

BUTLER COUNTY ENGINEER'S OFFICE



GREGORY J. WILKENS, P.E., P.S. BUTLER COUNTY ENGINEER

www.bceo.org

A N N U A L R E P O R T | 2 0 1 8





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CONTACT US

The Butler County Engineer's Office has always worked hard to provide you the citizens, our employers, with current and relevant information about road and bridge construction, safety issues, and how your tax dollars are being applied. Your comments, concerns, and feedback are important.

In the interest of service and safety, we have tried to make it as easy as possible to reach us and access information. We strongly recommend our website at www.bceo.org as the best source for up-to-date and pertinent information. There you can keep track of project and construction news, road closings, public meeting notices, and much more. Departmental information and employee email addresses are also available on our website. We hope you will check out our other social media platforms for quick information on our projects and roadways.

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SAFETY,
INTEGRITY,
SOUND
ENGINEERING



April 30, 2019

To the Citizens and Board of County Commissioners of Butler County, Ohio:

I respectfully present the Butler County Engineer's 2018 Annual Report for your review. Each project listed in this Report has the direct involvement of the Butler County Engineer's Office (BCEO), including planning and engineering, funding, administration of the contract, and/or construction and inspection.

This summary of 2018 activity provides only a partial overview of who we are and what we do. It details over \$21 million in capital improvements and various forms of maintenance last year. However, what isn't fully detailed are the hours of behind the scenes planning and extended time frames it can take to launch major projects into construction. We have a team of hardworking and knowledgeable professionals at the Engineer's Office who make the projects happen. These outstanding employees design, construct and maintain our roads so that they are safe and efficient. Only with a team of professionals who know, understand, and have experience in the business can this be accomplished.

The successful improvements of our transportation infrastructure over the last year continue to be an integral part of growing the economy in our communities and townships; all achieved cost-effectively, saving money for the citizens of Butler County. However, the most important thing is not necessarily building roads and bridges; it's hiring good people. Once we hire good people, we can build any roads and bridges we want! My staff of 81 full-time employees functioning as a respectful and cohesive team is evidence that the health of the BCEO is a priority. Collaborating and learning from each other is crucial to keeping morale high and therefore, soundly executing our projects and services for Butler County motorists.

Thanks for your continued trust and support as your County Engineer. Please feel free to contact us at the BCEO with your concerns and suggestions for how we can improve our service. We look forward to hearing your thoughts.

Very truly yours,

A handwritten signature in green ink that reads "Gregory J. Wilkens". The signature is written in a cursive, flowing style.

Gregory J. Wilkens, P.E., P.S.
Butler County Engineer

GENERAL DATA

Population (2018 est.)	382,378
State Rank	7 TH
Area	469 square miles
State Rank	35 TH
Courthouse elevation	601 feet
Highest elevation	1,052 ft. (near Todd Road, Oxford Twp.)
Lowest elevation	520 ft. (Great Miami River, Fairfield)

2018 POPULATION ESTIMATES

(UNINCORPORATED AREAS)

Fairfield Twp.	22,634	Oxford Twp.	2,196
Hanover Twp.	8,500	Reily Twp.	2,746
Lemon Twp.	2,435	Ross Twp.	8,272
Liberty Twp.	38,492	St. Clair Twp.	4,642
Madison Twp.	8,871	Wayne Twp.	4,080
Milford Twp.	3,714	West Chester Twp.	61,637
Morgan Twp.	5,796	TOTAL	174,015

(INCORPORATED AREAS)

College Corner	*199	New Miami	2,349
Fairfield	42,566	Oxford	22,859
Hamilton	62,092	Seven Mile	780
Jacksonburg	63	Sharonville	*2,421
Middletown	*46,078	Trenton	12,912
Millville	728	TOTAL	206,589
Monroe	*13,542		

* PORTIONS OF THESE COMMUNITIES LIE WITHIN NEIGHBORING COUNTIES; FIGURES REPRESENT THEIR BUTLER COUNTY POPULATIONS ONLY.

GIS INTERACTIVE WEB MAP

The GIS interactive map can be easily accessed from Apple, Windows, and Android tablets and phones as well as from desktop computers and laptops. The map displays a representation of Butler County parcels, aerial views, access to the plats of survey with an option to download the plat, and other base maps. There are also links to the Butler County Auditor's website for real estate data and the Butler County Recorder's website to view record plats with the option to download the plat for each parcel and/or subdivision. Interested users can access the interactive map via a link on the homepage of the Butler County Engineer's Office website at www.bceo.org.

If users would prefer to access the site directly, the specific web address is <http://gis.bceo.org/>.



@bceonews

BUTLER COUNTY CERTIFIED ROAD MILEAGE

(EFFECTIVE DECEMBER 31, 2018)

County Roads	266.70 miles
Township Roads	786.70 miles
U.S. and State Roads	236.20 miles

CERTIFIED ROAD MILEAGE BY TOWNSHIP (EFFECTIVE DECEMBER 31, 2018)

TOWNSHIP	COUNTY ROADS	TOWNSHIP ROADS
Fairfield	14.20	80.10
Hanover	25.60	36.00
Lemon	0	11.20
Liberty	27.80	148.10
Madison	23.90	52.20
Milford	20.60	33.40
Morgan	26.80	31.00
Oxford	18.30	27.00
Reily	30.10	34.10
Ross	13.00	47.00
St. Clair	20.80	33.30
Wayne	14.20	30.10
West Chester	31.40	223.20
TOTAL	266.70	786.70

PROJECT DEVELOPMENT

How a Project is Developed and Constructed

All potential projects are identified and developed by BCEO engineers, who also determine a funding source for each project and place it on a timeline. Ongoing three and five-year plans are maintained and routinely updated. Most large scale projects have already been identified in the Butler County Thoroughfare Plan developed by the Engineer's Office, which serves as an ongoing comprehensive 20year countywide transportation planning guide. The Plan is modified every four to five years based on development and growth trends and subsequent changing traffic demands.

Following the planning phase, projects move into the engineering design phase. The BCEO Design Department is responsible for engineering and designing the projects on our CAD System (Computer Aided Design) or through local and regional consultants. Once a project is designed the BCEO's Construction Department manages the actual construction of all contract projects. This involves several significant steps, including the purchase of rightofway, coordinating utility relocations, and working directly with contractors to make sure the job is completed in a timely manner and according to design specifications.

By law all major jobs must be advertised for bid and awarded to the lowest qualified bidding contractor; however, crews from the BCEO's Operations Department handle construction of all Force Account (noncontract) projects. These may include small bridge and culvert replacements, bridge deck repairs and replacements, and intersection modifications.



FUNDING SOURCES

Adequate funding is the key to a successful capital improvements plan. The BCEO obtains revenue from three different levels – Federal, State, and Local. There are two primary sources of local money – gasoline taxes and license plate fees. (For an explanation of how these monies are distributed by the State, please visit the BCEO website.) This money is designated specifically for the County Engineer's Office for road and bridge projects and is completely separate from the County's general fund. Annual income generated by these local funding sources averages approximately \$12 million. This revenue is important as local match money for State and Federally funded projects. On average, one local dollar can leverage three to four dollars from sources outside Butler County.

