



2018 CLINTON COUNTY ENGINEER'S ANNUAL REPORT

MARCH 31, 2019

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Jeffrey B. Linkous, P.E., P.S.
County Engineer

I am pleased to present you with our 2018 Annual Report. Each year the County Engineer must provide an annual report to the County Commissioners that shows the status of all our roads, bridges and culverts in Clinton County.

During 2018, construction or rehabilitation of major structures, including bridges and culverts, totaled \$393,163. This total includes rehabilitating bridges on Hamilton and Jenkins Roads by replacing all or part of the prestressed box beams, while using the existing abutments. Partial funding on these projects for material was from the Ohio Public Works Program (OPWC) with all other work being done by county forces. All other replacements were designed in-house and also constructed with our forces. The annual bridge inspections of all of our bridges was completed in the fall of 2018. A separate bridge report has been submitted to the Board of County Commissioners. Part of our current strategy, while we are not replacing as many bridges, is to do more preventive repair and maintenance. On several bridges, we have taken the wearing surface off and added new waterproofing before replacing with a new wearing surface. On many of our prestressed box beam bridges, we are cleaning and recoating the outside beams where salt and water have the potential to wear the exposed portion of the beam faster.

In 2019, work continues on rehabilitating a large bridge on Spring Hill road that was built in 1979. This work consists of removing all existing box beams, repairing the abutments and piers and replacing with a new composite concrete top that should extend the life of this bridge possibly another 40 to

50 years. Funding for this project is 80% federal bridge money, 15% credit bridge funds and 5% OPWC grant. We also have three bridges that we plan to rehab by removing some of the prestressed box beams that are deteriorating and replace them with new beams. Funding for the beams is provided from OPWC grants, while our highway forces will do the construction. Nine more bridges will receive new waterproofing systems this summer, which will hopefully extend the life of each bridge another 15-20 years. Maintenance items are also receiving attention where we are fixing guardrail, adding stream protection, fixing approaches, re-lining existing culverts, and continuing to paint exposed beams with protective coatings. In addition, we will be replacing several of our inventory of over 1100 culverts/pipes that we have on a 5-year schedule.

2019 started off to be a hard winter and the freeze and thaw will take a toll on our roads. That combined with record rainfalls has roads already looking like we will need to repair more locations this year. Each spring, we travel every mile of county road and give them a Pavement Condition Rating. Based on these ratings, we determine which roads will be priority for resurfacing that year. In 2018, we were able to seal portions of 16 different roads totaling approximately 32 miles at a cost of \$431,742. The average cost per mile for this program was \$13,497. We are starting to see our average ratings decline each year and we cannot continue to only do repairs and maintenance each year. Instead, we need to be able to pave and reconstruct in order to keep up with the wear on the roads. We are constantly looking to existing and new technology to extend the life of our roads. We would like to have our roads on a 7-10 year cycle for resurfacing, but in the meantime we will continue to prolong their life with an aggressive repair program, which includes chip sealing, crack sealing, patching and repair.

In 2019, we will again use grant money from the Federal Highway Safety Im-

provement Program and the Ohio Public Works Program to continue our program of hazard elimination. As part of that hazard elimination program, we will be reconstructing a section of Antioch Road near the county line to improve sight distance, intersections and softening a curve just north of the county line. We also have four more safety projects scheduled in 2020, 2021, 2022 and 2023, as well as grants for guardrail and pavement marking. The safety of the traveling public is important to us and we are always looking for any opportunity to improve our highway system.

A summary of all maintenance and construction costs for 2018 has been included in this report for your review.

While it looks to be a fairly typical winter as far as snowfalls are concerned, last season's winter storms (December of 2017-April 2018) were a little harder. We spent more than 2000 hours on the road driving 73,000 miles and used 3745 tons of salt and grit. Our total cost for snow and ice removal was \$310,034 which is triple from the previous year where we spent \$103,759.

Our budget has not changed much in the last 10 years and that is starting to take a toll on roads and bridges and make for a challenging situation. (See article on page 4) It is becoming harder to keep up with maintenance and still make improvements. In the meantime, we look for other options to increase future funding as we cannot continue to keep our infrastructure to the level that is expected without additional resources.

