



**Jeff Maiden, P.E., P.S.
Athens County Engineer**

To the Board of Commissioners and the Citizens of Athens County:

I am writing this annual report to provide information about the condition of the county's roads, bridges, and culverts, and how your tax dollars were spent in 2014. This report is mandated by Section 5443.02 of the Ohio Revised Code; this is my second annual report.

During my first two years in office, Athens County experienced two of the worst winters in decades. More than \$1 million was spent on snow and ice events during the first two winters; \$530,000 in the 2014-2015 season, and \$483,000 in the 2013-2014 season. The damage to the county road system, and the annual budget, has been devastating. The majority of our material budget for 2014 was spent just patching and repairing the road surface damage caused by the severe winter weather.

With the addition of two new management employees, I now have an excellent and extremely qualified management staff in place for the duration. Maria Smith joined the team in March 2014, and takes care of all things financial as the new Business Manager. Lyle Fuller assumed his responsibilities as the Garage Supervisor in January 2014.

The mission of the Athens County Engineer's Office (ACEO) is to serve the citizens of Athens County by building and maintaining a safe and modern county highway system; to respond promptly to reasonable road complaints; to process land surveys and property records accurately; and to be good stewards of taxpayer dollars by developing cost effective solutions for road and bridge maintenance problems.

ATHENS COUNTY TRANSPORTATION IMPROVEMENT DISTRICT

We worked with the County Commissioners to form the Athens County Transportation Improvement District (ACTID). The ACTID applied for and received \$300,000 in grant monies from the Ohio Department of Transportation to supplement two road improvement projects: \$50,000 for the County Road 7 Road Reconstruction, and \$250,000 for the County Road 53 Paving Project. Although still in its infancy state, the ACTID has tremendous potential for developing sources of funding for road and bridge construction projects in Athens County.

AFSCME LOCAL 103 CONTRACT

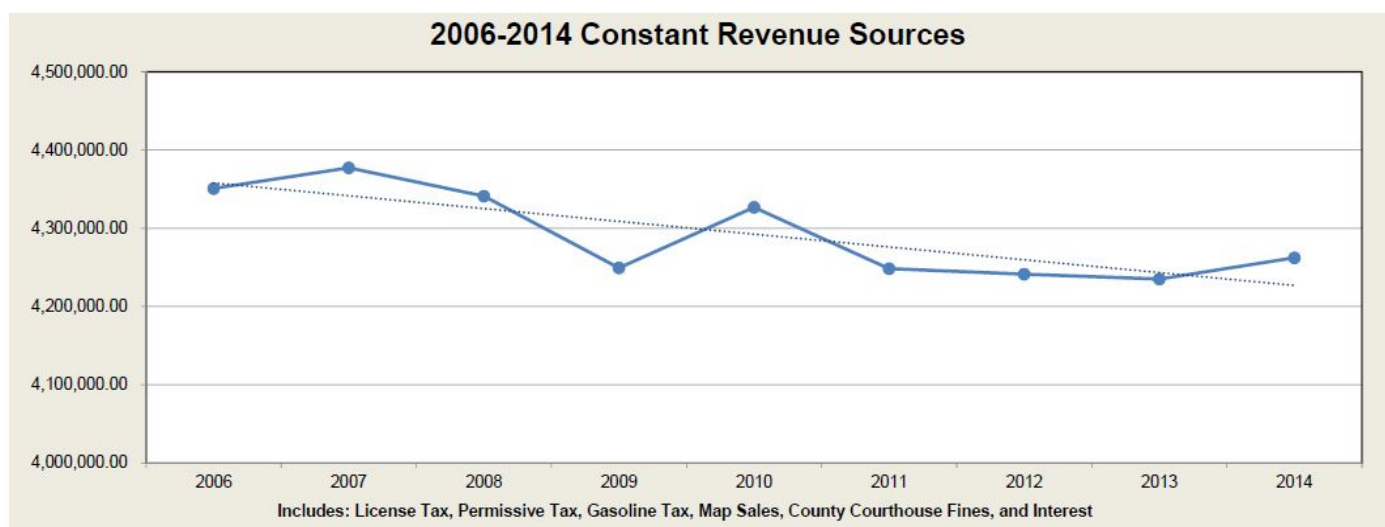
The first contract negotiation with our AFSCME Local 103 bargaining unit employees was successfully completed on January 9th, 2015. The few remaining issues were settled that day by negotiation during a Fact Finding Hearing, in which the Fact Finder's final report became the contract. The bargaining unit employees will pay 6% of the insurance premium cost in 2015 and receive a 4% raise; 8% of the premium cost in 2016 with a 3% raise; and 10% of the premium cost in 2017 with a 2% raise. CEBCO frowns upon organizations that pay 100% of health insurance premiums, because they believe in their customers being educated and invested in managing the cost of their own healthcare. This marks the first time that employees of the Athens County Engineer's Office have paid a portion of the premium cost of their health insurance. The majority of other Athens County employees pay 15% of their premium cost for health insurance. This new contract is a win/win for the bargaining unit employees as well as the taxpayers of Athens County.

