Introduction

The DeKalb County Highway Department was established in 1913 when the Tice Law, named for Rep. Homer J. Tice was enacted. The first DeKalb County Superintendent of Highways, William C. Mill, was appointed in 1914. From William Mill to Nathan Schwartz, there have been 8 Superintendents/County Engineers in the 100 years of the County Highway Department.

In 1920, the first mile of the Lincoln Highway was paved near Malta, IL. The Lincoln Highway was the first rural hard surface road in the country. It spanned from Times Square in New York City to Lincoln Park in San Francisco. The first paved roads built by the DeKalb County Highway Department were completed in 1936. Today, the County Highway Department maintains 190 miles of paved roads and provides advice and assistance to the 19 township road districts concerning their 780 miles of roads.

Maintenance of the county highway system to keep a good level of service includes work throughout the year. During the spring, the maintenance crews may be found hot mix patching and sealing cracks in the pavement, cleaning bridge decks, and litter pick-up. The summer and fall months are filled with replacing culverts under the road and driveways, regrading ditches to improve drainage, placing new aggregate on the roadway shoulders, guardrail repair, hot mix patching, mowing, tile repair, roadway sweeping, and painting of crosswalks, stop bars, and railroad crossings. The winter is primarily spent controlling snow and ice, shoulder patching, and brush and tree trimming. Year-round maintenance includes equipment repair and maintenance, sign installation and repair, traffic signal maintenance, roadway shoulder grading, storm clean-up, and deer carcass and debris removal.

Maintenance of the highway system also includes projects such as seal coat, hot mix asphalt paving, and striping. These projects are contracted out for private companies to perform. However, the Highway Department staff is intimately involved in each of these projects. The staff assesses the need for the work to be done, measures the road to calculate quantities, creates the bid documents and contracts, inspects the work for safety and adherence to standards while the contractor is performing it, and completes the final paperwork for future reference, auditing, and IDOT requirements.

The County Highway Department supports the 19 townships within DeKalb County. The County prepares the contracts and inspects the work for the township seal coat projects, hot mix asphalt paving, bridge projects, and roadway striping. The County also surveys right of way, provides construction stake out, and performs drainage studies when Townships replace pipe culverts. By law, the County manages the Township Motor Fuel Tax (MFT) funds. It is the County’s responsibility to ensure any project paid with MFT funds meets current state standards. Further, the County inspects approximately 200 bridge structures for itself, the 19 townships, and 3 municipalities. The bridge inspections adhere to federal requirements that specify how and when bridges are inspected, which is typically every 2 years.

The Highway Department also supports other departments within DeKalb County. The Highway Department mows the detention pond at the Health Department facility on Glidden Road. It has started maintaining the 9-acre County property between Greenwood Acres Drive and Market
Square Cinemas in DeKalb as well as the 2-acre property on Old State Road which was previously approved to be a Sycamore Park District dog park. Occasionally, the crews have helped to clean up the County Farm cemetery. The Highway Department hosts the annual County auction of used equipment and stores trailers and miscellaneous items for the Sheriff’s Department and the County Clerk. The Highway Department provides office space for the DeKalb County Local Emergency Planning Committee (LEPC) in its DeKalb office and for the Sheriff’s Department at its Waterman shop. As needed, the Highway Department will loan out equipment to other Departments such as the wood chipper, boom truck, or front end loader. The Highway Department stores salt on its campus for 10 townships, 4 municipalities, 3 schools, and 2 other County agencies. It also maintains the contract for these 19 entities as well as 12 others that store salt at their own facilities. When requested, the crews clean debris stuck under the County Forest Preserve bridges or will spread ice abrasives on icy roads within the Forest Preserves. Also, the Highway Department aids the State’s Attorney with technical data and policy items when dealing with litigation involving the County’s highway system.
Somonauk Road between US Route 34 in Somonauk, IL and Chicago Road was last paved in 1978. Since that time, the number of vehicles traveling this section of road has changed from less than 1,400 per day to 3,800 per day. This 5.3 mile stretch of road was ready for some much needed attention.

The maintenance started in the springtime when the Highway Department crews routed and sealed the cracks in the pavement. Later in the summer, the same crews installed safety shoulders on curves where traffic tends to “cut the corners” and drive off the edge of the pavement. Safety shoulders are paved shoulders typically 2 to 3 feet wide. They 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 lane. It also creates an area bicycles use to help stay separated from traffic.

Builders Paving, LLC dba Hardin Paving Services of Hillside, IL performed the paving at a cost of $778,156. Of the total, $622,525 was paid using federal funds (STR) and $155,631 was paid using local Matching Tax funds.
Chicago Road Paving

This project was the upgrade of Chicago Road to a designated truck route. The project extended from Illinois Route 23 to MTR Farms near Maplewood Road, a distance of 0.8 miles. Every year during the spring, roads across Illinois are posted with reduced weight limits while the frost is coming out of the ground. When the ice/water/voids combination is in the pavement during this timeframe, the roads are particularly susceptible to damage. Hence, the need for reduced weight limits. Chicago Road was no exception to the rule.

