

2018 ANNUAL REPORT

PREPARED BY:
ALAN BRUBAKER, P.E., P.S.
SUMMIT COUNTY ENGINEER

ISSUED APRIL 15, 2019



2018 Riverview Road Bridge Scour Mitigation—SCE's oldest bridge



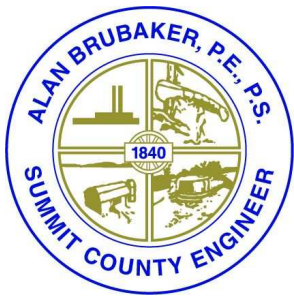
Home Avenue Bridge Replacement—to be completed in 2019

Mission Statement

Our mission is to serve the Summit County community by maintaining and improving our region's infrastructure, encouraging economic development, and ensuring a safe and efficient transportation system while protecting the environment.

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ALAN BRUBAKER, P.E., P.S.

SUMMIT COUNTY ENGINEER

April 15, 2019

Summit County Council
Ohio Building – 7th Floor
175 South Main Street
Akron, Ohio 44308-1314

Dear Members of Summit County Council:

In accordance with the Ohio Revised Code Section 5543.02, I respectfully submit the Summit County Engineer's (SCE) annual report for the year 2018. This report reviews the activities of this Office for 2018, highlighting major infrastructure improvement projects and the maintenance of our existing infrastructure. The office continues to be an active partner with the townships, cities, and villages in their efforts to update and improve local infrastructure systems.

2018 was our tenth year in office and we had many successes. The County adopted a Surface Water Management Program in 2017 and that program was created from scratch and implemented in 2018. The State of Ohio authorized an optional additional \$5 permissive license fee and Council approved the fee, providing much needed additional revenue for county road and bridge projects starting in 2019.

Our primary sources of revenue are license taxes and gasoline taxes. In 2018, tax revenue was approximately \$15.9 million, a 4% increase from the previous year. In 2018, capital expenses were approximately \$5.8 million, an increase of \$700,000.00 from the previous year, while operating expenses increased by just 1%. State and federal grant funding brought in an additional \$1.5 million for capital expenses. Since taking office we have focused on reducing operating costs and expanding capital project expenditures. We are seeing results. Ten years ago, the capital program accounted for approximately 21% of total expenditures for the office. In 2018, more than 34% of our offices total expenditures were capital programming expenses.

This annual report highlights many of our projects and initiatives. If you have any questions regarding past accomplishments or the future plans set forth within this Annual Report, please contact me at (330) 643-2850.

Sincerely,

Alan Brubaker, P.E., P.S.
Summit County Engineer

Services

**Summit County Engineer Alan Brubaker, P.E, P.S.
is pleased to offer the following services to the public:**

- Design, construction, inspection and maintenance of Summit County highways, bridges and dedicated stormwater facilities.
- Surface Water Management for Bath Township starting in June 2018.
- Installation, inspection, and maintenance of traffic safety equipment, guardrail, signs, traffic control signal systems, and pavement markings on county highways and bridges.
- Snow and ice control on Summit County highways and in other communities by agreement.
- Engineering design and other services to Summit County's cities, villages and townships.
- Coordination of local efforts to procure state and federal funding for infrastructure.
- Township representation: SCE has dedicated an employee to cover each township, attend meetings, and stay in touch with local issues as they arise.



Engineer Brubaker gathered with colleagues to receive the Akron Area Engineer's Week proclamation from the City of Akron.

**THE SUMMIT COUNTY ENGINEER
HAS A WEALTH OF RESOURCES AND
INFORMATION FOR PUBLIC USE.
PLEASE LET US KNOW HOW WE
CAN HELP YOUR COMMUNITY!**

CALL US AT 330.643.2850

www.summitengineer.net

Here's just some of the resources currently available on our website:

- List of current projects & initiatives
- Conveyance standards
- Road records
- Bid notices
- Traffic alerts
- SCE publications
- Surveys
- Subdivision plats & documentation
- Monument mapper
- County maps
- Road and bridge permit forms
- Township services forms

Your Summit County Engineer maintains:

- Over 360 lane miles of roads - in all seasons
- Over 300 bridges throughout the County - and inspects each one, **every** year
- Over 1200 culverts
- Hundreds of miles of road right-of-way and roadside ditches
- Regional stormwater facilities, including assessed subdivisions
- Over 30 signalized intersections

Notable Events

Implementation of the Summit County Surface Water Management District

After many years of hard work trying to implement a surface water solution other than just the ditch petition process, Summit County Council enacted Chapter 942—Surface Water Management District on September 12, 2017. The Ordinance created a completely voluntary, opt-in stormwater program that functions as a utility. The goal of the program is to reduce flooding and improve water quality in Summit County. It is open to all communities in Summit County. This option gives communities restrained by current state law another option to combat flooding.

Those who opt-in to the program will have a flat residential fee of \$4 per month for conventionally developed residential properties. This is the Equivalent Rate Unit or “ERU”. Commercial properties will be charged one ERU, or \$4 per month, per every 3,000 square feet of impervious surface area.

ERU Credits are available for residential use parcels eligible for Homestead Exemption (25%) and parcels within a Drainage Maintenance Assessment Subdivision (25%).

Bath Township joined the program at the end of 2017. SCE successfully implemented the program in 2018 by calculating ERUs for commercial properties, establishing a billing system, including bill design and hiring a company to print and mail the bills, and setting up the appropriate fund accounts. In addition, District Rules and Regulations were adopted by Council. SCE contracted with Sustainable Streams, LLC to visually inspect the Yellow Creek Watershed and develop a master plan of projects and goals for the District. Sustainable Streams has been working diligently and the preliminary report for the watershed has been submitted. SCE will soon form an Advisory Committee of Bath Township residents to review the recommendations from Sustainable Streams and help prioritize drainage projects.

