



RHONDA CROWDER

More Diversity Efforts are Needed in Engineering

Of the 300-plus active members in The Cleveland Engineering Society (CES), less than 10% are minority. And, if you survey the Northeast Ohio landscape, it's a struggle to identify minority-owned engineering firms.

Cleveland Engineering Society Executive Director Tuwhanna Lewis can't think of any.

"There are some minority companies more focused on construction that do engineering, like Ozanne, but I can't think of any true engineering companies," says Angela M. Jones, senior government affairs specialist for Northeast Ohio Regional Sewer District.

Ramona Lowery, commissioner of Cleveland Water Pollution Control (WPC), thinks of one. And, Adam Kilbourne, FSMPS, CPSM, president of

Tec Inc. Engineering and Design can name two that his company has partnered with on projects.

Why the shortage of minority-owned engineering firms?

Jones recalls the former Cleveland Mayor Michael R. White era, when companies couldn't bid on a contract without minority participation. "If they don't demand a diverse pool of professionals, you won't see it happen," Jones says.

"People have to be intentional," adds Lowery. "Someone has to be willing to give a small firm an opportunity."



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READY TO WORK Shown on a job site for MetroHealth System as a co-op with Great Lakes Construction, Mohammed Khalil Khaled (standing) was introduced to engineering while participating in The Ace Mentoring Program at John Hay High School.

Both Jones and Lowery were introduced to engineering in high school through a teacher recognizing their strengths and then exposing them to it. Neither knew anything about engineering but went on to obtain a degree in civil engineering. That's why they work with the National Society of Black Engineers' (NSBE) JR. to make minority students more aware of the opportunities as early as possible. NSBE JR. helps stimulate and develop student interest in engineering to increase the number of high school students who choose to major in technical fields.

SME, an engineering consulting firm, hired intern Mohammed Khalil Khaled, 21, who was exposed to engineering while participating in The ACE Mentoring Program at John Hay High School. He is currently in his junior year at Cleveland State's Fenn College of Engineering.

Managed by Construction Employers Association, The ACE Mentoring Program's mission is to inform high school students about career opportunities in architecture, construction and engineering. ACE encourages students to pursue secondary and post-secondary education that will prepare them for careers in the integrated construction industry and supports the development of basic and technical skills through mentor relationships.

"ACE opened my eyes to how big construction is and the different parts and groups of people," says Khaled, who grew up in Cleveland's inner city.

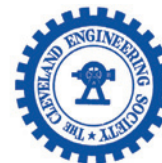
"Through ACE, I got my first internship with Gilbane Building Company, then Great Lakes Construction."

Khaled says his undergraduate program lacked diversity. And, he sees little on job sites. "MetroHealth was the only site I saw meet the diversity requirement," Khaled says. "Diversity is good. It forces people to come in."

Getting students in high school, and even younger, is a good start. But there also needs to be opportunities for students to pursue their interest in the ACE fields in college. According to Kilbourne, however, few colleges and universities offer curriculum specifically focused on architectural engineering.

Kilbourne says The University of Cincinnati and Penn State University are the two nearest schools to Northeast Ohio offering architectural engineering and that only about 10 around the country offer this type of degree program. "You can go to many colleges for mechanical or electrical engineering, but it is such a broad field and they study a lot of theory, and few programs even mention A/E/C," he says.

Stephen F. Duffy, a civil engineering professor at CSU, has been an advocate for first-generation minority students for years but says his department has taken for granted that the minorities who are interested will find their way to the program. During a conversation with a colleague from West Africa, he learned their department has no metrics for diversity in recruitment or hiring. "We have nothing to shoot for," says Duffy.



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Duffy sees more international studies at the graduate level. A junior level class he teaches is 40% female with several African Americans. He tries his best to make sure they receive support. "There's hope but we should be pushing more," says Duffy. "When you have a bigger pool to play with, you have a better chance of pulling from diverse demographics."

But the industry can't stop at attracting more minority students to seek engineering degrees. It needs a strong support network to help young engineers make it through the pipeline.

"You don't learn unless you work in a large firm," says Jones. "So, we're behind the curve. Our counterparts are brought up in families with firms. They are typically third and fourth generation

"You have to get involved [in the engineering profession] early, in school, to start building that professional network.... There's a lot of work to do to pull in more minorities, people of color and women."

Tuwhanna Lewis

Cleveland Engineering Society

engineers, so they know how to maneuver, and the business aspect."

"You have to get involved early, in school, to start building that professional network," adds Lewis.

CES ran a pilot program with Cleveland State University (CSU) where members served as mentors to minority and first-generation college students. CES has had conversations about how to bring it back.

Lewis admits that CES, as an organization, should focus more on diversity but it's not always a topic of discussion. However, she says, there's always an excitement among members about up and coming engineers, regardless of race.

"There's a lot of work to do to pull in more minorities, people of color and women," says Lewis. **P**

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