



2019 Annual Report

Ashland County Engineer's Office & Highway Department

Ashland County Commissioners
Ashland, Ohio 44805

February 24, 2020

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 2019 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 2020. 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

Contents	
Bridges	2-3
Culverts	4
Roads	4-6
Equipment	7
Buildings & Grounds	7
Personnel	7
Tax Map	8
Financial Information	8-9

Bridges:

2019 EXPENDITURES: \$570,706 2020 PROJECTED EXPENDITURES: \$500,000

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 2019, Guy Keener 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	2
POOR	11
FAIR	27
SATISFACTORY	48
GENERAL GOOD	55
VERY GOOD	82
NEW	9

BRIDGE SUFFICIENCY RATINGS	
(DOES NOT INCLUDE BORDER BRIDGES)	
Sufficiency Rating	# of Bridges
< 50%	7
50% - 59%	12
60% - 69%	20
70% - 79%	20
80% - 89%	33
90% - 100%	131

*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 – 2019:

County workers performed routine maintenance and repair work on 43 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 \$29,121.

BRIDGE FORCE ACCOUNT WORK - 2019

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 2019 using County resources.

Structure	Township	Plan	Cost
775-2250	Clear Creek	New Beams	\$51,787
801-915	Orange	Rehab	\$114,215
801-830	Orange	New Beams	\$104,009

Bridge contract work – Structure #655-1840-Vermillion Township-replacement structure. The Crawford Construction Co., Inc. was awarded the bid on this contract for \$258,962.00. The actual cost was \$271,543.

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.

Culverts:

2019 EXPENDITURES: \$107,735

2020 PROJECTED EXPENSES: \$50,000

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-2019

Culvert work done in 2019 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
681-4	Sullivan	47"x71"x46' CMP 47"x71"x40'	\$13,235
175-137	Jackson	48"x24" Concrete Box 53"x34"x40' Ellip. Conc.	\$14,283
251-42	Jackson	87"x50' Steel Culvert 60"x80' Plastic	\$15,886

Proposed Culvert Work - 2020:

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 eight culverts in 2020.

MAJOR CULVERT REPLACEMENTS PROPOSED-2020

Culvert	Township	Existing / Planned Replacement	Estimated Cost
801-23	Orange	79"x46"x32' CMP 73"x55"x40'	\$16,919
2175-13	Vermillion	57"x38"x40' CMP 48"x40' Plastic	\$8,772

Roads Section:

2019 EXPENDITURES: \$2,930,200

2020 PROJECTED EXPENSES: \$3,900,000

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 2019 and our plans for 2020.

Paving

In 2019, we practiced with paving with the asphalt concrete paving program. 6.507 miles of road were paved with 1½” hot mix asphalt by Sarver Paving Co. at an expenditure of \$566,993 for a cost of \$87,136 per mile. The chart below itemizes the roads paved under this contract. Seven hundred cubic yards of partial depth pavement repair of County Road 500 was paved with 1½” hot mix asphalt, Sarver Paving Co. completed this work under the same contract at a cost of \$141,921. Total contract cost \$708,914.

Road	Mileage	Begin	End
CR 1356	3.338	SR 603	Ashland City Limits
CR 3175	3.169	SR 3	Holmes County Line
CR 500	700 cu. Yds.	TR 391	CR 175

A spring assessment will determine the paving to be done in 2020.

Sealing

Sealing roads extends the life of the pavement and is much cheaper than paving. During 2019, about 38.25 miles of roads throughout the County Road system were chip sealed by Sarver Paving Co. using Ashland County materials. Sarver Paving Co. was paid \$140,117 for their labor and used \$454,926 worth of materials. The total cost of the sealing program was \$595,043, which is a cost of about \$15,556 per mile. For 2020, we anticipate sealing close to 45 miles.

Patching

In addition to the contract work done by Sarver Paving Co., our own workforce spent 3,709 man hours in 2019 patching various road sections. The total cost for materials and equipment was \$256,575 to perform this type of work.

Pavement Marking

All roads received new pavement marking during 2019. The roads were marked with centerlines, edge lines, turning lanes, and school zones by Dura Mark Inc. who was paid \$228,818. We plan to repeat this pavement marking program in 2020.

Roadside Maintenance

During 2019, the County Highway Department spent the following amounts maintaining county rights-of-way: Ditching/Sloping - \$59,426; Berming - \$64,959; Road Cleaning - \$2,658; Mowing – \$108,636; Brush Cutting - \$143,439; Spraying - \$6,273. This totals \$385,391 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 2019, there were 39 residential driveways; 14 field drives, 18 ditch enclosures; 3 commercial drives; and 18 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 2019, the following permits were issued: 9-construction equipment; 1-annual over width; 3-trip & return (14 days).