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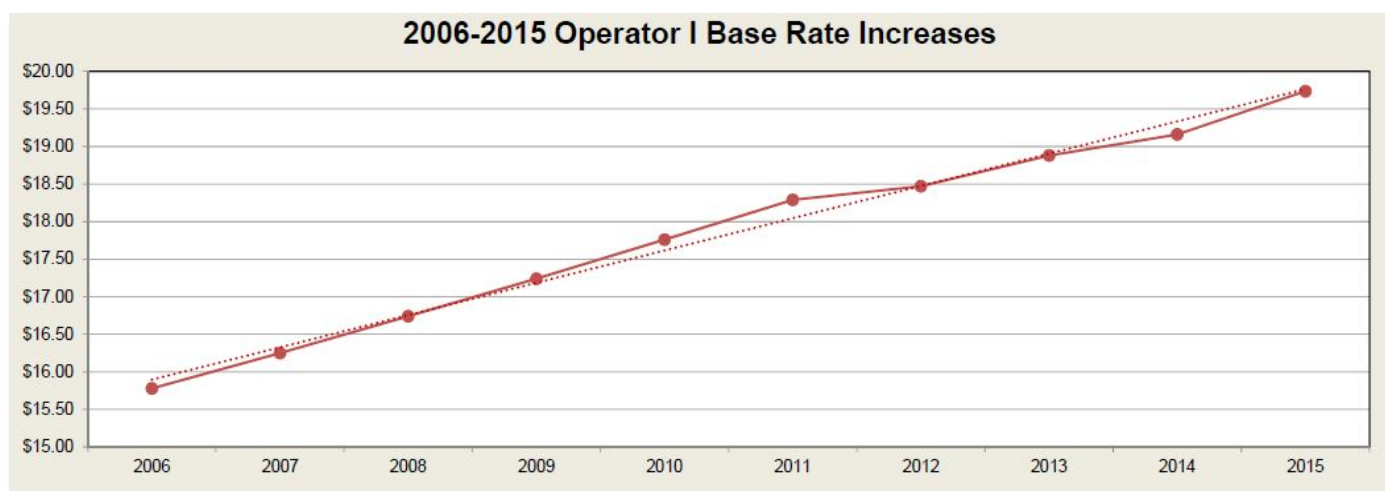
LACK OF ADEQUATE FUNDING

I have attended many monthly board meetings of the County Engineers Association of Ohio (CEAO) during the past two years. The biggest issue facing county engineers today is the lack of funding needed to adequately repair county infrastructure. Our primary sources of funding are the License Plate Tax and the Gasoline Excise Tax from the state, and the local Permissive License tax. We looked at the recent history of constant revenue sources versus operating costs, and discovered that revenues peaked in 2007 and have been declining, while labor and material costs have been steadily increasing. Consider the following facts:

- Revenue from constant sources peaked in 2007 at \$4,377,351, compared to \$4,262,297 in 2014. That is a net decrease of \$115,054 in revenue during that period (a 2.6% reduction in funding).

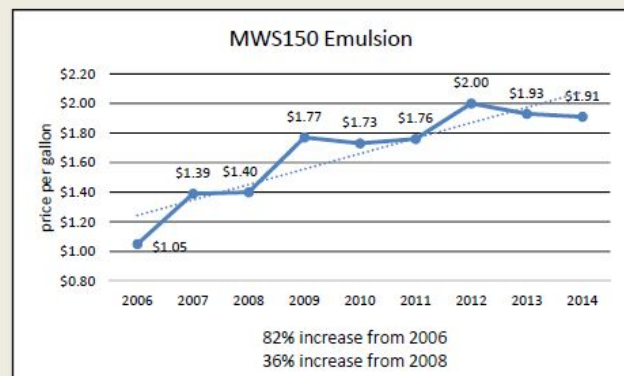
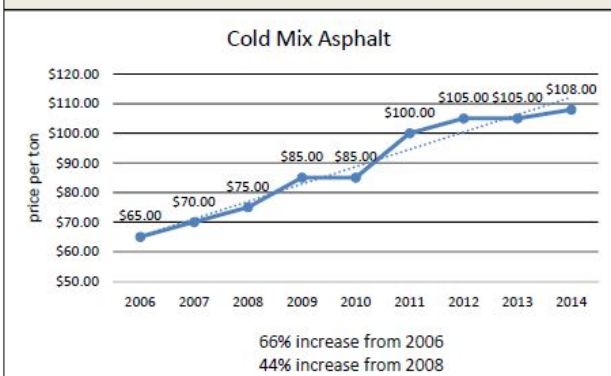
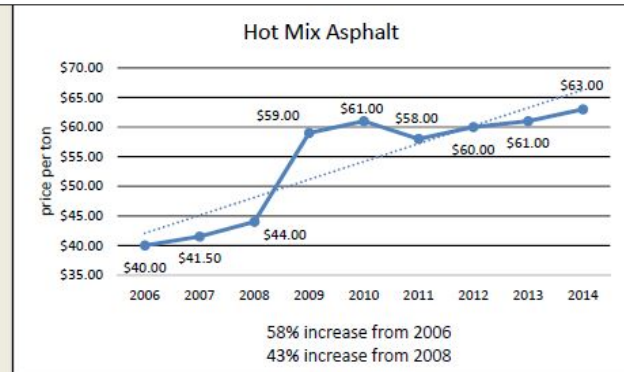
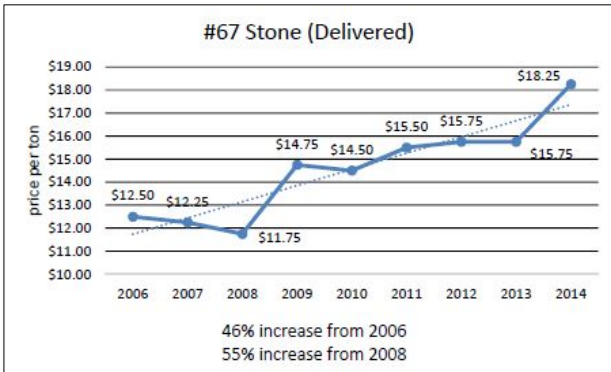


- The base rate for an Equipment Operator I classification has increased from \$15.78 per hour in 2006 to \$19.93 per hour in 2015. This is a 26.3% increase in wages over that time frame.



LACK OF ADEQUATE FUNDING (continued)

- Material prices for stone and asphalt have increased anywhere from 46% to 82% since 2006:
#67 Stone (+46%); Hot Mix Asphalt (+58%); Cold Mix Asphalt (+66%); MWS Emulsion (+82%).



The obvious long term solution is to increase the Gasoline Excise Tax to keep pace with inflation, as other surrounding states have done. We performed a needs assessment to determine the funding required for a ten year cycle for paving asphalt roads; a ten year cycle for chip and seal roads; and a ten year timeframe to replace forty-two structurally deficient bridges. Assuming that we could secure 80% grant funding for the asphalt paving and the bridges, we would still need, at a minimum, an additional \$2.5 million dollars per year for the next ten years. This figure does not account for inflation. The study can be found on our website at <http://athenscountyengineer.org/wp-content/uploads/2015/05/Engineer-Funding-Requirements-Study.pdf>.

