



# 2012 Annual Report

Ashland County Engineer's Office & Highway Department

Ashland County Commissioners  
Ashland, Ohio 44805

May 31, 2013

Your Honorable Body:

This report from the Ashland County Engineer is in accordance with Section 5543.02 of the Ohio Revised Code and provides information as to the condition of Ashland County's roads, bridges, and culverts. It outlines the work performed in 2012 to improve and maintain our roadways and the associated costs. This report also estimates the probable amount of funds required to maintain and improve any roads, bridges, or culverts in 2013. All monetary figures are rounded to the nearest dollar. The Ashland County Engineer will clarify or provide any additional information that may be requested.

Respectfully submitted,

Edward J. Meixner, PE, PS  
Ashland County Engineer

## Staff:

Ryan Athy, Assistant Engineer  
Glenn Frank, Tax Map Draftsperson  
Kelly Hickey, Administrative Assistant  
Guy Keener, Construction Coordinator  
Jim McDaid, Engineering Aid/Draftsperson  
Becky Schaly, Administrative Assistant  
LynAnn Spoerr, Tax Map Supervisor  
Mark Stauffer, Highway Superintendent

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## Bridges:

2012 EXPENDITURES: \$190,370    2013 PROJECTED EXPENDITURES: \$600,000

The Ashland County Engineer is responsible for maintaining bridges or "structures" spanning 10 feet or more on County or Township Roads within Ashland County. In the event the structure is on a road forming a county boundary the maintenance costs are shared by Ashland County and that particular county.

The program for caring for these structures includes annual inspections and data analysis. In 2012, Guy Keener and Ryan Athy of the Ashland County Engineer's Office inspected the 236 structures under our care. Since 1973, this thorough on-site review of the structural and functional elements of each of our bridges provides the data needed to monitor and assess the health of our bridges. Following inspection, a numeric condition rating is assigned to each bridge: 0="closed" to 9="new, excellent", as well as sufficiency rating that incorporates a public safety factor. Together the condition and sufficiency scores provide indications of relative bridge condition and public safety risk and are used to plan maintenance and improvement projects. This data is also submitted to ODOT.

BRIDGE CONDITION RATINGS	
Condition	# of bridges
OUT OF SERVICE	0
IMMINENT FAILURE	0
CRITICAL	1
SERIOUS	4
POOR	15
FAIR	35
SATISFACTORY	45
GENERAL GOOD	39
VERY GOOD	51
NEW	46

BRIDGE SUFFICIENCY RATINGS	
(DOES NOT INCLUDE BORDER BRIDGES)	
Sufficiency Rating	# of Bridges
< 50%	16
50% - 59%	15
60% - 69%	19
70% - 79%	22
80% - 89%	35
90% - 100%	118

\*Sufficiency rating is a measure of the condition of the bridge and includes pavement conditions, bridge conditions, geometric adequacy and accident rates.

## Bridge Work Completed – 2012:

County workers performed routine maintenance and repair work on 64 bridges throughout the county. That work consisted of beam patching, deck repair, debris removal, washing, erosion control, and scour countermeasures. The cost of this work done by force account was \$39,267.

## BRIDGE FORCE ACCOUNT WORK - 2012

Bridge projects estimated to be under \$100,000 can be undertaken by the Ashland County Highway Department work force. The following structures were rebuilt in 2012 using County resources.

Structure	Township	Plan	Cost
175-2410	Lake	Rebuilt	\$105,743.00
1153-1250	Milton	Rebuilt	\$38,945.00
856-1375	Clear Creek	Replaced as culvert	\$6,415.00

## POSTED BRIDGES

Following inspection, a bridge considered unable to carry a legal load is marked with a sign identifying the load it can bear. This is known as "Posting" a bridge. It is illegal to cross a posted bridge with a load above the posted weight.

Township	Structure	Posted Weight	Township	Structure	Posted Weight
Lake	2575-170	19	Perry	63-1220	20
Mifflin	1808-1345*	20	Perry	13-1210*	15
Montgomery	1500-505	11	Ruggles	126-1230	15

\* Border bridges

### Bridges – Outside Funding:

This office continually seeks federal and state funds to finance major bridge projects. Using these funds sets a project on a completion timeline dictated by the funding source. This timeline can be 6 months to 6 years.