\$5 Permissive License Fee

The State Legislature authorized the additional \$5 permissive license tax in the 2017 State Transportation Bill. This was the third additional permissive tax the state has allowed the counties since 1968. The Ohio General Assembly authorized the additional \$5 fee because they recognized the stagnant funding of local transportation systems and that counties were struggling to keep up with the need for bridge replacements and road repair. The federal gas tax has not been increased since 1993 and the last county \$5 permissive fee that was enacted was in 1987. Council adopted the increase in January of 2018. This will bring in an estimated \$2.6 million for capital projects starting in 2019. In addition, the Engineer’s office and Executive’s office created a economic development grant program, setting aside \$250,000.00 for economic development related road projects available to Summit County cities, villages, and townships. In March of 2019 the state adopted a gas tax increase, which will take effect in late 2019.

Saving the Riverview Road Bridge over Yellow Creek

Located in Akron, the Riverview Road Bridge over Yellow Creek is Summit County’s oldest structure. The bridge is a 192-year-old stone arch structure. Erosion in Yellow Creek was undermining the bridge’s support and SCE had to move quickly to ensure the historical bridge remained open. SCE contracted with Lockhart Concrete to perform a scour mitigation and streambank stabilization project. The County partnered with Cuyahoga Valley National Park, with each entity paying 50% of the \$240,000.00 project.

Public Services Division

The Public Services Division is responsible for maintaining over 360 lane miles of county roadway, 312 bridges, over 1,200 culverts, guardrail, berms, vegetation control, ditches, pavement markings, traffic signals, tree trimming and removal, deceased animal removal, culvert pipes, fleet maintenance, retention and detention ponds, roadside mowing, and snow and ice control.

The Public Services Division's administrative office and the South Street Station are located at 601 East Crosier Street in Akron, with an outpost at Boston Mills Station located in Boston Township. Bath, Boston, Copley, Coventry, Northfield Center, Richfield, Sagamore Hills, Springfield and Twinsburg townships are provided general maintenance and snow and ice control by our department. In addition to our South Street and Boston locations, the County has salt storage facilities in Bath and Lakemore.

In 2018, a total of 997 requests for service were received and completed for roadside mowing, ditching, berm cutting, pothole repairs, tree trimming, weed control, and asphalt patching. The department used 2,400 tons of stone, 400 feet of culvert pipe, 700 tons of asphalt and 13,200 tons of salt for snow and ice control.



Martin Road Culvert Repair—Before



Martin Road Culvert Repair—After

Public Services Division

Our South District replaced culverts on Ingleside Drive and Balton Drive. They also performed culvert repairs on Skelton Road, Hametown Road, Portage Lakes Drive, Mogadore Road, and Albrecht Road. In addition, roadside mowing, mailbox repairs, bridge repair, ditching, culvert cleaning, berm cutting, pavement repairs, tree trimming, and weed control were also performed throughout the South District.

Our North District performed culvert replacements on Olde 8 Road, Alger Road, four locations on Hametown Road, Revere Road, and Riverview Road. They also performed repairs on five curb inlet basins on Springside Drive. In addition, roadside mowing, mailbox repairs, bridge repair, ditching, culvert cleaning, berm cutting, pavement repairs, tree trimming, and weed control were also performed throughout the North District.

Our Ditch Crew performed stormwater basin repair projects in the following subdivisions: North Bath Estates, Miller Farm Estates, Charter Lake Estates, and Rhodes Allotment. Catch basin repairs were performed in Eaton Estates and Longmeadow Subdivision. The Ditch Crew performed culvert repairs on Martin Road and Revere Road. They also performed vegetation clearing in Revere Lake Reserve, Westridge Estates, Kensington Reserve, and Four Seasons of Bath. In addition, they performed routine maintenance and repairs on other various areas throughout Summit County.

The total cost of all work done in assessed subdivisions includes maintenance activities performed by SCE crews and task order contracts with two consulting firms to evaluate drainage in assessed subdivisions and recommend improvements. District 1 covers northern Summit County subdivisions and District 2 covers southern Summit County.



Martin Road Bridge—Erosion Control Project

Material Usage

	2014	2015	2016	2017	2018
Salt (in tons)	19,900	17,000	12,000	11,500	13,200
Stone (in tons)	4,000	5,200	1,200	1,400	2,400
Asphalt (in tons)	1,100	1,700	720	675	700
Culvert Pipe (in feet)	1,100	1,200	700	650	400

New equipment/vehicle purchases

Single Axle Plow Truck & Equipment	\$151,523.00
2 Ford F-150s & 2 Ford Explorers	\$111,795.12
308E2 Mini Excavator	\$124,166.00
TOTAL	\$387,484.12

District 1	\$234,839.29
District 2	\$127,723.31
Total	\$362,532.60

Public Services Division

Bridge Section



Brecksville Road Gunnite
Repair

In 2018, our Bridge Crews were busy sandblasting, forming, and pouring concrete to replace crumbling parapet walls, wing walls and other important components of the bridges that comprise the life-line of our commerce. The following highlighted projects demonstrate work performed by this crew in 2018.

Wheatley Road (BST 174-0321): Erosion and railing repair

Front Street (AKR 59-0275): Drainage system repair

Brecksville Road (RFV 17-2461): Concrete repair

Hudson Drive (STW 34-0428): Erosion repair

High Level Bridge (AKR 8-0908): Routine bi-annual maintenance

Bolanz Road (CUY 81-0039): Erosion repair

Akron Peninsula (BST 10-1127): Drainage improvement project

Truxell Road (BST 187-0117) Erosion repair

Ira Rd. (BAT 46-0004) Erosion repair

In addition to work mentioned above, the Bridge Crew removed numerous logjams, performed bridge deck washing and other various maintenance tasks.

Engineering Division

The Engineering Division is active in the development of plans for highway, drainage, and bridge improvements and new construction on Summit County roads. The engineers and technicians prepare improvement plans for federal, state and locally funded projects on County highways. They also assist townships by preparing plans for township roads and drainage systems. Our project managers are responsible for overseeing large projects from initial scoping through the design phase and into construction.

High Level Bridge Repairs

This project made repairs to the North Main Street structure crossing over the Cuyahoga River, also known as the High Level Bridge, including patching the bridge deck wearing surface, epoxy waterproofing overlay repairs, catwalk railing repairs, and truss gusset plate steel repairs. Becdir Construction was the contractor for this \$453,761.25 project.



