

2017

# Annual Report

The Geauga County Engineer's Office



# 2017

## Annual Report

The Geauga County Engineer's Office

### Executive Summary

Thank you for taking the time to review and learn about the projects and maintenance that the Geauga County Engineer's Office managed in 2017.

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 2017.

Thank you,

Joe Cattell, PE, PS

Joe Cattell, PE, PS

Joe was elected to the office of Geauga County Engineer in November 2012 and took office on January 7<sup>th</sup>, 2013. He was re-elected to a second term in 2016 and took office in 2017.

Prior to his election, Joe served as an employee at the Geauga County Engineer's Office from 1994-2013.

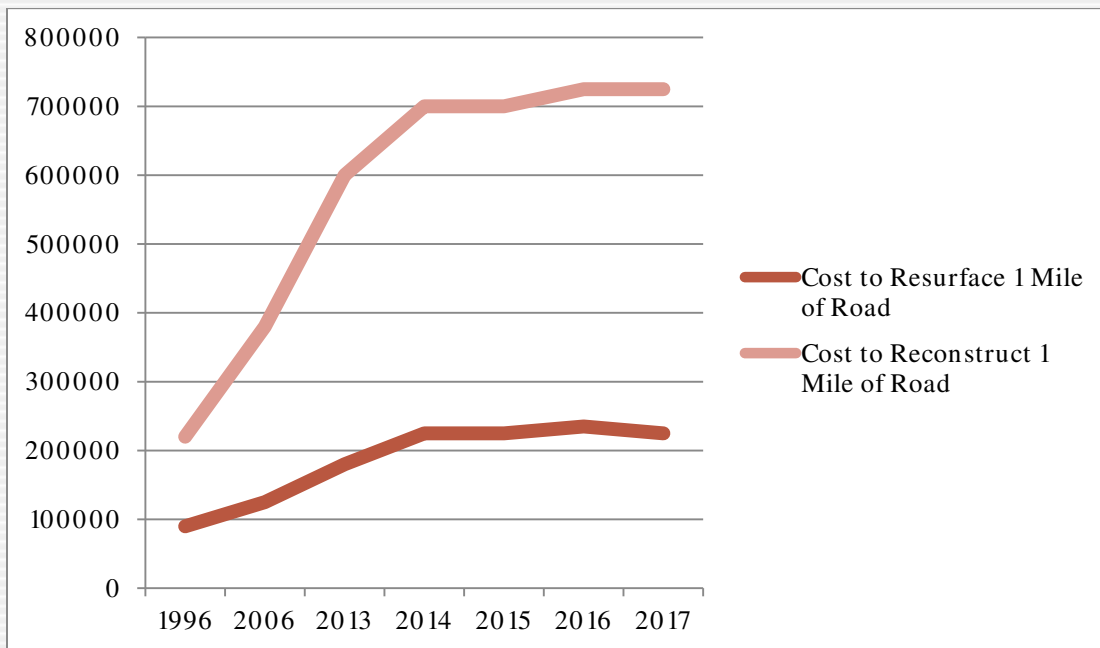
Joe received his Professional Surveyor's license in 2001 and his Professional Engineer's license in 1999.

Joe graduated from Cleveland State University in 1993 with a B.S. in Civil Engineering.



## Cost Increases

While costs have increased exponentially over the past two decades, the Engineer's Office has combatted these rising costs by developing a more efficient and effective workforce that is able to provide higher quality services to residents while doing so with fewer resources. One of the most significant cost increases the Engineer's Office has experienced concerns the rising costs in asphalt materials. Since 1996, reconstruction project costs have increased by 300% and asphalt resurfacing projects have increased by 250%. During that same time, the Engineer's overall budget has increased approximately 47% over the past twenty one (21) years.



Accordingly, the Engineer's Office has taken steps to better utilize and unleash the creativity of its most valuable asset: the dynamic, diverse, and creative people that make up the Engineer's Office. These people are finding new, creative, and more efficient ways to harness technology to provide faster speed of project execution that ultimately benefits the traveling public and the residents of Geauga County.

