



ST. LOUIS ENGINEER

MSD Project Clear – Maline Creek

Abstract: Project Clear is a \$4 billion dollar Metropolitan St. Louis Sewer District (MSD) initiative to improve water quality throughout St. Louis City and County. The Maline Creek Tunnel is the third Project Clear storage project to be constructed, and will be the first large diameter chamber to store combined sewer water. The underground cavern is 175 feet below the ground surface, constructed through a 50’ diameter circular shaft excavation supported by secant piles. Drill and blast techniques were used to excavate the cavern in an urban setting under a USACE floodwall. A mobile form carrier and 41’ long segmental form is used to cast the 28’ diameter cavern concrete liner. The three drop shafts have been drilled and excavated, along with the five vent shafts. A world record was set by Kiewit Foundations Group for the 11’ diameter rock drill used to excavate the larger drop shafts. The excavations have adapted to 100 year flooding, water main breakages and flooding, overhead and underground utilities, and varied groundwater conditions. The presentation will summarize the construction progress, methods, and challenges to date.

John Deeken is a geotechnical engineer for Black & Veatch residing near St. Louis, MO. John has over 14 years of professional experience in the US and 6 foreign countries, involved in construction and design of numerous power generation and transmission projects. As a geotechnical specialist he is a member of several ASCE, DFI, and AISC groups. He is currently the Resident Engineer for the Maline Creek CSO project.

Kevin Nelson is a civil engineer and construction manager for Black & Veatch in St. Louis, MO. During his 29 year career, he has been involved in the design and construction of numerous water and wastewater system projects throughout the United States. He is currently the Construction Manager of a program consisting of construction of five tunnels and three large relief sewer projects for the Metropolitan St. Louis Sewer District.

Time, Date, Location: 11:30am to 1:00pm, June 20th , 2019, at the Engineering Center, 4359 Lindell, St. Louis 63018. Registration starts at 11:30am and lunch is served at Noon. The program will begin promptly at 12:15pm. One (1.0) PDH is available.

Cost: \$20/person, students and members in transition \$5

Registration: Please register and pay online using the link below for reservations by Friday before the event @ 5:00 PM. Please cancel by Friday before the meeting or we may have to charge you for the meal: <https://mspe.org/event-3344359>

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June Joint Luncheon

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P R E S I D E N T ' S M E S S A G E

MSPE St. Louis Chapter – February 2018 President's Report



Hopefully you were able to join us for our successful April luncheon! This was a well-attended program held in cooperation with our colleagues from The American Society of Quality (ASQ). The program featured the use of unmanned aerial vehicles in inspecting infrastructure, specifically the power grid.

The April luncheon highlighted one of the things NSPE/MSPE does well, that is share information across disciplines and make us think about our role as Engineers in considering the impact and role of technology. I must admit my own personal experience in MSPE/NSPE has been particularly broadening, especially in my interaction with my Electrical Engineering colleagues that work at Ameren. While many of my distinguished colleagues concerns are unique to their employer or position working for another utility I find their experiences often familiar.

I was reminded of the interconnected nature of Engineering when I recently attended a lecture by Michael E. Webber, author of Power Trip (Basic Books, 2019). In this enlightening book Mr. Weber outlines the connection of power and energy to other facets of civilization many of us take for granted. The areas he includes as impacted by energy include: Water, Food, Transportation, Wealth, Cities, and Security. Or as is explained, "Bringing these pieces together, it is clear that the story of energy is the story of civilization." However, we all know as Engineers the challenges always lay in the details, "Bringing the benefits of energy to everyone ... without scorching the atmosphere, acidifying the oceans or denuding the land will require a new kind of magic. This is our global challenge."

One way energy impacts water is of course in the pumping needed in modern water systems be they water, wastewater or stormwater systems. Our June 20th luncheon, outlined in this newsletter, will include a presentation of MSD Project Clear – Maline Creek Tunnel. The tunnel is 28 feet in diameter and is being constructed 175 feet below the ground surface. Obviously any sewage placed in the tunnel will need to be pumped out, hence the connection to our Ameren colleagues.

So if you have not come join MSPE/NSPE and help us all strive to become more than narrow technocrats but widely informed, curious and effective professionals ready to meet the "global challenge." Also please take a moment to congratulate our new officers, outlined in this newsletter, who have taken the challenge. I encourage you to join us for our June event and if you wish to become more active in MSPE please call or email me.

Yours respectfully,
Michael T. Buechter, PE, D.WRE, F.EWRI, 314-768-2772
or mtbuec@stlmsd.com.