Riverview Road Stone Arch Bridge

Riverview Road Bridge over Yellow Creek

This was a scour mitigation project to control the erosion undermining the 192-year-old stone arch bridge. The County partnered with Cuyahoga Valley National Park on the contract. Lockhart Concrete performed the \$243,186.00 project, with Cuyahoga Valley National Park and the County each paying 50% of the project costs.

Arlington Road Improvement Project

Road improvements began in 2016 for Arlington Road from City of Green line to beyond Swartz Road. Improvements included upgrading traffic signals, resurfacing, installing a north bound left hand turn lane at Warner Road, constructing sidewalks, relocation of utilities, and upgrading signage and pavement markings.

Karvo Companies was the contractor for this \$2,537,296.90 project. The project is 80% funded with Federal Highway Administration grant funds and was completed in 2018.

Design/Build Projects

In 2018, County Council authorized the County Engineer to follow the design/build process outline in the Ohio Revised Code for construction contracts. This allows the County to hire a construction contractor through the standard bidding process and the contractor then works with an engineering design consultant to design the construction following specifications set forth by the County. SCE has three design/build projects underway: Medina Line Road Bridge over Yellow Creek Replacement, North Main Street Bridge over Howard Street Ramp Removal, and the West Bath Road Bridge Rehabilitation Project. Construction is expected in 2019 on these projects.

Engineering Division

Summit County is proud to offer a county-wide regional pavement maintenance program. We encourage local communities in Summit County to join our bid process, allowing to go out to bid as one unit and, as a result, getting lower per unit costs for all of our communities who participate. Our pavement maintenance programs include hot mix resurfacing, motor paving, chip and seal, asphalt rejuvenation, crack sealing, pavement marking, culvert replacements, guardrail replacements, and concrete road repair. In 2018, 17 individual local governments participated. Forty-seven individual projects were combined into ten larger projects worth \$7.2 million. Below are some of the county-owned roads included in 2018's pavement maintenance program.

405 (Motor Paving)

Columbia Road from Black Road to Riverview Road
Hametown Road from SR 18 to Granger Road

422 (Chip Seal)

Sourek Road from Ghent Road to Sourek Extension
Twinsburg Road from Olde 8 to 1,960 feet east of Olde 8
Brush Road from Village of Richfield line to Black Road
Boston Mills Road from Black Road to Summit County Outpost
Townsend Road from Village of Richfield line to Cuyahoga County line

448 (Hot Mix Asphalt)

Alger Road from 780 feet north of State Route 176 to Boston Road
Chaffee Road from Valley View Road to State Route 82
Chamberlin Road Bridge (spot paving at the bridge and transfer station)
Killian Road from Arlington Road to Pickle Road
Ridgewood Road from Medina Line Road to Hametown Road
Portage Lakes Drive from SR 93 to Cormany
Robinson Road from Cormany Road to 500 feet west of Cormany Road
Wheatley Road from Revere Road to Everett Road (OPWC Project)

Asphalt Rejuvenating

Robinson Road from State Street to State Route 93
Cormany Road from Robinson Road to State Route 93
Killian Road from South Main Street to Arlington Road
Everett Road from Cleveland-Massillon Road to Revere Road
Old Mill Road from State Route 91 to 400 feet east of State Route 91

Asphalt Crack Sealing Program

Warner Road from La Force Road to Arlington Road
Summit Road from Cleveland-Massillon Road to Jacoby Road
Arlington Road from Swartz Road to the Green line
South Turkeyfoot Road from New Franklin line to Portage Lakes Drive
Boyden Road from State Route 82 to Highland Road
Truxell Road from Akron-Peninsula Road to Akron-Cleveland Road
Akron-Peninsula Road from Cuyahoga Falls line to Village of Peninsula line
Pickle Road from Green line to Killian Road
Ghent Road from Fairlawn line to Cleveland-Massillon Road
E. Waterloo Road from Portage Line Road to State Route 224
Cleveland-Massillon Road from Ghent Road to Ira Road

Engineering Division

Survey Section

The Summit County Engineer's (SCE) Survey Section has a survey field crew under the direct supervision of a Professional Surveyor, all having over 20 years of experience. Their experience provides a high level of consistency and reliability. The SCE's in-house surveyors provide flexibility for instant response to changes in project priorities.

The SCE performs surveying for internal departments and townships and other local government agencies. They use a Trimble S6 robotic total station and a Ranger data collector with TDS software to collect survey data. They also use a 2016 Nikon Nivo total station with reflectorless technology to serve as backup unit. Computers with Civil 3D 2016 CAD and specialized survey software are used to process and analyze the field data to create the base mapping for design and field staking purposes. The Survey Section uses two dual frequency GPS receivers to establish horizontal and vertical control on jobsites. The receivers can utilize the Ohio Department of Transportation's (ODOT) Continuously Operating Receiver System (CORS)/Virtual Reference System (VRS), which provides real time coordinates having survey accuracy. The Survey Section annually prepares and adheres to an efficient and cost effective budget.

Public Records on File

- Geodetic control in Summit County used to reference the GIS
- Records for county and township Roads
- Road improvement plans
- Road dedication and vacation Plats
- Summit County survey field notes
- Survey drawings of minor subdivisions
- Records of Summit County surveys
- State road improvement plans
- Major subdivision plats and improvement plans in unincorporated areas
- Ditch and drainage records
- Summit County bridge records
- Cemetery maps
- Survey maps of Ohio-Erie Canal

The Survey Section provided various surveying services including record research, plan review, topographical mapping, field staking, calculations to determine road centerline, right-of-way lines, property lines, and the preparation of legal descriptions for easement acquisitions. The Survey Section provided surveying services to:

