



# A WORD FROM THE COUNTY ENGINEER

Thank you for taking the time to review and learn about the projects and maintenance that the Geauga County Engineer's Office managed in 2019.

Please utilize this document as an overview of the Engineer's responsibilities and performance to help you better understand the essential service that the Geauga County Engineer provides to the residents of Geauga County, Ohio.

The County Engineer is required per the Ohio Revised Code, Section 5543, to perform the following duties on all County roads and all bridges on county and township roads:

- Construction
- Reconstruction
- Improvement
- Maintenance



The County Engineer is also statutorily required to perform engineering services on all township roads.

The following document details the Geauga County Engineer's successful fulfillment of those duties in 2019.

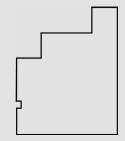
Thank you,

fr live

JOE CATTELL, PE, PS
GEAUGA COUNTY ENGINEER



## MEET JOE CATTELL, PE, PS



Joe Cattell, PE, PS grew up in Eastlake, Ohio. During his school years, Joe excelled in the math and science subjects. He decided to become a civil engineer because of his expertise in the math and science subjects, as well as the passion he had for building things. In 1993, he graduated with a Bachelor of Science in Civil Engineering from Cleveland State University. Joe returned to college in 1995 to earn his surveying license. In 1999, Joe became a registered Professional Engineer (PE) in the state of Ohio. In 2002, he became a registered Professional Surveyor (PS) in the state of Ohio.

Joe has one daughter and two sons. His daughter is currently teaching at the University Of Indiana, while simultaneously obtaining her Ph.D. His oldest son is currently in the U.S. Army National Guard as an Air Defense Battle Management System Operator, while currently attending college to become a commercial pilot. Joe's youngest son is currently serving in the U.S. Army full time as a Horizontal Construction Engineer.

### **BUILDING OUR TEAM**

Throughout 2019, the Geauga County Engineer made a concentrated effort at developing its team. Through advertising and marketing, the Engineer attracted and hired several fine candidates for Highway Worker, Highway Technician, Mechanic, and Engineering positions. The Engineer attracted prospects from many different walks of life, which has led to a more diverse set of skills. This has aided in developing better and more efficient work habits. Along with that, Engineer employed several employee development plans aimed at expanding the skills of personnel in areas professionalism. leadership. positivity, and other soft-skill areas. Utilizing both in-house resources and external

resources, the Engineer's staff gained knowledge in these areas, which has made a noticeable impact in overall productivity and teamwork. This has led to a more cohesive workforce, and one that better executes its dailv responsibilities. By continuing the education and development of all team members at the Engineer's Office, the public reaps the benefits, as the community improves through a balance of quantity and quality. The Engineer believes that learning should never end, and is always searching for new ways to challenge its staff to push itself beyond preconceived limits. As the development of the staff continues, the expectation is that Geauga County residents will be the ultimate benefitiaries.



# DESIGN, FUNDING, AND PLANNING DEPARTMENT Shane Hajjar, PE - Deputy Engineer

The Design, Funding, and **Planning** Department is responsible for various project design duties on the 235.674 miles of County roads, 187 bridges, and 577.362 miles of township roads. This department uses professional engineering expertise to statutory perform engineering responsibilities for all County roads and bridges, and all township roads in the 16 Townships within Geauga County.

The Design Department performs the following statutory duties:

