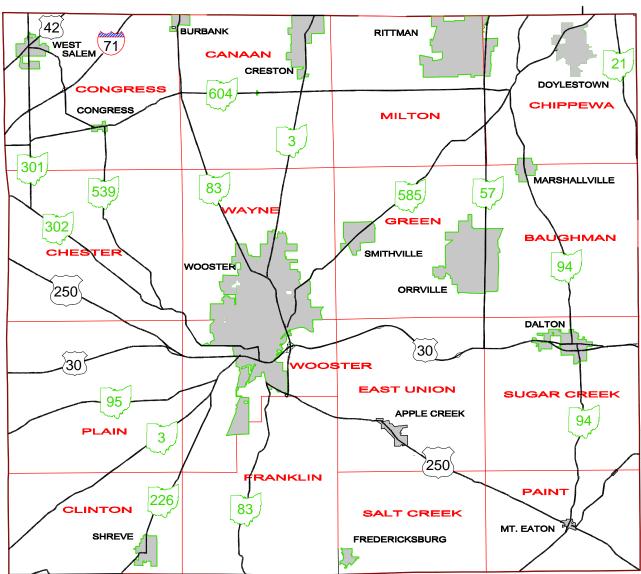


WAYNE COUNTY ENGINEER'S OFFICE

2013 ANNUAL REPORT



ROGER K. TERRILL, P.E., P.S. WAYNE COUNTY ENGINEER

3151 WEST OLD LINCOLN WAY WOOSTER, OHIO 44691 PHONE: (330) 287-5500 FAX (330) 287-5520 www.wayne-county-engineer.com



WAYNE COUNTY ENGINEER'S OFFICE ROGER K. TERRILL, P.E., P.S. WAYNE COUNTY ENGINEER

April 10, 2014

Wayne County Commissioners 428 West Liberty Street Wooster, Ohio 44691

Honorable Commissioners:

I am proud to present the Wayne County Engineer's <u>2013 Annual Report</u>, summarizing the activities of the Engineering, Highway Maintenance and Tax Map Departments.

As can be seen on the included chart, receipts increased moderately from 2002 to 2012, while slightly increasing in 2013. Due to layoffs and attrition, actual total salaries increased (2.4% from 2002 through 2013) less than the increase in receipts from 2002 through 2013, whereas employee benefits increased more than salaries during the same period. Employee benefits also make up approximately one-third of total of salary and employee benefits. Salary and employee benefits make up approximately forty (40) percent of the Engineer's Office total budget. The remaining sixty (60) percent of the budget is made up of materials (gravel, concrete, asphalt, etc.), construction costs (labor, equipment & material for construction of roads & bridges), equipment, fuel, etc. and increased extensively from 2002 through 2013. Materials, construction costs, equipment, fuel, etc. also increased at a rate far greater than receipts for the same period. Please note that gasoline and diesel fuel in 2014 are anticipated to increase to over 200% since 2002.

Construction in 2013 included the replacement of six (6) bridges (three (3) bridges via contract and three (3) via force account). The three (3) contracted bridges were replaced with federal funds. We also replaced four (4) large culverts. Our goal is to replace ten (10) bridges and twelve (12) large culverts annually.

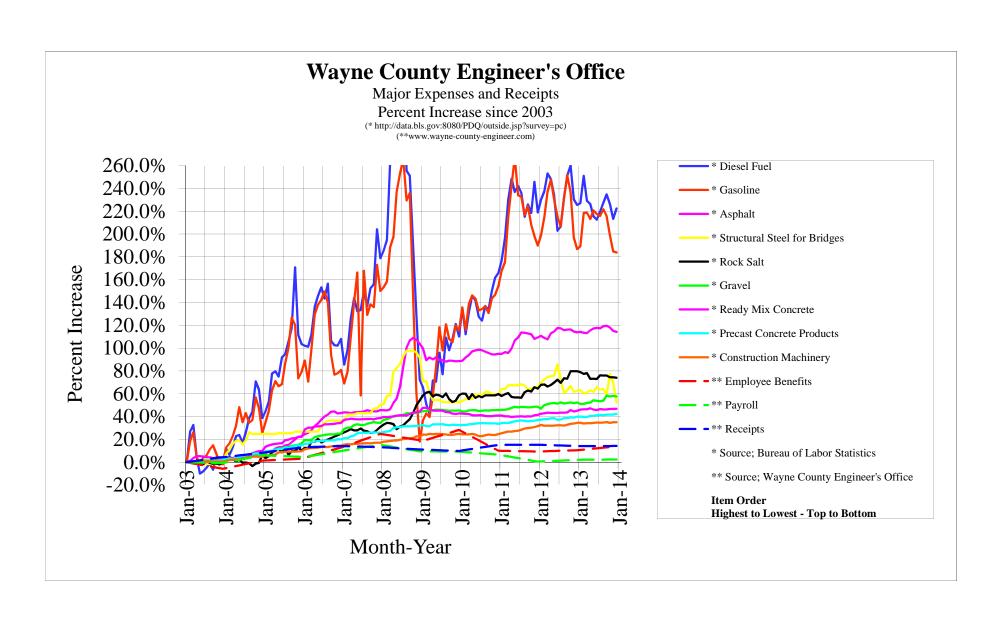
We continue to utilize all available grants in the most efficient manner possible. However, state and federal funding have become much more difficult to obtain. We were not successful in obtaining funding through CDBG in 2013.

