# 2016

# ANNUAL REPORT

# DEKALB COUNTY

# HIGHWAY DEPARTMENT

**Presented by**
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**County Engineer**

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Introduction

One of the difficult tasks placed upon all governmental agencies is creating a good budget. Government is expected to provide new services as needed and maintain or improve current services while preserving a balanced budget. Sometimes a balanced budget is partially achieved by cutting waste or becoming more efficient at current tasks. Sometimes a balanced budget is partially achieved by sharing responsibilities with other agencies completing similar tasks. Sometimes a balanced budget is partially achieved by increasing revenues to offset higher costs.

As it applies to the Highway Department, increasing revenues can be done by different methods. A tax levy, which is the basis for the tax rate, can increase if it is not at its maximum rate already. If more homes or businesses are built in the county, the new construction could increase the tax base enough so the tax rate would not change. If there is not enough new growth, the tax rate may have to increase to reach the amount levied.

Creating new fees or increasing existing fees is another option to increase revenues. Unlike property taxes, which affect most everyone either directly or through their monthly rent, fees usually are applied to the individual user or business using that specific service. Sometimes fees are applied evenly to all users and sometimes they are graduated so a higher usage means a higher fee.

A sometimes difficult way to increase revenues is through external funding. While this is not an option for everyone, the DeKalb County Highway Department has put a lot of effort into trying to acquire external funding. The motor fuel taxes collected by the state and federal governments are not all dispersed to local agencies through regular allocations. Some are dispersed through competitive grants to be used for specific projects or goals. Many times these grants do not fit the current programs being pursued by the Highway Department. Occasionally, a grant will match our activities and we submit an application.

A few grants for which we have successfully applied include the Truck Access Route Program (TARP), Major Bridge Program (MBP), and the Highway Safety Improvement Program (HSIP). The TARP program provides supplemental funding for the upgrade of a road to an 80,000 lb, year-round, permanent, designated truck route. This program provides usually less than 50% of funding for a project. It is funded through the state.

The MBP provides 80% funding for a bridge costing more than $1 million. Factors such as traffic counts, the current condition of the bridge, and total cost are considered when the grant is being awarded. A high traffic, low cost bridge is much more competitive than a low traffic, high cost bridge. This program is quite competitive and is funded with federal dollars. The Highway Department is fortunate to have received this grant in the past.

The HSIP provides 90% funding for roadway improvements which will measurably increase safety on the statewide highway system. It is a very competitive application process which compares the cost of a project to the benefits. The benefits are computed by determining the number and types of accidents which should be reduced after the project is completed. The Highway Department is currently working with IDOT on two different projects for the HSIP. We hope to receive this external source of federal funding soon.

These sources of external funding are one part of the program the DeKalb County Highway Department implements while keeping a balanced budget. We will continue to pursue these while performing preventative maintenance and other programs to keep the County Highway System a safe and reliable transportation network.

Shabbona Road Paving

Shabbona Road between the Village of Shabbona and the Village of Malta was originally scheduled to be paved as two different projects in 2016 and 2017. The south half was last paved in 1989 while the north half was last paved in 1991. However, a year before construction was to begin, IDOT approached the County about moving a 2017 project to 2016 and the two projects were combined into one.

This project included the resurfacing of 12.3 miles from Route 30 in the Village of Shabbona to South Second Street in the Village of Malta. Paved safety shoulders were included throughout the project. Safety shoulders are paved shoulders typically 3 feet wide and eliminate the drop off at the edge of the driving lane caused by traffic kicking the aggregate shoulder away. It provides an area for traffic to more easily recover if it leaves the driving lane.

Rock Road Companies, Inc of Janesville, WI performed the work at a cost of $1,598,444.77. The estimated cost of the project was $2,247,521. Of the total, 80% was paid using federal Surface Transportation Funds - Rural (STR) and 20% using local Matching Tax funds. Kevin Fricke of the County Highway Department was the resident inspector on this project. The DeKalb County Highway Department prepared the plans for the Shabbona Road paving project.