- determine, find, or set property pins, produce base-mapping with topography, and right of way determination at the county owned Steels Corners Yard to design and to obtain permits for a new SCE salt storage facility.
- produce base-mapping with topography, centerline and right-of-way determination, and property line determination to design plans to replace culverts on Gannet Road, Portage Lakes Drive, Twinsburg Road, and Farmdale Road.
- produce base-mapping with topography, centerline and right-of-way determination, and plan review for plans to improve a portion roadway shoulder of Old Mill Road.
- set survey pins to maintain existing survey pins inside 100 survey roadway monument boxes defining the centerline of right-of-way of 11 county highways and three township roads during road resurfacing projects.
- stake the road right of way for SCE engineers to observe potential road sight distance concerns on Tisen/Portage Line Road in Springfield Township and Cormany Road in Coventry Township.
- set nine spindles defining the centerline of right of way on the surface of Shaw Road.
- create project control for a future landslide repair project.
- determine that a culvert on Revere Road and Revere Drive was within the road right-of-way.
- stake the road right-of-way for Waterloo Road and Canfield Road for Springfield Township.
- provide as-built field work to verify certain structures were built to plan Hidden Ridge Subdivision.
- collect as-built measurements on structures within Hidden Ridge Subdivision.
- field stake drainage easements in North Bath Estates and Charter Lake Estates for the SCE Public Service to improve storm drainage in the area.
- obtain water elevations in Eaton Estates Stonebridge Subdivision for SCE engineering to discern storm water runoff.
- monitor movement in various portions of Portage Lakes Drive and South Main used by heavy trucks during a construction project by ODNR and in the clocktower and sidewalk along a highway and lake.

Engineering Division

Survey Section continued

Additional Survey Section Tasks

- coordination for the recording of an SCE created dedication plat for the improvement of the intersection of Ghent and Cleveland-Massillon Roads and review consultant plans for the subsequent intersection improvement.
- preparation of office calculations from consultant plans of a Canton Road improvement to potentially field stake proposed road right way for viewing purposes.
- records research to help the SCE, City of Cuyahoga Falls and Copley Township to help them determine maintenance obligations.
- creation of guidelines concerning the return of certain original documents from the Fiscal Office to the SCE after recording.
- coordination with the Fiscal Office concerning proposed revisions to the “County of Summit, Ohio, Standards for the Approval of Plats and Legal Description used in Real Property Conveyances”.
- assistance to the Subdivision Engineer by reviewing 13 proposed major subdivision/replat final plats, and by verifying that survey pins are set for the centerline of right of way and all lot corners for three subdivisions entering into maintenance bond.
- review of 46 survey drawings and associated legal descriptions for parcel splits or consolidations to help ensure requirements of state and local standards are met.
- review and research for explanation of easements in assessed subdivision.
- review of a proposed vacation of a portion of right-of-way of Akron-Cleveland Road in Boston Township and a proposed vacation for portion of Riverview Road to the Cuyahoga Valley National Park (CVNP) for parking purposes.
- review for the proposed vacation of Parkwood Drive in Northfield Township and Central Avenue in Coventry Township.
- research assistance to surveyors, engineers, and the public for various public and private projects.



The Survey Section utilized a Ricoh Aficio MP W3601 large format copier/printer/color scanner to produce scanned images of: Road Record Plan Sheets, Dedication Plats, Vacation Plats, Private Surveys, Major Subdivision Final Plats and Major Subdivision Improvement Plans. Other historic images include: Drainage Plans, Cemetery Maps, Abandoned Mines Maps, Portage Lakes Maps, Nimisila Reservoir Maps, and Miscellaneous Township Surveys.

In cooperation with the Office of Information Technology, the Survey Section is working towards our goal of a "digital records room" that can be accessed anytime from the internet. Scanned images of surveys, subdivisions and subdivision improvement plans and road record scanned images, all from the SCE records archive, are currently available through the "ON LINE TOOLS" section on the Summit County Engineer website: <http://www.summitengineer.net/resources/tools>. The Survey Section has scanned images of all the road and survey records on file at the Summit County Engineer's Office, and maintains the record information in hard copy format and in a data base format to better serve the residents of Summit County.

The Survey Section has been instrumental in maintaining the geodetic survey monumentation that comprises the foundation of the Summit County GIS Program. There are over 900 survey monuments with accurate horizontal and/or vertical data. Data sheet information on these survey monuments is available through the "ON LINE TOOLS" section on the Summit County Engineer website: <http://www.summitengineer.net/resources/tools>

Engineering Division

Bridge Section

The Summit County Engineer Bridge Section is responsible for bridge inspections, bridge inventory, coordination of our bridge maintenance program and developing recommendations for rehabilitation or replacement of County bridges. The bridge section also reviews all bridge plans prepared by consultants. Our project inspectors serve a dual role. They inspect our construction work and are ODOT certified bridge inspectors and perform our bridge inspections annually to ensure they remain safe for the traveling public.

RECENTLY COMPLETED BRIDGE PROJECTS

N. Main St. over Cuyahoga River Valley in Cities of Akron & Cuyahoga Falls – Structure and Deck Repairs \$450K, truss gusset plates retrofits, expansion joint replacement, deck repairs and other miscellaneous repairs.

Riverview Rd. over Yellow Creek in City of Akron / CVNP – Emergency Foundation Repairs \$240,000. This 105 ft long, 1827 stone arch bridge carries Riverview Rd, Towpath Trail and the CVNP Scenic Railroad. Cost shared with National Parks Service at 50% / 50% Split.

ONGOING/UPCOMING BRIDGE CONSTRUCTION

Home Ave. over Little Cuyahoga River in City of Akron – Total Replacement \$1.8M, single-span, prestressed concrete beam bridge with concrete deck, 74 ft long.

N. Main St. over Howard St. Ramp in City of Akron – Total Removal \$509,000. Existing steel beam bridge with concrete deck, 47 ft long x 70 ft wide. Replace with embankment fill.

Medina Line Rd. over Branch Yellow Creek in Bath Township – Total Replacement \$527,000, single-span prestressed concrete beams with concrete deck, 35 ft long. Project Cost Share with Medina County at 50% / 50% Split.

Bath Rd. over Cuyahoga River in City of Akron / CVNP / Summit Metro Parks – Major Rehabilitation \$1.2M, 3-span steel beam bridge with concrete deck, 212 ft long x 36 ft wide.

Riverview Rd over Furnace Run in City of Cuyahoga Falls / CVNP – Major Rehabilitation in Year 2019, \$1.3M, 3-span prestressed concrete box beam bridge with concrete deck.

Wright Rd. over Pigeon Creek in Copley Township – Total Replacement in Year 2020, \$700,000, single-span prestressed concrete box beam bridge 59 ft long x 32 ft wide.



