

Monroe County Engineer
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Annual Report for 2022

January 19, 2023

Per the Ohio Revised Code, Section 5543.02, I am providing an annual report for the review and record of the Monroe County Commissioners. This report will provide a summary of the activities during the calendar year on County-owned roads, bridges and other infrastructure.

The County Engineers office is responsible for the maintenance and upkeep of **372 miles** of County Roads, including all drainage, culverts, signs, mowing, guardrail, snow/ice treatment and embankment stability. The Engineer's office is also responsible for all bridges on County Roads, and bridges on Township Roads. The current number is **179 bridges** on the County Engineers inventory.

The County Engineers budget is financed through a gasoline tax and a vehicle registration tax, as well as minor income from permit fees and sales/services. For several years, this financing has been extremely lacking, limiting the Engineers office's ability to maintain roads and bridges at a safe and good condition. Whenever possible, Federal grant money and Ohio Public Works funds have been applied for, to replace those lacking funds. In more recent years, Oil & Gas industry has moved into Monroe County and the Operators have contributed significantly to the upgrade/improvements of the County's infrastructure. In 2020 and continuing through 2022, Oil & Gas activity took a major downturn in Monroe County, which is reflected in the decrease in permits, RUMAs, and road upgrades/improvements.

In a continued effort to generate additional income and close the gap in the Engineers needed funds, the option of enacting additional permissive vehicle registrations has been discussed multiple times. The Commissioners held the two required public hearings in April 2019. Based on public input, the motion was made against enacting any additional permissive taxes at this time. This topic was revisited in discussions between Commissioners and Engineers offices since 2019, but has not been pursued any further.

Thanks to the efforts of many individuals across Ohio, in mid-2019 the State approved an increase in the rate and modification of the distribution of revenue from motor fuel excise taxes (fuel tax). This increase took effect July 1, 2019. Projected data for 2020 indicated that each County Engineer would receive an additional \$1 to \$1.5 million. Unfortunately, with the COVID-19 pandemic occurrence, the impact of the fuel tax increase was offset by the sudden decrease in fuel consumption. The long-term effect of COVID-19 on remote-working is anticipated to reduce the fuel consumption permanently, with an estimate of 25% reduction in fuel excise tax income for County Engineers.

While the County Engineers office continues to stretch each dollar as far as we can, by applying for as many grants as we can afford to match, performing work in-house when cost-effective, and working with Oil & Gas operators to cost-share on projects, the funds required to maintain "status-quo" are still not able to be met solely on the Engineers budget alone. Future plans of additional funding sources will need to be seriously considered, in order to prevent our county infrastructures deterioration.

Please continue to the following pages for more detailed information on the projects and activities of the Engineers Office in 2022.

COUNTY PERMIT SUMMARY

Special haul permits

Special Haul Permits Summary	2022	2021	2020	2019	2018	2017
Total Permits Approved	282	340	202	526	787	632
Total permit fees received	\$32,425.00	\$33,775.00	\$26,225.00	\$61,500.00	\$85,625.00	\$78,803.50
Total fees paid to consultants	\$0.00	\$0.00	\$0.00	\$0.00	\$1,500.00	\$13,931.50
Total bridges analyzed (at least once)	1	9	4	6	5	35
Total bridges analyzed that were not passable	0	2	0	1	0	13

Right of Way Work permits

Right-of-Way work Permits Summary	2022	2021	2020	2019	2018	2017
Total Permits Approved	106	109	155	156	205	171
Total permit fees received by County	\$3,580.00	\$3,830.00	\$4,090.00	\$4,549.00	\$6,770.00	\$6,840.00
Total permit fees paid to Townships	\$550.00	\$500.00	\$500.00	\$900.00	\$950.00	\$1,625.00

COUNTY EQUIPMENT PURCHASES/SALES

Since the onset of the COVID-19 pandemic, trucks and equipment purchases have been delayed and/or there are significant backlogs in production. The new trend that seems to be forming is to order a truck or new equipment, then wait up to 12 months for delivery. In some cases, the number of orders being taken per year is limited, and the option to order is not even possible. Below is a summary of equipment purchases made in recent years, with notes where equipment funds were encumbered in one year, but the equipment was not received until the following year:

Equipment	2022	2021	2020	2019	2018
2019 F250 Regular Cab Truck x 3					\$89,111.49
John Deere 710 Backhoe Loader					\$143,313.52
Wacker BS60-4A Compactor					\$2,682.00
Meyer Snow Plow & Install x 3					\$16,356.00
Tiger Model Ditch Cleaner Attachment					\$9,250.00
2020 f450 Regular Cab Truck x 1				\$40,136.00	
2021 International HV507 Dump w/ Plows x 2			\$296,728.46		
2018 Case 621G Wheel Loader			\$139,750.00		
2016 Gradall D152			\$149,900.00		
2019 Bomag Roller			\$99,900.00		
2018 Bomag Roller		\$47,500.00			
2018 Felling Tilt Trailer (Used)		\$4,605.13			
2022 F250 Regular Cab Truck		\$35,712.00			
John Deere 6110M Tractor x 2	Received	\$159,534.72			
Alamo 22' Samurai Boom Mower x 2	Received	\$107,254.40			
2022 F250 Regular Cab Truck	\$37,175.00				
2022 F250 Regular Cab Truck	\$45,420.00				
Total	\$82,595.00	\$354,606.25	\$686,278.46	\$40,136.00	\$260,713.01

As vehicles and equipment age through many hours of use, or through the normal course of technology improvements, they reach a point where they become obsolete, unfit or unneeded for public use. At this point the Engineers Office requests approval from the Commissioners to dispose of these pieces of equipment, either through sale or proper method of disposal. With the difficulty and delay in purchasing new equipment, the Engineers office did not find it prudent to dispose of any currently owned equipment in 2022.

