



The Orange Brigade



Winter 2016

Logan County Engineer's Office

Volume 48



Coleman's Comments

Due to the salt shortage last year, we requested road salt bids for summer fill-up and winter fill in March 2015. Cargill Inc. was the low bidder at \$76.24 per ton for 2,800 tons of road salt. Last winter we paid \$67.12 to \$77.00 per ton for salt. We extend our thanks to the Champaign County Engineer and the Auglaize County Engineer for supplying us with additional salt to make it through last winter. We anticipate that salt prices may stabilize in 2016.

In addition to salt, we continue to utilize liquid Beet Heet, a sugar beet extract, to increase the efficiency of our road salt treatment. The use of Beet Heet allows us to melt snow and ice faster and at lower temperatures. As always, we encourage drivers to use caution and allow extra travel time when driving during winter weather conditions. Even though roads have been treated and plowed, you may encounter isolated slick road conditions.

In 2012, the Ohio Attorney General filed an antitrust lawsuit against Morton Salt and Cargill Inc. In early 2015, the lawsuit was settled for \$11.5 million and we applied for our portion of the settlement in August. In October, we received \$14,519.16 as our portion of the settlement. We have calculated the share of this settlement for each village and township and we will apply that amount toward their salt purchases during this winter season.

In March, we saw heavy damage to CR 53 from what appears to have been trucks hauling grain to market. As we enter the winter season, we encourage haulers to avoid hauling heavy truck loads during periods of thaw and heavy saturation from snow melt. If we can reduce loads or delay hauling during these periods, we can preserve our local highway system.

The sales tax for roads and bridges has become vital for the maintenance of local roads and bridges. The Ohio Legislature has shown no appetite for funding local road and bridge maintenance. We see a shortfall of approximately \$1.5 million per county throughout Ohio for road and bridge funding. The Ohio Legislature has made it very clear that they expect each county to fund this shortfall through local

tax levies. Our one-half percent sales tax for roads and bridges generated \$3,069,474.83 in 2015. These funds are collected and divided among county (\$1,841,770.63), townships (\$491,138.83), municipalities (\$491,138.80), and land use and economic development (\$245,569.40)

By combining sales tax with motor vehicle fuel tax, vehicle registration fees, federal grant and state grant funds, we were able to complete several construction projects in 2015. County road resurfacing totaled \$2,218,451.82. Township resurfacing was \$362,143.75 and township chip-sealing totaled \$269,323.86. Village resurfacing came in at \$700,548.25. We also completed a federally funded guardrail replacement and upgrade of 12,575 feet of railing throughout the county at a cost of \$244,983.75. These projects would not have been possible without the sales tax for roads and bridges. Thank you for supporting this program.

In March of 2014, the Ohio Department of Natural Resources (ODNR) and Federal Emergency Management Agency (FEMA) notified Logan County officials that they had updated the base flood elevation (BFE) and Flood Insurance Rate Map (FIRM) for Logan County without any input or consultation with any Logan County agencies. In July 2014, ODNR and FEMA held public meetings to present the revised flood maps to the public. After the July meeting, we requested that ODNR/FEMA consider several adjustments. In December 2014, ODNR/FEMA notified Logan County that the 90 day appeal period for the new flood maps had begun. Logan County filed our appeal on March 6, 2015. At this time, we are still awaiting FEMA's approval of our corrected base flood elevation and hydraulic study.

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

2015 Bridge Program

By: *Cale Jacobs, P.E.*
Assistant Engineer

During 2015, the Logan County Bridge Crew completed the replacement of four bridges/culverts in the county. All of these structures were replaced with concrete box culverts with concrete wing walls. All of the replacements were major improvements to the roads they carry.

