

# Secondary Roads Department

Iowa DOT County Five-Year Program (CFYP)  
& Maintenance Rehabilitation Program (MRP)  
Calendar 2023-2027 (Fiscal 2024-2028)



Draft  
2022.03.01



# JOHNSON COUNTY'S SECONDARY ROADS SYSTEM

(Data based on 2022 IADOT published values)

- **Roads**

- The department is responsible for roughly 914 total miles of Secondary Roads
- Broken down by surface type:

| Dirt | Gravel | Bituminous/Chipseal | Asphalt (HMA) | Concrete (PCC) |
|------|--------|---------------------|---------------|----------------|
| 41   | 569    | 126                 | 129           | 47             |

- We maintain approximately 314 economically crucial Farm-to-Market road miles
- Roads are designed to last 30-40 years between total reconstructions
- We manage over 1800 miles of roadside vegetation and ditches
- Maintenance and rehabilitation projects hold things together between reconstructions
  - Overlays
  - Mill and fill
  - Patching
  - Crack sealing



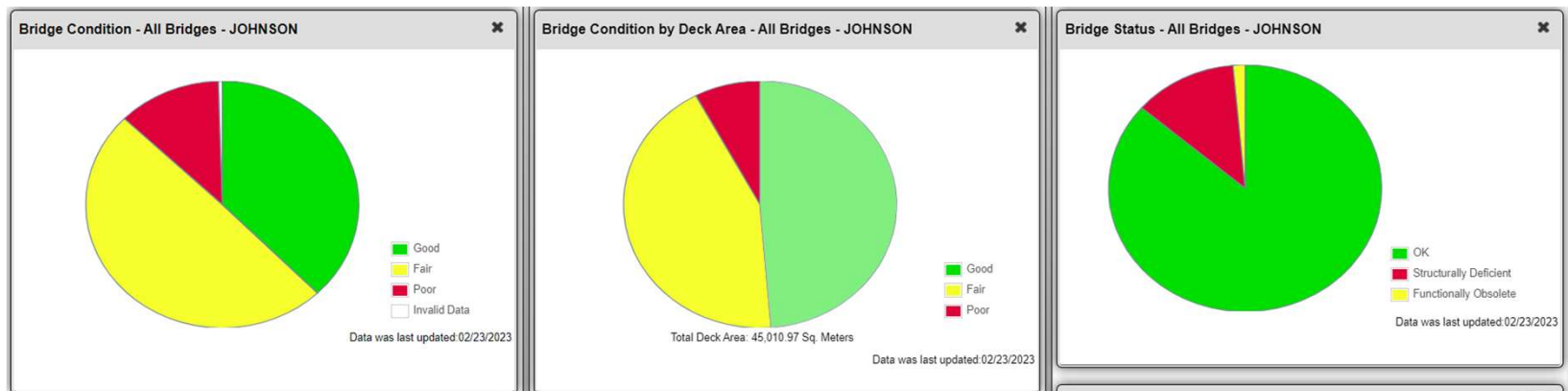
# JOHNSON COUNTY'S SECONDARY ROADS SYSTEM

(Data based on 2022 SIIMS data)