Mr. Michael Rosenwinkel wanted to be able to run 80,000 lb trucks throughout the year. He was willing to provide the funding necessary to upgrade the road to a designated truck route. County forces were able to replace the pipe culverts under the road and the paving work was contracted.

Chicago Road receives a lot of farming traffic in addition to cars and trucks. This wider equipment tends to kick the aggregate off the shoulders creating a drop off at the edge of the pavement. Knowing about this situation, paved safety shoulders were placed throughout the entire length of the project.

The total cost of the improvements was $230,550. $93,550 was Truck Access Route Program (TARP) funds from IDOT and $137,000 was private funds from MTR Farms. Curran Contracting Company of DeKalb, IL performed the paving.
Health Facility / Rehab & Nursing Center Parking Lot

The Glidden Road campus of DeKalb County is comprised of the Health Facility, the Rehab & Nursing Center, the Community Outreach Building, and the Heritage Woods assisted living facility. The parking lot has received some repairs since it was originally built, but has not received any major improvements. DeKalb County received several options from a consultant for potential maintenance/improvements to the parking lot. The Highway Department, being very familiar with pavements, was asked to review the options, prepare a proposal to be advertised for bids, and oversee the improvements during construction.

Two major issues were noticed during inspection of the existing pavement. The first issue was the amount of standing water after a rain and the long time for the water to drain away. The second issue was the condition of the pavement itself. It was stressed considerably in areas with multiple layers of patching in the worst areas.

The project was completed in just less than 2 weeks. Coordination with all the County departments at the campus went well with the employees being very patient during the inconvenience of construction. Curran Contracting Company of DeKalb, IL performed the work at a cost of $236,529. Local funds were used to pay for the improvements.
Hortense Street Bridge

In August, 2010, the Hortense Street bridge in Kirkland, IL was unexpectedly closed due to considerable decay of the concrete beams which made up the bridge deck. Without funds reserved for this specific project, the school district, fire district, police department, and local community members all had to endure a one-mile bypass to get to the other side of the Bull Run Creek. The Village of Kirkland petitioned the County for aid to replace or repair the bridge. The substructure was found to be in good condition and a deck replacement was designed.

The anticipated replacement cost of the bridge was $500,000. By replacing the bridge deck and modifying the timber piles supporting the bridge, over 50% cost savings were realized. On November 9, 2012, a ribbon cutting ceremony was held. In attendance were Representative Bob Pritchard, Village Mayor Les Bellah, Village Clerk Terri D’Amato, and a large showing of support from the people of Kirkland.

The project was completed by Herlihy Mid-Continent Company of Romeoville, IL. The final construction cost was $219,145. $175,316 was paid using federal bridge funds (BRRP) and $43,829 was paid with Village local funds.
Bethany Road Bridge

In June, 2012, the Cortland Township road commissioner was patching holes in the bituminous wearing surface of a bridge when he noticed one of the holes was deeper than the hot mix asphalt overlay. After consulting with the County Highway Department, the wearing surface was removed to expose the concrete beams that make up the bridge deck.

It was determined the beams were beyond repair and must be replaced. After extensive review, the substructure was found to be in good condition and would be allowed to remain in place. Plans were drawn up for a bridge deck replacement.

Normally bids for projects are received during the spring or early summer. Since there was a desire to reopen the bridge as soon as possible, the letting of this project occurred in November, 2012 with a partial completion date to reopen the bridge by January 18, 2013. The paving of the approaches would have to wait until spring. Illinois Constructors of Elburn, IL was awarded the project and completed the bridge deck on time. The bridge is currently open to traffic but awaits paving until the weather warms up. The anticipated cost of the project is $193,613 with Township Bridge Program (TBP) funds paying $154,890. Cortland Township and County Bridge Funds will split the remaining $38,723.
Commonwealth Edison Transmission Line

In November, 2011, Commonwealth Edison sent notification it was required to raise the height of the transmission line wires running across the south half of the county. For each crew on the project, a large crane would be used to pick up the tower while the rest of crew built extensions of the legs at the bottom of the tower. Crews needed matting placed across the farm fields so they could get to the towers and work without getting stuck. Each tower to be raised required an average of over 100 truckloads of matting. Due to predetermined outages, the work would most likely be done during the 2012 spring postings.

After negotiations, a formal agreement was signed to protect the interests of Commonwealth Edison, DeKalb County Highway Department, and the 5 affected township road districts. High wind speeds caused a few delays to the project, but overall it progressed very well. On a few towers, a helicopter took crews to the top of the tower where they were able to raise the wires themselves.

The Townships received over 24,000 tons of aggregate from Commonwealth Edison to improve and repair the roads used during the project.
Glidden Road Shoulders

Shoulders of roads serve multiple functions. They allow space for a vehicle to get out of traffic in case of an emergency. They provide a recovery area for vehicles to regain control if they leave the driving lanes. Shoulders support the road and help to keep the edge of pavement from breaking off when heavy vehicles drive on the edge of the blacktop. The also help to drain water away from the pavement during a rain by having proper slopes.