Bridge TR 209-0.18 (Pleasant Twp.) and the two covered bridges McColly (Washington/Bloomfield Twps.) and Bickham (Richland Twp.) received painting updates in 2015. The exteriors of the covered bridges were re-stained and a fire retardant paint was applied to the interiors. Both bridges received lighting upgrades that will illuminate the interior from dusk to dawn. The Bickham bridge also had a new timber deck installed. We are planning a grand opening ceremony for the covered bridges in the spring of 2016. The covered bridge improvements were 80% funded by federal enhancement grants.

We are currently completing the 2015 annual inspections of nearly 300 bridges in Logan County and will be finished by February. Our office will then use these inspection reports to finalize bridge replacements for 2017 and minor bridge repairs for 2016. After many years of an aggressive bridge replacement program, our office is seeing a decline in the overall number of bridges that need replaced. However, timely maintenance and repairs is becoming more important to maintain their good condition.

Bridge replacements and repairs take the combined efforts of both the Highway Department and the Engineer's Office staff, in addition to the patience of the traveling public. Listed below are the bridges replaced in 2015 and the bridges being considered for replacement or major repair in 2016.

Bridges Replaced in 2015

TR 160-1.41 Replacement (Zane Twp.)
CR 5-4.30 Deck and Wing Wall Extensions (Monroe Twp.)
CR 5-4.31 Replacement (Monroe Twp.)
CR 2-7.80 Replacement (Perry Twp.)
CR 23-2.74 Replacement (Pleasant Twp.)

Bridges considered for replacement in 2016

CR 11-1.34 Replacement (Pleasant Twp.)
CR 20-6.53 Replacement (Bokescreek Twp.)
CR 87-1.50 Replacement (Stokes Twp.)
TR 30-0.80 Replacement (Miami Twp.)
CR 120-1.32 Wing Wall Extensions (Bokescreek Twp.)
CR 101-3.47 Replacement (Rushcreek Twp.)

Safety Update

By *Todd Bumgardner*
Administrative Coordinator

Our crews did have a reportable injury since the summer Orange Brigade, but we are all thankful that the employee was able to return to normal daily activities within a short time. We are reminded daily that heavy highway work is a hazardous profession and our work crews often work in groups under live traffic coordinating multiple pieces of complex mobile machines. The Logan County Engineer's Office and Highway Department continue monthly safety meetings and training of new employees to implement safe work practices and implement lessons learned from the past.



Bridge Crew Update

*By: Dan McMillen
Bridge Superintendent*

This late summer and fall the bridge crew has had plenty of projects on the "to-do" list. Two of the larger projects completed this fall included two concrete box culverts on CR 2 and CR 23.

In between the larger projects the crew:

- Refaced an abutment wall on a bridge on TR 3,
- Repaired concrete deck on CR 4 bridge,
- Removed log jams under bridges on CR 117, CR 130, CR 158 and CR 12
- Removed log jams under township bridges on TR 166 and TR 163
- Completed repair projects on bridges on CR 173 and CR 10
- Removed fourteen tandem axle truck loads of silt from under a large bridge on CR 59

September saw the completion of the painting of a steel truss bridge on Twp. Rd. 209. The painting process was a three step process. First, the steel was water blasted with recycled glass media. Second, a penetrating rust inhibiting primer was applied to the bare steel. Third, a two-part marine grade epoxy paint was applied. This was our first time using the glass bead water blasting steel preparation process. While there were many additional steps involved with this preparation method, we feel it will give a solid foundation; therefore extending the life of the primer and paint.

The bridge crew also assisted with crack sealing for two weeks this fall.

Highway Update

*By Joel Miracle
Highway Superintendent*

In the fall of 2015, we have been performing road reviews of the 370 miles of Logan County roads. During these reviews we determine a time frame for future maintenance. The maintenance includes crack sealing, dura-patching, paving and chip-sealing. We also evaluate base and sub-grade failures, as well as, longitudinal and transverse cracks which opens layers of asphalt creating ways for moisture, both rain and snow, to penetrate our road surfaces. Other parts of the inspection would include site distance concerns (aerial and ground tree trimming), guardrail condition, drainage issues and daily traffic counts.

