



2011–2012 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



2011 A Busy Year for Co. Engineer's Dept:

After coming off of a light year of construction work in 2010, 2011 proved to be a very busy year. Some major ditch projects were completed along with three major bridges being replaced on Bowsher Road, Osman Road and Bliss Road. We received state and federal grants for some major road work and for guard-rail replacement and traffic sign upgrades. All totaled, **\$4,448,872 was spent in 2011 on road, bridge and drainage contract work.** In fact, in the last 5 years ('07-'11) the Allen County Engineer's Department has **averaged \$4.8 million dollars per year in road, bridge and drainage work contracted out** to local contractors. This is a huge boost to our local economy keeping people employed while **completing major infrastructure improvement projects** in our county.

Bridges Were a Priority in 2011:

Federal funds were used to replace three major bridges in Allen County last year. The **Bliss Road Bridge over the Auglaize River** in Marion Township was replaced at a cost of **\$1,123,040**. The **Bowsher Road Bridge** in Shawnee Township



was also replaced at a cost of **\$720,427** and the **Osman Road Bridge** in Perry Township was replaced at a cost of **\$320,485**. County bridge crews also replaced the **Dutch Hollow Road Bridge** in American Township and the **McBride**

Road Bridge in Amanda Township using

OPWC Issue 1 funds with a local match. Overall, our bridge department has been able to reduce the number of bridges posted with weight limits by **replacing eight (8) bridges in the last two years.** See more details in the 2011 Bridges & Culverts page in this report.

Two Large Roadway Projects in 2011:

Federal funds were used to pay for 80% of the cost to remove heaved concrete joints and to resurface **Lincoln Highway** between SR 115 and Cairo in Sugar Creek and Monroe Townships at a total



cost of **\$413,953**. **Issue 1 funds** were received by the American Township Trustees to completely rebuild **Edgewood Drive from Cole Street west ½ mile**. Concrete stabilization was used to provide a solid base for the roadway. Sidewalks were also provided as part of the project. The American

Township Trustees received an **80% OPWC Issue 1 grant** with the remaining 20% match coming from township funds. The total cost of the Edgewood Project was **\$447,120**. Our county road depart-

ment did the plans, inspection and administration of the project. **Around 24 miles of paving** was done for the county, townships and villages by either our road crews or a private contractor. For additional details, see the Roadway Projects page in this report.

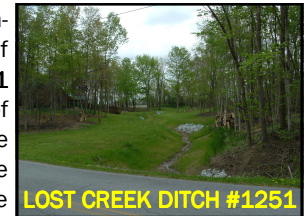
Grants Used for Other Projects in 2011:

In 2011, Allen County received grants totaling **\$270,000 for guard-rail replacement and sign upgrades.** Deteriorated guardrail and posts on county roads were replaced and all county road traffic signs were upgraded to **high-intensity prismatic signs** using safety grants obtained through the County Engineers Association of Ohio.

Major Ditch Projects Completed in 2011:

The **Lost Creek Ditch Project #1251** in Bath Township was completed in 2011 by contract at a cost of \$496,137. The **W.B. Berryman Ditch #1252** paralleling Shawnee Road was completed by contract at a cost of \$148,300.

The **Dutton Ditch #1231** was completed by contract at a cost of \$41,500. The **Welty Ditch #1281** was completed at a cost of \$108,369. All of these ditches were petitioned by landowners who were suffering drainage problems and the projects were paid for by property owners whose lands drain through these watercourses. See the 2011 Drainage Engineering page to read more about our department's management of the **FEMA Floodplain Map updates, Stormwater Management & Sediment Control Regulations and OEPA Phase II Stormwater coordination.**



2012 Promises to Be A Busy Year:

This year promises to be as busy as 2011 with **seven petitioned ditch projects** already in the hearing, plan preparation or bid stages for 2012. Two **major bridges**, the **Elm Street Bridge over the Ot-tawa River** in American Township and another **Osman Road Bridge** in Perry Township having already been bid out and both will start soon. Other projects planned for this year are the **Lincoln Highway joint removal and resurfacing project – Phase II** between Cairo and Beaverdam in Monroe and Richland Townships, **East Side Townships Issue 1 Paving** in the six townships on the east side of the county, and the **County Road Sign Upgrade – Phase II**. Our county garage crew will be taking on the assembling of a **snow-plow dump truck** by combining its component parts which will save our department at least **\$10,000**. Our tax map personnel continue to review deed descriptions, approve surveys of recent lot splits and create the **Allen County Road Map in-house**. All of these projects will keep our office staff and crews busy during 2012.

