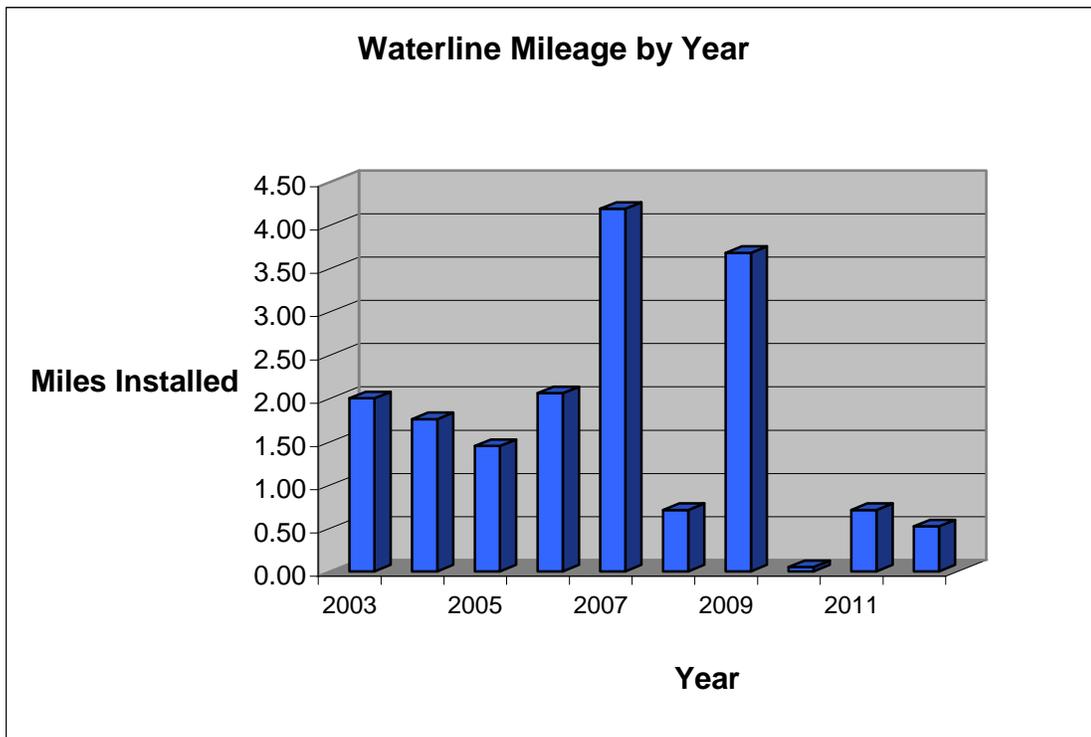
Sanitary Sewer Mileage

Year	Increase in Miles	Total Miles	% Increase
		112.02	
2003	0.62	112.64	0.55%
2004	0.50	113.14	0.44%
2005	2.56	115.70	2.26%
2006	1.71	117.41	1.48%
2007	0.88	118.29	0.75%
2008	0.14	118.43	0.12%
2009	1.73	120.16	1.46%
2010	0.46	120.62	0.38%
2011	0.00	120.62	0.00%
2012	0.21	120.83	0.17%