## Design, Funding, and Planning Department

Shane E. Hajjar, PE – Deputy Engineer

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 perform statutory engineering responsibilities for all County roads, all bridges and all 16 Township Boards of Trustees within Geauga County.

The Design Department performs the following statutory duties:

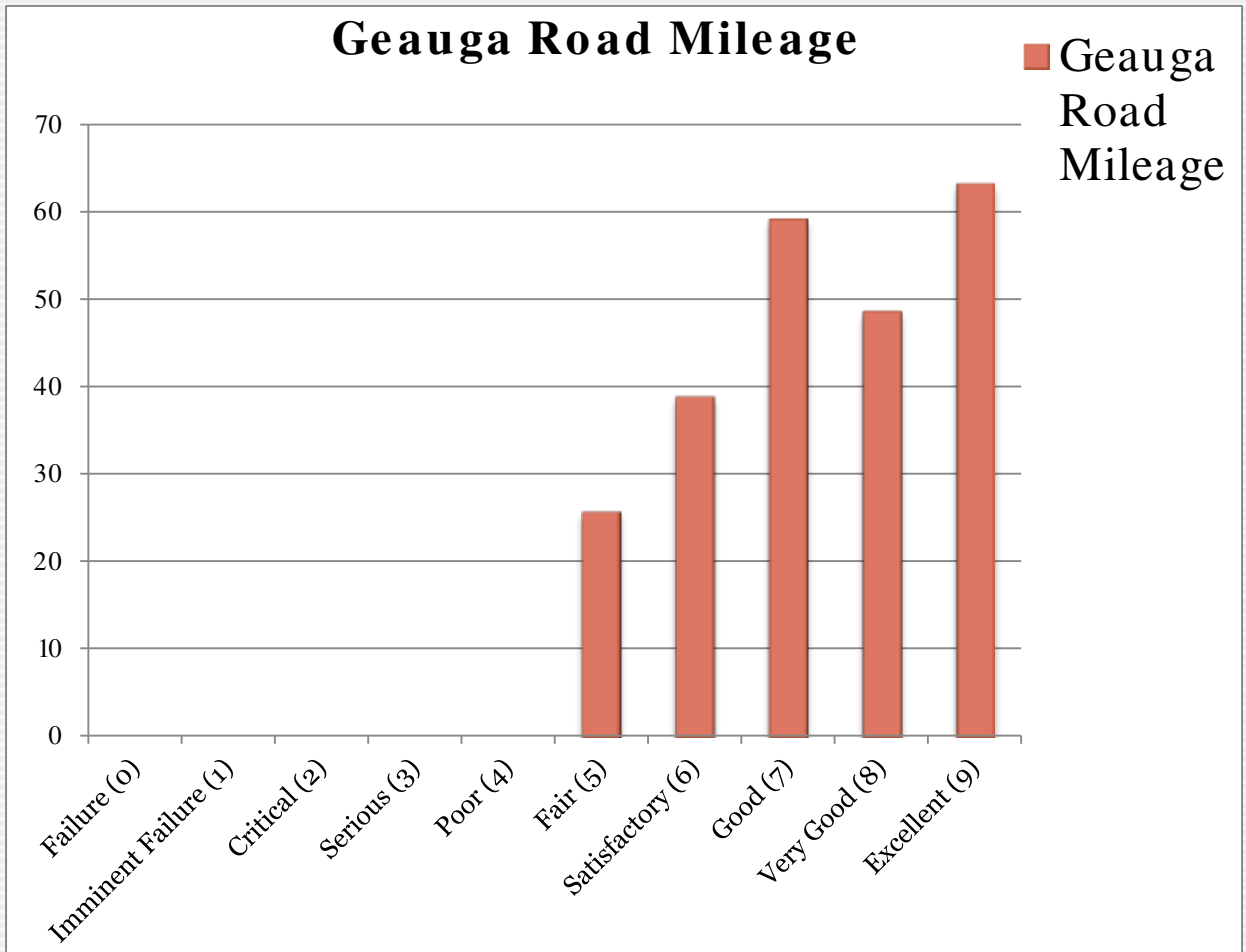
- Design of all bridges, culverts, ditches and roads
- Hydraulic studies
- Preparation of improvement plans, specifications, and estimates

The most recent assessment found that eighty-nine percent (89%) of all County roads have a numerical rating of six (6) or higher.

