



The Orange Brigade



Summer 2013

Logan County Engineer's Office

Volume 43



Coleman's Comments

Since the winter newsletter we have experienced a long and seemingly unending winter. Our total cost for snow and ice control during this past winter season was \$439,715.81, which is about \$71,000 above our fifteen year average cost. Since the snow quit and the weather finally warmed, our crews have been able to accomplish a lot of work over a short time. We have been very busy with crack sealing roads ahead of our resurfacing and sealing programs. The ditch crews have been able to complete one full round of mowing and are finishing our herbicide spraying. The bridge crew has completed three bridge replacements and has completed several maintenance repairs already this year.

We are continuing a significant capital improvements program this year thanks to the commitment of the taxpayers of Logan County who continue to support the sales tax for roads and bridges. Your dedication to preserving and maintaining our local highway system allows us to utilize the most effective preservation tools as well as implementing cutting edge technologies. We will be completing two warm-mix asphalt resurfacing projects covering 23.7 miles and totaling over \$2.4 million. We are administering and inspecting a \$733,322 resurfacing project for the townships. We are also administering the township chip-sealing contract.

Our highway crews will construct over \$397,000 of chip-sealing to preserve 34 miles of pavement this summer. Chip-sealing preserves and extends the life of our pavements and the investment that our community has made. The process consist of spraying the pavement with a hot asphalt emulsion to seal the pavement and covering this with ½ inch crushed stone for a skid resistant wearing surface. We sweep the roads the same day that they are treated and we do a finish sweep a week afterwards. Within 6 to 8 weeks, most of the loose stone is gone. Please slow down, watch for loose stone, and give yourself extra travel time so that your experience with fresh chip-seal will be more pleasant.

Our organization has continued to adapt to the new economic climate and seek improvements in efficiency. We continue to expand our shared services to

townships and villages on various projects. We have assisted with mowing, spraying, sign inspection, berm and washout repairs, culvert replacements, sign replacement, durapatching, and painting railroad crossing warnings. These projects help both entities cope with increasing material costs and reduced revenues.

We are very fortunate here in Logan County that our community has decided to invest in the local highway system through the sales tax for roads and bridges. Many counties, townships, and municipalities have not been fortunate enough to gain this type of cooperation and investment from their citizens. The current legislated funding for local government roads and bridges is inadequate. Local governments maintain 100,000 miles of public highways, which is 83% of all centerline miles of highways in Ohio. The cost of paving has nearly tripled in the last eleven years. Counties maintain 26,900 bridges in Ohio, which is 60% of all bridges. Currently, counties have 2,463 bridges needing replaced immediately at a cost of \$700 million dollars. Funding for their replacement is not available.

The County Engineers Association fought in court to make sure that the commercial activity tax collected on motor vehicle fuel sales would be used for road and bridge funding. However, the state legislature is currently planning to keep all of the approximately \$140 million additional motor vehicle fuel taxes for the state rather than splitting them with local governments as they do with all other gas taxes. This will be a loss of an estimated \$191,000 of potential revenue to the Logan County Engineer's Office. Townships and municipalities will lose significant funds as well.

Additionally, the state legislature has balanced their budget by reducing local government funding rather than making significant spending cuts at the state level. Please contact your state representative and state senator and encourage them to share all motor vehicle fuel taxes with local governments based on the current splits. Encourage them to restore full local government funding levels and make real spending reductions at the state level as we have at the local level and in our own homes.