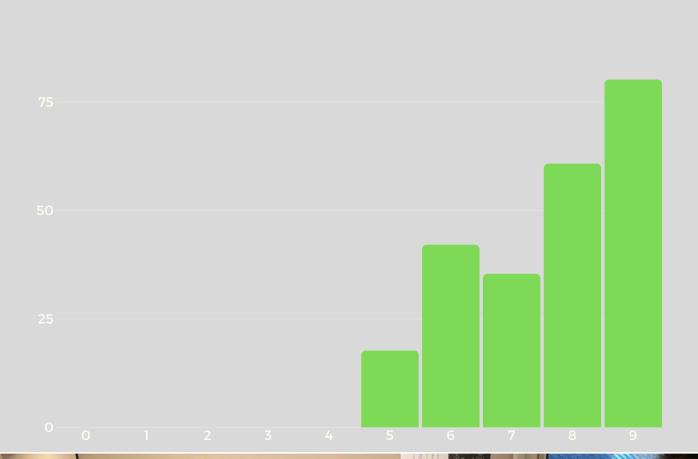
- Design of all bridges, culverts, ditches, and roads
- Hydraulic studies
- Preparation of improvement plans, specifications, and estimates
- · Right-of-way acquisition

The County reports its roads infrastructure assets using the modified approach. The following disclosures pertain to the condition assessment and budgeted versus actual expenditure in 2019 for the preservation of these assets. The Geauga County Engineer administers a five-year program for road and bridge repairs and improvements. This plan changes continually based upon conditional inspections and budget allowances.

A general overall numerical rating ranging from 0 to 9 is assigned to sections of roadways as a result of the yearly visual observations, with 0 being the lowest ranking and 9 being the highest. It is the practice of the Geauga County Engineer's Office to maintain at least eighty percent (80%) of the mileage of the County highway system at an appraisal rating of 5 or more. The most recent assessment found that one-hundred percent (100%) of all County roads have a numerical rating of 5 or higher.



### GEAUGA COUNTY HIGHWAY RATINGS (DATA SHOWN IN MILES)



## THE DATA

Factors considered when evaluating a roadway include time since the last surface maintenance, current pavement condition from visual observation, traffic volume, and traffic type.

A general overall numerical rating ranging from 0 to 9 is assigned to sections of roadways as a result of the yearly visual observations, with 0 being the lowest ranking and 9 being the highest.

It is the practice of the Geauga County Engineer's Office to maintain at least eighty percent (80%) of the mileage of the County highway system at an appraisal rating of 5 or more. The most recent assessment found that one hundred percent (100%) of the County roads have a numerical rating of 5 or higher.

## CONSTRUCTION AND TRAFFIC MANAGEMENT DEPARTMENT

Nicholas J. Gorris, PE - Deputy Engineer

The Construction and Traffic Management Department is responsible and inspecting for managing resurfacing and reconstruction projects on the 235 miles of County roads, 187 bridges, and 577 miles of township roads.

Get to know the work the Construction and Traffic Management Department does, learn about its responsibilities, and review the statistics reflecting its work and efforts to improve the roadway and bridges of Geauga County.

### DEPARTMENT RESPONSIBILITIES

- Traffic related studies including, but not limited to, volume counts, speed studies, crash review, and analysis
- Culvert Inventory Management and **Inspection for County highways**
- Management and inspection of all roadway resurfacing, reconstruction, culvert and bridge replacement projects on all County and Township roads
- Oversight of all Subdivision development, including plan review, inspection, and stormwater maintenance
- Prevailing Wage Law Contract Compliance



## CONSTRUCTION MANAGEMENT AND INSPECTION

The Geauga County Engineer's Office recorded over 5,700 hours of management and inspection services on the following County and Township improvement construction projects.

- · One (1) County Infrastructure Project
- · Seven (7) County Roadway Resurfacing Projects
- · Four (4) Township Roadway Reconstruction Projects
- · Six (6) Township Roadway Resurfacing Projects
- · One (1) Township Roadway Maintenance Project
- · One (1) County Roadway Pavement Marking Project
- · One (1) Township Roadway Pavement Marking Project
- Four (4) County Culvert Replacement Projects
- Three (3) Township Culvert Replacement Projects
- One (1) Township Embankment Stabilization Project

Total Mileage of Township Roadways Improved	28.05
Total Mileage of County Highway Improved	22.13
Total Mileage of Improved Highway	50.18

The above referenced projects included the replacement of over 96,000 tons of Hot Mix Asphalt