- **Bridges**

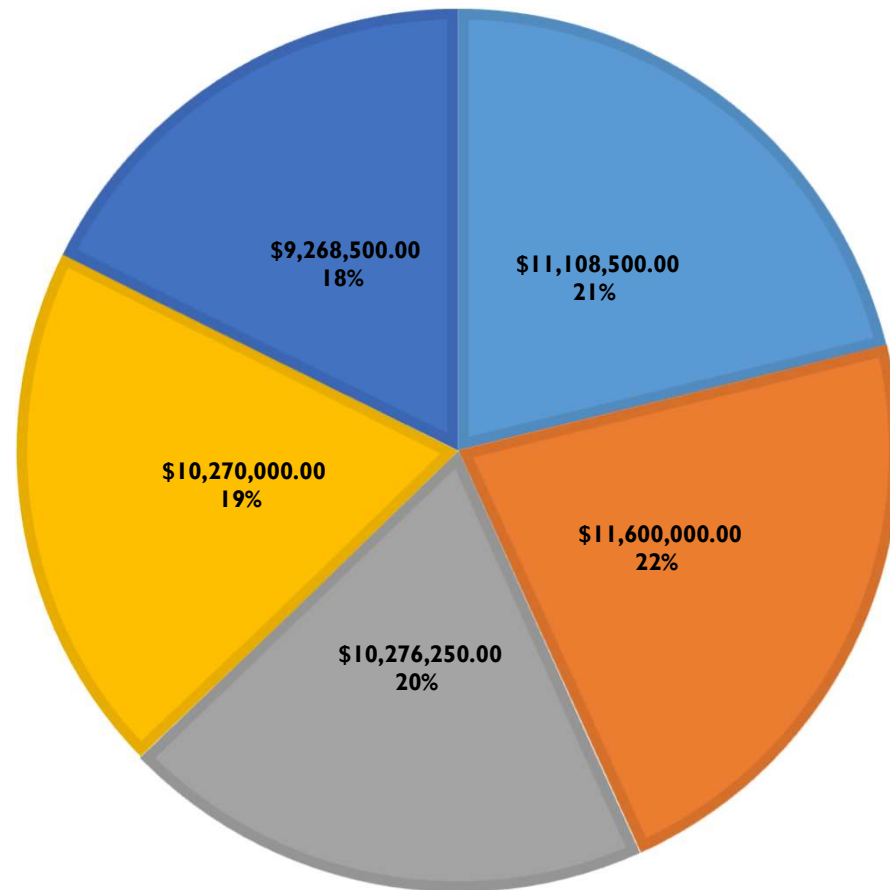
- We monitor 211 Bridges/Culverts longer than 20 feet included in the NBIS
- All bridges  $\geq 20$  feet in length are required to be inspected at no less than 24 month intervals
- Of those 211 NBIS structures:
  - 26 bridges are structurally deficient (SD)
  - 3 are functionally obsolete (FO)
  - Only 2 fracture critical (FC) bridges remain on our system.
- We are aggressively replacing and repairing deficient bridges as part of this CFYP
- Johnson County bridges rank very well compared with most in Iowa, although Iowa struggles with a low ranking nationwide due to the sheer number of bridges on the system
- Bridges are designed to last 50 years or more – although many of our bridges are centenarians

- **Thousands(!) of cross-road and driveway culverts <20 feet**



# CFYP CONSTRUCTION

(Expenditures By Calendar Year – 2023-2027)