Federal Funding

The BCEO works to leverage outside funding whenever possible for eligible projects. As an example, there are several categories of Federal aid, most of which are designated for certain types of projects on specific roads and bridges. To utilize these funds very strict qualifications must be met, including the completion of environmental studies and providing the local funding match. An average leveraged ratio of 80 percent federal to 20 percent local is maintained by federal aid experts at the BCEO.

The Community Development Block Grant Program is designed to provide money for small city, village, and township infrastructure programs that normally would not qualify for other outside funding sources. This program is also designed to assist with improvements in low-income areas.

State Funding

The primary source of State funding utilized by the BCEO is Ohio Public Works Commission (OPWC) funds, renewed by Ohio voters as State Issue 1 in May 2014.

OPWC money is designated for the repair and replacement of existing infrastructure. The Ohio Public Works Commission administers three funding categories – Local Transportation Improvement Program (LTIP), State Capital Improvement Program (SCIP), and Small Government Capital Improvement Program. Local match money is technically not required but does enhance the chances for receiving OPWC grants by enhancing project viability ratings. The OPWC has divided the State into 19 separate funding districts, and communities and qualifying agencies within each district must vie for their share of the funding which is allotted to their district. Butler County lies within District 10, which also includes the Counties of Warren, Clermont, and Clinton and their communities. The Miami University Center for Public Management and Regional Affairs serves as the manager and liaison for all OPWC funding in District 10.



Local Funding

The two primary sources of local funding are gasoline taxes and license plate fees. Many road and bridge projects are funded onehundred percent with local money and are let by contract or are performed by crews from the Engineer's Office. Noncontract projects performed by BCEO crews are known as Force Account projects and can consist of everything from culvert and bridge replacements and deck repairs to general and seasonal maintenance. The Ohio Revised Code caps Force Account projects at \$30,000 per mile for paving or maintenance and \$100,000 per structure (bridge or culvert). (Materials for Force Account projects are bid through separate contracts.) If the cost estimate for a project is over these amounts, the project must by law be competitively bid and let as a contract to the lowest qualified bidder.

A relatively new concept in locally funded road construction is the Transportation Improvement District (TID), which was enacted through state legislation passed in 1993. The TID is comprised of a panel of local governments charged with funding several projects in the TIDdesignated area, which covers most of the southeast quadrant of the County. Innovative financing is the key to speeding up construction of much-needed projects for which traditional funding methods have been difficult since most local, state, and federal budgets are already stretched. The County Engineer serves on the TID Board of Directors.

2018 REVIEW

Projects and Activity

The Butler County Engineer's Office employed a total of 81 full-time employees in 2018, four permanent part-time employees, and 24 part-time temporary (seasonal and co-op) employees. Our staff was involved with the completion of capital improvement projects, upgrades, and traffic signal maintenance totaling \$21,340,258, including:

- 5 bridge projects
- 41 culvert projects
- 3 roadway improvement projects
- 3 intersection projects
- 56 miles of resurfacing

The above list does not include routine activities such as general design and engineering, commercial and residential development services, tax mapping services, and day-to-day roadway maintenance such as signing, mowing, drainage, and snow and ice control. As you can see, the BCEO is a multi-faceted, full-service agency covering all facets of road and highway transportation in Butler County.

For a detailed review of 2018 activity, please read on.

2018 PROJECTS

This section includes a comprehensive listing of all projects that were completed during the 2018 construction year.

Bridges

The Butler County Engineer's Office performs an annual inspection of all bridges on County and Township roads. Some bridges receive inspection two or more times per year due to their worsened condition. The BCEO had inspection and maintenance responsibility for 407 bridges (structures with a clear span of ten feet or greater) at the end of 2018.

BRIDGE SUMMARY 2018

TOTAL: 5

TOTAL COST: \$54,470

Federal Funds

Contract 2018-16 – One bridge replacement

Myers Road Bridge #00.019

TOTAL CONSTRUCTION COST: \$802,356

Local Funds by Force Account

Barret Road Bridge #00.702

TOTAL CONSTRUCTION COST: \$15,688

Indian Springs Road Bridge #00.432

TOTAL CONSTRUCTION COST: \$23,918

McCoy Road Bridge #01.197

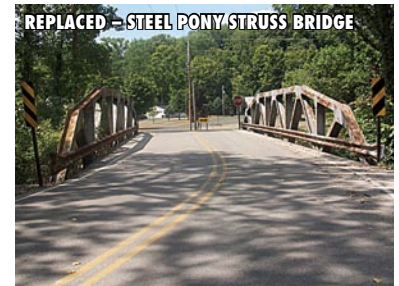
TOTAL CONSTRUCTION COST: \$9,654

Morgan Ross Road Bridge #00.390

TOTAL CONSTRUCTION COST: \$5,210

MYERS ROAD BRIDGE REPLACED

The Myers Road bridge over Browns Run was replaced in 2018. The old bridge, a steel pony truss built in 1962, was replaced with a new, safer pre-stressed, concrete box beam structure — funding for the project consisted of 100 percent federal grant money.



REPLACED – STEEL PONY TRUSS BRIDGE

MYERS RD. BRIDGE #00.019



REPLACED



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BARRET RD. BRIDGE #00.702



INDIAN SPRINGS RD. BRIDGE #00.432



MCCOY RD. BRIDGE #01.197



MORGAN ROSS RD. BRIDGE #00.390

Culverts

The BCEO is responsible for the annual inspection of all culverts located on County and Township roads that number totaled 985 at the end of 2018. A culvert is a conduit running underneath a road to transfer storm water runoff from one side of the road to another. Culverts are technically classified as structures with a clear span of fewer than ten feet and can be made of different types of material. Culvert replacements are, like bridges, determined by the age and condition of the structure and are often planned in conjunction with future resurfacing projects.

CULVERT SUMMARY 2018

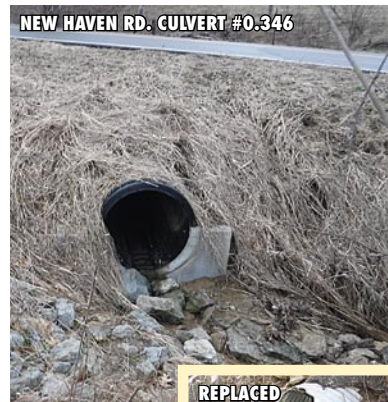
TOTAL: 41

TOTAL COST: \$544,014

Local BCEO Funds by Force Account

41 county culvert replacements / repairs

Alert New London Road Culverts #1.731, #1.926, and #3.258
 Brown Road Culverts #1.383 and #1.445
 Bunker Hill Woods Road Culverts #0.386, #0.050, #2.484, and #2.590
 Elk Creek Road Culvert #4.880
 Hamilton Eaton Road Culvert #2.445
 Hamilton Mason Road Culvert #3.700
 Hamilton New London Road Culvert #0.527
 Howe Road Culvert #0.645
 Lanes Mill Road Culvert #1.413
 Layhigh Road Culverts #8.382 and #8.626
 Mormon Road Culverts #1.890, #2.455, and #2.465
 New Haven Road Culverts #0.056, #0.346, #0.705, #1.586, and #0.748
 Nichols Road Culverts #2.532 and #0.297
 Oxford Milford Road Culvert #0.074
 Riggs Road Culverts #0.578, #0.677, and #1.625
 Robinson Road Culvert #0.877
 Schradin Road Culvert #1.734
 State Line Center Road Culvert #2.802
 Stillwell Road Culvert #3.168
 Stillwell Beckett Road Culverts #0.763, #0.099, and #6.316
 Tylersville Road Culvert #6.044
 West Alexandria Road Culvert #1.698
 Woodbine Road Culvert #2.431



Roadway Improvements

ROADWAY SUMMARY 2018

TOTAL: 3

TOTAL COST: \$10,667,621

Federal Funds

Contract 2017-02 – Roadway improvement (widen lanes, roundabout, bridge replacement/rehab, sidewalk)

Yankee Road – Dutchland Parkway to Princeton Road

TOTAL CONSTRUCTION COST: \$3,970,730

(Additional funding: BCEO, BCWS.)

