



The Orange Brigade



Summer 2017

Logan County Engineer's Office

Volume 51



Coleman's Comments

This winter and spring has kept us very busy reviewing and approving multiple permits to install public utilities within county and township road right-of-ways. We have approved the following: approximately 30 miles of new fiber optic cable across the county, approximately 6.5 miles of gas line serving DeGraff, Ohio, and the installation of telecommunications equipment at several sites throughout the county.

With the awarding of the Smart Cities grant to Columbus, Ohio, we have been working locally to submit infrastructure projects for the competitive advantage project with the Mid Ohio Regional Planning Commission. In the near future, we anticipate seeing connected vehicles, connected electric autonomous vehicles, and truck platooning in the county. In preparation, we are working with the Logan Union Champaign Regional Planning Commission to conduct a freight study for the southeast Logan County and northeast Champaign County areas in preparation for potential industrial development in the area. The Logan County Engineer's Office will continue to work with our regional partners to provide safe infrastructure as these technologies develop.

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.

- July 2014, ODNR and FEMA held public meetings to present the revised flood maps to the public.
- Late 2014, we requested that ODNR/FEMA consider several adjustments.
- December 2014, ODNR/FEMA notified Logan County that the 90 day appeal period for the new flood maps had begun.

- March 6, 2015 Logan County filed our appeal.
- August 31, 2016, FEMA approved our request to adjust the BFE of Indian Lake from 997.6 feet to 997.5 feet (NAVD88)
- September 2016, the Logan County Commissioners requested that the new BFE of 997.5 feet be incorporated into the new FIRM, requested that FEMA provide Logan County with a Flood Insurance advocate to assist us with our appeal of the preliminary flood rate maps, and requested good-faith consultation with FEMA.
- June 6, 2017, FEMA may adjust the FIRM maps for Indian Lake to reflect the adjusted BFE of 997.5 feet (NAVD88) but they intend to proceed with adopting the preliminary maps.
- FEMA does not reimburse landowners for elevation certificates that result in a Letter of Map Amendment (LOMA). However, landowners may be eligible for reimbursement of flood insurance premiums.

The County Commissioners and County Engineer continue to advocate on behalf of our residents for accurate Flood Insurance Rate Maps.

**Insurers and mortgage companies must use the current Flood Insurance Rate Map (FIRM) to determine if a property is in a Special Flood Hazard Area (SFHA) and to determine the appropriate insurance rate. If you believe that your property has been incorrectly identified as being located in the SFHA or your flood insurance policy has been incorrectly rated, please contact ODNR's Floodplain Management Program for assistance.*

*Alicia Silverio, CFM I Senior Environmental Specialist
Floodplain Management Program | ODNR
(ph) 614.265.1006
alicia.silverio@dnr.state.oh.us*

Sincerely,
Scott C. Coleman, P.E., P.S.

2017 Logan County Pavement Marking Program

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

This year we will be striping 358.55 miles of centerline pavement and 56.38 miles of edge line pavement. This is a significant increase from last years 158.07 and 39.76 miles respectively. This increase is due to Logan County receiving Federal Aid Grant monies in the value of \$150,000.00. On June 6, 2017, the commissioners accepted a bid of \$151,273.04 from Oglesby Construction Inc. out of Norwalk, Ohio.

The following county roads receive fresh centerline and edge line painting annually:

- CR 1 - State Route 245 to the City of Bellefontaine Corp. Line
- CR 10 - City of Bellefontaine Corp. Line to CR 5
- CR 18 - Township Road 45 to CR 11
- CR 32 - CR 11 to Railroad and the City of Bellefontaine Corp. Line to CR 130
- CR 130 - City of Bellefontaine Corp. Line to US Route 33 Overpass
- CR 144 - CR 153 to SR 347
- CR 154 - State Route 347 to CR 10
- CR 200 - CR 18 to the Fountain Plaza Rear Drive

The paints are fast drying waterbourne traffic paints made with some of the most advanced resin technology on the market today. The yellow centerline striping is 4" wide x 10' long with a 30' space between stripes and our white edgeline striping is 4" wide. These products meet all of the specification and performance requirements of the Ohio Department of Transportation. Both the white and yellow products are formulated without lead containing pigments. Glass beads are added to the wet paint to increase the reflectivity of the lines.