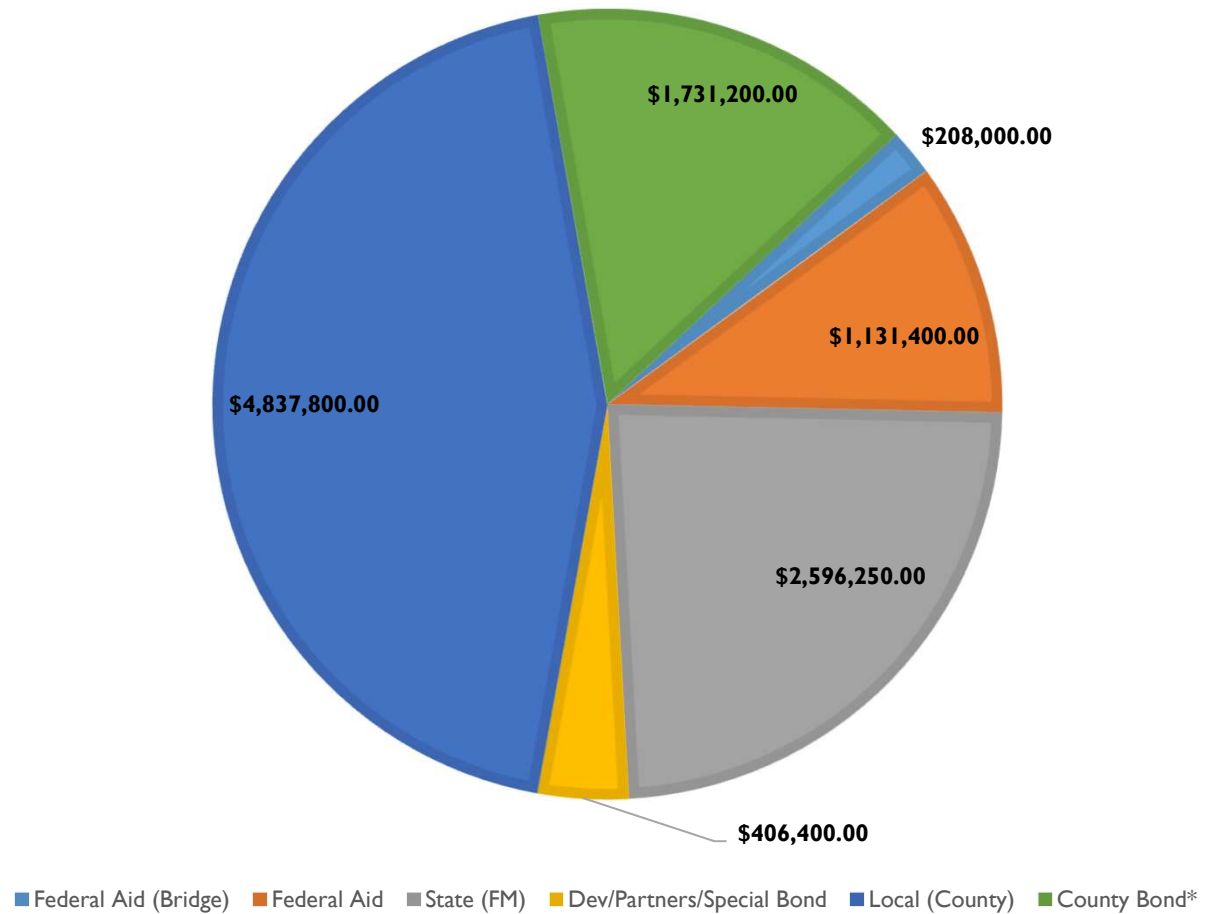


■ 2023 ■ 2024 ■ 2025 ■ 2026 ■ 2027



# CFYP CONSTRUCTION

(Revenue/Expenditures - Average Values – All Sources - Calendar 2023-2027)