GRANT FUNDS

One strategy to overcome this lack of funding is to leverage local funds to obtain state and federal grants for construction projects. We applied for and received a total of \$1,154,439 in grant funds during 2014. Many of those projects were constructed in 2014, and some are slated for construction in 2015. The list of grants is included on Page 17 of this report.

SMART FINANCIAL DECISIONS

The AFSCME Local 103 bargaining unit employees were moved to the Athens County CEBCO health insurance plan in February 2014. A third party administrator was hired to assure that the bargaining unit employees had the same level of benefits that they had prior to the insurance change. The total savings in health insurance costs as a result of that change was approximately **\$248,000** in fiscal year 2014. The management employees had previously moved to the CEBCO health plan in the spring of 2013. The total savings in health insurance premiums during my first term in office (2013 through 2016) will exceed **\$900,000**.

An auction of old equipment was held in April 2014 that generated a net income of **\$43,614**. The auction items ranged from old equipment that had not been used in decades to a variety of miscellaneous surplus items.

Rock salt for snow and ice control had always been delivered and stored in a salt storage building at our outpost building in Coolville, approximately three miles from the eastern boundary of Athens County. In the winter of 2013-2014, we trucked more than 2,000 tons of salt to our centrally located facility at Canaanville. The salt was mixed with #9 gravel and redistributed throughout the county during snow events. The cost to truck the 2,000 tons of salt from the Coolville outpost to Canaanville was approximately **\$25,000**. A new salt storage building was constructed in Canaanville in the fall of 2014 at a contracted cost of \$298,329 and financed for ten years at 1.8% interest. The annual payment of \$32,732 per year is almost offset by the \$25,000 annual savings, because we no longer have to truck rock salt from Coolville to Canaanville.

Our aging fleet of dump trucks consisted of sixteen single axle trucks and three tandem axle trucks in 2013. We exceeded our credit limit to buy fuel in January 2014, and had to request an increase from our supplier. Fourteen of the dump trucks (GMC and International Harvester brand) were between fourteen and twenty years old and averaging about three miles per gallon. In addition, we had at least four trucks broken down most of the time. After extensive research, the decision was made to purchase four new Western Star brand dump trucks at a total cost of \$624,670. The big bore Detroit engine (model DD13) was selected for the trucks because the fuel economy was projected to get more than six miles per gallon. Each truck is driven approximately 20,000 miles per year. When the decision was made to purchase the trucks in April 2014, the projected annual fuel savings was **\$55,732 per year** (13,333 gallons of fuel at \$4.18 per gallon). The fuel savings alone accounts for about 43% of the annual payment of \$130,542 amortized over five years. We will continue to manage taxpayer money efficiently and be as fiscally responsible as possible.

The winter of 2014-2015 was once again a very harsh one. There were many winter mornings where crews started at 4:00 am, sometimes working nearly sixteen hours a day in the bitter cold. I would like to thank the employees of the Athens County Engineer's Office for their dedication to make the county road system as safe as possible for the traveling public.

Finally, I would like to thank the citizens of Athens County for the opportunity to serve you as the Athens County Engineer.

Sincerely,



Jeff Maiden, P.E., P.S.
Athens County Engineer



PROJECT DESIGN

There were seven roadway projects completed in 2014, and each one was designed by the Athens County Engineer's Office (ACEO) engineering staff, which is comprised of Donnie Stevens, P.E., S.I. (Assistant Engineer), Brandon Williams (CAD Technician), and me. We surveyed and designed all of the road and bridge projects that were constructed in 2014. The engineering and surveying capabilities of this administration are an enhancement to the Athens County Engineer's Office, and have saved taxpayers thousands of dollars in consulting fees that would otherwise have been paid to outside engineering design firms.

PROJECT SUMMARIES

The **County Road 53 Paving Project** consisted of the motor paving of 8.0 miles of CR 53 (Bethany Ridge Road and Lottridge Road) and 1.7 miles of CR 143 (Potter Road); it was the first motor paving project in Athens County. Motor paving is a cold mix asphalt overlay where the gravel and asphalt are actually mixed in the paving machine onsite. The benefit is a more pliable or flexible pavement on secondary roads that have a very rough and uneven existing surface. Motor paving is more economical than hot mix asphalt; about twice as much roadway can be paved for the same amount of money. The project was completed in September 2014 at a total project cost of \$1,102,535. Funding was provided through an Ohio Public Works Commission (OPWC) Issue 1 grant for \$399,581 and an Ohio Department of Transportation (ODOT) grant for \$250,000 through the Athens County TID.

The **County Road 7 Road Reconstruction, Phase 2** was completed in August 2014, at a total project cost of \$98,756. Johnson Road is a primary arterial road between US 33 and The Plains, and is also the primary access road to Athens High School. This section of CR 7 was constructed in 2011 by the prior administration without a road base material (i.e., asphalt laid directly on shale fill materials). The road was reconstructed in 2014 with a 6" thick stone base, 4" asphalt intermediate course, and 2" asphalt surface course. The project was partially funded by a grant from ODOT to the Athens County TID for \$50,000.

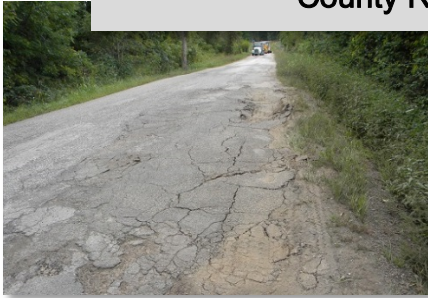
The **County Road 110 Culvert Project** was completed in July 2014, at a total project cost of \$85,585. An existing 5' diameter pipe failed on CR 110 (Poston Station Road) near the intersection of Lemaster Road. The failure caused subsidence in the roadway, as well as a slip at the discharge end of the pipe which threatened road closure. An OPWC emergency grant for \$63,720 was secured for the project.

