



## WSPE eNews

A monthly publication from the Wisconsin Society of Professional Engineers

### June 2014 Edition

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#### 1. Project Profile: Fly Ash Stabilized Subgrade in Kenosha

Submitted By James R. Rosenmerkel, P.E.  
Rosenmerkel Engineering/Lafarge

**Purpose.** Over 1.5 miles of old CTH 'N' needed to be widened and repaved to accommodate the new development of Gordon Foods Services (GFS), the largest distributor of food supplies to hotels and restaurants in the country. The project required a jurisdictional transfer of the road from Kenosha County to the City of Kenosha. The new road is now called 38th Street, connecting STH 142 with Interstate 94 and abuts the airport. The overall cost of the project was \$ 2.9 million.



*Old CTH 'N', Now 38th St  
Before FAS*



*38th St - During  
Reconstruction*

**Scope/Challenge.** The existing asphalt pavement was constructed over poor soil and consisted of only 3 inches of hot mix asphalt (HMA), bordered with narrow shoulders and heavy tree lines. There were no disposal sites available for unsuitable materials. New pavement was to be PC concrete, with bike lanes and turn lanes, to accommodate increased truck traffic at GFS. The project was divided into four phases to assure access to the facility throughout the seasons. A new bridge over the Kilbourn Road Ditch was also required along with new utilities, sewer, water and lighting.

**Solution.** Construction of the new pavement began by pulverizing and re-grading the old pavement to approximate final profile and cross slope. Self-cementing class 'C' fly ash was spread at a rate of 120 # / SY on the new surface, mixed with a pulverizer, compacted and graded to final specification requirements. After final grading and rolling with a smooth drum roller, it was ready for a crushed aggregate base course and new 36 foot PC concrete pavement. It rained heavily on the newly recycled surface on several occasions, enhancing the hydration process with no delays in the overall construction schedule. The cost of the project was covered by the County, the City of Kenosha, the state of Wisconsin with a TEA (Transportation Economic Assistance) grant and federal ARRA money for the bridge. The City engineering staff was very pleased with the process, the time/cost savings and the 4 final project outcome.



*38th St - During Reconstruction*



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## 2. Supporting Organizations: Thank You!

Thank You to our Supporting Organizations!

### Silver Level



**WISCONSIN**  
UNIVERSITY OF WISCONSIN-MADISON



**WISCONSIN  
CONCRETE PIPE  
ASSOCIATION**

### Bronze Level



*eblake & associates*

Interested in having your company support WSPE? Take a look at our Supporting Organizations webpage here: <http://www.wspe.org/sponsors.shtml>

Contact Ed Rodden at [execdir@wspe.org](mailto:execdir@wspe.org) or (414) 531-1129 for more details about this program.

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## 3. Raytheon MATHCOUNTS National Competition Results

By Darwin D. Behlke, PE

The Wisconsin Team placed 20th in the 31st MATHCOUNTS National Competition. Team members included Charles Hua, Leo Ma, Zander Rossman, and Anusha Sahai, who placed in the top 100 Mathletes, Coached by Loi Nguyen. The Team had score spread of two points and a place spread of 19. Charles Hua was given the Wisconsin High Scorer Award. Anusha Sahai was given a Repeat Award for attending National Competition two years. The top ten teams were California 1st, Maryland 2nd, Virginia 3rd, New York 4th, Pennsylvania 5th, Indiana 6th, Texas 7th, Massachusetts 8th, Florida 9th and Colorado 10th.

Written Competition Champion was Kevin Liu, Indiana. Written Competition Runner-Up was Nicholas Sun, Illinois. First place winner was 8th Grader, Swapnil Gang, CA. Second place winner was 7th Grader, Kevin Liu, IN. Semi-Finalists included 7th Grader Daniel Zhu, MD and 8th Grader, Alan Peng, MO.

Quarter-Finalist included 8th Grader, Nicholas Chen, IL; 8th Grader Hongyi Chen, CO; 7th Grader, Colin Tang, WA; and 8th Grader, Vinjai Vale, TX. Countdown Round Participants were 7th Grader, Freddie Zhou, MI; 8th Grader, Jun-Hee Lee, IA; Graham O'Donnell, FL; and 8th Grader, Akshaj Kadaveru, VA. We met Po-Shen Loh, a former WI Mathlete who was the 1997 National 3rd Place winner. He is the IMO U.S.A. Team Leader. Look for a future article on Po-Shen and his siblings who all represent WI at the National Competition.



