



2016 Annual Report

Ashland County Engineer's Office & Highway Department

Ashland County Commissioners
Ashland, Ohio 44805

March 28, 2017

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 2016 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 2017. 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
Kelly Hickey, Administrative Assistant
Guy Keener, Construction Coordinator
Becky Schaly, Engineering Assistant
LynAnn Spoerr, Tax Map Supervisor
Mark Stauffer, Highway Superintendent
Ernie Weiler, Tax Map Technician

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Bridges:

2016 EXPENDITURES: \$32,348

2017 PROJECTED EXPENDITURES: \$300,000

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 2016, Guy Keener and Ryan Athy of the Ashland County Engineer’s Office inspected the 234 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 incorporate 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	2
POOR	14
FAIR	34
SATISFACTORY	42
GENERAL GOOD	45
VERY GOOD	84
NEW	12

BRIDGE SUFFICIENCY RATINGS	
(DOES NOT INCLUDE BORDER BRIDGES)	
Sufficiency Rating	# of Bridges
< 50%	15
50% - 59%	9
60% - 69%	23
70% - 79%	18
80% - 89%	32
90% - 100%	125

*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 – 2016:

County workers performed routine maintenance and repair work on 46 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 \$32,348.

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
Mifflin	1808-1345*	20		Perry	13-1210*	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: In 2016, Bridge 2575-170 in Lake Township was replaced with a 109' long steel truss with a 112' long concrete slab. VO Menezes & Son was the contractor for this project, this project cost \$568,257. The bridge is open to traffic; paving will be finished in the spring of 2017 due to asphalt plant shutdown for winter. ODOT State Exchange funding was used to pay for this project.

In 2016, Bridge 1075-2525 in Green Township was replaced. Page Excavating, Inc. was the contractor for this project, this project cost \$301,367. Ohio Public Works Commission was used to complete this project.



Bridge 2575-170-Lake Township



Bridge 1075-2525-Green Township

Culverts:

2016 EXPENDITURES: \$116,937

2017 PROJECTED EXPENSES: \$175,000

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 2016			
Culvert work done in 2016 included replacements, extensions, and general repair. Twenty-eight culverts were replaced. The major culvert projects and their costs are listed in the table below.			
Culvert	Township	Description	Cost
175-107	Perry	(1)-112"x75"x44' CMP (1)-112"x75"x50' CMP	\$32,713
175-78	Perry	60'x42" CMP 60'x36" Plastic	\$19,607
2575-25	Lake	58'x36" CMP 60'x36" Plastic	\$7,284

Proposed Culvert Work - 2017:

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 thirty-two culverts in 2017.

Major Culvert Replacements Proposed 2017			
Culvert	Township	Existing / Planned Replacement	Estimated Cost
529-6	Hanover	36"x72"x26' Concrete Box 53"x83"x40' Elliptical Concrete	\$22,349
995-30	Montgomery	60"x40' Corrugated Metal 60"x60' Plastic	\$15,314
1302-19	Perry	48"x60"x26' Concrete Box 60"x40' Plastic	\$15,107

Roads Section:

2016 EXPENDITURES: \$2,540,696

2017 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 2016 and our plans for 2017.

Paving

In 2016, we continued the practice of paving with the less expensive cold mix asphalt followed by a chip seal. 4.3 miles of road received this treatment by Melway Paving Co. at an expenditure of \$268,112 for a cost of \$62,352 per mile. 6.8 miles of County Road 775 was paved with 1 ½" of asphalt concrete by Melway Paving Co. at a cost of \$625,793 for a cost of \$92,028 per mile. The chart below itemizes the roads paved under this contract.

Road	Mileage	Begin	End
CR 758	2.784	US 250	Richland Co.
CR 2256	.524	SR 511	CR 775
CR 775	6.815	SR 95	SR 60

A spring assessment will determine the paving to be done in 2017.

Sealing

Sealing roads extends the life of the pavement and is much cheaper than paving. During 2016, about 56 miles of roads throughout the County Road system were chip sealed by Melway Paving Co. using Ashland County materials. Melway Paving Co. was paid \$121,604 for their labor and used \$504,554 worth of materials. The total cost of the sealing program was \$626,158, which is a cost of about \$11,193 per mile. For 2017, we anticipate sealing close to the same amount of miles.

Patching

In addition to the contract work done by Melway Paving Co., our own workforce spent 3777 man hours in 2016 patching various road sections. The total cost for materials and equipment was \$275,665 to perform this type of work.

Pavement Marking

All roads received new pavement marking during 2016. The roads were marked with centerlines, edge lines, turning lanes, and school zones by Oglesby Construction Inc. who was paid \$227,168. We plan to repeat this pavement marking program in 2017.

