

# ALLEN COUNTY ENGINEER

## 2020-2021 Annual Report of the Engineer

This report is prepared by the Allen County Engineer as directed by Section 5543.02 of the Ohio Revised Code

May 2021 Issue 23

### From the Engineer's desk.....



As your Allen County Engineer, my job is to administer all aspects of design, construction, repair and maintenance of our local roads and bridges here in Allen County. This includes 353 miles of roads and 377 bridges. Ultimately, my goal is to provide the safest and most efficient roadway system possible and thankfully, I have a great staff to help me accomplish this goal.

In the beginning, 2020 was looking to be a banner year, as the Ohio legislature had just increased the fuel tax the year before. After fourteen years without an increase, we finally had a boost in revenue to help us get more work done. Instead, 2020 will always be remembered for COVID-19 and all the effects it made in our world. Whether it was the illness, isolation or from shutdowns and mandates, our daily lives were changed. Our office was no exception, so just like everywhere else, we had to change the way we operated.

While many employees were able to shift and work from home, that wasn't an option for truck drivers or equipment operators. As "essential employees" we had to learn how to adapt, while still doing our work. A difficult task to say the least. So, to protect the health and welfare of our employees, their families and the community from the potential spread of the COVID-19 virus; I segregated the entire workforce into two (2) groups and worked alternating schedules. Then once the initial "stay at home" period was over, we all reported back to work on June 1st, 2020, but with some modifications. I separated our staff as much as possible, including having our West side road crew members along with the ditch maintenance crew work from the old ODOT campus. All of these measures caused havoc from a management perspective, but enabled us to minimize the potential for exposures and therefore limit the potential for staffing shortages caused by quarantines. While COVID infected several employees, thankfully we were able to complete the year without any deaths or major disruptions in staffing.

Unfortunately, our revenue was not the same, as we experienced a major drop in fuel usage license plate renewals. This in turn required us to cancel and postpone some of our projects until our funding recovered. At the end of the year our annual revenue was lower than projected, but it's was still much better than the previous year. So, hopefully this pandemic and it's effect are behind us and we can now look forward to a better year, one closer to normal.

I hope you enjoy reading this Annual Report, which summarizes the condition of our department and of our roads and bridges in 2020. If you should have any questions, please feel free to contact my office at 419-228-3196 or visit us on the web at [www.allencountyohengineer.com](http://www.allencountyohengineer.com).



### CONTACT US

**Allen County Engineer**  
1501 North Sugar Street  
Lima, Ohio 45801

Phone 419-228-3196  
Fax 419-227-2920

**Website:**  
[www.allencountyohengineer.com](http://www.allencountyohengineer.com)

**Email:**  
[brhodes@allencountyohio.com](mailto:brhodes@allencountyohio.com)

**Find us on Facebook**

**Tax Map Office**  
301 North Main Street  
Lima, Ohio 45801

Phone 419-228-3700  
Fax 419-228-7243

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## Roadway Department

The Roadway Department is responsible for the safety & maintenance of over 351 miles of county roads in Allen County. We also assist the Townships and Villages with the maintenance of their roadways at 550 miles and 248 miles, respectively. In 2020, over \$2.8 million dollars were spent for county, township & village road work. Our county road crew and paving contractor were very busy paving 19.1 miles of county, township and village roads and sealing 82.21 miles of roads; sealing is another name for tar & chip application to the surface of the roadway. Seal acts as a water sealant to keep pavement from absorbing water.

The Roadway Department has always taken pride in the quality of the roads in Allen County. While the cost of asphalt and stone continues to rise, the revenue for the Allen County Engineer and more specifically, the Roadway Department, has remained constant. This means that we cannot annually maintain the same miles of roads as we once could. Ideally, we would like to see a newly paved road last 20 years before it needs re-paved. At that rate, we should be paving nearly 20 miles of roads per year to properly maintain our roadway system. Unfortunately, we do not have the funds to do that, but we do have a couple of other options.

First, we often apply for different types of state and federal funding to help finance our projects. Nearly every year, we apply for the State Issue I OPWC Grant. This grant dramatically helps both the county and townships pave 15-20 miles annually, using an 80-20 match in funding. In 2019, we received a \$156,000 matching grant through the Ohio EPA to help pave 4 miles of Columbus Grove-Bluffton Road just outside of Bluffton. This asphalt is using Ground Tire Rubber (GTR) to help strengthen and provide more flexibility in the mix. Not to mention, it's saving 3,600 tires from going to the landfill. This project was supposed to be completed in 2020, but due to Covid-19, it was delayed until 2021. In 2020, we also received a \$300,000 Federal Safety Grant to replace several sections of deteriorating guardrail along several county roads. This project will be completed in 2021 as well.



