



JAMES (JIM) A. WIECHART, P.E., P.S.

~Mercer County Engineer~ REPORT FOR 2016

What might be hard to distinguish (for someone that does not live on a day to day basis in our world of local road and bridge infrastructure system improvements) is that these infrastructure assets (over large swaths of time) have “evolved” through the years. Yes, many of the improvements over the shorter period of time (10-20 years) have had planned improvements. But, if you review why and how these assets have changed over broad stretches of time, they have “evolved” because of forces of localized development or due to connectivity benefits for the transportation system. Thus, beyond any one Engineer or specific Board(s) action through the years, circumstances of the world have been the primary driving forces to implement in an evolutionary fashion, changes to our infrastructure system. Even though our infrastructure assets have “in a sense” evolved, we continue to strive to effect positive change in this area for the public we serve.

In 2016, our organization went through significant employee transition with the end of the year retirements of Mike Borns (Operations Manager), Vern Eichler (Engineer Tech 3/Surveyor) and John Menchhofer (Bridge Worker II). Elements of the approximate 109 years of experience that leave our workforce are irreplaceable and we wish our fellow former co-workers all the best as they continue down life’s highway. With the losses being suffered, every change is also an opportunity to adjust to new and upcoming challenges and to bring on board new talents. We welcome aboard new employees: Aaron Moeller (Survey Design Technician/Drainage Deputy), Gary Schaublin (Equipment Operator II) and James Allen (Equipment Operator II). We believe all of these folks and our current work force will help us meet those challenges.

Thus, pursuant to the requirement in the Ohio Revised Code, an annual report must be made to the Board of County Commissioners summarizing the activities and accomplishments for the year. Please read and accept this report for our activities conducted for 2016.

Our purpose is to serve our public to the best of our abilities. This report serves as the vehicle to broadly list our pursuits. Please feel free to question, critique or compliment our efforts as you deem fit.

REVENUE/EXPENDITURES

<u>HIGHWAY RECEIPTS</u>			<u>HIGHWAY EXPENDITURES</u>		
MOTOR LICENSE FEES	\$2,897,803.99	36.18%	RESURFACING/IMPROVEMENTS	\$3,991,681.78	53.87%
GAS TAX	\$2,338,615.75	29.20%	BRIDGE CONSTR. & MAINT.	\$261,461.99	3.53%
FINES/NON FUEL REIMBURSEMENTS	\$818,255.91	10.22%	SALARIES	\$1,316,847.28	17.77%
FUEL REIMBURSEMENT	\$277,569.00	3.47%	FRINGE BENEFITS	\$546,703.49	7.38%
STATE & FEDERAL GRANTS/0% INTEREST LOANS	\$1,616,847.42	20.18%	EQUIPMENT PURCHASES	\$186,155.22	2.51%
INTEREST INCOME	\$32,841.55	0.41%	ROAD MAINT. & UTILITIES	\$452,048.89	6.1%
CO. PMT. ENG OFFICE SPACE	<u>\$27,000.00</u>	0.34%	REPAIRS & SUPPLIES	\$248,270.03	3.35%
			NEW FACILITY DEVELOPMENT	\$7,278.24	.1%
			BOND PAYMENT-NEW FACILITY	\$400,000.00	5.39%
TOTAL RECEIPTS	\$8,008,933.62		TOTAL EXPENDITURES	\$7,410,446.92	

Note: Carryover monies, grants and 0% interest loans make up the difference between revenue and expenditures.

PAVEMENT MARKINGS

The following pavement markings were placed: 105.929 miles of centerline and 18.37 miles of edge line at a cost of \$43,999.43. This work was completed by Oglesby Construction, Inc. They were awarded the contract through a competitive quoting process.

LITTER PICK-UP

The County Engineer's Office, in partnership with the Mercer County Solid Waste Office and various Boards of Township Trustees, sponsored various civic and community groups in 11 Mercer County townships to pick up litter along county roads in 2016. The Engineer's office paid each group \$20.00 per mile of county roads for their efforts in this community service project. Litter was picked up along 303 miles of county roads. The County Engineer's Office along with the Solid Waste Office furnished litterbags, safety vests, and signs. The Mercer County Solid Waste Office paid the litter disposal fees.