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 2019 was \$84,500. We anticipate spending \$70,000 for sign work in 2020. The signs were tested with the retroreflectometer that was purchased in 2012.

Snow and Ice Control

In 2019, we spent \$326,912 on snow and ice control. The chart below shows the snow and ice control trend for the past five years:

Snow & Ice Control	2014-15	2015-16	2016-17	2017-18	2018-19
# of days with snow	74	34	32	48	49
Inches of snowfall	57.60	21.90	31.10	46.30	45.80
Tons of Salt & Grits used	10,169	4,386	5,168	4,181	7,234
Hours of labor	5,870	2,400	2,799	4,222	4,044

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 with Cuyahoga Fence, LLC to improve or install close to 6,919 feet of guardrail along county roads in 2019. Total contract cost \$334,317. In 2019, we spent \$9,730 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 2020.

Equipment:

A total of \$679,493 was spent purchasing and servicing the equipment used to maintain the county road system. For 2019, we purchased 1 used International dump truck - \$30,100; 2 new Freightliners - \$199,230.

Equipment Maintenance-2019			
\$450,163			
Parts	Labor	Outside Service	Fuel
\$120,491	\$93,262	\$136,958	\$99,452

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 \$10,084. An additional \$29,815 was paid for utilities bringing the entire amount paid for maintaining the Engineer's work and office space in 2019 to \$39,899.

Personnel:

During 2019, there was a change in personnel working for the Ashland County Engineer:

Engineer's Office: There were no changes in the Engineer's Office in 2019.

Highway Department: The Highway Department had one employee resign in 2019. 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.

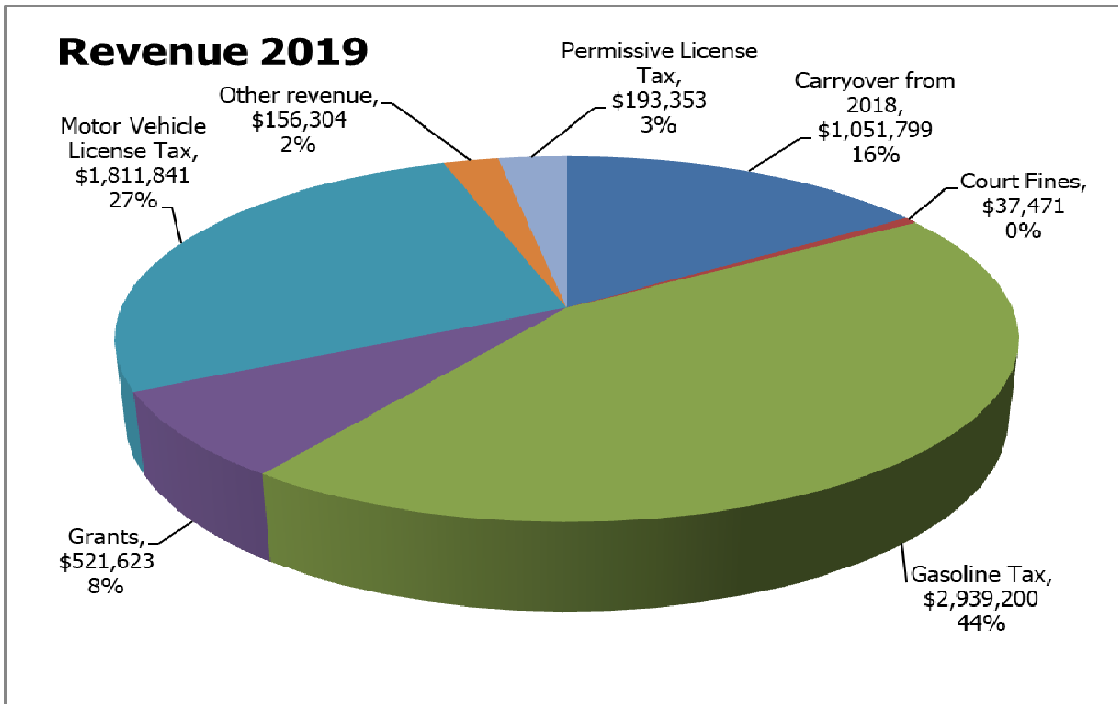
TAX MAP DATA - 2019			
Deed Transfers	2,173	Surveys reviewed/approved	171
New Parcels transferred by deeds	179	New Parcels surveyed (created by survey docs-not necessarily transferred)	200

Financial Information for 2019:

As the chart on the next page indicates, 44% 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 27% 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, 25% for Payroll and Benefits, 17% is Carryover to 2020, 23% for Projects, 5% for Contract Repairs/Services, 4% for Highway Equipment.

