

2011 ANNUAL REPORT

PREPARED BY:
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SUMMIT COUNTY ENGINEER

ISSUED APRIL 2, 2012





Replacement of the Northampton Road Bridge, Cuyahoga Falls

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.



2012 Miniature Bridge Building Competition

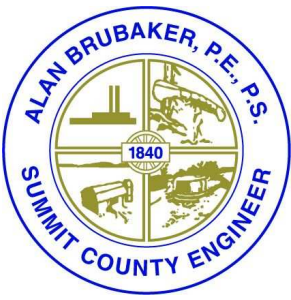


Emergency response to the Bolanz Bridge over the Cuyahoga Logjam

Photo credit: Robert Eller

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

SUMMIT COUNTY ENGINEER

April 2, 2012

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

Dear Members of Summit County Council:

In accordance with Ohio Revised Code Section 5543.02, I respectfully submit the Summit County Engineer's (SCE) annual report for the year 2011. This report reviews the activities of this Office for 2011, 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.

The third year in office was again affected by the economic downturn. However, I am proud to say that we were able to keep our expenditures in line with the declining revenue without cutting any essential services to the public. Notably, our salary and benefits line item was reduced by another \$309,000, representing a decrease of 4% from 2010. These reductions allowed us to increase highway maintenance expenditures by \$248,000 and still maintain a sufficient reserve fund for future operations. We continue to move forward on several initiatives while still providing snow and ice control and maintaining the roads and bridges.

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.
- Installation, inspection, and maintenance of traffic safety equipment, 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 nine townships.
- Coordination of local efforts to procure state and federal funding for infrastructure.



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

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 storm water facilities, including 55 assessed subdivisions
- Over 30 signalized intersections

**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
- Bid notices
- Traffic Alerts
- SCE publications
- Surveys
- Subdivision plats & documentation
- Monument mapper
- County maps
- Road and bridge permit forms
- Township services forms
- House numbering requests

Notable Events

Regional Pavement Maintenance Program

In 2011, the Summit County Engineer's office created a regional pavement maintenance program. The office's bid process was opened up to other communities in Summit County. The larger purchasing power created by bidding for pavement maintenance items as one unit had led to a smaller per unit costs for all participants, while the municipalities still maintain local control over the projects. The Summit County Engineer's office administers the County-wide program.



Many officials were involved in the creation of the County-wide program. The Summit County Engineer's office would like to thank Summit County Council, the Summit County Executive, and participating officials from Bath, Copley, Coventry, Northfield Center, Sagamore Hills, Springfield, and Twinsburg Townships as well as the cities of Akron and New Franklin and the village of Richfield.

New budgeting procedures, performance measures, and the newly developed budget document

In 2010, we issued our first budget document, the complete operating budget for 2011, a detailed explanation of our budgeting process and procedures. The 35 page document was submitted to County Council and the Executive along with our standard budget worksheets as a way to detail the steps our office has undertaken to create the budget, the reasoning behind our budget requests and to explain various program and budget changes instituted by this office.

In 2011, we added onto the budget document. Now we not only submit the operating budget in our budget document, but the capital budget as well. This gives County Council and citizens the clearest picture possible of the state of the Engineer's office finances and upcoming projects. The document is now 47 pages long and explains in detail any budgetary maneuver or change made by this office.

The changes made over the last three years to our budgeting process is a major step toward improving financial accountability in the Engineer's office by actively evaluating all expenditures and setting results expectations for the office.

Time Tracking

The IT Section developed a new Time Tracker, a tool for tracking time and funding sources to help track and report on projects as they develop. (See page 17 for more information.)

Traffic Access Management

In 2010 the Engineer's office got the ball rolling on implementing a countywide traffic access management manual. Traffic access is the regulation of interchanges, intersections, driveways and median openings to a roadway. In 2011, the first part of the project was completed and the consultant began preparations to write the manual. (See page 15 for more information.)



Northampton Road Bridge Replacement

As part of our 2011 Construction Program, we replaced the Northampton Road Bridge over Mud Brook. The old bridge was built in 1930, making it 81 years old and was rated 304th of the 314 bridges in our inventory when it was replaced. This project had been in the works since before 2008. Michael Baker Jr., Inc performed the design services and Workman Industrial Services, Inc., constructed the new bridge this past fall. After some weather related delays, the new bridge was reopened to traffic on December 2, 2011.

Notable Events

Surface Water Management

In 2011, we made even more significant strides towards developing a surface water plan for Summit County. Our office put together a draft proposal for County Council's consideration for implementing a County-wide surface water management program. (See page 14 for more information)

July 20, 2011 Storm Response

On July 20th Summit County experienced what meteorologists deemed to be a 100 year storm. Summit County Engineer employees responded quickly and efficiently to prevent hazardous situations for motorists and to protect Summit County roads, bridges, and culverts.