Thank you for the opportunity to share this annual report. We hope you find it informative. If you have any questions please feel free to contact my office at 937-382-2078 or visit us on the web for at www.clintoncountyengineer.org.

Respectfully submitted

2018
TAX MAP SUMMARY

Total Parcel Transfers	1768
Parcel Pre-approvals	1565
Existing parcels checked	1318
Survey plats filed	133
Total Property Splits & Resurveys	
Minor Splits< 20 ac.	34
Over 20 acres	8
Resurveys	60
Exempt	14
Combinations	21
Total Parcels Reviewed	
(include replat)	159
Annexations reviewed	0
Major Subdivisions	
Recorded	3
Road Dedication	1
Commercial PUD	2
Total Pay-in—General	
	\$1,124.38

SNOW & ICE REMOVAL

Regular Hours	896 hrs.
Overtime Hours	1226 hrs.
Grit (small stone)	2165 ton
Salt	1590 ton
Miles Driven	72,900 miles
Fuel Used	18,225 gals.
TOTAL COST:	\$310,034
	(12/09/17— 3/22/18)

2018
PERMITS & REVIEWS

Utility Permits Granted	86
House Numbers Assigned	34
Access Permits Issued	53
Crash Reports Reviewed	3185
Hauling/Overload Permits	76

MISC. MAINTENANCE

Trash Pickup	
(3/26/18—4/19/18)	\$46,969
Water-Based Pavement Marking:	
Centerline (39.988 mi)	\$17,394.78
Edgeline (79.976 mi)	\$29,511.14

Facts & Figures

2018 REVENUE

Motor Vehicle Tax (State)	\$ 1,377,889.78
Gas Tax	\$ 2,417,403.95
Reimbursements	\$ 354,015.75
Interest Income	\$ 34,764.88
Fines	\$ 212,188.65
Miscellaneous	\$ 27,958.22
Permissive Tax	\$ 74,306.09
TOTAL:	\$4,498,527.32

2018 EXPENDITURES

Personnel—Wages	\$ 1,518,948.15
Personnel—Fringe Benefits	\$ 749,105.43
Admin (non-personnel)	\$ 99,424.28
Road Expenditures	\$ 1,111,991.82
Bridge/Culvert Expenditures	\$ 180,908.06
Capital Expenditures	\$ 205,700.50
Buildings & Grounds	\$ 52,464.85
TOTAL:	\$ 3,869,226.97

BUILDING BRIDGES TO OUR FUTURE

2018 Bridge Replacements and Major Culverts

Road	Bridge #	Type of Bridge	Cost
Hamilton	33-0.330	Prestressed Box Beam	\$ 114,981* <i>rehab</i>
Jenkins	261-0.830	Prestressed Box Beam	\$ 116,490* <i>rehab</i>
Center	16-4.341	HDPE Pipe Replacement	\$ 19,464
Pansy	18-2.348	HDPE Pipe Replacement	\$ 21,906
Prairie	21-2.312	HDPE Pipe Replacement	\$ 15,233
Fayetteville	27-1.252	Precast Concrete Box	\$ 84,326
Webertown	33-1.326	HDPE Pipe Replacement	\$ 10,408
Hackney	53-3.696	HDPE Pipe Replacement	\$ 10,355

*Partially funded by OPWC monies

TOTAL: \$393,163



SPRING HILL BRIDGE REHABILITATION

The longest bridge on the County road system is undergoing a major rehabilitation. The three-span Spring Hill Rd. bridge over Todd's Fork measures 211' from end to end. DDK Construction began work on a total deck replacement and pier repairs in February with an anticipated completion date in late June of 2019. Originally opened in 1979 this bridge now carries more than 1600 vehicles each day into and out of the County.