I want to express my sincere appreciation to my staff for compiling this report and to the Board for their cooperation in helping us achieve our goals. Your comments and suggestions are welcome.

Respectfully submitted

Roger K. Terrill, P.E., P.S.

Wayne County Engineer



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DUTIES OF THE COUNTY ENGINEER

The Engineer has the responsibility of performing for the County all duties authorized or declared by law to be done by a civil engineer or surveyor, and accordingly must hold registration certificates of the State of Ohio as both Professional Engineer and Professional Surveyor.

The Engineer, in cooperation with the County Commissioners, is responsible for all maintenance, repair, widening, resurfacing, reconstruction, and construction of roads and bridges on the county highway system.

The Engineer serves as an advisor to the Township Trustees for the maintenance, repair, widening, resurfacing, and reconstruction of their highways. The bridges on the township highway system are the full responsibility of the County.

The Engineer is also responsible for many bridges within municipalities. These bridges are located on streets which are extensions of county or township roads.

Also, the Engineer must maintain a perpetual inventory of all bridges on the county and township highway system, including an annual inspection and evaluation of the condition and load carrying capacity of each bridge.

The Engineer is the Tax Map Draftsman for the County and at the discretion of the County Commissioners, he may also serve as the Acting Sanitary Engineer and as a member of the County Planning Commission.

OHIO HIGHWAYS AND ROADS

System	Mileage	Maintained By
State Highway	19,236	Ohio Department of Transportation
County Road	28,978	County Engineers
Township Road	41,500	Township Trustees
Municipal Street	31,661	Incorporated Cities & Villages
TOTAL	121,375	

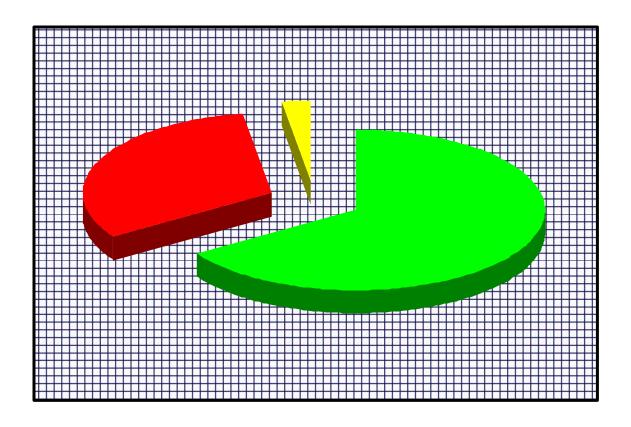
WAYNE COUNTY HIGHWAYS AND ROADS

System	Mileage	Maintained By
State Highway	253	Ohio Department of Transportation
County Road	499	Wayne County Engineer
Township Road	563	Township Trustees
Municipal Street	276	Incorporated Cities & Villages
TOTAL	1,591	

TOWNSHIP ROAD MILEAGE

Baughman -	36.87	Clinton -	26.05	Green -	34.69	Salt Creek -	23.81
Canaan -	26.57	Congress -	36.06	Milton -	33.16	Sugar Creek -	46.98
Chester -	44.79	East Union -	41.92	Paint -	24.30	Wayne -	35.01
Chippewa -	50.84	Franklin -	31.50	Plain -	37.58	Wooster -	33.34