Public Services crews were out in the field starting at 5:30am on Tuesday and worked well into the evening. Quick work saved the Bolanz Road Bridge over the Cuyahoga, as well as helping the nearby flood waters recede. Crews had to cover northern, western, and southern Summit County quickly in order to mark hazardous areas with road closed signs, cones, and barrels. Debris had to be removed from numerous County highways and washouts along roads had to be stabilized



Debris and flood waters threatening to wash out the Bolanz Bridge over the Cuyahoga in July 2011. Photo credit: Robert Eller

Work continued the next day to protect the integrity of Summit County roadways by stabilizing washouts and removing debris from roads and culverts. The embankment of the Brush Road Bridge over Furnace Run had eroded dangerously and workers backfilled and reinforced the area in order to get the road open to traffic by 5:15pm that evening. Crews also reinforced the erosion threatening North Turkeyfoot Road by Portage Lakes Drive with no disruption of traffic.

It should also be noted that this was done on some of the warmest days of the year.

AMATS Funding

The Akron Metropolitan Area Transportation Study allocates funds every year based on a point system to local governments to improve their roadways. In 2011, the Summit County Engineer's office applied for money to resurface several roads and were awarded funds to resurface three Summit County roads. These applications brought in an additional \$2,240,000.00 to resurface County roads.

Public Lands Highway Discretionary Funding



Example of an improved roadway in the Cuyahoga Valley National Park

In 2011 the Summit County Engineer's office submitted a grant application for funding under the Public Lands Highway Discretionary Grant Fund program. The office was successful in securing grant funding for making significant safety and accessibility improvements to Summit County roadways within the Cuyahoga Valley National Park (CVNP) as the result of the approval of his grant application for \$1,947,393.00 of Public Lands Highway Discretionary (PLHD) funds.

The improvements to the roadways will include:

- performing speed and safety studies throughout the CVNP,
- addressing environmental and erosion concerns,
- upgrading gravel shoulders to asphalt shoulders,
- repairing and resurfacing roadways,
- widening shoulders for bicycle travel, and
- constructing trail heads, scenic overlooks and park and ride facilities.

Public Services Division

The Public Services Division is responsible for maintaining over 360 lane miles of county roadway, 314 bridges, over 1,200 culverts, guardrail, berms, vegetation control, ditches, pavement markings, traffic signals, tree trimming and removal, deceased animal removal, driveway culvert pipes, fleet maintenance, retention and detention ponds, roadside mowing, and snow and ice control. The men and women in the Public Services Department are most often the public face of this office. They do so much more than just maintain the roadway. They are often rebuilding culverts, driveway pipes, dredging retention or detention ponds, providing snow and ice control or providing pavement markings.

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. We also provide snow and ice control for the City of New Franklin by contract. In addition to our South Street and Boston locations, the County has salt storage facilities in Bath, Lakemore and New Franklin.

In 2011, a total of 1,309 requests for service were received and completed, 171 animals were picked up and disposed of, 137 ditches were cleaned, 54 traffic signal malfunctions were repaired, 53 tree problems were handled and there were 40 road shoulder repairs. The department used 1,900 tons of stone, 1,300 ft of culvert pipe, 1,300 tons of asphalt and 20,000 tons of salt.

Portage Lakes Drive Stabilization Project



Public Services Division

Our South District replaced two crossover pipes on Minor Road. Landslide repairs were made on North Turkeyfoot Drive and Portage Lakes Drive. Washout repairs were made on South Hometown Road. In addition, road side mowing, driveway culvert replacements, ditch cleanouts and pothole patching were performed.

Our Boston district installed ditch enclosures and drive pipes on Old Mill Road and Revere Road. Work was performed on Bath Road consisting of: Installation of a basin at the crossover south of #2917, installation of a basin at crossover at #3139, and the reconstruction of a retaining wall at the intersection of Ghent Hills Road. A crossover pipe was replaced on Boston Mills Road east of the 271 overpass. A crossover pipe was replaced on Boyden Road at Glencrest. In addition, road side mowing and numerous driveway culvert replacements, ditch cleanouts and pot hole patching were performed throughout the district.

Our Ditch Crew completed ditch maintenance and clean out work on Commerce Drive and Glaze Ditch. A culvert replacement was done on Minor Road, and a retaining wall project was completed on Portage Lakes Drive. Ditch reconstruction work was performed on Spruce Run and retention pond restoration work, at Royal Meadows, was also performed. Work was completed to clean out a blockage on Glencairn Forest, at retention area in front of box culvert. In addition, our Ditch Crew replaced a retention pond outlet pipe on Kingsbury Crossing and repaired sink holes at Eaton Estates.



**Spruce Run
Retention Pond Reconstruction**

Material Usage

	2008	2009	2010	2011
Salt (in tons)	14,900	14,160	16,400	20,000
Stone (in tons)	6,200	5,500	3,400	19,000
Asphalt (in tons)	2,600	2,300	2,000	1,300
Culvert Pipe (in feet)	4,140	5,100	2,300	1,300

New equipment/vehicle purchases

2011 Schwarze Vac-All Street Sweeper	\$210,000.00
2012 Ford Explorer	\$ 26,270.00
2011 Durapatcher	\$ 61,654.00
TOTAL	\$297,924.00

Public Services Division

Bridge Section

In 2011 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.



Cleveland Massillon Road Bridge
Wing Wall Reconstruction

Cleveland Massillon Road Bridge (FRA-17-0475): Extensive concrete repair, gunite and pour in place redi-mix.

Houghton Road Bridge (SAG-166-0053): Gunite Repairs

High Level Bridge (AKR-8-0908): Gunite and repair curb and routine bi-annual maintenance.