This work will take place in all townships throughout the county and is scheduled to be completed before October 6, 2017. Please be on the lookout for work crews this fall and please slow down when approaching and passing the paint trucks. Remember "Safety is Everyone's Business".

Safety Update

*By Todd Bumgardner
Administrative Coordinator*

In February 2017 The Logan County Highway Department saw our most severe accident in nearly a decade. The accident happened while our crews were removing trees along CR 60 near the Muchinippi Creek. While chain sawing a limb off a felled tree, the stump "rolled". During the roll, the limbs blunt end struck the employee in an upward motion between the hard hat and safety glasses. A valuable lesson was learned through this event by our entire workforce. In the meetings and interviews that followed the incident, the message that resonated was that safety is a responsibility borne by everyone. Our employees know the type of work we do is dangerous, only through continued training, use of machinery, application of personal protective equipment, our own mindfulness and watching out for one another can we avoid this type of accident in the future. Our employee is back at work and our entire organization is thankful for his return as many do not live to tell about this type of severe accident.

Highway Update

*By Joel Miracle
Highway Superintendent*

In the spring of 2017 the Highway Crew has been performing full depth asphalt repairs on C.R. 27 ahead of our 2017 sales tax paving program. These repairs were needed due to failed areas of pavement along the roadside edge. The excavations extended below the existing pavement replacing any yielding subgrade beneath. The road was built back up to existing grade and is now awaiting resurfacing. C.R. 27 is scheduled to be paved by contract in July – August.

In addition, several repairs were performed at various locations along C.R. 142 in both Perry and Bokescreek Townships. The repairs were part of the preparation for the 2017 chipseal program. These repairs varied depending on failure in size and depth. At each location the patch was saw cut, excavated, replaced and sealed with an initial application of chipseal. The entire length of C.R.142 is scheduled to be part of the 2017 chipseal program.

Our crews have completed the 2017 and will soon be starting the 2018 crackseal program. This program is completed ahead of both the chipseal and paving operations for the current or following year. The liquid asphalt crackseal material is placed to fill cracks up to 1/4" in size. This bead of crackseal bridges the gap and aids in stopping water penetration to the lower layers of the road extending the life of the upcoming pavement or pavement preservation work.

Our crews have completed miscellaneous roadside ditch grading as well as culvert replacements for both County and Township roadways. These are continuing efforts to keep the storm water running off and away from the pavement. This operation not only creates a safer, but also a longer lasting road.

Additional information on our current construction programs can be found at our website www.leco.us. Also, the local radio station and newspaper will be alerting the public with regular press release updates on all our construction scheduling.



Full Depth Asphalt Repair

College Interns

*By Donna Dahlke
Personnel Specialist*

This summer we are pleased that we have two summer interns from 2016 returning. We would like to welcome back Jarret Matthews, a student at Bowling Green State University and Adam Preston, a student at The Ohio State University.

Joining our summer intern program this summer is William (Mitch) Schwieterman, a student at the University of Cincinnati and Timothy McCall, a student at Youngstown State University.

We welcome back our seasonal workers Sam Ragland and Denny Stryker.

Bridge Crew Update

*By: Dan McMillen
Bridge Superintendent*

With Spring also came the removal of log jams that had accumulated at the inlet side of bridges located on C.R. 25, C.R. 64, C.R. 54 and C.R. 73. A log jam may negatively impact the stream because the flow is naturally channeled toward the route of least resistance, which is around the obstruction. As the stream's flow is directed around an obstruction it creates a channel that directs the streams energy from one bank to the other as the water flows downstream, eroding the stream banks and undercutting vegetation. Log jams and the back water pool created behind it take up volume in the stream channel or floodplain producing less available natural storage when a flood event occurs. This can significantly impact farm fields and residences in the floodplain and to particularly low-lying flood-prone areas.

On a regular basis the Highway Department inspects large diameter (5 - 9 1/2') culverts within the county to inspect for flooding, stream erosion or for pipe concerns such as crushed, aged, rotted or damaged culverts. Drainage projects thus far this year have included installing two 24" x 60' culverts on both C.R. 64 and C.R. 73 to help alleviate water and drainage issues.

