



2022 Annual Report

Ashland County Engineer's Office & Highway Department

Ashland County Commissioners
Ashland, Ohio 44805

March 17, 2023

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 2022 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 2023. 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
Kevin Pasho, Bridge Engineer
Becky Schaly, Engineering Assistant
LynAnn Spoerr, Tax Map Supervisor
Mike Weber, Highway Superintendent
Ernie Weiler, Tax Map Technician

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Bridges:

2022 EXPENDITURES: \$202,135 2023 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 2022, Guy Keener of the Ashland County Engineer’s Office inspected the 230 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	1
POOR	10
FAIR	24
SATISFACTORY	48
GENERAL GOOD	61
VERY GOOD	77
NEW	9

BRIDGE SUFFICIENCY RATINGS	
(DOES NOT INCLUDE BORDER BRIDGES)	
Sufficiency Rating	# of Bridges
< 50%	3
50% - 59%	7
60% - 69%	7
70% - 79%	19
80% - 89%	61
90% - 100%	122

*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 – 2022:

County workers performed routine maintenance and repair work on 7 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 \$6,643.

BRIDGE FORCE ACCOUNT WORK - 2022

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 2022 using County resources.

Structure	Township	Plan	Cost
555-1780	Vermillion	Replace	\$242,220*
984-1025	Orange	Replace	\$54,263
1775-640	Montgomery	New culvert	\$24,509

*Structural steel & decking for this project in the amount of \$186,970 was competitively bid in 2022.

PROPOSED BRIDGE FORCE ACCOUNT WORK - 2023

Structure	Township	Plan	Cost
1575-1520	Montgomery	Replace-Steel Superstructure	\$493,591

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
Mifflin	1808-1345*	20 tons
Montgomery	1356-1021!	35 tons
Perry	13-1210*	15 tons
Clear Creek	658-1340	6+ axle – 31 tons
Green	2654-800	3 axle – 23 tons
Montgomery	1600-720	3 axle – 23 tons
Perry	1550-50	2 axle – 12 tons 3 axle – 14 tons 4 axle – 14 tons 5 axle – 16 tons 6+ axle – 18 tons 18 Wheeler – 25 tons
Vermillion	585-2060	4 axle – 25 tons 5 axle – 27 tons 6+ axle – 28 tons

* 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. We replaced Mohican Twp. bridge structure #30A-450 on County Road 30-A this year using Ohio Public Works Funds for a cost of \$853,876, VO Menezes & Son, Inc. was the contractor for this project.

Culverts:

2022 EXPENDITURES: \$250,842

2023 PROJECTED EXPENSES: \$260,000

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-2022

Culvert work done in 2022 included replacements, extensions, and general repair. Three culverts were replaced. The major culvert projects and their costs are listed in the table below.

Culvert	Township	Description	Cost
251-75	Jackson	73"x55"x30' CMP 60"x40' plastic	\$18,978
500-77	Jackson	96"x72"x50' CMP 40'x8'x5' concrete box	\$44,033
2400-1	Lake	94'x36" stone 60'x24" Plastic	\$17,832
2575-13	Lake	48"x56' CMP 48"x60' Plastic	\$15,461

Proposed Culvert Work - 2023:

Each year we determine which culverts to replace by considering condition and/or length (short lengths limit road width.) Below is a list of culverts that will be replaced in 2023.

CULVERT REPLACEMENTS PROPOSED-2023			
Culvert	Township	Existing / Planned Replacement	Estimated Cost
175-111	Perry	87" Steel 60" Plastic	\$18,252
917-7	Green	84" CMP 60" Plastic	\$31,119
1353-16	Milton	103"x71"x60' CMP 8'x5'x40' Concrete Box	\$71,114
16-26	Ruggles	12"x36' CIP/St 12"x40' Plastic	\$4,303
175-21	Lake	18"x43' Concrete 18"x50' Plastic	\$5,793
175-29	Mohican	78"x48' Steel 60" Plastic	\$32,606
530-15	Jackson	20"x33' Steel 18" Plastic	\$5,057
601-33	Orange	24"x54' Steel 24"x60' Plastic	\$9,692
601-38	Orange	64"x43"x50' CMP 64"x43"x60' CMP	\$40,416
655-11	Vermillion	12"x45' Steel 12"x50' Plastic	\$4,980
775-36	Green	18"x48' CIP 18"x50' Plastic	\$11,535
775-45	Green	54"x40' CMP 60"x60' Plastic	\$29,846
775-46	Green	48"x37' CMP 48"x60' Plastic	\$23,889
775-59	Vermillion	12"x32' CIP/St 12"x40' Plastic	\$4,579
791-35	Troy	12"x50' Steel 12"x50' Plastic	\$5,461
801-5	Orange	12"x36' CMP 12"x40' Plastic	\$3,408
500-75	Jackson	15"x42' CMP/CIP 18"x50' Plastic	\$6,334