2019 County Projects											
Project	Start Date		Total Working Days	Miles	Bid Amount	Final Cost					
Wilson Mills Road, CH 8, Sections A-C, 12 Culvert Replacements and Drainage Improvements	5/21/2019	7/3/2019	32	2.75	\$240,353.30	\$237,736.40					
Mentor Road, CH 5, Sections G-K (Resurface)	5/6/2019	6/10/2019	17	4.82	\$1,007,748.90	\$969,481.72					
Munn Road, CH 32, Section D (Reserface)	4/26/2019	5/20/2019	7	1.48	\$382,066.90	\$355,188.04					
Rapids Road, CH 1, Sections A-C (Resurface)	4/17/2019	5/19/2019	9	2.72	\$446,735.00	\$450,440.40					
Clay Street, CH 37, Sections G-J (Resurface)	7/15/2019	7/31/2019	11	3.07	\$645,885.00	\$638,254.20					
Wilson Mills Road, CH 8, Sections A-C, (Resurfacing)	9/17/2019	10/16/2019	11	2.75	\$638,250.00	\$619,386.90					
Caves Road, CH 30, Sections E-F (Resurfacing)	9/17/2019	10/17/2019	8	1.45	\$278,745.00	\$281,734.50					
Kile Road, CH 44 Sections C-D (Resurfacing)	9/9/2019	10/10/2019	10	3.09	\$695,049.23	\$703,250.59					
County Wide - Polyester Pavement Marking	7/4/2019	8/16/2019	6	80.00	\$196,765.00	\$192,817.30					
2019 County Project Totals: 102.13 \$4,531,598.33 \$4,448,290.05											

THROUGH DILIGENT PROJECT MANAGEMENT ON COUNTY HIGHWAY AND BRIDGE PROJECTS, GEAUGA COUNTY ENGINEER PROJECT MANAGERS SAVED TAXPAYERS A TOTAL OF \$83,308.28, THE DIFFERENCE BETWEEN THE BID AMOUNT AND THE ACTUAL FINAL COST.



#### GEAUGA COUNTY ENGINEER

_									
20									
Project	Start Date	Completion Date	Total Working Days	Miles	Bid Amount		Final Cost		
Aubum: Resurfacing of Various Roads	7/15/2019	10/16/2019	18	3.93	\$	767,990.35	\$ 739,966.45		
Auburn: Snow Road, TR 145 Drainage Improvements	8/5/2019	9/18/2019	13	N/A	\$	85,626.85	\$ 88,176.25		
Bainbridge: Asphalt Improvement of Various Roads	8/5/2019	10/17/2019	10	6.05	\$	302,000.00	\$ 253,789.50		
Bainbridge: Reconstruction of Various Roads	7/29/2019	10/17/2019	19	1.05	\$	465,765.00	\$ 428,935.08		
Bainbridge: Resurfacing of Haskins Road, TR 191 Sections B-C	8/20/2019	10/16/2019	8	2.47	\$	555,999.00	\$ 538,373.25		
Burton and Newbury: Reconstruction of Hotchkiss Road, TR 83, Sections A-D,	6/8/2019	8/5/2019	45	3.33	\$	1,010,400.00	\$ 915,199.13		
Chester: Heath Road Embankment Stabilization, Section E	8/5/2019	8/13/2019	7	N/A	\$	127,657.50	\$ 128,025.00		
Chester: Reconstruction of Various Roads	6/17/2019	10/17/2019	23	1.04	\$	621,400.00	\$ 651,408.08		
Claridon: Taylor Wells, TR 113 Drainage Improvements, Sections B-C	6/17/2019	8/9/2019	30	2.7	\$	238,870.50	\$ 239,005.00		
Hambden: Resurfacing of Various Roads	7/24/2019	8/8/2019	5	0.66	\$	203,875.00	\$ 190,562.00		
Munson: Resurfacing of Various Roads	5/31/2019	6/25/2019	11	1.77	\$	341,750.00	\$ 313,131.50		
Newbury: Resurfacing of Various Roads	7/15/2019	8/3/2019	6	1.33	\$	278,695.00	\$ 260,214.00		
Russell and Village of Hunting Valley: Reconstruction of County Line Road, TR 93	6/4/2019	N/A	N/A	3.72		\$3,928,563.70	ACTIVE		
Total Township Project Mileage: 28					\$	8,928,592.90	PENDING		