Sincerely,

Scott C. Coleman, P.E., P.S.
Logan County Engineer

COUNTY BRIDGE NEWS

New Construction Method

By Bryan Dhume, P.E.
Assistant Engineer

The Logan County Bridge Crew recently completed construction of their first composite box beam bridge. This was done by placing a 6" reinforced concrete deck on top of the prestressed box beams on the newly built bridge on County Road 105. The concrete deck serves a few different purposes. It acts as a wearing surface for the bridge and helps distribute vehicle wheel load over multiple beams. The deck also becomes structural with the beams, adding strength to the bridge. Most importantly, however, the deck protects the beams from the elements. Water mixed with deicing salts is the major contributor to our bridge deterioration over time. Membrane waterproofing with asphalt overlays eventually fail, leading to leakage between the beam joints. As the joints continue to leak, the salts penetrate the concrete beams and cause the reinforcing and prestressing strands to corrode. The symptoms of this can be seen under the bridge as spalled concrete with exposed strands. When a strand is exposed it has to be taken out of consideration when the load rating of the bridge is calculated, reducing the load carrying capacity of the bridge. We do have a few box beam bridges in Logan County with this condition, and many more that have started to exhibit leakage in the joints. This is a very common problem among bridge owners, and hopefully one we can improve on by going with concrete bridge decks instead of asphalt overlays.

Bridge Update

By Dan McMillen
Bridge Superintendent

The Logan County Bridge crew had a very busy spring replacing three bridges. On Township Road 56 (the county is responsible for bridges on township roads) we completed a 12 foot span concrete bridge deck 24 feet wide with poured concrete approaches. A 43 foot bridge was removed and replaced on County Road 105 using the new construction method that is discussed above. On County Road 43 the box culvert structure spanned 14' and measured 7' vertically. The structure was designed at 52' end to end which allowed the roadside slopes to be placed in a manner that does not require guardrail. The no guardrail design will lower long term cost to the county.

On Wednesday May 29th the crew took part in the ribbon cutting ceremony for the new Onion Ditch Bridge on Township Road 174. This is the longest Thermo Plastic Bridge in the United States and was proudly constructed by our bridge crew. Several hundred thousand recycled plastic containers were used in the manufacturing of this bridge.

Employee Safety
Todd Bumgardner
General Superintendent

The Logan County Engineer's Office and Logan County Highway Department had our annual appreciation luncheon on June 26th. During the lunch Dustin Wickersham, County Commissioner Scott Coleman, County Engineer and Todd Bumgardner, General Superintendent addressed the combined group. The group achieved 185 days of injury free work representing nearly 1 year of heavy highway construction work. The group is on the way to surpass our former record set in June of 2012 which was 751 days or over 3 years with no accidents. The group also received a resolution passed by the county commissioners that gave recognition to the achievements of the workers for their efforts and commitment to workplace safety. Each employee received an award along with lunch provided by the Shelly Company.



Shared Services Program
Todd Bumgardner
General Superintendent

The Logan County Highway Department continues to offer shared services to townships and villages that may not otherwise have the resources to complete needed projects. In 2013 we have completed 6 township projects, 2 projects for villages and 1 project for the court offices all within Logan County. The Highway Department when requested provides an estimate that outlines the proposed scope of work. Once the scope of work and estimated cost are approved by the entity the county proceeds with the project. Our skilled workers give the same care and attention to detail as they would on any of our own projects. Upon completion the Logan County Highway Department sends an invoice to the entity for payment reflecting our actual cost. The projects are billed with no mark up on labor or equipment. Materials are often paid for directly by the entity to supplier avoiding any additional charges. The entire process is simple and helps all parties while keeping costs to a minimum. Typical projects include: roadside ditching, roadway repairs, culvert replacement, roadside mowing, roadside spraying and signage work

New Equipment Purchases

By Harvey Grimes
Administrative Coordinator

The Logan County Engineer's Office has purchased the following equipment to enable us to better service the citizens of Logan County.

2013 International Tandem Dump Truck w/snow plow and sander
\$125,945 total-Cab & chassis purchased using State Purchasing Program

2013 John Deere Tractor w/cab
\$57,054.20 State Purchasing Program

2013 MoTrim Boom Mower
\$39,722 State Purchasing Program

2013 Chevy Silverado Crew Cab Short Bed
\$24,320 State Purchasing Program



Map Room

By Susan Yoesting
Map Room Supervisor

The Map Room has recently updated the mapping to include color aerial photographs which were taken in 2012. In addition to the new photos, the drafting and GIS programming, along with the computer operating systems have been upgraded to keep up with the ever changing technology. We appreciate everyone's patience and understanding as we strive to make more information accessible at your fingertips on the Logan County website.