In 2016, we are projected to complete 12 miles of resurfacing and 50 miles of chip-seal. We also plan to chip-seal the Sheriff's Office parking lot and areas of our county fairgrounds. Although many do not appreciate a chip-seal road surface, understand that it is a vital part of road preservation aimed at protecting our investment in the Logan County road system.

New Employee and Promotions

*By Donna Dahlke
Personnel Specialist*

We are pleased to announce Derek Thurman has joined our team in the Logan County Highway department. Derek is a graduate of the Ohio Hi-Point Outdoor Careers program with experience in equipment for lawn care and excavation. **WELCOME ABOARD DEREK!!**

Promotions include Timothy "TJ" Yoder to Mechanic II in June 2015 and Mark "Elliott" Fullerton to Highway Worker III in July 2015. **Congratulations! Job well done !**

Map Room

By Suzie Yoesting
Map Room Supervisor

Through December 24, 2015, the Map Room staff checked legal descriptions on 2,511 real estate documents. There were 1,955 deeds, 388 affidavits, 81 certificates of transfer, 41 easements and 46 land contracts. Additionally, two condominium plats and one annexation plat were approved and recorded. New property splits totaled 123 for the year with 82 documents being new surveys.

Surveyors submitted 255 new legal descriptions that were reviewed, approved, scanned and filed by the Map Room personnel. In addition, 21 new house numbers were assigned in 2015.

The records of the Map Room can be found on the Logan County Engineer's Office website at: loganco.co.logan.oh.us/engineer

Ditch Maintenance & Traffic Department

By Steve Tracey
Ditch/Traffic Superintendent

The Ditch Department has performed maintenance throughout the county which started by fixing tiles on the Hoover, Pence, Ligget, Rowand, Fun Place, Mouser, Milner and E.B. Fry maintenance ditches. With heavy rains and flooding this Spring and Summer we had to fix bank slides, re-align and place erosion control on the Hankinson, Hughes, Hoover, Slough, Bokengehalas and Pryor ditches. A full center dip was completed on the Leach ditch with partials done on the Pence and Hankinson.

The Ditch Department finished all roadside and maintenance ditch mowing for 2015 with the help of a new J.D. 5100m tractor and two new single wing side ditch mowers.

The Traffic Department also had a busy Summer and Fall. The sign crew finished upgrading all county maintained signs to high intensity prismatic to meet federal guidelines and currently maintain over 6,800 signs.

With the help of federal crash data we received grants to upgrade dangerous hills, curves, and intersections. Five years (2008-2012) of crash data analysis exhibited identifiable trends of curve related crashes and the curve sections were prioritized for upgrades. The new signs were oversized, double posted with warning speeds and chevron signs in place to guide motorist around dangerous curves. The updated intersections were CR 5 at CR 1 and CR 200 at CR 18. The dangerous curves are located at CR 1 and CR 47, CR 1 at Castle Hill, CR 5 and CR 29, CR 10 hill into Zanesfield, and CR 130 at CR 91.

Thank you to all the guys for their safe and hard work during this busy year !



Zanesfield Drainage Project

*By: Michael Kerns,
Assistant Engineer*

The Logan County Engineer's Office and the Village of Zanesfield have developed plans for a joint project to improve the drainage from CR 10 and through the Village. Initially, we hoped to acquire funding for a storm water drainage project running from the west edge of town on CR 10/Bellefontaine Street and leading to an eventual outlet at the Mad River. After estimating the cost for the entire project, it was split into four phases in order to be more budget friendly and increase the chances of getting financial assistance through the Ohio Public Works Commission (OPWC). The Logan County Engineer's Office is contributing to this project by performing the design and planning portion of the project.

