

**2015 WASHINGTON COUNTY
REPORT ON ROAD AND BRIDGE CONDITIONS**

Roger E. Wright PE, PS, Washington County Engineer

In accordance with Ohio Revised Code 5543.02, I hereby submit the annual report of the condition of the roads, bridges and culverts on the Washington County Highway System for 2015.

The Washington County Engineer and Highway Department has responsibility for 341 miles of 2-lane County roads and 380 bridges within one of the largest geographic area counties in Ohio. Maintaining them to the condition level described herein is a tribute to the hard work and dedication of our supervisors and employees.

SAFETY

We did not have a lost time accident in 2015.

REVENUE AND EXPENDITURE SUMMARY

In 2015 the Washington County Engineer had two sources of funds. The first fund is the Motor Vehicle Registration Fee and Gasoline Tax, known as MVGT. The second fund is 1% Permissive Sales Tax. Together both funds generate and provide the revenue for road and bridge repair, replacement and highway operations.

In order to leverage and maximize our local funds as County Engineer I pursue Federal grant funding for capital projects, allowing our local funds to act as matching funds for specific projects. In 2015 we were very fortunate to receive a large amount of Federal Funding, and with that we were able to complete a number of large projects detailed herein.

2015 MVGT REVENUE RECEIVED:

LICENSES TAX		\$2,287,968.20
GASOLINE TAX		\$2,356,712.91
PERMISSIVE TAX ORC 4504.02		\$274,355.07
\$5 - PERMISSIVE TAX ORC 4504.15 & 4504.16	Enacted 2009	\$556,927.19
FINES		\$45,310.41
SALES		\$16,154.55
INVESTMENT INCOME		\$10,816.80
TRANSFERS – IN		\$0.00
REIMBURSEMENTS		\$37,830.52
OTHER RECEIPTS		\$7,534.16
CAPITAL PROJECTS FEDERAL FUNDS		\$1,408,736.73
TOTAL REVENUE		\$7,002,346.54

For comparison 2014 TOTAL REVENUE: \$5,935,917.72

2015 1% PERMISSIVE SALES TAX REVENUE

SALES TAX – 2015 Allocated	\$368,423.00

2015 MVGT EXPENSES:

PERSONNEL COSTS	\$2,128,140.00
CONTRACT SERVICES	\$109,570.44
SUPPLIES AND MATERIALS	\$1,390,700.12
CAPITAL EQUIPMENT	\$172,772.35
CAPITAL PROJECTS	\$2,922,054.43
OTHER	\$26,233.14
TOTAL EXPENSES	\$6,749,470.48

1% SALES TAX FUNDING FOR COUNTY ENGINEER IN 2015

SALES TAX – 2015, Allocated 1/1/2015	\$368,423.00
4% of 2014 Total Sales Tax Collected	

The 1% Sales Tax fund was originally established by vote of the Board of County Commissioners in 1983, stating that 85% of the proceeds would be used for roads and bridges and 15% for the County General Fund. The County Engineer and all 22 townships were to divide the 85% allocation per an agreed-upon formula.

However, 4 years later in 1987 the Commissioners allocated 35% of the total collections to the General Fund and thus began a steady erosion of the 1% Sales Tax money away from the County Engineer and Townships for road and bridge projects.

For a period of 17 years (1987-2003), the Board of Commissioners increased the percentage of 1% Sales Tax dollars for the County's General Fund, at the expense of roads and bridges, in the approximate amount of 35-50% of the total collected. Then, in 2004 the Commissioners increased the percentage of total collected to 64% going to the General Fund which began another acceleration of funding away from roads and bridges. Ultimately in 2010 a high of 88% of the total 1% Sales Tax collected was allocated to the General Fund.

What effect did this have on road and bridge funding for the County Engineer and Townships? Obviously, it reduced the dollars available when compared with the originally stated 85%. In 1987, this meant a loss of about \$523,000. For the initial 17 year period (1987-2003) roads and bridges lost a total of over \$23,000,000, ranging from \$1,361,000 to \$1,844,000 per year.

In 2004 even greater diverting of monies to the General Fund began, with the nine year period ending in 2012 seeing over \$34,000,000 lost from roads and bridges—an average of over \$3,803,000 per year.