2013 INCOME

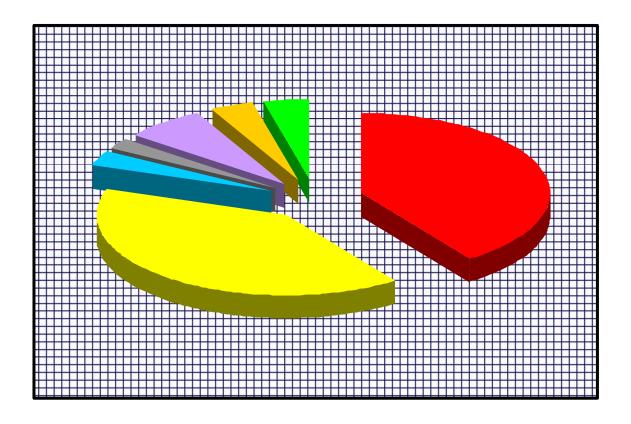


WHERE THE MONEY COMES FROM

License Fees & Pe	rmissive Tax	\$4,794,185	65.9%
Gasoline Tax		2,299,886	31.6%
Traffic Fines, Fee	es, & Misc.	184,000	2.5%
	TOTAL	\$7,278,071	100.0%

REAL ESTATE TAXES ARE NOT USED FOR COUNTY HIGHWAY PURPOSES.

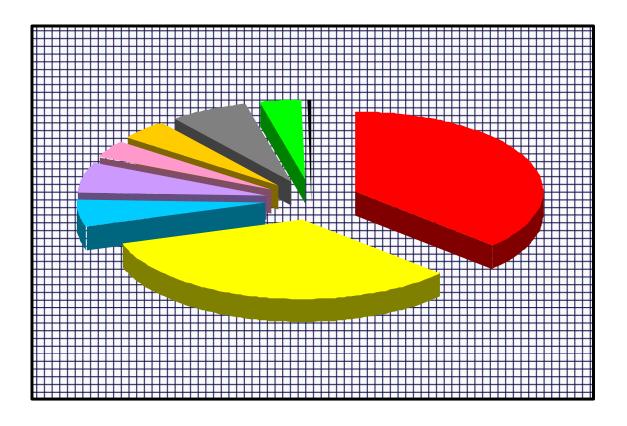
2013 EXPENDITURES



WHERE THE MONEY GOES

Labor and Fringes	\$2,809,300	40.2%
Road Materials & Contracts	2,793,156	40.0%
Repair, Fuel, Etc.	486,134	7.0%
Note Repayment	267,733	3.8%
Contracts (Repairs & Services), Compensation & Damage, Advertising & Printing	255,261	3.7%
Bridge Materials & Contracts	225,874	3.2%
Equipment	142,677	2.0%
OPWC Projects	6,407	0.1%
TOTAL	\$6,986,542	100.0%

2014 PROJECTED APPROPRIATIONS



Labor and Fringes	\$2,942,693	36.8%
Road Materials & Contracts	2,642,581	33.0%
Equipment	534,200	6.7%
Repair, Fuel, Etc.	500,000	6.2%
Bridge Materials & Contracts	453,000	5.7%
Contracts (Repairs & Services), Compensation & Damage, Advertising & Printing	328,500	4.1%
OPWC Projects	286,302	3.6%
Note Repayment	285,000	3.6%
Grants to Townships	21,000	0.3%
TOTAL	\$7,993,276	100.0%

PERSONNEL

Roger K. Terrill County Engineer

ADMINISTRATIVE SERVICES DEPARTMENT

Pamela Brown
Administrative Assistant

Cindy NoIt
Account Clerk II

ENGINEERING DEPARTMENT

Larry Conn
Engineering Services Manager

Eric Liew Terry Vorhies

Deputy Engineer (Bridges) Deputy Surveyor

Mark Spademan Larry Warner

Deputy Engineer (Subdivisions) Engineering Inspector

Jeffrey Sparr Michael Barnhouse

Deputy Engineer (Highways) Engineering Technician

TAX MAP DEPARTMENT

Douglas Green
Tax Map Supervisor

Mike Martin
Tax Map Specialist

PERSONNEL Continued

HIGHWAY MAINTENANCE DEPARTMENT

Highway Superintendent

Ben Saurer

Assistant Highway Superintendent

Gail Wilcox (Eff. 11-17-13)