Ravenna Road Bridge over Tinker's Creek—Snooper Truck Inspection

BRIDGE INSPECTION

Summit County Bridges – Completed required annual inspections and inventory updates for all 312 bridges. SCE's Construction Inspectors are also ODOT qualified Bridge Inspectors who annual inspect / verify the material condition of the County's bridges. In addition, a consulting engineering firm provided inspection services on a total of 23 bridges, several requiring use of ODOT's "Snooper" inspection vehicle due to difficult access. In Year 2019, an Underwater Inspection will be performed by a Certified Diver on three bridges to assess potential stream scour and foundation undermining.

Summit MetroParks – Completed the inspection of 9 vehicular bridges and 31 pedestrian and maintenance vehicle bridges for the Summit MetroParks.

BRIDGE LOAD RATINGS

Four consulting engineering firms performed a structural analysis on a total of 42 bridges to determine their safe load carrying capacity for current Ohio Legal Load Vehicles and Emergency Vehicles. Results of the Load Ratings determined that 14 bridges throughout the County required Weight Limit Restrictions Signs be posted.

**Summit County Engineer
Bridge Facts**

312 total bridges
117 in Townships
195 in Cities and Villages

Community Involvement

County Engineer Alan Brubaker and SCE staff attend meetings of numerous committees and organizations that affect roads, bridges, and surface water in the County. Attendance at these meetings enables this Office to communicate the impact of their projects on County facilities, advise them of County projects that may affect their programs, and assist in planning County projects to coordinate with other community programs. Individuals in this office participated in the following committees, organizations, and programs:

Supported Committees & Organizations:

- American Society of Civil Engineers
- American Society of Highway Engineers
- National Society of Professional Surveyors
- Professional Land Surveyors of Ohio
- Association for Bridge and Construction Design
- Institute of Transportation Engineers
- American Public Works Association—Northeast Ohio Chapter Director
- Northern Ohio Service Directors Association
- Watershed Management Association of Ohio
- International Erosion Control Association
- Urban and Regional Information Systems Association
- Akron Metropolitan Area Transportation Study, Technical Advisory Committee, Policy Committee, and Citizen Involvement Committee
- County-wide program administrator—National Pollutant Discharge Detection and Elimination System
- Summit County Transportation Improvement District Executive Committee
- Northeast Ohio Four County Regional Planning and Development Organization
- Ohio Public Works Commission—District 8
- Natural Resources Assistance Council—District 8
- Summit County Emergency Management Executive Committee
- Summit County Board of Control
- Summit County Information Technology Board
- County Engineer's Association of Ohio
- Township Association of Summit County
- Joint Safety Committee—Bath, Copley, and Fairlawn
- Community Partnership Program-Economic Development grant program administered by the Summit County Engineer's office to promote economic development related road projects throughout Summit County
- Miniature Bridge Building Competition-SCE and our engineering consulting firm partners run a bridge building competition for Summit County High School students and offer participants scholarships if they go on to major in an engineering field in college
- Summit and Portage County Mayors, Service Directors, and City Managers Regional Group
- Salt Subcommittee to oversee the administration of salt bidding for the Community University Education Purchasing Alliance
- An Engineer to Each Township—SCE has assigned an employee to represent each Summit County township. They attend township meetings and facilitate ongoing communication between the County and the townships
- County Commissioners and Engineers Administrative Professionals Association
- Society for Human Resource Management (SHRM)
- Akron Area SHRM
- Greater Akron Public Personnel Professionals
- National Public Employer Labor Relations Association
- Ohio Public Employer Labor Relations Association
- Ohio Government Finance Officers Association
- Association of Government Accountants

Engineer Brubaker also is the Treasurer for the International Soap Box Derby and on the Boy Scouts of America Eagle Scout Recognition Committee.

Engineering Division

Drainage Section

The Drainage Section coordinates requests, reviews, inspects, designs and schedules improvements to ditches, culverts, storm sewers and other drainage-related items for landowners, townships and/or County maintenance. Preliminary studies and improvement plans were prepared for several township and county drainage projects. There were several proposed commercial improvement plans reviewed in the townships as well as several drainage studies and storm sewer replacement projects.

2018 Drainage Projects

Bath	Martin Road Culvert 195-00840	Plans to replace the deteriorating culvert were prepared in 2017. Repairs to culvert and headwall was completed by County forces in 2018.
Coventry	N. Turkeyfoot Road Culvert @ Falcon Court	Plans to replace the deteriorating culvert were prepared in 2017. Work was completed in 2018.
	N. Turkeyfoot Road Culvert @ Hohman Drive	Plans to replace the deteriorating culvert were prepared in 2017. Work was completed in 2018.
	Vaughn Trail Culvert @ Long Lake Blvd	Plans to replace the deteriorating culvert were prepared in 2017. Work was completed in 2018.
Sagamore Hills	Gannett Road Culvert	Sizing completed in 2017 to replace twin 24" culverts with one culvert. Work was completed in 2018.
Twinsburg Twp	Twinsburg Road Culvert 112-13461 west of Walters Road	Design underway to replace deteriorating 60" culvert. Work to be completed in 2019.
Countywide	Storm Sewer Video/Inspection Contract	Countywide program to provide full inspection of inaccessible drainage systems. Inspection of enclosed systems was completed on four county highways in 2017, with final mapping provided in 2018. A second inspection program is scheduled

2018 Commercial Plan Reviews

Bath

- Bath Elementary School - 1246 N. Cleve-Mass Road
- Bath Town Hall Parking Lot Expansion - 1206 N. Cleve-Mass Road
- Diyanni Homes Model Home - NE corner of SR 18/N. Hametown
- Revere High School - 3420 Everett Road
- Revere Schools Transportation Facility - 3622 Everett Road
- Truenorth/Shell - 4035 Medina Road

Twinsburg Twp

- Churchill Steel - 7851 Bavaria Road

Copley

- Copley Senior Lifestyle Facility - 4071 Heritage Center Drive
- Copley Crossing - 4161 Heritage Center Drive
- Dan's Wholesale Carpet & Flooring - 29 Rothrock Loop
- Eyesite - 3612 Ridgewood Road
- Planet Fitness - 120 Rothrock Road
- Redwood Apartments - Ridgewood Road