The **County Road 97 Slip Repair Project** was completed in December 2014, at a total cost of \$92,533. A landslide developed after the 2013-2014 winter season on CR 97 (Pearl Wood Road). Soil borings were drilled and the ACEO engineering staff designed a drilled pier wall system to stabilize and support the road. An OPWC emergency grant for \$132,942 was obtained for the project, though not completely needed.

The **Athens County Pavement Marking Project** was completed in October 2014, at a total project cost of \$131,828; 100% of the project was paid for by state and federal grant funds. There were numerous complaints about the lack of centerline and edgeline striping when I took office in 2013. A Highway Safety Improvement Grant (HSIP) for \$150,000 was obtained from ODOT for this pavement striping project, which covered 137.5 miles of county roads.

There were two **FEMA (Federal Emergency Management Agency) Paving Projects** that were completed in 2014. The projects were put out for bid as one project. The County Road 78 portion (Marion Johnson Road) was paved at a cost of \$9,612, and the County Road 98 portion (Angel Ridge Road) was paved at a cost of \$16,146.

County Road 53 (Bethany Ridge and Lottridge Roads) – Motor Paving



CR 53 Lottridge, pre-construction.



Motor paving on CR 53 Bethany Ridge.



Compacting the road surface.



Work in progress.



Final stages of chip seal.

- TID Grant for \$250,000
- OPWC Issue 1 Grant for \$399,581
- Survey and design by ACEO
- Bid date of July 16th, 2014
- The Shelly Company – low bid of \$814,965
- (Bid also included chip seal for CR 143 Potter Road and lower end of CR 53 Lottridge; bid total for extra area was \$152,980)
- Bethany Ridge: 5.8 miles (Motor pave / Chip seal)
- Lottridge: 2.2 miles (Motor pave / Chip seal)
- Potter: 1.7 miles (Motor pave / Chip seal)
- Lower end of Lottridge: 3.2 miles (Chip seal)
- Construction began early September 2014
- Entire project finished in late September 2014

County Road 7 (Johnson Road) – Road Reconstruction, Phase 2

- TID Grant for \$50,000
- Survey and design by ACEO
- Rebuilt 570 lineal feet of road
- Bid date of July 8th, 2014
- York Paving Company – low bid of \$98,756
- Construction began July 29th, 2014
- Road opened on August 5th, 2014



Pre-construction – CR 7.



CR 7 paving finished.



Striping completed on CR 7.

County Road 110 (Poston Station Road) – Culvert Project



Culvert failure on CR 110.



Work in progress.



CR 110 project completed.

- OPWC Emergency Grant for \$63,720
- Survey and design by ACEO
- Bid date of June 10th, 2014
- York Paving Company – low bid of \$85,585
- Construction began on June 24th, 2014
- Road opened on July 9th, 2014

County Road 97 (Pearl Wood Road) – Slip Repair



Slip on CR 97.

- OPWC Emergency Grant for \$132,942
- Survey and design by ACEO
- Bid date of October 28th, 2014
- US Bridge – low bid of \$92,533
- Construction began on December 2nd, 2014
- Road opened on December 19th, 2014



Piling driven on CR 97.



View of drilled pier wall.



CR 97 completed.

Pavement Striping Project – Countywide

- HSIP Grant for \$150,000 (100% funding)
- Survey and design by ACEO
- Striping of 137.51 miles of Athens County roads
- Bid date of August 7th, 2014
- Oglesby Construction, Inc. – low bid of \$131,828
- Striping performed and completed in October 2014



County Roads 78 (Marion Johnson) and 98 (Angel Ridge) – FEMA Paving Projects

- Two roads bid as combined project
 - Bid date of August 26th, 2014
 - McKee Paving and Sealing, LLC
 - Projects completed October 1st, 2014
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- | | |
|---|--|
| <ul style="list-style-type: none">• CR 78 – 204 lineal feet of paving• Total cost of \$9,612 | <ul style="list-style-type: none">• CR 98 – 260 lineal feet of paving• Total cost of \$16,146 |
|---|--|



CR 78 (Marion Johnson Road).



CR 98 (Angel Ridge Road).

Six projects with FEMA funding were redesigned during 2014. Upon reviewing the original scope of each remaining project, the current ACEO engineers determined that the designs were not feasible and/or ineffective. As a result, several design improvements were made, and the scope of some projects changed substantially. The total cost savings based on these design changes is estimated to be over \$430,000, and the county's share of these savings will be over \$50,000; most importantly, these final projects will be reliable and effective.

2014 ROAD REPAIRS AND MAINTENANCE



CR 57 (South Rodehaver Road), 3/6/15.

2014 – 2015 Snow and Ice Removal

Item	Amount	Total Costs
Labor (includes overtime)	3,280 hours	\$126,116
Fuel	25,674 gallons	\$77,931
Salt	2,188 tons	\$234,189
Grits (includes hauling)	8,724 tons	\$91,762
Total Costs for 2014-2015 Winter Season:		\$529,998

The 2013 – 2014 winter season wreaked havoc on the county road system. With temperatures reaching -15°F and a substantial number of snow events, it was generally considered one of the worst winters in decades. Many county roads sustained substantial damage to the road surface (and road base) during the spring thaw of 2014. The two roads that experienced the most damage were CR 80 (Enlow Road) and CR 48 (New England Road). Major portions of both roads needed extensive base repair work. The majority of the repair work on other county roads consisted of asphalt leveling work to repair the surface where excessive cracking had occurred, and is summarized in the table below.

