

Requirement for this Report

The Ohio Revised Code 5543.02 mandates the County Engineer to annually report to the Board of County Commissioners the state of the County Roadways and Bridges

Message from the County Engineer

Our Mission is to provide a safe and cost-effective system of transportation that promotes the trans-economy for Hancock County in a global marketplace.



Douglas E. Cade, PE, PS
Hancock County Engineer

As I start my 29th year as a Surveyor and Civil Engineer, I reflect back on the hundreds of projects in the private and public sector that I have had the opportunity to plan, design, construct and improve the daily lives for my community and our region. We make a priority to collaborate with private and public partners such as agri-business, business, economic development, ODOT, Township and Municipal government to find ways to improve safety, maintain our roads and bridges, and plan for the future of our transportation system in Hancock County.

County Engineer's Office

1900 Lima Avenue
Findlay, Ohio 45840
419-422-7433

Highway Maintenance Garage

Mike Clark—Superintendent
419-424-7225

Hours

7:00—3:30 M-F

Summer Maintenance Hours

6:00—4:30 M-Th

Web:

[www.co.hancock.oh.us/
government-services/engineer](http://www.co.hancock.oh.us/government-services/engineer)



You will see those efforts more in the coming year with the partnerships that we have forged with ODOT District 1 to improve safety on State Route 15 at our County Road Intersections. We are also moving forward with improvements to the I75 / County Road 99 Interchange and corridor to improve the flow of traffic through our economic development areas in Liberty, Marion, and Allen Township, all in partnership with ODOT District 1 and the City.

Our goal is to not to be the headline of the newspaper every day, but to provide our community with a safe and efficient transportation system so our citizens can focus on their families and their daily lives. This Annual Report is a summary of what our Team accomplished for our gas tax payers in 2022 and how we plan to continue our work in 2023. I am honored and appreciate the opportunity to serve you as your Hancock County Engineer and will work hard every day to improve our transportation system and our community.

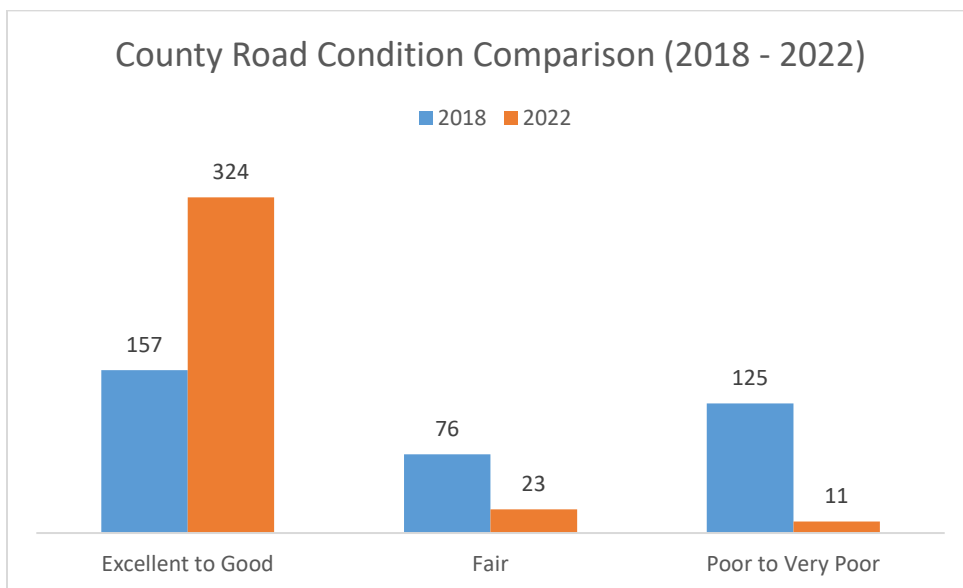
Thank you,

A handwritten signature in blue ink, which appears to be "Doug Cade".

Hancock County Engineer

The County Highway System has 358 centerline miles. We evaluate those pavements using a detailed Pavement Condition Rating system on those roads every three years, allowing us to make sound engineering-based decisions to maximize our pavement life and triage our roadway system. Additionally, we are constantly monitoring the pavements with our engineering and maintenance team. Currently, we have 91% in Excellent to Good Condition, 6% in Fair Condition and 3% in Poor to Very Poor Condition, as shown in the table below. The estimated cost in 2023 to maintain and repair these Poor to Very Poor Condition roads is \$5,574,971.

Ideally, we would like to see our roads be resurfaced on a 12-15 year rotation, which would reduce the preventative maintenance and critical maintenance that we have to perform daily. We are striving to improve that resurfacing cycle with the existing gas tax funds to make our County Roads better for all of Hancock County.