Roads Section:

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 2022 and our plans for 2023.

Paving

In 2022, 20.37 miles of road were paved with 1½” hot mix asphalt by Sarver Paving Co. at an expenditure of \$1,633,340 for a cost of \$80,183 per mile. The chart below itemizes the roads paved under this contract.

Road	Mileage	Begin	End
CR 1075	3.346	SR 95	SR 39
CR 40	5.557	CR 1031	SR 58
CR 175	6.626	SR 302	CR 500
CR 2575	4.841	SR 60	SR 179

Below is a list of roads to be paved in 2023.

Road	Mileage	Begin	End
CR 956	2.156	CR 1353	US 250
CR 500	6.446	SR 511	CR 281
CR 601	2.621	ASHLAND RR	SR 58
CR 1302	3.246	SR 89	US 250
CR 2000	3.557	CR 2175	CR 175

Sealing

Sealing roads extends the life of the pavement and is much cheaper than paving. During 2022, about 50.462 miles of roads throughout the County Road system were chip sealed by Melway Paving Co. using Ashland County materials. Melway Paving Co. was paid \$208,134 for their labor and used \$696,700 worth of materials. The total cost of the sealing program was \$904,834, which is a cost of about \$17,931 per mile. For 2023, we anticipate sealing close to 45 miles.

Patching

In addition to the contract work done by Sarver Paving Co. and Melway Paving Co., our own workforce spent 1721 man hours in 2022 patching various road sections. The total cost for materials and equipment was \$96,193 to perform this type of work.

Pavement Marking

All roads received new pavement marking during 2022. The roads were marked with centerlines, edge lines, turning lanes, and school zones by American Roadway Logistics who was paid \$233,336. We plan to repeat this pavement marking program in 2023.

Roadside Maintenance

During 2022, the County Highway Department spent the following amounts maintaining county rights-of-way: Ditching/Sloping - \$107,343; Berming - \$66,099; Road Cleaning - \$1,730; Mowing – \$158,169; Brush Cutting - \$136,595; Spraying - \$6,828; Erosion Protection - \$2,861. This totals \$479,625 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 2022, there were 55 residential driveways; 17 field drives, 20 ditch enclosures; 2 commercial drives; 46 utility work projects; and 1 ditching permit.

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 2022, the following permits were issued: 17-construction equipment; 1-trip & return (14 days); 4-monthly multiple move; 1-annual overwidth .

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 2022 was \$55,719. We anticipate spending \$70,000 for sign work in 2023. The signs are tested each year with a retroreflectometer to determine their effectiveness.

Snow and Ice Control

In 2022, we spent \$337,853 on snow and ice control. The chart below shows the snow and ice control trend for the past five years:

Snow & Ice Control	2017-18	2018-19	2019-20	2020-21	2021-22
# of days with snow	48	49	40	53	52
Inches of snowfall	46.30	45.80	17.40	38.90	39.50
Tons of Salt & Grits used	4,181	7,234	4,297	4,962	4,538
Hours of labor	4,222	4,044	2,275	3,130	3,537

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 various locations.

In 2022, we spent \$1,251 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 2023. We are using federal safety funds administered through ODOT to replace and install guardrail in various locations. The contract work for this work was completed by Lake Erie Construction Co. for \$299,075. It is estimated that the 2023 Guardrail Project will cost \$296,143.