Most recently a bridge rehab has been completed on Bridge 158-1.26 outside of Middleburg. Rust and chlorides were removed by pressure blasting the steel beams with a product called Chlor Rid. This product removes years of chloride saturation from road salts. The steel beams are tested by our crews both before and after the blasting to insure this harmful rust generating invisible residue is removed prior to painting. The structure was then painted with Sherwin Williams Marine coating Dura Plate 235 after a prime coat of a penetrating macropoxy was applied. The rehab also included replacement of reinforcing steel members and backwall repairs.

Bridges located on C.R. 39 and C.R. 277 have been repaired by replacing special order guardrail members due to car accidents over this past winter.

Ditch Maintenance & Traffic Department

*By Steve Tracey
Ditch/Traffic Superintendent*

The Ditch Department has repaired tile and tile outlets on the Hoover, McColloch, Badger, Pence and Green Group Ditches. Downed trees have been pulled from the Dutch, Slough and multiple areas along the South Fork River.

Erosion control from bank slides has been placed on the Hoover and Rowland Ditches. A full center dip was performed on the Rowland Ditch as well as the outlet of the Lamb tile. We are currently spraying and mowing roadside ditches, guardrail and maintenance ditches.

The Sign Department is currently upgrading our tile and culvert markers along county roads for better record keeping and inventory purposes. We have also installed large solar powered flashing beacons at two locations; C.R. 21-1.00 bridge to alert the public of the decreased weight limit and C.R. 18 on the advanced warning signs to alert the public that they are approaching a dangerous intersection. The Sign Department is currently maintaining 7, 051 signs.



2017 Equipment Purchases

*By Todd Bumgardner
Administrative Coordinator*

Every year at the Logan County Highway Department and Engineer's Office we upgrade and replace outdated, worn out and surplus equipment. 2017 is no different and has brought about changes in equipment capabilities and replacements. Listed below are the purchases for this year and their anticipated use :

1. 2012 variable width head Etnyre Chipspreader box. This piece is the workhorse of our chipseal operations and this replaces a fixed head 1997 model. The new unit will allow crews to become more efficient in placement operations. Also, this unit will aid our crews in their continued efforts to offer a completed quality product at a lower cost than outside contracting.
2. 2017 Linkbelt 80 Spin Ace midi excavator. This excavator is equipped with rubber pads allowing it to do work on the road surface without damage. Also with its 19,000 dressed weight it is half the size of our large excavators and can be more versatile within our operations. This unit will relieve our aging excavators of many hours of work in hopes we can extend their useful life at the Highway Department.
3. 2012 Vermeer 800TX compact loader. Both box culverts and bridges replaced with sales tax dollars in the last 20+ years need continuing maintenance. This machine will make quick work of cleaning, grading and daily work on low overhead structures. In the past these seemingly small projects took many laborious hours to complete. In hopes of working "smarter not harder" with this piece of equipment our crews can complete more projects in less time with fewer injuries.
4. 2 new 2017 Chevrolet pickup trucks from Steve Austin's Auto Group. These new trucks will have a trickledown effect on our daily driver fleet eventually replacing our 1990 and 1998 pickups. That's no typo, these 2 trucks will have a combined service life of 46 years to the county.
5. 2017 model of Trak Engineering fuel management system. This system will replace our current failing set up which has been in service for 25+ years and is no longer supported by the manufacture.

Map Room

*By Suzie Cochran
Map Room Supervisor*

The records of the Map Room can be found on the new Logan County Engineer's Office website at www.lceo.us under the Map Room link in the upper left hand corner of the main web page. The Map Room records include surveys, recorded subdivision plats, railroad plans, highway plans, cemetery plats along with tax books ranging from 1870 to 1966 just to name a few. There are also links to the county shape files, school district maps, voting precinct maps, tax district maps & fire district maps. The County Tax maps with the aerial photography can also be viewed on this page. Additionally, there is a link to FEMA to view the flood plain maps. If you need assistance locating a specific record you can call (937)599-7230.

Extending the Life of our Fleet through Preventative Maintenance

*By: Mark Hilty
Operations Superintendent*

We have a very diverse fleet of vehicles and equipment, ranging in years from 2017 all the way back to 1959 (which is still in use). Extending the life of our fleet is a top priority. We have been able to repurpose several vehicles and give them a second life. One way to help with this is a little bit of daily preventative maintenance. Our crews are in and out of different vehicles and equipment throughout the day on a daily basis. This being said, we ask our employees to take a little bit of time each morning to do the following pre-trip inspection.