The following is a look at what we accomplished in 2022 and a look at what we are planning to improve in 2023.

2022 Resurfacing Program

Asphalt Resurfacing

(Funded with Local and OPWC grant funds)

County Road 172 - 4.00 Miles - \$334,567

County Road 140 - 2.37 Miles - \$199,410

County Road 236 - 2.58 Miles - \$198,936

(Funded with Local Gas Tax funds)

County Road 7 – 6.84 Miles - \$593,492

County Road 216 – 4.73 Miles - \$374,059

County Road 139 – 3.52 Miles - \$278,652

County Road 131 – 0.34 Miles - \$23,380

County Road 96 – 0.25 Miles - \$16,513

County Road 97 – 4.88 Miles - \$419,853



County Road 236 – Before Resurfacing



County Road 236 – After Resurfacing

Roadway Widening

(Funded with County funds)

County Road 9 – 0.41 Miles - \$772,526

Our Plan for 2023

Asphalt Resurfacing – 10.42 Miles - \$888,955

(Using Local Gas Tax and OPWC Funds)

County Road 9 – 1.89 Miles - \$184,850

County Road 88 – 1.14 Miles - \$111,497

County Road 144 – 1.00 Miles - \$102,057

County Road 223 – 0.32 Miles - \$32,658

County Road 300 – 0.50 Miles - \$46,776

County Road 40 – 2.52 Miles - \$203,603

County Road 16 – 3.05 Miles - \$207,515

Asphalt Resurfacing – 0.80 Miles - \$98,666

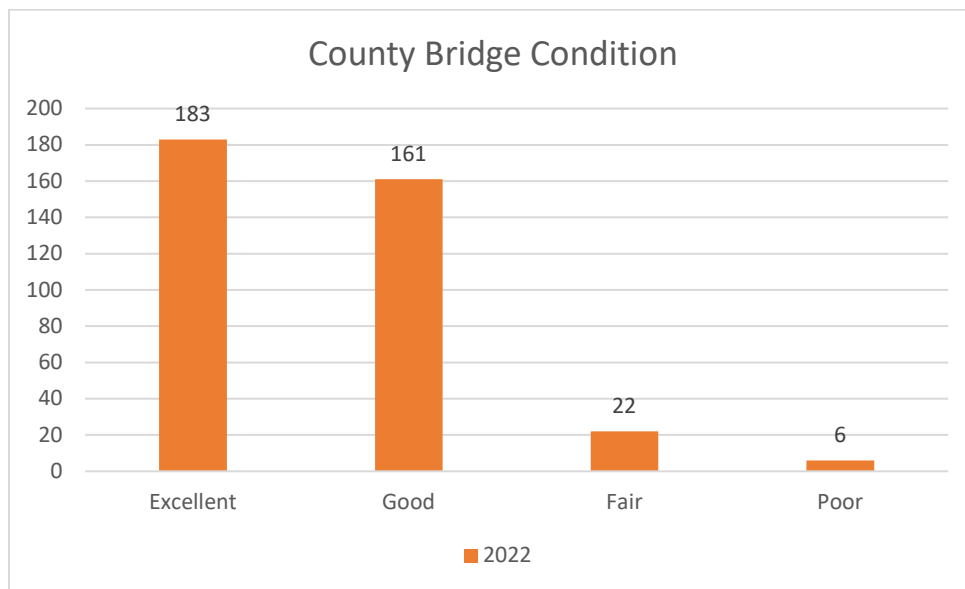
(Funded with Local Gas Tax funds)

County Road 26 – 0.80 Miles - \$98,666

Bridges

In Ohio, a “bridge” is considered a structure spanning 10 ft or more, carrying vehicular or pedestrian traffic over an obstruction such as water, highway, bikeway or railway. According to the Federal Highway Administration (FHWA), the span must be 20 ft or greater. In Hancock County, we have 143 bridges between 10 ft and 20 ft (54 of which are pipe culverts), and 229 bridges over 20 ft.

Our office performs annual detailed inspections of all 372 bridges that are located on County and Township roads and in some of our 13 Municipalities. In addition to these inspections, we create an inspection report and evaluate all of our bridges for their load carrying capacity. There are 13 County bridges that have a reduced weight limit with 5 of those in fair to poor condition. The remaining Posted bridges are in good condition and will be replaced as the poor condition bridges are completed. From these reports and evaluations, we create a bridge replacement priority list to efficiently and strategically replace our bridges over time. The estimated cost to maintain and repair all of these bridges is \$13,034,007.