Contract 2017-03 – Roadway improvement

SR 747 from Princeton Road to Millikin Road

TOTAL CONSTRUCTION COST: \$6,534,440

(Additional funding: BCWS, Liberty Township)

Local Funds by Contract

Contract 2018-02 – Roadway improvement (ease curve)

Hamilton Eaton Road

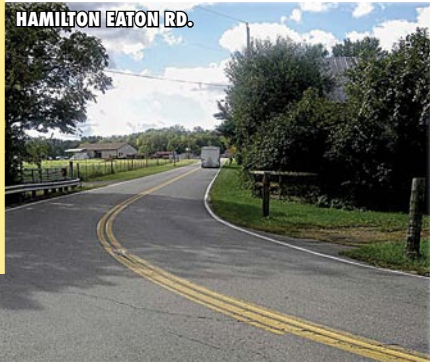
TOTAL CONSTRUCTION COST: \$162,451

(Funding: BCEO)

CONSTRUCTION



HAMILTON EATON RD.



YANKEE ROAD RECEIVED MAJOR UPGRADE

Included New Roundabout at Princeton Road

A significant roadway improvement to Yankee Road got underway in July of 2017. The road was widened to add capacity and smooth out traffic flow, thereby enhancing motorist safety. "This project will be an asset to the community, providing easier access from the northern part of Liberty Township to Ohio 129," Greg Wilkens, Butler County Engineer said. "Widening Yankee in conjunction with a new roundabout at Princeton Road fits in with our overall plan to make commuting in this growing area much safer."

Specifically, the project involved widening Yankee Road between Dutchland Parkway and Princeton Road from two to three lanes – one lane in each direction with a dedicated center left turn lane. A modern roundabout was constructed at Yankee and Princeton Road which involved closing all four legs of the intersection; one bridge was replaced, and another was widened which also meant full closures at those locations; and, adjustments were made to the roadway's vertical profile. Additionally, sidewalk was added between Dutchland and Wyandot Lane and signals were installed at Dutchland and Yankee.

The project involved multiple phases with various closures. Wilkens noted, "Construction will be challenging for motorists, so we plan to do everything possible to make the process smooth and keep everyone informed. Our website and Twitter feed will be the best sources for up to the minute information about construction and associated road closures."

A construction contract for the project was awarded to Barrett Paving Materials, Inc. of Middletown which submitted a low bid of \$4,071,271. Funding consisted of Federal and State grant money plus local Butler County funds.

Phasing, Maintenance of Traffic, Bridge Closures, Intersection Closure

To facilitate construction, it was necessary to close Yankee Road between Dutchland Parkway and Princeton Road for five to six months. The multiple phases involved varying closure points. Phases were separate and nonconcurrent.

Project phasing was as follows:

Phase 1: All four legs of the Yankee Road / Princeton Road intersection were closed for roundabout construction for approximately three months.

Phase 2: Yankee Road was closed half-way between Wyandot Lane and Princeton Road for a bridge replacement for approximately one month.

Phase 3: Yankee Road was closed just south of Wyandot Lane for a bridge widening for approximately three weeks.

Construction was suspended for the winter and resumed in spring 2018 beginning with Phase 4. All roads were open through the winter months.

Phase 4: All three legs of the Wyandot Lane / Yankee Road intersection closed for 45 days.

Phase 5: Widening of Yankee Road from Princeton Road to Dutchland Parkway.

S.R. 747 – LIBERTY TWP.



S.R. 747 AT MILLIKIN RD. – LIBERTY TWP.



S.R. 747 – LIBERTY TWP.



PRINCETON RD. AT YANKEE RD. ROUNDABOUT



CONSTRUCTION



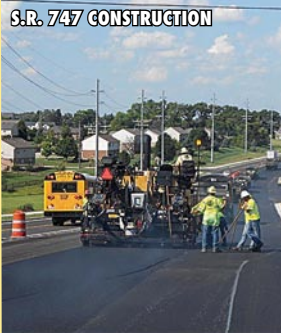
CONSTRUCTION



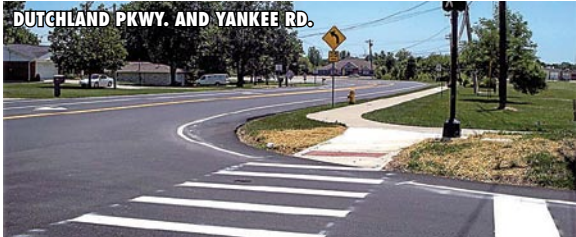
S.R. 747 CONSTRUCTION



S.R. 747 CONSTRUCTION



DUTCHLAND PKWY. AND YANKEE RD.



Intersection Improvements

INTERSECTION SUMMARY 2018

TOTAL: 3

TOTAL COST: \$2,644,583

Federal Funds

Contract 2018-03– Intersection improvement - roundabout

Beckett Road at Smith Road

TOTAL COST: \$996,084

(Additional Funding: West Chester Township, TIF)

State Funds

Contract 2018-05– Intersection improvement - roundabout

Hamilton Mason Road at LeSourdsville West Chester Road

TOTAL COST: \$1,022,253

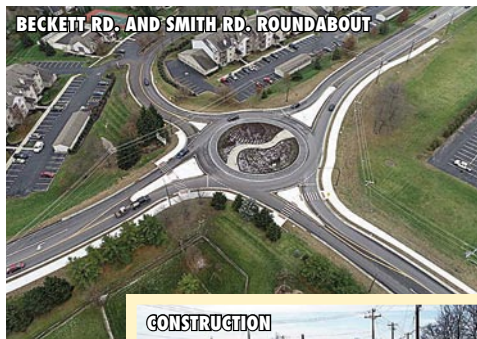
(Funding: OPWC, BCEO, Liberty Township)

Contract 2018-06– Intersection improvement - roundabout

Millikin Road at Yankee Road

TOTAL COST: \$626,246

(Funding: OPWC, BCEO, BCWS)



BUTLER COUNTY'S ROUNDABOUTS

How Many So Far?