Here is a brief summary of each phase:

Phase 1: This project is on the east side of Zanesfield and begins at the Mad River and runs westerly to an existing culvert outlet under the alley behind Firehouse Pizza. The preliminary plan shows the project on the properties of Michael Failor and the Zanesfield Chamber of Commerce. Approximately 1,250 feet of open ditch will be constructed and two 36" culvert pipes will be installed, with one serving the purpose of maintaining the existing driveway through the Chamber's park. Excess spoil will be spread, graded, and seeded in the Chamber's park. The estimated cost for this phase is \$43,667.

Phase 2: Replace the existing drainage under Sandusky Street with approximately 320 feet of precast box culvert that will run under Sandusky Street and through the alley between Straker Investments and Sloan Library and outlet to the proposed ditch constructed during Phase 1. This phase is currently the most functional portion of the system and has been planned as the last phase of construction. The estimated cost for this phase is \$240,370.

Phase 3: Begin with the construction of an open ditch starting at Sandusky Street (at the inlet of the proposed box culvert of Phase 2) and proceed west to Main Street, continue north parallel with Main Street, then go west under Main Street and continue west approximately 200 feet. The project will include culvert structures under Main Street, CR 10, Walnut Alley, and Green Alley. The total length of the project is approximately 895 feet. The estimated cost for this phase is \$68,760.

Phase 4: This phase consists of excavating an existing tile that runs parallel with CR 10/Bellefontaine Street and ending at Main Street. The existing tile will be replaced with 36" 12 ga ALT2 Ultra Flow placed in the same location as the existing tile. Dumped rock will be placed at the far west end of the project and hydroseeding will also be done wherever the ground has been disturbed. Asphalt concrete will be laid down where the project intersects existing pavement, which is on driveways and Main Street. The preliminary cost estimate is \$33,000 and did not score high enough to be funded by OPWC this year.

Funding has been approved through an OPWC grant for both Phase 1 and Phase 3 and both of those grants will cover 90% of the respective project costs with the Village covering the other 10%. Final designs and easement work are currently being completed with the goal being to start Phase 1 construction this upcoming Spring.

2015 Equipment Purchasing Highlights

*By Todd Bumgardner
Administrative Coordinator*

December brought with it a new plow and dump truck for the highway department. The new truck is a 2016 Freightliner tandem axle with a repurposed galvanized dump bed originally purchased in 2005. The new truck and plow replaces a 2004 tandem international truck that will be placed in the lineup as a backup. The new tandem truck was built with consideration to its second life here at The Logan County Highway Department. Once it serves 10 to 12 years as a front line truck the cab and chassis will become our lowboy haul truck. In our fleet the lowboy cab and chassis hauls the majority of our equipment between jobsites. Many of the features needed to make a good lowboy truck were added to this trucks build specifications. With careful planning and maintenance we are hopeful that this truck will have 17 to 20 years of service life.

Our third assembled in the USA John Deere 5100M tractor and two single wing mowers were placed into service in 2016. Our total of four tractors tow mowing units that together maintain over 700 miles of roadside ditches and 60 miles of county waterways.

A 69 inch Alamo "BuzzBar" boom tractor attachment was added to our equipment inventory in 2016. The "BuzzBar" has three 26 inch diameter blades for a total cutting width of 69inches. This attachment can be switched out in 15 minutes with quick attach couplers to our Alamo Versa Boom which in mounted on a John Deere 5115M tractor. With the tractor, boom and buzzbar combination, an operator can cut tree limbs 4inches in diameter to a height of 17 feet without leaving the protection of the tractor cab. Improving work force efficiency and safety while clearing and cleaning county right of way.

Our roadside spray truck console, pumps, sprayers and tank were updated to new electronic controls, a Javad Triumph-LS survey unit was purchased updating our crews capability and new "All-In-One" copier, scanner, printer and fax machines were purchased for both the Engineer's Office and Map Room. Each of these purchases replaced out dated equipment that contained obsolete, hard to find parts.

Wind Chill Temperature?