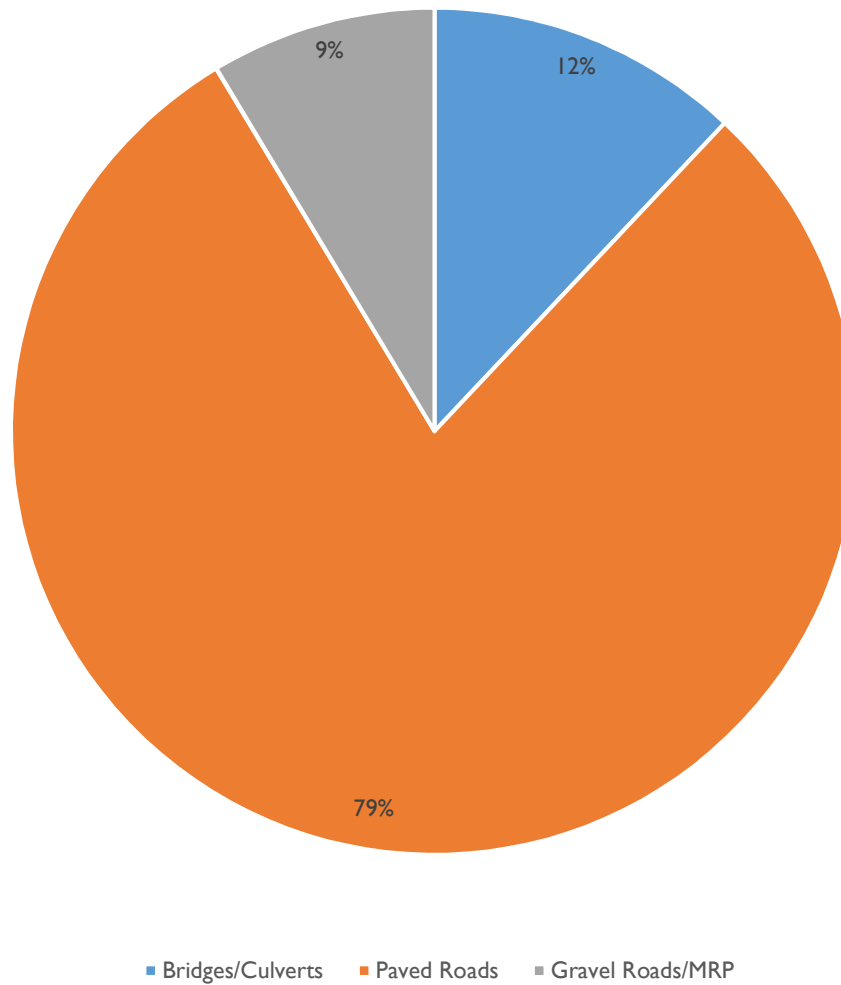


\*- County Bond Funding is subject to Iowa legislature and BOS approval



# CFYP CONSTRUCTION

(Expenditures by Project Type Calendar 2023-2027)





Making a difference – Completed Project Type Examples

# ●° **JOHNSON COUNTY** **SECONDARY ROADS CFYP**



# ORVAL YODER TURNPIKE BRIDGE

Bridge Rehab Project Example - Structure P-2-3, Proj.#LFM-Bridges-2021--7X-52

- On Orval Yoder Turnpike over Old Man's Creek ~ \$347k
- Replaced HMA with PCC approach pavement.
- Repaired voids beneath abutments and repainted structural steel pile casings
- Added 20-30+ years of additional service life to this structure.

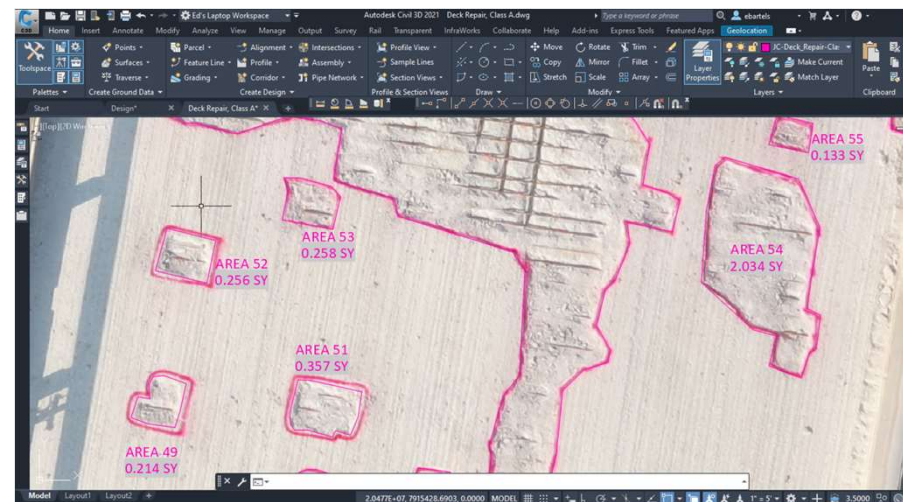
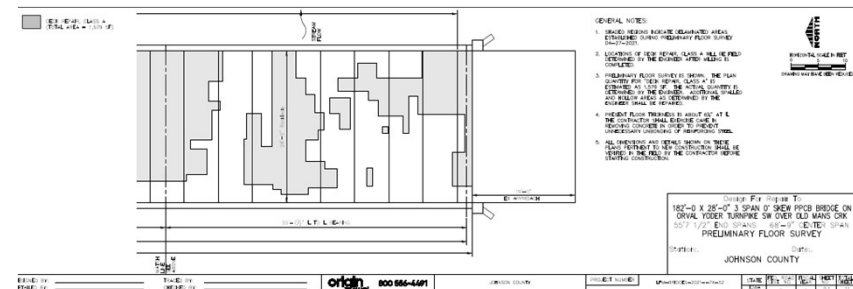