Funding Granted: We received notice that our 2010 application for funds to replace Bridge 2575-170 in Lake Township was accepted. In 2017, we will receive 80% of the costs related to construction and construction engineering. Outside contractors will be used for soil testing and construction. Engineer's Office staff will do the design work and monitor the construction.

We also became aware of 80% funding to replace Bridges 126-1230 in Ruggles Township and 175-995 in Jackson Township. Estimated cost for these replacements is \$832,000.

## Culverts:

2012 EXPENDITURES: \$121,947

2013 PROJECTED EXPENSES: \$200,000

A culvert is described as being any structure with a span less than ten feet. They are installed to allow water courses to flow under county roads. Ashland County maintains 1423 culverts.

### CULVERT WORK 2012

Culvert work done in 2012 included replacements, extensions, and general repair. Thirty-seven culverts were replaced and an additional eight culverts were worked on. The major culvert projects and their costs are listed in the table below.

Culvert	Township	Description	Cost
1600-57	Perry	(2)-34' x 44" x 72" CMP (1)-40' x 67" x 95" CMP	\$19,510.00
2256-7	Vermillion	37' x 36" - CMP 50' x 36" - Plastic	\$7,098.00
30A-1	Mifflin	100' x 36" x 36"- Concrete 120' x 24" - Plastic	\$6,037.00

### Proposed Culvert Work - 2013:

Each year we determine which culverts to replace by considering condition and/or length (short lengths limit road width.) Currently, there are plans to replace approximately forty culverts in 2013.

## Roads Section:

2012 EXPENDITURES: \$2,681,101

2013 PROJECTED EXPENSES: \$2,900,000

Maintaining the usability, safety, and stability of the county road system consumes the greatest amount of resources by employees of the Ashland County Engineer's Office and Highway Garage.

To be usable, roads must be kept clear of obstructions so we plow snow, distribute salt, remove debris, patch, seal, and pave. To increase safety, roads must be well marked and have appropriate signs and sight distance so we paint the pavement, install signs, mow, and clear brush. For roads to remain stable, water must drain away from them so we can clean out culverts and maintain ditches. To accomplish all these things, equipment is purchased and maintained. To track and analyze our costs and to plan our future activities, all the work is documented. The following sections itemize the maintenance activities undertaken in 2012 and our plans for 2013.

## Paving

In 2012, we continued the practice of paving with the less expensive cold mix asphalt. Close to 15 miles of road received this treatment by Melway Paving Co. Inc. at an expenditure of \$990,783 for a cost of \$63,804 per mile. The chart below itemizes the roads paved under this contract.

A spring assessment will determine the paving to be done in 2013.

Road	Mileage	Begin	End
CR 601	5.434	US 42	SR 58
CR 620	2.669	Savannah	SR 511
CR 1802	1.095	CR 655	CR 555
CR 959	1.519	Knox Co. Line	CR 3275
CR 1302	3.207	SR 89	US 250
CR 2175	1.123	US 30	CR 30A

## Sealing

Sealing roads extends the life of the pavement and is much cheaper than paving. During 2012, about 53 miles of roads throughout the County Road system were chip sealed by Melway Paving Co. Inc. using Ashland County materials. Melway Paving Co. Inc. was paid \$82,590 for their labor and used \$575,243 worth of materials. The total cost of the sealing program was \$657,833, which is a unit cost of about \$12,318 per mile. For 2013, we anticipate sealing close to the same amount of miles.

## Patching

In addition to the contract work done by Melway Paving Co. Inc., our own workforce spent 3461 man hours in 2012 patching various road sections. The total cost for materials and equipment was \$235,536 to perform this type of work.

## Pavement Marking

All roads received new pavement marking during 2012. The roads were marked with centerlines, edge lines, turning lanes, and school zones by A&A Safety Inc. who was paid \$200,945. We plan to repeat this marking program in 2013 and expect to spend as much as \$220,000.

## Roadside Maintenance

During 2012, the County Highway Department spent the following amounts maintaining county rights-of-way: Ditching/Sloping - \$28,698; Berming - \$50,218; Erosion Protection - \$2,295; and Road Cleaning - \$2,518; Mowing - \$93,319; Brush Cutting - \$87,730. This totals \$264,778 for roadside maintenance.

During 2012, we contracted with Tru-Quality Services to apply weed control to approximately 87,120 linear feet of guardrail. Cost of this project was \$5,570.

