

Using a "triage" method, Delaware, OH is able to repair their network on a severely limited budget.

Avoided the pitfalls and costs associated with rebuilding roads every 12 to 15 years

Average network condition improved from 65 PCR to 70 PCR

**BACKSTORY:**

In 1997, Delaware county was managing their roads using a traditional "worst-first" program. As a result, the network was in decline, with an average road condition of 65 PCI.

Then, in 1998, when citizens voted for a temporary increase in sales tax to fund road maintenance, the county embarked on an aggressive Full Depth Reclamation program to recover the failing network. They reclaimed more than 200 center-line miles, or about two-thirds of the county network over ten years.

During this time of major repairs, the county knew they had to do something to prevent the cycle of deterioration from coming back to haunt them down the line. As the tax increase became permanent, teams began Delaware's first ever preservation program with one goal: Extend the life cycle of the roads to avoid major cost to taxpayers.

**PROBLEM:**

In 2010, Delaware County began by taking a "triage" approach to road maintenance. The county's roads are inspected annually, using a windshield scoring system based on a modified ODOT PCR measurement. The road segments are then categorized into groups:

**86-100 PCR –Medium Priority.** This category consists of roads that will benefit from routine maintenance actions. It is considered medium priority because minor interventions will maintain the road's "good" condition.

**56-85 PCR -- High Priority.** These roads may require pavement preservation treatment, and are considered the highest priority. Preserving these roads prevents them from falling into the third and most expensive category.

**0-55 PCR – Low Priority.** These roads have fallen below a 55 PCI and have already failed. They will require reconstruction, reclamation, or recycling to restore to operational condition. Because the intervention required for these roads is the costliest, they may be left as-is until the budget allows for long-term repairs. The county recognizes that reactionary maintenance, such as costly pothole patching, will continue to increase on these roads, but they have committed to address these roads as funds overflow after meeting the needs within the Medium and High Priority sections.

To meet the needs of this prioritizing system, Delaware County has expanded the treatment toolbox to include 16 different treatments (images below).

“ With an increase in revenue, the temptation is to invest in costly rebuilding programs, but following a strategic plan for preservation serves the community long-term with more roads in better condition over a longer period of time. ”

— Robb Riley, Chief Deputy County Engineer

**SOLUTION:**

Since the strategic plan above was implemented, the county has significantly improved the network's condition. They've moved from an average rating of 65 PCR to having over 80% of roads rated at 85 PCI or higher-- and none are below 70. Furthermore, the county has avoided the pitfalls of completely rebuilding roads every 12 to 15 years, and is saving the taxpayers millions of dollars.

**PHOTOS:**

**Delaware County's Treatment Toolbox**

- ◆ Asphalt Rejuvenator
- ◆ Hot Rubber Crack Seal
- ◆ Hot Mastic
- ◆ Chip Seal with Fog Seal
- ◆ Frictional Mastic Seal Coat
- ◆ SAMI Fiber Interlayer
- ◆ Single Course Micro Surfacing
- ◆ Double Course Micro Surfacing
- ◆ Single Course Micro Surfacing with Rut Fill
- ◆ Cape Seal
- ◆ Chip Seal overlayed with HMA
- ◆ Ultra Thin HMA
- ◆ Partial Depth Mill/Chip Seal Interlayer/HMA
- ◆ Cement FDR Stabilization
- ◆ Hot In-place Recycling
- ◆ Cold In-place Recycling

Delaware County's Treatment Toolbox