It is the temperature it "feels like" outside and is based on the rate of heat loss from exposed skin caused by the effects of wind and cold. As the wind increases, the body is cooled at a faster rate causing the skin temperature to drop. Wind Chill does not impact inanimate objects like car radiators and exposed water pipes, because these objects cannot cool below the actual air temperature.

TIPS ON HOW TO PROTECT YOURSELF DURING COLD WEATHER

- Monitor your physical condition and that of your coworkers.
- Wear appropriate clothing—1. Wear several layers of loose clothing for insulation 2. Tight clothing reduces blood circulation to the extremities.
- Be aware that some clothing may restrict movement resulting in a hazardous situation.
- Protect the ears, face, hands and feet in extremely cold or wet weather—1. Boots should be waterproof and insulated. 2. Wear a hat to reduce the loss of body heat from your head.
- Move into warm locations during breaks; limit the amount of time outside.
- Carry extra socks, gloves, hats, jacket, blankets, a change of clothes and a thermos of hot liquid.
- Include chemical hot packs in your first aid kit.
- Avoid touching cold metal surfaces with bare skin.

Battling Salt Corrosion

By: Mark Hilty
Operations Superintendent

This fall/winter we are trying a couple of new products to extend the life of our truck fleet. The first product is T-40 from Krown Industries, which is a rust inhibitor that is sprayed on the truck underside, engine compartment, and door jambs. T-40 works by penetrating into steel and creeping into electrical connections, driving out moisture, while creating a protective barrier, leaving salt and de-icing products with nothing to bond too.

This was applied to five of our mainline plow trucks, ranging in age from 2007 to 2015, and varying in condition from moderate to no rust. The 2015 truck should give us a baseline on how the product is working on a rust free unit, while the 2007 truck is a test to see if the progression of moderate rust that exists on it is halted or slowed down. We also have had this product applied to our Cat loader, which is used for salt/grit mixing and loading.

The next step we are taking is how we wash our equipment after a snow event. In the past we have used high pressure water by itself. This rinses away some salt, but at the same time drives saltwater into other areas. When the truck dries, this leaves a salt residue that starts to corrode as temperatures and humidity rise in warmer weather. Our new method will be a low pressure wash with Krown Salt Eliminator. This product is run through a special mixing gun at low pressure, creating a thick foam, which covers the entire truck and engine. After sitting for about ten minutes, it is rinsed off with a low pressure hose. Krown Salt Eliminator bonds to salt and de-icing residues and is rinsed away.

Hopefully these two products will help us avoid costly repairs due to corrosion, therefore extending the life of our fleet and saving the taxpayers money.



Winter Driving Kit

The following items, carried in your vehicle, will be invaluable should an emergency develop.

- Bag of abrasive material (sand, salt or cat litter)
- Small snow shovel
- Snow brush
- Traction mats
- Flashlight
- Window-washing solvent
- Gloves or mittens
- Ice scraper
- Cloth or paper towels
- Booster cables
- Blanket
- Warning flares or triangles
- Cellular phone



Safe Winter Driving Tips

- Clear snow and ice from all windows and lights - even the hood and roof before driving
 - Leave plenty of room for stopping.
 - Pay attention don't try to out drive the conditions. Remember the posted speed limits are for dry pavement.
 - Know the current road conditions.
 - Use brakes carefully. Brake early. Brake correctly. It takes more time and distance to stop in adverse conditions.
- Bridge decks freeze first. Due to the difference in the exposure to air, the surface condition can be worse on a bridge than on the approach road.
 - Exit ramps are an even greater challenge during the winter since they may have received less anti-icing material than the main line. Be aware of this when exiting the highway.
 - Don't use the "cruise control" option driving in wintry conditions. Even roads that appear clear can have sudden slippery spots and the slightest touch of your brakes to deactivate the cruise control can cause you to lose control of your vehicle.
 - Don't get overconfident in your 4x4 vehicle. Remember that, if you are driving a four wheel drive vehicle, the vehicle may help you get going quicker but it won't help you stop any quicker. Many 4x4 vehicles are heavier than passenger vehicles and actually may take longer to stop. Don't get overconfident in your 4x4 vehicle's traction.
 - Look further ahead in traffic than you normally do. Actions by cars and trucks will alert you quicker to problems and give you a split-second extra time to react safely.
 - Remember that trucks are heavier than cars. Trucks take longer to safely respond and come to a complete stop, so avoid cutting quickly in front of them.
 - Leave room for maintenance vehicles and plows - stay back at least 200 feet and don't pass on the right. (See additional information below.)
 - Most importantly please remember to **SLOW DOWN!** Also, seat belts should be worn at all times - it's the law.