North Main Street Bridge (Akr-8-0898): Expansion joint repair.

Granger Road Bridge (BAT-79-0283): Modify concrete slope protection.

Granger Road Bridge (BAT-79-0203): Gunite repair and crack seal pavement

Vanderhoof Road Bridge (FRA-215-0290): Girder retrofit project.

Hudson Aurora Road Bridge (HUT-39-0296): Gunite repairs.

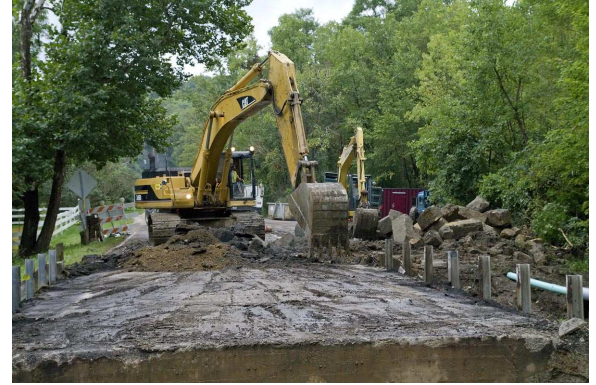
In addition to work mentioned above, numerous log jam removals, washing of bridge decks and other various maintenance tasks were performed.



Vanderhoof Road Bridge
Girder Retrofit

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.



Northampton Road Bridge Replacement

Akron Peninsula Road Resurfacing

Akron-Peninsula Road was improved from 1,200' south of Truxell Road to Orchard St. in Village of Peninsula. The existing road was milled, pavement repairs performed, new asphalt placed, and new pavement markings applied.

Lockwood Road Resurfacing

Lockwood road from SR 619 to State Road was improved in 2011. The existing road was pulva-mixed. This process grinds the existing pavement and then compacts it back in place to form a stable road base of recycled from the original road material. Then, an intermediate course of 405 was placed. Finally, a surface course of 409 was applied.

2011 Summit County 405 and 409 Resurfacing Program

- Boston Mills Road from Richfield Corporate Line to Black Road
- Columbia Road from Black Road to Riverview Road
- Myersville Road from Green Corporate Line to Krumroy Road
- Minor Road from Medina Line Road to Cleveland-Massillon Road

2011 448 Resurfacing

- Bath Road from Revere Road to Shade Road
- Old Mill Road from the Twinsburg Corporate Line to Ravenna Road
- Revere Road from Bath Road to Shade Road
- Albrecht Road from Edith Road to the Portage Line
- Pickle Road from the Green Corporate Line to Killian Road

2011 Crack Sealing Program for Summit County

- Cleveland-Massillon Road from Springside Drive to Ghent Road
- Summit Road from Cleveland-Massillon Road to Jacoby Road
- Portage Lakes Drive from South Turkeyfoot Road to South Main Street
- State Street from SR 93 to New Franklin Corporate Line

2011 Asphalt Rejuvenating Program

- Jacoby Road from Summit Road to Ridgewood Road
- Swartz Road from Darnell Drive to 800' west of Arlington Road
- North Turkeyfoot Road from Vaughn Trail to 500' west of South Main Street
- Waterloo Road from Portage Line Road to SR 224
- Krumroy Road from SR 241 to Pressler Road

Summit County 2011 Spot Paving Program

- South Main Street (center lanes only) from Warner Road to Mallard Point
- Quick Road from the top of the hill to 2000' east
- Cleveland-Massillon Road (Turn lanes at Lowe's)
- Medina Line Road (various locations) from SR 18 to SR 303
- Everett Road Bridge deck over Riding Run
- Graybill Road Bridge deck over Heckman Ditch
- Reimer Road Bridge deck over Van Hyning

Engineering Division

Survey Section

The Summit County Engineer's Survey Section utilizes a survey field crew under the direct supervision of a Professional Surveyor to perform surveying for internal departments, townships and for the County Executive. A Trimble 5600 robotic total station, Topcon 300 series total station and a Ranger data collector with TDS software were utilized to collect survey data. Computers with Civil 3D CAD and specialized survey software were used to accept and analyze the field data and create the base mapping for design and field staking purposes. The Survey Section also utilizes four GPS receivers to establish horizontal and vertical control on jobsites. The survey Section annually prepares and adheres to an efficient and cost effective budget.



The Survey Section provided various surveying services including record research, plan review, the determination of road centerline, right-of-way lines and property lines, topographical mapping, staking, and the preparation of legal descriptions for 32 road, bridge or drainage projects. They also aided in proposed easement acquisitions by field staking the proposed acquisition areas. They routinely took measurements to monitor areas affected by landslide movement that is slowly causing deterioration in portions of Portage lakes Drive and also in an area of the south bank of a portion of Revere Road. They staked road right-of-way at the request of the SCE Public Service Department to aid with ditching and signal pole installation. They helped to ensure proper construction of subdivisions by verifying road survey monumentation is set. They reviewed major subdivision plats, and survey drawings and legal descriptions for parcel splits and consolidations to ensure state and local standards are met. They provided field work and wrote professional documents for the Department of Environmental Services to acquire easements for construction of a sewer project in Coventry Township. They provided coordination and technical support to Sagamore Hills Township, Northfield Center and Boston Township concerning proposed township road vacations.