From 1984 to 2008 the County Engineer's Office received at least \$1,000,000 annually in 1% Sales Tax funds, with an average allocation of \$1.4 million over that time period earmarked strictly for road and bridge maintenance.

From 1984 to 2008 the townships also received yearly Sales Tax funds of at least \$500,000, with an annual average of approximately \$750,000 to be divided based on road mileage in each of the 22 townships for road maintenance.

In response to the County Engineer's plea for additional road funding, in 2009 the Commissioners adopted two \$5 permissive license tax fees which have generated approximately \$550,000 annually for County road and bridge work.

In 2012 the Engineer's Office and Township Trustees Association negotiated with the Commissioners to increase 1% Permissive Sales Tax funds to the County Engineer and the townships. Working together, a compromise was reached, and in 2013 the infamous "cap" was removed from the 1% Sales Tax funds and all parties received a portion of the total sales tax collected.

In 2013 the 1% Sales Tax collected approximately \$7.8 million, and was allocated in 2014 as follows; the County Commissioners received \$5.7 million (74%), the Township Trustees received \$1.7 million (22%), and the County Engineer received \$313,036 (4%).

This formula was again followed for 2015, with the 2014 1% Sales Tax of approximately 9.2 million resulting in allocations as follows: County Commissioners \$6.8 million (74%), Township Trustees \$2.02 million (22%), and County Engineer \$368,423.00 (4%).

Unfortunately, 2015 was a repeat of 2014, the amount of 1% Sales Tax received (\$368,423.00) combined with the two additional \$5 Permissive Tax fees from 2009 (\$556,927.19) resulted in a total of (\$925,350). This total falls short of the average of \$1.4 million received for roads and bridges from 1984-2008, without taking into account rising costs of materials.

Expenses for basic commodities such as limestone, fuel, asphalt and asphalt emulsions, road salt, etc. have risen steadily since 2008. Even with the additional revenue from \$5 Permissive Tax the amount lost in 1% Sales Tax has caused revenue to decline or remain flat. Additionally as cars become more fuel efficient, less gas is purchased and gasoline tax revenue (MVGT) continues to fall, adding to the decline of revenue. This results in a loss of buying power with fewer dollars available for maintenance, improvement, or replacement. In order to counter these effects the number of employees has been reduced through attrition via retirement, resulting in a reduction of employees over the course of 10 years in which manpower is now currently at the minimum.

With staffing now at minimum numbers and the budget remaining flat, the level of service of the County roadways will have to be reduced to accommodate the situation. In the very near future it may be necessary to take roads that are currently chip and seal back to gravel, as gravel is cheaper to maintain. This year, like the past few years, I have made the decision to forego re-paving existing asphalt roadways, and instead apply a cheaper chip seal surface.

As reference the table below shows the cost of some basic materials used by the county highway department and how those costs have risen over the past ten years, along with the decrease in number of employees.

	2015	2010	2005
TOTAL REVENUE (without carryover)	\$7,002,346.54	\$6,339,259.62	\$5,173,183.86
1% Permissive Sales Tax Received	\$368,423.00	\$0.00	\$1,358,045.05
TOTAL EXPENDITURES	\$6,749,470.48	\$5,324,038.66	\$4,696,814.46
Salt per ton	\$80.27	\$64.87	\$36.72
Asphalt Material Hot Mix per ton	\$68.00	\$55.00	\$32.00
#57 Limestone per ton	\$21.50	\$19.50	\$14.50
NUMBER OF EMPLOYEES	32	37	40

ROAD CONDITION

The Washington County Engineer has responsibility for approximately 341 miles of County roads. The Micro Paver pavement management system is used to rate the surface condition of our roads. This system only addresses the pavement surface condition as it exists on the day of the bi-yearly evaluation and does not attempt to evaluate whether a particular road should be surfaced with a particular type of pavement.

The road condition goal is to maintain the county road system such that 90% of the roads are in at least fair condition. The table below indicates that this goal was met with nearly all of our roads rated fair or better.

