



VALLEY FORGE CHAPTER  
PENNSYLVANIA SOCIETY OF PROFESSIONAL ENGINEERS  
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## REPLACEMENT OF TRAM MG SETS WITH VARIABLE SPEED DRIVES AT THE GATEWAY ARCH - **WEDNESDAY OCTOBER 23, 2019**

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*Gateway Arch, St. Louis Missouri*

- **Harve Hnatiuk, PE, F.NSPE**  
**Maida Engineering**
- Get a behind-the-scenes look at the Gateway Arch, and discover how 50-year-old arch trams that take visitors to its observation deck 630 feet above the ground have been updated with 21st century technology. Learn how site-related challenges were overcome with synergetic team building measures. We will describe the justifications for replacing the trams' motor-generator (MG) sets and DC motors with variable-frequency drives and AC motors. Over the course of this session, we will discuss design and engineering challenges associated with this complex project, and the creative solutions that were implemented.
- Get 1.0 professional development hour (PDH)

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**Where:** Peppers Italian Restaurant & Bar  
175 Town Center Rd. King of Prussia, PA 19406

**When:** **Wednesday October 23<sup>rd</sup>**  
5:45 PM-6:30PM Networking  
6:30PM-8:30PM Dinner & Presentation

**Cost:** **PSPE Member: \$35 // Non-member: \$40**

**RSVP by:** October 18<sup>th</sup> to Ben Foster, P.E. @ [vfc.pspe@gmail.com](mailto:vfc.pspe@gmail.com)