PERSONNEL ACTIVITY

Retirements

NONE

Promotions

NONE

New Hires/Transfers

Tom Harris, Laborer in Bargaining Unit, hired January 3, 2022

Tim Lumbatis, Tax Map Supervisor, hired March 21, 2022

Resignations/Terminations

Marica Wolfe, Tax Map Supervisor, resigned February 24, 2022

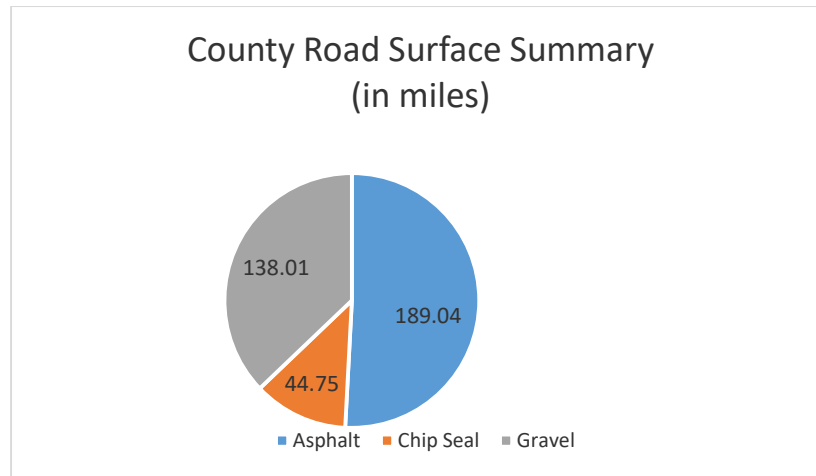
Seasonal Hires

The Engineers Office typically hires seasonal (summer) employees to assist with the increased work load that generally occurs during the summer months. For the 2022 summer season, seven seasonal employees were hired to work various timeframes between May and September. These seasonal workers greatly increase our ability to form multiple work crews and complete several more projects than in the off-season. The total cost for all seasonal employees for 2022 was \$41,980.06.

ROAD & BRIDGE INVENTORY

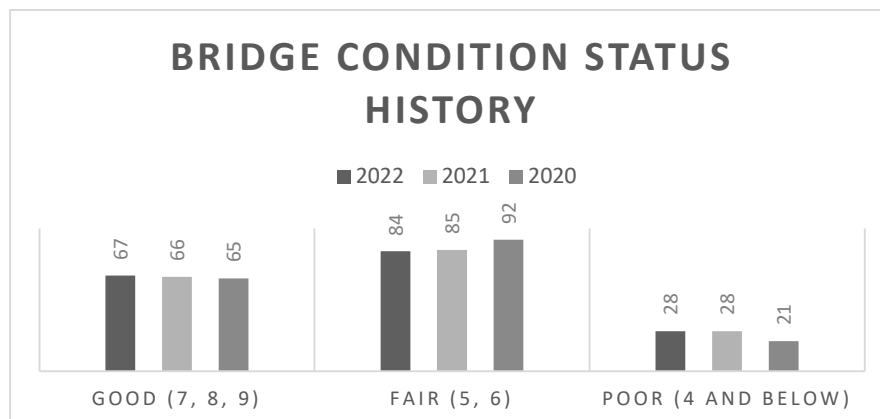
Monroe County roads are composed of a combination of three types of road surfaces: Asphalt, Chip Seal and Gravel. In recent years, Oil & Gas operators have upgraded several miles of County roads that were previously gravel or chip seal, to asphalt. However, we continue to have nearly 140 miles of gravel County roads, and approximately 45 more that are chip seal.

Road Surface Type	Miles (2017)	% in 2017	Miles (2022)	% in 2022
Asphalt	160.113	43.17%	189.04	50.84%
Chip Seal	54.544	14.71%	44.75	12.04%
Gravel	156.191	42.12%	138.01	37.12%



All bridges on the County inventory are inspected at least annually and rated on a scale from 1-9, with “9” being new or like new condition. Below is a summary of the rating conditions from 2022 for all bridges on the County inventory.

	2022	2021	2020	
Bridge Inventory Condition Status	# of Bridges	# of Bridges	# of Bridges	%
Good (7, 8, 9)	67	66	65	36.87%
Fair (5, 6)	84	85	92	47.49%
Poor (4 and below)	28	28	21	15.64%
Total	179	179	178	100.00%



When a bridge is unable to support the required Ohio Legal Loadings, it is load-posted with signage to indicate to the traveling public what weights are allowed to cross the structure safely. Below is a summary of the posted bridges over the past years.

Load Posted Bridges	2022	2021	2020	2019	2018	2017
Number of Posted Bridge	35	34	31	32	31	25
% of Total	19.55%	18.99%	17.42%	17.98%	17.42%	14.04%

FUNDED PROJECTS SUMMARY – COMPLETED & ACTIVE

Each year the County Engineers office applies for several types of funding, which have specific targets or qualifications that determine what roads, bridges, etc. the funding can be used on. Nearly every funding source also requires local participation through funding match or in-house contributions of labor, equipment and/or materials. Below is a summary of the projects either completed or on-going in 2022, with funding sources associated. Rows that are shaded are complete and the rows with white background are on-going. More details on each project will be included in the following sections of this report.