# ORVAL YODER TURNPIKE BRIDGE (CONTINUED)

Bridge Rehab Project Example - Structure P-2-3, Proj.#LFM-Bridges-2021--7X-52

- Ongoing mini research project - used UAS equipped with thermal camera to determine delamination areas for comparison with traditional sounding methodology
- Used UAS to very accurately document and measure delamination/repair areas
- Improved safety, speed, and accuracy of project inputs & outputs. Saved significant cost and time as well



## F46 (MELROSE AVE / IWV RD)

Full Reconstruction Phased – Grade & Pave Example - Proj.# STP-U-3715(668)--70-52

- HWY 218 to Hebl Avenue (~1.5 Mi.) ~ \$5.1M Total, \$1.4M FM funding - joint project with Iowa City accomplished over two construction seasons
- 22' HMA pavement widened to 32' wide (4' paved shoulders added each side)



## F44 (HERBERT HOOVER HIGHWAY)

Full Reconstruction Phased – Grade & Pavement Example - Proj.# STBG-SWAP-C052(I20)--FG-52

- From 0.9 mi. East of Wapsi to 0.1 miles West of Johnson Cedar line (~2.0 Mi.) ~ \$4.2M Total
- 22' HMA pavement widened to 32' wide (4' paved shoulders added each side), structure replacements, and bike trail grading.