The WI Team: (l to r) Anusha, Leo, Coach Loi, Charles, and Zander

Grade:	Gender:			Total
	M	F	U	
6	8	1		9
7	53	7		60
8	132	23		155
Total	193	31	0	224

#### Scoring Statistics

	Individual			Team	
	Indiv. Total	Sprint Score	Target Score	Team Total	Team Round
Minimum	4.00	4.00	0.00	14.75	6.00
Average	24.16	15.84	8.32	35.27	11.11
Maximum	43.00	28.00	16.00	52.75	18.00
Std. Dev.	9.37	5.64	4.23	9.97	2.88

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## 4. Job Openings

WSPE has posted new job opportunities on the Job Board:  
[http://www.wspe.org/job\\_board.shtml](http://www.wspe.org/job_board.shtml)

Summaries of these postings are as follows:

### Estimating Engineer (Civil Engineer Transportation Advanced) - WisDOT

The Department of Transportation, Division of Transportation System Development (DTSD), Bureau of Project Development is seeking to hire an Estimating Engineer (Civil Engineer Transportation Advanced). The headquarters of this position is the Hill Farms State Office Building on the Westside of Madison.

#### Job Duties:

This position resides in the Proposal Management Section in the Bureau of Project Development. This position monitors, evaluates and improves the processes used to develop engineer estimates for transportation improvement projects. This position leads the statewide estimating user group, monitors bidding and economic trends and develops guidance for engineers. This position also trains WisDOT and consultant staff on the tools and processes required to develop estimates.

This position is a member of the bid analysis team, providing technical support for the monthly bid analysis process. This position works directly with the proposal management section chief and the Bureau of Project Development director to manage the estimate justification process. This position will analyze monthly letting reports and identify concerns relative to awarding contracts and complete required unbalanced bid analyses.

#### Special Notes:

A valid Professional Engineer (PE) license is required upon application. Hired candidates must obtain a PE from the State of Wisconsin within three months of employment in the position.

Prior to any appointments for position(s) filled from this recruitment/announcement, candidates may be subject to a comprehensive criminal background check which may include FBI fingerprinting.

Starting annual salary is \$67,258 - \$76,646, pending relative qualifications, plus

excellent benefits.

The deadline to apply is 5/18/14.

**Job Knowledge, Skills and Abilities:**

- 1 Extensive knowledge of the engineering practices and principles required in the development of transportation projects.
- 1 Thorough understanding of the PS&E development process.
- 1 Knowledge of Wisconsin transportation laws and codes.
- 1 Thorough knowledge of the WisDOT Facilities Development Manual, Standard Specifications and Construction Materials Manual.
- 1 Detailed understanding of the materials and practices required to build transportation projects.
- 1 Working knowledge of the state highway program development process and funding mechanisms.
- 1 A thorough understanding of Modal Division objectives.
- 1 Skills in leading diverse groups, meeting management and facilitation.
- 1 Good organizational skills.
- 1 Skilled in the use of office tools, such as: Microsoft Word, Excel, Access, PowerPoint and Outlook.
- 1 Strong oral and written communication skills.

**How To Apply:**

To apply for this position, go to <http://wisc.jobs/public/index.asp> and click "Log In" to access your existing account or to create a new account if you don't already have an account in the system. Once you are logged in, click "Apply Now." You will be asked to provide your personal information, attach a resume and then complete some exam questions. Once you finalize your exam, you will be sent an email by the system confirming that the exam process has been completed. The responses to your exam will be verified and qualified candidates will receive further consideration. Please address questions regarding the application process to Deb Heiser at [Debra.Heiser@dot.wi.gov](mailto:Debra.Heiser@dot.wi.gov) or at (608) 264-9529.

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**Electrical Engineer / Department of Military Affairs**

This position is with the Department of Military Affairs (DMA), which is located on the east side of Madison, just north of the MATC Truax Campus on Wright Street. We are in a beautiful facility with a weight room and exercise facility, locker room, and a basketball court; all with free parking just outside the door. We offer an opportunity to work with a team of dedicated professionals, flexible schedules, and wonderful work/life balance; all for an organization with a truly worthwhile mission. Qualified veterans with a 30% or more service connected disability are eligible for non-competitive appointment to permanent positions in classified state civil service under s. 230.275, WI Stats. Ask the HR contact listed for information on how to apply under this provision.