Butler County's roundabout count stood at 22 last year, which includes five neighborhood traffic circles. The jurisdictional breakdown is:

- BCEO maintenance = 13
- Township maintenance = 4
- ODOT (BCEO constructed this roundabout at Layhigh Road and Ohio 748)

More roundabouts are being planned for 2019 - 2021 according to BCEO Traffic Engineer Matt Loeffler, including:

- Hamilton Mason Road at Gilmore Road
- Ohio 73 at Jacksonburg Road (to be constructed by ODOT)
- Butler Warren Road & Barret Road /Western Row Road
- Hamilton Mason Road & Tylersville Road (Five Points)
- Wayne Madison Road & Trenton Road
- Butler Warren Road at West Chester Road / Socialville Foster Road

How To Properly Navigate A Roundabout

While most drivers prefer roundabouts once they get used to them, there is a learning curve, but it's quite simple. The BCEO offers the following tips for navigating roundabouts safely and properly:

APPROACHING and ENTERING

- When approaching a roundabout, slow down and be prepared to yield to pedestrians in the crosswalk.
- Pull up to the Yield line, look to the left for approaching traffic within the roundabout. Remember, circulating traffic has the right-of-way. Entering traffic must yield the right-of-way to circulating traffic.
- Enter the roundabout when there is an adequate gap in circulating traffic. Proceed to your right. Vehicles travel counterclockwise around a raised center island.

IN THE ROUNDABOUT

- Once in the roundabout, drivers proceed counterclockwise to the appropriate exit, following the guidance provided by traffic signs and pavement markings. Once in the roundabout, you now have the right-of-way. You shouldn't have to stop.
- Stay off the slightly raised truck apron unless needed by a larger turning radius vehicle.

EXITING

- As you approach your exit, use your right turn signal if possible.
- Watch for pedestrians in the crosswalk and be prepared to yield.
- Slowly exit the roundabout.

Resources and Educational Material

Additional tips and roundabout resources can be found on the BCEO's Traffic Page. We also make available pre-printed brochures or downloadable PDFs from our website for distribution to schools and community groups. These are great educational tools for motorists who may be unfamiliar with how to properly navigate a roundabout. Any school or organization can obtain pre-printed copies at no charge by contacting the Engineer's Office at info@bceo.org.



Paving

The Butler County Engineer's Office is responsible for 266.7 miles (centerline miles) of roadway and has a 12-15 year paving program in place. This system enables roads to be resurfaced on a regular basis and maintained routinely in a more cost-effective manner. Many Township roads that are substandard in lane width and those County roads that meet minimum standards only, where feasible, are also being widened to bring them up to modern safety standards.

There were 56 miles of county and township roads resurfaced in 2018. This also includes berming of all major roads paved.

PAVING SUMMARY 2018

TOTAL MILES: 56.26

TOTAL COST: \$5,880,971

Local Funds by Contract

Contract 2018-20 – Paving of various County and Township roads (asphalt)

TOTAL MILES: 44.11

TOTAL COST: \$5,310,473

Funded by BCEO:

Barret Road – Cox Road to Paul Drive
Booth Road – Law Road to U.S. 27
Cincinnati Dayton Road – Mauds Hughes Road to S.R. 129
Elk Creek Road – S.R. 122 to West Alexandria Road
Huston Road – Scott Road to S.R. 73
Kyles Station Road – S.R. 4 to Kroger limits
Layhigh Road – New London Road to School Road
Layhigh Road – School Road to S.R. 126
McCauly Road – West Chester Road to Dimmick Road
Morman Road – Stahlheber Road to S.R. 130
New Haven Road – Hamilton City line to S.R. 126
Riggs Road – Oxford Township line to Brookville Road
Robinson Road – Layhigh Road to S.R. 129
Scott Road – Huston Road to S.R. 177
Stillwell Beckett Road – Woods Station Road to U.S. 27
Stillwell Road – Bunkerhill Woods Road to Salman Road
Waynes Trace Road – S.R. 744 to Preble County line
West Chester Road – Revere Run to Barret Road

MILES: 20.95

Funded by Fairfield Township:

Morris Road – 6504 Morris Road to Millikin Road
Various subdivision streets

MILES: 3.74

Funded by Liberty Township:

Fire Station Parking Lot – S.R. 747
Liberty Park Parking Lot – Behind YMCA
Various subdivision streets

MILES: 5.33

Funded by Madison Township:

Franklin Madison Road – Keister Road to County line
Michael Road – S.R. 122 to Hertzler Road
Radabaugh Road – S.R. 73 to Sycamore Road



Renee Drive - All

MILES: 2.51

Funded by Ross Township

Herman Road – U.S. 27 to Hamilton New London Road

MILES: 1.20

Funded by West Chester Township:

Butler Warren Road – U.S. 42 to Taffy Drive

Port Union Bike Trail – Union Centre Boulevard at Le Saint Drive

Union Centre Boulevard – S.R. 747 to City of Fairfield

Various subdivision streets

MILES: 10.38

Contract 2018-22 – Chip seal of various Township roads

TOTAL MILES: 4.37

TOTAL COST: \$215,476

Funded by Hanover Township:

Taylor School Road – Huston Road to Township limit

MILES: 0.77

Funded by Madison Township:

North First Street – Aberdeen to Dead end

Hinkle Road - All

Pritchard Road – Butler County section only

MILES: 1.64

Funded by Morgan Township:

Layhigh Road – North Wynn Road to Chapel Road

MILES: 1.01

Funded by Oxford Township:

Shera Road – All

Stout Road – Shera Road to Hayworth Road

MILES: 0.95

Contract 2017-22A (local funding portion only) – Black mat bituminous coating on various Township roads

TOTAL MILES: 7.78

TOTAL COST: \$355,022

Funded by Hanover Township:

Various subdivision streets

MILES: 0.56

Funded by Liberty Township:

Various subdivision streets

MILES: 1.96

Funded by Ross Township:

Various subdivision streets

MILES: 2.67

Funded by West Chester Township:

Various subdivision streets

MILES: 2.59



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Railroad Crossings

Railroad crossing safety is a major concern of the County Engineer's Office. The BCEO works closely with the railroad companies to facilitate road closings and subsequent repairs at various crossings throughout Butler County each year.

Railroad Funds

Crossing repairs

Augsburger Avenue (New Miami) at CSX RR
Augsburger Avenue at CSX RR
Forrer Avenue at CSX RR
Jackson Road at CSX RR (north crossing)
Jackson Road at CSX RR (south crossing)
Morganthaler Road at CSX RR
Oxford State Road at CSX RR
Pierson Road at CSX RR
S.R. 122 at CSX RR
Trenton Franklin Road at CSX RR
Wayne Madison Road at CSX RR
Wehr Road at CSX RR
(Funding: CSX)

Augsburger Avenue at N&S RR
Somerville Road at N&S RR
State Road at N&S RR
Taylor School Road (Ritter Street) at N&S RR
U.S. 127 at N&S RR
(Funding: N&S)



Other

Federal Community Development Block Grant Funds

Contract 2018-13 (CDBG-17-3) – Sidewalk replacement/resurfacing

Village of College Corner

TOTAL COST: \$142,132

Local Funds by Contract

Contract 2018-17 – Retrace of centerlines, edge lines, stop bars, arrows (paint)

Various County and Township roads

TOTAL COST: \$274,574

(Funding: BCEO; Oxford, Hanover, Ross, Wayne, Madison, Liberty, Fairfield, West Chester Twp;
Village of New Miami)

COLLEGE CORNER SIDEWALK REPLACEMENT



CENTERLINE MILES — COUNTY ROADS: 118
CENTERLINE MILES — TOWNSHIP ROADS: 80
EDGE LINE MILES — COUNTY ROADS: 220
EDGE LINE MILES — TOWNSHIP ROADS: 120

Contract 2018-21 – Drainage improvements

Millikin Road east of Jackie Drive

TOTAL COST: \$881,893

(Funding: BCSW)

Contract 2018-27M – Traffic signal maintenance

Maintenance, repair, minor construction of traffic signals

TOTAL COST: \$200,000

(Funding: BCEO)

Local BCEO Funds by Force Account

Drainage improvements

Hamilton Mason Road between Once Upon a Time and Londondale Dr.