Summary Road Condition Table as of December 31, 2015

CONDITION	PCI RANGE	AVG. PCI CONDITION	LENGTH (Miles)	PAVEMENT AREA (Sq. Ft.)	PERCENT of TOTAL ROAD MILES by CONDITION	ACCUMULATING PERCENT OF TOTAL ROAD MILES
EXCELLENT	≥85	90.1	157.96	16,558,618	46.38%	
GOOD	61-84	71.9	159.69	16,367,805	46.89%	93.27%
FAIR	46-60	55.8	22.36	2,365,930	6.57%	99.83%
POOR	31-45	32.5	0.57	60,874	0.17%	100.00%
FAILED	≤30	0.0	0.00	0	0.00%	
			340.58			

Road Miles by Surface Type

SURFACE TYPE	AVERAGE CONDITION (PCI)	LENGTH (Miles)
ASPHALT	77.1	217.36
CHIP SEAL	79.6	105.78
AGGREGATE	64.4	17.11
CONCRETE	95.0	0.32
		340.58

BRIDGE CONDITION

Based on the annual inspection of bridges, the following table indicates the condition of the 380 bridges in Washington County.

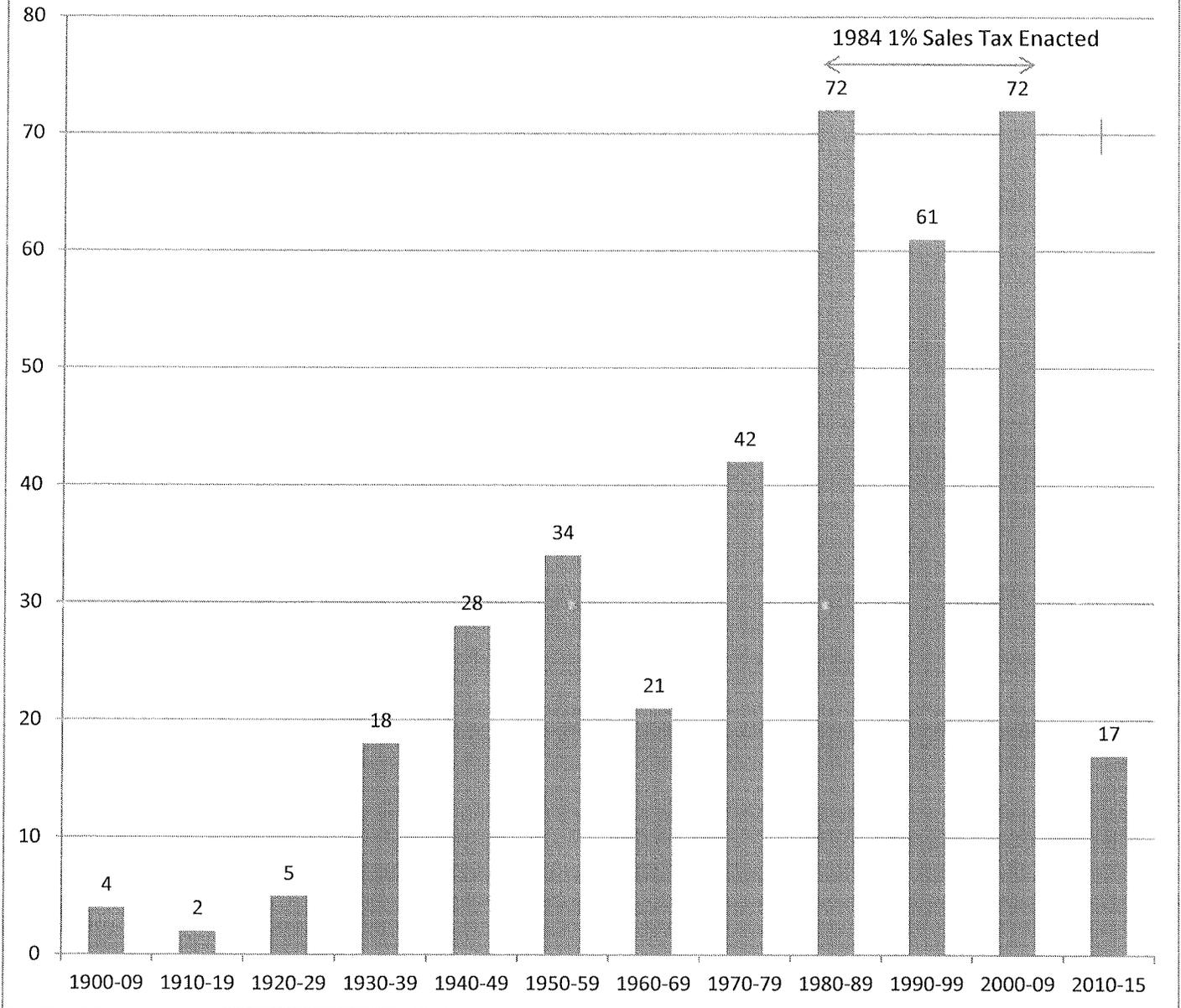
The bridge condition goal is to have 90% of all bridges at or above a general appraisal of 5, Fair Condition. As the table below indicates, this goal was met with 98.16% of our bridges rated with a general appraisal of 5 or higher.