Bridge/Road Number/Description	Percent Funded	Project Total Cost	Funding Year
County-wide FEMA disaster 4360	FEMA 75%, State 25%	\$6,169,073.90	2018
County-wide FEMA disaster 4424	FEMA 75%, State 25%	\$15,793,907.03	2019
County-wide State disaster	EMA 75%, Local 25%	\$4,298,328.02	2020
MOE - CR12-18.00	Engineering - Local responsibility Construction-100% funded	\$331,175.00	2022
CR28	100% (\$500,000 max)	\$500,000.00	2022
CR37-0.30	OPWC \$179,000, County provide Design	\$143,765.35	2022
CR2-7.34	OPWC \$187,000, County provide Design	\$171,376.60	2022
CR10-8.07	OPWC \$342,900, County Provide design	\$381,000.00	2022
County-wide State disaster (February)	EMA 75%, Local 25%	\$28,408.65	2022
County-wide State disaster (May)	EMA 75%, Local 25%	\$198,903.21	2022
County-wide State disaster (June)	EMA 75%, Local 25%	\$425,350.00	2022
MOE-TR1004-2.27	80% FLAP/20% Local	\$855,320.00	2023

MOE-T0183-0.13	100%	\$465,000.00	2023
MOE-T2001-0.13	100%	\$450,000.00	2023
CR9A	OPWC \$400,000 grant/\$258,000 Loan, \$234,793 County	\$892,793.00	2023
CR9A-0.52 Road Slip	OPWC \$180,100, County \$65,000	\$245,100.00	2023
MOE-TR0307-0.75	80%	\$1,106,000.00	2024
MOE-TR1004-2.27	100%	\$800,000.00	2024
MOE-T0183-00.50	100% Design/Construction , Local pays CE/Inspection	\$751,000.00	2025
MOE-TR1206-0.01	80%	\$425,000.00	2024
Curve Signage - 3 locations	100%	\$3,940.00	FY2022
Sign Upgrade project - Various signs	80%	\$2,700.00	FY2022
MOE-C28-0.56	80% LBR, 15%Credit Bridge, 5% Local	\$760,000.00	FY2023
MOE-TR199-2.38 & 2.57	OPWC \$400,000 grant/\$350,000 Loan	\$750,000.00	FY2023
MOE-C29-6.95	80%	\$425,000.00	FY2023
CR12 (SR26 to SR800) FDR& Paving	CSTP \$2,000,000 cap, OPWC \$400,000 grant, remainder local	\$3,571,140.00	FY2023/24
CR106	100% (\$401,189 max)	\$406,674.89	FY2023
Curve Signage - 1 location	100%	\$3,600.00	FY2023
Sign Upgrade project - Various signs	80%	\$10,000.00	FY2023
Various GR (CR2, CR37, CR22, CR43, CR138)	100%	\$300,000.00	FY2023

Infrastructure Improvements, Repairs & Maintenance

The County Engineers Office manages several types of projects each year in order to maintain, and hopefully, improve our County's Roads and Bridge system. Routine project types are:

- (1) Slip Repairs
- (2) Culvert Repairs & Maintenance
- (3) Road Repairs & Maintenance
- (4) Bridge Repairs & Maintenance

These infrastructure improvements, repairs and maintenance are achieved through a number of methods:

- (1) In-house/Force Account – County employees, equipment and material are used
- (2) Contracted out – County awards project(s) to contractor(s). Typically, this is done when the County forces are unable to perform the work needed.
- (3) Outside entity contract – An entity other than the County contracts work to be done on County-owned infrastructure through a Road Use agreement or permit. Typically, this will be done by an Oil & Gas Operator.
- (4) Funded - Funding authority awards project(s) to contractor(s). This can include funds that the County applied for, or funds that were made available due to a weather event, such as flooding.

In the following several sections, summaries and information will be provided on the many different types of projects completed this year.

SLIP REPAIRS

Slip Repairs In-House/Force-Account

Project Type	Route/Location	Force Account Cost
PILING WALL MAINTENANCE	CR96-0.74	\$3,274.99
PILING WALL MAINTENANCE	CR96-0.65	\$1,583.90
PILING WALL MAINTENANCE	CR96-0.36	\$2,296.20
SLIP REPAIR-ROCK EMBANKMENT	CR12-18.20	\$11,178.99
SLIP REPAIR MAINTENANCE	CR43-0.60	\$4,538.39
SLIP REPAIR-PIPE PILING	CR43-1.40	\$54,366.38
SLIP REPAIR-PIPE PILING	CR43-0.80	\$37,954.45
SLIP REPAIR-PIPE PILING	CR105B-0.30	\$43,977.70
SLIP REPAIR-PIPE PILING	CR77-5.30	\$21,771.64
SLIP REPAIR-PIPE PILING	CR68-4.20	\$25,610.72
SLIP REPAIR-PIPE PILING	CR68-1.70	\$37,208.83
SLIP REPAIR-PIPE PILING	CR64-1.28	\$37,860.82
SLIP REPAIR-PIPE PILING	CR13-3.80	\$41,209.38

Total Slip Repair Project force account costs for 2022 = \$322,832.39

Historical Force Account costs:

2019 = \$ 26,357.13

2021 = \$57,775.17

2018 = \$67,016.52

2020 = \$227,025.12

2017 = \$139,117.14

Slip Repairs EMA Funded

2020 EMA Event

A total of 75 slips/damage areas qualified and were reported under the EMA event that occurred in spring of 2020. These projects are only partially funded by EMA state disaster funds (75% of contract work, approximately 60% of Force Account work). The County Engineers budget must cover the remaining costs.

Several of the EMA-approved projects were completed in 2021 & 2022, with the remainder having the design work complete and awaiting construction. Below is a summary of all approved EMA projects, to-date, with the highlighted projects being 100% completed by end of year 2022:

Road No.	Log Point	Type of Repair	Contract/Force Account
2	0.24	Pipe Piling	Force Account
2	0.60	Pipe Piling	Force Account
2	0.70	Pipe Piling	Force Account
2	1.20	Pipe Piling	Force Account
2	3.41	H-Piling	Contract
2	6.25	Pipe Piling	Force Account
4	0.60	H-Piling	Contract
4	0.70	H-Piling	Contract
4	3.40	Pipe Piling	Contract
4		Debris & Mud Removal - County Forces	Force Account
5	1.80	Gabions	Contract
11	1.75	Pipe Piling	Force Account
11	2.10	Pipe Piling & add guardrail backing	Force Account
12	0.40	H-Piling	Contract
12	0.90	H-Piling	Contract
12	18.20	Rock Embankment	Force Account
13	3.80	Pipe Piling	Force Account
15	8.32	Pipe Piling with Rock Channel Protection	Force Account
15	8.35	Pipe Piling with Rock Channel Protection	Force Account
16	6.57	H-Piling	Contract
17	0.60	Rock Embankment	Contract
17	1.00	H-Piling	Contract