Supervisors

Mike Pritchett Bud Weiker

Bill Sprinkle Dean Whitman (Eff. 11-17-13)

Highway Workers

Keith Badertscher Tom Nolletti

John Baldner Trevor Ogi

Larry Bresson Tom Shamp (Eff. 11-25-13)
Dale Cutter Matt Sigler

Les Durstine Brian Spotts

Bob Ewing Stephen Stewart

Jeff GrassmanKevin TroyerJon Hudson (Eff. 11-25-13)Patrick WilsonScott Loving (Eff. 11-25-13)Craig Wuthrich

Kevin Miller John Yungen (Res'd. 8-29-13)

Patrick Miller Jeffrey Zerrer

David Mowrer

Mechanic

Joe Burns (Eff. 2-11-13)

Parts Department

Bob Tenney

Sign Shop

Jeffrey Metcalf Alan Poulson (Ret'd. 5-31-13) Brock Yoder

HIGHWAY MAINTENANCE REPORT

MAINTENANCE AND CONSTRUCTION

County forces improved the pavement surface on several roads by placing a leveling (or scratch) course of asphalt concrete. The roads in the following table were scratched full-width in 2013.

Road No.	Name	Section	Miles
21	Franchester	C*-D*	1.11
42	Withrich	А	1.11
47	Benner	А	0.99
48	Pleasant Home	A*,B*,C*,D*,E*	3.90
51	Canaan Center	G*	0.72
52	Kidron	A*	0.87
54	Honeytown	H*-I	1.62
78	Hutton	C-D	2.14
95	Coal Bank	В	1.10
97	Wenger	D*-E*	1.79
98	Zuercher	B*	0.40
105	West Lebanon	D*	0.62
133	Black Diamond	A*-B*	1.50
169	Hametown	A*-B*	1.33
217	Western	D*	0.78
226	Northeast Street	А	0.36
416	McQuaid	A*,B*,C*,D*	2.77
		Total	23.11

* - Partial Section

HIGHWAY MAINTENANCE REPORT Continued

C.R. 57A (Benner - Rittman Road) was resurfaced with a 2" overlay of asphalt concrete in 2013. The total cost of the project was \$367,424. The project was financed by the Ohio Public Works Commission (\$146,970) and Wayne County (\$220,455). Superior Paving & Materials, Inc. from North Canton, Ohio was the prime contractor.



Several roads also received a chip/seal surface treatment by county forces.

Road No.	Name	Section	Miles
7	Church	F-H	2.82
29	Rohrer	A-C	3.20
32	Dalton-Fox Lake	A-D,E*	4.97
95	Coal Bank	Α	1.05
103	Deerfield Avenue	F-G	1.89
116	Warwick	A-C	3.05
120	Five Points	A-D	4.16
242	Burton City	С	1.40
		Total	22.54

* - Partial Section

HIGHWAY MAINTENANCE REPORT Continued

A contract was also awarded to Lytle Construction, Inc. from Wooster, Ohio to seal various roads in 2013. The existing pavement of the following roads was sealed with bituminous material and limestone cover aggregate. A fog seal was also applied to C.R. 150. The total construction cost of the project was \$228,752. Local funds financed the project.

Road No.	Name	Section	Miles
5	Shank	А	1.26
100	Clinton	В	0.63
150	Eastern	A-C*	2.68
169	Hametown	C-D	1.96
504	Sterling	A-D	5.58
		Total	12.11

The Wayne County Engineer=s Office also assisted the Wooster Township Trustees on an Ohio Public Works project. Development of construction plans and project administration was provided by the Engineer=s Office. Various roads were resurfaced with a 2" overlay of bituminous cold mix. Also, a 0.37 mile section of roadway (Batdorf Road and Tolbert Road) was widened and resurfaced. The total construction cost of the project was \$386,913. The project was financed by Ohio Public Works funds (\$225,027) and Wooster Township (\$161,886). Kokosing Construction Company, Inc. from Mansfield, Ohio was the prime contractor.



HIGHWAY MAINTENANCE REPORT Continued

SNOW AND ICE CONTROL

Heavy equipment available for snow and ice control includes; 27 plow trucks with spreaders and 2 V-plow graders.

