



**AGC**  
THE CONSTRUCTION  
ASSOCIATION

**& AUTODESK**

**2023 WORKFORCE SURVEY RELEASE**  
**Virtual Media Event Talking Points**  
*Wednesday, September 6, 2023*

**Ken Simonson Remarks**

Hello and thank you for joining us today. My name is Ken Simonson and I am the chief economist for the Associated General Contractors of America. With me today are Allison Scott, Autodesk's Director of Customer Experience and Industry Advocacy; Bill Ryan, the Workforce Development and Education Coordinator for Dick Anderson Construction out of Butte, Montana, Hal Fuglevand, the vice president of operations support for Knife River construction in Billings, Montana and Kim Sargent, Director of Marketing and Kenna Smith, the Talent Acquisition Manager for Roanoke, Virginia-based Branch Group.

The Associated General Contractors of America and Autodesk each year partner to measure the state of construction workforce shortages, better understand why those shortages exist, assess the impacts of labor shortages on construction projects and learn what firms are doing to cope with and overcome those shortages.

The results of this year's Workforce Survey highlight significant shortcomings in the nation's approach to preparing workers for careers in construction. Eighty-five percent of firms report they have open positions they are trying to fill. Among firms with openings, 88 percent are having trouble filling at least some of those positions – particularly among the craft workforce that performs the bulk of the onsite construction work.

(Add regional and union breakouts here).

One of the main reasons labor shortages are so severe in the construction industry is that most job candidates are not qualified to work in the industry. A shocking 68 percent of firms report applicants lack the skills needed to work in construction. In addition, one-third of firms report candidates cannot pass a drug test.

These shortages are adding to the impacts of supply chain disruptions that have made it difficult for firms to get materials delivered on time and that are driving up the cost of those materials. While these shortages have recently shown signs of abating, 65 percent of firms report projects they work on have been delayed because of supply chain challenges and 61 percent have projects that have been delayed because of labor shortages.

Supply chain problems and labor shortages are making construction more expensive, undermining demand for certain types of projects. Half the respondents report owners canceled, postponed or scaled back

projects due to increasing costs, while 22 percent of firms report projects were impacted due to lengthening or uncertain completion times.

Many construction firms are taking steps to cope with and try to overcome workforce shortages. Eighty-one percent of firms have raised base pay rates for their workers during the past year. In addition to raising pay, 44 percent are providing incentives and bonuses and 26 percent have also improved their benefits packages.

Firms are also getting more creative when it comes to recruiting workers. Sixty-three percent of survey respondents – up from 39 percent in the 2022 survey – report they added online strategies, like using social media or targeted digital advertising, to connect better with younger applicants.

Contractors are also increasing investments in their internal training programs in an effort to address the fact many candidates lack the basic hard and soft skills needed to be successful. Forty-one percent of firms are boosting spending on training and professional development programs, 25 percent are enhancing their online and video training capabilities and 14 percent are using augmented and virtual reality technology to better train workers.

When it comes to the impact of two broad categories of technology—artificial intelligence, or AI, and robotics—on construction jobs in the next five years, almost half of respondents (44 percent) state that AI and robotics will positively impact construction costs by automating manual, error-prone tasks. In addition, 41 percent say AI and robotics will improve the quality of construction jobs and make workers safer and more productive. But 17 percent say AI and robotics will negatively impact the construction job market by eliminating jobs, while 30 percent expect no effect on construction jobs.

We have invited Autodesk’s Allison Scott to share some additional observations about how firms are coming to increasingly rely on technology...

### **Allison Scott Remarks**

Thanks Ken.

The construction labor shortage and digital skills gap are still widespread challenges in our industry. As workers continue to retire without being replaced, construction technology will play an increasingly pivotal role in helping firms cope with a lack of skilled talent to manage their current slate of projects, in addition to other issues they are facing.

Despite the continued challenges expressed by survey participants around the labor and supply chain issues, there are promising trends around digital skills, AI and robotics, and diversity that point to a larger cultural shift in construction. We see similar trends within our community of construction professionals using our tools.

- For instance, Ken described how 41 percent of firms are boosting spending on training and development programs, 25 percent are enhancing their on-line training, and 14 percent are using augmented and virtual reality technology to better train workers. Autodesk has increased investment in learning initiatives for construction, and we see

similar growth in digital learning. For example, Autodesk Construction Cloud Learning Center offers free courses and learning materials translated into five different languages on how to use Autodesk Construction Cloud products. Since its launch in 2021, there have been more than 135,000 course enrollments across over 70 courses, with Learning Center visitors from over 170 countries. Learners can now earn Certificates of Completion and add them to their LinkedIn profiles. Over 48,000 certificates have been issued through the Learning Center.

