



2018 Annual Report

Ashland County Engineer's Office & Highway Department

Ashland County Commissioners
Ashland, Ohio 44805

March 20, 2019

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 2018 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 2019. 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:

2018 EXPENDITURES: \$559,905 2019 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 2018, 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	0
SERIOUS	4
POOR	11
FAIR	31
SATISFACTORY	46
GENERAL GOOD	52
VERY GOOD	82
NEW	8

BRIDGE SUFFICIENCY RATINGS	
(DOES NOT INCLUDE BORDER BRIDGES)	
Sufficiency Rating	# of Bridges
< 50%	9
50% - 59%	11
60% - 69%	22
70% - 79%	22
80% - 89%	33
90% - 100%	126

*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 – 2018:

County workers performed routine maintenance and repair work on 24 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 \$11,490.

BRIDGE FORCE ACCOUNT WORK - 2018

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 2018 using County resources.

Structure	Township	Plan	Cost
956-1140	Clear Creek	Rehab	\$39,842
1600-505	Montgomery	Rehab	\$96,887
2000-495	Mohican	New Deck	\$58,270
2175-830	Green	Rehab	\$85,298

Bridge contract work – Structure #620-650-Orange Township-replace beams. VO Menezes & Son was awarded the bid on this contract for \$279,608.00.

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
Mifflin	1808-1345*	20	Perry	13-1210*	15
Montgomery	1356-1021*	35			

* Border bridges *City Bridge

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. In 2018, this office didn't seek outside funding to finance any major bridge projects.

Culverts:

2018 EXPENDITURES: \$111,602 2019 PROJECTED EXPENSES: \$350,000

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.

MAJOR CULVERT REPLACEMENTS-2018			
Culvert work done in 2018 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
30A-38	Mohican	47"x71"x47' Corrugated Metal 60"x60' Plastic	\$9,044
1600-53	Montgomery	48"x72" Concrete Box 60"x50' Plastic	\$7,043
1095-9A	Montgomery	30"x54' Corrugated Metal 30"x60' Plastic	\$10,052

Proposed Culvert Work - 2019:

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 seventeen culverts in 2019.

MAJOR CULVERT REPLACEMENTS PROPOSED-2018			
Culvert	Township	Existing / Planned Replacement	Estimated Cost
681-4	Sullivan	47"x71"x46' CMP 47"x71"x40'	\$20,184
1475-10	Milton	32"x54' Steel 30"x60' Plastic	\$7,972

Roads Section:

2018 EXPENDITURES: \$2,698,526 2019 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 2018 and our plans for 2019.

Paving

In 2018, we continued the practice of paving with the less expensive cold mix asphalt followed by a chip seal. 4.835 miles of road received this treatment by Melway Paving Co. at an expenditure of \$350,590 for a cost of \$72,510 per mile. The chart below itemizes the roads paved under this contract. Three and a half miles of County Road 1095 was paved with 1 ½" hot mix asphalt, Melway Paving Co. completed this work under the same contract at a cost of \$310,182; \$88,548 per mile.

Road	Mileage	Begin	End
CR 175	3.052	SR 179	SR 95
CR 700	1.783	CR 175	US 42
CR 1095	3.503	US 30	Ashland City Limits

A spring assessment will determine the paving to be done in 2019.

Sealing

Sealing roads extends the life of the pavement and is much cheaper than paving. During 2018, about 53.7 miles of roads throughout the County Road system were chip sealed by Melway Paving Co. using Ashland County materials. Melway Paving Co. was paid \$132,722 for their labor and used \$532,639 worth of materials. The total cost of the sealing program was \$665,361, which is a cost of about \$12,389 per mile. For 2019, 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 3,464 man hours in 2018 patching various road sections. The total cost for materials and equipment was \$368,646 to perform this type of work.

Pavement Marking

All roads received new pavement marking during 2018. The roads were marked with centerlines, edge lines, turning lanes, and school zones by Oglesby Construction, Inc. who was paid \$220,190. We plan to repeat this pavement marking program in 2019.

Roadside Maintenance

During 2018, the County Highway Department spent the following amounts maintaining county rights-of-way: Ditching/Sloping - \$54,787; Berming - \$32,984; Erosion Protection - \$1,727; and Road Cleaning - \$2,860; Mowing - \$119,690; Brush Cutting - \$100,314; Spraying - \$5,863. This totals \$318,225 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 2018, there were 38 residential driveways; 15 field drives, 13 ditch enclosures; 2 commercial drives; 2 directional bores; 1 bike drive; and 27 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 2018, the following permits were issued: 12-construction equipment; 1-annual over width; 2-trip & return (14 days); 2-yearly overweight; and 1-quarterly 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 2018 was \$58,244. We anticipate spending \$70,000 for sign work in 2019. The signs were tested with the retroreflectometer that was purchased in 2012.