### Condition Assessment of County Roads and Bridges

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 2017 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 6 or more. The most recent assessment found that **eighty-nine percent (89%)** of all County roads have a numerical rating of 6 or higher.





## Construction, Permitting, and Traffic Management Department

Nicholas J. Gorris, PE – Deputy Engineer

Department responsibilities in 2017 included:

- Traffic related studies including, but not limited to, volume counts, speed studies, crash review and signal warrant analysis
- Culvert Inventory Management and Inspection for both County and Township Trustees
- Management and inspection of all resurfacing, reconstruction, culvert and bridge replacements on all county and township roads
- Management of all Subdivision development, plan review of new and expanded subdivisions, including utility permitting
- Prevailing Wage Law Contract Compliance
- The issuance of all new and replacement driveway culvert permits
- The issuance and enforcement of Highway Use Permits along all county roadways, and along twelve (12) of the sixteen (16) township maintained roadways.
- The issuance of overweight/over-width hauling permits



## Construction Management & Inspection

The Geauga County Engineer's Office recorded over 5,000 hours of management and inspection services on the following County and Township improvement construction projects:

- One (1) County Roadway Drainage Improvement Project
- Seven (7) County Roadway Resurfacing Projects
- One (1) Township Roadway Reconstruction Project
- Ten (10) Township Roadway Resurfacing Projects
- One (1) Township Roadway Drainage Improvement Project
- Three (3) Township Roadway Maintenance Projects
- One (1) County Roadway Polyester Pavement Marking Project

The above referenced projects included the placement of over 75,000 tons of Hot Mix Asphalt, and the application of over 80 miles of Polyester Pavement Markings.



<b>2017 County Projects</b>						
<b>Project: County</b>	<b>Start Date</b>	<b>Completion Date</b>	<b>Total Working Days</b>	<b>Miles</b>	<b>Bid Amount</b>	<b>Final Cost</b>
Nelson Road, CH 2, Sections A-C (Resurface)	5/1/2017	6/6/2017	9	1.69	\$181,958.96	\$189,023.46
Claridon Troy Road, CH 3, Sections F-H (Resurface)	7/25/2017	8/3/2017	11	3.34	\$636,849.95	\$644,254.50
Thompson Road, CH 7, Sections F-H (Resurface)	5/2/2017	6/6/2017	9	2.48	\$355,735.20	\$347,087.00
Chardon Windsor Road, CH 13, Sections E-H (Resurface)	5/10/2017	6/21/2017	10	3.99	\$697,847.20	\$673,852.95
Kirtland Road, CH 17, Sections A-C (Resurface)	5/23/2017	7/11/2017	22	1.62	\$376,476.50	\$379,276.40
Caves Road, CH 30, Culvert Replacement (6 Locations)	4/17/2017	6/2/2017	36	N/A	\$259,339.40	\$257,061.40
Clay Street, CH 37, Sections A-D (Resurface)	4/28/2017	5/22/2017	7	1.68	\$305,779.50	\$300,972.10
Mulberry Road, CH 39, Sections A-D (Resurface)	8/22/2017	10/3/2017	10	2.58	\$415,270.05	\$393,447.09
County Wide - Polyester Pavement Marking	7/18/2017	7/25/2017	4		\$147,000.00	\$156,758.20
<b>2017 County Project Totals:</b>				<b>17.38</b>	<b>\$3,376,256.76</b>	<b>\$3,341,733.10</b>

Through diligent project management on County road and bridge projects, Geauga County Engineer project managers saved taxpayers a total of **\$34,523.66**, the difference between the Bid Amount and the actual final project cost.