2014 Road Leveling Costs

Road Number	Road Name	Labor	Materials	Total Costs
County Road 9	Salem Road	\$673	\$5,905	\$6,578
County Road 17	Fisher Road	\$588	\$1,886	\$2,474
County Road 20	Strouds Run Road	\$554	\$3,777	\$4,331
County Road 24	South Canaan Road	\$305	\$2,394	\$2,699
County Road 28	McDougal Road	\$1,593	\$13,451	\$15,044
County Road 31	Oakdale Road	\$459	\$3,682	\$4,141
County Road 32	Congress Run Road	\$1,697	\$10,710	\$12,407
County Road 33A	Old U.S. 33	\$383	\$1,505	\$1,888
County Road 36	Hooper Ridge Road	\$1,514	\$14,066	\$15,580
County Road 48	New England Road	\$2,869	\$21,300	\$24,169
County Road 53	Bethany Ridge Road	\$1,241	\$8,696	\$9,937
County Road 53	Lottridge Road	\$1,252	\$8,300	\$9,552
County Road 57	North Rodehaver Road	\$385	\$3,483	\$3,868
County Road 70	Meadowbrook Road	\$2,499	\$16,602	\$19,101
County Road 80	Enlow Road	\$3,466	\$28,010	\$31,476
County Road 81	Fox Lake Road	\$626	\$5,936	\$6,562
County Road 85	Big Run Road	\$2,591	\$17,804	\$20,395
County Road 87	Antle Orchard Road	\$860	\$7,794	\$8,654
County Road 89	Rainbow Lake Road	\$1,011	\$8,001	\$9,012
County Road 98	Angel Ridge Road	\$1,714	\$12,323	\$14,037
Total Road Leveling Costs for 2014:		\$26,280	\$195,625	\$221,905

2014 ROAD REPAIRS AND MAINTENANCE

We continue our focus on improving the drainage along all of our county roads, with a specific emphasis on roads that are scheduled for paving and reconstruction. Many county roads still have high berms along the edge of the road, resulting in rainwater which runs down the middle of the road. Graders are used to cut down the berms and cut ditches; a rejuvenated dirt loader was used last year to load the excavated materials into dump trucks for disposal offsite. We also use a Gradall excavating machine where deeper and more extensive ditching is required. After the berming and ditching is completed, new culverts are installed as needed on roads scheduled for paving, and on roads where failing culverts are causing subsidence in the road surface. The roads in the following table were fully bermed and ditched along their entire length in 2014.

2014 Ditching and Berming

Road Number	Road Name	Miles	Labor
County Road 1A	Happy Hollow Road	1.82	\$2,043
County Road 49	Joy Road	1.68	\$5,345
County Road 51	Plantville Road	1.90	\$3,840
County Road 53	Bethany Ridge Road	5.90	\$5,131
County Road 53	Lottridge Road	5.60	\$5,070
County Road 80	Enlow Road	3.60	\$6,550
County Road 143	Potter Road	1.70	\$7,921
Full Road Ditch and Berm Amounts for 2014:		22.20	\$35,900

There are situations where the entire length of the road does not need ditched and bermed, or we simply do not have the time and budget to do the entire road. The following roads were partially ditched and bermed: CR 1 (Carbondale / Kimberly), CR 2 (Connett), CR 9 (Salem), CR 10 (Baker), CR 14 (Factory), CR 16 (Pleasanton), CR 17 (Fisher), CR 19 (Radford), CR 21 (Pleasant Hill), CR 24 (Harmony), CR 25 (Fossil Rock / Long Run), CR 28 (McDougal), CR 29 (Big Bailey Run), CR 31 (Oakdale), CR 33 (Old SR 33), CR 35 (Fleming), CR 37 (Concord Church), CR 42 (Mill School), CR 44 (Bucks Lake), CR 62 (North Torch), CR 65 (Deep Hollow), CR 69 (Chase), CR 73 (Wolfe Bennett), CR 78 (Marion Johnson), CR 89 (Rainbow Lake), CR 90 (Mansfield), CR 94 (Swett Hollow), and CR 100 (Rhoric). The total cost of labor to ditch and berm these roads was \$14,502.

CULVERT WORK

The last official count of the number of culverts in the county road system was more than twenty-five years ago, and I have been told that number was approximately 7,000 culverts. Most of the old culverts are galvanized corrugated metal culverts, which have bottoms that are completely rusted out. The culvert sidewalls eventually collapse because there is no bottom, and the road base begins to cave into the culvert. The subsidence causes a depression in the roadway, at which point the culvert is scheduled for replacement. If a major paving project is planned, then all culverts on that roadway are inspected and replaced as needed. The culverts replaced in 2014 are listed by County Road location in the table on the next page.

2014 Pothole Patching Costs

Item	Amount	Patching Costs
Labor	3,954 hours	\$126,461
Cold Mix	2,432 tons	\$175,392
Total Patching Costs for 2014:		\$301,853

Patching costs in 2014 increased by over 250% compared to 2013 – yet another indication that the 2013-2014 winter was particularly hard on the county road system.

The tonnage in this table represents around 300 single-axle dump truck loads of cold mix. ACEO employees clean out debris before hand-shoveling the cold mix into the pothole. Compaction of the cold mix into the area finishes the repair.

