Congratulations and Welcome!!

EEI would like to recognize the following employee for his milestone anniversary with the company:

15 Years: Timothy N. Paulson, P.E., CFM
Project Manager

EEI welcomes **Michael W. Schweisthal, E.I.**, *Project Engineer* to our staff!

Did You Know?

Engineering Enterprises, Inc.'s very own Jeff Freeman, P.E., CFM, LEED AP, received the inaugural Robert T. Sasman Volunteer Appreciation Award while down at the ISAWWA WATERCON2014 Conference.

EEI also gave two presentations while at the conference, those can be found on our website under the *Resource* tab.

Enterprises Trivia Challenge

Q: What is America's most recycled material?

Send your answer to **eei@eeiweb.com** or fax to **(630) 466-6701** by June 20th to be entered in a drawing for a $50 American Express gift card!

Engineering Enterprises, Inc. (EEI), founded in 1974, provides consulting engineering services throughout northern Illinois. Our expertise includes water, wastewater, transportation, stormwater, construction management, land surveying and GIS.

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40 YEARS

Can You Use FDR In Your Community?

In this Edition:

The cost of roadway rehabilitation and maintenance can be a substantial part of a public agency's annual budget. In recent years, these costs have continued to rise and as infrastructure repair needs continue to grow, the need for cost-effective roadway maintenance solutions is more important than ever.

Budget

One way to conserve our roadways, budgets and non-renewable resources is the use of Full-Depth Reclamation (FDR) in annual roadway maintenance programs. The technology of FDR has been around for decades; however the use of the technology has become much more popular as the costs associated with conventional roadway reconstruction continue to increase. Prior to commencing an FDR project, careful consideration should be given when selecting the proper roadways on which to use this process. Ideal candidates are roadways that have severely deteriorated to the point where resurfacing is no longer an option and reconstruction is generally. FDR serves as a cost-effective alternative solution to complete reconstruction, while generally providing similar performance.

Spring / Summer 2014

Enterprises

Can You Use FDR In Your Community?, Cont'd.

Deterioating Roads Are A Constant Problem for Communities

This method was used in the Fall of 2013 in the Village of Hinckley, Illinois on two roadways, Louise Drive and Sycamore Street, that had been identified for the rehabilitation. The two selected roadways had significant failures and roadway cores revealed inadequate pavement sections. The estimated cost for full reconstruction exceeded the available budget, as a result, the FDR process was explored as a possible treatment.

Before: Sycamore Street

Before: Louise Drive

The FDR Process

The process involves the pulverization of the existing pavement surface, which is combined with the roadway base and even a portion of the underlying soil. This material is then treated with cement or asphalt, re-graded and compacted. After allowing this treated material to cure, it is extremely strong and will provide a solid base for various treatments including seal coats, microsurfacing or new asphalt or concrete pavement. The use of the FDR process on this project resulted in a savings of approximately 50%.

In Hinckley, the pulverization depth was 16 inches on Louise Drive and 12 inches on Sycamore Street. Due to the presence of curb on Louise Drive, additional material was removed to provide space for the placement of new HMA pavement while matching the existing curb grades. On both roadways, a combination of 5% cement and 8-10% water (to obtain optimal water content) were added to the roadway.

Water Truck

Grading After Cement Incorporation

Compacting Reclamation Material

Final Product After Cement Before Surfacing

After: Sycamore Street

After: Louise Drive

This material was tilled into the pulverized roadway material and was then graded and compacted. After this material cured, new HMA was placed and the project was completed.

If you would like to see if your roads qualify for FDR, please contact **Jason Bauer at jbauer@eeiweb.com or (630) 466-6700.**

President's Message

The Illinois Section of the American Society of Civil Engineers has issued their infrastructure report card for Illinois, and we received a C- for 2014. That is the bad news, the good news is that it is up from a D+ in 2013. It is good to see that we are making progress and it is apparent that we have a lot more work to do.

2014 REPORT CARD **illinois** INFRASTRUCTURE

Based on 8 criteria (capacity, condition, funding, future need, operation and maintenance, public safety, resilience and innovation).

A = Exceptional: Fit for the Future
B = Good: Adequate for Now
C = Mediocre: Requires Attention
D = Poor: At Risk
F = Failing: Critical: Unfit for Purpose

AVIATION	C+
BRIDGES	C+
DAMS	C
DRINKING WATER	C-
NAVIGABLE WATER	D-
RAIL	C
ROADS	D+
TRANSIT	D+
WASTEWATER	D+

ILLINOIS 2014 GRADE **C-**

IL-ASCE 2014 Report Card

We have a vast and complex infrastructure and finding the funding to maintain and improve it is a difficult challenge. Setting priorities and identifying funding are certainly the cornerstone of any capital improvement program. The days of being able to check off every project are gone. Municipalities are left with tough choices and more projects than money. I don't envy our elected officials as they are continually being asked to do more with less. Oh and by the way, it is not getting any less complicated out there.

I have been attending public sector board meetings for over 35 years and every board that I have worked with was and is committed to doing the very best job they can. Keeping costs down and spending money wisely are not new concepts, but I have to say it seems like circumstances are conspiring to make it more difficult. So from my side of the table and tax bill, I say **"Thanks"** to all the elected officials who have and are doing their very best to govern and use our resources wisely. Keep up the good work!

This month we highlight a road repair method that in the proper instance can be a tool for municipalities to save some money while still providing a high quality product. I hope you enjoy the article.