- Walk around
- Look for damage
- Check tire wear and inflation
- Look under vehicle for any traces of leaking fluids
- Check oil level, coolant level, windshield washer fluid level
- Check lights, turn signals, and horn
- Report any damage or problems to a fleet technician

Post trip or end of the day:

- Fill vehicle with fuel
- Remove any and all trash
- Put away signs, tools, etc.

Taking these steps will help ensure the safety of the operator and general public, promote vehicle reliability by catching potential problems early, decrease down time due to unexpected break downs and reduce our overall maintenance cost. Lets keep doing these simple steps and maybe we can get another 58 years out of some of our fleet.

How Can We Be Safe Around Equipment

1. Avoid entering equipment operating areas.
2. Near moving, swinging, or 'pinch point' work vehicles:
 - Obey markings and barricades in work space, stay outside 'danger zone'.
 - **NEVER** enter space unannounced.
3. Approach only after communicating with the operator:
 - By radio.
 - With hand signals.
 - Wait until operator returns signal.
 - Never assume operator sees you.
4. Avoid equipment 'blind spots' where workers on foot cannot be seen by operators.
5. Respond to back up alarms.
6. Use spotters. Spotters warn operators about nearby workers and hazards.
7. Check surroundings often, listen for warnings. Avoid distractions.



Ignoring Bridge Weight Limits is Dangerous and Illegal

By Michael Kerns, Assistant Engineer

Recently BR 21-1.00, in Pleasant Township, made headlines when it appeared on the front page of a local newspaper because drivers have been ignoring its weight limit signs but the problem of drivers ignoring bridge weight limits spans to the ten additional posted bridges within Logan County.

Why do bridges have load limits? As bridges age (as an example BR 21-1.00 was built in 1882) they can deteriorate and lose the initial load carrying capacity they once had. The Engineer's Office inspects every county bridge each year to evaluate the health of the bridges and make sure they are still capable of carrying maximum allowable Ohio Legal Loads. In addition to these yearly inspections, a load rating analysis is performed on bridges that are shown to be structurally deficient and these load ratings give the recommended weight limits of the bridge. These weight limits are put in place to make sure the safe live load capacity of the bridge is still maintained despite its deterioration. In addition to safety concerns, driving oversized vehicles over bridges can accelerate the deterioration of the bridge.

The refusal to follow these bridge postings could have devastating consequences, the most scary possibility being when it was learned that school busses from nearby districts had been seen crossing BR 21-1.00. In 1974, BR 20-6.53, a truss bridge in Bokescreek Township, collapsed as a loaded truck tried crossing after not adhering to the bridge posting.

Solar powered flashing beacons have been placed on BR 21-1.00 in order to bring further attention to the weight limit postings.

Please do not take these load limits lightly as they are put in place for your protection. For the most up-to-date list of bridge postings, click on the 'Bridge Posting List' tab on the Logan County Engineer's website (www.lceo.us).



Safety Tips for the Driver in Work Zones

Remember these driving tips to avoid "A Sudden Change in Plans" and perhaps save a life including your own!

Stay Alert and Minimize Distractions

- Dedicate your full attention to the roadway
- Avoid changing the radio station, using a mobile phone, eating, or other distractions that can remove your concentration from the road

Pay Attention to the Road

- "Listen to the signs".
- Watch brake lights on vehicles ahead.
- Watch traffic around you and be prepared to react.

Obey the Posted Speed Limit

- Workers may be present just feet away.
- Fines may be doubled for moving traffic violations.
- Be prepared to slow down further if conditions indicate the need.

Merge into the Proper Lane

- Merge well before you reach the lane closure.
- Be aware that traffic patterns can change daily.

Change Lanes Safely

- Change lanes only where pavement markings indicate, and only when traffic conditions permit.

Follow Instructions from Flaggers

Don't tailgate

- Follow other vehicles at a safe distance.

BE PATIENT

Expect the Unexpected

- Workers, work vehicles, or equipment may enter your lane without warning.
- Other vehicles may slow, stop, or change lanes unexpectedly.