	<u>WINTER</u>	WINTER	<u>WINTER</u>
	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>
Salt & Cinders	12,182	5,181	6,474
(Tons)			
Labor	\$202,658	\$78,683	\$141,626
Equipment	204,272	106,050	181,363
Material	244,033	103,736	130,382
Total	\$650,963	\$288,469	\$453,371

WEED AND BRUSH CONTROL

In 2013, guardrail spraying was performed by DeAngelo Brothers, Inc. from Hazleton, Pennsylvania at a total cost of \$15,624. County maintenance crews conducted mowing operations in the summer and performed brush cutting during the winter months.

EQUIPMENT PURCHASES

2013	2014 - Tentative
1 Mini Excavator	1 Tandem-Axle Dump Truck
	2 Single-Axle Dump Trucks
	2 Pickup Trucks

PLANNING AND PROGRAMMING

The roads comprising the maintenance program are selected after an evaluation of the condition of each road. Information for all county roads is available in various electronic files. This information aids in the preparation of the annual highway maintenance program.

The highway inventory consists of approximately 470 road sections. During 2013, all sections were reevaluated.

Permits were issued for the following:

61 Drive Pipes

96 Utility Permits

27 Ditch Enclosures

The utility permits were primarily for public utilities and the oil and gas industry.

Drive pipe permits were for private, commercial, and industrial drives. Permits were also issued for 34 oversize or overweight loads.

In addition, the engineering inspectors are often asked to inspect a variety of problems, to determine whether or not the problems are the responsibility of the County, and if so, what measures should be taken to correct the problems.

WAYNE COUNTY ROAD AND BRIDGE FACTS

- Ranked 4th in the state for county road mileage.
- Ranked 5th in the state for bridges maintained.
- Ranked 14th in the state for land area.
- Ranked 24th in the state for population 114,520 (2010 Census)

COMPARISON WITH ADJOINING COUNTIES

	Ashland	Holmes	Medina	Stark	Summit	Wayne
Co. Road Mileage	282	249	327	408	183	499
Twp. Road Mileage	405	567	490	1,311	344	563
Bridges, 10' Span or Greater	221	283	290	332	309	488
Land Area (Sq. Mi.)	424	423	422	576	413	555

BRIDGE STATUS

1) INSPECTION, MAINTENANCE, AND CONSTRUCTION RESPONSIBILITY

- 28 On streets within municipalities (extensions to county or township roads).
- 237 On county roads.
- 223 On township roads.
- 488 Total bridges for inspection.

2) GENERAL DATA FOR COUNTY INSPECTED BRIDGES

- 118 Too narrow (less than 20').
- 43 Posted load limits.
- 42 Structurally deficient.
- 112 Functionally obsolete.

3) OTHER 2013 BRIDGE FACTS

Average age for 440 bridges with a recorded year built is 42.7 years - useful life is considered to be 50 years. For the other 48 bridges, the year built is unknown.

Average overall bridge length is 39.9 feet.

Maintain 3.25 miles of bridge deck.

Note: The information shown above is for bridges having a span of 10' or greater.

BRIDGE REPORT

The Wayne County Engineer is responsible for inspection, maintenance, and construction of 488 bridges on county and township roads, and extensions of those roads through municipalities.

INSPECTION

Annual inspections for 488 bridges are performed in accordance with the latest Ohio Department of Transportation ABridge Inspection Manual. Some bridges are inspected and monitored more frequently because of known deficiencies.

LOAD RATINGS

To be in compliance with the National Bridge Inspection Standards; the Federal Highway Administration (FHWA) requires ratings on all structures with a span greater than 20′. The load rating is performed for the safety of the traveling public. The carrying-capacity of all bridges in the State of Ohio are rated using a standard set of vehicles, called "Ohio Legal Loads". Ratings for 84 bridges were submitted to ODOT in 2013. The ratings performed resulted in the posting of load limits on 2 bridges (formerly not posted) and the posting of revised limits on 2 bridges.

MAINTENANCE

County forces performed maintenance work ranging from minor structural repairs to replacing damaged guardrail on 11 bridges in 2013.

BRIDGE REPORT Continued

CONSTRUCTION

Six (6) bridges were replaced in 2013.

Considering the average life expectancy is 50 years for the typical bridge, we should be replacing more than 10 bridges per year. An average of 6.7 bridges per year have been replaced over the past 10 years.