**Duties:**

This position is responsible for managing projects related to the design, construction, operation and maintenance of electrical systems in state owned buildings, and serves as the agency's engineering consultant for electrical system design. Also serves as the liaison between facility user groups and contracted firms, providing guidance and direction to both. Performs activities in the areas of site investigation, scope definition, specification writing, cost estimating, budget formulation and management, project scheduling, construction management, and project inspection.

**Salary:**

Starting salary will be between \$46,450 and \$76,646 annually, depending upon qualifications, plus an excellent benefits package that includes employer retirement contributions and a wonderful health care plan.

**Special Notes:**

Incumbent must be registered as a Professional Engineer (PE) as defined in Wis. Stat. S.443.04. Incumbent must pass a criminal background check prior to appointment. Also must be able pass a National Agency Check to obtain, and must maintain, a U.S. Government Common Access Card as a condition of employment.

**Job Knowledge, Skills and Abilities:**

- 1 Wisconsin electrical codes as applied to renovations and new construction;
- 1 Architectural, mechanical and civil engineering principles; Project management principles and practices applicable to facility design and construction;
- 1 State and federal laws, codes and regulation applicable to design and

- 1 construction of state-owned facilities;
- 1 Ability to read and interpret electrical plans and specifications, as well as complex legal language;
- 1 Ability to make mathematical calculations using engineering formulas;
- 1 Ability to interpret, classify and organize large volumes of technical data and information;
- 1 Excellent organizational and communication skills.

**How To Apply:**

To apply for this position, go to <https://wisc.jobs/public/index.asp> and click "Log In" to access your existing account or to create a new account if you don't already have an account in the system. Once you are logged in, search for job announcement 1401991, go into the job announcement and click "Apply Now." You will be asked to provide your personal information, attach a resume and then complete some exam questions. Once you finalize your exam, you will be sent an email by the system confirming that the exam process has been completed. The responses to your exam will be verified and qualified candidates will receive further consideration.

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**Traffic Engineer (Civil Engineer Transportation Advanced)**

The Department of Transportation (DOT), Division of Transportation System Development (DTSD) is currently seeking individuals who are ready to take on a lead role in the delivery of the state's transportation traffic program.

**The Bureau of Traffic Operations (BTO) is currently looking to fill the following vacancies: State Traffic Engineering Analysis and Data Management Engineer and Traffic Operations Engineer.** Headquarters are Madison.

*The hiring list generated from this recruitment will be used for the next 6-12 months to fill current and future positions in the Regional Offices and in the Bureau of Traffic Operations.*

DTSD's Offices are located across the state: Madison (Dane County), Waukesha, Green Bay (Brown County), Wisconsin Rapids (Wood County), La Crosse, Eau Claire, Rhinelander (Oneida County), Superior (Douglas County), Spooner (Washburn County), Milwaukee.

You must apply directly to this recruitment in order to receive consideration for these Traffic positions.

**WisDOT is a great place to work!** We offer amazing [benefits](#) such as a casual office atmosphere, flexible work schedules, ample vacation time, excellent health benefits, and an exceptional employee assistance program that offers a variety of programs and tools to help promote an employee's wellness and health.

**Job Duties:**

**Current Vacancies:**

*State Traffic Engineering Analysis and Data Management Engineer*

This position has a critical role in providing advanced level technical support for improvement programs, traffic analysis and modeling, and traffic management across the department as well as throughout the state of Wisconsin. This position represents BTO's Traffic Section on a broad range of committees tasked with facilitating programs relating to DOT's improvement program and traffic engineering program. This position is responsible for initiating, planning and implementing traffic analysis tools and requirements associated with traffic modeling and traffic engineering.

*Traffic Operations Engineer*

This position is responsible for providing advanced level technical support for intersection/interchange operations, the speed management program, and freight operations. This position will also provide comments and guidance to the regions throughout the intersection control evaluation (ICE) process. This position initiates, plans, and implements special traffic studies in areas related to this position. The State Traffic Operations Engineer will act as a bureau liaison for major/mega projects. This position represents BTO's Traffic Section on a broad range of committees concerned with programs relating to intersection operations, safety, speed management, and freight.

**Special Notes:**

A valid Professional Engineer (PE) license is required upon application. A Wisconsin PE license must be obtained within three months of hire.

***Prior to any application for position(s) filled from this announcement, candidates will be subject to a comprehensive criminal background check, which may include FBI fingerprinting.***

Starting annual salary is \$67,258 - \$76,646, pending relative qualifications, plus excellent benefits.

The deadline to apply is June 8, 2014.