THROUGH DILIGENT PROJECT MANAGEMENT ON TOWNSHIP ROAD AND BRIDGE PROJECTS, GEAUGA COUNTY ENGINEER PROJECT MANAGERS SAVED TAXPAYERS A TOTAL OF \$102,170.95, THE DIFFERENCE BETWEEN THE BID AMOUNT AND THE ACTUAL FINAL COST.



### **SUBDIVISIONS**

The County Engineer continued the oversight of various subdivisions in Geauga County in 2019.

- Two (2) under active construction
- Three (3) under maintenance guarantee







## **BRIDGE DEPARTMENT**

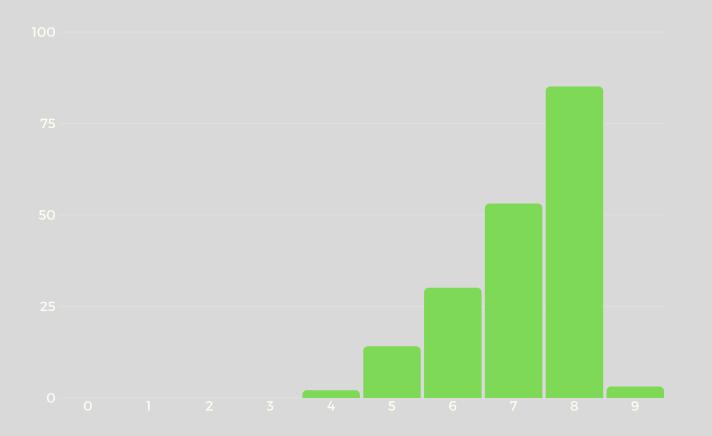
Andrew Haupt, PE, PS - Deputy Engineer

## THE COUNTY ENGINEER IS RESPONSIBLE FOR INSPECTING AND MAINTAINING GEAUGA COUNTY'S 187 BRIDGES LOCATED ON COUNTY AND TOWNSHIP ROADS.

The Bridge Department, along with all other state-wide entities, have made the transition to the Ohio Department Transportation's Structure Management System for reporting 2019 inspection year condition ratings, work orders, and inventory updates. Through effective management of inspection data, the Engineer has developed a scheduled bridge maintenance program to efficiently preserve and extend the life of these essential pieces of infrastructure.

Each bridge is evaluated annually based on the State and Federal Law and in accordance with Ohio Department of Transportation recommendations. Each bridge is given an ODOT sufficiency rating and an overall appraisal rating based upon bridge inspection rating The County Engineer is factors. responsible to maintain all bridges located on County and Township roads in Geauga County. The most recent assessment found that ninety-nine percent (99%) of the County bridges have a numerical rating of 5 or higher.





99% OF GEAUGA COUNTY BRIDGES ARE RATED FAIR TO EXCELLENT.

## THE DATA

Annual bridge inspections result in a "General Appraisal" number being assigned on a scale of 0 to 9, where 9 is a brand new bridge, zero being a failed bridge.

The general appraisal number allows the bridges to be scheduled for repair or replacement based on the different structural elements reviewed in each yearly inspection.

The most recent assessment found that ninety-nine percent (99%) of the County bridges have a numerical rating of 5 or higher.