Chip Seal on Mehaffey Road at Napoleon Road

Secondly, we can use alternative methods of maintenance to help prolong the life of our roads. In 2014, we purchased a Dura Patcher machine to repair potholes. The machine has several components that work together to create the blend of gravel and emulsion that the workers spray into the potholes. The method uses sufficient force to compact the material as it is applied to fill the hole. The result is not as smooth as a newly resurfaced road, but it is better than having potholes and much faster and less expensive than rebuilding an entire section of roadway.

There are also several companies that apply specialty coatings to pavements to help prolong the pavements life. One of those treatments, that we have been using and have had great success with, is a product called Reclamite. Formulated from the same light oils and resins that are the volatile fractions of asphalt. Reclamite provides a simple, one-step early method for asphalt preservation by restoring plasticity and durability of the asphalt binder.

If you have any questions about the above maintenance techniques or questions about the Allen County Road Program in general, please feel free to give the Roadway Department a call at 419-996-7110 or visit our website.

## 2020-2021 Winter



Our crews worked very hard this winter keeping roadways safe in Allen County. In **2020**, we entered into a salt contract with ODOT for **3,950 ton** of road salt at **\$62.73 per ton** from Compass Minerals. The Village of Bluffton, Village of Spencerville, City of Delphos, Shawnee and American Townships also took part in the purchase & utilization of the road salt. This past winter we spent over **\$300,000** for salt, grit and labor to care for the roadways of Allen County. In addition to the bad winter, comes the pot holes, however our crews are doing their best to keep up with filling the pot holes.

## Traffic Department

In 2020, the Allen County Engineer Traffic Maintenance Department had a typical busy year. In total, the department purchased 5,170 gallons of yellow traffic paint for centerline striping. This paint covered 178 miles of county roads, 108 miles of township roads, and 12 miles of village roads. In addition to that, 770 gallons of white traffic paint was purchased for edge line striping that covered 12 lane miles of township roads and 32 lane miles of county roads. The Traffic Department also spent the summer painting railroad and school legends, school crosswalks, lane arrows and stop bars at intersections.

Along with striping, the Traffic Department also maintains over 5,300 traffic signs. Ongoing throughout the year, signs are checked for condition and visibility and missing signs are replaced. It is important that all signs meet the minimum reflectivity standards. As signs are replaced, they are upgraded with a High-Intensity Prismatic surface that reflects light at a further distance and thus attracts motorist attention earlier.

The county also maintains 15 traffic light controlled intersections, one signal flasher and assists in maintaining 3 village traffic lights. All county maintained signals have been upgraded to LED lights, which last longer than incandescent bulbs and will also save electricity, as well as battery backups installed to assist in the possibility of power outage. These new signals provide approximately 8-10 hours of normal operation per location. Annually, all traffic lights and traffic cabinets are also cleaned and inspected to maintain proper working order.

## Tax Map & GIS Department

The Allen County Tax Map/GIS Department is located in the County Courthouse, which handles all Tax Map and GIS responsibilities for Allen County.

In 2020, the Tax Map Office processed **402 parcel splits and combinations** keeping the Tax Maps current for the use of the Auditors office and citizens of Allen County. They also processed **245 survey reviews and 5,660 deed reviews** in accordance to the County Conveyance Standards.

In 2020, the GIS Department maintained data for multiple departments in Allen County. These departments include Allen County Engineer, Sanitary Engineer, Health Department, Auditor, Water District, Ditch Maintenance & Sheriff's Department. Many of these departments are deploying GIS in a desktop and mobile platform to meet their everyday work needs. These applications have allowed Allen County to streamline repetitive tasks and maintain accurate up to date data.

## Bridge and Culvert Departments

With 377 Allen County bridges to maintain on county and township roads, and hundreds of culverts, the work never ends for the Allen County Engineer's Bridge and Culvert Crews. All of these bridges are checked annually, and some more frequently, with results being sent to the Ohio Department of Transportation. Existing culverts and storm sewers are continually in need of upgrades and replacements and circumstances arise that require new culverts be installed. The cooperative effort between these crews help us maintain our number one goal: safe roads and bridges for the traveling public in Allen County.