2019 Proposed Bridge Repair & Replacement

Road	Bridge #	Type of Bridge	Cost Est.
Spring Hill	2-0.25	Prestressed Box Beams	\$ 829,000**
Old State	112-0.87	Prestressed Box Beams	\$ 96,229*
Mitchell	202-2.07	Prestressed Box Beams	\$ 79,859*
Hales Branch	49-1.54	Prestressed Box Beams	\$ 146,671*

TOTAL: \$ 1,151,759

**Funded with Federal and OPWC grants

*Partially funded with OPWC grants



Adam Fricke
Deputy Engineer

FOUR FUTURE SAFETY PROJECTS FUNDED BY GRANTS

Clinton County is to be the recipient of approximately 2.25 million dollars in grants to fund four safety improvements along Antioch Rd. in the upcoming years.

Plans are complete and ready for construction on a project that will straighten a curve and widen lanes and ditches between Scissorville Rd. and the Highland County line. Construction is currently scheduled to begin in late 2019 and is 100% funded through federal gas tax grant monies and the Ohio Public Works Commission grants monies.

In 2020, in cooperation with the Ohio Department of Transportation (ODOT), a turn lane will added to State Route 73 at Antioch Rd. This improvement will provide for continuous traffic flow in the southbound direction while providing vehicles turning left onto Antioch Rd. with a place outside of the southbound traffic flow in which to wait for a safe opportunity to complete their turning maneuver. This project is funded by federal gas tax grant dollars with additional contributions by ODOT. The Clinton County Engineer's Office is leading the project and participating by preparing plans and administering the construction.

A curve that is just north of Fife Rd., which has been the site of numerous crashes, will be improved in 2021. Part of this project will include removing several hills and widening lanes and ditches for approximately 1500 feet in both directions from Fife Rd. This project will be funded 80% with federal gas tax grant dollars and will be supplemented with Ohio Public Works Commission grant dollars and/or local gas tax revenues.

Finally, 2023 will bring a project to remove numerous hills and widen lanes and ditches between Beatty Rd. and Hodson Rd. Sight distance at both of these cross roads will be improved as well. Funding for this project will also be provided for at 80% with federal gas tax grant dollars and will also be supplemented with Ohio Public Works Commission grant dollars and/or local gas tax revenues.

Grant Dollars Save County Dollars

Federal Monies Received for Projects in 2018

LPA Bridge Load Rating Agreement	\$ 2,080.00
Farmers CLI-CR-7-4.44	\$ 13,537.70
CLI-CR 2 Spring Hill Bridge Repl.	\$ 47,633.00

OPWC Monies Received for Projects in 2018

Hamilton/Jenkins Bridge Rehab	\$133,021.65
Farmers CLI-CR-7-4.44	\$ 3,024.99
CLI-CR 2 Spring Hill Bridge Repl.	\$ 2,507.00

TOTAL GRANT MONIES RECEIVED: \$201,804.34

2018 Resurfacing

Road Name	Length	Description	Width	Cost
Bernard	2.429	Single Seal	19	\$ 30,655.86
County Lane	0.156	Single Seal	20	\$ 2,412.27
Crouse	1.565	Single Seal	19	\$ 19,555.86
Fife Avenue	0.791	Single Seal	23.5	\$ 12,585.84
Gano	0.354	Single Seal	18	\$ 4,947.06
McCoy	1.279	Single Seal	19	\$ 15,321.45
Melvin	2.678	Single Seal	27.5	\$ 46,538.76
New Burlington	2.713	Single Seal	21	\$ 34,497.36
Port William	2.649	Single Seal	20.7	\$ 32,901.39
Prairie	2.687	Single Seal	20.2	\$ 10,124.85
Prairie	0.870	Single Seal	20	\$ 32,894.70
Sabina	5.257*	Single Seal	19.5	\$ 81,941.79
Sabina	2.584	Single Seal	19.5	\$ 33,723.06
Sprague	0.818	Single Seal	16	\$ 9,842.37
Stone	2.370	Single Seal	21	\$ 34,811.64
Stone	2.787	Single Seal	19	\$ 28,987.68

TOTALS: \$ 431,741.94

Avg. Cost of Single Seal Per Mile—\$ 13,497.42 (includes cost of stone)