The Survey Section helps maintain the integrity of the road surfaces by surveying for the installation of Monument Boxes. Since a portion of everyone's property borders a road, private surveyors need to dig holes in the pavement to find old survey pins that define the centerline of that road. The holes can be more than a foot deep and soon turn into large "pot holes". We survey to determine the centerline of road right of way in coordination with a pavement resurfacing project. Monument Boxes containing survey pins marking the centerline can then be installed at the surface of the pavement during the paving project. This allows private surveyors to simply lift the lid of the monument box to access the pins they need to perform surveys for the general public and other improvement projects. This helps to eliminate unnecessary pot holes and extend the life of the pavement.

The Survey Section set or reset road centerline of right-of-way monumentation on or along 7 county highways and 1 township road during paving projects. The monumentation includes survey pins set inside 22 monument boxes defining the centerline of right-of-way, 11 metal survey spindles defining the centerline of right-of-way and 24 pins set along the right of way. The monument boxes and spindles are set flush with the pavement and are accessible to surveyors without damage to the roadway pavement

The Survey Section assists with the review of major road and bridge projects as well as road dedications, road vacations, annexations and land subdivisions. They provided survey coordination and review of plans created by consultants for 4 bridges scheduled for improvements. They provided review services for 1 vacation plat. They provided review services for 1 road improvement plans prepared by consultants for the SCE and 1 improvement plan for the Metro Parks Serving Summit County.

Engineering Division

Survey Section

The Survey Section utilizes a Ricoh Aficio XP W2470 RPCS large format copier/printer/color scanner to produce scanned images of Drainage Plans, Subdivision Improvement Plans, Road Record Plan Sheets, Dedication Plats, Vacations Plats, Private Surveys, Cemeteries Maps, Abandoned Mines Maps, Portage Lakes Maps, Nimisila Reservoir Maps, Miscellaneous Township Surveys on file with the Summit County Engineer. Indexes were created identifying the scanned images. These images are available for download to an external hard drive for a fee of \$10.00. There are over 80,000 images available with a total capacity of about 150 gigabytes. This allows private firms and others the ability to access these records from their own computer at anytime. Our goal is to work toward a "digital records room" that can be accessed from the internet. Scanned images of surveys, subdivisions and subdivision improvement plans from our records can be found through the "ON LINE TOOLS" section on the Summit County Engineer website: <http://www.summitengineer.net/resources/tools>

The Survey Section has been instrumental on establishing and maintaining the geodetic survey monumentation that comprises the foundation of the Summit County GIS program. Data sheet information on these survey monuments can also be found through the "ON LINE TOOLS" section on the Summit County Engineer website: <http://www.summitengineer.net/resources/tools>
The Survey Section maintains road and survey record information in a data base format. This allows us to better serve the residents of Summit County.

Community Service

County Engineers Association of Ohio, Ohio Land Records and Modernization Conference, Columbus Ohio
Bob Warren served on a panel and made a narrated power point presentation and internet presentation on 5-18-11 to approximately 100 attendees at the County Engineers Association of Ohio, Ohio Land Records and Modernization Conference in Columbus Ohio. All attendees received certificates of attendance for 2 professional development hours to apply towards their professional surveyor license renewal. Attendees were instructed how to use the SCE web page to access scanned images of 5,562 survey drawings, 1219 subdivision plats, 386 subdivision improvement plans and our Monument Mapper application that gives information on about 900 geodetic monuments in Summit County. The ability to access the records on line will enable them to do their job more efficiently, thereby providing a service to the community.

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

Engineering Division

Right-of-Way

Right-of-Way Coordination

The Right-of-Way (ROW) Coordinator works with ODOT and local agencies to ensure proper procedures are followed in the evaluation, appraisal and procurement of property, right-of-way and easements required for construction of County bridge and highway projects.

The Summit County Engineer's ROW Coordinator is a State of Ohio Certified Residential License Appraiser as well as being ODOT certified to perform acquisition functions for LPA projects in the areas of title search, appraisal, appraisal review, negotiations, and closings.

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 are ODOT certified bridge inspectors and perform our bridge inspections annually to ensure they remain safe for the traveling public.

RECENTLY COMPLETED BRIDGE PROJECTS

Northampton Road Bridge over Mud Brook in City of Cuyahoga Falls – Total bridge reconstruction completed in December 2011.

BRIDGE MAINTENANCE COMPLETED

Cleveland Massillon Road Bridge over Pancake Creek in City of New Franklin – Bridge Deck Repairs with Gunite.

Granger Road Bridge over Yellow Creek in Bath Township – Bridge Deck Repairs with Gunite and crack sealing of asphalt wearing surface.

Granger Road Bridge over North Fork in Bath Township – Slope Protection Repairs with Gunite.

Houghton Road Bridge over Branch Sagamore Creek in Sagamore Hills Township – Slope Protection Repairs with Gunite.

Hudson Aurora Road Bridge over Tinkers Creek in City of Hudson – Bridge Deck Repairs with Gunite.

N Main Street Bridge over Howard Street Ramp in City of Akron – Bridge Deck Expansion Joint Repairs.

N Main Street Bridge over Cuyahoga River in City of Akron – Curb Repairs with Gunite and Bi-Annual Maintenance.