Currently Washington County has eight (20) load restricted bridges. Three (3) load posted bridges are wooden covered bridges built around 1900. They are still open to traffic but were not designed for current legal loads and must be load posted.

BRIDGE GENERAL CONDITION TABLE

2015 ANNUAL BRIDGE SUMMARY				
CONDITION DESCRIPTION	Bridge General Appraisal	NUMBER OF BRIDGES	PERCENT OF TOTAL BRIDGES	ACCUMULATING PERCENT OF TOTAL BRIDGES
EXCELLENT	9	13	3.42%	
VERY GOOD	8	58	15.26%	18.68%
GOOD	7	151	39.74%	58.42%
SATISFACTORY	6	104	27.37%	85.79%
FAIR	5	47	12.37%	98.16%
POOR	4	6	1.58%	99.74%
SERIOUS	3	0	0.00%	99.74%
CRITICAL	2	1	0.26%	100.00%
OUT OF SERVICE	1	0	0.00%	
	TOTALS	380		

Washington County Bridges Built by Decade



From 1984 to 2009 \$36,677,968 was allocated from the 1% Sales Tax fund to the County Engineer's Office for road and bridge maintenance. This allowed for replacement and improvement to the county infrastructure and the results can be seen by the current condition of the county roads and bridges. The rate of replacement for 2010 to 2019 is projected to be less than 30 as rising costs and limited funds, along with preventative maintenance to extend the life of existing structures, slows the rate of replacement.

ROAD MAINTANENCE HIGHLIGHTS:

The Washington County Engineer's Office utilizes Softworks cost tracking software. This software allows the County to document and track associated costs by work type, labor cost, equipment cost (billed at FEMA hourly rental rates), and material cost for the particular work.

All totals listed below include labor, equipment and materials for in-house maintenance work.

Snow and Ice Control 2015 Winter Season – Winter with just a few large Snow Events

The Snow and Ice control season for 2015 begins in October 2015 and continues into April 2016 to determine a true cost for the 2015 winter season. The snow and ice control cost includes labor, materials, and equipment for road application, as well as work in the stock yards mixing materials and re-stocking the County satellite stockpiles. The cost of diesel fuel is not included in this total, as gallons used are not tracked by work type, but the majority of the fuel costs during this time frame are directly related to winter operations.

Like all counties in Ohio, Washington County saw a sharp increase in the price of salt in 2014 and hoped the price would fall in 2015. Washington County typically purchases 2,000 tons of salt per year with delivery during the winter season. In order to be better prepared for winter and ensure the volatility in salt price did not leave us compromised budget wise, our large salt dome was converted from stockpiling winter mix to stockpiling pure salt. Converting the dome required a new dormer and loading belts, but increased the amount of salt we can stockpile from 2,000 ton to almost 4,000 ton. This additional capacity now allows us to purchase salt both in the Summer Fill program and the Winter Fill program, taking advantage of any cost savings. Doubling the amount of salt on hand will also ensure that even during the harshest of winters Washington County should have enough salt on hand to combat Mother Nature without worry of running out of product, while also allowing us the option to purchase more or less salt depending on the price each year.

In 2015 Washington County participated in the salt Summer Fill program and Winter Fill program	
Summer fill:	Salt price \$80.27, purchased 1,500 ton, final cost \$120,405
Winter fill:	Salt price \$77.36, purchased 900 ton, final cost \$69,624

For comparison in 2013 salt cost \$56.66 / ton, after the harsh 2013 winter salt increased in 2014 to \$86.31 / ton.

The total cost of the 2015 winter season was \$603,565.73.

In comparison the 2014 winter season was \$718,125, 2013 winter season was \$933,810 and 2012 was \$466,677.