4 ROADS RECEIVED FULL ASPHALTIC CONCRETE RESURFACING

<u>ROAD NAME</u>	<u>WIDTH</u>	<u>LENGTH (MILES)</u>	<u>TOTAL COST</u>
KARCH	20'	1.509	\$98,224.19
MERCER/AUGLAIZE CO LINE	20'	1.017	\$98,031.65
SIEGRIST JUTTE	19'	2.016	\$124,065.52
WILSON	18'	1.265	\$74,968.93
TOTAL FULL ASPHALTIC CONCRETE RESURFACING		5.807	\$395,290.29

*Note: There was other asphaltic concrete resurfacing on two large federal aid projects seen in another area of this report.

17 ROADS RECEIVED FULL CHIP AND SEAL RESURFACING

<u>ROAD NAME</u>	<u>WIDTH</u>	<u>LENGTH (MILES)</u>	<u>TOTAL COST</u>
<u>FULL SEAL</u>			
GUADALUPE	24'	3.78	\$55,567.77
CR 716A	19'	1.53	\$20,029.79
FT RECOVERY MINSTER	24'	4.13	\$80,474.43
KREMER HOYING	24.5'	2.52	\$38,909.19
TAMA	22'	3.23	\$47,506.46
BURK ST HENRY	23'	2.065	\$30,242.57
HERMAN	19'	1.508	\$18,158.27
KREMER	19'	1.656	\$19,963.26
WATKINS	19'	3.13	\$41,282.00
TOWNSHIP LINE	19'	3.27	\$43,594.08
ERASTUS DURBIN	19'	1.01	\$12,497.41
OREGON	19'	4.84	\$58,572.83
WABASH	19'	3.028	\$39,831.25
FRYSINGER	19'	2.22	\$27,313.43
DUTTON	18'	1.005	\$12,300.75
PALMER	18'	1.009	\$12,149.35
HARRIS	18'	.33	\$4,310.93
TOTAL FULL CHIP AND SEAL RESURFACING		40.261	\$562,803.77

BRIDGE RECONSTRUCTION PROJECTS

Both the prior two years (2014 & 2015) were very light years as it relates to bridge replacements and rehabilitations as other priorities and infrastructure investments affected this work area. 2016 was a more normalized schedule of work as 9 projects were completed (8 through our own crews and 1 through a federal-aid contact). These projects are listed below.

2016 BRIDGE & LARGE CULVERT REPLACEMENT PROGRAM

<u>TWP</u>	<u>BRIDGE</u>	<u>ROAD NAME</u>	<u>TYPE</u>	<u>COST</u>
WAS	T21C-1.21B	RAUH	COUNTY BEAM OR BOX(to be completed in 2017)	\$17,329
WAS	C31A-3.32B	WABASH	40' LONG COUNTY BEAMS 33' WIDE	\$52,384
GIB	C61-2.12B	TOWNSHIP LINE	72 LF 87" X 136" ELLIPTICAL PIPE	\$69,248
BUT	C61-6.75B	TOWNSHIP LINE	80 LF 84" DIAMETER REINFORCED CONCRETE PIPE	\$38,982
BUT	C70-5.75B	PHILOTHEA	72LF 82" X 128" ELLIPTICAL PIPE	\$51,624
MAR	T125-0.77B	STELZER	88 LF 90" REINFORCED CONCRETE PIPE	\$43,679
CEN	T171C-1.03B	KUCK	72 LF 96" DIAMETER REINFORCED CONCRETE PIPE	\$33,999
CEN	C200C-1.40B	DENNY	72 LF 63" X 98" ELLIPTICAL PIPE	\$44,425
LIB	T190-1.99B	SCHAADT	CAST IN PLACE REINFORCED CONCRETE DECK(to be completed in 2017)*Federal Aid	\$251,157

NOTES: Some of the bridge and culvert materials for these projects were purchased in 2015. Also, some of the projects may have been started in 2015. Cost shown is 2016 and may not be total project cost.