Tim Piper

Roadway Projects

David R. Louth, P.E., S.I., Roadway Engineer



In 2011, over **\$1.3 million dollars** were spent for county, township & village road work. Our county road crews and our paving contractor were very busy paving **24 miles** of county, township and village roads and sealing **33 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.



Also in 2011, the Allen County Engineer applied for and received **\$331,162** in Federal

funding for the concrete joint repair and asphalt resurfacing of **2.38 miles** of Lincoln Highway between SR 115 and the Village of Cairo. That funding helped to pay for 80% of the total cost of the **\$413,953** project. The remaining 20% or \$82,790 was paid out of local funds by the Allen County Engineer. The Lincoln Highway project was completed by the Shelly Company.

The Allen County Engineer also applied for and received **\$270,075** in Federal Grant funding for the replacement of guardrail at various locations in Allen County. This also included the replacement of posts, block-outs and anchor assemblies. This was done at no expense to Allen County, as the Federal funding paid for 100% of the total cost of the project. The Guardrail Safety Improvement project was completed by the Lake Erie Construction Company.

Traffic Department – By: Steve Howell, Traffic Supervisor



The traffic department striped just over **300 miles** of roads in 2011; which consisted of **191.70 miles** of county roads, **100.5 miles** of township roads and **7.8 miles** of village roads.

In 2011, the traffic department was very busy replacing all regulatory and warning signs on county roads in order to meet Retroreflectivity Standards set for 2015. The traffic department will have completed **Phase 1** of the sign project by the end of April 2012, which was 80% federally funded. Newman Sign Company was awarded the bid, which included supply and delivery of signs, and sign posts. The next phase (**Phase 2**) of the sign project will begin soon and will include names signs and rivets. This phase will be completed by September 2012, and is also 80% federally funded. Garden State Highway Products, Inc. was awarded the bid for supply and delivery of the signs. County Engineer's fund paid the remaining 20% of both phases.



The Traffic Department continues to maintain 14 traffic signals, 3 flashers and 1 school flasher, all owned by the county. In addition, they help to maintain 7 village traffic lights.

2011-2012 WINTER SNOW REMOVAL



The 2011-2012 winter cost Allen County \$287,000; which included 3000 tons of salt, 506 tons of ice grits, 12,720 gallons of fuel and 1366 hours of overtime. The road salt price increased \$.94 over last year raising the cost to \$60.67 per ton. This winter average diesel fuel was \$3.19/gal, last year was \$2.98/gal.

Tax Map Office—by Michael Howbert, P.S. Tax Map Surveyor

The Tax Map Office is responsible for maintaining the Tax Map for the County. The office has processed **397** parcel splits and combinations for the 2011 tax year. Along with the tax map the office also maintains the County Road Map and the County Plat Books. We also review the property descriptions for all sheriff sales which numbered **734** for 2011, down from **1007** in 2010. Surveys are also reviewed by this office to meet the County Conveyance Standards, there were **285** surveys submitted for review in 2011. The Geographic Information System (GIS) will be undergoing some updates for 2012, please be patient. ☺

2011–2012 Bridges & Culverts

By: Brion E. Rhodes, P.E., P.S.— Chief Deputy Engineer / Bridge Engineer

The Allen County Engineer is responsible for the inspection, maintenance and replacement of 378 bridges on the county system. To manage such a large system, Tim Piper relies on the bridge department to maintain each bridge for as long as possible. While the average bridge is expected to last fifty years, actual life expectancy can vary anywhere from 25 to 100+ years. With such a long list of responsibilities, ongoing funding issues can play havoc on our replacement scheduling. In recent years, our bridge budget has been reduced because of financial burdens associated with Eastown Road. These reductions forced us to re-focus and concentrate our efforts on maintenance issues rather than replacements. In fact, for several years our crews have not replaced a single bridge. However, with Eastown completed our budgets are starting to recover and we are utilizing various types of funding to begin making progress on bridge replacements once again.