The Highway Department started improving the shoulders on Glidden Road between Dresser Road and Illinois Route 64 in 2011. Additional right of way was purchased so the shoulder on each side of the road could be widened to 10 feet. When widening the shoulders, the ditches need to be moved away from the road and regraded.

During the project, crossroad pipes are replaced and concrete box culverts which were partially filled with dirt are cleaned.

This 3.5 stretch of road was partially completed in 2011. The remainder of the project will be worked on in 2013. County forces are performing the work.
Various Contracts

Yearly maintenance includes seal coating to fill cracks in the road thereby keeping out water. It also reduces oxidation of the road surface and creates a new wearing surface providing better traction for motorists. In 2012, approximately 70 miles of county and township roads were seal coated at a cost of $1,132,677. The Highway Department prepared the contracts and oversaw the work on behalf of itself and the townships. The county portion of the work was $367,099 and the township portion was $765,578.

Other yearly projects include the paving of township roads. In 2012, 8 townships requested 10 paving contracts be prepared and performed on township roads. Over $1.04 million in township paving was overseen by the Highway Department.

Each fall, crews paint stop bars, railroad crossing markings, and turn arrows. While this work is done with county forces, the centerlines and edgelines of roads are painted by a contractor. $254,973 was spent on striping roads in 2012, of which $188,463 was on County highways.

Malta Road Paving

Malta Road between Old State Road and Illinois Route 72 was last paved in 1972. For a 40 year old pavement, it is holding up fairly well. This is a testament to the benefits of regular preventive maintenance including seal coating. In 2013, this 4.1-mile stretch of road will be paved with hot mix asphalt. The work will include paved safety shoulders throughout the many curves on the road. This project is expected to cost $725,000 with $580,000 paid from federal funds (STR).

Perry Road Paving

West of Illinois Route 23, Perry Road has been maintained over the years in several pieces. The remaining 5-mile section due for paving is between Haumesser Road and Waterman Road. Parts of this stretch were paved at different times but all done in the mid-1980s. Being a well-traveled road with considerable farming traffic, the entire length of the project will receive paved safety shoulders. The project cost is expected to be $835,000 with $668,000 paid with federal funds (STR).

Annie Glidden Road Widening

The DeKalb Township Road District has scheduled an upgrade for Annie Glidden Road between the I-88 tollway entrance and the City of DeKalb. This ½-mile stretch of road was improved a few years ago for two lanes of traffic traveling north into DeKalb. The Road District asked the Highway Department to survey the road and prepare plans for its widening to 4 lanes. The cost estimate for this project is $900,000, to be paid with DeKalb Township local funds.
Base Line Road Bridge

This bridge over the South Branch of the Kishwaukee River was built in 1965. Its three spans cover 185 feet. During biannual inspections, advanced deterioration of the deck was found. However, the substructure was still in good condition. It was determined a new deck would be the appropriate and economical solution. The bridge deck will be replaced in 2013. It is anticipated to cost $700,000. Of that cost, federal funds (STR-BR) will cover $560,000, Township Bridge Funds (TBP) will cover $112,000, and the County and Townships will cover the remaining $28,000.

Five Points Road Bridge

This bridge replacement on the north side of Kingston, IL also spans the South Branch of the Kishwaukee River. The current 1956 bridge is 159 feet long. Similar to the Base Line Road bridge, advanced deterioration was found in the deck of this bridge. Unlike the Base Line Road bridge, this bridge has an inadequate capacity for flow during flood events. Therefore, the entire bridge will be replaced with a longer and wider bridge in 2013. The Kingston Park District has park facilities on three corners of the bridge. Walcamp, a summer camp for kids, is located immediately north of the Park District. Because of the proximity to these facilities, a sidewalk will be included on the bridge. The shoulders of the roadway will be widened to accommodate a future sidewalk or recreation path. The cost of the project is expected to be $2.09 million with federal funds (STR-BR) paying $1.67 million and the balance paid with local County funds.

Waterman Road Reconstruction

Illinois Route 23 originally traveled from US Route 30 through the Village of Waterman north to Perry Road. The road was originally a one lane concrete pavement. Later it was widened with bituminous asphalt to two lanes. When the current alignment of Route 23 was created, the old road was transferred to the jurisdiction of the Village and the County. The road has been crack filled, patched, and seal coated, but it has not received any hot mix asphalt paving since 1976. Because of the different pavement compositions between the original road and the widening, the pavement reacts differently in different weather and soil conditions. This creates cracks in the road surface and a rough ride for motorists. Furthermore, the ditches along the road need to be regraded to improve the drainage. A simple hot mix asphalt overlay will make a driver’s ride smooth, but only for the short term. In order to “fix” the road properly, the concrete pavement will need to be broken into pieces and used as a base for the new road. The shoulders and ditches will be graded to provide proper drainage for runoff. The shoulder and ditch grading will be performed by County forces. Because we are working on the Glidden Road shoulders in 2013, Waterman Road reconstruction will probably start in 2014. We anticipate two years to complete the earthwork while we continue our annual maintenance throughout the County. The pavement work should be completed the year after the earthwork is complete.