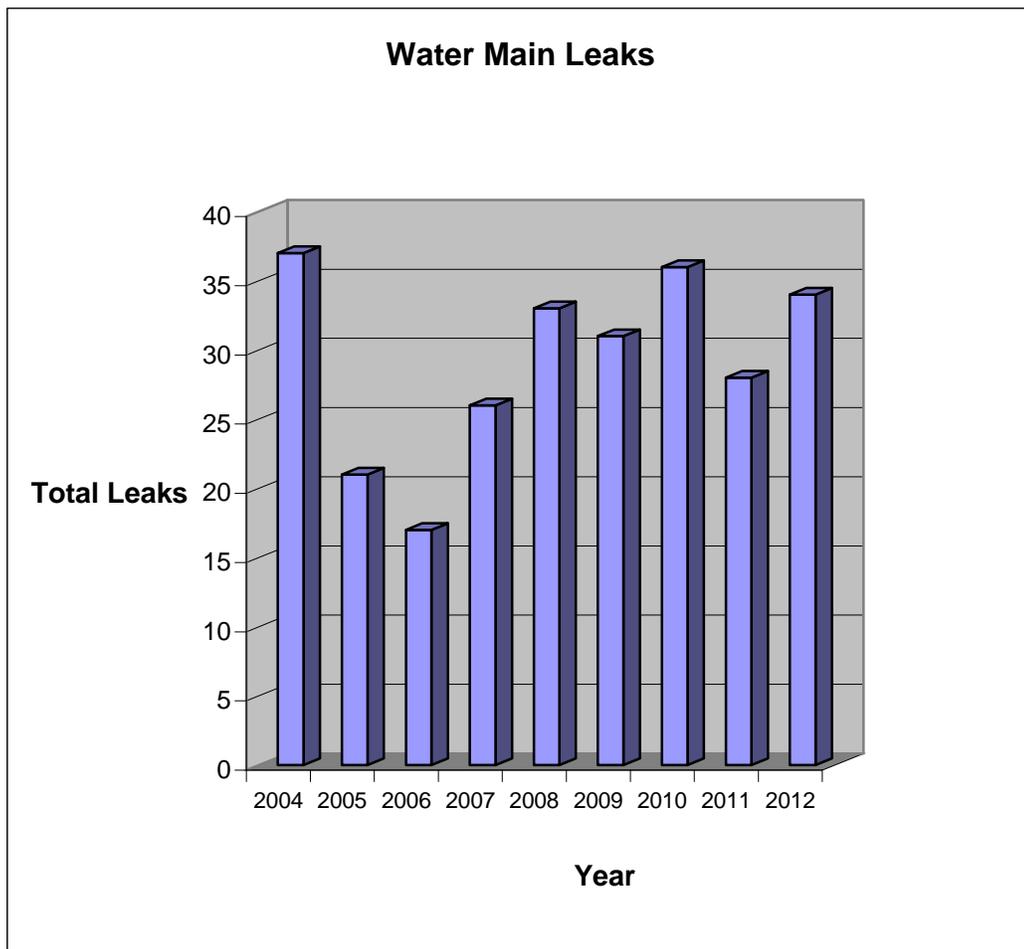
Waterline Mileage

Year	Increase in Miles	Total Miles	% Increase
		118.15	
2003	2.00	120.15	1.69%
2004	1.76	121.91	1.46%
2005	1.45	123.36	1.19%
2006	2.06	125.42	1.67%
2007	4.19	129.61	3.34%
2008	0.71	130.32	0.55%
2009	3.68	134.00	2.82%
2010	0.05	134.05	0.04%
2011	0.71	134.76	0.53%
2012	0.52	135.28	0.39%



Water Main Leaks

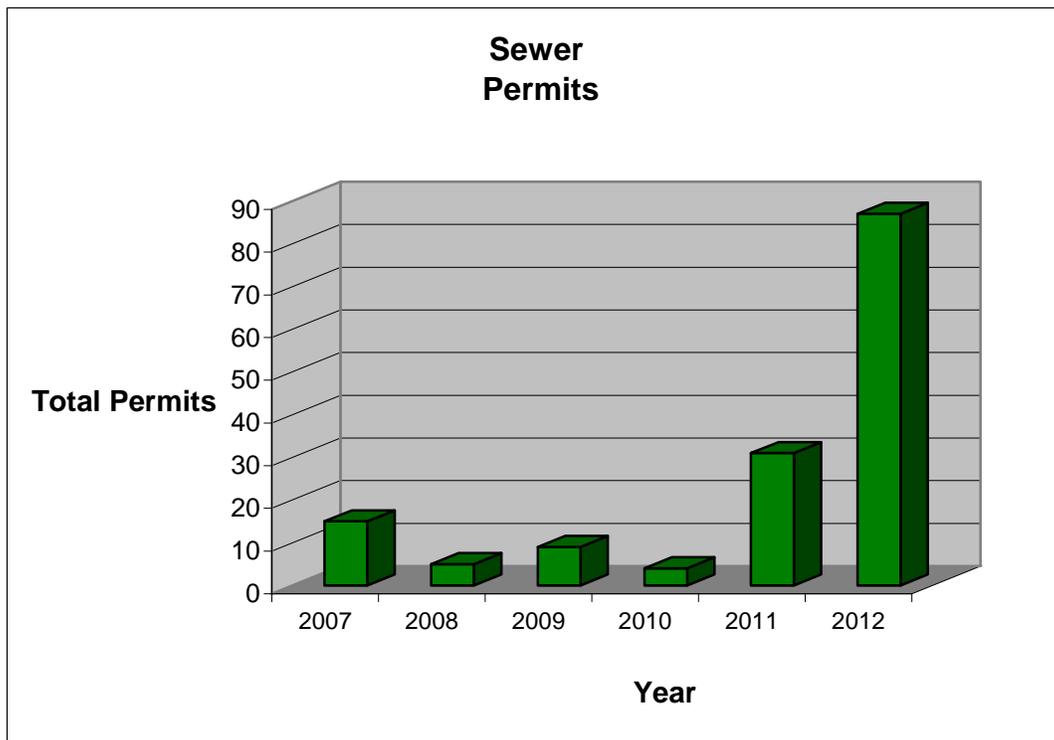
<u>Year</u>	<u>Number</u>
2002	50
2003	42
2004	37
2005	21
2006	17
2007	26
2008	33
2009	31
2010	36
2011	28
2012	34



Water leaks continue to be consistent due to the age and deterioration of the current infrastructure. Many leaks occurred on water mains originally scheduled for replacement, but postponed due to budget shortfalls.

Sewer Permits

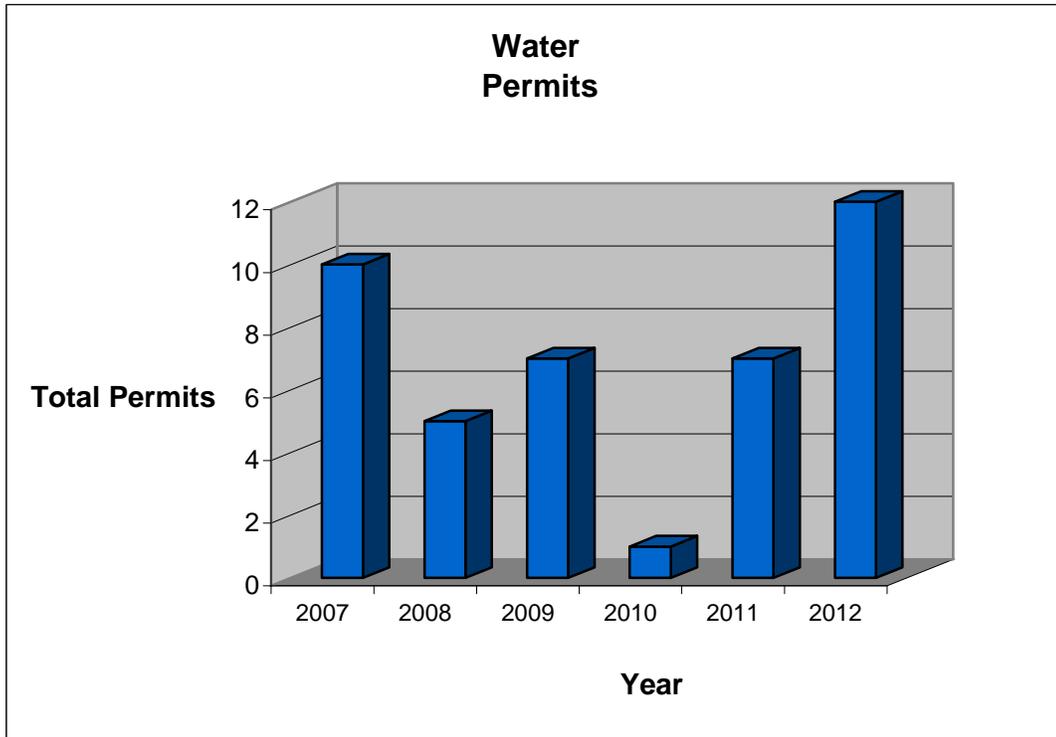
<u>Year</u>	<u>Number</u>
2005	9
2006	15
2007	15
2008	5
2009	9
2010	4
2011	31
2012	87