22	1.50	H-Piling	Contract
22	1.70	H-Piling	Contract
22	2.01	H-Piling	Contract
24	0.1	Rock Embankment	Contract
25	2.068	H-Piling	Contract
25	3.80	H-Piling	Contract
26	3.90	H-Piling	Contract
26	4.26	H-Piling	Contract
27	3.10	H-Piling	Contract
29	0.5	H-Piling	Contract
29	9.24	Rock Embankment	Contract
33	1.28	Pipe Piling	Force Account
38	2.6	H-Piling	Contract
39	2.60	H-Piling	Contract
40	4.40	H-Piling	Contract
40	4.70	H-Piling	Contract
42	2.49	Pipe Piling	Force Account
42	3.90	Rock Embankment	Force Account
42		Debris & Mud Removal - County Forces	Force Account
43	0.80	Pipe Piling	COMBINED
43	1.40	Pipe Piling	COMBINED
43	4.90	Pipe Piling	COMBINED
44	0.90	Rock Embankment	Contract
45	1.90	Pipe Piling	Force Account
47	2.15	Rock Embankment	Force Account
47	2.40	Pipe Piling	Force Account
47	3.60	Pipe Piling	Force Account
47	3.70	Pipe Piling	Force Account
53	1.553	Rock Embankment	Contract
53	3.30	Pipe Piling	Force Account
57	0.40	Rock Embankment	Contract
60		Debris & Mud Removal - County Forces	Force Account
64	1.95	H-Piling	Contract
65	0.08	Pipe Piling	Force Account

68	1.7	Pipe Piling	Force Account
68	4.2	Pipe Piling	Force Account
73	8.505	Pipe Piling	Force Account
73	8.8	Pipe Piling	Force Account
77	5.3	Pipe Piling	Force Account
79	4.10	H-Piling	Contract
79	5.50	H-Piling	Contract
81	1.59	H-Piling	Contract
81	1.96	H-Piling	Contract
84	2.10	Pipe Piling	Force Account
88	3.90	Rock Embankment	Force Account
89		Debris & Mud Removal - County Forces	Force Account
11S	0.50	Pipe Piling	Force Account
11S	0.60	Pipe Piling	Force Account
11S	3.20	H-Piling	Contract



County Forces
installing Pipe Piling
Walls

Slip Repairs Contracted -None in 2022

Slip Repairs OPWC Funded

CR2-7.34 – Stahl Sheaffer was awarded the geotechnical analysis contract at this location, for a total cost of \$14,225. The County Engineers office then prepared the design plans for a Drilled Shaft H-Piling retaining wall repair, for an in-kind match value of \$16,680.32. Construction was awarded to Ohio-West Virginia Excavating for a total cost of \$134,855.78 and construction inspection was performed by True Inspection Services at a cost of \$5838.00. Ohio Public Works Emergency funds were used to pay for all of the contracted work, with the Engineers office supplying the in-kind design work as local match.

CR37-0.30– Stahl Sheaffer was awarded the geotechnical analysis contract at this location, for a total cost of \$13,780. The County Engineers office then prepared the design plans for a Drilled Shaft H-Piling retaining wall repair, for an in-kind match value of \$16,680.32. Construction was awarded to Ohio-West Virginia Excavating for a total cost of \$110,032.53 and construction inspection was performed by True Inspection Services at a cost of \$3050.00. Ohio Public Works Emergency funds were used to pay for all of the contracted work, with the Engineers office supplying the in-kind design work as local match.



Slip Repairs FEMA Funded

2019 FEMA Event

A total of 206 slips qualified and were reported under the FEMA event that occurred in February, 2019. Of the total, 130 locations have been validated by FEMA to-date. NRCS claimed authority over and approved repairs for 24 locations, which are all complete. The following projects are in progress and are anticipated to be completed in 2023:

CR35-1.00 – H-pile retaining wall complete. Asphalt Road repairs to be completed.

CR79-4.50 – H-pile retaining wall complete, along with asphalt road base repairs. Asphalt surface to be completed.

CR16B Improved Project – Culvert installations are complete. Cement Stabilization and chip seal surface to be completed.

CR45-0.74/1.92 – H-pile retaining walls complete. Asphalt road repairs to be completed.

CR64-0.27 – Design complete. Construction to be completed.

CR47-3.95 – Design and construction to be completed.

CR26-6.43 – Design is underway. Construction to be completed.

All FEMA qualified projects are funded 75% by FEMA and 25% by the State of Ohio, EMA. No local match is required. The remaining 52 locations have been appealed and denied, leaving a large amount of damage for the County to fund repairs. These locations are not anticipated to be repaired immediately, as there are no available funds in the Engineers budget to perform the work.



CR22-1.94 DENIED
FEMA FUNDING

CR96-1.15 & 1.17
Completed Walls



CULVERT REPAIRS AND MAINTENANCE

Culvert Replacement In-House/Force-Account

Project Type	Route/Location	Force Account Cost
CULVERT REPLACEMENTS	CR100-0.83 & 1.02	\$6,115.11
CULVERT REPLACEMENTS	CR77-3.68	\$3,504.11
CULVERT REPLACEMENTS	CR25	\$4,621.25
CULVERT REPLACEMENTS	CR16B-0.015 & 0.06	\$4,578.72
CULVERT REPLACEMENTS	CR16-2.20	\$6,645.50
CULVERT REPLACEMENTS	CR12-0.37 & 0.55	\$13,808.22
CULVERT REPLACEMENTS	CR10-7.90 & 9.69	\$10,044.92
CULVERT REPLACEMENTS	CR5-1.01	\$3,081.22
CULVERT REPLACEMENTS	CR106	\$22,544.91
CULVERT REPLACEMENTS	CR12	\$238,176.89

