

2016 MEDINA COUNTY ENGINEER'S ANNUAL REPORT

By: Andrew J. Conrad, P.E., P.S., Medina County Engineer

To the Board of Medina County Commissioners

It is my privilege to present the Annual Report for the Office of the Medina County Engineer. Each calendar year the County Engineer submits an annual report to the Board of County Commissioners which summarizes the status and condition of the infrastructure for which the Engineer is responsible. It also serves as a summary to the citizens of Medina County of the work that was accomplished over the past year and an accounting of where dollars were spent in order to improve and maintain the County's system of roads and bridges.

The County Engineer is responsible for the maintenance, repair, and construction of the roadways on the County highway system and the bridges on both the County and Township roads. Employees of the County Engineer also assist the County Commissioners with management of the stormwater and floodplain regulations, highway use permitting, and subdivision infrastructure planning. Employees of the Engineer also manage the tax map office and various computer operations for the County, including GIS functions.

I want to give a special "Thank You" to the employees of this office for their effort in 2016. I would also like to recognize my predecessor, Mike Salay, for serving Medina County faithfully for over 40 years, including the previous 12 years as County Engineer.

WINTER MAINTENANCE

Each winter season brings its own set of unique challenges. Winter operations for our highway department personnel consists primarily of snow and ice control and removal. The total cost of all snow and ice operations which includes plowing, spreading salt, stacking/loading, brine making and application, and dispatch and supervision was \$850,634. A combination of lighter than normal snowfall and a drop in the price of rock salt helped us stay under a million dollars for snow and ice control for the first time in a while.

TREE TRIMMING

As a result of the continued infestation of the emerald ash borer insect, there are a large number of dead and dying ash trees along most of the roads in Medina County. As time permits and where needed, work crews have been out in many locations performing tree trimming and removal. The work is made more difficult with the number of overhead utilities that occupy our road right-of-ways. Contractors are often utilized when large trees are encountered. During 2016, the total cost of tree removal for our crews was \$295,857.

ROADSIDE MOWING

Three rounds of mowing were completed over the 326 centerline miles of County Roads. The first two rounds involved mowing mainly roadsides as well as intersection locations where sight distance was impacted. The third round also included backslopes in addition to roadsides and intersections. A total of \$157,787 was spent on mowing operations with an additional \$4,527 spent for weed-eating at spot locations.

2016 ROADWAY IMPROVEMENTS

WEST 130th STREET IMPROVEMENT

West 130th Street, approximately 5.46 miles in length, extending from State Route 3 to Boston Road, was resurfaced during 2016 with hot mix asphalt. Extensive work was performed by Medina County crews during 2015 and 2016 in order to prepare for the project by replacing and extending several cross culverts and adding fill material along sections of the roadway. The resurfacing project consisted of milling two inches of the existing asphalt surface, widening and repairing pavement edges, resurfacing with a total of three inches of asphalt placed in two lifts, guardrail, and pavement marking. The prime contractor for this project was The Shelly Company of Twinsburg, Ohio. The total cost of the project was \$1,287,420 of which \$1,024,652 was paid for with Federal Highway Gas Tax Funds administered through NOACA (Northeast Ohio Areawide Coordinating Agency). The remaining \$262,768 local match was made up of local Medina County auto and gas funds.

GRAFTON ROAD RESURFACING

A section of Grafton Road approximately 2.57 miles in length and extending from State Route 252 to Marks Road was resurfaced during 2016 with hot mix asphalt. The resurfacing project consisted of milling two inches of the existing asphalt surface, repairing pavement edges, resurfacing with a total of three and a half inches of asphalt placed in two lifts, and pavement marking. The prime contractor for this project was Karvo Companies Inc. of Stow, Ohio. The total cost of the project was \$447,666 of which \$354,758 was paid for by grants from the Ohio Public Works Commission (OPWC). The remaining \$92,908 local match was made up of local Medina County auto and gas funds.

PAVING AND CHIP SEAL PROGRAM

The County paving program for 2016 consisted mainly of applying a 2" surface course of 405 cold mix asphalt (motor-pave) with chip seal to 8.94 miles of roadway. The total cost of this work amounted to \$863,093.53. Spot full depth repairs were also performed on these roads as part of the resurfacing contract and included in the total cost. The following roads were resurfaced in this manner:

Erhart Road from C.H. 45 to C.H. 4	1.64 miles
Spencer Mills Road from S.R. 162 to C.H. 27	0.67 miles
Pawnee Road from C.H. 84 to T.H. 69	1.36 miles
Old Weymouth Road from S.R. 3 to C.H. 131	0.96 miles
Grafton Road from Lorain County Line to S.R. 252	2.37 miles
New London Eastern Road from C.H. 26 to T.H. 36	0.99 miles
Black River School Road from C.H. 26 to T.H. 36	0.95 miles

The chip seal program consisted of applying a single seal of asphalt emulsion and number eight slag cover aggregate to 18.73 miles of various County Roads. The total cost of the chip seal work amounted to \$511,988.09. The work for both the 405 motor-pave process as well as the single chip seal application was performed by Melway Paving Company of Holmesville, Ohio.

SPOT PAVEMENT REPAIRS

County crews performed machine patching and repair on various roads in 2016 in addition to hand patching where needed. Also, a contract was let for more extensive repairs to Boston Road and Grafton Road. Barbicas Construction of Akron, Ohio furnished equipment, material and labor to mill and repair sections of these roads. The total cost of this contract work was \$98,825.92.