With the completion of the Batdorf Road Sanitary Improvement project, we anticipate that the number of sewer permits issued in 2013 will be in the more normal range of less than 10.

Water Permits

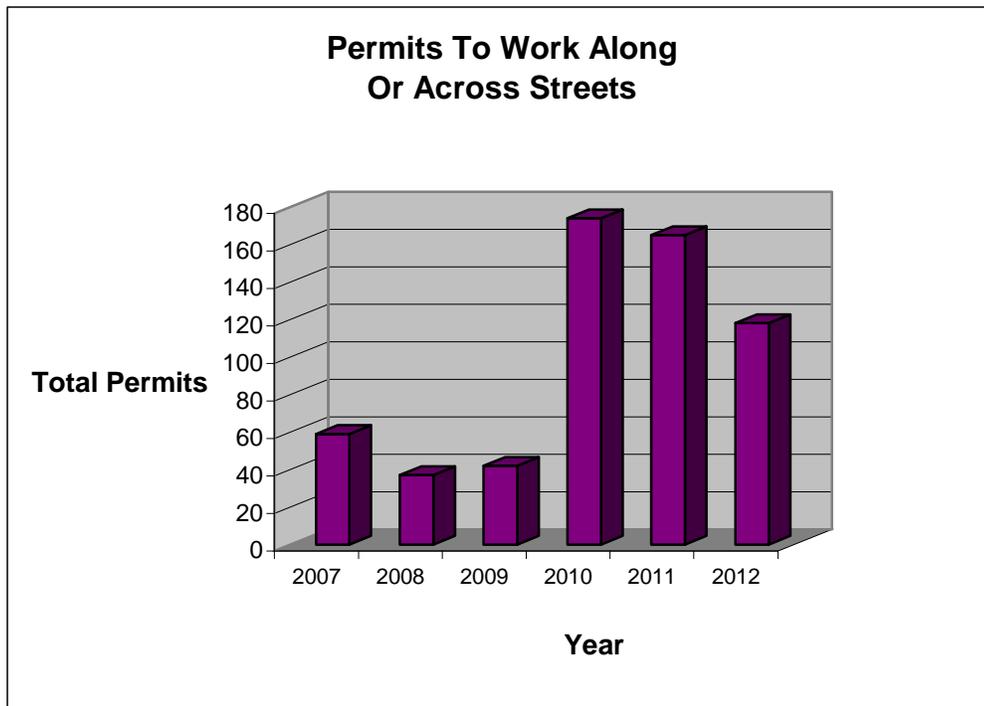
Year	Number
2003	7
2004	14
2005	7
2006	12
2007	10
2008	5
2009	7
2010	1
2011	7
2012	12



New construction accounted for the increase in water permits issued for 2012.

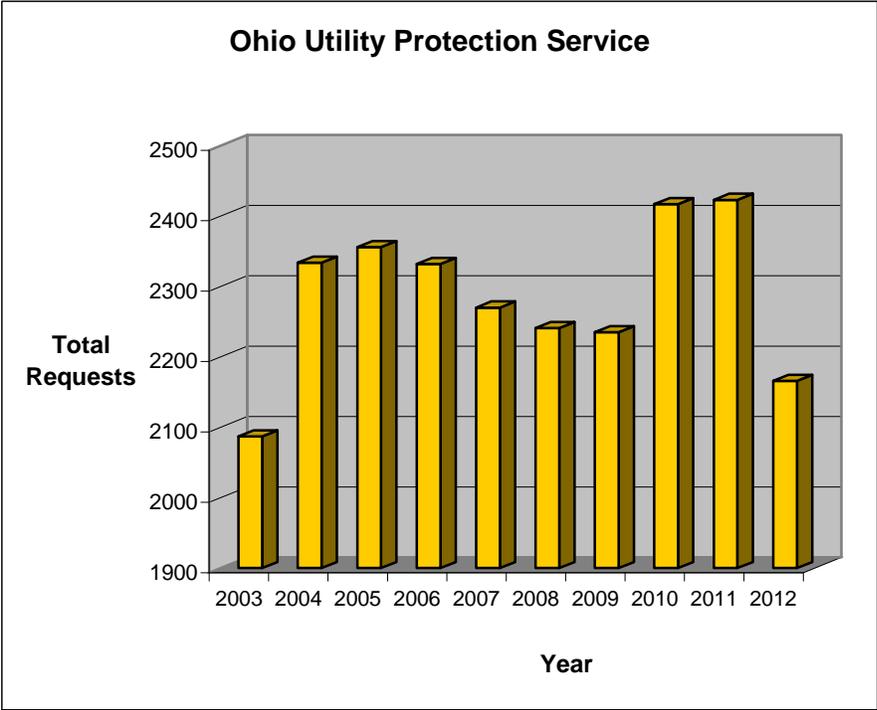
**Permits To Work Along
Or Across Streets**