MSPE April Lunch Event

St. Louis Engineer
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St. Louis State Directors
Breck R. Washam, P.E.
Jeff Hoevelmann, P.E.
Tom Ratzki, P.E.

Missouri Society of Professional Engineers - St. Louis Chapter
2019 Calendar

Jun-18						
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

-  Chapter/Foundation Board Meeting
-  MSD Project Clear – Maline Creek

Potential Programs, potential 3rd Thursday of the month:

June: Lunch - MSD Project Clear – Maline Creek



MSPE Educational Foundation Building

On July 13, 1994, Kansas City civic leader Jerome Cohen and his wife, Jeannette, donated the building and property at 200 East McCarty Street in Jefferson City, Missouri to the Missouri Society of Professional Engineers Educational Foundation, Inc.

By gutting the facility, the professional design/construction team of Pellham, Phillips, Hagerman of Springfield, Missouri and Ludwig Associates of Jefferson City transformed the building's plain and unassuming original structure into a design that projects the technical and professional image of engineering in a classic way.

The donation of a building is an asset to further the purpose of the MSPE Educational Foundation, which was established January 15, 1968 under the General Not for Profit Corporation Law, Chapter 355 RSMo, as a way for the member engineer or their family to make charitable contributions to the profession.

The Foundation Activities

- ◆ Fund a MSPE Chapter Grants Program to promote STEM activities with community
- ◆ Promote the study of engineering through quality STEM programs like the highly-acclaimed MATHCOUNTS, Project Lead the Way and FIRST Robotics programs for K-12 grades.
- ◆ Develop sound investment strategies and enable the building to become a revenue producing asset while encouraging and enhancing access to excellent engineering education curriculums and successful engineering careers.
- ◆ Donations and estate planning for the MSPE Educational Foundation are welcome from any supporters of the foundation.



Please go to <https://mspe.org/Educational-Foundation> to Donate or Learn More.

Thank you in advance!

ADVERTISEMENT OPPURTUNITY!



Are you looking to advertise your business in the St. Louis area to a focused group of Engineers?

Look no further than the MSPE—St. Louis Engineer Newsletter!

Your company or message will be directly connected to hundreds of Engineers in the Greater St. Louis Area in various companies and industries.

If you are interested, contact Adam Zuroweste at azuroweste@burnsmcd.com

**YOUR
AD
HERE**



Call for MSPE Committee Volunteers!!!

The Missouri Society of Professional Engineer's committees facilitate the development and implementation of the goals and objectives with an emphasis on:

- ◆ Membership
- ◆ Annual Convention
- ◆ Awards
- ◆ Education
- ◆ Publications
- ◆ Bylaws
- ◆ Young Engineer Committee or Activities
- ◆ Audit
- ◆ State Mathcounts
- ◆ Fall PDH Task Force
- ◆ IT Advisory Committee

For experienced professionals, this is a great way to continue the leadership of the organization and an opportunity to mentor our newer members.

For the new members, this is an opportunity to network with individuals within the Profession as well as begin your path with a well-respected institution in Professional Engineering. Moreover, activity within the Chapter is a criteria that goes toward consideration for the Chapter's Young Engineer of the Year Award that is awarded annually.

The following criteria should apply to all nominees:

- 1) Member in good standing (some positions may require 3-tier membership)
- 2) Be knowledgeable about the identified activity or have a willingness to learn
- 3) Be able to devote the time and attention required to fulfill committee's responsibilities
- 4) Have the ability to receive and send e-mails with attachments
- 5) Be willing to serve if appointed

Indicate your preferences, (up to 3), Chapter and contact information to Stacey Meyer at smeyer@mspe.org. Identify any limitations as well. Most Committee work is handled through email, phone and or virtual-style meetings.

Note: You can still continue your service to the Chapter as a member of one the MSPE Committees.

Should you have any questions or have an interest, please email bob@becnel.com or call Bob at 314-941-7641.

DEADLINE: Friday, June 21, 2019



Job Opportunity



POSITION SUMMARY

We are currently seeking a Manufacturing Engineer. With minimal supervision, the Manufacturing Engineer will work with engineering, operations, and project management to develop technical manufacturing solutions for new programs.

WHO IS LMI?

LMI is a world-class leader in designing, building and manufacturing aerospace structures, systems and components for commercial, business and regional, and military aerospace customers. We employ engineering, manufacturing and testing experts throughout the United States and the rest of the world.