Snow and Ice Control

In 2018, we spent \$407,088 on snow and ice control. The chart below shows the snow and ice control trend for the past five years:

Snow & Ice Control	2013-14	2014-15	2015-16	2016-17	2017-18
# of days with snow	79	74	34	32	48
Inches of snowfall	58.40	57.60	21.90	31.10	46.30
Tons of Salt & Grits used	7,360	10,169	4,386	5,168	4,181
Hours of labor	6,114	5,870	2,400	2,799	4,222

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.

With federal safety funding, we contracted to improve or install close to 8,150 feet of guardrail along county roads in 2019. In 2018, we spent \$3,287 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 2019.

Equipment:

A total of \$639,866 was spent purchasing and servicing the equipment used to maintain the county road system. For 2018, we purchased an International truck with Altec bucket and brush body - \$147,653; 2 used dump trucks-1 Sterling - \$33,759 1-International - \$35,500.

Equipment Maintenance-2018			
\$422,954			
Parts	Labor	Outside Service	Fuel
\$139,841	\$89,734	\$82,554	\$110,825

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 \$6,339. An additional \$31,455 was paid for utilities bringing the entire amount paid for maintaining the Engineer’s work and office space in 2018 to \$37,794.

Personnel:

During 2018, there were some changes in personnel working for the Ashland County Engineer:

Engineer’s Office: There were no changes in the Engineer’s Office in 2018.

Highway Department: The Highway Department had two employees resign and an additional employee was hired in 2018. 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.

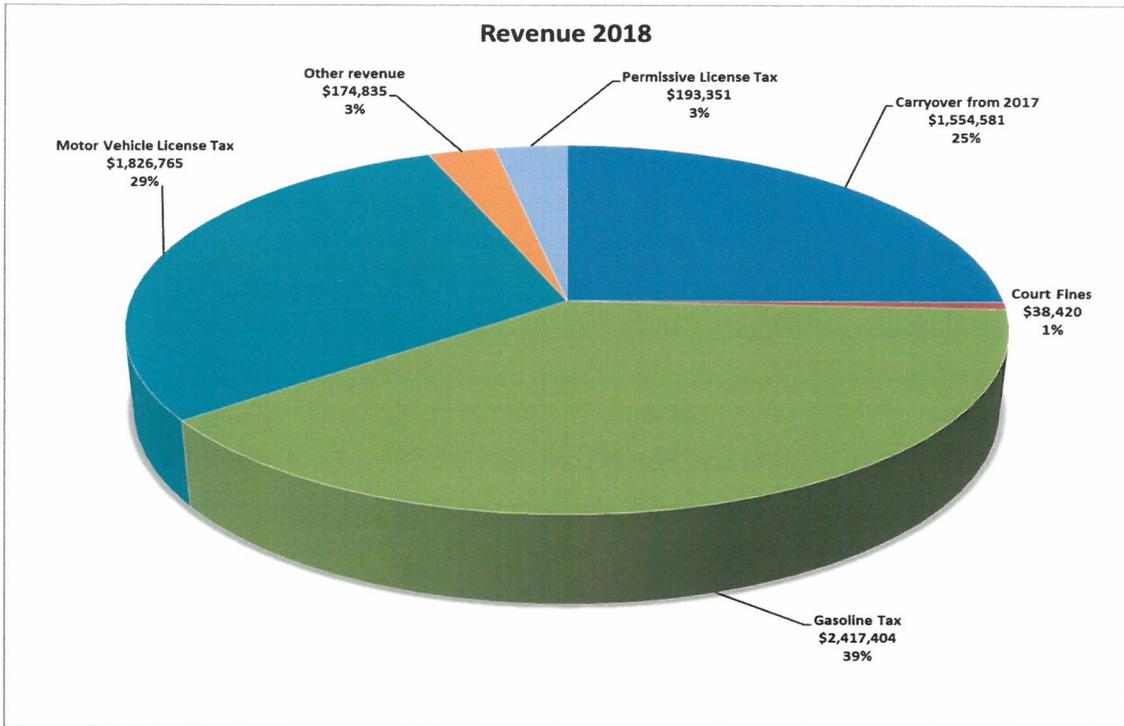
TAX MAP DATA - 2018			
Deed Transfers	2,162	Surveys reviewed/approved	138
New Parcels transferred by deeds	174	New Parcels surveyed (created by survey docs-not necessarily transferred)	186

Financial Information for 2018:

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 29% 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, 31% of the expenses are for Materials, 26% for Payroll and Benefits, 17% is Carryover to 2019, 17% for Projects, 5% for Contract Repairs/Services, 4% for Highway Equipment.