Total Culvert Project force account costs for 2022 = \$313,120.85

Historical Force Account costs:

2019=\$246,008.63

2021 = \$222,653.84

2018 = \$102,593.82

2020 = \$410,673.08

2017 = \$518,126.46

	2022	2021	2020	
Culvert Inventory Condition Status	# of Culverts	# of Culverts	# of Culverts	% for 2022
Good (A)	935	749	1223	29.36%
Fair/Functional (B)	769	812	808	24.14%
Poor/Failed (C, D)	1481	1582	1257	46.50%
Total	3185	3143	3288	100.00%

Culverts Contracted/Funded – None in 2022

ROADWAY REPAIRS AND MAINTENANCE

Chip Seal In-House/Force-Account

Project Type	Route/Location	Force Account Cost
CHIP SEAL	CR96	\$92,120.71
DUST CONTROL CR9, CR67, CR11S	CR9, CR67, CR11S	\$17,865.96

Total Chip Seal Project force account costs for 2021 = \$109,986.67

Historical Force Account Costs:

2019 = \$9,726.54

2021 = \$745,130.64

2018 = \$32,027.65

2020 = \$221,313.00

2017 = \$79,268.10

Chip Seal Contracted/Funded - None in 2022

Emergency Services

Snow & Ice Removal - County forces provide snow & ice removal for all 372 miles of County Roads during the winter months. In 2022, a total of \$425,060.64 was spent on this service.

Labor = \$126,505.26

Materials = \$173,543.98

Equipment Usage = \$125,011.40

Debris & Tree Removal – County forces respond AFTER HOURS to trees and debris that fall into the roadway, causing a hazard for the traveling public. In 2022, over 295 man-hours were spent for a total of **\$11,294.69** in OVERTIME Labor costs for this service. Equipment and fuel costs are not included in the total. Debris & Tree removal during normal business hours is not included in the total.

All Emergency service costs are paid from by the County Engineers Budget.

Roadside Mowing

County-Wide Road side mowing - County forces provide roadside mowing for all 372 miles of County Roads throughout the year, with a goal to make at least 2 passes on each road annually and spend as much time as feasible to make additional passes to increase the width we can clear along the roads. In 2022, a total of **\$468,452.08** was spent on this service.

Labor = \$167,164.45 (5614 man-hours)

Equipment Usage = \$301,287.63

Miscellaneous Road Improvements In-House/Force-Account

Project Type	Route/Location	Force Account Cost
2022 SIGN INSTALLATION	COUNTY WIDE	\$6,131.94
MOWING 2022	COUNTY WIDE	\$468,452.08
ODOT Detour Maintenance	CR13	\$14,930.79
ROAD IMPROVEMENTS	CR96	\$430,297.44
SHOULDER BACK UP	CR106	\$19,434.82
SNOW & ICE 2022	COUNTY WIDE	\$425,060.64

Total Miscellaneous Road Improvement Project force account costs for 2022 = \$1,364,307.71

Historical Force Account costs:

2019 = \$567,101.21

2021 = \$1,536,274.54

2018 = \$110,527.00

2020 = \$852,472.59

2017=\$510,840.47

Miscellaneous Road Improvements Contracted

County Road 81 Asphalt Mill & Fill Repairs – Ohio West Virginia Excavating was contracted to perform Asphalt Mill & Fill patch repairs on specific locations of County Road 81, for a total cost of \$10,689.98. This work was funded through the Engineers Budget.

County Road 12 Asphalt Mill & Fill Repairs – Shelly and Sands was contracted to perform Asphalt Mill & Fill patch repairs on specific locations of County Road 12, for a total cost of \$11,000. This work was funded through the Engineers Budget entirely.

County Road 43 Asphalt Mill & Fill Repairs – Shelly and Sands was contracted to perform Asphalt Mill & Fill patch repairs on specific locations of County Road 43, for a total cost of \$10,300. This work was funded through the Engineers Budget entirely.

Miscellaneous Road Improvements Funded

Ohio Public Works Commission (OPWC) /CSTP Project – The 2022 OPWC project funding was paired with CSTP (County Surface Transportation Program) funds, to cement stabilize and resurface County Road 12, Greenbrier Road/Trail Run Road, for approximately 10.5 miles between Graysville and State Route 800. This project was originally slated for construction in July 2022, but due to drastically high bid pricing, the project scope was revised and re-bid in December 2022. County forces have completed all necessary culvert replacements. Construction is slated for 2023.

Local Roads Oil & Shale Program – CR106 Road Improvement project included culvert replacements, drainage improvements, asphalt overlay, paved shoulders and pavement marking. County forces replaced the culverts and performed the drainage grading for a total cost of \$22,544.91. The remaining work was bid through ODOT, awarded to Shelly and Sands Inc. and completed for a total cost of \$406,670.00. The Engineers budget contributed \$5,481.00, and the remainder was funded through the Local Roads program funding.

BRIDGE IMPROVEMENTS AND REPAIRS

In-House/Force Account

Total Bridge Project force account costs for 2022 = \$0.00

Historical force account costs:

2021= \$4,239.21

2020 = \$58,762.63

2019 = \$58,967.16

2018 = \$77,459.20

2017 = \$102,268.09

Contracted/Funded

CR28-0.56 Bridge replacement project design was completed in 2022. The bridge is slated for construction to start and complete in 2023. The design costs for the project are 100% funded through the Engineers budget, while the construction was 100% funded through FHWA/LBR Program funds.



CR29-6.95 Bridge replacement project design was completed in 2022. The bridge is slated for construction to start and complete in 2023. The design costs for the project are 100% funded through the Engineers budget, while the construction was 100% funded through FHWA/LBR Program funds.



TR199-2.38 Bridge replacement project design was completed in 2022. The bridge is slated for construction to start and complete in 2023. The design and construction costs are funded through Ohio Public Works Infrastructure Grant and Loan program.