Vanderhoof Road Bridge over Tuscarawas River in City of New Franklin – Bridge Girder Web Plate Retrofit at Abutments and Painting.

BRIDGE INSPECTION

Summit County Bridges – Completed required inspections and inventory of all 314 bridges.

MetroParks Serving Summit County Bridges – Completed 2nd year inspection and inventory of 7 highway/ pedestrian bridges and 25 pedestrian bridges for MetroParks Serving Summit County.

BRIDGE LOAD RATINGS

Summit County Bridges – The Federal Highway Administration (FHWA) requires all bridges over 20 Ft clear span in the United States be load rated. The Summit County Engineer has currently load rated 128 of 176 (72.7%) eligible bridges. The remaining 48 bridges to be load rated in 2012.

COMMUNITY INVOLVEMENT

The Bridge Section participates in the Annual Miniature Bridge Building Competition. This year's competition featured 38 teams of Summit County High School students.

Summit County Engineer Bridge Facts

314 total bridges
118 in Townships
196 in Cities and Villages

New precast concrete arch for Northampton Road Bridge over Mud Brook in City of Cuyahoga Falls completed December 2011.



UPCOMING BRIDGE CONSTRUCTION

31st Street (Cleve-Mass Rd) Bridge over Hudson Run in City of Barberton.

Van Buren Road Bridge over Tuscarawas River in City of New Franklin.

South Main Street Bridge over Portage Lakes Feeder Channel in Coventry Township.

Cleveland Massillon Road Bridge over Van Hyning Run in City of Norton.

Medina Line Road Bridge over Branch of Yellow Creek in Bath Township.

East North Street Bridge over Little Cuyahoga River in City of Akron.

Ravenna Road Bridge over Tinkers Creek in Twinsburg Township.

Ravenna Road Bridge over Tinkers Creek in City of Hudson.

UPCOMING BRIDGE MAINTENANCE

Everett Road Extension Bridge over Riding Run in Boston Township – Bridge Deck Waterproofing.

Greybill Road Bridge over Heckman Ditch II in City of Green - Bridge Deck Waterproofing.

Reimer Road Bridge over Van Hyning Run in City of Norton - Bridge Deck Waterproofing.

Cleveland Massillon Road Bridge over North Fork in Bath Township – Scour mitigation with rock channel protection, mortar of exposed foundations and seeding/mulching of disturbed areas.

Cleveland Massillon Road Bridge over Pancake Creek in City of New Franklin – Downstream Rip Rap Repairs.

Greenwich Road Bridge over Branch Hudson Run in City of Norton – Scour repair at abutments and gunite repairs bottom of deck slab.

Brecksville Road Bridge over Furnace Run in Village of Richfield – Gunite repairs to abutments and wingwalls.

Brecksville Road Bridge over Branch Furnace Run in Village of Richfield – Gunite repairs to wingwalls and scour repair to abutments at outlet.

Minor Road Bridge over Wolf Creek in Copley Township – Abutment scour repair at grout filled mattress slope protection.

Planning Section

Supported Committees & Organizations:

The Planning Section supports and regularly attends meetings of various committees and organizations that affect roads and bridges 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 co-ordinate with other community programs. This office participated in the following committees and organizations:

- National Pollution Discharge Elimination System Phase II County-wide Program
- Heritage Corridors of Bath Scenic Byway
- Northeast Ohio Four County Planning and Development Organization (NEFCO) Environmental Technical Advisory Committee (TAC)
- Akron Metropolitan Area Transportation Study (AMATS) Technical Advisory Committee
- Yellow Creek Watershed Group
- Brandywine Watershed Group
- Muskingum Watershed Conservancy District
- SCE representative to Bath Township
- Providing municipal engineering services to the City of Norton



Bath Nature Preserve Underpass

G.I.S. Section

The Geographic Information System (G.I.S.) Section is a complement to our engineering section by supporting the design engineers by creating design drawings, mapping infrastructure features, including the mapping of infrastructure features using handheld G.P.S. equipment and other miscellaneous spatially based mapping necessary to provide information to make informed engineering decisions. They also provide the Summit County maps to the public.

LBRS (Location Based Response System) Project

The Engineer's office currently provides house numbering services to a large portion of Summit County. The G.I.S. Section aides emergency responders by providing additional layers of address validation and ensuring accuracy and quick response times to emergencies.

AutoCad Civil 3D Implementation & Drafting Standards Update

The G.I.S. Section uses the latest AutoCad Civil 3D and Eagle Point software to produce plans for the County Engineer's projects. Design styles and plot control files that create a consistent "look and feel" for our plans are also available to consulting firms working on county projects by request.

2011 LIDAR / Two Foot Contour Data

The Engineers office is evaluating the use of LIDAR (Light Detection And Ranging) to assist our Storm Water Engineers in the modeling of drainage areas and impervious surfaces in the county. The LIDAR data can also be used to produce highly accurate contour and DEM (Digital Elevation Model) data county wide.



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. In 2011, the Drainage Section generated 41 letters of response and/or transmittals providing information regarding drainage reviews. 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. There were 8 ditch restoration projects coordinated with the Summit County Engineer's Maintenance Department Ditch Crew and 7 drainage projects are in various stages of design.

