

Jefferson County Engineer's Office

2024 Year End Report

March 11, 2025

Eric B. Hilty, P.E., P.S.

JAMES F. BRANAGAN — JEFFERSON COUNTY ENGINEER 1989 TO 2025

James F. Branagan, P.E., P.S. retired as the Jefferson County Engineer fulfilling his last of 9 terms. Jim's 36-year long career as the County Engineer began in 1989. Jim made a huge impact on Jefferson County during his career. Upon taking office, he started the first of many Inventory and Needs Analysis reports. This analysis performed in-house by the Engineer's staff guided the decisions that shaped the County Highway system for the better. Over Jim's career, road surfaces, guardrail, bridges and facilities improved tremendously. Jim's vision and guidance allowed the highway department to implement many programs that efficiently maintain the infrastructure of Jefferson County. Examples include the cold mix paving program that provided a substantial road base on many low quality roads, guardrail installation and replacement that improved the 23 miles of low quality guardrail in 1993 to over 84 miles of guardrail in 2024, the transition to deicing of roads with all salt and brine and the construction of four salt storage facilities.

Jim co-authored one of the first "Road Use and Maintenance Agreements" dealing with the oil and gas surge in eastern Ohio, and helped ODOT in the development of a model RUMA for general distribution. This document, still in use today, protects

County and Township roads from major projects that involve heavy hauling on highways. Jim also helped write the Jefferson County Subdivision Regulations on two occasions. During his time as the Jefferson County Engineer, he secured millions of dollars in funding through various grant opportunities.

Mr. Branagan was also an active member of the community. He served as a park commissioner for the Friendship Park District. His service helped the park gain many camp sites and improve the overall opportunities of the park including the design of a park sewer system. He was a member of the Jefferson County Township Trustee Association, where he was honored with the Association's Home Town Leader award in 2013.

Jim found great pride in serving the citizens of Jefferson County and looks forward to joining his wife in retirement.

Eric B. Hilty, P.E., P.S.
Jefferson County Engineer

Snap Shot

- ◆ Miles paved 13.51
- ◆ Miles chip sealed 4.60
- ◆ LF pipe installed 1301
- ◆ Miles road markings 145
- ◆ Bridges replaced 2
- ◆ Bridges rehabilitated 2
- ◆ New signs installed 47
- ◆ Slip repairs 3
- ◆ Tons of aggregate 4,553
- ◆ Gallons emulsion 31,371
- ◆ Tons of salt 1,890
- ◆ SY base repair 12,694
- ◆ Tons of asphalt 9,618

COUNTY ROAD 7C—BURIED TREASURE

County Road 7C Yellow Creek Road is unique in that in order to access it you must leave Jefferson County and drive into Columbiana County and thru the village of Wellsville, the road connects to Saline Township Road 307 which terminates at a campground. For the last 30 years the department has performed minimal maintenance on this road, normally adding aggregate, grading and compacting the road surface. Plans from 1932, when the road was maintained by the state, indicated it was originally a brick surface with concrete curbs.

In April of 2024 we had crews start grading ditches and cleaning culverts. During this work, the crews found what was believed to be the top of the curb from the 1930's project. We then hired a contractor to bring in an asphalt milling machine in an attempt to find if the brick road indicated in the 1932 plans still existed. After removing 2,500 cubic yards of material, over 15 inches in depth at some locations, we discovered a fully intact brick road with curbs. County crews made repairs to the road in a few locations, completed cleaning, repairing or replacing drainage features and then seeded and mulched disturbed areas of the road

shoulders. The road is currently in better condition than it has been in over 30 years. It is unknown why the original brick surface was buried and turned to a stone road.