<u>Year</u>	<u>Number</u>
2005	27
2006	37
2007	59
2008	37
2009	42
2010	174
2011	165
2012	118



Ohio Utility Protection Service
Location Requests

<u>Year</u>	<u>Number</u>
2002	2043
2003	2087
2004	2334
2005	2356
2006	2332
2007	2270
2008	2241
2009	2235
2010	2417
2011	2423
2012	2166

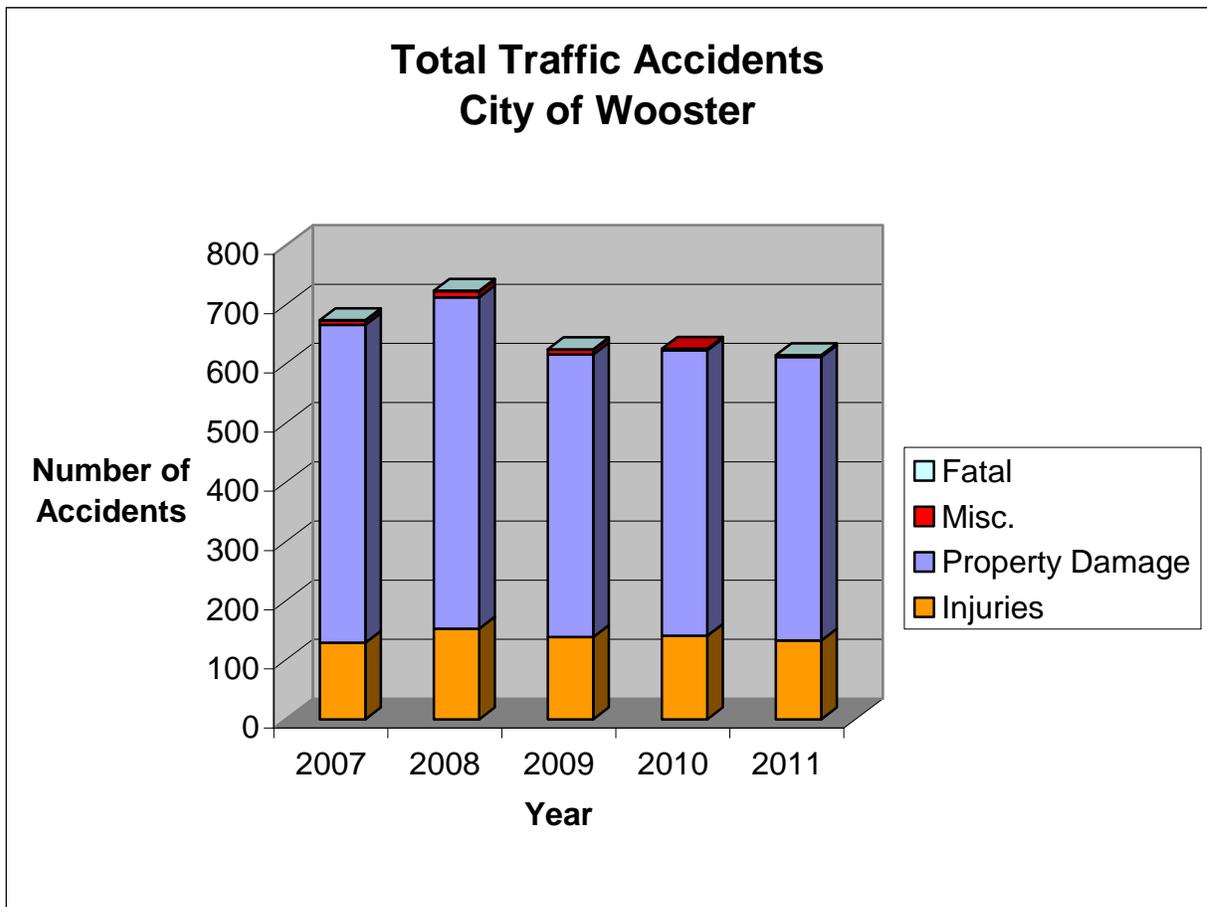


*Division of Engineering
City of Wooster
2012 Annual Report*

Traffic Statistics – Section 4

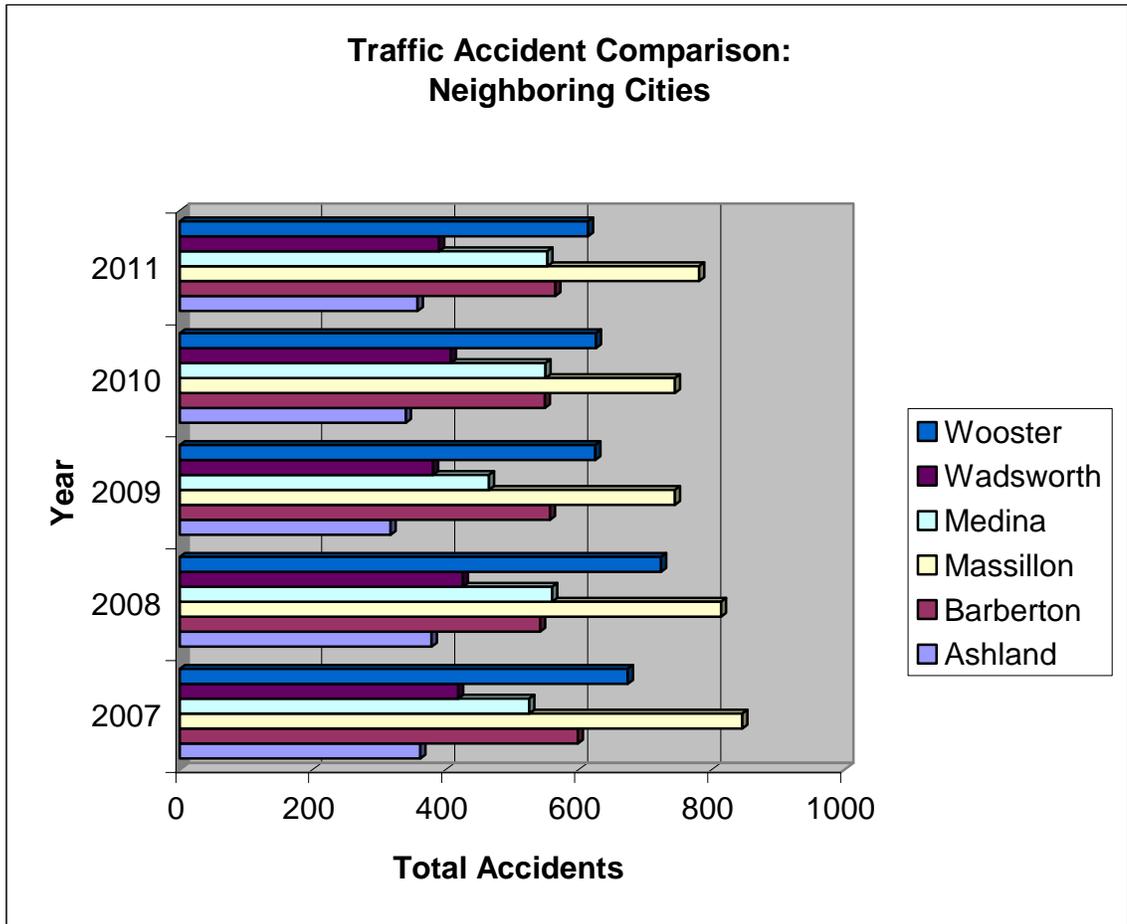