2014 ROAD REPAIRS AND MAINTENANCE

2014 Roadway Culverts

Road Number	Road Name	Feet of Culvert	Labor	Equipment	Materials	Total Costs
County Road 10	Baker Road	95	\$3,583	\$4,613	\$5,405	\$13,601
County Road 17	Fisher Road	60	\$1,640	\$1,778	\$959	\$4,377
County Road 19	Hebbardsville Road	80	\$2,687	\$1,009	\$4,232	\$7,928
County Road 24	South Canaan Road	40	\$677	\$878	\$640	\$2,195
County Road 27	Jacksonville Road	40	\$942	\$1,100	\$280	\$2,322
County Road 27	Millfield Road	40	\$1,199	\$1,399	\$356	\$2,954
County Road 32	Congress Run Road	40	\$2,108	\$2,628	\$3,469	\$8,205
County Road 36	Hooper Ridge Road	30	\$796	\$852	\$277	\$1,925
County Road 37	Concord Church Road	20	\$691	\$851	\$792	\$2,334
County Road 49	Joy Road	160	\$5,738	\$6,750	\$4,551	\$17,039
County Road 53	Bethany Ridge Road	1,240	\$20,378	\$24,844	\$24,986	\$70,208
County Road 53	Lottridge Road	1,034	\$20,984	\$22,229	\$25,841	\$69,054
County Road 58	Frost Road	40	\$734		\$784	\$1,518
County Road 59	Ireland Road	120	\$1,811	\$2,320	\$2,436	\$6,567
County Road 62	Torch Road	40	\$1,170	\$1,442	\$1,470	\$4,082
County Road 73	Wolfe Bennett Road	40	\$2,326	\$1,032	\$1,160	\$4,518
County Road 78	Marion Johnson Road	40	\$425	\$477	\$524	\$1,426
County Road 80	Enlow Road	100	\$1,656	\$1,441	\$1,678	\$4,775
County Road 86	North Concord Road	20	\$294	\$360	\$785	\$1,439
County Road 94	Swett Hollow Road	280	\$6,530	\$2,304	\$10,260	\$19,094
County Road 98	Angel Ridge Road	40	\$449	\$494	\$412	\$1,355
County Road 109	Beebe Road	80	\$1,794		\$1,607	\$3,401
County Road 143	Potter Road	230	\$5,662	\$2,875	\$8,017	\$16,554
Total Roadway Culvert Amounts for 2014:		3,909 feet	\$84,274	\$81,676	\$100,921	\$266,871

Most of the chip and seal resurfacing work on county roads is done by employees of the Athens County Engineer's Office. County crews use a 1987 International Tar Distributor truck to shoot the road with emulsion; a 1997 Etnyre chip spreader to spread the stone evenly on the road; and a 2010 BOMAG rubber tired roller to compact the stone into the emulsion. County dump trucks are used to haul the stone to the project site. County Road 70 (Meadowbrook Road) was chip and sealed with #67 stone in 2013, and sealed with #8 stone in 2014. County Road 80 (Enlow Road) was chip and sealed with #8 stone in 2014. The southern portion of County Road 53 (Lottridge Road) from County Road 57 (South Rodehaven) to the Meigs County line was chip and sealed with #8 gravel by county employees. The entire length of Lottridge Road (from US 50 to the Meigs County line) was chip and sealed by The Shelly Company as part of an OPWC Issue 1 grant.

2014 Chip and Seal Costs

Road Number	Road Name	Miles	Labor	Equipment	Materials	Total Costs
County Road 53	Lottridge Road	3.20	\$5,998	\$6,502	\$57,510	\$70,010
County Road 70	Meadowbrook Road	2.70	\$4,054	\$4,937	\$24,189	\$33,180
County Road 80	Enlow Road	3.11	\$6,129	\$7,408	\$30,354	\$43,891
Total Chip and Seal Costs for 2014:		9.01	\$16,181	\$18,847	\$112,053	\$147,081

2014 BRIDGE PROJECTS

There are a total of 333 bridges on the county and township roads in Athens County which are the responsibility of the Athens County Engineer. There were three township road bridges added to the inventory in 2014. All of these bridges were inspected by Athens County Engineer's Office Bridge Inspector, John Brunton, and consultant John Wackerly, P.E. Those inspections include field measurements and subjective judgement as to the condition of each bridge. The inspections and the 2013 load rating work yield the following facts about the bridges of Athens County:

- 65 bridges are considered Structurally Deficient (SD)
- 102 bridges are rated Functionally Obsolete (FO)
- 50% of the bridges we maintain are either in a really deteriorated condition (SD) or too narrow to accommodate daily traffic considerations (FO)
- 117 bridges are posted with load limit restrictions and cannot support legal truck loads

Federal grant funding is a very limited solution – only fifteen of these 167 bridges meet the requirements to qualify for the Local Bridge Program (LBR funding). The greatest problem that we face is inadequate funding (as discussed previously in this report). We need to rebuild this infrastructure, and we truly lack the funding to even maintain what we currently have. The most cost-effective solution is developing the skills within our county workforce to construct the smaller bridges.

The State of Ohio announced the Ohio Bridge Partnership Program in the fall of 2013, as a new construction initiative designed to reduce the excess of deficient county bridges. There are nine bridges that we maintain in Athens County that will be paid for and reconstructed by ODOT as part of this initiative. The ACEO engineering and surveying staff performed the field surveying and preparation of right-of-way plans for four of these bridges in 2014. ODOT will bid these projects in 2015, and the first four bridges should be completed by the spring of 2016.

Five new bridge replacement projects were completed in 2014. Four of these bridges – **County Road 28 (McDougal Road)**, **County Road 85 (Big Run Road)**, **County Road 1A (Happy Hollow Road)**, and **County Road 45 (King Road)** – were funded through the Local Bridge Program administered by ODOT, with 80% federal funds and 20% local funds. The **Waterloo Township Road 25 (Hawk Road)** was an emergency project. We were notified by the Waterloo Township Trustees that a bridge deck had cracked and deflected substantially. The ACEO engineering staff designed a new concrete box culvert to replace the bridge, and the construction was completed by county employees in October 2014.

Employees of the Athens County Engineer's Office also completed two bridge repair projects. A stone wingwall was repaired on **Dover Township Road 225 (Hamley Run Road)** in order to maintain traffic. The ACEO engineering staff has designed a new concrete box culvert to replace the bridge, which will be constructed in the fall of 2015. The wood bridge deck was replaced on the **Bern Township Road 227 (Parmiter Road)** bridge with a corrugated metal deck and paved with asphalt.