### Permits

Right-of-way permits are issued for work within county road right-of-ways, which includes residential driveways, ditch enclosures, farm field entrances, commercial entrances and utility work. Driveway entrance construction and maintenance are the responsibility of the property owner in accordance with Section 5543.16 of the Ohio Revised Code. During 2012 there were 16 residential driveways; 7 field drives, 4 ditch enclosures; 2 commercial drives; and 10 utility work projects.

Special hauling permits are also issued pursuant to Section 4513.34 of the Ohio Revised Code. All individuals, firms, partnerships, companies and corporations wishing to operate or move a vehicle or combination of vehicles of a size or weight of a vehicle or load exceeding the maximum specified in Sections 5577.01 to 5577.09 of the Ohio Revised Code on any Ashland County maintained highway must obtain a SPECIAL HAULING PERMIT. During 2012 the following permits issued: 16 overwidth/overweight trips and returns; 51 overwidth trips and returns; 7 annual overwidth; and 10 overwidth single trips.

### Signs

Our Superintendent relies on direct observation and reports from work crews in the field and the public to determine what signs need to be cleaned, reset, or replaced. The Highway Department performs an annual inspection of all signs along county roads which provides an excellent record of the signs' condition. The amount for sign work in 2012 was \$47,180. We anticipate spending \$50,000 for sign work in 2013.

In January, 2012, the Engineer's Office purchased a retroreflectometer for \$9,000 to test reflectivity of all road signs to comply with the FHWA mandate. All signs on Ashland County roads were tested during 2012. The signs not meeting the minimum reflectivity were replaced.

### Snow and Ice Control

In 2012, we spent \$217,132 on snow and ice control. The chart below shows the snow and ice control trend for the past five years.

Snow & Ice Control	2007-08	2008-09	2009-10	2010-11	2011-12
# of days with snow	55	68	55	54	35
Inches of snowfall	79.60	64.30	84.10	86.80	32.50
Tons of Salt & Grits used	6,689	7,251	7,162	9,332	3,122
Hours of labor	5,048	5,406	5,885	5,430	2,181

## Guardrails

Guardrail is used to prevent vehicles from crashing against solid objects or falling into ravines.

Most of the guardrail work done by our Highway Department is to maintain existing guardrail or install new guardrail in conjunction with paving, widening, or bridge projects. When time and money allow, we install or upgrade guardrail in locations identified in a study completed in 1994. We have recently received grant money to upgrade this study for 2013.

With federal safety funding, we contracted to improve or install close to 13,725 feet of guardrail along county roads in 2012. In addition we spent \$9,913 for guardrail maintenance and installation done by our work force. Construction of a similarly funded project for 2013 has been recently put out to bid. In addition to the outside funds spent on the contracted project, we expect to spend about \$5,000 for guardrail work done by our work force in 2013.

## Special Projects/Outside Funding

Just as with our bridges the County Engineer seeks federal and state funds to finance road projects and studies. In 2012, one project was completed and a second project had funds authorized. These two projects are described below:



County Road 1035 Guardrail



County Road 1035 Guardrail

- As mentioned the Highway Safety Improvement Program (HSIP) funds were used to contract with Lake Erie Construction to improve guardrail along portions of County Roads 175, 500, and 1035. Total cost for the project was \$275,189 which was all paid for by HSIP.
- Awaiting Release of Funds: We were approved for another guardrail project late in 2012. Funds for this project will be available in 2014.

## Equipment:

A total of \$419,160 was spent purchasing and servicing the equipment used to maintain the county road system. For 2013, we anticipate purchasing a new loader for approximately \$148,000, a new pick-up/dump bed combination for \$48,000, and retrofitting an older pick-up to be able to spray for weeds at our guardrail locations.

Equipment Maintenance-2012			
\$407,016			
Parts	Labor	Outside Service	Fuel
\$128,778	\$88,202	\$46,227	\$143,809

## Buildings and Grounds:

The Ashland County Highway Department maintains three physical locations: the main garage and office building at 1511 Cleveland Avenue; a mixing plant on Simanton Road; and a garage outpost at 991 CR 2796 in Perrysville.

Routine maintenance projects carried out by our work force totaled \$13,011. An additional \$26,145 was paid for utilities bringing the entire amount paid for maintaining the Engineer's work and office space in 2012 to \$39,156.