City of Wooster
Traffic Accidents

Year	Injuries	Property Damage	Misc.	Fatal
2007	129	537	7	1
2008	153	560	10	1
2009	139	477	8	1
2010	141	482	3	
2011	133	479	0	3



Traffic Accident Comparison
Totals By Neighboring Cities

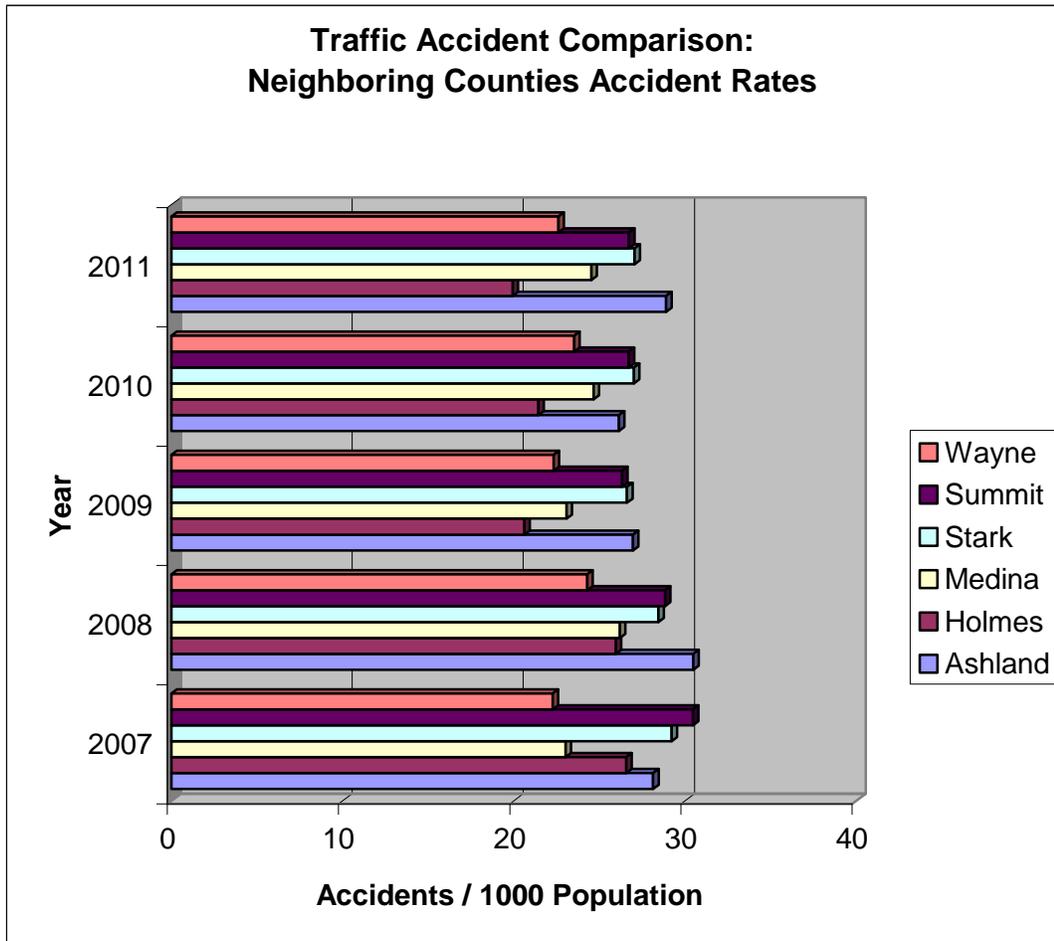
Year	Ashland	Barberton	Massillon	Medina	Wadsworth	Wooster
2007	362	599	846	526	419	674
2008	379	542	814	560	426	724
2009	317	557	745	465	381	625
2010	340	549	745	550	408	626
2011	358	565	781	553	390	614