Diesel fuel costs from October 2015 to April 2016 were \$49,325.20.

Total Approximate Cost for the 2015 Winter Season for labor, materials, equipment and diesel fuel: \$652,890.93.

Chip and Seal Maintenance Program

Due to the number of weather emergencies and harsh weather the County had incurred over the last two years a large amount of road maintenance work required completing in 2015. In order to allow the Highway Crew the opportunity to perform this maintenance without falling behind on other items I decided to contract out the yearly Chip and Seal program.

By contract United Sealing chip sealed 29.84 miles in 2015, using over 4,800 tons of stone and over 120,000 gallons of asphalt emulsion.

United Sealing Contract	MVGT	\$188,771.99
	1% Sales Tax	\$155,932.01
	Total	\$344,704.00

The county roads chip sealed in 2015 were:

Road Number	Name	From	To	Length (Mi)
222	ORNDOFF RD	SR 676	COUNTY LINE	0.17
6	BROWNRIGG RD	Kitts Rd	SR 676	1.50
6	BUCHANAN RD	SR 676	WELLS RD (CR 174)	2.66
6	BUCHANAN RD	WELLS RD (CR 174)	SR 339	3.36
102	MILNER RD	PRIVATE RD	SWIFT RD (TR 567)	0.11
102	MILNER RD	SWIFT RD (TR 567)	CORYHILL RD (TR 104)	1.17
102	MILNER RD	CORYHILL RD (TR 104)	SPARLING RD (CR 32)	2.38
27	ROCKY POINT RD	SR 339	BARNETT RIDGE RD (CR 2)	2.87
27	BARTH RD	BARNETT RIDGE RD (CR 2)	VETO RD (CR 3)	3.42
2	BARNETT RIDGE RD	VETO RD (CR 3)	SR 550	4.78
18	OAK HILL RD	SR 550	BROWNRIGG RD (CR 6)	6.51
51	JOE SKINNER RD	PAVEMENT CHANGE	PAVEMENT CHANGE	0.91

Flushing / Bleeding Road Control

In late spring and summer many of our chip seal roads exhibit a property known as flushing (commonly called bleeding) which is the oozing of the liquid asphalt up through the aggregate, causing some of our residents to get tar on their vehicles and tires. This is a common problem with most road agencies that have built-up chip seal road surfaces and is counteracted by applying cover aggregate over the bleeding surface. In areas in which bleeding was very common we have applied overlays and this has been very effective in lowering the cost of bleeding control.

The cost of bleeding road maintenance in 2015 was \$1,555.53

Culverts

The county crews replaced road culvert pipe at 55 locations plus 11 driveway culverts where the property owner pays for all materials and the County provides installation.

The cost of County road culvert replacement in 2015 was \$133,273.15 and \$24,426.86 for driveway culvert replacement.

County crews also repaired headwalls on existing culverts along with various other repairs, as well as cleaning out existing culverts to ensure drainage was maintained.

The cost of County road culvert repair and cleaning in 2015 was \$145,268.19

Ditch and Shoulder Maintenance:

One of the most important maintenance items performed by County forces is ditching, shoulder grading, and shoulder repair. Ditch maintenance reduces water damage to our pavements preventing soft spots in the roadway. Repairing road shoulders maintains a wider and safer roadway.

In 2015 \$437,738.24 was spent on ditching and shoulder maintenance.

Road Patching and Spot Base Repair

The county maintenance crews utilize cold mix asphalt for pot hole patching by hand during winter months and hot mix asphalt utilizing a grader for patching and preparing roads for chip and seal, along with performing spot base repair as needed on our 341 miles of county roads. Hot mix grader patching increased significantly in 2015, as County forces focused on patching many miles of roadway.

The cost of patching and spot base repair on County roadways in 2015 was \$544,517.50

Traffic Control Signs

Sign maintenance is ongoing, as we replace faded, stolen or damaged signs. In years past almost all of Washington County's road signs have been replaced to meet new federal retro-reflectivity guidelines.

The cost of sign work in 2015 was \$36,101.66.

Brush Cutting and Roadside Mowing

County forces remove limbs overhanging the pavement and trees that could potentially fall across the road. Removing trees and brush along the roadway creates sight distance which makes for a safer roadway.

The cost of brush cutting in 2015 was \$96,723.83.