In 2022, we replaced four bridges totaling \$1,279,792, utilizing Local Gas Tax, ODOT grant and Ohio Public Works Commission (OPWC) grant funds. All four bridges were in poor condition, with three being load restricted.

In 2023, we plan to replace one bridge with an estimated total of \$85,000, utilizing Local Gas Tax funds. Additionally, we are partnering with ODOT on three projects that involve bridges crossing their roadways.

The following is more information on those projects.

2022 Completed Bridges

Hancock County Road 172 – 0.33 Bridge Replacement



Existing:

Built in 1962
Single Span, Concrete Slab Deck, Asphalt Wearing Surface,
Span = 18'-6"
Condition – Fair, Load Restricted

New:

Built in 2022
Single Span, 4-Sided Precast Box Culvert with Precast Block Wingwalls, Asphalt Wearing Surface, Span = 19'-0"

*Location: TR172-0.33 over Homer Oman Ditch
Between SR68 & TR179*

Project Total: \$134,817.23 (Local Funds)

Marion Township Road 205 – 2.91 Bridge Rehabilitation



Existing:

Built in 1972
Single Span, Steel Beam with Corrugated Metal Deck, Asphalt Wearing Surface,
Span = 56'-7"
Condition - Fair

New:

Built in 2022
Single Span, Prestressed Concrete Box Beams, Patching Existing Abutment Walls, Asphalt Wearing Surface
Span = 58'-10"

*Location: TR205-2.91 over Corbin Ditch
Between TR240 & TR244*

Project Total: \$294,184.45 (OPWC & Local)

Marion Township Road 204 – 0.53 (Olive St) Bridge Replacement



Existing:

Built in 1954
Single Span, Steel Truss, Asphalt Wearing Surface
Span = 99'-9"
Condition - Fair

New:

Built in 2022
3 Spans, Prestressed Concrete Box Beams, Asphalt Wearing Surface
Span = 126'-7"

*Location: TR204-2.91 over Eagle Creek
Between CR221 & TR201*

Project Total: \$764,526.58 (State & Local)

Hancock County Road 7 – 3.76 Bridge Replacement



Existing:

Built in 1932
Single Span, Concrete Slab Deck, Asphalt Wearing Surface
Span = 18'-0"
Condition – Poor, Load Restricted

New:

Built in 2022
Single Span, 2-Piece Precast Box Culvert with Precast Block Wingwalls, Asphalt Wearing Surface
Span = 16'-0"

*Location: CR7-3.76 over Ropp Ditch
Between TR253 & TR255*

Project Total: \$86,264.55 (Local Funds)

Our Plan for 2023

Hancock County Road 216-2.88 Bridge Replacement



Location:

*CR216-2.88 over Hiram Grubb Ditch
Between CR18 & CR236*

Condition:

Poor Condition

Project Estimate:

\$85,000 (Local Funds)

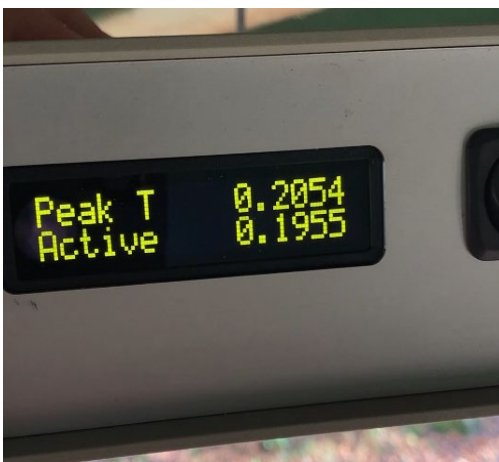
We are also partners with ODOT in the State Route 15 Overpass (Grade Separation) projects at County Road 180 and County Road 169 to improve safety of the traveling public using these intersections. Additionally, we are partners with ODOT and Findlay the with I75 / County Road 99 Diverging Diamond Interchange Improvements.



State Route 15 at County Road 180 in Jackson Township

Hancock County Bridge Load Testing Study

In Hancock County, we are continually searching for new and innovative products and services to extend the life of our roads and bridges which, in turn, allow gas tax dollars to be spent more economically. In 2022, we participated in a pilot project, in conjunction with the Soy Transportation Coalition, to utilize strain gauges as a way to field verify load restricted bridges in Hancock County. The intent of the field verification was to compare the actual measured vehicle loads to the theoretical load values and identify if a load posting could be reduced or eliminated. This would allow motorists, emergency vehicles, and farm equipment less restrictive access across bridges.



How it Works:

Strain gauges were installed on multiple beam members of the bridge and initial “zero” readings were recorded. Then a known legal load was driven over the bridge and the maximum strain was recorded. Using, the Manual for Bridge Evaluation, the values will be used to calculate a Rating Factor based on real collected data.