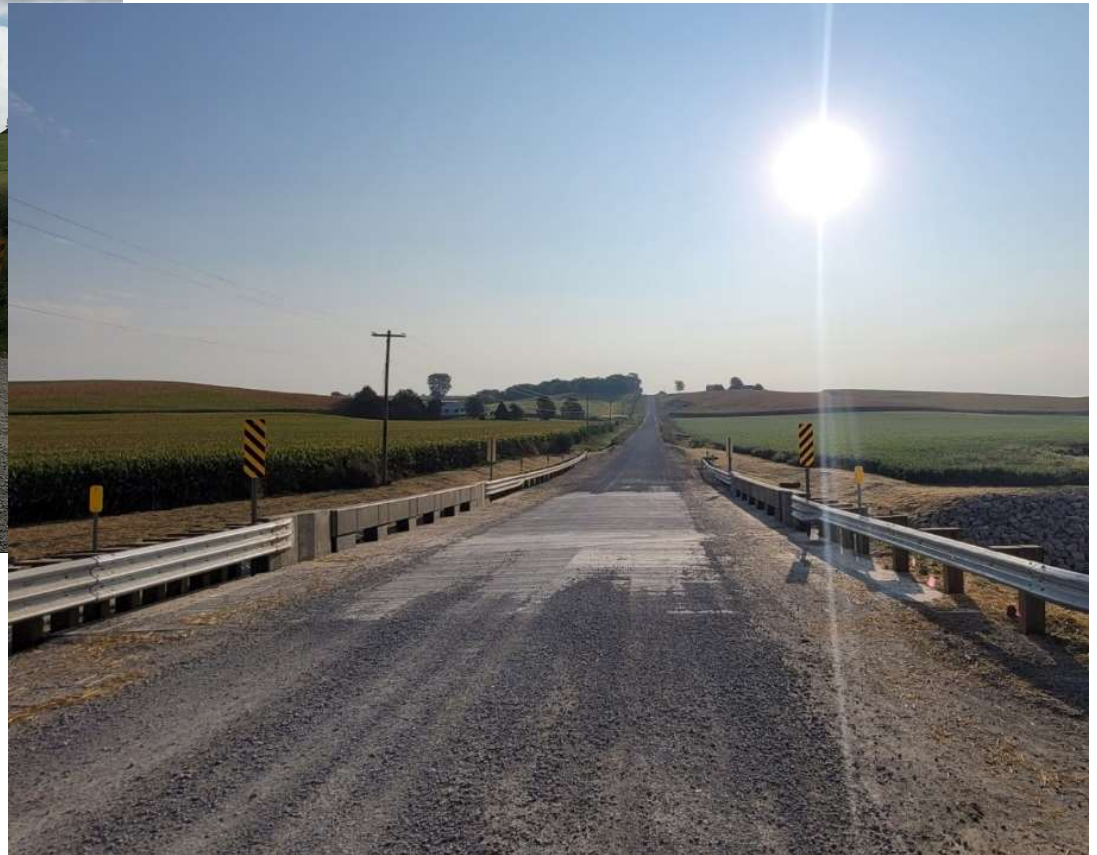




## ROHRET ROAD SW STRUCTURE O-30-2

Bridge Replacement Example – Proj.#FM-C052(I48)--55-52

- Over Mooney Creek ~ \$866k
- Load limited bridge replaced with 30'-6"w x 50' CCS bridge

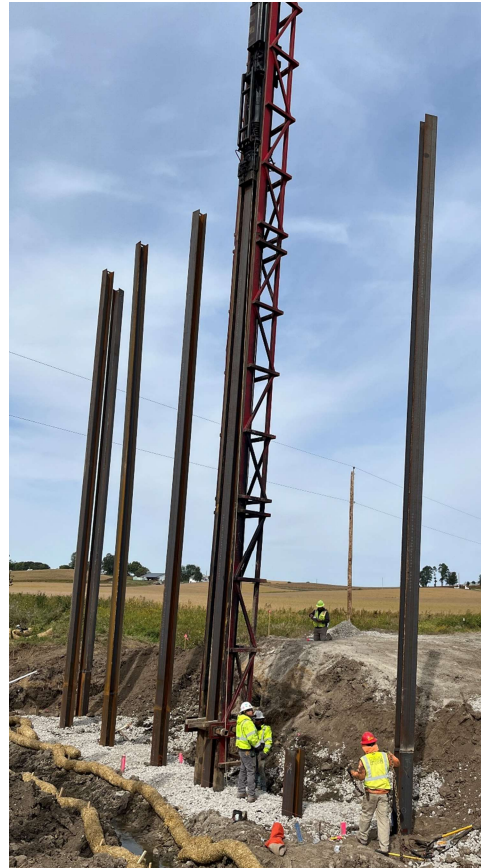




## HALF MOON AVENUE SW STRUCTURE N-5-2

Bridge replacement example – Proj.# L-N-5-2--73-52

- Over a branch of Rapid Creek ~ \$380k
- Load limited, NBIS bridge replaced with 30'-6" x 30' PPCB Bridge
- <18 months from bridge closure to open to traffic



## FUTURE PRIORITIES

(Subject to change - Listed alphabetically)

140th Street Culvert just West of Ely Road

250th (Penn) Street/Echo Avenue Grade for Pave

500th Street from Naples Avenue to Oak Crest Hill Road

Amana Road stabilized macadam base from Greencastle to Iowa County

Black Diamond Road - Iowa County to HWY 1

Dubuque Street from I-80 to North Liberty

High Volume Chipseal Transition Plan

IWW Road from Blackhawk to Cosgrove

Rapid Creek Road from HWY 1 to Wapsi

Utah Avenue from HWY 6 to 520th Street



## THANK-YOU'S

- The Johnson County Board of Supervisors
  - Prioritize infrastructure improvement
  - Support Secondary Roads mission
  - Invest through bonding and sustained local contribution
- Our Technicians
  - Tim Dunton
  - Adam Finken
  - Adam Gebhart
- Our Maintenance Staff
  - Get it done under extreme conditions
  - Hold it all together
- Residents of Johnson County
  - Take an active part
  - Care about this community
  - Willing to invest in it

*"The Johnson County Secondary Road Department's purpose is to enhance and maintain the County's road system. The department is committed to providing the citizens of Johnson County, and all who use our roads and trails, superior infrastructure and maintenance that improves mobility and a commitment to environmental and economic accountability. Departmental activities strive to meet and most often exceed expectations in the most efficient, effective, and responsible manner."*





**QUESTIONS?**