2011 Ditching Projects

Township	Location	Type of Work
Bath	Royal Meadows Subdivision	Detention Basin Maintenance
Copley	Spruce Run	Detention Basin Maintenance
Copley	Twin Creeks Subdivision	Ditch Clean Out
Copley	Commerce Drive	Detention Basin Maintenance
Copley	Montrose West	Detention Basin Maintenance
Richfield	Glencairn Forest Phase 3	Detention Basin Maintenance
Sagamore Hills	Red Hawk Reserve	Detention Basin Maintenance
Springfield	Springfield Lake Outlet	County Ditch Maintenance

2011 Drainage Projects

Bath	Bonnebrook Culvert	Construction Completed
Bath	North Fork Streambank Repairs	Repairs Underway
Bath	Treecrest Drive Drainage Improvements	Active Ditch Petition Project
Copley	Minor Road Culvert Replacement	Construction Completed
Coventry	Iris/Bender Culverts	Construction Completed
Coventry	Krebs Drive Culvert	Design Complete/Obtaining Easements
Various	2011 Culvert Contract - One Culvert on Cottage Grove Road	Construction to be Completed Mid-2012

2011 Commercial Plan Reviews

Copley

- CNS Building Addition - 762 S. Cleveland-Massillon Road
- Copley Eye Center - 270 S. Cleveland Massillon Road
- Guardian Angels Church - 1676 S. Cleveland-Massillon Road
- Homebuilders Association - 799 White Pond Drive
- Montrose Ford Wash Bay Addition - 3960 Medina Road
- Salvation Army - 150 Springside Drive
- Team Health - Ridge Park Business Center
- Walmart - 200 Rothrock Road

Coventry

- All About Kids Daycare - 792 Waterloo Road
- Dunkin Donuts - Manchester Road Outlot

Northfield Center

- Aldi/Sptitzer Access Drive
- Brandywine Road Bike & Hike Trail and Parking Lot Improvements

Springfield

- Springfield High School/Canton Road Site Improvements
- Rochling Site Improvements - Picton Parkway
- Walmart - 2887 S. Arlington Road

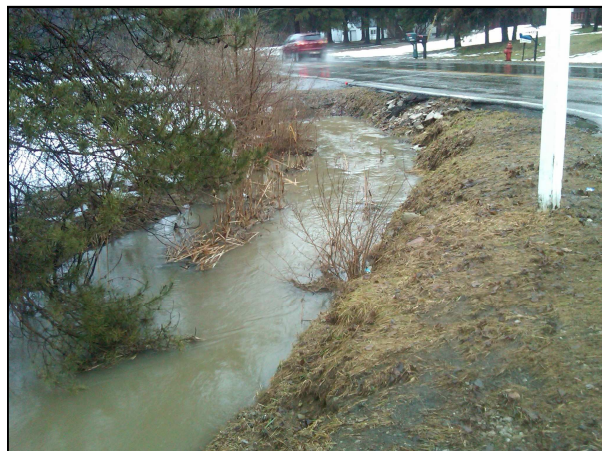
Engineering Division

Drainage Section - Surface Water

Stormwater Management

In March of 2010, the County Executive's office, County Council and the County Engineer entered into a Memorandum of Understanding (MOU) in regards to a surface water funding program. In the MOU the County Engineer's office was charged with putting together a preliminary county-wide stormwater management plan. After a long process the Summit County Engineer's office came up with a draft Ordinance in 2011 putting in place the basic structure of a regional surface water management utility in Summit County.

The greatest benefit of the Surface Water Utility to our local residents will be the funding of projects that will stop or prevent flooding that causes damage to private property and businesses. Last year was the second wettest on record for the Akron area and this year is predicted to be worse given that the water table is already elevated. Currently there is no funding source on the county level to fix flooding that occurs outside the road right-of-way.



The Regional Surface Water Management Utility draft was created by relying heavily on community input. The County Engineer's office, with the approval of County Council, hired the University of Akron in partnership with the Lorain County Community College to study the issue. They conducted interviews with Summit County communities to solicit their views with regard to large scale flooding and stormwater runoff issues. The County Engineer's office used the feedback to design a program that would address the communities' needs.

The program has mechanisms to solve regional flooding problems while cities, villages and townships still maintain local control. If enacted, there would be a board made up of local officials to determine project funding and timelines. The utility would allow communities to decide if their project was local or regional in nature. If they agree that their project has "regional" benefits, the project would be a candidate for funding through the Regional Surface Water Utility. No project would be constructed without the consent of the local community.

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.

Barn Hill No. 3
Bentley Reserve
Natures Preserve
The Hammonds
Rotilli Lane



2011 FINAL PLATS

TOWNSHIP	SUBDIVISIONS	SUBLOTS	ACRES
Bath	1	4	8
Copley	1	39	21
Coventry	3	7	3
Richfield	1	4	3
Springfield	2	22	13
TOTALS	3	76	48

2011 PRELIMINARY PLANS

TOWNSHIP	SUBDIVISIONS	SUBLOTS	ACRES
Bath	1	4	8
Copley	1	39	21
TOTALS	2	43	29

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.