In eastern Marion Township northwest of Elida, County Forces replaced a 1935 concrete slab bridge over Leatherwood Ditch on State Road with a reinforced concrete box culvert structure. Construction occurred from the middle of June through the end of July, which is a remarkably short timespan to replace a bridge. The new bridge, built with 20' wide by 7' tall precast sections, allows for more capacity of stream flow and widens the roadway from 20' of pavement between two old concrete walls to 32' between new bridge guardrails. The road widening makes this structure much safer than the previous one, as most vehicles have increased in size in 85 years since the last bridge was built. The bridge, which is just west of Leatherwood Road, did have a load limit, but has now been removed from that list.



The concrete deck of a 1954 steel beam bridge on Kemp Road just south of Poling Road in American Township failed in the summer of 2019 and caused a road closure. It was determined that the original abutments were still suitable for reuse, so they were modified and became a perfect sub-structure for a new bridge. County Forces constructed a new 28' wide concrete slab deck in the Fall of 2020, again creating a unique, low-cost solution to a problem. This project was just one of many over the years that used an ingenious idea to solve a problem – at much less cost of rebuilding an entirely new bridge, thus saving Allen County taxpayers money and stretching the dollar towards use on more in-house projects.



Every year, County Forces complete several major bridge rehabilitation projects and 2020 was no exception. Typically, these projects are not planned, but due to failing conditions, needs arise to repair issues on existing bridges and culverts. Two bridges required deck repairs; a State Road bridge in Marion Twp. just west of Old Delphos Road, and a Kill Road bridge in Spencer Twp. south of Freund Road. This State Road bridge will be replaced in 2022. Once the Kill Road bridge repair was completed, it was removed from the load limit list. Another bridge, on Columbus Grove Bluffton Road, just west of Bluffton's Kibler Street in Richland Twp., required repairs to both the east and west abutments and deck beams. The skilled County work forces are truly a benefit to the traveling public in Allen County.



## Drainage and Ditch Maintenance Departments

All engineering and administrative work conducted by the Drainage Engineering Department is supervised and approved by Brion E. Rhodes, Allen County Engineer. This department has a dual role within the county structure. It operates as the reviewing agency for commercial, industrial, and residential developments, as well as the drainage consultant for the County Commissioners. Within this realm, we are responsible for all Petitioned Drainage Improvements of which the Commissioners have final authority.

Our responsibility includes the management of over \$22 million dollars in drainage improvements and work consciously to provide the most pro-active and cost-effective maintenance possible. Funding for the engineering, administration, construction and maintenance of petitioned drainage improvements is derived from funds acquired from parcel owners within the watershed of each project. The methodology is outlined in the Ohio Revised Code, Sections 6131, 6133, and 6137.

As the Drainage Consultant for the Commissioners, we manage the entire process of Petitioned Drainage Improvements. All projects constructed through petition are placed on permanent maintenance once construction is completed. The Allen County Drainage Department currently maintains 255 miles of open ditches, 54 miles of agricultural and residential conduits, 21 miles of waterways, and 18 detention ponds. These projects benefit 255,618 watershed acres and 45,028 parcel owners. Additional projects are always in progress, with multiple improvement plans in various states of completion at all times.

In Jackson Township, northwest of Lafayette, construction was completed on the Napoleon Road Drainage Improvement Petitioned Ditch #1337 at a cost of \$75,000. Approximately 3,170 LF of new tile was placed along with approximately 1,950 LF of ditch cleaning. This improvement drains Napoleon Road to Fisher Road to the Ottawa River between the Ottawa River and SR81.



Construction continues in Shawnee Township on O.B. Frails Subdivision Drainage Improvement Petitioned Ditch #1330. The contractor is currently working on driveway approaches and final restoration. The project is anticipated to

be under budget (\$891,666). This project consists of approximately 1,300 LF of ditch clearing and approximately 19,000 LF of tile work.

In 2021, we will have a final hearing for Baughman #1198 (American Township), Indianbrook & Wildbrook Estates #1322 (Shawnee Township) and Smith Improvement Project #1332 (American Township) with bidding and construction to follow later in the year.

We are working with Allen Soil & Water Conservation District on the design of Hutchinson Drainage Improvements located in Jackson Township. This work will consist of tile and ditch work.

We are also the compliance coordinators of the OEPA's Phase II

tions. An integral component of this program, of which our department manages for the County Commissioners, is the Stormwater Management & Sediment Control Regulations (SMSCR). These regulations are necessary to comply with the latest mandates by Ohio EPA. The Stormwater Regulations are a self-supporting entity funded entirely from permit and review fees acquired from developers. In 2020, 23 permits were issued at a cost of approximately \$66,970, funded by those private developments.

If you would like additional information on any of our endeavors, contact the Allen County Engineers Office, Drainage Engineering Department. Phone 419.996.7130 or visit our website.



Stormwater Regulation