FORCE ACCOUNT PROJECTS

Our 2011 bridge program started off with the replacement of two (2) deficient bridge using OPWC Issue 1 funding. The first



bridge replacement was the McBride Road Bridge No. AMA-TR 75-1.25. This structure is located between Zion Church Road and Davidson Road in Amanda Township; Allen County, Ohio. This bridge had

been CLOSED to traffic since November 2008 and was replaced with a twenty-eight (28) foot wide prestressed concrete box beam bridge. This work was performed by our Force Account Crews utilizing a State Issue One grant from the Ohio Public Works Commission (OPWC) for eighty percent (80%) of the project cost. Since this job was performed by our Force Account Crews, we utilized In-Kind Contributions (Labor and Equipment) to cover our twenty percent (20%) share of the cost. In addition, we were reimbursed for our labor and material costs above this 20%, therefore making this project very affordable.



The **second** project we performed with Force Account Crews was the replacement of the Dutch Hollow Road Bridge No. AME-94-0.57, which is located between East Road and Allentown Road in

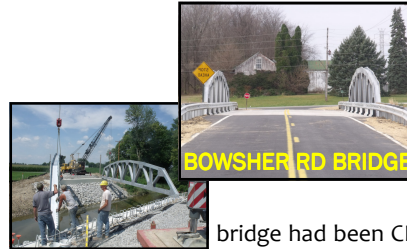
American Township. We replaced this concrete slab deck bridge with seventy-two (72) feet of precast reinforced concrete box sections, measuring 7'-0" (Span) x 5'-0" (Rise). In addition to replacing the structure, we also raised the road profile and cleared obstructions in the right-of-way. This created better sight distance, making it safer for the traveling public.

As always, our Bridge and Drainage Crews work really well together and this year was no exception. This year the Drainage Crew helped on the bridge projects mentioned above, as always, their help was greatly appreciated! Independently, the Drainage Crew completed **198** drainage improvements throughout the county, varying from hydro-cleaning tile to full replacement of drainage systems. So, a special "Thank you" goes out to our Drainage crew because their

work is typically overlooked and underappreciated until water starts to back up.

FEDERAL BRIDGE REPLACEMENTS

As for Federal projects, in 2011 we replaced and reopened three (3) closed bridges in the county. All three (3) of these bridges were steel trusses and had been closed to traffic due to safety concerns with the deteriorating structures. In order to cover the replacement costs, the Allen County Engineer utilized both Federal and State Issue One (1) funds for these projects. The bridge projects can be described as follows:



The **1st bridge project** was the Bowsher Road Bridge No. SHA-TR 143-1.92 over the Little Ottawa River, which is located between Beeler Road and Sellers Road in Shawnee Township. This bridge had been CLOSED to traffic since 04/15/99.

The contractor on this project was R. G. Zachrich Construction from Defiance, Ohio and the contract price for the replacement was \$ 720,426.64. This project was a Local Public Agency (LPA) Project with the Ohio Department of Transportation and was funded using ninety-five percent (95%) federal funds. The remaining 5% was funded by the County Engineer using Motor Vehicle and Gasoline Taxes.



The **2nd bridge project** was the Bliss Road Bridge No. MAR-TR 63-1.63 over the Auglaize River, which is located between Defiance Trail and Conant Road in Marion Township. This bridge had been CLOSED to traffic since

11/08/05. The contractor on this project was Eagle Bridge Co. from Sidney, Ohio and the contract price for the replacement was \$ 1,123,040.05. This project was a Local Public Agency (LPA) Project with the Ohio Department of Transportation and was also funded using ninety-five percent (95%) federal funds. The remaining 5% was funded by the County Engineer using Motor Vehicle and Gasoline Taxes.



The **3rd bridge project** was the Osman Road Bridge No. PER-TR 63-1.63 over the Auglaize River, which is located between Creps and McPherson Roads in Perry Township. This bridge had CLOSED to traffic

on 11/18/09. The contractor on this project was also the Eagle Bridge Co. from Sidney, Ohio and the contract price for this replacement was \$ 320,484.80. This project was another Local Public Agency (LPA) Project with the Ohio Department of Transportation but was funded using eighty percent (80%) federal funds and twenty percent (20%) State Issue One funds. Therefore, this project was funded at 100% and there was no cost to Allen County.