Design Complete	Studies Complete
Boston– Akron–Peninsula Improvements Phase 2	Coventry -- Bender Avenue Sight Distance Study
Boston–Hines Hill Road Guardrail Design	Coventry -- Boston/Covelin Sight Distance Study
Coventry–Portage Lakes Drive Embankment Repairs	Richfield -- Townsend Road Speed Limit
Sagamore Hills–Holzhauer Road Improvements	Richfield -- Wheatley Road Speed Limit
Twinsburg Twp–Old Mill/Ravenna Traffic Signal	Countywide -- Highway/Rail Crossing Upgrades
Current Design	Current Studies
Bath -- Cleveland–Massillon Road Improvements	Richfield -- Southern Road Speed Limit
Boston -- Riverview Road Improvements Phase 1	Copley -- Montrose Speed Limits
	Countywide -- Hidden Drive/Sight Distance Policy

Traffic Access Management

What Is Access Management?

Access management involves maximizing the existing street capacity and reducing potential for crashes through limiting the number of access points, carefully placing and spacing access points (side streets, commercial driveways and median crossovers), ensuring driveway design meets standards, properly spacing traffic signals and other enhancements.

The Summit County Engineer is now entering the second phase of developing a manual to better plan for our future roads. The manual will include best practices for design and safety, based on successful models from across the country and Ohio. However, it will be tailored to fit the unique characteristics of different areas in Summit County.

The manual will include:

- Access management standards to improve traffic flow and safety through the location, number and design of access points.
- New standards for center turn lanes, passing lanes, turn lanes, and medians/boulevards.
- Future right-of-way widths needed to accommodate all roadway users.
- Standards for subdivision street connectivity.
- Guidelines for requiring and reviewing Transportation Impact Studies.

Why is it Important?

SAFETY: *Studies show a direct relationship between the number of driveways along a corridor and the number of crashes. Successful access management reduces the number of driveways.*

INVESTMENT: *Maintains capacity and traffic flow without costly widening or reconstruction.*

COMMUNITY: *Sustains vibrant business districts and makes roads more walkable, bikeable and livable.*

The county has sought input from townships, municipalities, AMATS, ODOT and key stakeholders that may be affected by the manual. A series of meetings, targeted to key interest groups, provided a forum in which to learn about the benefits of the project and discuss how the new manual can best meet the county's needs.

- Advisory Committee Meetings will be held throughout the project
- Stakeholder Roundtables are planned to better understand the private business and developer's perspective
- Meetings with local communities are expected to help disseminate information and provide local meeting opportunities
- A Public Workshop will be held to present findings and receive feedback

Engineering Division

Construction Section

The Construction Section ensures the quality, cost and timeliness of improvements to the County's highways and bridges. This includes all activities from obtaining legislative approval to project bidding to construction inspection to completion of final project documents.

Road Projects

Akron Peninsula Road Improvements	\$	453,252.65
Lockwood Resurfacing (w/Barberton)	\$	174,504.83

Bridge Projects

Northampton Road Bridge Replacement	\$	524,531.06
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Drainage Projects

Twinsburg Rd Culvert Replacement	\$	24,053.62
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Pavement Rehabilitation

Hot Mix Asphalt Resurfacing - 448 North	\$	426,776.03
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Hot Mix Asphalt Resurfacing - 448 South	\$	249,405.27
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Resurfacing - Seal Coat and Motor Paving	\$	335,076.91
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Pavement Marking	\$	72,443.40
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Pavement Rejuvenation	\$	50,321.49
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Spot Paving	\$	220,208.50
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TOTAL	\$	2,530,573.76
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Northampton Road Bridge Replacement

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

The Utility Coordinator maintains communications with utility (gas/water/telephone/fiber optic/cable TV/ electric power/sanitary sewer/railroad) companies that have facilities in Summit County. The Coordinator works with the utility owners to ensure safe and efficient planning, construction and operation of utilities in the County's right-of-way.

2011 Regional Pavement Maintenance Program

SCE, 7 Townships, 2 City, 1 Village

23 Smaller projects were condensed into 6 larger projects worth \$3.1 Million

Township Construction Projects Administered, Inspected, and Tested		
Township	Projects	Miles
Bath	4	8.09
Boston	0	0
Copley	4	1.79
Coventry	3	4.09
Northfield Center	1	0.7
Richfield	1	0.94
Sagamore Hills	2	0.73
Springfield	1	0.77
Twinsburg	3	3.76
	19	20.87

Township Controlled Highway Miles:

Bath	62.37	Boston	12.19
Copley	58.91	Coventry	54.78
Northfield Ctr.	20.75	Richfield	15.71
Sagamore Hills	37.37	Springfield	70.03
Twinsburg	13.03		

Total Township Miles: 345.12

2011 County Controlled Highway Mileage: 182.77

Administration Division

Human Resource Section

The Human Resource (HR) Section coordinates the human resource functions of the Summit County Engineer's Office, acting as a source of information and support for employees and managers in all aspects of employment, including policy, procedure, compensation, benefits, training, and professional development. The HR Section is also responsible for labor relations and Equal Employment Opportunity Compliance for the Engineer's Office.

The HR Section trains employees on current Office, County, state and federal policies and procedures, and assures compliance with federal and state labor and workplace safety laws, County Human Resource Commission Rules, and the County's Classification/Compensation Plan. The section maintains an employee database for the 111 County Engineer employees.



Summit County Engineer's employees received fire extinguisher training on April 28th.