Traffic Accident Comparison
Rates by Neighboring Counties

Accidents Per 1000 People

Year	Ashland	Holmes	Medina	Stark	Summit	Wayne
2007	28.14	26.57	23.03	29.22	30.46	22.28
2008	30.48	25.96	26.21	28.45	28.83	24.3
2009	26.96	20.62	23.08	26.62	26.33	22.33
2010	26.14	21.44	24.66	27.02	26.72	23.54
2011	28.9	19.93	24.53	27.05	26.73	22.61



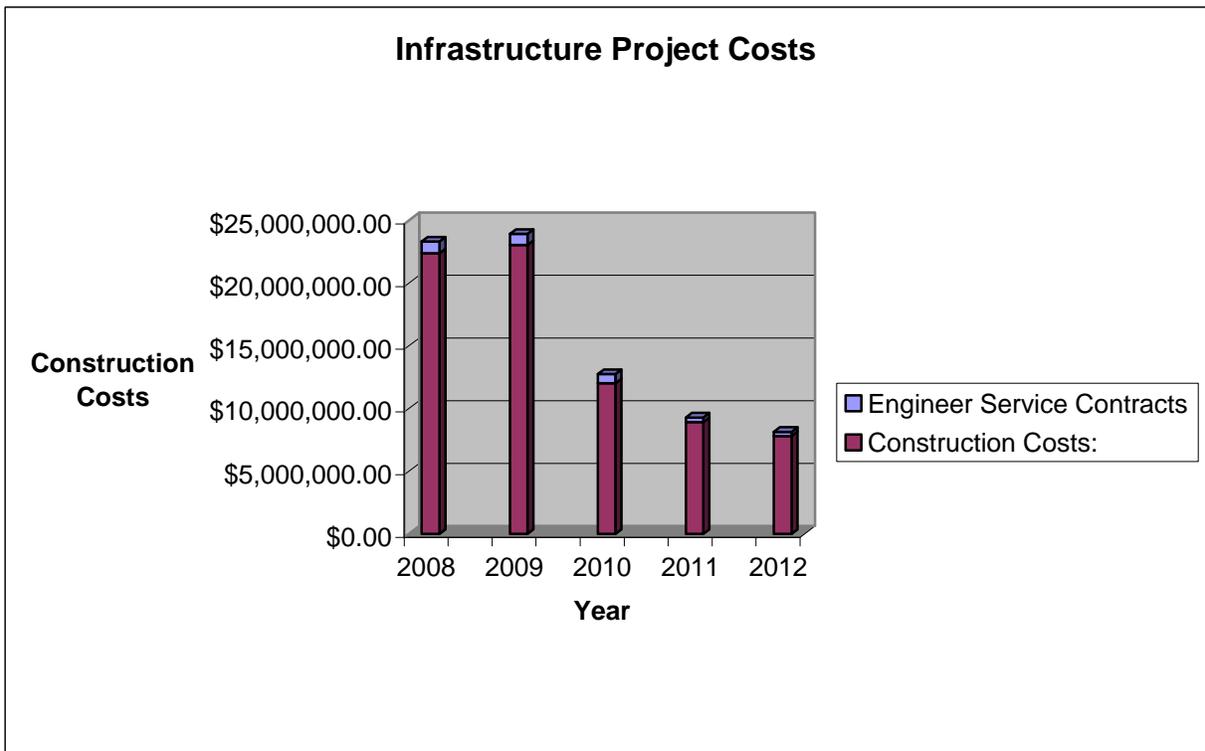
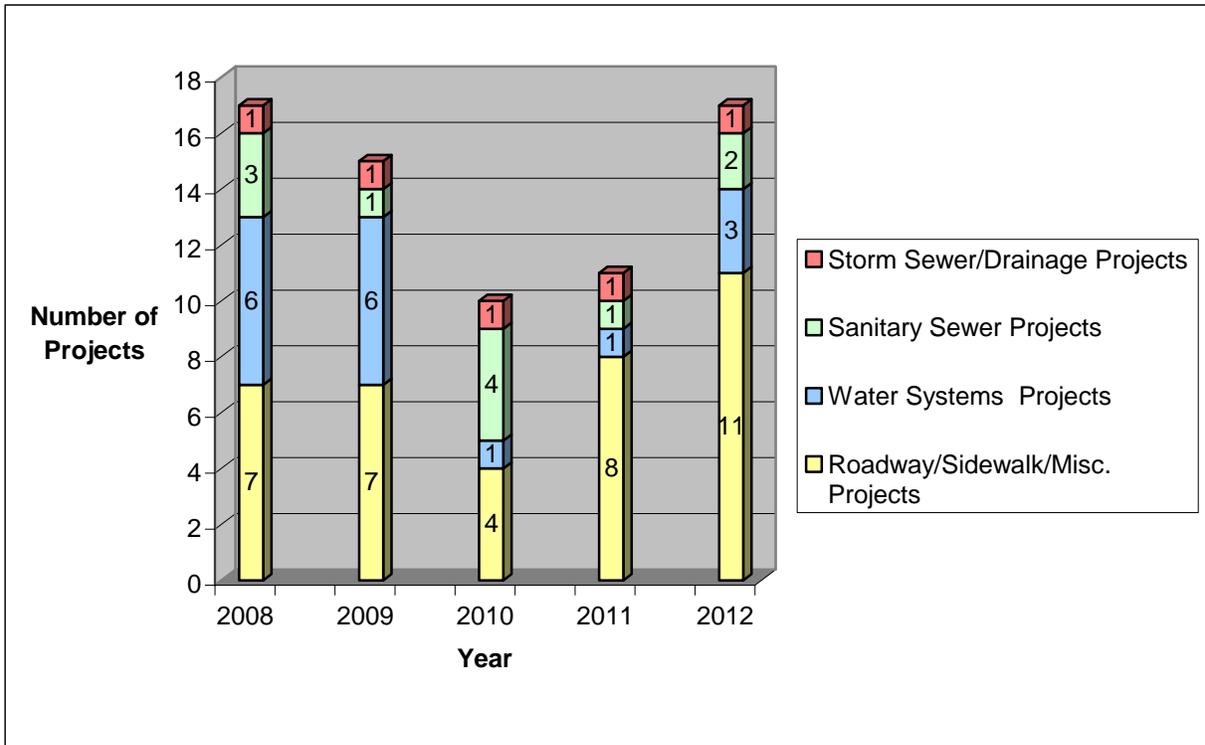
*Division of Engineering
City of Wooster
2011 Annual Report*