<b>2017 Township Projects</b>						
<b>Township: Project</b>	<b>Start Date</b>	<b>Completion Date</b>	<b>Total Working Days</b>	<b>Miles</b>	<b>Bid Amount</b>	<b>Final Cost</b>
Auburn: Resurfacing of Sections C & D of Taylor May Road, TR 186	8/29/2017	9/16/2017	7	1.3	\$217,347.00	\$225,783.50
Auburn: Resurfacing of Various Roads	8/16/2017	9/1/2017	11	1.41	\$266,925.00	\$272,064.20
Auburn/Newbury: Chip Seal of Various Roads	8/14/2017	8/16/2017	3	4.63	\$214,400.00	\$192,951.65
Bainbridge: Resurfacing of Section C of Taylor May Road, TR 186	7/10/2017	10/29/2017	32	0.61	\$417,364.80	\$393,408.93
Bainbridge: Resurfacing of Various Roads	7/24/2017	8/4/2017	5	2.28	\$177,040.00	\$158,825.10
Bainbridge: Resurfacing of Country Lane, TR 178	9/20/2017	10/21/2017	10	1.87	\$392,464.05	\$345,146.85
Bainbridge: Pavement Repair of Various Roads	7/24/2017	8/4/2017	5	0.89	\$146,600.00	\$142,705.40
Burton: Resurfacing of Moss Woods Drive, TR 913	6/14/2017	7/11/2017	6	0.42	\$134,002.00	\$133,879.60
Chester: Resurfacing of Various Roads	6/2/2017	8/15/2017	22	3.62	\$710,740.00	\$681,146.60
Chester: Culvert Replacement, Cedar Road, TR 098	10/2/2017	10/10/2017	6	N/A	\$69,832.53	\$67,122.53
Claridon: Cement Stabilization and Asphalt Resurfacing of Various Roads	7/17/2017	8/18/2017	11	1.04	\$326,595.00	\$306,334.75
Hambden: Resurfacing of High Country Drive, TR 689	7/6/2017	7/15/2017	6	1.32	\$251,977.00	\$242,205.50
Munson: Resurfacing of Fowlers Mill Road, TR 108	9/22/2017	11/13/2017	15	0.8	\$334,552.00	\$317,770.92
Newbury: Resurfacing of Various Roads	6/23/2017	7/11/2017	9	1.57	\$345,082.85	\$329,279.89
Parkman: Chip Seal of Various Roads	8/26/2017	10/3/2017	2	0.98	\$90,020.00	\$96,349.30
<b>2017 Township Project Mileage:</b>				<b>22.74</b>	<b>\$4,094,942.23</b>	<b>\$3,904,974.72</b>

## 2017 Totals for Township Projects

Bid Amounts: \$4,094,942.23

Final Costs: \$3,904,974.72

Through diligent project management, Geauga County Engineer project managers on township roads saved taxpayers a total of **\$189,967.51**, the difference between the Bid Amount and the actual final project cost.

### Subdivisions & Permitting

#### Subdivisions

Subdivision development continues to remain at low levels.

Under active construction - 5

Under maintenance guaranty - 0

Released from maintenance guaranty - 0

#### Permitting

Twenty-Two (22) 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.

Two hundred forty two (242) Drive Permits were issued for the installation of new driveway culverts and the replacement of existing driveway culverts. In addition one hundred sixty eight (168) new addresses were issued to existing parcels.