County Road 7C—Exposing brick road with milling machine

BRIDGES

2024 Bridge Replacements / Rehabilitations						
Township	Route	SLM	Description	Cost	Funding	Contractor
Springfield	CR49	0.19	Steel Beam Bridge Replacement	\$ 1,424,000.00	ST EXCH	Contractor
Cross Creek	TR173	0.01	Concrete Slab replaced with Steel Culvert	\$ 27,375.00	LOCAL	In-house
Cross Creek	CR74	0.01	Truss Repairs	\$ 10,000.00	LOCAL	Contractor
Wayne	CR36	0.75	Truss Repairs / Rehabilitation	\$ 41,000.00	LOCAL	Contractor
2024 Total Cost				\$1,502,375.00		

2024 Bridge Design Projects						
Township	Route	SLM	Description	Estimated Cost	Funding	Construction
Knox	TR289	0.06	Historic Truss Rehabilitation	\$ 1,623,140.00	FED/BHJ	2024-2025
Springfield	TR472	0.12	Truss Replaced with Steel Beam Bridge	\$ 737,244.00	OBPP	2025
Smithfield	CR11	2.25	Steel Beam Bridge Replaced with Box Culvert	\$ 725,465.00	LOCAL/OPWC	2025
Springfield	TR309A	Wolf Run	9' Diameter Steel Culvert	\$ 20,000.00	LOCAL	2025
Smithfield	CR6	0.00	Steel Beam Bridge Replacement	\$ 1,092,700.00	ST EXCH	2026
Wayne	CR36	0.75	Truss Replaced with Steel Beam Bridge	\$ 1,225,000.00	LOCAL/OPWC	2026
2025 - 2026 Estimated Cost				\$5,423,549.00		



Knox Township Road 289—Historic Truss Bridge Rehabilitation



Cross Creek Township Road 173—Bridge Replacement

SLIP REPAIRS

Road	SLM	Length (FT)	Repair Type	Funding	Cost
CR 1	3.40	72	Drilled Shaft	County	\$ 87,217.00
CR 26	6.10	56	Drilled Shaft	County/Ohio EMA	\$ 66,257.67
CR 26	7.80	80	Drilled Shaft	County/Ohio EMA	\$ 62,936.00
3 Sites		208		Total Repair Costs	\$ 216,410.67
				County Funds	\$ 119,515.42

COUNTY ROAD 51—FLOOD PREVENTION

During the fall of 2024 our department completed a project on CR 51 Hollow Rock Road to reduce frequent flooding. This flooding normally occurs after a storm when the Ohio River rises and tributaries such as Yellow Creek and Hollow Rock run begin to back up. County forces removed the existing pavement, replaced a culvert and then filled the site using asphalt millings recycled from other projects. They also placed intermediate asphalt pavement, aggregate shoulders and dump rock channel protection. Project length was 750 feet and the road elevation was increased an average of 24 inches. Although this work may not prevent all flooding it will significantly reduce the frequency and duration of future flooding.



County Road 51—Flood Prevention Project

PAVEMENT

Road	Begin	End	Miles	Description	Funding	Cost
1	Well Site	CR 2	1.4	2" overlay	County	\$ 259,690.00
2	County Line	CR 1	0.62	2" overlay	County	\$ 78,431.00
7	CR 6	SR 150	3.15	1.5" overlay	County	\$ 389,326.00
10	County Line	Adena Corp.	2.13	1.5" overlay	County	\$ 260,842.00
34	CR 26	CR 22A	3.46	1.5" overlay	County/OPWC	\$ 530,255.00
		Total Length	10.76		Total Cost	\$ 1,518,544.00
					County Funds	\$ 1,418,544.00

2024 Upgrades and Repairs to County Roads by Gas and Oil Industry

Road	Begin	End	Miles	Description	Company	Cost
26	CR 23	Well Site	2.75	FDR/3" overlay	Ascent	\$1,317,548.91

PAVEMENT REPAIRS

Prior to contract resurfacing projects County forces performed base and pavement repairs on County Roads 7, 10 and 34. This work is completed by milling out failed sections along the outer edge of the pavement and replacing with base or intermediate asphalt and compacting. Paving contractor completed similar work on County Roads 1 and 2 prior to resurfacing. A summary of repairs completed by County forces is below.

