



The Orange Brigade



Summer 2015

Logan County Engineer's Office

Volume 47



Coleman's Comments

This past winter was once again very cold and led to deep frost throughout the area. In the second week of March we experienced a rapid warm-up. This warm period caused our road system to begin thawing from the top down. Therefore, we had saturated and soft road bases that still had frozen ground below them and held all the moisture in the base. Once this is combined with heavy truck loads, you have rapid failure of roads. This happened on CR 53 between SR 274 and CR 52 in early March. Heavy trucks were hauling on CR 53 during the worst possible conditions and it led to the full depth failure of several large areas of CR 53. Had the loads been reduced or delayed, the road may not have been damaged so severely. (see photos on back page)

This section of highway had been paved in 2001 and was planned to last through about 2021. Due to the damage, the estimate to perform full depth repairs for this two mile section of highway is about \$750,000. We have performed temporary repairs, but permanent repairs cannot be made this year. Unfortunately, our community, who has chosen to invest in the local highway system, will be hindered in their travels by the actions of a very few.

We have seen damages to a few township roads over the past few years due to the hauling of heavy loads during periods of thaw. We also have seen several county roads that are showing signs of premature damage due to heavy trucks and equipment being operated during wet and thaw periods. This unnecessary damage can be prevented by scheduling hauling operations by a few weeks before or after the thaw or wet periods or reducing load weight. Since 1997, our community has invested over \$36 million in improving our highway system and we all share in the responsibility to preserve that investment.

Logan County experienced widespread flooding damage caused by rainfall amounts totaling approximately 8 inches from June 12 through June 17. Our highway crews have been busy for several days setting barricades, cleaning storm drains, repairing washouts and berms, and cleaning debris from these storms. To date we have spent over \$22,000 and anticipate the total costs will be over \$65,000. Cleanup of the storm damage will continue through late summer as we proceed with our regularly scheduled construction project

In the winter newsletter I discussed the updated base flood elevation (BFE) and Flood Insurance Rate Map (FIRM) for Logan County as developed by the Ohio Department of Natural Resources (ODNR) and Federal Emergency Management Agency (FEMA). Since January, DLZ Engineering has completed their analysis of the preliminary FIRM maps and have filed an appeal on behalf of the residents of Logan County. Our office has been working very closely with the Logan County Commissioners and DLZ and have determined the FEMA maps to be technically flawed and are currently awaiting FEMA's acceptance of our hydrologic and hydraulic analysis.

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



McColly and Bickham Covered Bridges Update

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

We are fortunate to have two historic wooden covered bridges located in Logan County. The engineers office has secured funds from the Federal Highway Administration and the Ohio Department of Transportation from the National Historic Covered Bridge Grant Program to provide preservation and enhancement upgrades to the McColly and Bickham covered bridges. Both bridges will receive the following upgrades:

- Exterior and interior LED lighting will be installed assisting with lowering the occurrences of vandalism, deterring animals from nesting and improving night time driving.
- Fire retardant paint will be reapplied to all interior members helping prevent the loss of these historic structures to vandalism.
- All exterior siding timber members will be stained, restoring the 15 year old coating system and preserving the structures from the weather.

The Bickham bridge will also receive the following upgrades:

- All structural steel members will be pressure washed at a minimum of 5,000 psi then overcoated with a high ratio co-polymerized calcium sulfonate self priming topcoat. The proposed one coat protective coating will replace a deteriorated 3-coat epoxy paint system, and will provide additional protection against the crevice corrosion currently being exhibited.
- A new 3"x6" treated southern yellow pine timber strip floor system will be installed. This will replace a delaminated timber strip floor installed during the 2002 rehabilitation.

The proposed lighting, fire protection, and preservation upgrades will provide a deterrence from vandalism, as well as structural preservation and a cosmetic facelift for these two bridges while maintaining their historical significance.