County forces utilize 4 tractors to mow three rounds on both sides of our 341 miles of roadway, mowing over 2,000 lane miles each year.

The cost of roadside mowing in 2015 was \$113,073.20

BRIDGE MAINTANENCE HIGHLIGHTS:

Bridge Repair

County forces provided a variety of maintenance items on our 380 County bridges, everything from repair or replacement of structural members to cleaning and installing dump rock to mitigate stream scour. In 2015 County forces focused on repairing the large amount of stream scour and bank erosion caused by the numerous large rains and flood events over the past few years.

The total cost of in-house bridge maintenance and repair in 2015 was \$175,072.24.

Emergency Storm Clean Up

Mother Nature was once again relentless and our maintenance crews were extremely busy cleaning up debris and repairing roadways. I was proud of the response and service to the community that the county highway department provided, many times dispatched at night to clear blocked roadways.

The cost for emergency storm clean-up for 2015 was \$166,312.77

Fuel

The cost of fuel, both diesel and gasoline, in 2015 was \$145,293.24.

In addition \$8,411.55 was spent for fluids (not including fuel).

ROAD AND BRIDGE MAINTENANCE EQUIPMENT:

The following major equipment was purchased in 2015:

Miscellaneous Marcs Radios	\$2,382
1993 International Flat Bed	\$8,100
Buyers Salt Dogg	\$1,795
2016 International 7400 w/ bed and spreader	\$127,788

2015 CAPITAL PROJECT IMPROVEMENTS

ROADS

Hot Mix Paving

2015 was a very large paving program for Washington County roadways, with several projects receiving Federal money and the County funds leveraged as matching funds for these projects with all of the remaining 1% Sales Tax received in 2015 applied to the hot mix paving program. Washington County was very fortunate to have this amount of federal assistance and it will now be several years before another federal project is scheduled due to the competitive nature of the funding.

The following table shows the roads resurfaced during 2015.

Road Number	Name	From	To	Length (Mi)		Funding Percentages	Final Total
	2015 Paving						
25	BEAR RUN RD	SR 26	CR 9	3.12	FEDERAL	80%	\$723,825
25	DANAS RUN RD	CR 9	CR 244	3.47	COUNTY	20%	\$180,956
11	DALZELL RD	SR 821	CR 42	4.07	FEDERAL	80%	\$801,108
11	DALZELL RD	CR 42	CR 371	3.25	COUNTY	20%	\$200,277
11	DALZELL RD	CR 371	CR 12	0.19			
10	BLUE KNOB RD	SR 7	SR 7	1.71	FEDERAL	80%	\$197,314
					COUNTY	20%	\$49,328
17	PLEASANT RIDGE RD	SR 26	PVMNT CHANGE	5.00	OPWC GRANT	55%	\$399,970
17	PLEASANT RIDGE RD	PVMNT CHANGE	CR 133	1.94	OPWC LOAN	19%	\$136,902
					COUNTY	26%	\$188,631
				22.75			

\$3,339,209

COUNTY FUNDS	\$756,094
FEDERAL FUNDS	\$2,122,217
OHIO PUBLIC WORKS GRANT	\$399,970

Guardrail Repair

Washington County was awarded a guardrail repair project with federal funds and county matching funds for County Road 4. The total cost of the project was \$75,320.50.

FEDERAL	80%	\$60,256
COUNTY	20%	\$15,064

Landslip Repairs:

Due to the extremely wet spring and summer we experienced an increase in the number of landslips scattered throughout the County. It seemed a new landslip would occur every few weeks and we were extremely busy dealing with these emergency situations, while also assisting the townships as landslips occurred and impacted them.

Landslips occurred on County Roads 2,9,12,14,17,27,42,47,60,79,102,138,174,333,340 and 354, with some roads experiencing multiple landslips miles apart. Landslips are typically repaired with driven pipe pile. Landslips are extremely difficult to budget for and we were fortunate that the hot mix paving program, along with the capital bridge replacement program was supported with a large amount of federal funds, allowing the paving program to be completed in full while County funds supported landslip repair.

In 2015 \$366,051.96 was spent on landslip repair.

BRIDGES

Bridge Replacement Projects

The following table shows the major bridge work accomplished during 2015. Federal assistance again allowed County funds to be leveraged and used as matching funds for the C-14-0361 bridge replacement project.