Bridges Evaluated in 2022

Bridge ID	Road Name	Between	Bridge Type	Current Legal Load Deduction
HAN-C0005-0059	Hancock CR 5	TR 115 & TR 117	Steel Truss	25%
HAN-T0214-0691	Washington TR 214	CR 23 & Co. Line	Steel Beam	30%
HAN-T0215-0256	Washington TR 215	CR 18 & CR 236	Steel Beam	35%

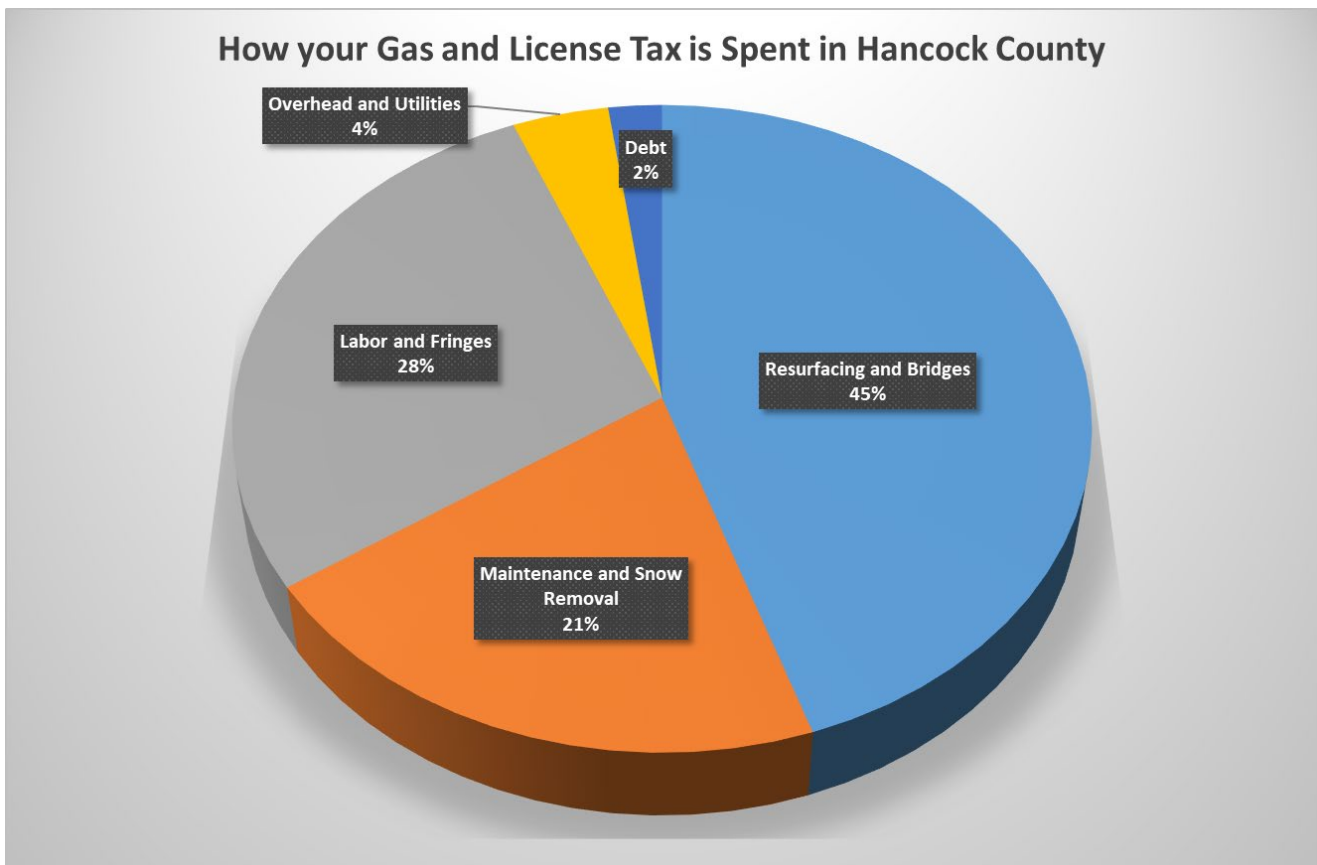
While these results are still being evaluated, our goal is to confirm the results of these tests and effectively reduce or remove load restricted bridges.