## 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.

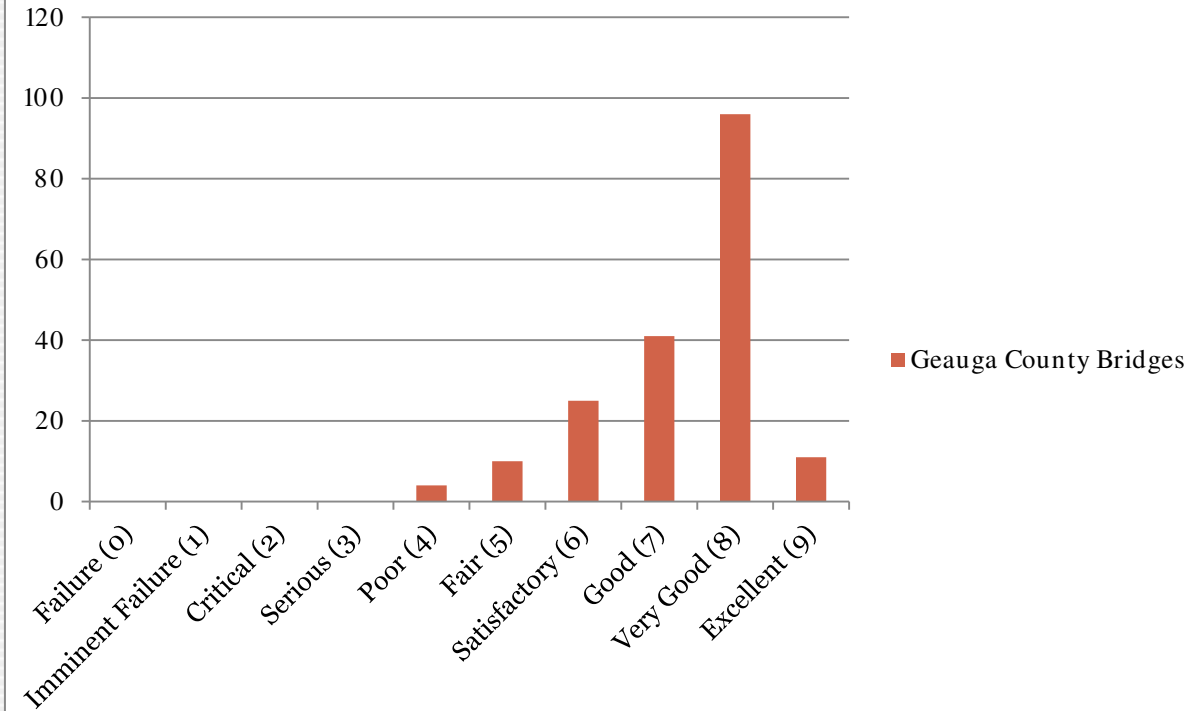
The Bridge Department, along with all other state-wide entities, have made the transition to the Ohio Department of Transportation's Structure Management System for reporting 2017 inspection year condition ratings, work orders, and inventory updates. Through effective management of inspection data, the 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 (ODOT) recommendations. Each bridge is given an ODOT sufficiency rating and an overall appraisal rating based upon bridge inspection rating factors. The County Engineer's Office is responsible to maintain all bridges located on County and township roads in Geauga County. The most recent inspection assessment found that ninety-eight percent (98%) of the County bridges have a numerical rating of 5 or higher.



## Geauga County Bridges



98% of Geauga County Bridges are Rated Fair to Excellent.



## Survey Department

Andrew Haupt, PE PS – Deputy Engineer

The Engineer's Office effectively and efficiently utilizes recently acquired cutting edge survey equipment consisting of robotic total stations and a 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. 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, diligent field recovery of monuments and Right-of-Way Acquisition.

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.



## Highway Maintenance Department

Trace Turnbull, Highway Superintendent

The Geauga County Engineer Highway Maintenance forces maintain approximately 236 miles of county roads and 187 bridges. During the 2017 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.

