



2021 Annual Report

Ashland County Engineer's Office & Highway Department

Ashland County Commissioners
Ashland, Ohio 44805

February 10, 2022

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 2021 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 2022. 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

Contents	
Bridges	2-4
Culverts	4-5
Roads	5-7
Equipment	8
Buildings & Grounds	8
Personnel	8
Tax Map	9
Financial Information	9-10

Bridges:

2021 EXPENDITURES: \$202,135 2022 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 2021, Guy Keener of the Ashland County Engineer’s Office inspected the 232 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	27
SATISFACTORY	48
GENERAL GOOD	58
VERY GOOD	77
NEW	11

BRIDGE SUFFICIENCY RATINGS	
(DOES NOT INCLUDE BORDER BRIDGES)	
Sufficiency Rating	# of Bridges
< 50%	4
50% - 59%	7
60% - 69%	9
70% - 79%	19
80% - 89%	59
90% - 100%	123

*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 – 2021:

County workers performed routine maintenance and repair work on 11 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 \$56,759.

BRIDGE FORCE ACCOUNT WORK - 2021

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 2021 using County resources.

Structure	Township	Plan	Cost
775-2080	Vermillion	Replace	\$38,423
601-810	Orange	Replace	\$59,772
1037-2570	Green	New Beams/Deck	\$47,180

PROPOSED BRIDGE FORCE ACCOUNT WORK - 2022

Structure	Township	Plan	Cost
555-1780	Vermillion	Replace-Steel Superstructure	\$220,863
984-1025	Orange	Replace	\$50,535
1775-640	Montgomery	Replace	\$32,386

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

Township	Structure	New Load Limit
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

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 #175-1960 in 2021 using State Exchange Funds administered by ODOT at a cost of \$702,861. The plan is to replace Structure #30A-450 on County Road 30-A in Mohican Township this year using Ohio Public Works Funds.

Culverts:

2021 EXPENDITURES: \$77,336 2022 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-2021			
Culvert work done in 2021 included replacements, extensions, and general repair. Four culverts were replaced. The major culvert projects and their costs are listed in the table below.			
Culvert	Township	Description	Cost
1975-12	Mohican	36"x37' cast iron 36"x40' plastic	\$10,027
30A-12	Vermillion	30"x74' corrugated metal 30'x80' plastic	\$14,413
2160-2	Mohican	96"x43"28' wood 49'x33'x40' CMP	\$8,074

Proposed Culvert Work - 2022:

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 five culverts in 2022.

MAJOR CULVERT REPLACEMENTS PROPOSED-2022			
Culvert	Township	Existing / Planned Replacement	Estimated Cost
175-111	Perry	87"x47' steel 73"x55"x40' CMP	\$18,252
500-77	Jackson	72"x96"x50' corrugated metal 8'x5' concrete box	\$38,412
2575-13	Lake	48"x56' CMP 48"x60' Plastic	\$24,075
251-75	Jackson	73"x55" MP Arch 60" Plastic	\$22,526
917-7	Green	84" CMP 60" Plastic	\$31,119

Roads Section:

2021 EXPENDITURES: \$3,813,559 2022 PROJECTED EXPENSES: \$4,000,000

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 2021 and our plans for 2022.

Paving

In 2021, 22.319 miles of road were paved with 1½" hot mix asphalt by Sarver Paving Co. at an expenditure of \$1,714,526 for a cost of \$76,819 per mile. The chart below itemizes the roads paved under this contract.

Road	Mileage	Begin	End
CR 1575	2.664	US 250	CR 1600
CR 1600	1.034	CR 1575	SR 89
CR 30A	8.116	Mifflin	Jeromesville
CR 1302	4.135	US 42	SR 89
CR 775	3.586	Loudonville	SR 95
CR 758	2.784	Richland County Line	US 250

A spring assessment will determine the paving to be done in 2022.

Sealing

Sealing roads extends the life of the pavement and is much cheaper than paving. During 2021, about 51.054 miles of roads throughout the County Road system were chip sealed by Melway Paving Co. using Ashland County materials. Melway Paving Co. was paid \$170,914 for their labor and used \$591,094 worth of materials. The total cost of the sealing program was \$762,008, which is a cost of about \$14,926 per mile. For 2022, we anticipate sealing close to 50 miles.

Patching

In addition to the contract work done by Sarver Paving Co. and Melway Paving Co., our own workforce spent 2088 man hours in 2021 patching various road sections. The total cost for materials and equipment was \$96,849 to perform this type of work.

Pavement Marking

All roads received new pavement marking during 2021. The roads were marked with centerlines, edge lines, turning lanes, and school zones by JD Striping & Service, Inc. who was paid \$227,994. We plan to repeat this pavement marking program in 2022.

Roadside Maintenance

During 2021, the County Highway Department spent the following amounts maintaining county rights-of-way: Ditching/Sloping - \$131,999; Berming - \$125,399; Road Cleaning - \$1,343; Mowing – \$137,280; Brush Cutting - \$161,798; Spraying - \$5,937; Erosion Protection - \$15,523. This totals \$588,750 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 2021, there were 42 residential driveways; 13 field drives, 23 ditch enclosures; 2 commercial drives; and 40 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 2021, the following permits were issued: 9-construction equipment; 11-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 2021 was \$111,419. We anticipate spending \$70,000 for sign work in 2022. The signs are tested each year with a retroreflectometer to determine their effectiveness.