Budget / Fiscal Outlook

Our Team is always working to find a more cost-effective way to improve the safety of our County's Roadways and stretch our revenue as far as we can. Our employees are dedicated to serving the public and making sure your roads and bridges are as safe as possible, because their families also travel the roads. During the past 20 years, we have become more efficient in our operations, more prudent in our expenses, and have reduced our workforce, through attrition, to a total of 29 employees. That savings has been converted to more resurfacing and bridge replacement and matching funds for state and federal grants. But as with most things, the cost of materials has seen a steady increase over the years while our revenue and statutory limits that our crews are permitted to do in-house have remained flat.

We work efficiently by partnering with other agencies to purchase salt, utilize the State Cooperative Purchasing program, utilize the state surplus property program, competitively bid our aggregate, fuel and asphalt, serve as a fuel depot for all County vehicles and some participating Townships, jointly bid with Townships and Villages resurfacing, chip-seal and pavement striping projects and evaluate every single item that we purchase to make sure we are getting the best possible price.

During 2022, our Direct Revenue from State Gas Tax, License Plate Fees, County Vehicle Fuel Sales, Township Road Maintenance, Fines, and Interest was \$6,784,491. Additionally, we received \$32,220 in Federal Grants and \$1,239,557 in State OPWC and ODOT Grants that were dedicated to specific projects. The following chart describes how those funds were spent for the maintenance and improvement of the County Roads and Bridges.



Tax Mapping

One of many statutory duties of the County Engineer is to serve as the County’s Tax Map Draftsman and this is also one of the primary reasons that the County Engineer is required to have a Professional Surveyor License as a qualification to serve. These duties often are not seen as being under the County Engineer because our employees are housed with the County Auditor’s staff, making for a seamless operation in the transfer of property in Hancock County. It is an important job that we take pride in efficiently working with land owners, surveyors, real estate agents, and attorneys to make the conveyance of property an easy process.

In 2022, my Team reviewed the legal descriptions and appropriately mapped 4,012 transfers and surveys, which was down 7% from 2021. Those included the following:

	2021	2022
Conveyed Transfers	2,082	1,788
Exempt Transfers	1,257	1,194
New Surveys	170	157
Pre-approvals	805	873

Permits

Our office serves as the central location to obtain permits for work in the Road Right of Way, Oversized and Overweight trucking permits and Floodplain Development for all County roads and many of the Township Roads. While this is not a statutory duty of the County Engineer, we are glad to provide this assistance to the County Commissioners and all 17 Townships, and serve as their engineering advisor.

In 2022, my Team reviewed the 266 Permits and numerous inquiries from business and residents wishing to develop in Hancock County. Those included the following:

Permit Type	2021	2022
Drive Access Permits	77	72
Drive Access Variances	6	1
Utility Installations (County Roads)	35	58
Utility Installations (Township Roads)	37	68
Overweight/Oversize Trucks	63	31
Roadside Ditch Work (County Roads)	5	3
Roadside Ditch Work (Township Roads)	1	3
Floodplain Development	9	31

Subdivisions

While the County Engineer's statutory responsibility is limited to the review of Subdivision Roads and Bridges, our Team provides assistance to the Hancock County Regional Planning, the County Commissioners, and the Township Trustees, to review the County's minimum requirements for Subdivision construction. The following subdivisions were completed in 2022:

1. Best Liberty Addition (24 Lots)
2. Best Liberty Addition 1st Addition (22 Lots)
3. The Woods at Hillcrest 9th Addition (20 Lots)

The following subdivisions are scheduled to be constructed in 2023:

1. Hickory Lakes 4th Addition (12 Lots)

Petition Ditch Construction

Our Office provides assistance to the County Commissioners for the engineering and construction of Ditches that are petitioned through the Ohio Petition Ditch Law Process. This assistance is primarily through the Public Viewing, Preliminary Engineering Report, project design, Final Engineering Report, initial construction assessments, and 6-year reviews. In 2002, the County Engineer, County Commissioners and Hancock Soil and Water entered into an agreement that Soil and Water would administer all of the Petition Ditch Maintenance for the County. We continue to provide assistance to Soil and Water on an as needed basis. Like the Subdivision Program, we do this work as time allows due to no funding being provided nor reimbursed from Construction Fees. Currently, our team is working on the following Petition Ditches:

1. Oil Ditch (City of Findlay and Liberty Township)
2. Howard Run (City of Findlay and Marion Township)
3. Liberty Reed (Liberty Township)
4. Western Meadows Outlet Ditch (Liberty Township)
5. Wells Tri-County (Delaware Township)
6. Conrad Hilshafer (Liberty Township)
7. Forest Lake Subdivision (Marion Township)

Check out our website by searching Hancock County Ohio Engineer.

New information is being added daily including Property Survey Records, Township Information, Subdivision Records, and information that you once had to visit the County Engineer's Office to research paper files.



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