*Stops and starts within that mileage for bridges

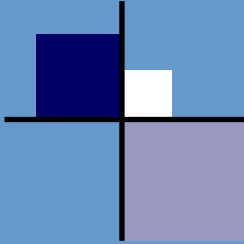


Jeff Linkous is sworn in as County Engineers Association of Ohio (CEAO) President by State Senator Bob Peterson at CCAO/CEAO Winter Conference December 10, 2018

FUTURE GRANTS APPROVED

FY2020	CLI-CR-12-0.00 Antioch Road Sight Improvement	\$ 869,600
FY2020	Guardrail Replacement	\$ 300,000
FY2021	Guardrail Replacement	\$ 200,000
FY2021	Pavement Marking	\$ 150,000
FY2021	CLI-CR-12-.7.96 Antioch Road Safety Improvement	\$ 648,800
FY2022	CLI-CR 10 Clarksville Road Safety Improvement	\$ 603,200
FY2022	Pavement Marking	\$ 150,000
FY2022	Guardrail Replacement	\$ 300,000
FY2023	Guardrail Replacement	\$ 300,000
FY2023	CLI-CR 6-4.86 Westboro Rd. Bridge Rehab	\$1,244,880
FY2023	CLI-CR 16-7.97 Center Rd. Safety Improvement	\$1,048,500
FY2024	CLI-CR 12-4.43 Antioch Rd Safety Improvement	\$ 776,800
FY2024	Pavement Marking	\$ 150,000
FY2024	Guardrail Replacement	\$ 300,000

TOTAL FUTURE GRANTS ALREADY APPROVED: \$7,041,780



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VISIT US ON THE WEB! www.clintoncountyengineer.org

Ohio County Engineers: Protecting our Economy and Public Safety

Ohio's Transportation infrastructure is one of our state's most important assets. We sit within 600 miles of 60 percent of America's population. We have the country's fourth-largest interstate system and the second largest inventory of bridges. Every year \$1.1 trillion in goods are shipped to and from sites in Ohio, mostly by truck. Nearly 2.4 million full-time jobs in Ohio in key industries like tourism, retail sales, agriculture and manufacturing rely on our transportation system.

Today this asset is threatened by a massive funding shortfall. It's not an exaggeration to say that absent adequate investment, the quality of our roads, the safety of Ohio motorists and the economy will suffer for decades to come.

This shortfall didn't happen overnight. It's been nearly 14 years since Ohio made a true investment in its roads with a gasoline-user fee increase. During that time vehicles have become more fuel efficient, roads are getting more used than ever and maintenance costs have risen dramatically.

Here are some facts about our Ohio County Roadways:

Safety:

Traffic Accidents (5-year total)	156,320
Traffic Injuries – Serious (5-year total)	6,931
Traffic Deaths (5-year total)	890
Percent of Total Traffic Deaths in Ohio	17%

Road Facts

Total miles of County Highway	28,970 miles	
Less than 20 ft wide (below current Standard)	18,879 miles	
Between 20 ft and 24 ft	9,422 miles	
Greater than 24 ft.	669 miles	
Cost to widen County Highways to current standards on a 20-year Schedule		\$226 million per year
Cost to Pave County roads on a 10-year schedule		\$362 Million per year
Cost to Maintain County Highway System		\$406 million per year
<i>(includes guardrail, pavement marking, signs, culverts, mowing, and snow plowing)</i>		

Bridge Facts:

Total Number of County Bridges	26,298	
Closed Bridges	96	
Posted with load limits	1,356	
One Lane Bridges	3,024	
Bridges 50 years and older	9,576	
Eligible for Replacement	1,854	
Eligible for Repair	6,221	
Total Cost to Replace and Repair all currently eligible bridges	\$1.2 Billion	
Cost per year on a 10-year Schedule		\$127 million per year

Statewide Total Amount Needed	\$1.12 Billion per year
Statewide Current Funding Level	\$450 million per year

(facts and figures courtesy of County Engineers Association of Ohio)

FACT: Every trip begins and ends on a local road.