THE FOLLOWING BRIDGES WERE REPLACED IN 2013:

- BAU 133-1.65 on Black Diamond Road in Baughman Township. Age unknown, 13' span, 23.0' wide, single span concrete slab bridge was replaced with an 8' span x 4' rise x 46' length precast reinforced concrete box culvert. Replacement work was completed by county forces. Local monies financed the project.
- on Sterling Road in Canaan Township. Age 80 years, 14' span, 22.2' wide, single span concrete slab bridge was replaced with a 14' span x 4' rise x 52' length precast reinforced concrete box culvert. Replacement work was completed by county forces. Local monies financed the project.
- CHI 94-0.98 on Serfass Road in Chippewa Township. Age unknown, 16' span, 16.0' wide, single span steel beam bridge was replaced with a 9' span x 5' rise x 87' length precast reinforced concrete box culvert. Replacement work was completed by county forces. Local monies financed the project.
- eas 416-3.20 on McQuaid Road in East Union Township. Age 78 years, 33' span, 20.0' wide, single span steel beam bridge was replaced with a 41' span, 28.0' wide, single span concrete slab bridge. V. O. Menuez & Son, Inc. from Millersburg, Ohio was the prime contractor. Federal and local monies financed the project at a cost of \$327,920.
- MIL 60-0.83 on Seville Road in Milton Township. Age 72 years, 101' span, 21.8' wide, three span steel girder bridge was replaced with a 74' span, 28.0' wide, single span prestressed concrete box beam bridge by Cuyahoga Bridge & Road, Inc. from Seville, Ohio. Federal and local monies financed the project. Final costs are pending. The original contract amount was \$397,692.

BRIDGE REPORT Continued

WOO 4-1.57

on Silver Road inside the City of Wooster corporation limits. Age unknown, 37' span, 12.5' wide, single span steel girder bridge was replaced with a 61' span, 28.0' wide, single span prestressed concrete box beam bridge by V. O. Menuez & Son, Inc. from Millersburg, Ohio. Federal and local monies financed the project at a cost of \$310,647.

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BLACK DI AMOND ROAD BRI DGE REPLACEMENT (BAU 133-1.65)





STERLING ROAD BRIDGE REPLACEMENT (CAN 59-2.39)





SERFASS ROAD BRIDGE REPLACEMENT (CHI 94-0.98)





MCQUAI D ROAD BRI DGE REPLACEMENT (EAS 416-3.20)





BEFORE

SEVILLE ROAD BRIDGE REPLACEMENT (MIL 60-0.83)





BEFORE

SILVER ROAD BRIDGE REPLACEMENT (WOO 4-1.57)



TRAFFIC CONTROL

The primary responsibility of our traffic control staff is the inspection and maintenance of over 8,500 road signs along nearly 500 miles of county roads and at narrow and load-limited bridges on township roads. The current focus of the sign crew's efforts (after the top priority of repairing or replacing damaged, vandalized or stolen stop and yield signs) is an upgrade of all curve signs (advance warnings, advisory speeds, and chevrons) along county roads. In October 2013, our office received a \$2,285 reimbursement from the County Engineers Association to assist with materials costs. The crew anticipates completing this project in fall 2014.

Wayne County has responsibility for traffic signals and flashers on Back Orrville Road, Canal Road, East Lincoln Way, and Smithville-Western Road. In May 2013, the County Engineer's Office switched McClintock Electric, our electrical contractor, from a per-service call basis to a retainer agreement (\$500 per year, plus equipment and materials). In addition, McClintock Electric installed battery backup / uninterruptable power supply upgrades at all three traffic signal installations for a cost of \$16,133 and performed other repairs and minor upgrades at our signals and flashers totaling \$5,066.

Due to budgetary limitations, Wayne County again had a reduced longitudinal pavement marking program in 2013. Markings included; 222 miles of center lines, 206 miles of edge lines and one mile of lane lines. Oglesby Construction of Norwalk, Ohio, performed this work at a total cost of \$186,968. In addition, paving and sealing contractors arranged for the repainting of 12 miles of center lines and 16 miles of edge lines under separate contracts with the County.