TR199-2.38 Bridge to be replaced in 2023

TR199-2.57 Bridge replacement project design was completed in 2022. The bridge is slated for construction to start and complete in 2023. The design and construction costs are funded through Ohio Public Works Infrastructure Grant and Loan program.



TR199-2.57 Bridge to be replaced in 2023

TR307-0.75 Bridge replacement project design was completed in 2022. The bridge is slated for construction to start and complete in 2023. The design costs for the project are 100% funded through the Engineers budget, while the construction was 100% funded through FHWA/LBR Program funds.



TR307-0.75 Bridge to be replaced in 2023

TR183-0.13 Bridge replacement project design-build scope was completed in 2022. The bridge is slated for construction to start and complete in 2023. The design costs and construction will be 100% funded through FHWA/BFP Program funds.



TR183-0.13 Bridge to be replaced in 2023

TR2001-0.13 Bridge replacement project design-build scope was completed in 2022. The bridge is slated for construction to start and complete in 2023. The design costs and construction will be 100% funded through FHWA/BFP Program funds.



TR2001-0.13 Bridge to be replaced in 2023

TR1206-0.01 Bridge replacement design for this project will be completed by summer of 2023. The bridge is slated for construction to be complete by fall of 2024. The design costs and construction will be 100% funded through FHWA/BFP Program funds.



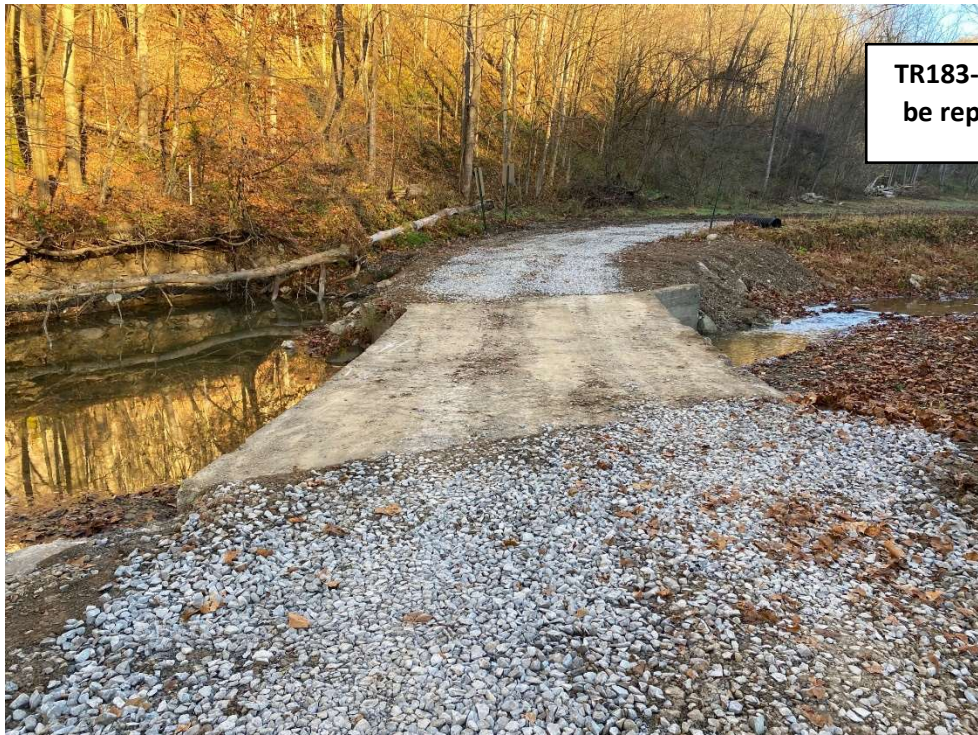
TR1206-0.01 Bridge to be replaced in 2024

TR1004-2.27 Bridge replacement design for this project will be completed by summer of 2023. The bridge is slated for construction to be complete in 2024. The design costs and construction will be shared funding through Federal Land Access Program and County Engineer budget funds.



TR1004-2.27 Bridge to be replaced in 2024

TR183-0.50 Bridge replacement design for this project will be completed by fall of 2023. The bridge is slated for construction to be complete by summer of 2025. The design costs and construction will be 100% funded through FHWA/BFP Program funds.



TR183-0.50 Bridge to be replaced in 2025

CR12-18.00 Bridge replacement project design was completed in 2020. The design costs for the project are 100% funded through the Engineers budget, while the construction was 100% funded through FHWA/Ohio Bridge Partnership Program funds and was completed in 2022.



BEFORE



**DURING
CONSTRUCTION**

OIL & GAS ACTIVITY

There are currently 14 different Oil & Gas Companies with at least one active RUMA in Monroe County. Over the past few years, several of the previous companies have merged or sold to form larger singular operators, and in the process, RUMAs have been combined into a “Master RUMA” which contains a list of all affected roadways for each Operator. While the miles of roadway under RUMA have not changed greatly, the number of RUMAs continues to decrease. Below is a summary of RUMA activity:

O & G RUMA Activity Summary	2022	2021	2020	2019	2018	2017
New RUMAs	3	6	7	13	30	30
Renewed RUMAs	5	6	42	46	19	41
Terminated/Modified RUMAs	4	*several RUMAs terminated to create a Master RUMA for each Operator	11	19	35	19
Total Number of Operators with at least one RUMA	14	14	19	23	23	19

As part of their activities, these Oil & gas Companies often need to improve the County’s current infrastructure. The following table is a summary of the Infrastructure Improvements made by Oil & Gas Companies in 2022. Maintenance items such as dust control and temporary patching are not included in this list.