**Job Knowledge, Skills and Abilities:**

- 1 Extensive knowledge of engineering principles and practices as applicable to the planning, design, construction and maintenance-of highways and related facilities.
- 1 Familiarity and working knowledge of traffic analysis tools, such as the Highway Capacity Software, Sidra, Synchro, and microsimulation modeling software.
- 1 Extensive knowledge of the Traffic Guidelines Manual and traffic operations principles.
- 1 Skills to communicate effectively on all aspects of job related functions orally and in writing.
- 1 Ability to establish and maintain effective working relationships.
- 1 Proficiency in computer and data base extraction tools including Excel, Word and PowerPoint.
- 1 Knowledge and familiarity with various traffic analysis software and data management systems.
- 1 Thorough knowledge of laws and rules applicable to highway traffic operations.

**How To Apply:** To apply for this recruitment, go to <https://wisc.jobs/public/index.asp> and click "Log In" to access your existing account or to create a new account if you don't already have an account in the system. Once you are logged in, click "Apply Now." You will be asked to provide your personal information, attach a resume and then complete an exam (questionnaire). Once you finalize your exam, you will be sent an email by the system confirming that the exam process has been completed. Those candidates that appear to be the most qualified will be invited to participate in the next step of the selection process.

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If you are interested in posting a job or your resume on our website, please contact Ed Rodden II at [ExecDir@wspe.org](mailto:ExecDir@wspe.org) or (414)531-1129.

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## **5. Earn PDHs at MSOE's PEAK Event!**

By Brittney Lynn, Continuing Studies and Outreach at MSOE

Registration is now open for MSOE's PEAK event held on Saturday, June 7th!

Professional Engineers can earn the professional development hours (PDHs) now required for maintaining licensure in Wisconsin by attending a PEAK Mini-Conference. This event is a collaborative knowledge exchange among engineering and technical professionals facilitated by MSOE, with the goal of providing a cost-effective way for engineers and technical professionals to learn about new topics.

Featured sessions include:

- \* Ethics in Engineering
- \* Intellectual Property Protection
- \* Doing Business in China
- \* Heat Transfer Fundamentals
- \* Lean Manufacturing Simulation
- \* How to do Technology Forecasting
- \* Radio-Frequency Engineering
- \* Adding Value Using Additive Manufacturing
- \* Using Digital Oscilloscope to Measure the Frequency Spectrum of a Signal
- \* 3-D Scanning Technology
- \* Improving Performance & Existing Work Teams
- \* ...and more!

[View schedule and register here](#)

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## **6. Welcome New WSPE Members!**

By Zack Damuth, PE



Please join us in welcoming our new WSPE members!

<b><u>Fox River Valley Chapter</u></b>	(WI01)	
Eric Otte	Licensed	JE Arthur and Associates, Inc.
Boris Green	Licensed	Abbott Labs
Joshua Cotter	Licensed	
Shelly Cornelius PE	Licensed	GRAEF
<b><u>Metro Chapter</u></b>	(WI10)	
Peter Starck PE	Licensed	Superior Structural Corporation
<b>Randy Konop PE</b>	Licensed	Terra Engineering & Construction Corp
Peter H Newman PE	Licensed	Peter Newman Consulting LLC
John M Koetz Jr	Licensed	Joy Global
Benjamin Tretow	Student	
Michael Kecman	Member	
Brian Hubbard PE	Licensed	
<b><u>Northwest Chapter</u></b>	(WI06)	
Evan M Berglund PE	Licensed	Krech Ojard & Associates Inc
Zachary Fagan	Licensed	Auth Consulting and Associates
<b><u>Southeast Chapter</u></b>	(WI08)	
Randall Murphy	Licensed	Letsch Manufacturing
Colleen Hoffman PE	Licensed	
Jayne Radomski	Licensed	
Peter Eggert PE	Licensed	City of Racine
Martin Lehner	Licensed	Anguil Environmental systems, Inc
Eric Fisher PE	Licensed	Integrated Process Solutions
Sheli Schroeder	Licensed	City of Racine
Adam Hammen	Licensed	The Sigma Group
<b><u>Southwest Chapter</u></b>	(WI09)	
Mike Slavish	Licensed	Hovde Properties
John Carvin	Licensed	Affiliated Engineers Inc
Christopher M. Hunter PE	Licensed	Mead & Hunt Inc.
Andrew Kottke	Licensed	Wisconsin Dept of Transportation
Michele Pluta PE	Licensed	Alliant Energy Corp.
Elliot Morris	Student	
Kelly Monahan	Student	
Tia Endres	Student	
	(WI11)	
Weston Lewis III EIT	Member	Atlas Resin Proppants
<b><u>Wisconsin Valley Chapter</u></b>	(WI12)	
William G Handlos PE	Licensed	Presto GeoSystems
<b><u>State HQ - At Large</u></b>	(WI50)	
Nancy Spelsberg	Licensed	BCP Transportation
Duane Jones PE	Licensed	Crenlo LLC
Mark Riebau	Licensed	Riebau Consulting Service
Charles Scalia	Licensed	Scalia Safety Engineering
Daniel Engstrand	Licensed	Engineered Sales Co.
Kathleen Langlois	Licensed	
Robert Goodreau	Licensed	U.P. Engineers & Architects Inc.