Snow and Ice Control

In 2021, we spent \$297,167 on snow and ice control. The chart below shows the snow and ice control trend for the past five years:

Snow & Ice Control	2016-17	2017-18	2018-19	2019-20	2020-21
# of days with snow	32	48	49	40	53
Inches of snowfall	31.10	46.30	45.80	17.40	38.90
Tons of Salt & Grits used	5,168	4,181	7,234	4,297	4,962
Hours of labor	2,799	4,222	4,044	2,275	3,130

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 2021, we spent \$9,471 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 2022. 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 \$263,673. It is estimated that the 2022 Guardrail Project will cost \$291,667.

Equipment:

A total of \$629,084 was spent purchasing and servicing the equipment used to maintain the county road system. For 2021, we purchased 2 new Freightliners - \$207,480; 1 new Dodge pickup truck - \$24,782.

Equipment Maintenance-2021			
\$396,822			
Parts	Labor	Outside Service	Fuel
\$107,105	\$70,421	\$102,666	\$116,630

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 \$6,959. An additional \$31,022 was paid for utilities bringing the entire amount paid for maintaining the Engineer's work and office space in 2021 to \$37,981.

Personnel:

During 2021, there were changes in personnel working for the Ashland County Engineer:

Engineer's Office: In June, 2021 there was one addition to the office staff.

Highway Department: The Highway Department had five employees retire in 2021, two employees resigned. Mark Stauffer, Road Superintendent, retired after 44 years of experience. I appreciate Mark's loyalty to Ashland County. In 2021, 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.

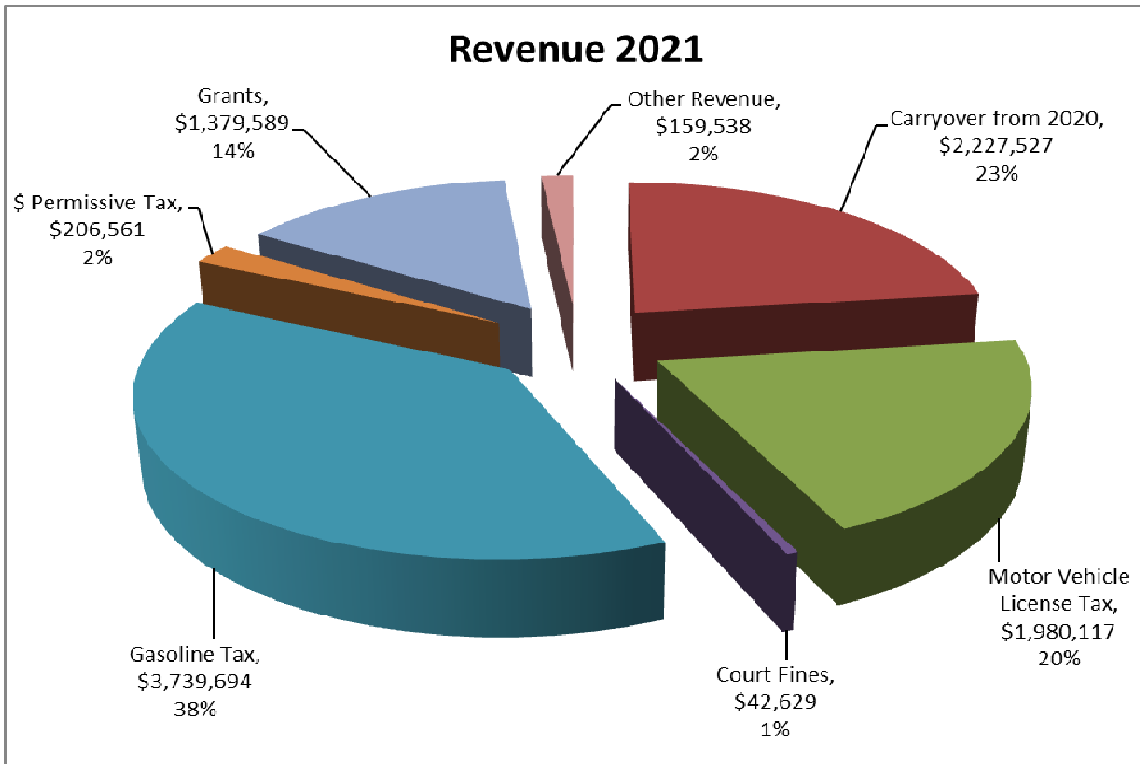
TAX MAP DATA - 2021			
Deed Transfers	2,536	Surveys reviewed/approved	191
New Parcels transferred by deeds	272	New Parcels surveyed (created by survey docs-not necessarily transferred)	279

Financial Information for 2021:

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 20% 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, 15% of the expenses are for Materials, 18% for Payroll and Benefits, 25% is Carryover to 2022, 37% for Projects, 2% for Contract Repairs/Services, 3% for Highway Equipment.