CRACK SEAL

Crack sealing of various County Roads was performed by County Forces in 2016. Material and labor cost for this work amounted to \$114,533.

SIGNS AND PAVEMENT MARKING

During 2016, the traffic and sign department was busy performing traffic counts, speed studies, and various site evaluations for sign and pavement marking upgrades. The sign department erected or repaired approximately 338 signs. This work was mostly necessary to repair damaged signs, replace those that were below retroreflectivity standards, and replace road name signs with new standard lettering. The sign shop also repairs and replaces mailboxes that are damaged as a result of snow removal operations.

Annual pavement marking was performed by contract to renew centerline and edgelines. Dura-Mark Inc. of Aurora, Ohio was the striping company to whom the contract was awarded for this work. A total of 83 miles of centerline and 116 miles of edgeline were painted at a cost of \$89,670.

2016 BRIDGE AND CULVERT PROGRAM

BRIDGE REPLACEMENTS

During 2016, there were two bridge replacements completed utilizing grants from the Ohio Public Works Commission (OPWC). These projects were designed by County Engineer Staff and constructed by contract. The structures were precast concrete box units with cast-in-place headwall/wingwalls. New guardrail and approach work was included where needed. The projects were as follows:

<u>Project Location</u>	<u>Contractor</u>	<u>Ohio Public Works Amt.</u>	<u>Total Contract Amt.</u>
Old Mill Road Bridge No. 13	Vasel Bros. Valley City, Ohio	\$120,875	\$163,344
Spencer Lake Road Bridge No. 5	N&N Construction Wakeman, Ohio	\$238,784	\$322,681

GUARDRAIL AND BRIDGE RAILING PROJECT

During 2016, the Medina County Guardrail and Bridge Railing project included constructing new guardrail and/or bridge railings at six locations throughout the County. The project was funded 100% (up to a maximum of \$300,000) with County Engineers Association of Ohio federal funds. Lake Erie Construction Company of Norwalk, Ohio was the contractor.

FORCE ACCOUNT CULVERT AND SHOULDER WORK

The Highway Department was able to replace several road culverts, build and repair shoulders and berms on various roads, and address a large number of work order requests related to drainage concerns and ditching. A great deal of effort was put into completing the culvert, shoulder, and ditching work necessary to complete the preparation for the Federal Aid paving project on West 130th Street that was completed in 2016. This force account work was performed utilizing both County Highway equipment and personnel as well as outside contractors. During 2016, Medina County Highway Forces repaired, replaced, and extended road culverts of various sizes at a cost of \$109,597.

HIGHWAY GARAGE PURCHASES EQUIPMENT PURCHASES

- * International Single-axle Truck With Dump Body and Hydraulics
- * GMC Four-Wheel Drive Pickup Truck for use as Survey Vehicle
- * Pavement Coring Trailer

- Both vehicles were procured utilizing the State of Ohio Cooperative purchasing program.

REVENUE HISTORY

Office of the Medina County Engineer

(A snapshot of Revenues and Expenses for the previous 10 years)

<u>Year</u>	<u>Gas Tax Revenue</u>		<u>Motor Vehicle Revenue</u>		<u>Combined Revenue</u>
2006	2,322,444.66	+	5,128,242.59	=	7,450,687.25
2007	2,396,839.15	+	5,057,422.23	=	7,454,261.38
2008	2,415,819.46	+	5,040,506.73	=	7,456,326.19
2009	2,331,702.91	+	4,949,365.98	=	7,281,068.89
2010	2,366,744.74	+	5,080,568.14	=	7,447,312.88
2011	2,310,206.30	+	5,104,144.90	=	7,414,351.20
2012	2,290,681.49	+	5,174,914.41	=	7,465,595.90
2013	2,299,886.19	+	5,180,261.51	=	7,480,147.70
2014	2,334,893.50	+	5,225,684.68	=	7,560,578.18
2015	2,356,712.91	+	5,372,789.76	=	7,729,502.67

The Total Combined Revenue has increased only 3.74% over the last ten years (2006 to 2015).

FINANCIAL SUMMARY

The maintenance, repair, and construction of roads and bridges on the County Highway System is funded primarily from portions of license plate fees collected for vehicles registered in Medina County and a share of the Ohio twenty-eight cents/gallon fuel tax. No real estate or sales tax is used for highway purposes. Federal gas tax and State Issue 1 funds are utilized on specific projects when our office is successful in securing these funds.

Below are the general summaries of the major Expenses and Revenues for 2016.

2016 EXPENSES	
Salaries	\$2,394,876
Fringe Benefits	\$869,375
New Equipment	\$159,049
Travel/Training	\$2,660
Road/Bridge Contract Repairs	\$2,227,287
Contract Services	\$594,898
Materials	\$1,013,132
Miscellaneous	\$32,276
Land	\$0
Total	\$7,293,553

2016 REVENUES	
License Plate Fees	\$5,564,657
Gasoline Tax	\$2,338,616
Fees	\$146,920
Fines	\$33,539
Sales/Reimbursements	\$186,444
Interest	\$46,030
Other	\$14,070
Total	\$8,330,276

ADDITIONAL REVENUE USED IN 2016 FOR ROAD AND BRIDGE CONTRACT PROJECTS

Ohio Public Works Issue 1	\$714,417
NOACA Federal Highway Funds	\$1,024,652
County Engineers Association of Ohio Federal Funds	\$300,000