### SURVEY DEPARTMENT

Andrew Haupt, PE, PS - Deputy Engineer Nick Goodrich, PS - Surveyor II

The Survey Department continues to improve and develop as a team. The Engineer's Office effectively efficiently utilizes recently acquired edge survey cutting equipment consisting of a robotic total station and GPS receiver configured to utilize the Ohio Department of Transportation's VRS (Virtual Reference Station) system which has enabled the Survey Department to increase efficiency and accuracy, while utilizing fewer staff members per survey crew. Additionally, the department worked with the Ohio Department of Transportation's CADD and Mapping Services on the addition of a VRS Base Station in Parkman. The department provided the Engineer's Office with the following survey related data collection:

- Control
- Topological
- Drainage
- Easement
- Right-of-Way and centerline surveys

The Survey Department supported the Design Department by providing record research, records assembly, and diligent field recovery of monuments. The Survey Department also supported the townships by performing centerline retracement, right of way staking, drainage surveys, record research of easements, as well as right of way vacations and dedications.

## DEPARTMENT RESPONSIBILITIES

- Right-of-way Relocation
- Vacation of Public Right-of-Ways
- Fulfillment of Public Information Requests
- Research of records for improvement projects
- Acquisition of easements for bridges and culverts
- Retracement of county and township road center lines



## TAX MAP DEPARTMENT

Andrew Haupt, PE, PS - Deputy Engineer Steven Roessner, PS - Tax Map Manager

THE GEAUGA COUNTY TAX MAP DEPARTMENT IS RESPONSIBLE FOR ASSISTING THE PUBLIC IN OBTAINING TAX MAPS AND SURVEY INFORMATION FOR PROPERTY IN GEAUGA COUNTY.

### **DEPARTMENT RESPONSIBILITIES**

- Maintains the GIS map depicting the County Auditor's tax duplicate
- · Reviews property descriptions and plat maps
- Assigns house numbers and business addresses for driveway permit application

## WORK COMPLETED BY THE TAX MAP DEPARTMENT IN 2019

- · 175 New Addresses Assigned
- 146 Surveys Reviewed for Splits, Combines, and Re-surveys
- · 1 Annexation Reviewed
- •1 De-annexation Reviewed
- · 7 Subdivisions or Re-Plats Reviewed
- · 1 Condominium Plat Reviewed
- 5 Land Contracts Reviewed
- 3 Change of Address Letters
- 589 Daily Audit Report Address Verifications
- 266 Parcels Updated on Address Maps
- · 266 New, Combined, or Deleted Parcels



## HIGHWAY MAINTENANCE

**DEPARTMENT** Trace Turnbull - Highway Superintendent Nick Kovach - Asst. Highway Superintendent

The Geauga County Engineer Highway Maintenance forces maintain approximately 235 miles of county roads and 187 bridges. During the 2019 calendar year, the Department worked tirelessly to respond to requests from residents. County forces also efficiently and safely provided snow and ice control measures on County roads and bridges.

The Maintenance Department worked closely with the Design and Construction Departments by ditching and grading the roadsides prior to resurfacing projects to ensure proper drainage. The department also maintained all roadside signs on County roads to ensure safe and efficient traffic control.

## THE LIST BELOW INDICATES SOME OF THE WORK COMPLETED BY THE DEPARTMENT IN 2019.

### HIGHWAY MAINTENANCE RESPONSIBILITIES

- Tree cutting and removal
- Bridge and culvert repair and maintenance
- Ditch repair and maintenance
- Sign management and replacement
- Guardrail repair and maintenance
- Snow & ice control
- Berm maintenance

#### **ASPHALT REPAIR**

• Hot Mix Asphalt: 1,359.79 tons

• Cold Mix Asphalt: 48,200 pounds

• Total Asphalt Cost: \$92,997.35

#### **SNOW & ICE CONTROL**

• Salt Used: 7.716.5 Tons

• Brine Used: 31,325 Gallons



### PERMITTING

Twenty-one (21) Highway Use Permits were issued allowing private contractors to work within the road right-of-way for the installation, maintenance, and/or replacement of private infrastructure projects.

Three hundred fifty-five (355) Drive Permits were issued for the installation of new driveway culverts and the replacement of existing driveway culverts. In addition, one hundred seventy-five (175) new addresses were issued to existing parcels.