Roadside Maintenance

During 2016, the County Highway Department spent the following amounts maintaining county rights-of-way: Ditching/Sloping - \$25,351; Berming - \$9,621; Erosion Protection - \$4,032; and Road Cleaning - \$3,841; Mowing – \$94,915; Brush Cutting - \$133,597; Spraying - \$5,031. This totals \$276,388 for roadside maintenance.

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 2016, there were 39 residential driveways; 12 field drives, 8 ditch enclosures; 2 commercial drives; and 32 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 2016, the following permits were issued: 6-construction equipment; 2-annual over width; and 2-yearly overweight.

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 2016 was \$42,069. We anticipate spending \$70,000 for sign work in 2017. The signs were tested with the retroreflectometer that was purchased in 2012.

Snow and Ice Control

In 2016, we spent \$191,025 on snow and ice control. The chart below shows the snow and ice control trend for the past five years:

Snow & Ice Control	2011-12	2012-13	2013-14	2014-15	2015-16
# of days with snow	35	38	79	74	34
Inches of snowfall	32.50	39.30	58.40	57.60	21.90
Tons of Salt & Grits used	3,122	3,841	7,360	10,169	4,386
Hours of labor	2,181	4,318	6,114	5,870	2,400

Guardrail

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.

In 2016, we spent \$8,318 for guardrail maintenance and installation done by our work force. 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 2017.

Equipment:

A total of \$408,464 was spent purchasing and servicing the equipment used to maintain the county road system. For 2016, we purchased a set of new portable traffic lights-\$42,900.

Equipment Maintenance-2016			
\$365,564			
Parts	Labor	Outside Service	Fuel
\$161,234	\$90,423	\$26,076	\$87,831

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 \$20,416. An additional \$26,755 was paid for utilities bringing the entire amount paid for maintaining the Engineer's work and office space in 2016 to \$47,171.

Personnel:

During 2016, there were two changes in personnel working for the Ashland County Engineer:

Engineer's Office: The Engineer's Office had one employee resign in 2016.

Highway Department: The Highway Department had one employee resign in 2016. 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.

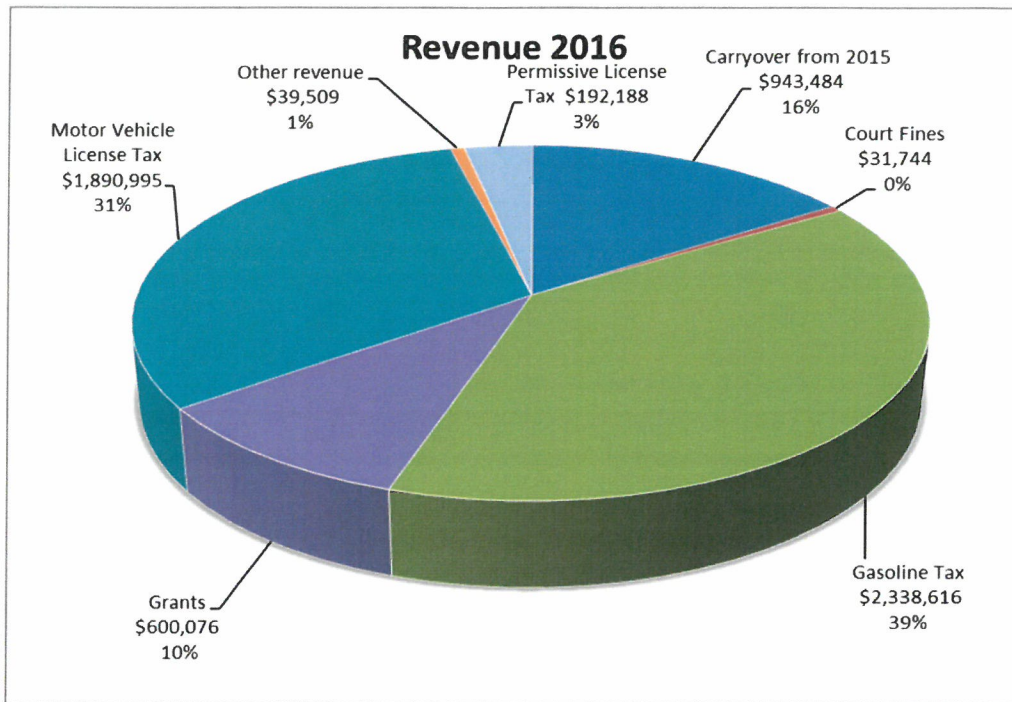
TAX MAP DATA			
Deed Transfers	2,115	Surveys reviewed/approved	123
New Parcels transferred by deeds	180	New Parcels surveyed (created by survey docs-not necessarily transferred)	157

Financial Information for 2016:

As the chart on the next page indicates, 39% 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 31% 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.



As the chart below indicates, 26% of the expenses are for Materials, 23% for Payroll and Benefits, 20% is Carryover to 2017, 30% for Projects, 0% for Contract Repairs/Services, 1% for Highway Equipment.