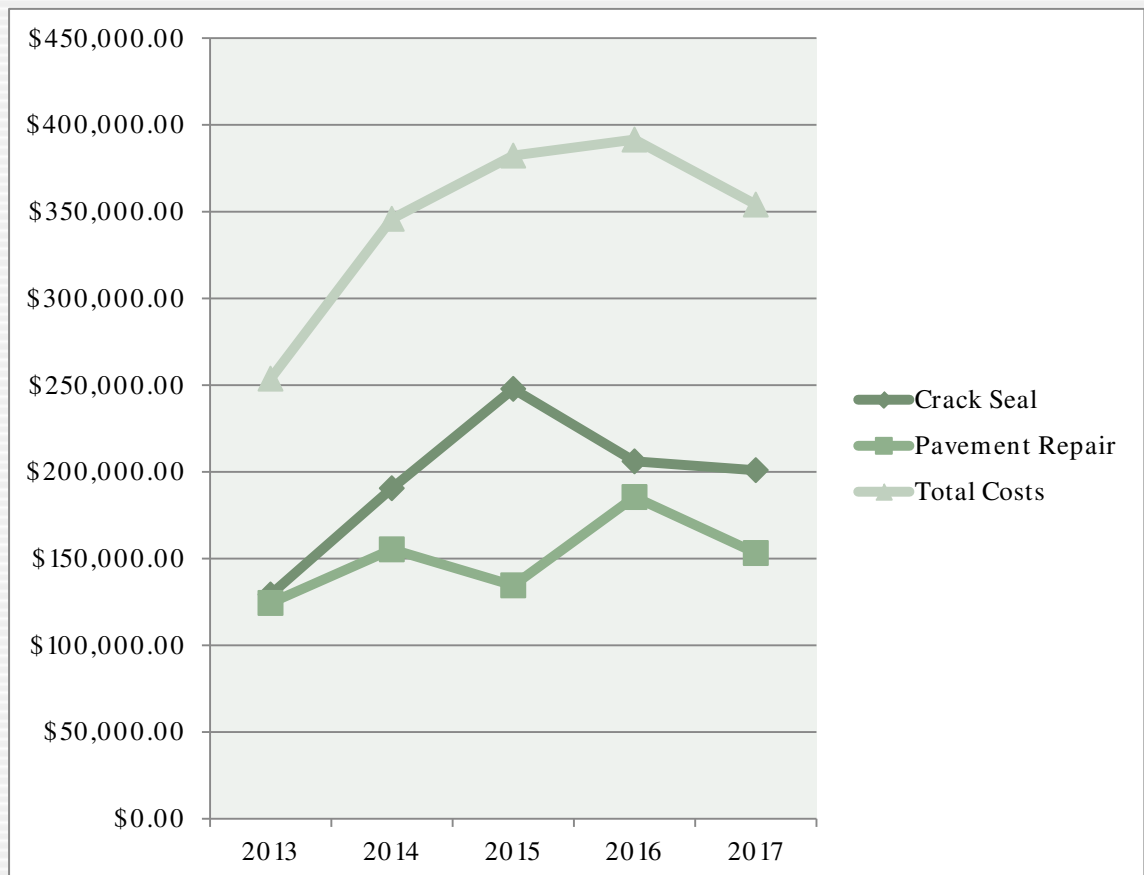
The list below indicates some of the work completed by the department in 2017.

- Crack Sealing Program
  - Material Used: 107,535 Pounds
  - Material costs: \$39,680.42
- Asphalt Repair Program
  - Asphalt Type 404 – 692.59 tons
  - Asphalt Type 402 – 41.31 tons
  - Asphalt Type 301 – 482.57 tons
  - Total asphalt cost \$69,007.18
- Tree Cutting and Removal
- Bridge and Culvert Repair and Maintenance
- Ditch Repair and Maintenance
- Sign Management and Replacement




## Crack Seal & Asphalt Increases

Over the past five years we have increased the amount of crack sealing and pavement repairs in an attempt to make Geauga County Roads last a few years longer than they have in the past. While we have increased the amount of crack seal that we put down on our roads, the price of crack seal has dropped from 57 cents per pound in 2013 to 38 cents per pound in 2017. Of the Geauga County Highways that have not been paved since 2013, 82% of those roads have had conditional scores either drop just one point or not at all.



# Resource Rental Program

In 2017, the Geauga County Engineer's Office continued the Resource Rental Program (RRP) to assist numerous townships. The goal of the RRP is to encourage resource sharing with Geauga County entities that are responsible for highway maintenance, thus reducing the overall burden on taxpayers.



**2017 Resource Rental Program:**  
Brought to you by:  
Gauga County Engineer, Joe Cattell, PE, PS

**2017 Year End Wrap-Up:**

May-July, October	<b>Bainbridge Township</b> Crack Seal	<b>\$56,814.85</b>
June, September October	<b>Burton Township</b> Crack Seal Mow Trim	<b>\$10,697.83</b>
May, June September	<b>Chester Township</b> Crack Seal Seeding of Right of Ways	<b>\$13,335.05</b>
November October, November November December December	<b>Claridon Township</b> Drive Pipe Replace Crack Seal Hot Mix Patch Mow Trim Tree Cutting	<b>\$23,801.81</b>
September	<b>Huntsburg Township</b> Crack Seal	<b>\$3,358.96</b>
August, September May June June, September November January May June September, November	<b>Montville Township</b> Full Depth Repair, Pavement Berm Repair Crack Seal Clean Ditches Apply Aggregate Repair Guardrail Install Lights & Signs Pavement Plane Tree Cutting	<b>\$46,510.56</b>
September	<b>Munson Township</b> Tree Cutting	<b>\$156.36</b>

