



ALLEN COUNTY ENGINEER

2016-2017 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

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, which includes 352 miles of roads and 377 bridges. I have a staff to help with these responsibilities and our main goal is to provide and maintain the safest and most efficient roadway system possible. Unfortunately, our infrastructure consists of aging intersections, deteriorating bridges, crumbling roadways and more potholes than you can imagine. Therefore, maintaining this aging infrastructure has become extremely difficult due to inadequate funding.

As you may know, the vast majority of our revenue comes from license plate fees and from gasoline and diesel fuel taxes, which haven't even been increased for decades. To compound this issue, over the last 10 years, our revenue has been declining because of reductions in fuel sales and in vehicle registrations, all while our costs have been steadily increasing. This has forced us to tighten our belts and reduce costs wherever possible, including reducing staff. Thankfully, I've been able to do this through attrition, but ultimately it means we have fewer staff members to perform the necessary work.

Therefore, we must try to be as efficient as possible in everything that we do. To help accomplish this, I've implemented a new software program called PubWorks, which is a comprehensive work order, asset management and fleet maintenance system designed for county agencies. This program allows us to input our daily activities along with various project information into a searchable database. Enabling us to track our project costs, overhead, and detailing where we spend our time. This can be very helpful for a local county government, but it has benefits that go beyond job costing.

PubWorks also helps to create work histories, allowing us to identify frequent problem areas and the performance of our repairs. Furthermore, we can track in-coming calls and complaints, when work orders are filed and when they are completed. This should improve our responsiveness and accountability, along with helping to keep requests from falling through the cracks. Ultimately, this software will help us be more efficient and enable us to accomplish more with less.

In the meantime, I hope you enjoy reading this Annual Report, which summarizes the work our department has provided for the citizens of Allen County in 2016.

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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 2016, over **\$1.5 million dollars** were spent for county, township & village road work. Our county road crews and our paving contractor were very busy paving **13 miles** of county, township and village roads and sealing **73 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. This year we will be receiving a **\$250,000 grant** from Jobs Ohio and a **\$150,000 zero-interest loan** through the Ohio Public Works Commission (OPWC) to help fund a full depth reconstruction project on Kill Road in Marion Township.

In 2018, we will be receiving **\$700,000 in Federal Funds** to repair a **2.5 mile** portion of Elida Road just east of Delphos. We will also be receiving a **\$300,000 Federal Grant** to replace several sections of deteriorating guardrail along several county roads.

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 pavement's 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.

2016-2017 WINTER

Our crews did a great job this winter keeping roadways safe in Allen County. In **2016**, we entered into a salt contract with ODOT for **2,400 ton** of road salt at **\$47.90 per ton** from Compass Minerals. The Village of Bluffton, City of Delphos, Shawnee Township and American Township also took part in the purchase & utilization of the 2400 ton of road salt. This past winter the county engineer spent a little over **\$200,000** for salt and labor to care for the roadways.



TRAFFIC DEPARTMENT

In **2016**, the Allen County Engineers Traffic Maintenance Department had a typical busy year. In total, the department purchased **5,830 gallons** of yellow traffic paint for centerline striping. This paint covered **218 miles** of county roads, **102 miles** of township roads, and **22 miles** of village roads. In addition to that, **660 gallons** of white traffic paint was purchased for edge line striping that covered **10**



lane miles of township roads and **28 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 maintains over **5,100 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 motorists attention earlier.

The county also maintains **15 traffic light** controlled intersections, **3 signal flashers** and **3 village traffic lights**. All signals have been upgraded to LED lights that will last longer than incandescent bulbs and will save electricity. Annually, all traffic lights and traffic cabinets are also cleaned and inspected to maintain proper working order.

TAX MAP OFFICE



Although the Tax Map Office is located on the 2nd floor of our county courthouse, the staff of four are full time employees of the County Engineer.

In 2016, they processed **388 parcel splits** and combinations. Along with maintaining the tax maps, this office stays busy maintaining the County Road Map and County Plat Book. They also review property descriptions for all sheriff sales which numbered **363** for 2016. A total of **272 surveys** were reviewed to meet County Conveyance Standards in **2016**. The tax map staff also reviewed **3,814 property descriptions** for transfers in 2016.

BRIDGE AND CULVERT DEPARTMENT

The County Engineer is responsible for the inspection, maintenance and replacement of over **378 bridges** in Allen County. To manage all of these bridges, the Allen County Engineer needs to maintain each bridge for as long as possible, which is typically 50 years or more. In today's economy, in addition to local funds and in-house labor, a combination of funding sources, such as Federal, State and Ohio Public Works Commission (OPWC) are also used to help replace bridges.

Allen County was able to complete the following bridge projects in 2016 using a combination of both internal and external funding:

STATE – OBPP (Hook-Waltz Road, Neely Road)

In 2016, Ohio Department of Transportation (ODOT) awarded the fifth and sixth of seven bridge replacements in Allen County under the Ohio Bridge Partnership Program (OBPP). The Hook-Waltz Road bridge just west of Thayer Road was a narrow concrete girder built in 1925. A 28' wide prestressed concrete box beam was built by the R.G. Zachrich Company of Defiance, OH as a replacement and will serve the traveling public very well. The replacement of the Neely Road bridge in American Township began late in 2016 by the R. G. Zachrich Company and will be completed in early 2017. The existing bridge was built in 1919 and was the oldest bridge in the township.