TOTAL COST: \$50,000

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HAMILTON MASON RD. DRAINAGE CONSTRUCTION



CONSTRUCTION DEPARTMENT

The BCEO Construction Department oversees the implementation of all capital improvement contracts for bridge, roadway, paving, and intersection construction. This includes preparation and management of contracts and payments to contractors, utility coordination and relocation, and construction inspection. Additionally, the Department performs inspections of culverts, pavement conditions, and ditch petitions. Driveway, right-of-way, and special hauling permits are also reviewed and issued by the Construction Department.

Contract 2018-07 – Salt Barn Construction

For Madison Township

TOTAL COST: \$239,024

(Funding:BCSW)

Contract 2018-0 – Salt Barn Construction

For St. Clair Township

TOTAL COST: \$129,961

(Funding:BCSW)



@bceonev

OPERATIONS DEPARTMENT

General / Seasonal Roadway Maintenance

The Operations Department of the Butler County Engineer's Office is responsible for all Force Account projects as well as the general day-to-day maintenance and seasonal-type maintenance of bridges and roads on the County roadway system. This includes ditching and drainage projects, painting and striping of roads, signing, traffic signal maintenance, patching, pavement repair, bridge repair, berm work, guardrail repair, mowing, brush and weed control, and snow and ice control. Also included is emergency maintenance such as storm damage, downed trees, high water and flooding problems, and any debris that poses an immediate safety hazard to the motoring public.

TOTAL SPENT ON GENERAL MAINTENANCE IN 2018: \$1,454,020

TOTAL SNOW AND ICE CONTROL COST JAN-DEC 2018: \$746,136

During 2018 the Operations Department added the following equipment:

- Pole Camera
- 2 Western Star Dump Trucks
- 1 Hot Mix transporter
- 1 GMC Sierra 1500
- 1 GMC Sierra 2500
- 1 Ford F450 Crew Cab

Each spring the BCEO advertises for bids on road salt for the following winter. These bids are compiled in conjunction with various cities and townships in order to get a better price. This resource sharing has become critical for local and regional jurisdictions as the cost of fuel and materials steadily increases. The following contract was awarded in 2018:

Contract 2018-1M – Bulk-treated sodium chloride

For Butler County; Cities of Fairfield, Oxford; Village of New Miami; plus various townships

TOTAL COST: \$68.48/TON (PILER), \$62.98/TON (DUMP)

2018 Snow and Ice Control / Weather-Related Maintenance

The winter of 2018-2019 was fairly mild for southwest Ohio with temperatures averaging over 45 degrees. Butler County residents only experienced a handful of snow/ice events, but they were significant. November brought a day of heavy rain turning to ice, weighing down trees, and causing power outages in some areas. In January, there were two snow events with accumulations from four to ten inches of snow. The season ended with a minor snowfall in February, leaving the BCEO within their budget for 2018.



BUTLER COUNTY ENGINEER'S OFFICE



GREGORY J. WILKENS, P.E., P.S. BUTLER COUNTY ENGINEER

Snowfighters Web Page

The Snowfighters page on our website continues to be instrumental in educating the media and the general public about the BCEO snow and ice control program. The page was designed to provide an in-depth overview of snow and ice management efforts, featuring current and seasonal BCEO snow-fighting statistics, as well as some interesting local winter history.

2018 Snow and Ice Control Summary (Jan. 1 – Dec. 31, 2018)

TOTAL ROAD SALT USED: 4,548 TONS
TOTAL BRINE/CALCIUM CHLORIDE/BEET JUICE MIX USED: 22,736
TOTAL MAN-HOURS UTILIZED FOR SNOW-AND-ICE CONTROL: 4,027 HRS
TOTAL LABOR COST: \$125,861
TOTAL SNOW AND ICE CONTROL COST = \$668,587

DESIGN & ENGINEERING DEPARTMENT

Not covered in our Annual Report is the routine planning and engineering of a project that takes place daily. Before a project goes to construction and gets reported here upon completion, many hours, sometimes years, of preparation have gone into getting the project ready for construction. Planning and identifying a funding source occur very early in the process, something that many outside of our Office may not realize.

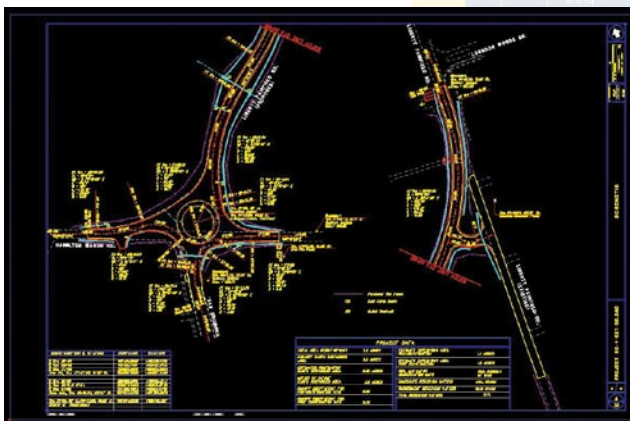
The BCEO Engineering Department is responsible for this early phase in the project timeline and continues to work with the Construction Department even as a project goes to construction. Engineering/Design is a multi-disciplined group that initiates the project development process. Our Planning Group is responsible for prioritizing short-range and long-range construction projects. An important asset of this group is the ability to search for and acquire local, state, and federal funding sources so that additional projects can be constructed while minimizing local dollars. The Geographic Information System (GIS) Department uses digital mapping of Butler County for query, analysis, and generation of maps and reports. The Survey Department attains topographic field data by utilizing GPS equipment, performs construction layouts and any other surveying needed for our projects. The Design Group is responsible for both in-house design and project management of culverts, bridges, intersections and any other roadway projects on both the township and County system. Once plans are complete they are given to our Right-of-Way Acquisition Department, so that appropriate work agreements and easements can be obtained.