Plank Road Paving

Plank Road between Illinois Route 23 and Lindgren Road has changed significantly in the past 20 years. It was last paved in 2002 when traffic counts were about 7,000 vehicles per day. In 2016 traffic counts had grown to nearly 12,000 vehicles per day. Two large subdivision entrances, an elementary school built on the east end, and a Casey's gas station built on the west end have all contributed to the large increase in traffic.

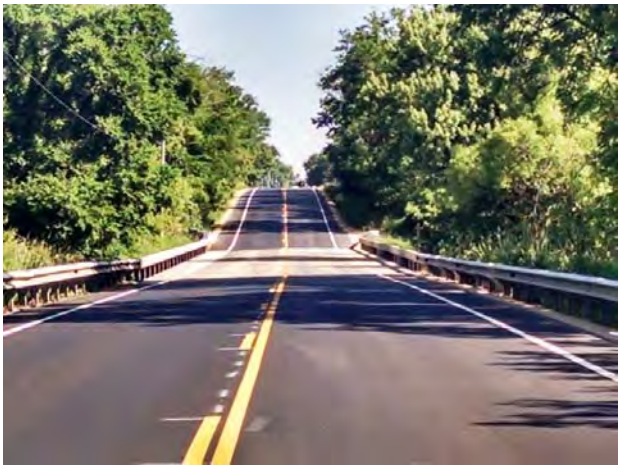
This project included the resurfacing of 0.5 miles of Plank Road with newly installed paved safety shoulders. Prior to the paving operations, the County Highway Department regraded the ditch and rebuilt the shoulder of the road along half of this section. The ditch was previously holding water throughout much of the year.

Peter Baker and Son Company of Lake Bluff, IL performed the paving at a cost of $276,563.00. The estimated cost of the project was $329,885. Of the total, 80% was paid using federal Surface Transportation Funds - Urban (STU) through the DeKalb-Sycamore-Cortland MPO (DSATS) and 20% using local Matching Tax funds. Brad Hunold of the County Highway Department was the resident engineer on this project. The DeKalb County Highway Department prepared the plans for the Plank Road paving project.

Glidden Road Paving

Glidden Road between Illinois Route 72 and Cherry Valley Road was last paved in 1994. It was not scheduled to be repaved for another couple of years. However, the condition of the road warranted moving the project up the schedule. The pavement recently had significant additional cracking and was experiencing rutting in the wheel paths due to truck traffic.

This project included the resurfacing of 2.4 miles of Glidden Road. Paved safety shoulders were included throughout the project. The project also included the repaving of a small section of rough road on the south side of Route 72.



Peter Baker and Son Company of Lake Bluff, IL performed the work at a cost of $384,199.24. The estimated cost of the project was $554,544. Of the total, 55% was paid using Motor Fuel Tax funds (MFT) and 45% using local Matching Tax funds. Kevin Fricke of the County Highway Department was the resident inspector on this project. The DeKalb County Highway Department prepared the plans for the Glidden Road paving project.

Coltonville Road Bridge

The Coltonville Road Bridge had a postponed start in 2015 due to delays in obtaining the steel I-beams which hold up the bridge deck. Despite this delay, the contractor was expected to open the bridge to traffic by the end of 2015. Unfortunately, 17 rain events during the fall and a foot of snow a week before the scheduled bridge deck pour caused enough delays to force the closure throughout the winter. The bridge was opened to traffic in June, 2016.

The Rich Bridge over the Kishwaukee River was built in 1976 at a length of 121 ft and a width of 40 ft. The new structure is considerably longer at a length of 228 ft to accommodate flood events. The new deck width is also wider at 53 ft to better accommodate future extra lanes of traffic as well as a future bicycle-pedestrian path. In total, the new bridge is 2 1/3 times larger than the old bridge.