Mill and Fill Pavement Repair Summary

Road	Mill and Fill Area — SY	Asphalt - Tons	Total Cost
7	6965	1182	\$171,361.51
10	1876	427	\$61,080.82
34	3853	850	\$119,765.59
Total	12694	2459	\$352,207.92



CR 61—County Forces Spot Paving



CR 10—County Forces Pavement Repairs

Summary of Spot Paving by County Forces

Road	Begin	End	Miles	Tons used	Cost
4	TR 155	CR 16	0.60	496.00	\$ 71,945.79
7F	Toronto	23+00	0.44	402.00	\$ 47,091.40
16A	CR 4	CR 16	0.07	52.00	\$ 11,760.15
18	SR 151	23+00	0.53	494.00	\$ 72,144.00
19	Wells Twp	Well Site	0.32	480.00	\$ 59,255.95
21	TR 151	SR 151	1.13	273.00	\$ 34,976.50
38	CR 22A	CR 39	2.69	137.00	\$ 25,518.99
39	CR 22A	Unionport	2.60	17.52	\$ 4,837.08
40	SR 152	Well Site	1.65	44.00	\$ 12,605.50
45	Well Site	TR 375	2.10	374.52	\$ 68,134.81
49	County Line	Bridge	0.11	187.00	\$ 22,912.60
51	SR 213	SR 213	4.62	69.00	\$ 13,530.80
53	Well Site	Bridge	0.70	663.00	\$ 87,205.19
61	Amsterdam	Well Site	0.66	423.00	\$ 58,148.00
		TOTALS	18.22	4112	\$ 590,066.76

CHIP SEAL

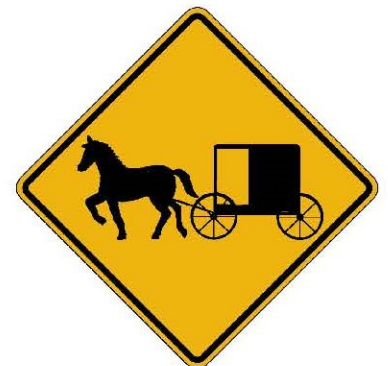
County crews placed a chip seal on 4.60 miles of County Roads including 47 and 54. The total cost was \$167,232.80 which includes preparation work such as base repairs, dust control and grading. Crews also sealed 23.23 miles of Township Roads.

VEGETATION MANAGEMENT

Contract tree trimming and removal was completed on County Roads 7, 10, 26, 34 and 43 at a cost of \$108,087.95. County crews completed right of way clearing on sections of County Roads 7C, 51 and 61 in addition to mowing on County Roads 6, 7, 8, 11, 12, 15, 16, 17, 54 and 58. Right of Way mowing by contractor consisted of three passes at a cost of \$45,066.00. County forces applied 298 gallons of herbicide at a cost of \$48,470.65. Total cost of Vegetation Management was \$507,571.25.

SIGNS

At the end of 2023 the sign inventory consisted of 4,126 signs of varying types. The County uses three types of signs, Regulatory, Warning and Informational. In 2024, 47 new signs were added, 142 signs were replaced, 125 signs were reset or relocated and 1 sign was removed. Including materials, equipment and labor the total cost was \$38,700.50.



CULVERT & CATCH BASIN INSTALLS

Road	Culvert Size							Cost
	8"	12"	15"	18"	24"	30"	CB	
5					20			\$ 56,210.01
7		50	279	80			1	\$ 89,668.28
7C			35	58			1	\$ 61,879.24
8		40						\$ 13,696.00
10		40				10		\$ 6,323.60
14		164						\$ 25,523.71
24				60				\$ 7,458.74
34	30	50	100					\$ 32,283.13
43		35						\$ 10,950.24
51				50				\$ 8,352.65
61		200					3	\$ 21,590.53
Total	30	579	414	248	20	10	5	
1301 LF pipe and 5 catch basins installed.								\$ 333,936.13

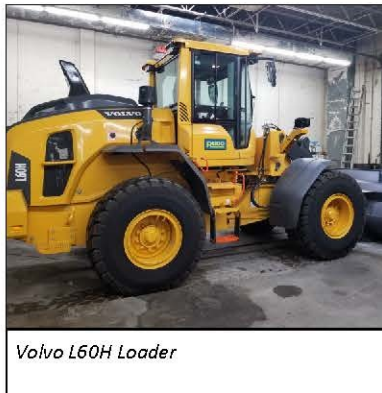
In addition to the above work, a contractor was hired to clean catch basins and drainage pipes on CR 7C. County crews completed 10.80 miles of ditch cleaning and 12.20 miles of shoulder grading. County crews also cleaned various culverts and placed dump rock to prevent erosion. Total cost for drainage work is \$1,373,077.95.