ESSENTIAL JOB RESPONSIBILITIES

- Develop technical manufacturing options.
- Perform research, design, and development of manufacturing processes.
- Consult with vendors to determine product specification and arrange for purchase of product.
- Applies statistical methods to estimate future manufacturing requirements and potential requirements.
- Excellent oral and written communication skills.

EDUCATION AND EXPERIENCES

- Requires 4-year degree in Engineering.
- 4 years minimum years related experience.
- Aerospace industry knowledge is required.
- Working knowledge of 3D CAD systems required. CATIA v4, v5 is preferred.
- Experience in sheet metal fabrication is required.
- Assembly engineering experience is desired.

For more information please go to:

https://lmiaerospace.wd1.myworkdayjobs.com/en-US/LMI_Careers/job/Washington-MO/Manufacturing-Engineer_R0005564



SAVE ^{THE} DATE

7 11 19
THURS

AFFILIATE SOCIETY SUMMER SOCIAL

HOSTED

BY THE ENGINEERING CENTER OF
ST. LOUIS, 4359 LINDELL BOULEVARD, ST. LOUIS, MISSOURI 63108

WHEN

JULY 11TH, 4:00 P.M. - 9:00 P.M.

WHY

GET TO MINGLE WITH REPRESENTATIVES OF 37 AFFILIATE SOCIETIES HOME TO
OVER 14,000 ENGINEERS AND CONTRACTORS.

THERE WILL BE THREE "THEMED" ROOMS TO EXPLORE!

MORE INFORMATION TO FOLLOW - PLEASE MARK YOUR CALENDARS.

2019 MSPE STL Chapter Elections

Please review the candidates for MSPE St. Louis Chapter board positions for 2019-2020. Candidate information for new additions to the board are below:

Secretary:

Mike Rademacher, P.E. is an electrical engineer at Burns and McDonnell, licensed in 5 states. He has a variety of experience in the low and medium voltage power distribution as well as instrumentation and controls design. He has been a three tier member of MSPE since 2013, and has served as a chapter director for St. Louis. He has also been active as awards chair, and volunteering with Mathcounts.

State Director (2019-2022):

Kathy French, P.E. is a 1997 graduate of Harvey Mudd College with a BS in general engineering and an MS from Drexel University in environmental engineering. She received her PE in 2004 and has been an active member of MSPE since 2007. She went through the chapter leadership track from 2012 to 2017 and also served as a chapter director from 2010 to 2012. Kathy has remained active as the lead on the Scholarship Committee for the last several years and assisting with other chapter activities. Kathy works at LS Power as the Vice President, Environmental.

State Director (2019-2020):

Tom Ratzki, P.E. received a BS in civil engineering from Oklahoma State University and a MS in Civil Engineering from the University of Missouri. Mr. Ratzki worked his entire career at Black & Veatch, beginning in June 1979. He worked exclusively on water and wastewater projects, with assignment in Kansas City (5 years), Cincinnati (15 years) and St Louis (18 years). He retired from Black & Veatch in March 2017. He was active in the Western Section of MSPE while initially employed by Black & Veatch in Kansas City. When he returned to Missouri in 2000, he reengaged with MSPE attending various St Louis Chapter MSPE meetings, assisting in and organizing Engineers Week events and ultimately becoming an officer and State Director for the St Louis Chapter.

Chapter Director (2019-2022):

Lisa Cheng received a Master's degree from the University of Pittsburgh. Since joining HDR in 2014, she has been working on deep pump stations, wastewater treatment processes, and collection systems. Lisa was originally from China and has been in the US for 10 years. With a multi-culture background, and with both her mom and husband as teachers, she has a passion for education for the next generation. Lisa is still learning the American culture both at work and in life, and finds that it is different, sometimes challenging, but more times exciting! In her spare time, Lisa likes to spend time with family, cooking, hanging out with friends and traveling.

Chapter Director (2019-2022):

Bently Green, P.E. is a professional engineer with 28 years of experience in water infrastructure design and construction. Bently is registered in four states, including Missouri, Illinois, Mississippi, and Tennessee. Bently started his career in Mississippi prior to moving to St. Louis in 1996. Bently has been a professional engineer since January 1994. Throughout his career, Bently has successfully managed very challenging projects, and currently serves as Black & Veatch's client director for the St. Louis office.

We have set up a Survey Monkey to approve the proposed Secretary, State Directors, and Chapter Directors. Please vote on chapter board members at <https://www.surveymonkey.com/r/B7GR8L9>