During 2018 the Engineering Department developed plans for the following:

- 12 culvert replacements
- 3 bridge replacements/rehabilitations
 - Lanes Mill Road Bridge #02.519 – Design/Build
 - Middletown Germantown Road Bridge #00.393 – Design/Build
 - Hamilton Mason Road Bridge #07.491
- 5 roadway improvements
 - Fields Ertel Road – Shoulder widening from SR 42 to Indian Creek Drive
 - Liberty Fairfield Road – Additional Center Turn Lane from Princeton Road to Millikin Road
 - Millikin Road – Shoulder Widening from LeSourdsville West Chester Road to Mauds Hughes Road
 - Tylersville Road (Phase 2) Additional Westbound Lane: I-75 to Cox Road
 - Tylersville Road – West of Lakota Hills Drive
- 11 intersection improvements
 - Butler Warren Road at Barret Road Roundabout
 - Butler Warren Road at West Chester Road Roundabout
 - Elk Run Drive Realignment at SR 4
 - Hamilton Mason Road at Five Points Roundabout
 - Hamilton Mason Road at Gilmore Road Roundabout
 - LeSourdsville West Chester Road at Beckett Ridge Drive Roundabout
 - Liberty Way at Butler Warren Turn Lane Additions
 - Millikin Road at LeSourdsville West Chester Road Roundabout
 - Tylersville Road Westbound Turn Lane to Southbound Chantilly Lane
 - Wayne Madison Road at Trenton Road Roundabout
 - Yankee Road at Hankins Road Intersection Improvement
- 3 safety upgrades
 - Beckett Drainage Project – East of Beckett Ridge Boulevard
 - Okeana Storm Sewer Project
 - Greenlawn Road Drainage Study
- 2 interchanges
 - Union Centre Boulevard Interchange – Converting to a Diverging Diamond Interchange (DDI)
 - SR 129 / Liberty Way Interchange Modification

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DESIGN & ENGINEERING: DEVELOPMENT SERVICES

This office reviews construction drawings for proposed residential subdivisions and commercial developments within the unincorporated areas of Butler County. To ensure new development follows the mission of the County Engineer's Office, three major components of the plan get evaluated – traffic, drainage, and water quality. Below are some of the items that get critiqued.

 TRAFFIC	 DRAINAGE	 WATER QUALITY
STREET CONNECTIVITY & LAYOUT	STORM WATER DETENTION BASINS	COMPLIANCE WITH EPA REGULATIONS
INTERSECTION SIGHT DISTANCE	STREET STORM SEWERS & EMERGENCY FLOOD ROUTES	CLEANSING OF STORM WATER RUNOFF
HORIZONTAL & VERTICAL DESIGN OF THE STREET	GENERAL SUBDIVISION DRAINAGE & GRADING	CATCH BASIN LABELING & CREEK SIGNAGE
TURN LANE & SIGNAL ANALYSIS	FLOODPLAIN DELINEATION & MITIGATION	BEST MANAGEMENT PRACTICES

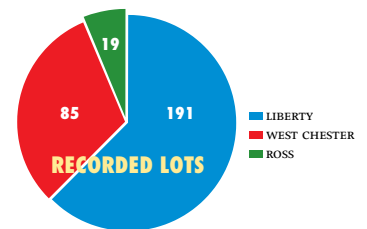
Residential home construction remained steady with 589 single-family permits across Butler County. As expected, Liberty Township leads all four counties in the southwest Ohio region having 260 new homes. In 2019 the number of permits in Butler County decreased by 9.2 percent, which echos national trends. The Home Builders Association of Greater Cincinnati expects 2019 to be “a good year” for single-family home construction.

Development Services Department

The Butler County Planning Commission approved 9 residential and 1 commercial subdivision preliminary plats and approved another 8 residential, 3 multi-family and 4 commercial final plats. These recorded plats created 201 single-family, 82 multi-family and 12 commercial lots. Due to steady development, the department issued 447 residential and 52 commercial Lot Sediment and Erosion Control Permits in these developments.

West Chester Township saw substantial infill development occur within their commercial and industrial districts. One of those developments, West Chester Trade Center, is located at the intersection of Union Centre Boulevard and State Route 747, and is one of the larger master-planned industrial parks in Butler County. Traffic signals at the intersections of SR 747 at Union Centre and SR 747 at US Bank will be upgraded to accommodate additional turn lanes. Union Centre Boulevard will also be widened to accommodate its new intersection with Trade Center Drive.

The healthcare industry continues to invest along the Interstate 75 corridor. TriHealth started construction of its Medical Center alongside Liberty Way and Veterans Boulevard. While Premier Physicians Network put the finishing touches on their Liberty Family Medicine facility located at the intersection of Cincinnati-Dayton at Bethany. Atrium Medical Center purchased roughly 96 acres near the envisioned Millikin Interchange.



DESIGN & ENGINEERING: GIS / TAX MAP / RECORDS / IT

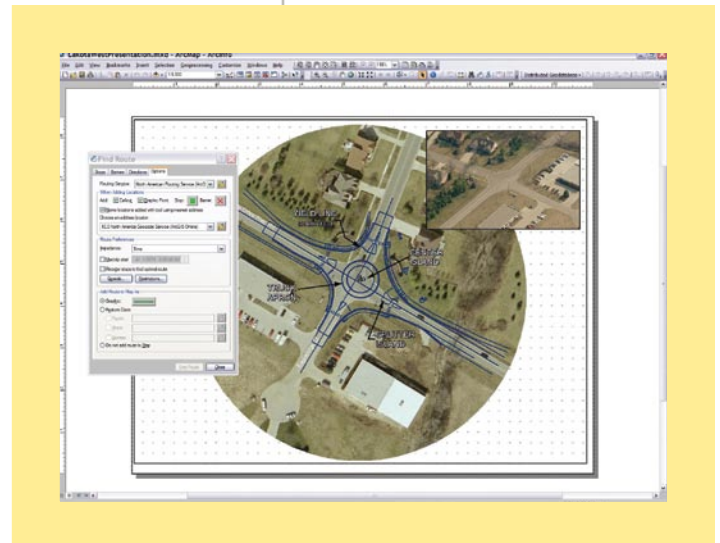
GIS / Tax Map

The Tax Map Office keeps tax plats of all land in the County, providing service and assistance about the property to attorneys, appraisers, developers, engineers, realtors, surveyors, and the general public. Continually updated parcel numbers, lot numbers, new subdivisions, and other tax map information aids the County Auditor in the real estate assessment of taxes and in maintaining the Auditor's system (IAS). The Tax Map Office is responsible for maintaining the 911 emergency system, assigning new addresses, and maintaining the centerline data for the county. Tax Map also provides address information to the Butler County Building Department for building permits and checks and records survey plats and legal descriptions.

Specifically the Tax Map Office is responsible for the following:

- Create and Maintain the Butler County Tax Map website
- Maintain tax map and assign new parcel numbers for the Butler County Auditor
- Maintain BCEO GIS infrastructure including roadway mileage
- Assign and verify addresses for the county's unincorporated areas
- Read legal descriptions for the transfer of property for the Butler County Auditor
- Review subdivision plats for the Butler County Planning Department
- Provide mobile projects for Butler County Engineer's Office Operations Department
- Provide mobile/GPS based projects to collect and maintain infrastructure information in the field
- Scan present as well as historic tax map documents
- Prepare presentations for BCEO projects

During 2018 the Tax Map Office once again collaborated with the BCEO IT Office to provide a needed update to the Tax Map Interactive Map, offering our users the opportunity to view the map in many formats. We have enhanced all of the features that we had added in 2017, multi-platform access, increase speed, more robust parcel search. There's a new look to the home page where you can access historical records, plats of survey and tax map pages. There are also links to the Butler County Engineer's home page, Butler County Auditor and the Butler County Recorder's Office. We have added a few more features to the Interactive Tax Map such as the ability to turn the Basemap off and on, Contours are now available as well as the new BCEO Aerials, and the parcel search can now be limited to the current viewing area. The Tax Map Office in conjunction with the Records Office continuing to make more documents available to the public. Our customers can view and download archived tax map pages, survey plat, as well as several other historical documents.