Civil Constructors, Inc of Freeport, IL was the contractor on this $2,464,700.91 project. The estimated cost of the project was $2,463,781. 80% of the project was paid using federal Major Bridge Funds and the remaining 20% paid using local Matching Tax funds. Jerry Busse of the County Highway Department was the resident inspector on the project. Fehr Graham & Associates, LLC of Springfield, IL performed the preliminary and design engineering.

Melms Road Bridge

This project was the replacement of a 78 ft long structure in Genoa Township originally built in 1960. The bridge deck had deteriorated to a point in which no overweight loads were permitted on the bridge.

With delays in completion of some recent projects, including a couple of projects extended over winter, the County Highway Department modified project specifications from traditional timeline requirements. The Melms Road bridge was the first project with the new requirements. The bridge was opened to traffic prior to the Thanksgiving holiday as scheduled.

Martin and Company of Oregon, IL was the contractor on this $615,581.68 project. The estimated cost of the project was $798,218. 80% of the project was paid using federal bridge funds (STR-Br), 16% paid using Township Bridge Program funds, 2% paid using Genoa Township local funds, and 2% paid using County Aid to Bridges funds. Jerry Busse of the County Highway Department was the resident inspector on the project. Wendler Groundbreaking Solutions of Dixon, IL performed the preliminary and design engineering for the Melms Road bridge project.

Howison Road Bridge

In the mid to late 1900's, many bridges were built throughout the nation using timber piles. Piling is driven into the ground and is the structural support for the abutments and piers which hold up the bridge deck. Bridges with timber piles built in the 1960's and 1970's have had deterioration problems in recent years with the wood rotting from the inside out. As a part of the County's biennial bridge inspections, this bridge on the Clinton Township / Squaw Grove Township line was identified with advanced deterioration in three of the timber piles. Subsequently, the bridge was posted at a maximum weight limit of 22 tons.

Landmark Contractors of Huntley, IL was the contractor on this $25,570.00 project to repair the three deteriorated piles. The estimated cost of the project was $45,000. 50% of the project was paid using County Aid to Bridges funds, the remaining 50% of the project was paid using local funds from Clinton Township and Squaw Grove Township. Kevin Fricke of the County Highway Department was the resident inspector on the project. The DeKalb County Highway Department and IDOT prepared the plans for the Howison Road bridge project.

Afton Center Cemetery Entrances

The two cemetery entrances on Perry Road were steep and resulted in vehicles scraping the paved shoulder at the bottom of the entrances. In 2013, Perry Road was paved from University Road to Waterman Road. Although it was considered, the coordination did not work for the reconstruction of the Perry Road Cemetery entrances at that time.

The County Highway Department designed different profiles for the entrances and the paved shoulder along Perry Road. Using in-house labor and equipment, the roadway shoulder and entrances were reconstructed in 2016. The final paving was contracted work.

DeKalb County Highway Department performed the removal and reconstruction of the Perry Road shoulder and cemetery entrances. Universal Asphalt and Excavating, Inc of LaSalle, IL performed the bituminous paving at a cost of $27,613.20. The estimated cost of the paving was $31,850 with 55% paid using Motor Fuel Tax funds (MFT) and 45% using local Matching Tax funds. The DeKalb County Highway Department prepared the plans for this project.

Stone Quarry Road Paving

Stone Quarry Road at the north end of DeKalb County extends from Cherry Valley Road to Belvidere, IL. As Stone Quarry Road crosses the I-90 Jane Addams Memorial Tollway, its name changes to Appleton Road. Appleton Road is home to the Chrysler Corporation Assembly Plant among other industrial companies.

This project included the resurfacing of 6 miles of Stone Quarry Road. 5.6 miles are in Boone County and the remaining 0.4 miles are in DeKalb County. As a good example of intergovernmental cooperation, Boone County agreed to add our small portion of Stone Quarry Road to their paving project. We were able to receive a much better price for the project since it was combined with Boone County's 5.6 miles of paving. The public further benefitted with only one construction project to inconvenience their travels instead of two separate projects.