WSPE thanks you for your support!

Interested in becoming a member?

Check out the member benefits at the following links:

<http://www.wspe.org/joinwspe.shtml>

<http://www.nspe.org/Membership/index.html>

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## 7. QBS Award Nominations Requested

By Mike McMeekin, P.E., Chair, ACEC Management Practices Committee and  
Eric West, P.E., Chair, NSPE/PEPP

This is a friendly reminder that the annual Qualifications-Based Selection (QBS) award applications are due by June 6th. Thanks so much and please let me know if there are any questions regarding submissions.

For more information about the QBS Awards, refer to the link below:

<http://www.nspe.org/membership/about-nspe/awards/qbs-award>

Thanks!

Mike McMeekin, P.E.  
Chair, ACEC Management Practices Committee

Eric West, P.E.  
Chair, NSPE/PEPP

OBS Award | National Society of Professional Engineers

Download a 2014 OBS AWARD APPLICATION

[Read more...](#)

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### **FREE 6-Month Trial Membership!**

Interested in WSPE but not sure if you want to join? Try a 6-month FREE trial membership, courtesy of WSPE.

Go to [www.wspe.org/WI%206%20months%20Free%20Membership%20Application.pdf](http://www.wspe.org/WI%206%20months%20Free%20Membership%20Application.pdf) to download an application.

Contact Ed Rodden, WSPE Executive Director, at [ExecDir@wspe.org](mailto:ExecDir@wspe.org) for details.

### **We Need Your News!**

- 1 Is your chapter hosting an event?
- 1 Did your chapter get some new members?
- 1 Have you started your own business?
- 1 Is your company taking on a really challenging project?

If you said "yes" to any one of these questions, or would like to share anything even remotely newsworthy with the rest of WSPE, please send your articles to Clayton Grow, WSPE eNews Editor, [ctgrow@gmail.com](mailto:ctgrow@gmail.com).

We look forward to including your news in our monthly updates!



Join the discussion at [WSPE's LinkedIn Group](#) or



["Like" us on Facebook.](#)



[Follow us on Twitter.](#)

### **We Need Your Email Address!**

If you are reading a paper copy of the WSPE eNews, you're missing out! Send your email address to Ed Rodden, WSPE Executive Director, at [ExecDir@wspe.org](mailto:ExecDir@wspe.org) or call him at (414) 531-1129 to receive electronic eNews.

### **Advertisers Wanted**

Help us offset the costs of producing this eNews by placing an advertisement here! There is a nominal fee of \$25 per issue per article/advertisement. If you are interested in advertising your company here, please contact Ed Rodden, WSPE Executive Director, at [ExecDir@wspe.org](mailto:ExecDir@wspe.org) or [\(414\) 531-1129](tel:4145311129).

Thanks for your help.

### **Update Your Information with WSPE**

Did you...

- ...get a new job?
- ...get promoted?
- ...get a new phone number or email address?
- ...get your PE license?

You can update your information yourself on the NSPE website!  
[Click this link to update your membership information.](#)

Alternatively, you can send your new information to Ed Rodden, WSPE Executive Director, at [ExecDir@wspe.org](mailto:ExecDir@wspe.org) or call him at (414) 531-1129 and he'll make sure your information is updated in both the WSPE and NSPE databases. We'd also like to include an article in the next eNews summarizing your recent change or accomplishment to inform your fellow WSPE members.



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## **WSPE Mission Statement**

*WSPE is an organization of licensed Professional Engineers (PEs) and Engineering Interns/Engineers in Training (EIs/EITs).*

*WSPE enhances the image of its members and their ability to ethically and professionally practice engineering through education, licensure advocacy, leadership training, multi-disciplinary networking, and outreach.*

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