Engineering Design Statistics – Section 5

DIVISION OF ENGINEERING
2012 Project Summary
(Projects Designed or Constructed in 2012)

PROJECT	DESIGNER/CONSULTANT	DESIGN COST	CONTRACTOR	ESTIMATED CONST. COST	BID PRICE	FINAL COST	Contract Balance	% Complete	Retainage
Burbank Road Waterline	Wooster Engineering	\$0	G.E. Baker	\$745,000	\$706,473	\$659,217	\$0	100%	\$0
Burbank Road Sanitary Sewer	Wooster Engineering	\$0	Underground Utilites	\$730,000	\$703,446	UC	\$531,243	24%	\$13,941
Spring Street Waterline	Wooster Engineering	\$0	Fioritto Construction	\$570,000	\$514,112	UC	\$0	0%	\$0
Wooster Gateway Project	GGJ	\$56,500	Stout	\$325,000	\$370,867	UC	\$65,746	82%	\$14,835
SRTS - Melrose Elementary	Wooster Engineering	\$0	Terra Valley	\$118,000	\$68,489	UC	\$3,177	99%	\$2,757
Beall Avenue - Lowry Center	Wooster Engineering	\$2,400	Thompson Electric	\$50,000	\$59,267	UC	\$3,312	99%	\$3,365
Market/Spruce Sewer Separation	Wooster Engineering	\$0	G.E. Baker	\$380,000	\$338,078	UC	\$0	0%	\$0
Melrose Drive Improvements	Wooster Engineering	\$0	Terra Valley	\$2,245,000	\$1,988,022	\$1,958,739	\$0	100%	\$0
Oak Hill/Quinby Microsurfacing	Wooster Engineering	\$0	American Pavement	\$320,000	\$260,238	\$234,898	\$0	100%	\$0.00
Geyers Chapel Sanitary Sewer	Wooster Engineering	\$0	Stout	\$60,000	\$49,367	\$49,241	\$0	100%	\$0
Columbus Avenue Resurfacing	Wooster Engineering	\$0	Kokosing	\$68,000	\$75,529	\$66,417	\$9,112	100%	\$3,121
University/Wayne Resurfacing	Wooster Engineering	0	Kokosing	\$185,000	\$182,894	UC	\$0	0%	\$0
Akron Road - Phase 1	Engineering Associates	\$255,555	Stout	\$1,700,000	\$1,778,087	\$1,791,694	\$0	100%	\$0
Merchants Block Parking Lot/Walnut St. Parking/Contract A, B, C	Wooster Engineering /Wolfe	\$5,000	Stout	\$390,000	\$359,882	\$378,313	\$0	100%	\$0
Merchants Block Parking Lot/Walnut St. Contract D,E, F	Wooster Engineering		Stout	\$90,000	\$81,000	UC	\$33,965	52%	\$3,240
Merchants Block Parking Lot/Walnut St. Contract G	Wooster Engineering	\$12,300	Miller Cable	\$160,000	\$144,000	UC	\$0	0%	\$0
SR83/Friendsville Road Signal	Burgess & Niple	\$12,300	Lafayette Electric	\$132,000	\$142,990	\$145,681	\$0	100%	\$0
Subtotals		\$344,055		\$8,268,000	\$7,822,741	\$5,284,200			
Friendsville Rd. Improvements	GPD	\$101,760	N/A	\$2,000,000	N/A	DC			
Akron Rd - Phase 2	Engineering Associates	\$385,000	N/A	\$2,800,000	N/A	DC			
Subtotals		\$486,760		\$4,800,000					
Mechanicsburg Rd. SS	Wooster Engineering	\$0	N/A	\$200,000	N/A	UD			
North High Water Tank	Wooster Engineering	\$0	N/A	\$2,000,000	N/A	UD			
Melrose Booster Station	GGJ	\$48,900	N/A	\$644,500	N/A	UD			
Spink/North Sts. Sewer Separation	Wooster Engineering	\$0	N/A	\$700,000	N/A	UD			
Catherine/Saybolt Sewer Separation	Wooster Engineering	\$0	N/A	\$500,000	N/A	UD			
Waterline Replacement - various	Wooster Engineering	\$0	N/A	\$400,000	N/A	UD			
Armstrong Road W/L replacement	Wooster Engineering	\$0	N/A	\$130,000	N/A	UD			
Oakley Culvert	Wooster Engineering	\$0	N/A	\$200,000	N/A	UD			
Geyers Chapel Culvert	Wooster Engineering	\$0	N/A	\$150,000	N/A	UD			
ODOT Paving Projects	Wooster Engineering	\$0	N/A	\$625,000	N/A	UD			
SRTS - ODOT - Kean/Parkview	Wooster Engineering	\$0	N/A	\$100,000	N/A	UD			
Fire Station #2	Architectual Resources Inc.	\$334,000	N/A	\$4,000,000	N/A	UD		UD = Under Design	
OARDC-SR 302 Crosswalk	Wooster Engineering	\$0	N/A	\$25,000	N/A	UD		UC = Under Construction	
Subtotals		\$1,254,660		\$17,274,500					

Note: Engineering consultant services and construction costs shown in this table represent totals to date. Actual expenditures occurred over several years.



