

“Grow Our Own” Minority STEM Initiative: Partnering in Outreach

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The railroad programs at the University of Illinois at Urbana-Champaign (UIUC) and Michigan Technological University (MTU) are supporting efforts led by Hanson Professional Services to expose underrepresented groups to railway engineering and “grow our own” next generation of civil engineering leaders.

From Community Impact Comes Opportunity

To support higher-speed passenger rail operations between Chicago and St. Louis, a long-term effort to consolidate multiple rail corridors through Springfield, Illinois is underway. Future construction of a rail link along 10th Street will allow for a single grade-separated rail corridor to replace multiple routes through the central business district, eliminating multiple roadway grade crossings. However, the approved alternative passes within blocks of a high school and impacts minority populations in the surrounding community.

Through a unique partnership, local community leaders saw the proposed rail corridor as an opportunity to

introduce local youth and minority populations to possible careers in related railway transportation, civil engineering and construction fields. The aim of the project is to help students from underrepresented groups connect the highly-visible construction, operations and maintenance activities in their community surrounding the new rail corridor to science, technology, engineering and mathematics (STEM) topics. With a tangible connection to real-world applications of these subjects, it is hoped that more of these students will pursue careers in engineering, railroads or construction industry, growing the next generation of industry professionals.

The “Grow Our Own” Minority STEM Initiative is led by Hanson Professional Services, a civil engineering consulting firm headquartered in Springfield. Hanson is joined by the City of Springfield, Sangamon County and the Illinois Department of Transportation in administering the initiative. Each group has pledged financial support to multiple programs including outreach to minorities through the NURail Center.



Program coordinators at Hanson work with nearby schools and local organizations such as the Urban League, Springfield Black Chamber of Commerce, Boys & Girls Clubs, Frontiers International and Ministerial Alliance to identify minority students in the Springfield community with an interest in STEM topics. Students are then matched with appropriate programs to foster their interest.

UIUC Engineering Open House

In March 2014, NURail and Hanson partnered to host 30 minority students from Springfield high schools and middle schools attending the Annual Engineering Open House on the UIUC campus. With bus transportation provided by Hanson, NURail graduate student Research Assistants served as tour guides to escort the Springfield students around the engineering campus. The visiting students were able to participate in hands-on activities demonstrating applications of STEM topics to various engineering fields. Among the hundreds of displays was the award-winning “Railway Extravaganza!” exhibit, consisting of a locomotive simulator and other interactive railway engineering activities, organized by the UIUC American Railway Engineering and Maintenance-of-Way Association (AREMA) Student Chapter and NURail-supported students.

While the AREMA exhibit provided a direct link to the railway project in Springfield, other exhibits on robotics, unmanned aerial vehicles, polymers and biotechnology were also popular with the Springfield students.

After the first visit proved successful, another group of 25 students from Springfield was hosted in 2015 with plans to make it an annual activity.



MTU Summer Youth Program

Thanks to travel support from Hanson and scholarships from NURail, two minority students from Springfield were able to experience a more intensive introduction to transportation and engineering concepts at the 2014 Summer Youth Program (SYP) in Rail and Intermodal Transportation hosted by Michigan Technological University. Over five days, students learn about transportation infrastructure and operations through hands-on activities and industry field trips. The popular MTU program also allows students to meet peers with similar interests but from differing backgrounds all across the United States.

Hanson and NURail plan to sponsor participation of more Springfield minority students in 2015 and at future editions of the MTU summer program.

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