BUTLER COUNTY ENGINEER'S OFFICE



GREGORY J. WILKENS, PE., PS. BUTLER COUNTY ENGINEER

Records Office

The Records Office is responsible for all historical records and archives, including road and bridge plans, maps, aerial photos, benchmarks, and land records. It was merged with the GIS Office in 2014, allowing more efficient and effective access for the public to research county records. The Office continually strives to improve record keeping as well as provide quick and easy access for Butler County residents. The office continues to rebuild and replace outdated equipment to ensure the quality and integrity of our records.

Information Services and Technology Office (IT)

Information Services is responsible for acquiring and maintaining all Butler County Engineer's Office computers, servers, and communication equipment and for the management of the County Engineer's records and data. This office operates under the premise that changes in computer systems and planning should be a dynamic process improving efficiency and services, reducing costs, and providing the County with up-to-date management tools to better serve the public. Information Services Office (IT) support services include programming, personal computer hardware and software support, records scanning, logistical support, and network services.

The Information Technologies office worked with the GIS office in 2018 to continue to offer a more efficient and updated system of servers to provide the employees of the Butler County Engineer's Office easy access to data and the ability to use applications in the field to update inventory and inspections. The proficient programming ability of the BCEO IT office enabled an update of the tax map interactive web map in-house, to continue to offer the public a user-friendly way to view and download survey information for Butler County properties. The IT office has also created many applications to be used by the employees of the Butler County Engineer's Office. One such program is the parcel management tool which allows the Tax Map Office to keep historical information on all parcels with an easy to use search that produces information quickly and easily and provides the ability to create reports for the Auditor's conveyance office. Our goal is to provide customers with convenient, time-saving access to the information they need to perform their jobs and to provide a more accessible and economical way to submit information to our office. If you have any questions, please contact us, and our staff will be happy to help.



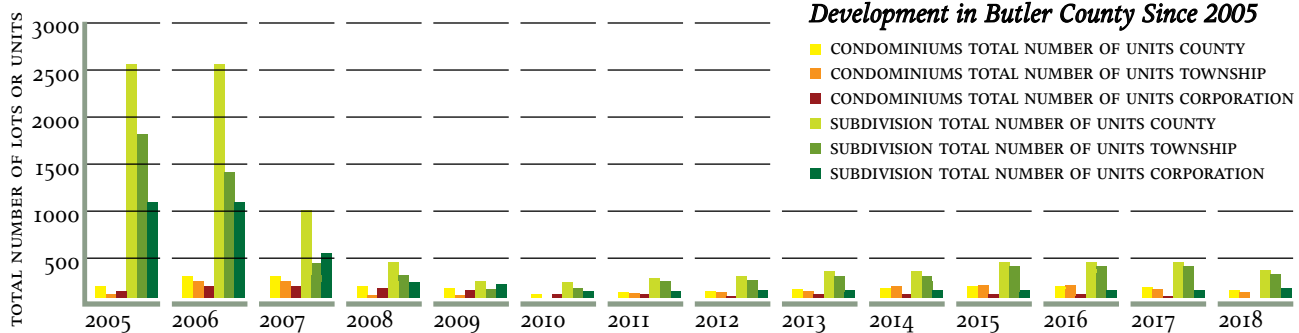
2018 SUBDIVISION DEVELOPMENT

UNINCORPORATED AREAS

TOWNSHIP	SUBDIVISION PLATS	SUBDIVISION LOTS	SUBDIVISION ACRES DEVELOPED	CONDOS (CONDOMINIUMS)	CONDO UNITS	CONDO ACREAGE	LANDOS (LANDMINIUMS)	LANDO UNITS	LANDO ACREAGE
Fairfield	0	0	0	1	2	0.35	0	0	0
Hanover	0	0	0	0	0	0	0	0	0
Lemon	0	0	0	0	0	0	0	0	0
Liberty	7	163	111.04	4	17	3.11	0	0	0
Madison	0	0	0	0	0	0	0	0	0
Milford	0	0	0	0	0	0	0	0	0
Morgan	0	0	0	0	0	0	0	0	0
Oxford	0	0	0	0	0	0	0	0	0
Reily	0	0	0	0	0	0	0	0	0
Ross	1	16	9.25	0	0	0	0	0	0
St. Clair	0	0	0	0	0	0	0	0	0
Wayne	0	0	0	0	0	0	0	0	0
West Chester	2	64	23.21	1	3	0.64	2	17	5.228
TOTAL	10	243	143.5	6	22	4.10	2	17	5.228

INCORPORATED AREAS

CITY/VILLAGE	SUBDIVISION PLATS	SUBDIVISION LOTS	SUBDIVISION ACRES DEVELOPED	CONDOS (CONDOMINIUMS)	CONDO UNITS	CONDO ACREAGE	LANDOS (LANDMINIUMS)	LANDO UNITS	LANDO ACREAGE
College Corner	0	0	0	0	0	0	0	0	0
Fairfield	0	0	0	0	0	0	0	0	0
Hamilton	1	3	0.683	0	0	0	0	0	0
Jacksonburg	0	0	0	0	0	0	0	0	0
Middletown	1	30	17.096	0	0	0	0	0	0
Millville	0	0	0	0	0	0	0	0	0
Monroe	1	14	5.908	0	0	0	0	0	0
New Miami	0	0	0	0	0	0	0	0	0
Oxford	1	29	12.084	0	0	0	0	0	0
Seven Mile	0	0	0	0	0	0	0	0	0
Sharonville	0	0	0	0	0	0	0	0	0
Somerville	0	0	0	0	0	0	0	0	0
Trenton	1	16	8.821	0	0	0	0	0	0
TOTAL	5	92	44.592	0	0	0	0	0	0



DESIGN & ENGINEERING: TRAFFIC

The BCEO Traffic Office is responsible for the engineering, design, installation, and maintenance of all traffic control devices, including signals, signage, and lane markings. Speed limits are also established by this Office, which conducts speed studies in some cases to determine if a speed limit should be changed. Various traffic studies are performed in the planning of future roadway projects utilizing data that is collected and maintained by the Office, including traffic counts and accident data.

Specifically in 2018, the Traffic Office was responsible for the following:

- Maintained 74 traffic signals, 2 flashers, 4 pedestrian signals (\$90,000)
- Maintenance of 20 school zone signals/flashers
- Maintained 13 modern roundabouts
- Maintenance of seven traffic operation cameras
- Maintenance of five closed loop systems (\$21,600)
- Collected over over 1000 ADT traffic counts
- Managed countywide pavement marking retrace contract
- Performed 12-speed studies
- Reviewed 15 Traffic Impact Studies (TIS)
- Managed three Interchange Modification Studies (IMS)
- Received 1,325 OUPS tickets and marked 150 location

The Sign Office in conjunction with the Traffic Office was responsible for the following in 2018:

- Maintenance of over 7,500 traffic control signs
- Produce drawings, set up and maintenance of all road closures and detours
- Signing and traffic control for all BCEO projects
- Supply signs for other Butler County agencies as requested
- Operation of sweeper truck for BCEO and Storm Water District needs



BUTLER COUNTY ENGINEER'S OFFICE



GREGORY J. WILKENS, P.E., P.S. BUTLER COUNTY ENGINEER

ADMINISTRATION DEPARTMENT

The Administration Department is responsible for managing finances and budget, human resources, public information, and media relations. This Department also serves as the primary liaison with the townships and other governmental agencies.