The auxiliary pavement marking program for 2013 included the painting of 51 railroad crossing symbols, 25 ASCHOOL@ words on the pavement, 50 feet of crosswalk lines, 62 stop bars at intersections, and special lane markings on East Lincoln Way (C.R. 30A). The work was done by Timco Pavement Striping of Wooster, Ohio, who also provided temporary pavement striping as needed. Timco's charge for this work was \$15,050.

SUBDIVISIONS

Due to the shift in rural residential housing construction toward single lot, infill, access easement, and common access drive projects; no new public subdivision roads were proposed to or inspected by the Wayne County Engineer=s Office in 2013.

The following public street was accepted by the Board of Wayne County Commissioners in 2013:

Coronado Lane (Jackson Heights Allotment / Wooster Township)

TAX MAP DEPARTMENT

The primary function of this department is the retention and maintenance of historical tax maps, surveys, and railroad and highway right-of-way maps for public viewing and research, and to provide a current set of tax maps to the County Auditor for taxation purposes. Every parcel of land in Wayne County is mapped and kept current with each landowner. These maps are available for viewing in the front office or on the department's website at map.wayneohio.org. Tax maps of past years dated from 1929 forward are retained in a reference library and are available for viewing.

All deeds are processed through this office and recorded on the appropriate map. Some of the instruments that the Tax Map Department is required to review and approve are as follows: warranty deeds, quit claim deeds, executor's deeds, certificate of transfers, deeds of trustees, transfer on death affidavits, land contracts, sheriff's deeds, etc..

In 2013, there were approximately 58,952 tax parcels in Wayne County. There were 4,205 conveyances processed through this department during the year.

The Tax Map Department also administers the continuation of the county house numbering system. Numbers are assigned to new and existing building sites, cell tower sites, etc. that require an address. The new numbers are registered on a separate set of maps and index cards. New addresses are submitted to area post offices.

TAX MAP DEPARTMENT Continued

For many years, surveyors have been required to submit their survey plats for review and entry into the land records. There are approximately 33,415 surveys dating back to 1815. These surveys include approximately 3,992 plats of allotments, subdivisions, and annexations. In 2013, this department reviewed and processed 226 survey plats.

This office prepares and maintains numerous volumes of other related maps, plats and drawings that form a part of the county mapping system. The office personnel deserve credit for performing the diversified duties that are required in serving the public and maintaining an efficient and well managed Tax Map Department.

RIGHT-OF-WAY

The Right-of-Way Section of the Engineering Department is responsible for maintaining the right-of-way records for county and township roads and drainage systems within the county.

The main duty of this office is the acquisition of additional right-of-way required for road and bridge improvements. The work involves preparation of documents which include easements, work agreements and rights-of-entry for specific purposes on privately owned lands. Negotiations with property owners are of vital importance in the acquisition process.

Road right-of-way information is available at this office, which is used extensively by local governments, private and public utility companies, engineering and surveying practitioners, the highway maintenance department, and the general public.

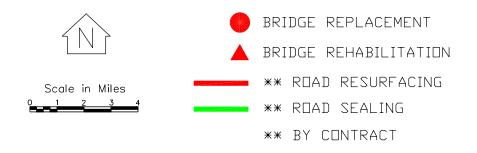
The office also establishes existing and proposed right-of-way limits on various roads for public improvements and reviews annexations for accuracy for the Board of Wayne County Commissioners.

Work will be required in 2014 on several projects that are now in the design stage along with other 2014 projects that will develop within the year.

SURVEYING

The primary function of the Surveying Section is to perform field surveys for engineering of public improvements consisting of: roads, bridges, culverts, and drainage. Surveying data collected in the field is downloaded in the office and a base map is created to facilitate the design of various projects by department engineers. After the projects are designed, the surveying section sets horizontal and vertical control monuments in the field for construction. The Surveying Section also reviews and/or performs surveying (as required by Ohio Statute) for annexations and road dedications/vacations in preparation for public viewings and public hearings.

The office also maintains an inventory of monuments that mark the original land divisions of the county and also has a record of Global Positioning Monuments (GPS) that were established throughout the county in 2000. The GPS monuments (approximately 200) have very precise horizontal and vertical positions relative to the earth. These monuments were utilized in the creation of Wayne County's current Geographical Information System (GIS).



WAYNE COUNTY, OHIO

STATE ROUTES ——
COUNTY ROADS ——
TOWNSHIP ROADS ——