### RESOURCE RENTAL PROGRAM

In 2019, the Geauga County Engineer's Office continued the Resource Rental Program (RRP) to assist numerous townships. The goal of the RRP is to encourage sharing with Geauga County entities that are responsible for highway maintenance, thus reducing the overall burden on taxpayers.







## ADMINISTRATIVE DEPARTMENT

Frank Antenucci, Esq.- Administrator Katie Taylor - Fiscal Officer

The Administrative Department is responsible for providing the support services necessary for the County Engineer's Office. These responsibilities include the following areas of work:

- Human resource administration
- Drug and alcohol training and testing
- Payroll
- Prevailing wage compliance
- Records retention

The Administrative Department has focused on moving forward by using technological advances to become more effective and efficient. Accordingly, the department has a dual role in supporting and managing the day-to-day activities of the Engineer's Office, and also coordinating the long-term strategic planning and procedural improvements for the Office.

The department has been responsible for managing the scanning, digitizing, organization of all historical records. These historical records once encompassed over twenty file cabinets and included the following documents: survey data. correspondence, past and road project information.

- Employee training and safety programs
- Benefits administration
- Invoice procurement and processing
- Contract negotiations
- Ohio public records compliance

They once used a significant amount of office space and required hours of tedious searching to acquire a specific document. The department is working to scan and digitally index all of these files for efficient storage and easy document acquisition. This ease of document acquisition not only aids engineering staff for faster research, but also aids the public in quicker and more efficient public records research.

Further, the Administrative department has worked to rewrite and update specific policies related to the long-term administration of the Engineer's Office.



## RECRUITING THE NEXT GENERATION OF PUBLIC SERVANTS

In 2019, the Engineer's Office was in need of several highway workers, engineers, and a mechanic, and to find the best candidates for the positions, the Engineer initiated several advertising campaigns. Not only did advertising bring in many great candidates, it also let the public see that making roadways safe for residents is our priority and the pride that the employees have to represent Geauga County.

The Engineer's Office worked with private partners to develop a recruitment campaign for the agency's open highway worker and engineer positions. Through video advertisements and graphics, the work done by the private partners helped expend our search and bring in a greater number of highly qualified candidates.

The Engineer's Office also launched several advertising campaigns in-house. Through social media, the Engineer's Office not only reached several great candidates for all positions, but also further marketed the Engineer's mission, and shed light on the work done by the staff at the Engineer's Office.

### **OUTREACH**

In an effort to better engage with the community, the Engineer's Office put a more focused effort on community involvement in 2019. The Engineer's Paint a Plow Campaign launched in the summer, which saw junior leaders from 4H spend a morning at the Engineer's Office painting a snow plow. The event helped raise snow and ice safety awareness, and served as a beginning to what will be an annual event.

Engineer's Office personnel also participated in several parades throughout the county, and local events sponsored by county businesses and organizations.

Finally, 2019 saw the launch of the Engineer's new website, which will assist residents, contractors, and Office personnel in day-to-day operations.









## SAFETY COMMITTEE

The Engineer's Safety Committee exists to encourage all employees of the Geauga County Engineer's Office to participate in suggestions actively pertaining to health and safety issues relevant to employment and also to recognize outstanding employee performance safety suggestions that make the Geauga County Engineer's Office a safer and healthier place to serve.

The Safety Committee's job is to provide safety planning, problem solving, and strategic safety related leadership for The Geauga County Engineer's Office. The Safety Committee works as a vehicle to ensure that safety suggestions from employees are received, considered, and possibly implemented. Ultimately, the Safety Committee exists to improve safety and heighten awareness of health and safety issues for all employees of the Office.