Coventry

- ANR Electric - 3783 State Street
- Convenience Drive Thru - 3511 Manchester Road
- Honeymoon Grille - 3458 Manchest Road
- Medical Office - 2858 S. Arlington Road
- Sheetz - 20 W. Waterloo Road

Engineering Division

Surface Water Management District

Surface Water Management District Status

The newly created Summit County Surface Water Management District was created in 2017. Bath Township joined the district, so the program was implemented in 2018. Implementation of the program was done almost entirely with existing County Engineer employees, so costs were minimal to the property owners in Bath Township. In 2018:

- The SWMD Coordinator and GIS Technician calculated the Equivalent Rate Unit for all non-residential properties in Bath Township.
- The Finance Department developed a complete billing system, including creating a database of bill recipients, gathering and sorting information made available from the Summit County Fiscal Office, designing the bill layout, creating a system to handle phone calls of questions and requests for service, and contracting with a company to print and mail the SWMD bills annually. In the end the cost for printing and mailing 4,400 bills for approximately \$3,500.00. The bills are also processed internally, saving additional money for those property owners paying the SWMD fee. SCE received 330 phone calls to the Surface Water Management District line to date.
- Developed an appeals system, ERU credit system, and drainage concern reporting system.
- Developed Rules and Regulations for the SWMD, which was passed by Summit County Council and added as an appendix to the Summit County Codified Ordinances. The District intends to use the Petition Ditch process to advance projects undertaken by the SWMD, in order to expedite the easement acquisition and establish a maintenance assessment. The construction cost assessment may be reduced by the SWMD fee revenue.
- Worked with Council to make updates for clarification to the existing SWMD Ordinance.
- Worked with the Friends of Yellow Creek to create a questionnaire to get feedback on drainage concerns and problem areas. This was put in the Bath Township newsletter and posted to the Friends of Yellow Creek website. They collected over 50 forms and our consultant visited and evaluated all sites and reported their findings.
- Met with Bath Township officials to get input on the billing process, township priority projects, and to hear concerns about the Ordinance with citizens and township officials.
- Hired Sustainable Streams to prepare a general improvement plan for the Yellow Creek Drainage Basin. Sustainable Streams have recently submitted preliminary findings after their thorough review of the 31 square mile Yellow Creek Watershed, including many in person field reviews. Besides Yellow Creek, there are five other watersheds partially located in Bath Township, and these will also be studied and improved. These are Rocky River, Furnace Run, Cuyahoga River, Sand Run, and Schocalog Run.
- Hired ms consultants to conduct a drainage study of Wye Creek which flows from the Sanctuary of Bath allotment past the Bake Shop in Ghent. The firm has evaluated this stream, which causes severe erosion and flooding, and is developing solutions.
- Next Steps: SCE has reached out to Bath Township to officially form an Advisory Committee in order to provide input to SWMD on priority projects and funding options. Volunteers from Bath Township have already stepped up to be members of the committee.
- Sustainable Streams has identified specific problem areas and will develop cost estimates and project priorities for the overall improvement of the drainage basin.

Assessed Subdivisions

Owners of lots within most township subdivisions developed since the mid-1980s pay Drainage Maintenance Assessments along with their real estate taxes. This funding pays for work that cannot be paid for by our road and bridge funds. Our maintenance crews perform routine inspection and maintenance of the stormwater management facilities (SWMF) within those assessed subdivisions with known drainage issues. In addition, our crews completed major clearing, grading and repair projects at SWMFs in 5 subdivisions. In 2018, we hired two engineering consultant firms to perform additional easement inspection of 135 SWMFs in 82 subdivisions and to prepare enhanced mapping for 37 subdivisions. This information brings our assessed subdivision database up to date and enables us to develop a program to prioritize and budget a comprehensive maintenance program for these SWMFs.

Engineering Division

Highway Section

The Highway Section is responsible for highway design, installation and maintenance of traffic control devices such as signs, pavement markings and traffic signal systems/warning flashers. These functions are integral parts of all improvements made to the Summit County highway system. In addition to the section's primary function of preparing plans for roadway improvements, the Highway Section also conducts studies and/or evaluations of roadway traffic, geometrics, physical features and access. The Highway Section determines the need for signage, guardrail, lane assignments/construction, speed limit revisions and other safety capacity improvements. This Section also reviews and coordinates construction projects to ensure that alternate routes for traffic detours are free of major obstructions and available during the construction season.

<u>Design Completed</u>	
Bath—Medina Line Road Resurfacing (SR 18 to Granger)	<u>Safety Studies</u>
	Ball Bank Study
<u>Current Design</u>	Chamberlin Road - Highland to SR 82 Intersection
Bath -- SR 18 Walkway Project	Cleve-Mass/Ridgewood Intersection
Boston—Boston Mills Phase 2 Improvement	Olde Eight/E. Highland Intersection
Copley—Cleveland-Massillon at Ridgewood Intersection Improvement	Valley View Road -- Sagamore to Boyden Intersection
<u>Current Studies</u>	Valley View Road - Boyden to SR 8 Intersection
Brookwall/Brookmont Intersection	Waterloo Road Speed Study -- US 224 to Portage Line Road
Killian/Myersville Intersection	
Olde Eight/Twinsburg Intersection	
Olde Eight Road Speed Study -- Valley View to SR 8	

Allotment Section

The Allotment Section works with developers, engineers, contractors, governmental agencies and the public to regulate the design, construction and acceptance of subdivisions. This section also coordinates inspections under the Engineer's annual stormwater maintenance program. This consists of inspecting detention/retention ponds, catch basins, headwalls and storm sewers in subdivisions throughout the County. When required, corrective measures are taken to update the stormwater facilities to assure that stormwater is appropriately managed in allotments.