County Road 28 – McDougal Road Bridge



- Survey and design by RJM Engineering
- Bid date of August 29th, 2013
- The Righter Company – low bid of \$732,953
- Construction began October 2013
- Opened on June 17th, 2014



County Road 45 – King Road Bridge



- Survey and design by RJM Engineering
- Bid date of October 10th, 2013
- Alan Stone Company, Inc. – low bid of \$713,341 for both CR 45 Bridge and CR 1A Bridge Projects
- Construction cost for CR 45 Bridge portion: \$347,295
- Construction began March 2014
- Opened on July 23rd, 2014



2014 BRIDGE PROJECTS

County Road 1A – Happy Hollow Road Bridge

- Survey and design by RJM Engineering
- Bid date of October 10th, 2013
- Alan Stone Company, Inc. – low bid of \$713,341 for both CR 45 Bridge and CR 1A Bridge Projects
- Construction cost for CR 1A Bridge portion: \$366,046
- Construction began April 2014
- Opened on July 31st, 2014



County Road 85 – Big Run Road Bridge



- Survey and design by RJM Engineering
- Bid date of July 1st, 2014
- Alan Stone Company, Inc. – low bidder



- Approximate construction cost: \$562,000
- Construction began August 2014
- Opened on November 3rd, 2014

Waterloo Township Road 25 (Hawk Road) – Bridge Replacement



- Survey, design, and build by ACEO
- Slab bridge replaced with 12' x 5' x 32' box culvert
- Construction began September 25th, 2014
- Opened on October 3rd, 2014



- Labor + fringe: \$15,956
- Equipment: \$20,066
- Materials: \$29,385
- Total cost: \$65,407



Bern Township Road 227 (Parmiter Road) – Bridge Replacement



- Replaced wood bridge deck with corrugated steel and asphalt



- Total cost: \$5,987 (paid by Bern Township Trustees)



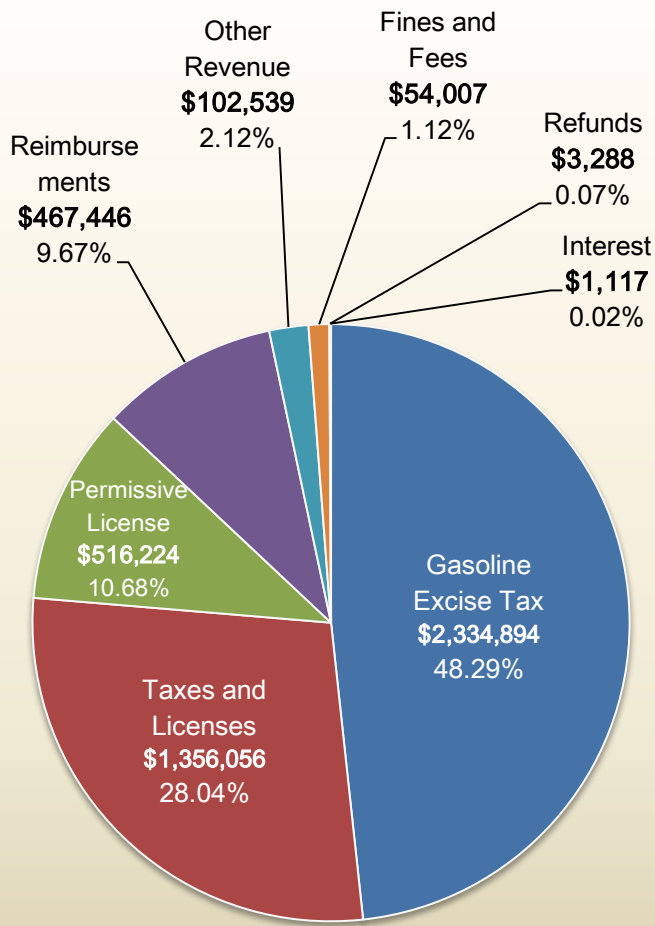
- Opened on October 28th, 2014

Dover Township Road 225 (Hamley Run Road) – Bridge Repair

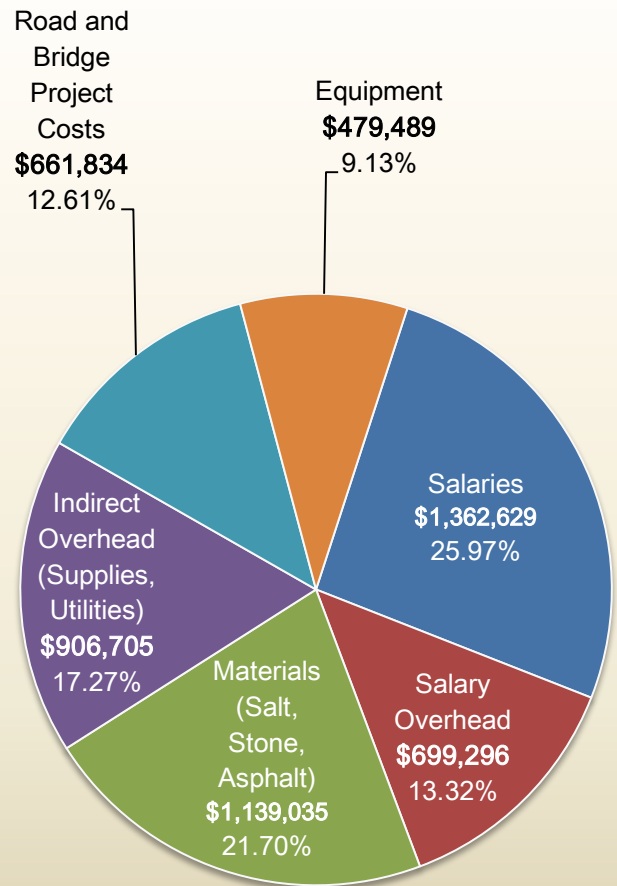
- Survey and design of an 8' x 8' x 48' box culvert to be built by ACEO
- Sandstone wingwalls repaired until box culvert is constructed
- Repaired on September 25th, 2014



2014 FINANCIAL STATUS



2014 Revenue - \$4,835,571



2014 Expenses - \$5,248,988

CONSTANT REVENUE SOURCES

The Athens County Engineer's Office is primarily funded by gasoline excise taxes, state registration taxes, motor vehicle registration fees, and county permissive license fees. Other regular sources of income are from fines and interest. In 2014, these constant revenue sources contributed to \$4,262,298 of our income for the year.