In 2010, we found out that due to a design flaw, our salt shed was in danger of collapsing in high winds. Studies of the structure done by Richland Engineering concluded that making alterations would diminish the integrity of the structure and leave it vulnerable to corrosion. The project to replace the upper portion of the shed has been bid. We are waiting for the contractor to begin the project. The cost to replace this roof structure is approximately \$147,000.

## Personnel:

During 2012, there were a few changes in personnel working for the Ashland County Engineer.

Engineer's Office: The most notable was the retirement of Karolyn Adams. Karolyn retired after 39 years of service. The employees of the Engineer's Office purchased a flowering plum tree in her honor and planted it at the Engineer's Office. Kelly Hickey was hired as an Administrative Assistant to replace Karolyn. She started in July, 2012.

Highway Department: The Highway Department has hired three new Highway Workers in 2012. Terry Chronister started in November, 2012-Terry had been working with us through the summer of 2012; Ben Rogers started in December,



2012; and Ryley Fenton started in December, 2012. The practice of hiring additional summer help and maintaining a list of CDL drivers, who help with snow and ice removal in the winter, continued.

### General Fund Activities-Tax Map:

Surveys and deeds are reviewed in the Tax Map Office to assure they meet state law and local regulations. These are then used to provide the County Auditor with detailed maps used to assess property taxes. The requirement that an Ohio County Engineer be a professional surveyor assures that the staff has appropriate guidance to fulfill these duties. The chart below itemizes some of the activities of the Tax Map Office.

TAX MAP DATA	
Deed Transfers	1,859
New Parcels transferred by deeds	161
Surveys reviewed/approved	125
New Parcels surveyed (created by survey docs-not necessarily transferred)	173

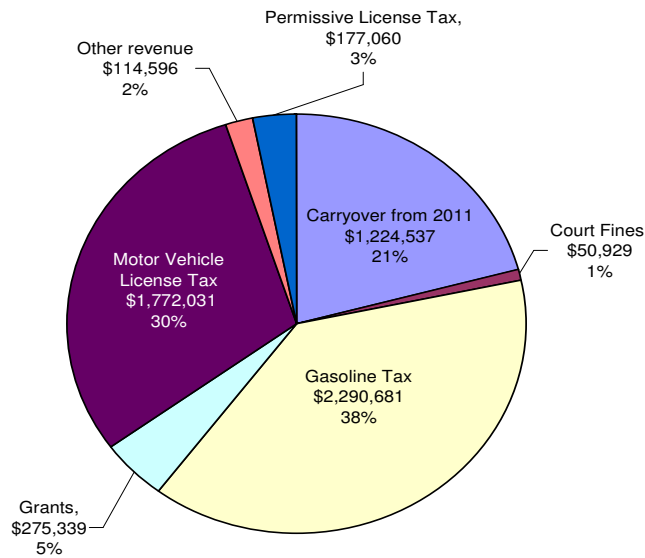
### Financial Information for 2012:

As the chart on the next page indicates, 38% of revenue is received by the Engineer's office is gasoline tax. This tax is applied per gallon creating a direct correlation between gasoline consumption and the amount of gasoline tax collected. Distribution of the gasoline tax is on a state-wide basis so buying gasoline anywhere in Ohio generates funds for the Ashland County Engineer. All 88 counties in the State of Ohio receive the same share of Gasoline Tax regardless of population, geographic size or amount of road miles.

Providing 30% of revenue is the Motor Vehicle License Tax. This tax is assessed when you apply for or renew a vehicle registration. The Ashland County Engineer receives a portion of this tax after the funds are processed by the state. Distribution of this tax is more complicated than the Gasoline Tax. Some of it is distributed to counties based on road mileage and some is distributed to counties, townships, and municipalities based on residence of the person registering the vehicle.

A considerably smaller revenue stream (3%) is generated by the Permissive License Tax. Like the Motor Vehicle License Tax, the Permissive License Tax is assessed when you apply for or renew a vehicle registration. This tax is distributed to counties based solely on the residence of the registrant.

### Revenue 2012



As the chart below indicates, 38% of the expenses are for Materials, 22% for Payroll and Benefits, 19% is Carryover to 2013, 12% for Projects, 7% for Contract Repairs/Services, and 1% for Highway Equipment, and Other Expenses.

### Expenses 2012