Traffic Department
By Mark Hilty
Ditch/Traffic Superintendent

The traffic department is continuing the annual sign maintenance program. We have about half of this year's replacements installed which will put us at approximately 80% of high intensity of signage overall. We are conducting our annual traffic count, which will include every county road this summer counting the total number of vehicles travel in a 24 hour period. Crews also updated the railroad crossing on Township Road 217 for Lake Township. This included new signage and painting symbols on the road surface. The department also conducted a sign inspection for Bokescreek Township.

Ditch Department
By Mark Hilty
Ditch/Traffic Superintendent

Our vegetation control spray truck received a make over this winter. This included removing the tank and bed, sanding and painting the frame, repairing the wood floor bed, and installing two new 70 gallon UV protected totes. The spray program was delayed this year due to the late spring and windy conditions. In addition to spraying county roads we will be spraying for Bokescreek, Jefferson, Lake, and Pleasant Townships this summer. Currently we are completing our second round of mowing and first round of ditch maintenance. Normally we complete four rounds of mowing on our 371 miles of roadside ditches and two rounds on our 58 miles of maintenance ditches.

Highway Update
By Joel Miracle
Highway Superintendent

Logan County Highway Crews have been busy replacing tiles and culverts as well as crack sealing roadways in preparations for the 2013 chipseal and paving programs. The county chipseal program will be completed with our own crews. This year 34 miles of chipseal is scheduled to be placed at a projected cost of \$397,000. This annual program is completed in an effort to preserve and protect our investment through sealing the roadway surface from all types of weather conditions. In addition the crews have prepared County Road 5 for widening between State Route 47 and County Road 50. This stretch of road is narrow for the amount of traffic it receives during the school year. Widening the roadway will allow more space for school busses and the traveling public during the busy times of the year. The crews continue to complete highway projects including: roadside ditching, right of way tree removal, shared services projects, roadway patching, guardrail repair and equipment maintenance.

Thanks to all members of the Logan County Highway Crew for keeping the 371 miles of county highways safe for the residents of Logan County.

2013 Summer Interns

Every year the Logan County Engineer's Office provides employment opportunities for college students in Logan County. The program is beneficial for both the county, giving us the benefit of extra employees during our busy summer months, and students giving them the opportunity for summer employment and internships. If you are interested in a position for the summer of 2014 contact the Engineer's Office in early March for information on the application process. Employed this summer as interns are:

Gabriel Campbell, Bellefontaine, junior at Bethel College in Mishawaka, IN Chemical Engineering major.

Eric Egbert, DeGraff, sophomore at Wilmington College Agricultural Business major.

Brice Hodge, DeGraff, junior Bluffton University Intervention Specialist major.

Tyler McCullough, Huntsville, sophomore The Ohio State University Chemical Engineering major.

Emily Overs, DeGraff, sophomore Purdue University Agricultural Education major.

Ethan Zack, Bellefontaine, sophomore Hocking College Heavy Equipment major.

Michael Kerns of West Liberty a graduate of Ohio University with a degree in Civil Engineering is working as a Senior Intern.



Promotion

Congratulation to Bradley Carnes who recently was promoted from Mechanic I to Mechanic II. Brad joined LCEO in early 2012 and is responsible for keeping our many pieces of equipment on the road.



New Hires

Two new employees have joined the LCEO team. In April Timothy (TJ) Yoder of De Graff was hired as a Mechanic I. Prior to joining the Engineer's Office TJ work for 11 years as a mechanic for Columbus Truck and Equipment. He is a graduate of Bellefontaine High School and has a degree from Lincoln Tech in Diesel Technology.

In May Christopher Stafford began work as a Ditch Maintenance Technician. Chris is a graduate of the West Liberty Salem High School and is an active member of the West Liberty Fire Department. Prior to joining the LCEO organization he was self em-

