



CHAngemaker
Jay Wolverton, PE

Engineers: Their Work Often Unnoticed, but Vital to Society

Engineers have always played a vital role in society, and at times, they don't get full credit for the contributions they make to our communities or how they impact our daily routine. For instance, think about how you started your day today. Did you have a hot shower and a cup of coffee? Did you have a safe drive to work or school? Did you check your email on your cell phone or send a text to your spouse or children? If the answer is yes to any of these questions, engineers played a significant role in your morning. Engineers designed the water infrastructure that sent clean water to your home. Engineers designed the electric grid that ran your coffee maker. Engineers designed the cellular network your phone is connected to. Engineers designed the highways, bridges and intersections you safely traveled to get to your destination.

Our industry is challenged to design infrastructure, systems, and buildings – big and small, remarkable and conventional, cutting-edge and practical. Sometimes it takes years of design and development until an engineer sees a design built, utilized and enjoyed by the communities they serve. Their work is primarily done behind the scenes – in the planning and design phases - so it's easy to take for granted those things we utilize in our everyday life – things that keep us safe, keep us connected, promote a more sustainable world – are available to us because an engineer designed it.

The newly passed Infrastructure Investment and Jobs Act (IIJA) has focused attention on the state of our nation's infrastructure, which has been underfunded for decades. Engineers are hard at work envisioning rehabilitating, repairing, and replacing some of our most critical systems, including water, transportation, aviation, and the power grid. Without this needed investment and the skillful work of engineers, our communities face ongoing threats to our basic services and economic growth. The IIJA will push engineers to develop solutions that make highways safer, extend the useful life of our most essential infrastructure, create more resilient power networks, bring clean water to millions, promote energy efficiency and new energy technologies, and take steps to reduce pollution and impact our environment in positive ways. Most of this work will occur out of the public view, but that doesn't make it any less important and impressive.

Engineers are in demand now, and the opportunities are nearly boundless. There are many specialized types of engineers and engineering disciplines providing a career path of discovery, challenge and passion for making an impact on the world. If you love travel or cars, one might consider civil engineering related to transportation and

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aviation. Our roads, bridges, and airports are poised for significant upgrades and new designs. Civil engineers are also needed to address our aging water infrastructure and the challenge to find new solutions where water is a diminishing resource. Suppose you want to make an impact on the environment. In that case, you might consider environmental, electrical, or mechanical engineering, where energy efficiency and new energy technologies are challenging the way we power our homes and businesses. These engineers are also being tested to address the environment by cleaning up and remediating sites impacted by past actions and reversing environmental impacts with our future decisions. If your passion is imagining extraordinary buildings and spaces that nurture a love of learning, sports or commerce, you might consider a career as a structural or geotechnical engineer or architecture. Designing the buildings of our future can be exciting and propel society to rethink our spaces and the earth and on which they sit. These are just a few of the many possibilities available within the engineering industry.

Today's engineers are some of the brightest and most creative among us, and we need more of them. Engineering is a great career, and our challenge remains to find and develop talented engineers to lead us into the future. The time has certainly come to think about how engineers impact our lives, acknowledge their considerable contributions to our communities, and thank them for what they do. Thank you to all the engineers I know – colleagues, clients, competitors, and friends - especially those I've had the honor to work with over my many years in this incredible industry. We have truly made the world a better place and will continue to do so in an even greater manner going forward.

About the Author: Jay Wolverton, PE, Executive Vice President and Chief Growth Officer for CHA Consulting, Inc. (CHA), provides strategic oversight and direction for market leaders, business development, and corporate marketing with a focus on the significant growth anticipated for the company. Prior to joining CHA, Jay was the founder and CEO of Wolverton & Associates, which was acquired by CHA in June 2019 and has been fully integrated and rebranded as CHA. Jay has more than 35 years of engineering and leadership experience and is a licensed Professional Engineer in 32 states. You can reach Jay at JWolverton@chacompanies.com.



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