The estimated costs for these improvements are \$168,533.75 (McColly) and \$265,000.00 (Bickham) respectively with the county receiving 80% funding through the National Historic Covered Bridge Grant Program and FHWA. The work is scheduled to begin on the McColly bridge July 13 and run through August 20, 2015. The work on the Bickham bridge will follow for approximately another 8 weeks. The bridges will be closed to traffic while the work is being performed and detours will be posted.

Safety Update

*By Todd Bumgardner
Administrative Coordinator*

Another year has passed and a HUGE congratulations to our staff for making it another safe injury free year. As of our monthly safety meeting on July 7, 2015 our employees have completed 507 days of work without an injury accident requiring more than on-site first aid. In the construction industry requiring work in the elements with both heavy equipment and hand tools this is a great accomplishment. This is the second time since our tracking has begun over 7 years ago that we have surpassed 500 days of safe work. Our employee's take well deserved ownership and pride in this accomplishment. Our last injury accident was nearly 3 years ago, since then 1 day at a time, and more than 500 days later, all have gone home safe and able to enjoy to their families and friends.

Bridge Crew Update

*By: Dan McMillen
Bridge Superintendent*

The bridge crew has had a busy spring and summer work season. The following projects were completed:

- C.R. 5—a 4' x 6' concrete box replacement with 6' 6" extension added to both ends due to a 1901 structure that was deteriorated beyond repair. These were done ahead of the 2015 Federal Aid paving program.
- C.R. 200—two structures were extended to add a reduction in ditch slope site improvements were also completed with the removal of trees, brush and soon to be replaced sections of guardrail.
- C.R. 2— the last wooden box culvert structure in the county was repaired and removal of 3' of silt buildup was excavated. The bridge crew also returned to complete the landscaping on a previous structure replacement from November 2014 by adding topsoil, grass seed and straw.



The Highway Dept. purchased three—1-yard interlocking block forms to make 2' x 2' x 6' concrete wing walls. During inclement weather the crew has poured 48 forms and are continuing to use these on culvert and bridge projects.

Recently the crews spent six days on flood repair maintaining high water signs, road berm washout and erosion control in Belle Center, New Richland, and Indian Lake area.

Lastly, I would like to thank the summer interns Bryce Hodge and Bret Wisner. To date this year they have cleaned 52 bridge sites. Cleaning includes blowing out the bridge abutment seats, the deck, and wing walls with a high pressure air wand. In addition small trees and brush growing near bridges are cut and removed.

Highway Update

*By Joel Miracle
Highway Superintendent*

The Highway Department has been working through the weather issues this spring and has successfully completed several projects including replacing a 12" culvert on C.R. 200, repaired the asphalt on C.R. 29 in advance of this years paving project using our new paver. Our crew also performed paving in Zane, Harrison, and Lake townships along with county culverts and a crossing for the Ohio & Indiana Railroad. The crews also have completed prep work for the 2015 chip seal program which includes berming, crack sealing, dura-patching, and stock piling stone.

College Interns/New Employee

This summer we are pleased that five of our summer interns from 2014 have returned. We would like to welcome back--Tyler Myers a student at Ivy Tech Community College, Melina Hilty a student at Urbana University, Bryce Hodge a graduate of Bluffton University, Rose Yoder a student Hesston College, and Brett Wisner a student at Miami University. Joining our crew this summer is Caleb Meadows a student at Cedarville University, Kyler Klinger a student at Rhodes State College, Parker Neeld a student from Ohio University, and Brooke Zarnosky a student at University of Mt. Union.

We also welcome back returning seasonal workers Sam Ragland, Denny Stryker and Mel Roberts.

Donna Dahlke from Bellefontaine joins our team as Personnel Specialist with many years of HR experience and formerly worked for Mobile Instrument Service & Repair.

County Road 200 Improvements

*By: Mark Hilty
Operations Superintendent*

Crews finished some much needed improvements along C.R. 200 and the intersection of C.R. 200 and C.R. 18. Grubbing was done along C.R. 200 to allow for better sight distance at the intersection and to allow for drainage improvements. The road ditch was dipped out and straightened. A small open ditch was cut to redirect water away from the intersection and into the Hankinson maintenance ditch.