Equipment:

A total of \$934,690 was spent purchasing and servicing the equipment used to maintain the county road system. For 2022, we purchased 1 new Mower Max Mower-\$244,675; 1 new 100' Conveyor-\$195,966; 1 new 10' Broom-\$13,800.

Equipment Maintenance-2022			
\$480,249			
Parts	Labor	Outside Service	Fuel
\$105,163	\$73,365	\$149,179	\$152,542

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 \$8,662. An additional \$33,135 was paid for utilities bringing the entire amount paid for maintaining the Engineer’s work and office space in 2022 to \$41,797.

Personnel:

During 2022, there were changes in personnel working for the Ashland County Engineer:

Engineer’s Office: There were no changes in the office staff in 2022.

Highway Department: The Highway Department had 4 employees resign and one passed away in 2022. In 2022, six employees were hired. Replacements are currently being interviewed and hired.

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.

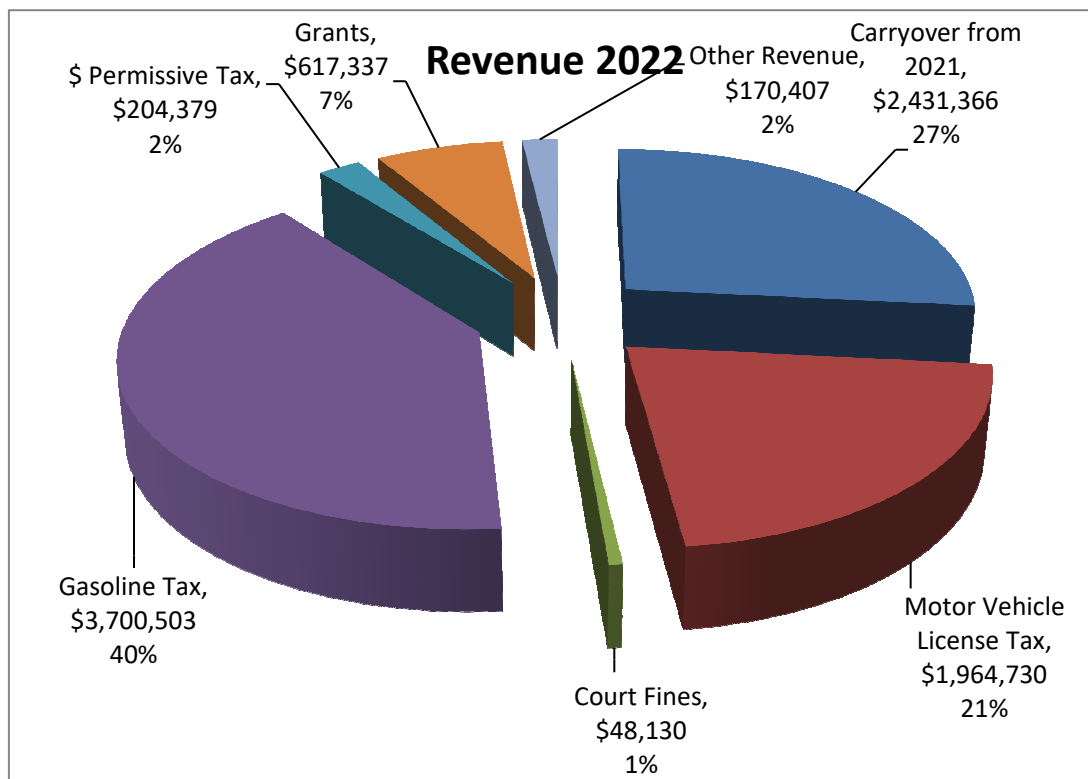
TAX MAP DATA - 2022			
Deed Transfers	2,561	Surveys reviewed/approved	170
New Parcels transferred by deeds	199	New Parcels surveyed (created by survey docs-not necessarily transferred)	214

Financial Information for 2022:

As the chart indicates, 40% 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 21% 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 (2%) 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, 22% of the expenses are for Materials, 19% for Payroll and Benefits, 18% is Carryover to 2023, 33% for Projects, 5% for Contract Repairs/Services, and 3% for Highway Equipment.