<i>Company</i>	<i>Road #/Name</i>	<i>Improvement/Work Done</i>	<i>Total Cost of Improvements</i>
SWN	CR96, Baptist Ridge Road	FDR & Cement Stabilization	\$376,927.40
SWN	CR10, Benwood Road	Asphalt Overlay	\$239,100.00
SWN	CR84, John Lengacher Road	Base Repairs & Asphalt Overlay	\$480,110.20
Equinor	CR84, John Lengacher Road	Slip Repair	\$33,500.00
Equinor	CR84, John Lengacher Road	Asphalt Repairs	\$29,393.10
Equinor	CR26, Beautiful Ridge Road	Crack Sealing	\$11,166.00
Equinor	CR4, Sykes Ridge Road	Asphalt Mill & Fill	\$7,464.20
Equinor	CR4, Sykes Ridge Road	25% participation in 3 slip repairs	\$91,468.36
Antero Midstream	CR39, Harper Ridge Road	Slip Repair	\$163,766.00
Antero	CR33, Burckhart Middle Church Road	Asphalt Mill & Fills	\$25,234.00
Antero	CR69, Walter Ridge Road	Underdrain installations	\$43,195.43
Eureka Midstream/EQM	CR77, Barber Ridge Road	Ditching, Aggregate, Widening, Chip Seal repair	\$25,000.00
Eureka Midstream/EQM	CR45, Moose Ridge Road	Ditching, Aggregate, Widening, Base Repairs	\$40,000.00
TOTAL			\$1,566,324.69

COUNTY ENGINEER FUNDING, REVENUE & EXPENDITURES SUMMARY

Projects Summary

Road & Bridge Funding Summary	2022	2021	2020	2019	2018	2017
In-House/Force Account Funds	\$2,389,943.55	\$2,285,644.39	\$1,772,341.29	\$1,670,724.37	\$968,357.29	\$1,194,571.83
County Engineer (local match) funds	\$1,308,675.73	\$1,033,556.23	\$489,568.83	\$459,055.10	\$573,854.21	\$177,170.31
County General Funds	\$75,000.00	\$75,000.00	\$75,000.00	\$102,690.00	\$410,773.62	\$75,000.00
Oil & Gas Funds	\$1,566,324.69	\$2,321,668.18	\$4,795,921.00	\$10,401,034.55	\$9,610,872.72	
CDBG Funds	\$0.00	\$0.00	\$0.00	\$255,750.00	\$0.00	\$0.00
FHWA/ODOT Funds	\$708,938.31	\$2,319,559.46	\$51,795.38	\$1,778,428.08	\$1,089,558.59	\$449,069.09
OPWC Funds	\$367,961.31	\$1,211,814.10	\$603,596.70	\$652,275.00	\$400,000.00	\$374,772.14
FEMA/EMA Funds	\$6,466,539.68	\$10,141,475.94	\$5,290,496.00	\$4,734,455.77	\$567,976.81	\$0.00
NRCS Funds	\$0.00	\$1,023,643.58	\$0.00	\$0.00	\$0.00	\$0.00
Federal Land Access Program Funds	\$0.00	\$456,583.00	\$0.00	\$0.00	\$0.00	\$0.00
Transportation Improvement District Funds	\$0.00	\$200,000.00	\$0.00	\$0.00	\$0.00	\$0.00
USDA Funds	\$288,000.00	\$0.00	\$297,000.00	\$0.00	\$141,000.00	\$0.00
TOTALS	\$13,171,383.27	\$21,068,944.88	\$13,375,719.20	\$20,054,412.87	\$13,762,393.24	\$2,270,583.37

County Engineer Budget – 2022 Revenue Summary

DESCRIPTION	2022 EOY FINAL	% of TOTAL
GASOLINE TAX	\$3,700,502.54	57.0%
OIL & GAS RECEIPTS	\$0.00	0.0%
MOTOR VEHICLE		
LICENSES	\$1,063,559.37	16.4%
ADVANCES IN	\$1,134,297.25	17.5%
TRANSFERS IN	\$79,935.00	1.2%
REFUND &/OR REIMBURSEMENT	\$259,018.24	4.0%
PERMISSIVE MVL	\$82,036.56	1.3%
SPECIAL HAUL PERMITS	\$32,925.00	0.5%
(National Forest Sales)	\$62,097.46	1.0%
SALE & SERVICE	\$22,127.12	0.3%
INTERGOVERNMENTAL	\$21,306.49	0.3%
COUNTY COURT FINES	\$8,613.89	0.1%
INTEREST	\$5,813.88	0.1%
OTHER RECEIPTS	\$15,000.00	0.2%
RIGHT OF WAY PERMITS	\$3,430.00	0.1%
MISC. INSURANCE & COBRA PAY-IN	\$0.00	0.0%
JUVENILE COURT FINES	\$14.79	0.0%
COMMON PLEAS COURT FINES	\$0.00	0.0%
TOTAL	\$6,490,677.59	100%

