



A Conversation with the Commissioner

The Douglas County Highway Department Leverages Staff, Budgets and Technology to Help Meet a Daunting Scope of Operations

By James Anderson III

Many people don't think much about the roads they drive on, except when they are in poor condition or when they are considering the best route to their destination. However, a lot of work, financial resources and labor go into building and maintaining roads that we use for passenger and commercial travel.

In Wisconsin, most of that work is the responsibility of county highway departments. What follows is a conversation with Jason Jackman, Douglas County Highway Commissioner.

Jason, how long have you been with the Highway Department?

I started in 2000 as an engineering technician. I came to the department from the private sector, where I was working for a civil engineering and construction firm. I've been the highway commissioner since 2014.

How big is your department?

We have a 37-member team that includes equipment operators, supervisors, laborers and one financial specialist. During the summer construction season, we also add about six seasonal workers, mostly in laborer positions.

What are the responsibilities of the Highway Department?

Summer maintenance activities include pothole patching, crack filling, asphalt wedging and rut filling, shoulder maintenance, mowing and brushing roadside vegetation, culvert pipe repairs and replacements, beam guard repairs, bridge repairs, ditch maintenance, pavement sweeping and sign repairs and replacements. Winter maintenance activities include screening sand and mixing sand and salt for use on county highways, plowing and removing snow and pothole patching.



County Road P before paving work began.
PHOTO BY JAMES ANDERSON

Do you do this just for county roads?

We are responsible for 32 county bridges and 338 miles of county roads. What a lot of people don't realize is that Wisconsin is unique – it is the only state that contracts with county road commissions to maintain and clear state roads. The State of Wisconsin doesn't have its own crews. Therefore, we are also responsible for 439 lane miles of state highway, maintenance and plowing in the winter.

You're just wrapping up the 2017 construction season. What did you work on?

2017 was a busy year; we replaced nearly 16 miles of highway. A pavement replacement is a complete pulverizing of the current surface and new pavement. These 16 miles included segments of County Highways P and Y. We also completed a three-mile Surface Transportation Program reconstruction segment on [Highway] D and one bridge replacement. This followed a busy 2016 season, where we rebuilt or overlaid nearly 23 miles of road.

How do you select these projects?

We use what is called a PASER – Pavement Surface Evaluation and Rating – evaluation, which is a score from one to 10. PASER was developed by University of Wisconsin-Madison and assigns a numeric value to the pavement surface conditions. We typically focus our rebuilding and resurfacing projects on roads scoring in the 3-to-4 range, and roads scoring higher will often receive maintenance like sealing cracks and fixing potholes. Our budget allows us to fill about 80 to 100 miles of cracks in county roads, keeping in mind that we are responsible for 338 total miles of county road.



County Road P after paving was completed.
PHOTO BY JONATHAN BROSTOWITZ

Do you have any unique challenges with your work in Douglas County?

Clay soils, freeze/thaw cycles and poor drainage are our biggest environmental challenges. A large part of our county has predominantly heavy soils, which makes for a poor pavement foundation and which is much more susceptible to rutting and drainage problems. It also is more expensive to reconstruct roadways with the heavier soil types than it is with those with underlying sandy soils. We have had a number of washouts, most notably in 2012 with the June flooding. We just completed our last recovery project in 2016 from those floods. When we have a segment of road that is particularly impacted by the clay and wetlands, we have started using an engineering design firm. Bringing in engineering expertise helps to design the rebuild, so our investment will last the expected life.

Has road building technology changed which extends a road's life or makes it more suitable for our weather?

Pavement as a process and technology has its challenges. The oil that mixes into aggregate needs to be at a high temperature, which degrades the oil before it even hits the road. A new warm mix technology has been adopted by neighboring counties, and we are starting to use this method now. This allows for the creation of asphalt at lower temperatures, which creates a higher quality pavement. Based on what others have seen, we should see less cracking in newer roads that use this warm mix method.



Douglas County Highway Department employees at work.
PHOTOS BY JONATHAN BROSTOWITZ



What projects will you be working on next year?

Thanks to the County Board of Supervisors who have approved bonding to help with our construction budget, we have a plan in place through 2022. Next year, we will be overlaying or rebuilding nearly 11 miles of county roads, including segments of County Highways W, B and Y. We are already starting engineering on one of those projects, and next summer we will begin design and engineering for 2019 projects.

You mentioned bonding. Where do you get your funding?

We are a department of Douglas County and we receive general tax levy for operations. In 2016, the county started a bonding program to help the department achieve our rebuilding and resurfacing goals. In 2016, Douglas County bonded about \$4 million for projects and another \$5 million in 2017. Our plan calls for \$15 million in additional bonding for projects between 2018 and 2022. These bonds are issued for 10 years and are repaid with general tax levy. In addition, we contract with the State of Wisconsin to maintain and clear state roadways and receive revenue for those services.

Is this funding adequate?


Unfortunately, it isn't adequate to meet a sustainable maintenance and rebuilding schedule. We get a lot of support from the County Board of Supervisors, but inadequate road funding is a problem throughout Wisconsin, not just here. We saw these concerns during the 2017-19 State of Wisconsin biennial budget debate.

An asphalt road has an expected life of about 25 years, with proper maintenance. With our 338 miles of county road, we should be repaving or rebuilding approximately 18 miles of road per year. While we have come much closer to that, we are still short.

Was there money in the new 2017-19 State of Wisconsin budget for counties?

The state did increase road funding for county projects in the new budget. We compete for these funds, known as the Surface Transportation Program. We use these funds to help with projects that we have identified under our six-year proposal to the county board.

Now that you are coming to an end of the construction season, what is next?

We stay busy year-round. We will start design and engineering for 2018 projects. But winter is coming, and we are busy preparing for the weather that winter brings. We need to prepare sand for county roads, which means screening and blending in salt. We are also getting our fleet of plows ready for winter. Our department has 14 county plow routes and nine state plow routes. We'll be ready for that first snowfall of the year, whenever it comes. Douglas County residents and visitors can expect to see us on county and state roads, clearing the way for their winter travels. 



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