Peter Baker and Son Company of Lake Bluff, IL performed the work. DeKalb County's portion of the project was $43,400.60. The estimated cost of the project was $50,480. The project was paid using Motor Fuel Tax funds (MFT). Boone County prepared the plans and provided construction inspection for this project.

Township Paving Projects

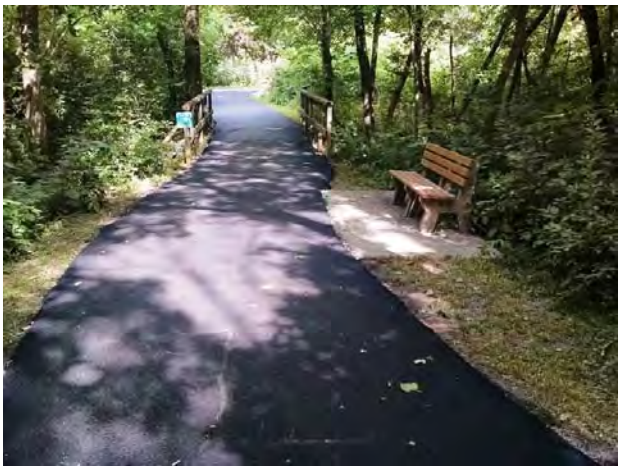
Each year, DeKalb County's township road districts request the County to prepare proposals and contracts as well as oversee construction activities. Some of these activities include hot-mix asphalt paving on subdivision streets and rural roads.

In 2016, 9 township road districts completed hot-mix asphalt paving projects throughout the County. These projects covered 9.8 miles of road at a cost of $1,342,335.30. They were paid using a combination of Township Motor Fuel Tax funds and Township local funds. The DeKalb County Highway Department prepared the plans for these paving projects.

Bicycle & Pedestrian Paths

Because of the County Highway Department's construction experience, we are sometimes asked to help with various projects. In 2016, we were asked to oversee the repaving of the Generation Link Bike Path. This path connects the County cemetery near Sycamore Road/Illinois Route 23 through the County Farm to the DeKalb Nature Trail.

This project covered 0.34 miles of trails at a cost of $30,476.41. The project was estimated to cost $19,570. It was paid using County local funds. The DeKalb County Highway Department performed the preliminary, design, and construction engineering for this project.



The County Highway Department was also asked to help construct a connection trail for the Peace Road Trail north of Prairie Drive by the DeKalb County Farm Bureau.
This project created 715 feet of new trail at a cost of $16,668.00. The easement for the project was donated by IDEAL Industries. Funding was provided by ComEd, Live Healthy DeKalb County, and the DeKalb County Community Foundation. The City of Sycamore and the DeKalb County Highway Department provided in-kind contributions of labor and equipment for the construction of the trail. The trail will be under the City of Sycamore's jurisdiction, but the DeKalb County Forest Preserve will maintain the vegetation along the path when they are maintaining their other existing trails in the area. The DeKalb County Highway Department performed the preliminary, design, and construction engineering for this project.

Sycamore Forest Preserve

In 2014, DeKalb County purchased Evergreen Village using a federal grant. The residents were relocated out of the floodway and the process began to transform the site into a park. For the next year, DeKalb County removed the structures and created open space on the property. In 2016, the DeKalb County Forest Preserve District began a project to improve parking and add bicycle / pedestrian paths.

The project is scheduled to be completed by the summer of 2017. Curran Contracting Company of Crystal Lake, IL is the contractor on the project. The contract cost is $316,305.21. The estimate of cost was $342,163. Wendler Groundbreaking Solutions of Dixon, IL performed the preliminary and design engineering for this Sycamore Forest Preserve project. The DeKalb County Highway Department provided inspection for the construction operations.