BRIDGE DESCRIPTION	EXISTING BRIDGE	WORK	COST		Funding Percentages	Final Total
C-14-0361	Existing fracture critical steel pony truss	Replace entire superstructure with concrete box beam with integral concrete deck and entire substructure with cap pile abutment	\$348,190.18	FEDERAL	80%	\$330,780.67
				COUNTY	20%	\$17,409.51
C-25-0581	Existing steel beam superstructure	Replace entire superstructure with cast in place concrete slab, on existing concrete abutments	\$153,916.00	COUNTY	100%	\$153,916.00

TOTAL COUNTY FUNDS	\$171,325
TOTAL FEDERAL FUNDS	\$330,780

2016 PLANNED IMPROVEMENTS

The following is a summary of our goals for road and bridge capital improvements for 2016. This is the program as planned but as the year progresses, changes may be necessary.

ROAD PROGRAM - 2016

The following is a list of tentative hot mix asphalt road paving projects for 2016. In years past the budget would tentatively allow for \$1.2 – \$1.4 million in county funds. However, this is no longer the case and priority towards bridge repair required an adjustment to approximately 1 million in county funds. Washington County was fortunate to receive federal and state assistance through grants and loans that allowed us to expand the paving program supplementing the County funds available.

Paving is dependent on the number of landslips and other major road repairs that will take priority.

Road Number	Name	From	To	Length (Mi)		Funding Percentages	Estimate
	2015 Paving						
341	MASONIC PARK RD	SR 60	DEVOLS DAM RD	1.10	WWW COUNTY	80% 20%	\$235,029 \$58,757
341	MASONIC PARK RD	DEVOLS DAM RD	MASONIC PARK LN	0.51	COUNTY	100%	\$35,700
60	LOWELL HILL RD	CR 79	SR 60	1.33	COUNTY	100%	\$291,503
2	BRAUN RD	BELPRE NCL	VETO RD (CR 3)	4.51	COUNTY	100%	\$315,702
42	STANLEYVILLE RD	GLENDALE RD (CR375)	WEPPLER DR (TR 716)	2.11	COUNTY	100%	\$147,636
WWW PROJECT BASE STABILIZATON							
59	BIG RUN RD	COUNTY LINE	SR 555	3.64	OPWC GRANT	55%	\$398,939
98	ELLIS RUN RD	TWO MILE RUN RD (CR 3)	BIG RUN RD (CR 59)	1.80	OPWC LOAN	19%	\$140,168
					COUNTY	26%	\$220,199
15.0 ESTIMATED FUNDS							

\$1,209,665 COUNTY FUNDS
 \$235,029 FEDERAL FUNDS
 \$398,939 OHIO PUBLIC WORKS GRANT

IN HOUSE CHIP SEAL PROGRAM - 2016

The following is a list of tentative roads that will be chip sealed in house for 2016. The current budget tentatively allows for \$200 - \$300 thousand for materials only. Chip seal costs are tracked and calculated at the end of the year with material, equipment and labor. The number of miles chip sealed is dependent on the number of landslips, other major road repairs, or natural disasters that will take priority for County forces.

056	BIG RUN RD	SR 60	LYNCH HILL RD (TR 151)	1.71
056	BIG RUN RD	LYNCH HILL RD (TR 151)	COUNTY LINE	1.36
076	CATS CREEK RD	LOWELL LOOP RD (CR 760)	COUNTY LINE	4.35
076	CATS CREEK RD	COUNTY LINE	HIGHLAND RIDGE RD (CR 8)	0.84
008	HIGHLAND RIDGE RD	SR 530	CATS CREEK RD (CR 76)	5.26
008	HIGHLAND RIDGE RD	CATS CREEK RD (CR 76)	SR 821	0.60
354	BODE RD	GERMANTOWN RD (CR 15)	COUNTY LINE	0.70
015	GERMANTOWN RD	BODE RD (CR 354)	DALZELL RD (CR 11)	2.47
358	WITTEN RUN RD	DALZELL RD (CR 11)	COUNTY LINE	0.38
360	LIBERTY UB CHURCH RD	DALZELL RD (CR 11)	COUNTY LINE	0.61
01	DALZELL RD	FIFTEEN MILE CREEK RD (CR 12)	LIBERTY UB CHURCH RD (CR 360)	3.40
011	DALZELL RD	LIBERTY UB CHURCH RD (CR 360)	COUNTY LINE	0.90
012	FIFTEEN MILE CREEK RD	SR 26	MILL FORK RD (TR 37)	1.20
133	MOSS RUN RD	SR 26	PLEASANTVILLE RD (CR 17)	2.66
133	MOSS RUN RD	PLEASANTVILLE RD (CR 17)	STANLEYVILLE RD (CR 42)	0.48
042	STANLEYVILLE RD	WEPPLER DR (TR 716)	MOSS RUN RD (CR 133)	5.03
042	STANLEYVILLE RD	MOSS RUN RD (CR 133)	DALZELL RD (CR 11)	3.08
014	ARCHERS FORK RD	SR 26	COUNTRY RD 9 (CR 9)	5.04
014	ARCHERS FORK RD	COUNTY RD 9 (CR 9)	SR 7	2.34
009	COUNTY ROAD NINE - C	ARCHERS FORK RD (CR 14)	various spot patches	1.00
365	HELDMAN RD	PAV'T CHANGE	SR-26	1.00
760	LOWELL LOOP RD	SR 60	CATS CREEK RD (CR 76)	0.35
				50.96