## 2019 SAFETY COMMITTEE

Kevin Shea

Mike Donaldson

Frank Antenucci Trace Turnbull

Zack Sipan



## MERIT AWARD COMMITTEE

The Engineer's Merit Award program was introduced in 2019 in an effort to recognize members of the Engineer's staff across all departments for their contributions and impact on the team and the community. The Merit Award Committee is comprised of five members, plus two members-at-large. Twice a year, the committee members vote on nominations for six categories, with one winner being selected from each category. The winner is then presented a certificate and hard hat decal, and has their

name engraved on a plague that corresponds with the award. Nominations for each award can be submitted by anybody within the organization. Those who nominated should be going above and beyond the normal expectation for their role. Ultimately, the Merit Award Program aims to recognize those at the Engineer's Office who are especially dedicated to the well-being of the community and team, and understand the big picture of the organization.

## 2019 MERIT AWARD COMMITTEE

Jerad Howes Addison Wolf Lee Thomas
Bill Dudinsky Ron Quercioli Tom Ross Zack Sipan

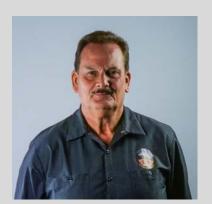
### 2019 PROMOTIONS

- Nick Goodrich Surveyor II
- Tom Ross Foreman
- Rob Weigle Foreman
- Zack Sipan Highway Worker V
- Rick Weikart Highway Worker IV
- Jerad Howes Highway Worker IV
- Lee Thomas Highway Worker IV
- Kyle Peschke Highway Worker III
- Jonathan Kreuz Highway Worker II
- Joe Rini Highway Worker II
- Brent Eldred Highway Worker II
- Matt Carver Highway Worker I
- Matt Miller Highway Worker I
- Daren Maruna Highway Worker I

### 2019 RETIREMENTS



Joe Prosser



**Scott Warner** 



**Darrell Robinson** 









### CURRENT EMPLOYEE LISTING

Frank Antenucci, Esq. - Administrator Jake Campbell, EI - Engineer I Rick Carlson - Highway Worker IV Matt Carver - Highway Worker I Keith Delfs - Survey Technician III Mike Donaldson - Mechanic V Bill Dudinsky - Operations Supervisor Ron Dunning - Highway Technician I Brent Eldred - Highway Worker II Rachel Formica, EI - Engineer I Nick Goodrich, PS - Surveyor II Nicholas J. Gorris, PE - Deputy Engineer Shane Hajjar, PE - Deputy Engineer Don Hatch - Mechanic IV Andrew Haupt, PE, PS - Deputy Engineer Eric Hawk - Mechanic II Jordan Hommes - Highway Worker I **Bridget Holy - Engineering Clerk** Kevin Holy - Highway Worker V Luke Horwatt - Highway Worker I **Dustin Howes - Highway Worker II** Jerad Howes - Highway Worker IV Matthew Johns - Development Coordinator Rory Judd - Mechanic III Corey Keeney - Highway Worker I Brian Kingure - Highway Technician I Nick Kovach - Assistant Highway Superintendent

Jonathan Kreuz - Highway Worker II Paul Kucharski - Engineer Technician I Ken Lewis - Highway Worker IV Sue Martin - Tax Map Technician II Daren Maruna - Highway Worker I Matt Miller - Highway Worker I Evan Miner - Highway Technician I Mikala Morgan - Finance/HR Coordinator Kyle Peschke - Highway Worker III Rick Poff - Highway Worker IV Al Prescott - Bridge Designer/Inspector Ron Quercioli - Highway Worker IV Joe Rini - Highway Worker III Steven Roessner, PS - Tax Map Mgr./Survey Coord. Tom Ross - Foreman Kevin Shea - Highway Worker III Zack Sipan - Highway Worker V Katie Taylor - Fiscal Officer Lee Thomas - Highway Worker IV Trace Turnbull - Highway Superintendent Dave Tvergyak - Highway Worker V Chris Villers - Highway Worker I Rob Weigle - Foreman Rick Weikart - Highway Worker IV Macen Whirrett, EI - Engineer I Addison Wolf, EI - Engineer I