FEDERAL-AID ROAD/BRIDGE IMPROVEMENT PROJECTS

We had 4 large federal-aid projects that started construction in 2016. St. Johns Road (C171) involved a widening and resurfacing of that road from a location south of SR 119 and extends north through St. Johns to a location north of Amsterdam Road (T50D).

Philothea Road (C70) from SR 118 to Carthage Road (C60) also involved structure replacements, drainage, pavement and shoulder widening. Both of these projects are largely completed with only a surface course of asphalt and associated activities to be done in 2017.

Mud Pike, from SR 118 to the City of Celina is similar to the above 2 projects with two exceptions. First, there are 2 intersection improvement re-alignments that will occur in 2017 at both Hellwarth and

Fleetfoot Roads and lastly, the majority of the work on this project will be finalized in 2017. At this writing, because of the mild winter, work continues.

Lastly, the Schaadt Road (T190) bridge project is nearly complete with some finalization work to occur in spring 2017. A synopsis of some of the details of these federal-aid projects is included below...

<u>PROJECT NAME</u> <u>(CO.RTE.SEC)</u>	<u>ROAD NAME</u>	<u>WORK</u> <u>TYPE</u>	<u>CONTRACTOR</u>	<u>BID AMOUNT</u>	<u>AMOUNT</u> <u>COMPLETED</u> <u>2016</u>
MER CR171-2.75	ST JOHNS	ROAD	TOM'S CONSTRUCTION, INC	\$768,693.00	\$563,288
MER CR70-6.21	PHILOTHEA	ROAD	VTF EXCAVATION, LLC	\$1,869,217.17	\$1,472,197
MER CR144-5.28	MUD PIKE	ROAD	SHINN BROTHERS, INC	\$2,120,921.00	\$330,935
MER TR190-1.99	SCHAADT	BRIDGE	BRUMBAUGH CONSTRUCTION	\$295,981.00	\$251,157

EQUIPMENT PURCHASES

The following is a list of the purchases over \$5000 during 2016.

Tennat Auto Floor Scrubber	\$6,572.00
Cat Mini Hydraulic Excavator (1C)	\$95,410.00
Interstate Trailer (2T)	\$17,216.00
Skid Loader Attachments	\$24,784.00
John Deere Skid Steer Loader (2C)	\$58,742.00
Towmaster Trailer (3T)	\$21,484.00
Verisight Pro 130 Push Camera with accessories	\$11,579.00
	\$235,787.00

MAINTENANCE

Roadside maintenance of existing roadway components is a very important part of our operations. During 2016 there were 2,173 signs replaced.

Six county mowers ran consistently May through September mowing 384 miles of county roads making 4 rounds in some sections. Once mowers were caught up with roadway side ditches and conditions allowed, during the regular mowing season, a small portion of county open ditches were mowed. Mowers were able to mow more consistently, over longer time frames, with all of the mowers having cabs.

County crews installed 48 catch basins. 13 different locations had trees cut and brush removed.

In fighting snow and ice, 1,090.25 tons of salt were used at a cost of \$78,248.94 and 1,090.34 tons of grit were used at a cost of \$9,114.81. 545.50 hours of overtime were worked in snow removal. In all, the costs of snow and ice control and removal to our operations in 2016 were \$220,590.06.

Roadside herbicide spraying of 383 miles of county roads was done by Dalton's Inc. at a cost of \$18,767.00.

PERSONNEL

A total of 24 full time employees make up our personnel. In the year 2016 there were 11 seasonal employees that worked for the Engineer. In 2000 we had 31 full-time employees. In 1984 there were 39 full-time employees.