County Engineer Budget – 2022 Expenditures Summary

DESCRIPTION	2022 EOY FINAL	% of TOTAL
<i>SALARIES OFFICIALS</i>	\$107,412.02	2.05%
<i>SALARIES EMPLOYEES</i>	\$317,862.16	6.07%
<i>LABORERS SALARIES</i>	\$842,553.37	16.09%
SUPPLIES	\$6,639.65	0.13%
<i>UNIFORMS & PPE</i>	\$7,247.10	0.14%
WELDING SUPPLIES	\$3,011.08	0.06%
ROAD MATERIALS	\$809,632.51	15.46%
EQUIPMENT	\$448,404.87	8.56%
CONTRACTS	\$135,653.78	2.59%
EMA CONTRACTS	\$762,823.48	14.57%
ODOT	\$5,606.73	0.11%
TRAVEL EXPENSES	\$472.75	0.01%
ADVERTISING & PRINTING	\$7,500.00	0.14%
<i>PERS/STRS</i>	\$177,321.04	3.39%
<i>WORKERS COMPENSATION</i>	\$8,645.61	0.17%
OTHER EXPENSES	\$13,013.92	0.25%
RIGHT OF WAY PERMITS -Expense	\$600.00	0.01%
ADVANCES OUT	\$142.55	0.00%
<i>INSURANCE</i>	\$243,993.31	4.66%
GROUP & LIABILITY	\$12,831.00	0.25%
FUEL	\$250,611.79	4.79%
UTILITIES	\$25,739.13	0.49%
<i>DOT TESTING</i>	\$1,475.25	0.03%
PRINCIPAL - USDA LOAN	\$30,000.00	0.57%
INTEREST-USDA LOAN	\$5,790.37	0.11%
OPWC LOAN	\$7,500.00	0.14%
VEHICLE MAINT.(IN HOUSE)	\$198,292.56	3.79%
VEHICLE (OUTSIDE REPAIRS)	\$117,761.84	2.25%
<i>MEDICARE TAX</i>	\$17,711.65	0.34%
DUES	\$1,427.25	0.03%
BUILDING & GROUNDS MAINTENANCE	\$1,517.60	0.03%
OFFICE MAINTENANCE	\$45,870.55	0.88%
SIGNS	\$5,724.40	0.11%
BRIDGE MATERIALS	\$7,300.00	0.14%
CONTRACTS	\$608,725.65	11.62%
<i>PERSONEL</i>		
<i>EXPENDITURES</i>	\$1,724,221.51	32.9%
<i>NON-PERSONEL</i>		
<i>EXPENDITURES</i>	\$3,512,593.46	67.1%
TOTAL	\$5,236,814.97	100.0%

FUNDING & THE FUTURE

FUNDING SUMMARY SHEET (2017-PRESENT)



Project Type	GRANTS RECEIVED	LOANS RECEIVED	LOCAL MATCH	TOTAL FUNDED PROJECTS COSTS
Bridge	\$6,596,775.20	\$350,000.00	\$1,199,524.22	\$8,146,299.42
Bridge Load Ratings	\$792,650.00	\$0.00	\$69,595.60	\$862,245.60
Road	\$6,464,956.10	\$637,153.97	\$1,043,114.49	\$8,145,224.56
Drainage	\$500,000.00	\$0.00	\$46,515.73	\$546,515.73
Safety	\$2,154,789.78	\$0.00	\$428,309.98	\$2,583,099.75
Sign	\$35,127.10	\$0.00	\$2,141.40	\$37,268.50
Equipment	\$291,405.46	\$576,000.00	\$20,000.00	\$887,405.46
Guardrail	\$245,087.50	\$0.00	\$0.00	\$245,087.50
Slip Repair/Flood Damage	\$33,157,878.56	\$0.00	\$1,190,735.40	\$34,348,613.96
TOTALS	\$50,238,669.69	\$1,563,153.97	\$3,999,936.82	\$55,801,760.48
	90%	3%	7%	100%

The County Engineers office takes pride in being able to “stretch a dollar” and find creative ways to accomplish the large amount of work needed, with a less-than-adequate budget. The table above shows just how well we have been able to do that in the past 6 years, with 90% of all funded projects being covered with money OTHER than County funds. You can also see how important it is to be able to supply Local Match money. A mere 10% of match money/loans has afforded the County over \$50,000,000.00 in road, bridge and infrastructure improvements.

With the constant increase in material and equipment costs, projects will continue to grow in price. Despite the diligent efforts of our crews and the large amount of funding we are able to secure, the County Engineers office still continues to be underfunded. We will continue to prioritize projects based on impact to the public, funding availability and other pertinent factors. Despite the overwhelming amount of work that lies ahead for the County, we will continue to plan and make the most of our funds available. The following table outlines future projects that have funding secured and will be completed over the next few years.

2023 & FUTURE FUNDING

Project Type	Bridge/Road Number/Description	Percent Funded	Project Total Cost	Funding Year
Slip Repairs/Flood Damage	County-wide FEMA disaster 4424	FEMA 75%, State 25%	\$15,793,907.03	2019
Slip Repairs/Flood Damage	County-wide State disaster	EMA 75%, Local 25%	\$4,298,328.02	2020
Flood Damage (May)	County-wide State disaster (May)	EMA 75%, Local 25%	\$198,903.21	2022
Flood Damage (June)	County-wide State disaster (June)	EMA 75%, Local 25%	\$425,350.00	2022
Bridge	MOE-TR199-2.38 & 2.57	OPWC \$400,000grant/\$350,000 Loan	\$750,000.00	2023
Bridge	MOE-TR1004-2.27	80% FLAP/20% Local	\$855,320.00	2023
Bridge	MOE-T0183-0.13	100%	\$465,000.00	2023
Bridge	MOE-T2001-0.13	100%	\$450,000.00	2023
Road/Resurfacing	CR9A	OPWC \$400,000grant/\$258,000 Loan, \$234,793 County	\$892,793.00	2023
Slip Repair	CR9A-0.52 Road Slip	OPWC \$180,100, County \$65,000	\$245,100.00	2023
Bridge	MOE-TR0307-0.75	80%	\$1,106,000.00	2024
Bridge	MOE-T0183-00.50	100% Design/Construction, Local pays CE/Inspection	\$751,000.00	2025
Bridge	MOE-TR1206-0.01	80%	\$425,000.00	2024
Bridge	MOE-C28-0.56	80% LBR, 15%Credit Bridge, 5% Local	\$760,000.00	FY2023
Bridge	MOE-C29-6.95	80%	\$425,000.00	FY2023
Road/Resurfacing	CR12 (SR26 to SR800) HIR & Chip Seal	CSTP \$2,000,000 cap, OPWC \$400,000 grant, remainder local	\$3,571,140.00	FY2023
Sign	Curve Signage - 1 location	100%	\$3,600.00	FY2023
Sign	Sign Upgrade project - Various signs	80%	\$10,000.00	FY2023
Guardrail	Various CR (CR2, CR37, CR22, CR43, CR138)	100%	\$300,000.00	FY2023