VARIABLE REVENUE SOURCES

Some portions of our revenue are highly variable from year to year. The majority of reimbursements come from grant revenue; project costs are paid upfront by ACEO, which the grantor (ODOT, OPWC, etc.) reimburses to ACEO after project completion. The section labeled Other Revenue includes over \$43,000 from the auction of old equipment and materials, and almost \$44,000 from Road Use Maintenance Agreements for specific road damages from heavy equipment; the remainder is from the sale of scrap metal, bid packets, maps, and copies. Refunds are collected due to returns, overpayments, and/or credits from vendors.

GRANTS RECEIVED

State and federal grants are an important part of my strategic plan to overcome a diminishing budget and increasing costs. The grants received and listed below made the following projects possible:

- | | |
|---|---|
| • County Road 110 – Culvert Project | OPWC Emergency Grant (90%/10%) for \$63,720 |
| • County Road 7 – Reconstruction, Phase 2 | Transportation Improvement District (TID) for \$50,000 |
| • County Road 53 – Motor Paving Project | Transportation Improvement District (TID) for \$250,000
- <i>Additional funding from 2013 OPWC Issue 1 for \$399,581</i> |
| • Countywide Pavement Striping – FY2020 | Highway Safety Improvement Program (HSIP) (100%) for \$150,000 |
| • County Road 97 – Slip Project | OPWC Emergency Grant (80%/20%) for \$132,942 |
| • CR28/CR32 – Motor Paving Project | OPWC Issue 1 (74%/26%) for \$399,526 |
| • County Sign Upgrade | CEAO – HSIP (80%/20%) for \$49,600 |
| • Curve Signs Project | CEAO – HSIP (100%) for \$50,000 |
| • Hydraulic Sign Post Puller and Driver | Ohio BWC Safety Improvement Grant (75%/25%) for \$8,651 |

LAND SURVEYS CHECKED

Property surveys are checked for compliance with the Minimum Standards and for mathematical accuracy, and then forwarded to the Mapping Department at the Athens County Auditor's Office for further processing. Brandon Williams (CAD/GIS Technician) does most of this work with oversight by Donnie Stevens, P.E., S.I. (Assistant Engineer). They checked 261 boundary surveys for accuracy in 2014.

EQUIPMENT REPAIRS AND PURCHASES

Our garage supervisor and mechanics repaired an Athey 7-12 Force Feed Dirt Loader that had not been used in over ten years. This conveyor dirt loader is a more efficient method of excavating material from ditching and berming operations. In addition to this and other repair work, several pieces of equipment were acquired in 2014:

- 2015 Western Star 4700SB dump trucks (two tandem-axle, two single-axle)
- 2014 Case 580 Super N WT Backhoe Loader (with hydraulic thumb, hoe-pac compactor, and hoe-ram breaker)
- Attachments (hydraulic thumb, hoe-pac compactor, and hoe-ram breaker) for 2007 Komatsu PC200LC-8 Trackhoe
- 2014 Dodge Ram 2500 ST 4x4
- 2015 Dodge Ram 2500 ST 4x4
- 2015 Dodge Ram 3500 4x4 Flatbed with Dump
- 2014 Falcon Hot Box Trailer (for patching during winter months)

The total for these equipment expenditures was approximately \$1,000,000. The four dump trucks have an annual payment of \$130,543 for five years; the backhoe, attachments, and pickups have an annual payment of \$40,545 for ten years.

OFFICE IMPROVEMENT PROJECT

The new office building that was constructed in 2006 had many flaws and energy efficiencies that needed to be corrected in order to make it a functional office space. During January, February, and March of 2013, the temperature within the office varied from 47 degrees in the morning to 89 degrees in the afternoon. Most of the exterior wall area is glass, resulting in the solar effects from the sun having a substantial impact on the interior room temperature. The drop ceiling stopped two feet short of the exterior walls, resulting in the need to heat and cool the entire space above the ceiling. The HVAC ductwork was delivering air near the ceiling level, and returning air from above the ceiling area. I did not have an individual office space, nor was there a conference room to conduct meetings. RVC Architects, Inc. was hired to design a project to correct the deficiencies mentioned above. Hoon, Inc. was the low bidder and contractor that constructed this project at a total cost of \$117,947. The project was completed in August 2014.

2014 UPDATES AND STAFF

SALT STORAGE BUILDING PROJECT

As discussed in the report introduction, rock salt had always been stored in a pole building at our Coolville outpost, and in the winter of 2013-2014, we trucked more than 2,000 tons of salt to our centrally located facility at Canaanville to be mixed with #9 gravel for snow events. A new salt storage building was completed at the Canaanville depot in December 2014, which represents \$25,000 in annual savings due to the reduced trucking costs. Some facts about the design and construction of this building are:

- Designed by Jeff Maiden, Athens County Engineer; RVC Architects, Inc. obtained State of Ohio building permits
- General contractor was Thompson Concrete, Inc., of Carroll, Ohio
- Contracted cost of the building was \$298,329; total project cost including site improvement work was \$350,767
- Dimensions are 60' wide x 98' long x 36' high at the center of the canopy
- Storage capacity of the new building is 3,000 tons of salt
- New building was designed to resist the long term corrosive effects of salt on concrete and steel



Staff

Jeff Maiden, P.E., P.S.
County Engineer

John Brunton
Bridge Inspector

Lyle Fuller
Garage Supervisor

Trisha Gail
Administrative Assistant

Mike Sheets
Superintendent

Maria Smith, B.S.
Business Manager

Donnie Stevens, P.E., S.I.
Assistant Engineer

Brandon Williams
CAD/GIS Technician

Canaanville Outpost:
Brian Baker
Kenneth Coen
Richard Efaw
William Gould
David Harvey
Albert Hawk
Mark Meili
Craig Scott
Travis Six

Coolville Outpost:
Tracy Bobo
Travis Brooks
Justin Williams

Nelsonville Outpost:
Bernard Mellinger
Cory Russell

Redtown Outpost:
David Holmes
Samuel Kamento
Geoffrey Moore

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