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2018 INCOME

INTERGOVERNMENTAL REVENUE

Gasoline Tax	\$2,417,404
Motor Vehicle License Fees	\$6,868,048
Permissive Tax – State Levy	\$989,211
Other Government Reimbursements	\$2,396,402
LPA Reimbursements	\$705,003
Interest Earned	\$197,311

TOTAL **\$13,573,380**

INTRAGOVERNMENTAL REVENUE

Sales	\$125,383
Fines	\$188,807

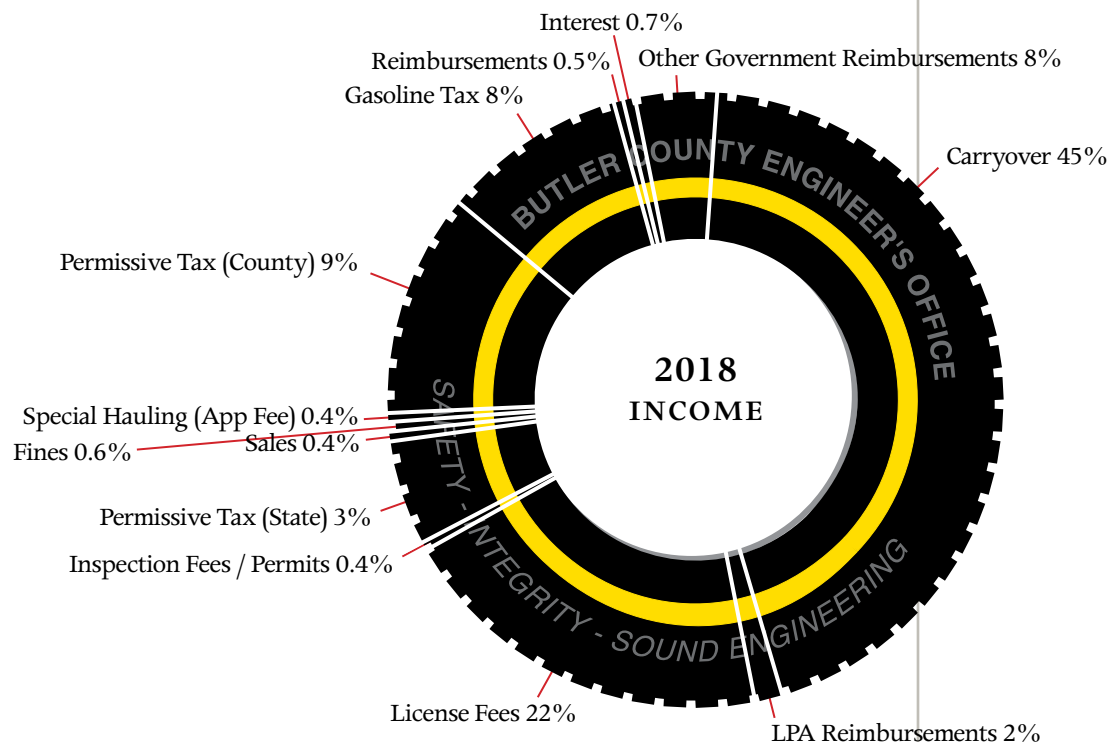
OTHER

Reimbursements	\$159,343
Inspection Fees & Permits	\$127,513
Project Management	\$0
Permissive Tax – County	\$2,744,646
Surity Bond / Subdivision Foreclosures	\$0
Study Grant (I-75/SR129 interchange)	\$0
Special Hauling Application Fee	\$118,360

TOTAL **\$3,464,051**

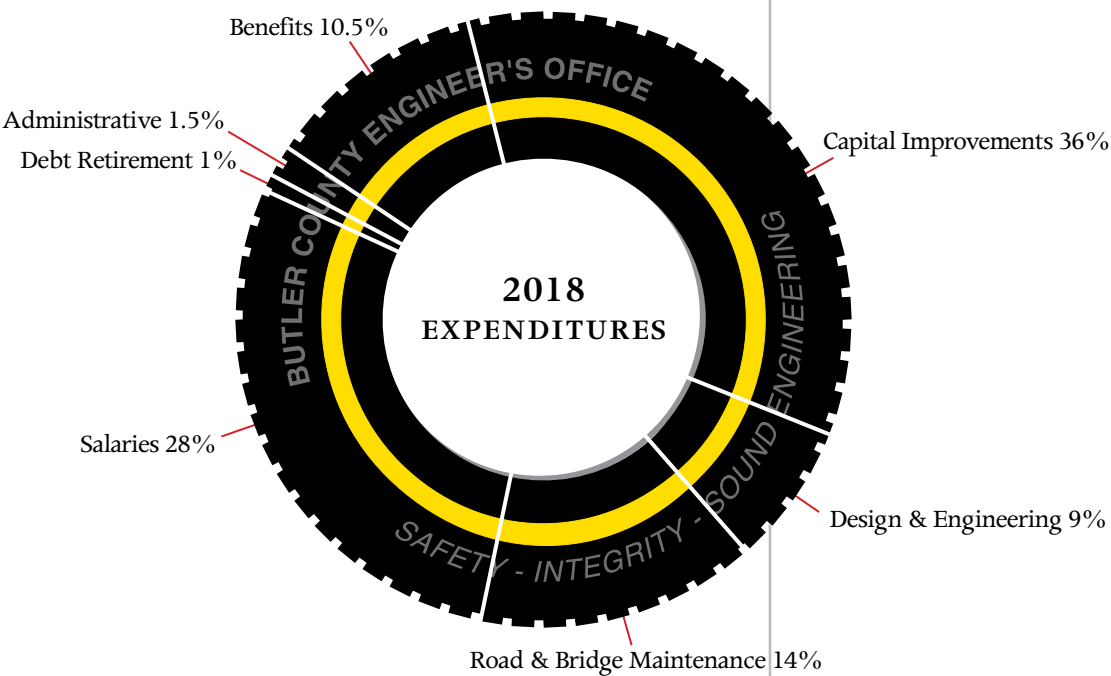
Carryover from 2017 \$14,054,01

TOTAL FUNDS AVAILABLE **\$31,091,442**



2018 EXPENDITURES

Capital Improvements	\$5,524,723
Road & Bridge Maintenance	\$2,195,697
Design & Engineering	\$1,391,321
Administrative	\$240,701
Debt Retirement <i>(Principle & Interest)</i>	\$124,288
Salaries	\$4,315,256
Benefits	\$1,644,210
TOTAL	\$15,436,196
<i>Carryover to 2019</i>	<i>\$15,655,245</i>





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BUTLER COUNTY ENGINEER



BUTLER COUNTY ENGINEER'S OFFICE

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