2011 Drainage Engineering ~ Year in Review and 2012 Work Elements Forecast

By: Douglass S. Degen, Drainage Engineer

All engineering and administrative work conducted by the **Drainage Engineering Department** is supervised and approved by **Timothy J. Piper, the 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.

Douglass S. Degen, Drainage Engineer is the Supervisor of the Drainage Engineering Department as well as Superintendent of the Ditch Maintenance Department and as such is responsible for reviewing all of the work, budget, and assessment procedures, conducted by the engineering and ditch maintenance departments. To assist with these endeavors in the department are Assistant Drainage Engineer's **Nathan Davis** and **Andrea Rode**. They have been in the Drainage Department for a number of years and provide a wealth of knowledge.

Brandon Brenneman supervises all documentation and work completed within the Ditch Maintenance Department. All projects constructed through petition are placed on permanent maintenance once construction is completed. The Ditch Maintenance Crew also includes Josh Foster and Jeff Holmes.

As the drainage consultant for the Commissioners we manage the entire process of Petitioned Drainage Improvements. During the 2010 - 2011 construction season, five significant drainage improvements have been either completed or near completion. Currently we maintain **203 miles** of Open Ditch, **31 miles** of Agricultural and Residential Conduits, **14 miles** of Waterways, and **13** Detention Ponds. In some cases special equipment must be leased to accommodate the needs of the department such as the long reach excavator illustrated.



Projects that are near completion or were completed during the past construction season are **Lost Creek Ditch #1251** (Turf Concepts, LLC.), **W.B. Berryman #1252** (Miller Contract. Group, Inc.), **Dutton Ditch #1231** (Gerding Ditching), **Welty Ditch #1281** (Edge Excavating), and **Shawver & Goddard Ditch #1276** (Sand Ridge Excavating).

Seven additional petitioned improvements, Baughman Ditch #1198 (Storm Sewer & Waterway), LaPoint Ditch #1275 (Storm Sewer & Waterway), American Village #1301 (Storm Sewer & Waterway), Elmview Drive #1302 (Storm Sewer), Jason Lamb #1305 (Storm Sewer), Lakeside Estates #1307 (Storm Sewer & Pond), and Perry Counts #1308 (Storm Sewer Waterway), are on our Spring roster. We are currently coordinating the Surveying, Engineering, Plan Preparation, and Public Hearing Preparation processes and if approved for construction and completed; our responsibility includes the management of over \$15.5 million dollars in drainage improvements, benefiting over 190,000 watershed acres. 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 method and process are outlined in the Ohio Revised Code, Sections 6131, 6133, and 6137.



We are also the County Engineer's compliance coordinators of the OEPA's Phase II Stormwater Regulations. An integral component of this program, of which our department manages for the **County Commissioners**, is the Stormwater Management & Sediment Control Regulations (SMSCR). A comprehensive re-writing of the SMSCR is underway and shall be adopted yet this spring. These regulations are necessary to be in compliance 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. At the same time the county is also in the process of adopting Illicit Discharge Regulations. Representatives of the Drainage Department have been instrumental in every aspect of regulation development.



The Drainage Department in conjunction with the Regional Planning Commission has continued to be the Allen County coordinators of a **Cooperating Technical Partnership** with FEMA and the United States Geological Survey to update the **FEMA Floodplain Maps**. In 2004, The Allen County Engineer, Allen County Auditor, and the Board of Allen County Commissioners entered into agreements with the Federal Emergency Management Agency (FEMA), the United States Geological Survey (USGS), and Woolpert, Inc. for the purpose of providing funding dollars for the Cooperating Technical Partnership /Floodplain Map Modernization Project. The entire project is extremely complex utilizing LIDAR Generated Ground Contours and Hydrologic & Hydraulic Stream Modeling, resulting in digital FEMA Floodplain Maps, for the entire county. We anticipate arrival of the Final Effective Maps by June, 2012.

If you would like additional information on any of our current projects, contact the **Allen County Engineers Office, Drainage Engineering Department. Phone 419.228.3196.**