## Seal Coat Projects

In 2016, 14 townships joined the County's seal coat contract. The County seal coated 11 miles at a cost of $133,462.26. The township road districts seal coated 38 miles at a cost of $650,545.45. Jim Seldal of the County Highway Department was the resident inspector on these projects. The DeKalb County Highway Department prepared the plans for these projects.

## Rejuvenator Projects

The County also uses a liquid rejuvenator as a way to extend the life of its roads. 4.6 miles of road was sprayed at a cost of $61,425.54. Jim Seldal of the County Highway Department was the resident inspector on this project. The DeKalb County Highway Department prepared the plans for these projects.

## Other Township Maintenance Projects

In addition to the above work, the 19 township road districts have the County prepare various maintenance contracts on their behalf. These include bituminous patching materials, various aggregates, calcium chloride, centerline and edgeline striping, drainage pipes, sign materials, and crackfilling. In 2016, the township road districts spent $246,074.98 on these other projects. The DeKalb County Highway Department prepared the plans for these projects. The Highway Department also performed construction inspection on crackfilling and miscellaneous drainage projects.

## 2017 Projects

### Somonauk Road Paving

Somonauk Road between the Town of Cortland and the City of Sycamore was last paved in 2003. This 3-mile project includes resurfacing in 2017 at an expected cost of $1,052,000. $457,000 will be paid using construction bond proceeds, $272,000 will be paid using Illinois Truck Access Route Program funds, and $323,000 will be paid using Federal Aid Matching funds.

### Waterman Road Reconstruction

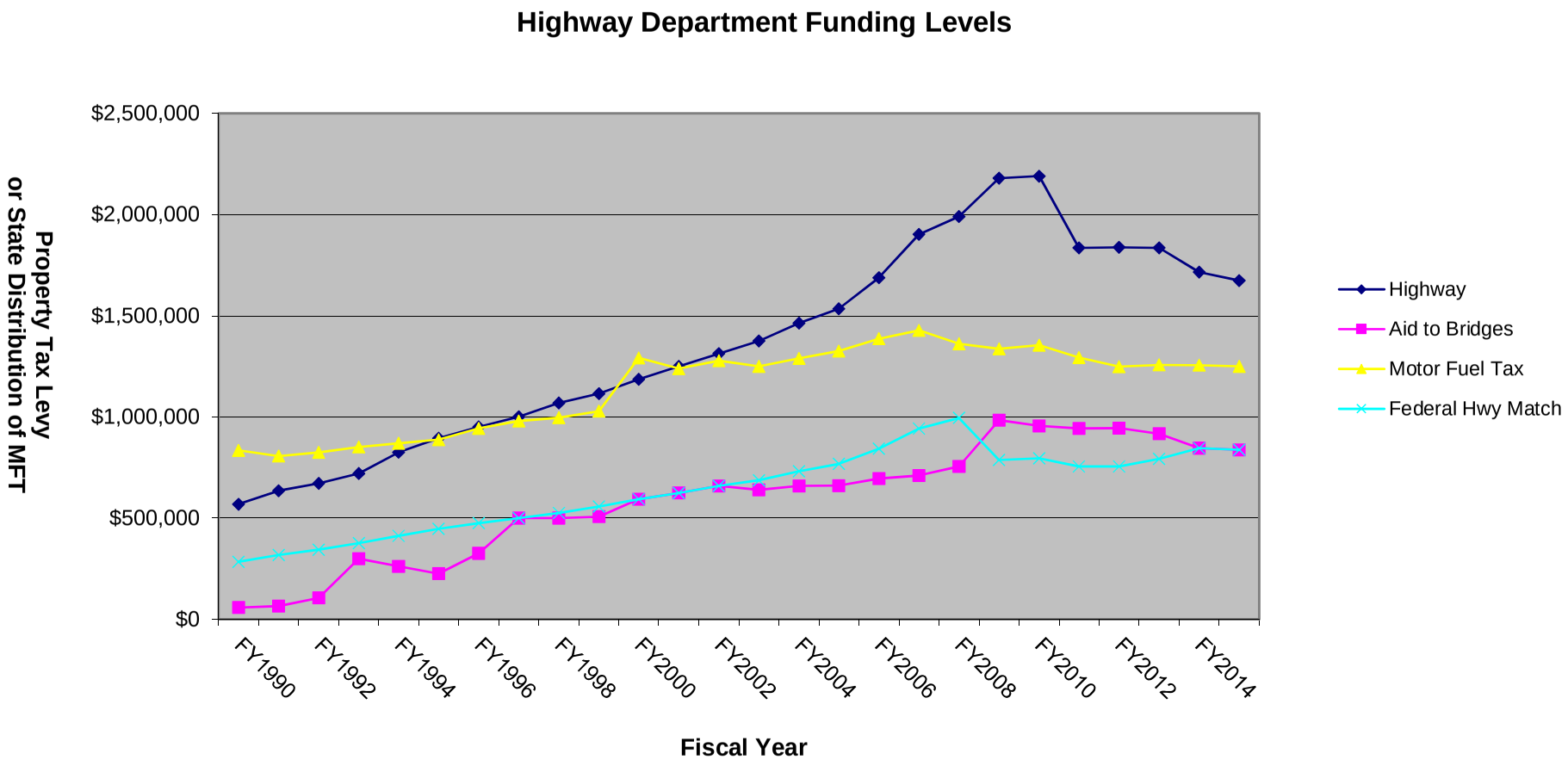
Waterman Road between the Village of Waterman and Perry Road is part of the original north-south state highway in DeKalb County. Jurisdiction was transferred to the County when Illinois Route 23 moved one mile east to its current location. Because of the combination concrete/bituminous road composition and the poor drainage of the ditches, a traditional overlay would only have temporary benefits. The County has been planning to rebuild Waterman Road for years and will begin by rebuilding the pavement in 2017. Shoulder and ditch grading along with final paving of the road will occur in the following years.