OPWC (Zurmehly Road)

The Zurmehly Road truss bridge was the fourth oldest truss bridge in Allen County, and due to its location near the Shawnee schools, was heavily traveled. The R.G. Zachrich Co. built a new 32' wide single span prestressed concrete box beam bridge that will increase safety tremendously to and from the schools.

OPWC & Local (Hume Road)

The replacement of Shawnee Township's Hume Road bridge, just west of DeLong Road, took an extraordinary effort to complete. The previous bridge was built in 1933, and once Interstate 75 was built, that portion of Hume Road became a dead-end, with a majority of the residents living beyond the deficient bridge. Prior to the old narrow structure being demolished, a temporary structure was built beside the bridge to allow residents and rescue personnel access to the homes west of the bridge as their only outlet. County forces and OPWC funds completely covered the construction of the new wider box culvert structure.

LOCAL – (Bridge and Drainage crews)

The Bridge and Drainage Crews work in tandem to solve many drainage issues and complete hundreds of improvements each year throughout the county. In 2016, over **165 bridge** and drainage improvements, totaling over **\$350,000**, were completed to secure the safe operation of Allen County bridges, culverts and to maintain properties in Allen County. The repairs come in all types and sizes. The Wolfe Road bridge just north of Sugar Creek Road in Bath Township had a very deteriorated deck, yet the original 1964 abutments were still in fine shape. Bridge crew personnel erected a new steel deck, poured a new concrete floor and added new guardrail to completely revive a poor situation into a much safer one. In Amanda Township, a poorly rated and narrow Coon Road concrete slab bridge just south of Spencerville Road was replaced by county forces with 80' of 78" round pipe conduit. Another major culvert replacement took place in Monroe Township on Thayer Road just south of Hook-Waltz Road. The new culvert includes 56' of 38" x 60" elliptical reinforced concrete pipe. Both culvert projects widened the crossings considerably with gentle tapered slopes, which in turn make for a much safer roadway for the traveling public.



HOOK-WALTZ ROAD



ZURMEHLY ROAD



HUME ROAD

DRAINAGE & DITCH MAINTENANCE DEPARTMENT

All engineering and administrative work conducted by the Drainage 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.



BRYAN DRAY, JOSH FOSTER, JIM WILLIAMS, JOE MALEY

Douglass S. Degen, Drainage Engineer is responsible for reviewing the work, budget and assessment procedures for the Drainage Department and the Ditch Maintenance. To accomplish these demanding responsibilities and endeavors are Assistant Drainage Engineers Nathan Davis and Andrea Rode.

Josh Foster is the Ditch Maintenance Supervisor which is responsible for all documentation and maintenance activities completed within this department. All projects constructed through Petition and SWCD SB 160 are placed on permanent maintenance once completed. The Drainage Maintenance Crew also includes Joe Maley, Bryan Dray, and our newest employee Jim Williams.

Our responsibility includes the management of over \$20 million dollars in drainage improvements and we 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 Engineer 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. Currently we maintain 250 miles of Open Ditch, 46 miles of Agricultural and Residential Conduits, 21 miles of Waterways, and 15 Detention Ponds. These projects benefit 258,745 watershed acres and 44,394 parcel owners.

This year we will continue with a final hearing for Baughman #1198 (Storm Sewer & Waterway). Construction has started on the Cody Nickles #1316 (Agricultural Storm Sewer), and Renner Improvement Project #1323 (Residential and Institutional) and Edgecomb #1324 will be bidding and constructed during this year. These projects will add an additional \$2 million dollars in drainage improvements to our program. Numerous additional potential projects have been discussed as well.



Sugar Creek Ditch #1304 — North of Tudor Road

have been discussed as well.

We are also the compliance coordinators of the OEPA's Phase II Stormwater Regulations. An integral component of this program, which our department manages for the County Commissioners, is the Stormwater Management & Sediment Control Regulations (SMSCR). With the assistance of Nathan Davis, Beth Seibert, Albert Suniga, Lisa Steffen, and Joe Gearing a comprehensive re-writing of the SMSCR as well as fee schedule was completed, approved, and adopted by the County Commissioners on December 1, 2016. The City of Lima will utilize these regulations as a model for adoption as well for county-wide consistency. 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.



Pike Run Ditch #1150 — North of Brower Road

In conjunction with the above-described activities, we also have devoted a significant amount of time to Potential Petitions in which several are ready to be filed and many do not result in an actual project. An effort is also underway by a group of commissioners, engineers, and interested parties to update sections of the Ohio Drainage Laws. To accomplish this task a Drainage Task Force has been created in which we will continue to review, re-write, and proposed modified language to ORC 1515, 6131, 6133, 6135, 6137. More will follow on this topic with future newsletters.

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.



Dug Run Ditch #1151 — West of Dutch Hollow Road



Pike Run Ditch #1150 — North of State Road