The estimated cost for materials only for the 2016 chip seal is \$438,884.

BRIDGE PROGRAM - 2016

We plan to do major rehabilitation or replacement of the bridges in the following table subject to any significant issues that may arise during the annual bridge inspection and re-evaluation of the load ratings. Bridges on the list below may have to be delayed due to lack of funding available, with priority given to repair of the Lowell T Bridge and exact cost yet to be determined. In years past \$1 – \$2 million was budgeted for bridge replacement. With priority given to bridge repair and replacement for 2016 approximately 1.2 million is budgeted for repair.

Route	Log Pt	Bridge Name	General Appraisal	Remarks	Funding Percentages	Estimate
C0060	0625	LOWELL T	5A	Repair of cracking on concrete pier at the T intersection	COUNTY 100%	\$250,000
C0003	1151	HOPKINS	4A	Replacement of steel culvert with pre-cast concrete arch type structure	COUNTY 100%	\$235,443
C0033	0004	MCVEY	5A	Replacement of steel beam simple span bridge with 4 sided pre-cast concrete box	COUNTY 100%	\$109,025
C0012	0404	HADLEY	6A	Replacement of the asphalt pan decking with integral concrete deck	COUNTY 100%	\$118,000
T0920	0020	BARNETT	2P	Complete replacement of pre-cast box beam bridge. New capped pile abutments on a new location, with pre-cast concrete box beam bridge with integral concrete deck	COUNTY 100%	\$99,418
					TOTAL PROJECT	\$811,886

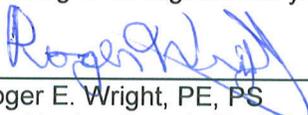
ENGINEER’S REMARKS

2015 was a year of change, with the retirement of several key members on staff, longtime Superintendent Calvin Becker and Carol Bergen, who served many years as Administrative Assistant. These positions were filled with Brian Bailey promoted to Superintendent and Tammy Bates hired to take over as Administrative Assistant. Both have done an excellent job and have been welcome additions.

Multiple projects were completed and we were very fortunate to have a number of the projects funded with Federal dollars, allowing our local funds to be used as matching funds. As always, maintaining and improving Washington County roads and bridges is our number one priority, with funding our biggest challenge.

In 1999 paving 1 mile of road cost approximately \$32,000; in 2014 the cost was approximately \$70,000 per mile. As the price of raw materials and fuel continue to rise, budgeting and maintaining our county highway system at its current level continues to be a challenge. The continuing State-wide decline of MVGT funds as cars become more fuel efficient or switch to alternative fuels increases this challenge. With the ever increasing costs of the raw materials that are used in highway construction, the current budgetary constraints simply will not allow for as many projects as in years past, while the need for such projects continues to grow. As County Engineer I will also continue to advocate for the return of a larger percentage of 1% Sales Tax Funds as originally intended, while continuing to seek alternative funding.

With all of the challenges and demands 2015 went by very quickly, but I would like to thank the residents of Washington County for the opportunity to serve. It was a very exciting and fast paced year, and I enjoyed the challenges throughout the year and look forward to an even better year in 2016.



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