### Somonauk Road Bridge

This project is the replacement of a 71 ft long structure originally built in 1991. The superstructure supporting the bridge deck has considerable deterioration due to overweight loads on the structure. The project is estimated to cost $650,000 and will be paid using the County Aid to Bridges fund.

### East County Line Road Bridge

This project is the replacement of a 56 ft long structure on the county line with Kane County. The structure is located north of the Village of Maple Park, halfway between Illinois Route 38 and Illinois Route 64. The bridge was originally built in 1964. The project is estimated to cost approximately $3 million and will be paid using a combination of federal bridge funds (STR-Br), Kane County funds, and DeKalb County local funds.


Highway Department Funding Levels
Property Tax Levy or State Distribution of MFT
$2,500,000
$2,000,000
$1,500,000
$1,000,000
$500,000
$0
FY1990
FY1992
FY1994
FY1996
FY1998
FY2000
FY2002
FY2004
FY2006
FY2008
FY2010
FY2012
FY2014
Fiscal Year
Highway
Aid to Bridges
Motor Fuel Tax
Federal Hwy Match

# DEKALB COUNTY HIGHWAY CONSTRUCTION MAP

WINNEBAGO COUNTY

BOONE COUNTY

McHENRY COUNTY

OGLE COUNTY

KANE COUNTY

LEE COUNTY

LASALLE COUNTY

KENDALL COUNTY

FRANKLIN

KINGSTON

GENOA

SOUTH GROVE

MAYFIELD

SYCAMORE

MALTA

DEKALB

CORTLAND

MILAN

AFTON

PIERCE

SHABBONA

CLINTON

SQUAW GROVE

PAW PAW

VICTOR

SOMONAUK

SANDWICH

Approx. E-W Distance 18 Miles
Approx. N-S Distance 36 Miles
Area 634.5 Square Miles

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