2018 SUBDIVISION PLAN REVIEW & CONSTRUCTION INSPECTION

Arbor Chase Subdivision
 Blue Jaye Farm Subdivision
 Hidden Ridge Subdivision
 Hillside Estates Phase 4
 Lions Park Allotment
 Mottel Reserve
 The Preserve at Miller's Farm
 The Reserve at North Revere



West Ridge Estates

2018 FINAL PLATS

TOWNSHIP	SUBDIVISIONS	SUBLOTS	ACRES
Bath	1	17	13
Sagamore Hills	1	38	38
Twinsburg Twp	1	23	13
TOTALS	3	78	64

2018 PRELIMINARY PLANS

TOWNSHIP	SUBDIVISIONS	SUBLOTS	ACRES
Sagamore	2	135	145
Twinsburg	2	79	52
TOTALS	4	214	197

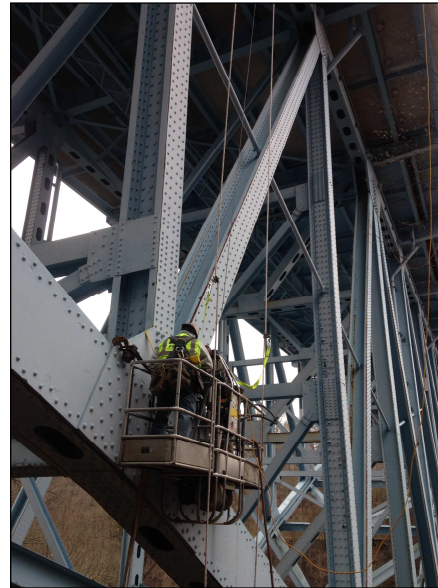
Engineering Division

Construction Section

The Construction Section is responsible for the quality, cost, and timeliness of improvements to the County's highways and bridges. This includes reviewing preliminary plans, acquiring property, relocating utilities, construction inspection, testing construction materials, and completing final construction contract documents.

2018 Construction Projects

<u>Road Projects</u>	<u>Cost</u>
S. Arlington Road Improvement Project	\$ 2,537,296.90
<u>Bridge Projects</u>	<u>Cost</u>
Riverview Road Bridge over Yellow Creek	\$ 243,186.00
North Main Street over Howard St Ramp	\$ 509,105.00
Medina Line Road Bridge over Yellow Creek	\$ 526,160.00
Home Avenue Bridge over Little Cuyahoga	\$ 1,807,186.00
<u>Drainage Projects</u>	
Culvert Program	\$ 185,300.00
Storm Sewer Cleaning and Videotaping	\$ 92,068.00



High Level Bridge Repairs, work completed in 2018

The Construction Section manages the Regional Pavement Maintenance Program. We invite all pavement owners in Summit County to join in joint projects for common roadway maintenance work types. The goal is to achieve savings through economy of scale and standardization of specifications.

The individual entities develop their own scopes and provide their own inspection. This office condenses the numerous smaller projects into larger projects and advertises, awards, and administers the projects.

In 2018, 17 individual local governments participated. 47 individual projects were combined into 10 larger projects worth \$6.7 Million.

<u>Regional Pavement Maintenance Program</u>	<u>SCE Cost</u>	<u>Other Cost</u>	<u>Total Cost</u>
405 Motor Paving	\$ 580,365.33	\$ 375,820.76	\$ 956,186.09
422 Seal Coat	\$ 391,173.04	\$ 754,174.46	\$ 1,145,347.50
448 North	\$ 1,191,045.78	\$ 859,879.64	\$ 2,050,925.42
448 South	\$ 587,120.76	\$ 678,729.64	\$ 1,265,850.40
Asphalt Crack Sealing	\$ 82,398.60	\$ 107,675.69	\$ 190,074.29
Asphalt Rejuvenation	\$ 58,544.09	\$ 61,789.41	\$ 120,333.50
Concrete Pavement Repair	\$ 322,784.50	\$ 100,107.26	\$ 422,891.76
Guardrail Repair	\$ 109,498.25	\$ 35,810.00	\$ 145,308.25
Pavement Marking	\$ 180,930.00	\$ 220,334.03	\$ 401,264.03
Total	\$ 3,503,860.35	\$ 3,194,320.89	\$ 6,698,181.24

**Total Value of All Improvements Managed by the Construction Section:
\$11,470,029.20**

Engineering Division Construction Section

The Construction Section provides assistance as requested by townships and various other municipalities, which may include review of construction documents and plans, preparation of cost estimates and bid documents, inspection of construction activities and contract administration. This Section also performs annual inspection of bridges, culverts and roads. In addition the Construction department administers permits for road openings and closings, special hauling, ditch enclosures, and driveway culverts.

Utility Coordination

Existing utilities, private and public, overhead and underground, conflict with almost every construction project. Our Utility Coordinator is responsible to ensure that all conflicts are identified and addressed before construction begins. This entails detailed reviews of preliminary construction plans, visits to the proposed construction site, and constant coordination with representatives of the utility companies.

In addition, to coordinating utilities for this office, our Utility Coordinator also performs this work for other government agencies that do not have a Utility Coordinator.

Right-of-Way Acquisition

Many public works projects require the acquisition of property. Our office is very fortunate to have a skilled staff member trained in all aspects of ROW acquisition.

Construction Management, Inspection, and Materials Testing

Our project coordinators and construction inspectors work with our general contractors to ensure that work is performed in conformance with the contract documents.

Other Construction Projects Administered, Inspected, and Tested	
Township	Projects
Bath	4
Boston	1
Copley	4
Coventry	1
Northfield Center	2
Richfield	0
Sagamore Hills	3
Springfield	3
Twinsburg	5
Other	
City of Akron	2
City of Green	2
City of New Franklin	2
City of Norton	1
Village of Clinton	1
Village of Peninsula	3
Village of Richfield	1
MetroParks	3
Total	38

TOWNSHIP PROJECTS

	Township Cost
Sagamore Hills Township	
Kiltie Lane	\$ 256,316.20
Canyon View Phase 2	\$ 422,415.86
Total Value of Improvements to SCE	\$ 7,353,790.25
Total Value of All Improvements Managed by Construction Section	\$ 11,226,843.20



Riverview Road Bridge over Yellow Creek Scour Mitigation

Administration Division

Human Resource Section

The Human Resource functions of the Engineer's Office are coordinated through our Personnel Administrator and the County Department of Human Resources which reports to the County Executive. The Personnel Administrator assures compliance with all rules and policies established by the County Human Resource Commission, the County Department of Human Resources and any federal, state or county labor laws. The Personnel Administrator also maintains an employee database for all employees of the County Engineer.