Headwalls were formed and poured on each end of an existing culvert that runs under C.R. 18. This allowed for the road ditches to be filled in and moved back away from the road. Later this summer the guardrail will be taken down and set back an additional 10 feet with most of the guardrail eliminated to help with sight distance at the stop signs.

Signage was upgraded the entire length of the road and in a few weeks the intersection will also receive new signage. This will be done through a grant from CEAO (County Engineers Association of Ohio) for dangerous intersections and will consist of oversized STOP AHEAD and STOP SIGNS along with post reflectors on all posts on both sides of the road warning drivers of the upcoming intersection.

C.R. 200 is one of heavier traveled roads in Logan County, averaging about 5000 vehicles per day, and these improvements will make a much safer road for the traveling public. GREAT JOB to all of those involved.

Ditch Maintenance & Traffic Department

*By Steve Tracey
Ditch/Traffic Superintendent*

The Ditch Department has performed maintenance throughout the county which started with re-shaping and widening a main crossover on the Ligget Ditch. A full center dip was completed on the Calico Ditch from inlet to outlet. Various tile outlets were also fixed on the Hoover, Pence, and Calico ditches placing dumprock in washouts on the Hoover and Stoney Creek ditches while pulling log jams from the South Fork. Repairs were also made to the bank slide on the Elder Cline along S.R. 117.

Recently we have completed our roadside spraying program for 2015 with a new Raven Direct injection spray system that was installed on our spray truck and purchased from Kale Marketing in Richwood.

The Traffic Department has had a busy Spring as well. Along with everyday operations we have completed sign inspection for Liberty Township and full replacements and upgrades in Monroe and Liberty townships. We are currently completing the upgrade of the county signs for 2015 to high intensity prismatic to meet federal guidelines as well as maintaining 6,600 signs. Along with sign replacements and upgrades the Traffic Dept. inspected all guardrail that is to be replaced in 2015 for a Federal Guard Rail Grant.

Federal and State Funding Updates

*By Todd Bumgardner
Administrative Coordinator*

The Logan County Engineer's office has had a busy spring and summer with the awarding of nearly \$3.8 million dollars of work in federal aid and state funded contracts. While it's true that these projects benefit the county maintained highway system they also provide for the villages and townships within Logan County as well as The City of Bellefontaine. The projects include typical roadway paving and bridge rehabilitation as well as traffic safety studies, village street paving and county wide sign replacements. The following is a list of federal and state funds being funneled into Logan County during the 2015 construction season:

1. \$62,495.00 - Sign Upgrade - Federal Highway Administration
2. \$7,047.42 - Curve Sign Upgrade - Federal Highway Administration
3. \$5,000.00 – Roadway Geographic Information System Study - Federal Highway Administration
4. \$160,607.64 – Pavement Markings - Federal Highway Administration
5. \$255,725.00 – Guardrail Rebuilding Program - Federal Highway Administration
6. \$2,230,959.22 – County and City Highway Resurfacing - Federal Highway Administration
7. \$718,988.00 – Village Roadway Resurfacing – Ohio Public Work Commission
8. \$61,884.00 – Zanesfield Drainage Project Phase 3 - Ohio Public Work Commission
9. \$168,533.75 – McColly Bridge Rehabilitation – Ohio Historic Bridge Preservation and Federal Highway Administration
10. \$265,000.00 (estimated) – Bickham Bridge Rehabilitation – Ohio Historic Bridge Preservation and Federal Highway Administration.

In most cases these federal and state moneys are requested 2 to 5 years in advance of the proposed work. The projects require additional administration and inspection to recover the committed federal and state funds. Many thanks goes out to all that played a role in getting these projects defined, measured, bid, awarded and soon to be inspected. These projects are large and sometimes multiyear undertakings that require the help of The Logan County Engineer's administrative staff, field superintendents, workers, as well as The Logan County Commissioners and their staff. With everyone's assistance we are able to provide an affordable finished product to the community.

Photos of C.R. 53 damage