April **Parkman Township** **\$100.00**  
Hot Box Rental

**Completed Projects**

Through these completed joint efforts, local communities with the assistance of the Geauga County Engineer's experienced personnel and equipment, the county and townships were able to exchange knowledge and skills which translated into effective and efficient use of taxpayer funds. Further, this proficient and cooperative use of resources will continue to benefit the residents of Geauga County for the foreseeable future.

**Rental Cost Examples**

	GRADALL XL 3100IV Hydraulic Excavator Includes: Operator & Fuel	\$100/hr
	John Deere 6430 Mid-Spec 4WD Cab Tractor with 22' Astrex Boom, 60" Rotary Mower Includes: Operator & Fuel	\$75/hr
	Crafco Super Shot 125, Diesel Compressor, EZ Series II, 500 Gallon Melter (Crack-sealer) Includes: Operator, Fuel & Material (Material supplied by GCEAL TWP.org)	\$65.00/hr plus material
	Dump Truck, Single Axle, Class 8, 8 CY, 40,000 GVW Includes: Operator & Fuel	\$65.00/hr
	Maintenance of Traffic: Flagging operation- two flaggers	\$40/hr (Summer Rate)
	CALL FOR ADDITIONAL AVAILABLE RESOURCES	

**AN EFFECTIVE RESOURCE PARTNERSHIP**

**ALL THAT IS REQUIRED FROM YOU TO PARTICIPATE IN THIS PROGRAM:**

- AGREE TO AND ACCEPT THE TERMS OF THE RESOURCE RENTAL PROGRAM
- PASS THE RESOLUTION TO PARTICIPATE IN THE GAUGUA COUNTY ENGINEER RESOURCE RENTAL PROGRAM, PROVIDED BY THE GAUGUA COUNTY ENGINEER
- IDENTIFY THE MAINTENANCE PROJECTS OF WHICH YOU REQUIRE ASSISTANCE
- CONTACT TRACE FOR SCHEDULING

FOR MORE INFORMATION, PLEASE CONTACT:  
TRACE TURNBULL, HIGHWAY SUPERINTENDENT  
440.279.1806 or turnbull@co.geauga.oh.us



## Administrative Department

Frank Antenucci, Esq., Administrator

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 Resources Administration
- Employee Training and Safety Programs
- Drug and Alcohol Training and Testing
- Benefits Administration
- Payroll
- Invoice Procurement and Processing
- Prevailing Wage Compliance
- Contract Negotiations
- Records Retention
- Ohio Public Records Compliance

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, and organization of all historical records. These historical records once encompassed over twenty file cabinets and included the following documents: survey data, correspondence, and past road project information. 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.

## Safety Committee

Frank Antenucci, Rick Carlson, Robert Hanck, Dave Loucka, Kevin Shea, Trace Turnbull

The Engineer's Safety Committee exists to encourage all employees of the Geauga County Engineer's Office to actively participate in suggestions 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.



## Advertising

In 2017, the Engineer’s Office was in need of several highway workers, and to find the best candidates for the position, an advertising campaign was initiated. Not only did advertising bring in many great candidates, it also let the public see that making roadways safe for residents is our goal and the pride that the employees have to represent Geauga County. There were several ways that the Office advertised to fill this position:

- Facebook
- Newspapers
  - Star Beacon
  - Maple Leaf
  - Chagrin Valley Times
  - News Herald
- Radio
  - 100.3 FM
- Job Fair

**ENGINEER'S OFFICE**  
GEAUGA COUNTY, OHIO

# ***JOB FAIR***

*At The Geauga County Engineer's Office*  
Where: 12665 Memitt Road Chardon Ohio 44024  
When: Saturday August 12, 2017 from 9:00 a.m. to 12:00 p.m.

**Join Our Team**  
**Now Hiring - Highway Worker**

We are looking to recruit a creative, passionate, and empowered person who wants to be part of a team dedicated to serving Geauga County.