The City oversaw \$7,795,741 of infrastructure construction projects in 2012 and associated engineering contracts of \$272,855. Industry averages for design fees are 8% to 11% of construction costs. The Division of Engineering staff designed 14 of the 17 projects.

Engineering Value Calculations (Major Projects Only)

Project	Design Cost	2012 Design Costs Paid	2011 Design Costs Paid	2010 Design Costs Paid	2009 Design Costs Paid	Engineer's Estimate	Contractor	Bid Price	Final Cost	2012 Const. Payments	2011 Const. Payments
Under Construction											
Burbank Road Waterline	\$0					\$745,000	G.E. Baker	\$706,473	\$659,217	\$261,586	\$397,631
Burbank Road Sanitary Sewer	\$0					\$730,000	Underground Utilites	\$703,446	UC	\$172,203	\$0
Spring Street Waterline	\$0					\$570,000	Fioritto	\$514,112	UC	\$0	\$0
Wooster Gateway Project	\$0		\$56,500			\$325,000	Stout	\$370,867	UC	\$226,002	\$0
Melrose Drive Improvements	\$0					\$2,245,000	Terra Valley	\$1,988,022	\$1,958,739	\$1,912,119	\$46,620
SRTS - Melrose Elementary	\$0		\$0	\$0	\$0	\$118,000	Terra Valley	\$68,489	UC	\$65,741	
Beall Avenue - Lowry Center	\$0					\$50,000	Thompson Electric	\$59,267	UC	\$46,163	
Market/Spruce Sewer Separation	\$2,400	\$2,400				\$380,000	G.E. Baker	\$338,078	UC	\$0	
Oak Hill/Quinby Microsurfacing	\$0					\$320,000	American Pavement	\$260,238	\$234,898	\$234,898	\$0
Geyers Chapel Sanitary Sewer	\$0					\$60,000	Stout	\$49,367	\$49,367	\$49,367	
Columbus Avenue Resurfacing	\$0					\$68,000	Kokosing	\$75,529	\$66,417	\$66,417	
University/Wayne Resurfacing	\$0					\$185,000	Kokosing	\$182,894	UC	\$0	
Merchants Block Parking Lot/Walnut St. Parking/Contract A, B, C	\$5,000	\$5,000				\$390,000	Stout	\$359,882	\$378,313	\$378,313	
Merchants Block Parking Lot/Walnut St. Contract D,E, F	0					\$90,000	Stout	\$81,000	UC	\$43,794	
Merchants Block Parking Lot/Walnut St. Contract G	\$12,300	\$12,300				\$160,000	Miller Cable	\$144,000	UC	\$0	
SR83/Friendsville Road Signal	\$12,300		\$10,159			\$132,000	Lafayette	\$142,990	\$145,681	\$145,681	\$0
Akron Road - Phase 1	\$255,555		\$2,006	\$6,398	\$242,474	\$1,700,000	Stout	\$1,751,087	\$1,791,694	\$442,851	\$1,348,843
	\$287,555	\$19,700	\$68,665	\$6,398	\$242,474	\$8,268,000		\$7,795,741		\$4,045,135	\$1,793,094
Value of Design Engineering* =	8.5%							\$662,638	Avg. =	\$237,949	
Design Completed											
Akron Rd - Phase 2	\$385,000	\$51,198	\$13,128	\$230,668	\$140,704	\$2,800,000					
Friendsville Rd. Improvements	\$101,760	\$15,837	\$59,072	\$24,341	\$0	\$2,000,000					
	\$486,760	\$67,035	\$72,200	\$255,009	\$140,704	\$4,800,000					
Under Design											
ODOT Paving Projects	0					\$100,000					
North High Water Tank	\$0				\$4,125	\$2,000,000					
Melrose Booster Station	\$63,150				\$48,900	\$644,500					
	\$63,150	\$0	\$0	\$0	\$53,025	\$2,744,500					
Preliminary Engineering, Planning & Funding											
Fire Station #2	\$334,000				\$75,000	\$4,000,000					
Water Projects (1)	\$0					\$3,802,000					
Sewer projects (1)	\$0					\$7,775,000					
Storm (1)	\$0					\$965,000					
Roadway Projects (1)	\$10,000	\$785	\$0	\$0	\$75,000	\$2,766,000					
	\$344,000	\$785	\$0	\$0	\$75,000	\$19,308,000					

Under Construction (2012)		
Value of Construction Engineering	10.00%	\$384,814
Design Value Provided in 2012 (3)	12.0%	\$39,048

Design Completed (2012)		
Value of Design Engineering	8.50%	-\$126,948

Under Design (2012)		
Value of Design Engineering	8.50%	\$180,258

Planning (2012)		
Value of Preliminary Engineering	3.00%	\$571,662

Total Engineering Services Provided in 2012		\$1,048,833
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Consultant Services Paid	% of Construction
\$337,237.00	7.03%
\$534,947.74	11.14%
\$53,025.00	1.93%
\$75,000.00	0.39%
\$1,000,209.74	3.24%

Notes:
 Fees for Engineering services are based on standard industry rates as established by various regulatory and funding agencies, including ODOT, USDA, EPA and OPWC, as well as recent engineering services proposals.
 (1) Sum of construction estimates from the 10 year infrastructure plan.