The total number of employees in the Engineer's office increased by 8 employees in 2018.

All the labor contracts for the Engineer's office were up for negotiation in 2018. The International Union of Operating Engineers (IUOE) represents three heavy equipment operators. The American Federation of State, County and Municipal Employees (AFSCME) represents the remaining 67 bargaining unit employees. By the end of the year, 70% of the employees in the Engineer's office were part of a collective bargaining unit.

The Administration Division added a records clerk. Prior to 2018 record clerk position had remained unfilled for several years and the functions were shared by other positions. The Maintenance Division was able to add 7 positions. The number of heavy equipment operators was increased from 2 to 3 in 2018. The other additional employees filled vacancies from prior

Employees by Employment Status		
	2017	2018
Bargaining	63	70
Non-Bargaining	19	20
Unclassified	10	10
Total	92	100

Employees by Division		
	2017	2018
Maintenance	60	67
Engineering	25	25
Administration	7	8
Total	92	100

Finance Section

Operating Expenditures

The overall increase in operating costs was less than 4% in 2018. Despite an increase in the number of employees, personnel costs increased less than 1%. Debt service costs decreased by more than 2%.

Non-personnel operating expenses were also trending well until salt prices doubled as we entered the 2018/2019 snow and ice control season. The unexpected surge in salt prices required supplemental appropriations to cover the increased costs. As a result, non-personnel operating costs increased over 15% by the end of the year.

Operating Expenditures	2017	2018
Personnel	\$7,945,067	\$7,998,077
Operations	\$2,430,229	\$2,801,455
Debt Service	\$325,667	\$317,098
Total	\$10,700,963	\$11,116,630

Capital Improvement Program

In 2018, capital program expenditures increased by nearly \$700,000 to just over \$5.8 million. This is the third consecutive year capital expenditures increased. The office has been working to control operating costs to help fund the capital program. Ten years ago, the capital program accounted for approximately 21% of total expenditures for the office. In 2018, more than 34% of our offices total expenditures were capital programming expenses.

Revenue

Our office's primary source of revenue is from vehicle license taxes and gasoline taxes. In 2018, tax collections increased by approximately 4%. However, total revenue from all sources increased by only 2.4%.

The county approved a \$5.00 increase in the county permissive license tax in 2018. The increase goes into effect for 2019. The increase will provide additional funding for capital projects in 2019 and beyond.

Tax Revenue		
	2017	2018
License Taxes	\$12,884,600	\$13,475,699
Gasoline Tax	\$2,389,285	\$2,417,404
Total	\$15,273,885	\$15,893,103

Current and Upcoming Projects

Home Avenue Bridge Replacement: Bridge construction is underway, to be completed in 2019

N. Main Street Bridge over Howard Street Ramp Removal: Construction is underway for this bridge removal project to be completed summer 2019

Medina Line Road Bridge Replacement: This project replaces the bridge located 200 feet south of the Granger Road intersection, including widening shoulders and setting back ditch lines. Stage 1 plans are complete, and the project will begin in Spring or Summer 2019

Wright Road Bridge Replacement: Project is under design and expected to bid out in late 2019

SR 18 Walkway: This is a Bath Township project administered by SCE however no county funds are involved in the project. SCE applied for Transportation Alternative Program dollars on behalf on Bath Township for the construction of an 8' wide pedestrian walkway/bicycle path along SR 18 from just east of I 77 to Cleveland Massillon Road. Construction will begin in the summer of 2019

Riverview Road Bridge over Furnace Run Reconstruction (Cuyahoga Falls): Design is complete on this project and with ODOT waiting for final approval. Construction expected in early 2020

Boston Mills Road Geotechnical Study : This study, partially funded by an Eastern Federal Lands Access Program grant will investigate the Boston Mills corridor, which has at least 7 active landslides.

Cleveland Massillon at Ghent Road Intersection Improvement is currently at the Stage 2 design phase. This project includes funding from SCE, Bath Township, and the Embassy Parkway Landowner's Association. The project involves realigning the intersection from a "Y" intersection to a "T" intersection and adding a continuous right turn lane on Cleveland Massillon to reduce congestion. Projected construction start date is Summer 2019

West Bath Road Landslide Repair: A design firm has been hired to design a landslide stabilization project on W. Bath Road from N. Revere Road to 500 feet east of the intersection. Project bid date for construction is Fall 2019

Bath Road Bridge over Cuyahoga River Rehabilitation: This is a design/build project for the rehabilitation of the Bath Road Bridge, which is currently load limited. The contract has recently been awarded. The goal is to start construction in 2019.

Canton Road/US 224/SR 91 Improvement : ODOT is administering this intersection improvement. ODOT maintains three legs of the intersection and Summit County owns and maintains the southern leg of the intersection. Construction expected to begin in 2019

Cleveland Massillon at Ridgewood Road: A design firm is currently designing this intersection improvement project. This is part of an effort with Copley Township and ODOT to reduce congestion along the corridor and construction expected in 2020

Cleveland Massillon at SR 162 (Copley Circle): This project is administered by ODOT and involves adding a southbound right turn lane and an eastbound left turn lane. Construction expected 2020

Major Resurfacing

- Portage Lakes Drive from SR 93 to Cormany
- Medina Line Road from SR 18 north to Granger Road
- Boston Mills Road Part 2 from Blue Hen Falls parking lot to end of the Phase 1 improvements – Partially funded with FLAP grant funds, under design

Alan Brubaker, P.E., P.S. Summit County Engineer

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For more information on projects of the Summit County Engineer's Office please contact us or check our website:

www.summitengineer.net

Pothole Season

Summit County Public Services Department is open Monday - Friday 7:30 a.m. – 4:00 p.m. for reporting any potential problems or concerns affecting the roadways throughout the County.

We also have a 24/7 reporting system to gather information reports of roadway problems. To report a pothole or roadway defect call 330-643-2860.

Surface Water Management Program Contact Information Now Available

Phone: (330) 643-8010

Email: SWMD@summitengineer.net

Web: www.summitengineer.net/services/surface-water-management



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