Our employees and their years of service to Mercer County:

<u>NAME</u>	<u>CLASSIFICATION</u>	<u>YRS</u>
Borns, Kirk	Sign Manager	21
Borns, Michael	Operations Manager-retired 12/31/16	46
Eichler, Vernon	Engineer Technician 3/Surveyor-retired 12/31/16	40
Freeman, Todd	Equipment Operator 2/Engineer Technician 1	16
Gray, Richard	Bridge Worker 2	17
Harter, Derrick	Equipment Operator 2	11
Heinrichs, Karen	Administrative Assistant	11
Highley, Richard	Equipment Operator 2	36
Kahlig, Renee	Office Assistant	2.3
Knapke, Anthony	Bridge Worker 2	4
Kuhn, Gary	Automotive Mechanic 3	33
Laffin, Brad	Operations Manager	27
Leininger, Mark	Highway Maintenance Superintendent	*20
Linn, Mark	Engineer Technician 2/Survey Technician	*20
Menchhofer, John	Bridge Worker 2-retired 12/31/16	21
Mescher, Samuel	Equipment Maintenance Supervisor	17
Messner, Dusty	Equipment Operator 2	16
Moeller, Aaron	Survey Design Technician/Drainage Deputy	.33
Porter, Darren	Highway Maintenance Supervisor/Safety Director	*20
Schaublin, Gary	Equipment Operator 2	.04
Schoenleben, Bryan	Automotive Mechanic 2	2.5
Smalley, TJ	Bridge Supervisor	17
Steinlage, Michael	Highway Maintenance Supervisor	12
Watercutter, Anthony	Equipment Operator 2	1.75
Waterman, Kiel	Equipment Operator 2	5
Wiechart, James	Mercer County Engineer	17

* Denotes employees that were awarded Certificates of Appreciation for their years of service with the Mercer County Engineer.



20 year of service.: Mark Leininger, Darren Porter & Mark Linn



Retirees: Mike Borns, Vern Eichler & John Menchhofer

INTERESTING FACTS

- There are 382 bridges on Mercer County township and county roads. Every year all 382 bridges are inspected by our office.
- There are 446 miles of township roads and 384 miles of county roads in Mercer County.
- There is an average of 16 miles of road and 16 bridges per full-time employee.
- Since 1999 the Mercer County Engineer has obtained approximately \$4,692,894.36 in competitive state grant programs for local road improvements.
- Since 1999 the Mercer County Engineer has obtained \$26,316,694.16 in competitive federal grant programs for local road improvements.
- No real estate, sales or property taxes fund county road and local road bridge improvements in Mercer County. Road user fees in the form of motor vehicle gas taxes and license fees fund our efforts.
- Gas tax and license fee revenue increased from 2010 to 2016 an average increase of 1.78% per year.
- Asphaltic Concrete prices as bid by the Mercer County Engineer increased 64% from 2007 to 2016, an average increase of 7.11% per year.
- By the end of 2017, we will have 29% of our county road pavements wider than 22’.
- The number of Mercer County Engineer full and part-time employees has decreased over the last 20 years with less resources going towards salaries and fringe benefits as a percentage of the total budget.
- Average years of service of county engineer full-time employees is 18 years.

SUMMARY

Much was accomplished in 2016 and we welcome your comments, suggestions and questions to our office: Mercer County Engineer, 4884 Mud Pike, Celina OH 45822, Phone# 419-586-7759, e-mail: engineer@mercercountyohio.org. Listed below are some of the short and long-term goals for the office for the years to come.

1. Maintain an acceptable standard of condition of our roadway pavements & bridges.
2. Obtain outside funding sources to supplement our budget for capital improvements.
3. Be aggressive where possible in putting significant resources into capital improvement projects like roadway widening, bridge replacements, etc.
4. Assist townships in getting outside funding sources for their capital improvement projects and assist them in the administration of those funds.
5. 24' by "44"—long-term goal to have all county road pavements widened to a minimum width of 24' by the year 2044. (I have needed to reconsider this goal through the years.)
6. Improve the condition of our county ditch maintenance program ditches and tile.

James A. Wiechart

James (Jim) A. Wiechart, P.E., P.S.
Mercer County Engineer