Information Technology Section

The Information Technology (IT) Section plans, implements, and supports all hardware, software, and network infrastructure for the Engineer's Office. The IT Section also advances the Office's efforts to incorporate cost-effective technology into our operations to constantly improve our delivery of services and information to the citizens of Summit County.

In 2011, our engineering staff and technology staff have been working to find a better, more efficient way to track the time spent on different projects. The IT Section developed a new Time Tracker, a tool for tracking time and funding sources to help track and report on projects as they develop. We are now implementing our new system to keep account of how much time we spend on various projects and endeavors. Being diligent and consistent with tracking our time spent on projects will yield more efficiency for the Engineer's office.



Finance Section

The Finance Section provides oversight, control and management of all budgetary functions for the Summit County Engineer's Office. In addition to the typical accounting functions, the Finance Section manages inventory control, asset accounting, cost accounting, budget management and finance planning.

Revenue

Portions of the Ohio vehicle registration, gasoline and permissive taxes fund the Engineer's office. Approximately 12 cents out of the current 28 cent State gasoline tax goes to Ohio County Engineers. Permissive vehicle registration taxes are used to plan, construct, maintain and repair public roadways. They now account for our second largest share of revenue. Our county permissive tax is \$15 per vehicle.

Capital Improvement Program

The Engineer's Office structures its 6-year Capital Improvement Plan (CIP) to integrate with the Engineer's yearly operating and capital budgets. In prior years, these documents were considered independently, making long term planning and forecasting difficult for the office. The most recent version of the Engineer's CIP is posted on our website.

ODOT State Infrastructure Bank Loans (SIB)

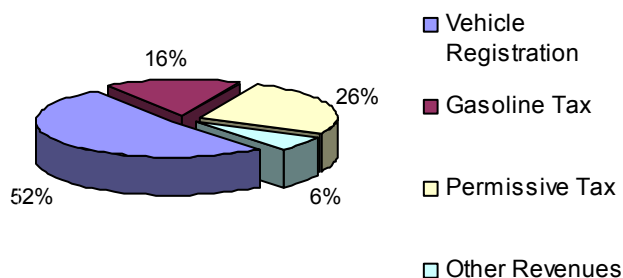
In years prior to 2009, the Summit County Engineer secured SIB loan financing to pay the county local share of the federal roadway improvement projects. The total debt principal on January 1, 2009 was \$4,498,144.00. Repayment of this debt commenced in 2004. The loans carried an average interest rate of 3% and were payable over a 10 year term.

We restructured this debt service in 2010 by consolidating our SIB loans into one note for \$3.5 million at 2.625% that will be held by the County. The restructuring of these loans provided benefits to the MVGT fund and the County's General fund. First, the restructuring provided a break in our interest rate of 375 basis points and a more favorable pay-off schedule, thereby providing approximately \$300,000 per year that can be used for pavement maintenance. Second, by selling the bonds to the General fund, the County's Fiscal Department received an additional 225 basis points over the current rate they had been receiving on their investment of General fund money.

In 2010, the County also refinanced a various purpose road improvement bond. The restructured bond expires in 2014 with a variable interest rate between 2% and 3%. The prior bond, which also expired in 2014, had a variable interest rate between 4.35% and 4.65%. This restructuring will save the MVGT fund approximately \$30,000 per year.

The total impact of the County's debt restructuring efforts is a 30% reduction in annual debt service costs for the MVGT fund through 2014. As impressive as this amount is, the overall debt service expenses still exceed levels advocated by the current administration's debt management policy which demonstrates the negative operational impact of relying on debt financing that occurred between 1990 and 2004.

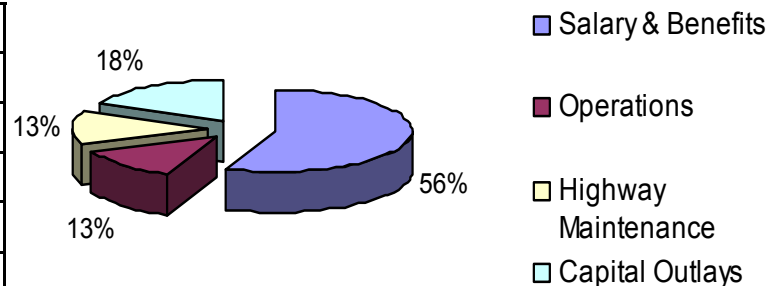
2011 Revenue



REVENUES	2010	2011
Vehicle Registration	\$7,487,222	\$7,647,232
Gasoline Tax	\$2,366,745	\$2,310,207
Permissive Tax	\$3,944,601	\$3,904,047
Other Revenues	\$1,359,352	\$927,725
TOTAL	\$15,158,352	\$14,789,211

2011 Expenditures

EXPENSES	2010	2011
Salary & Benefits	\$8,745,712	\$8,436,662
Operations	\$1,648,865	\$1,881,751
Highway Maintenance	\$1,759,546	\$2,007,579
Capital Outlays	\$2,545,755	\$2,681,317
TOTAL	\$14,699,878	\$14,917,309



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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.

**Summit County Engineer snow-plow drivers work all winter to keep our roads open and safe. Report county roads that need attention, during any season, 24 hours a day, 7 days a week at:
330-643-2860**



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