GUARDRAIL

The County Engineer maintains over 84 miles of guardrail which requires frequent repairs in order to retain its function. County crews removed several runs of guardrail on County Road 10. Changes were made to the embankment so guardrail was no longer warranted. A contractor replaced 17,680 lineal feet of guardrail on County Roads 10 and 56. The department received a grant of \$600,000.00 from the CEAO Highway Safety Improvement Program for this project, a portion of the work remains to be completed in 2025. Total cost for guardrail maintenance in 2024 was \$616,802.06.

EQUIPMENT

Item	Cost
1 Volvo L60H Loader	\$180,478.00
1 Ford F-350 Pickup & Utility Body	\$62,767.00
1 Ford F-150 Pickup	\$39,780.00
1 Jeep Grand Cherokee SUV	\$38,731.00
2 Peterbilt Tandem Chassis	\$274,591.00
1 International Tandem Dump Trk	\$176,623.80
1 Morbark 1415 Wood Chipper	\$63,507.22
1 Bobcat 24" Milling Head	\$23,404.48
1 Gledhill 707 Roll Gate Spreader	\$5,920.00
1 Radio Communication System	\$218,178.69
1 Stihl 14" Cut Off Saw	\$1,276.23
Total Cost	\$1,085,257.42



Volvo L60H Loader

BUILDING AND GROUNDS

Maintenance costs included HVAC service, garage door repairs, salt shed maintenance and fire alarm and sprinkler maintenance. Several projects were completed including the men's locker room remodel which started in 2023, the complex office and garage roof was replaced, the complex office HVAC system was upgraded and the Irondale office trailer was replaced. The total cost was \$602,963.58

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PAVEMENT MARKINGS

Double Yellow Center Line			
Road	Begin	End	Miles
1	Rayland Corp.	Mt. Pleasant Corp.	5.42
1A	CR 1	SR 647	0.12
2	SR 7	CR 1	1.76
4	CR 17	CR 16	1.22
7B	Mingo Corp.	Dead End	0.63
7F	Toronto Corp.	SR 7	1.92
7G	SR 7 Ramp	SR 7 Ramp	0.77
8	SR 150	SR 152	3.63
11	SR 152	CR 10	3.77
12	CR 10	Harrison Co. Line	1.29
16A	CR 16	CR 4	0.05
17	SR 7	CR 15	5.93
17A	Rayland Corp.	TR 155	2.38
18	CR 17	SR 151	2.60
19	Wells Twp.	Well Site	0.93
20	Old Smithfield Corp.	TR 118	2.49
21	CR 15	SR 151	1.59
22A	SR 152	Wintersville Corp.	5.07
24	CR 22A	Well Site	0.45
25	SR 151	CR 26	4.20
26	Steubenville Corp.	CR 23	11.6
28	CR 74	CR 26	2.56
29	CR 30	Mingo Jct. Corp.	0.32
30	Steubenville Corp.	Williams Blvd.	2.57
33	Wintersville Corp.	Well Site	0.83
34	CR 22A	Wintersville Corp.	1.40
38	CR 22A	CR 39	2.62
39	CR 22A	SR 43	9.90
40	SR 646	SR 152	2.86
43	SR 43	SR 7	6.05
47	SR 152	Toronto Corp.	3.99
49	SR 164	Carroll Co. Line	2.15
50	SR 213	CR 55	1.46
51	SR 213	SR 213	4.40
53	SR 213	CR 57	3.16
54	SR 43	CR 58	6.51
56	SR 7	SR 152	8.01
57	CR 56	CR 53	4.23
58	CR 60	CR 53	7.40
59	CR 60	CR 54	3.34
60	SR 43	CR 75	3.74
61	CR 75	Amsterdam Corp.	2.21
71	US 250	Belmont Co. Line	0.91
75	SR 43	SR 164	4.93
75A	CR 75	SR 164	0.30
77	Steubenville Corp.	Steubenville Corp.	1.37
Total Center Line Miles			145.04

The contractor also completed white edge lines on 21.23 miles of County Roads along with School Zone Markings on County Roads 30, 34 and 75A. Total project cost was \$125,211.80.

MAP OFFICE STATS

Deeds reviewed and recorded	3,970
Property splits and/or combinations	343
Copies provided per month	250
New surveys and descriptions reviewed	236