- ✓ Do you enjoy creative problem solving and critical thinking?
- ✓ Do you desire the opportunity to practice personal ownership to unlock your leadership potential?
- ✓ Are you motivated and driven to influence innovation?

Apply by turning in a resume and the Engineer's employment application which can be downloaded from the Geauga County Engineer's website. Applications and resumes should be e-mailed to [gee@co.geauga.oh.us](mailto:gee@co.geauga.oh.us) or mailed to the administrator, Frank Antenucci.

**Job Requirements**

This position requires that the candidate possess a Commercial Driver's License (Class A CDE) within the first ninety (90) days of employment with the Geauga County Engineer. The Engineer will make certain attempts to provide employees with assistance in obtaining this licensure. Employees must be able to perform snow and ice control activities, operate equipment such as chippers, rollers, and front end loaders, and perform heavy manual labor tasks. Employees are encouraged daily to use their creativity and offer any ideas they bring to the table.

## Job Fair

On August 12<sup>th</sup> of 2017, the Geauga County Engineer’s Office held a job fair in search of excellent candidates for the Highway Worker I positions. The Job Fair was a huge success that brought in over 40 people and several of these visitors were considered for the open positions or even hired.



## Promotions in 2017

Tom Ross – Highway Worker VI

Bridget Holy – Engineer Clerk

Darrell Robinson – Highway Worker IV

Jerad Howes – Highway Worker II

Kevin Holy – Highway Worker V

Mike Martin – Maintenance Technician

Rick Weikart – Highway Worker II

Rob Weigle – Highway Worker VI

Zack Sipan – Highway Worker IV

## New Team Members in 2017

Jerad Howes – Highway Worker II

Dustin Powell – Highway Worker I

Mike Valentino – Highway Worker I

Nick Prokop – Highway Worker I

Kyle Peschke – Highway Worker I

## Retirements in 2017

Jeff Baldauf – Highway Worker V

Bob Hagenbaugh – Maintenance Repair Worker II

## Current Employee Listing

Frank Antenucci, Esq. – Administrator	Mike Pennell – Highway Worker III
Rick Carlson – Fleet & Inventory Manager	Kyle Peschke – Highway Worker I
Keith Delfs – Survey Technician III	Rick Poff – Highway Worker IV
Mike Donaldson – Mechanic V	Dustin Powell – Highway Worker I
Bill Dudinsky – Foreman	Alan Prescott – Bridge Designer/ Inspector
Mike Farrell – Highway Worker III	Nick Prokop – Highway Worker I
Nicholas Goodrich – Survey Technician II	Joe Prosser – Foreman
Nicholas J. Gorris, PE – Deputy Engineer	Ron Quercioli – Highway Worker IV
Shane Hajjar, PE – Deputy Engineer	Darrell Robinson – Highway III
Bob Hanck – Assistant Highway Superintendent	Tom Ross – Highway Worker VI
Don Hatch – Mechanic IV	Katie Schaab – Fiscal Officer
Andy Haupt, PE, PS – Deputy Engineer	Kevin Shea – Highway Worker III
Bridget Holy – Engineer Clerk	Ben Shrock – Engineer Aide
Kevin Holy – Highway Worker V	Zack Sipan – Highway Worker IV
Jerad Howes – Highway Worker II	Lee Thomas – Highway Worker III
Rory Judd – Mechanic III	Trace Turnbull – Highway Superintendent
Nick Kovach – Foreman	Dave Tvergyak – Highway Worker V
Paul Kucharski – Engineer Technician I	Mike Valentino – Highway Worker I
Ken Lewis – Highway Worker IV	Kirk Walker – Highway Worker V
David Loucka – Engineer I	Scott Warner – Foreman
Steve Markey – Engineer Technician II	Robert Weigle – Highway VI
Mike Martin – Facility Maintenance Specialist	Rick Weikart – Highway Worker II



Geauga County Engineer 2017

This report sets forth the condition of the roads, bridges, culverts, and facilities under the responsibility of the County Engineer. It includes an estimate of the funds needed to maintain and improve this infrastructure and complies with the requirements of the Ohio Revised Code Chapter 5543.



# 2017

**End**