- Remember that the road in front of the plow is usually in much worse condition than the roadway behind the plow. Plows will typically travel under 35 miles per hour and there is always a temptation to pass them. For your safety, it is recommended that you stay a safe distance behind the snowplows.
- During plowing operations, visibility can be reduced by blowing snow and plow operators may need time to stop or move over to avoid stranded vehicles. Keeping a safe distance between your vehicle and the plow is very important in order to avoid accidents.
- Allow plenty of room when passing a snowplow. Do not cut back into the lane ahead of the plow too quickly since the blade extends several feet ahead of the truck. .
- When you see an approaching snow plow on an undivided roadway, move as far away from the center line as you safely can since blowing snow may obscure the actual width of the snowplow's blade.
- Turn on your lights- to see and be seen. Brush the snow off your headlights and taillights frequently. Winter driving requires motorists to be careful and alert, but the most important tip for winter driving is: **SLOW DOWN!**



Employee Birthdays

January

Matt Archer
Todd Bumgardner
Brad Carnes

February

Jayma Burkhammer
Chris Hackley
Derek Thurman
Kip Jenkins

March

Michaela Brunke
John Spencer

April

Drew Farris
Mark Hilty
Cale Jacobs
Bob Simmons
Todd Wisse
Suzanne Yoesting

May

Shirley Brunke
Scott Coleman
Dan McMillen
Greg Miller
Joel Miracle

June

Donna Dahlke
Curt Dill
Michael Kerns
Bryan LeVan
Keith Price
Lisa Stover

July

Steve Tracey

August

Jeremy Burrey
Elliott Fullerton

September

Allen Campbell
Greg Kennaw
Jason McKee

October

Todd Coleman
Luke Jolliff

November

Greg Dappert
Greg Swonguer

December

Mark Dearwester
TJ Yoder



Employee Anniversaries –2015

January

Greg Dappert-11 years
Bob Simmons-22 years

February

Keith Price-18 years

March

Todd Bumgardner-7 years
Drew Farris-5 years
Kip Jenkins-5 years
Luke Jolliff-5 years

April

Shirley Brunke-33 years
Jayma Burkhammer-16 yrs.
Jason McKee-7 years
TJ Yoder-2 years

May

Curt Dill-36 years
Suzie Yoesting-21 years
Matt Archer-10 years
Brad Carnes-3 years
Steve Tracey-10 years

June

Scott Coleman-21 years
Mark Hilty-18 years
Todd Coleman-18 years
John Spencer-16 years

**THANK YOU FOR YOUR
YEARS OF SERVICE.
YOUR HARD WORK IS
APPRECIATED !!**

July

Michaela Brunke-11 years
Chris Hackley-1 year

August

Bryan LeVan-3 years

September

Michael Kerns-2 years
Dan McMillen-22 years

October

Jeremy Burrey-12 years
Mark Dearwester-13 years
Elliott Fullerton-9 years
Greg Kennaw-9 years
Joel Miracle-12 years
Greg Swonguer-13 years

November

Cale Jacobs- 1 year
Greg Miller—5 years
Lisa Stover-7 years



EMPLOYEE GENEROSITY



Our employees gave generously to the Logan County United Way this year. Many local charities will receive these contributions over the coming year.

***Thank you to all the employees who
contributed to these worthy causes!***