- We've also seen increased demand for our technology from universities, unions and other industry training centers, with more industry training centers than ever before, across carpentry, sheet metal work, pipefitters, both union and non-union, using Autodesk Construction Cloud technology. These educators are responding to the industry's growing appetite for talent with technical skills. This trend is reflected in the survey as well with about half (49 percent) of firms reporting they are engaged with a career-building program, at high schools, colleges, or career and technical education programs.
- The survey also reflects how essential construction technology is to modern construction operations. Ninety-one percent of firms agree that their employees need to possess digital technology skills to be successful as firms adopt new labor-saving technologies. And while few candidates possess all the skills firms want, nearly three-quarters of responding firms say at least half of the people they are hiring possess the technology skills they need, and a similar share agrees that diversifying the current workforce is critical to strengthening their future business. This is what's so interesting and exciting about the opportunities a career in construction can provide— on a personal note, most of the jobs that I have had in this industry did not previously exist when I first arrived. And in twenty more years, we're going to have even MORE roles that embrace and intertwine technology in ways we cannot even fathom right now. This data is a strong indicator of the larger digitization trend taking hold in construction and shows that firms should continue to upskill digital nomads – those who came up in the industry without these tools – while also attracting digital natives, those who have been using connected technology since its inception. It's a top priority that the industry creates programs and opportunities that attract this group and tap into talent with diverse backgrounds, because people from different backgrounds willing to explore technology is what drives cultural change.
- This year, the survey includes firms' attitudes toward the use of AI and robotics in construction as interest in these technologies continues to heat up. Interestingly, almost half of respondents (44 percent) believe that AI and robotics will positively impact construction costs by automating manual, error-prone tasks, and 41 percent say AI and robotics will improve the quality of construction jobs and make workers safer and more productive so they can focus less on redundant work and more on meaningful work. To this end, Autodesk is consistently working to augment our technology with assistive workflows across preconstruction, construction project management, and operations – making the opportunity for impactful and meaningful work even more accessible. A recent example—earlier this year, we released AutoSpecs in ACC, which allows users to generate submittal logs within minutes—a task that used to take weeks or sometimes

months to get right—and leverages AI to identify missing submittal items before they become costly errors.

The labor shortage in the construction industry is becoming even more pressing as the current workforce retires, but it's just one component of a very complex problem our industry faces. Our customers consistently voice concerns that, though there will be an influx of new projects and roles, the industry is not attracting enough qualified people or growing the right skillsets. Construction learning initiatives are being employed to help companies stay agile so they can remain competitive and stay ahead of the curve during the industry's continued digital transformation, which has greatly accelerated over the last five years. This is a promising trend that sets the industry up for increased growth and improves the way people work.

And now I would like to turn things back to Ken to wrap up our analysis of this year's survey results.

### **Ken Simonson Remarks**

Thank you, Allison, for sharing your insights into the survey results.

Beyond the fact it remains hard for firms to find workers, the biggest takeaway from this year's Workforce Survey is how much the nation is failing to prepare future workers for high-paying careers in fields like construction. Too often, the applicants who are available lack even the basic qualifications needed to be employable.

It is time to rethink the way we as a nation educate and prepare workers. In virtually every community in this country there are open construction positions that pay better than the average job and are vital to local economic growth. Yet too few schools offer classes in construction or even expose students to the opportunities that exist in the field.

As AGC of America has long championed, public officials need to significantly boost investments in programs that expose students to the opportunities and the skills needed for careers in construction. This will put more students on a path to professional and financial success and address the needs of many more local employers. It will also signal to students that there are multiple paths to success in life, and one is not better than another.

That is why AGC of America will continue pushing federal officials to narrow an education funding gap that currently invests five times as much encouraging students to enroll in college as it does preparing them for careers in craft fields like construction. This includes boosting funding for the Perkins Act as well as rethinking who can qualify for programs like Pell Grants.

We also need to appreciate that it took decades to dismantle our once robust vocational education programs and it will take years to rebuild them. In the meantime, federal lawmakers need to allow more people with construction skills to lawfully enter the country and work in the sector. And since the only people who benefit from having a large pool of undocumented workers in the country are those who are willing to exploit them, we also need a path to legal status for people who are already here.

The bottom line is we need to do a better job as a nation preparing future workers for the many high-paying career opportunities that exist in this – and many other – industries. AGC of America and its network of chapters will continue pushing policy makers to do just that.

Combined with our other efforts to attract and retain workers, we are confident that investing in construction education will help solve worker shortages in this sector.

Now before we open things up for questions, I would like to invite the contractors on the call, Bill Ryan of Dick Anderson Construction, Hal Fuglevand with Knife River and Kim Sargent and Kenna Smith with the Branch Group, to share some observations about the labor market conditions, demand for construction and the impacts of the coronavirus in your respective areas.

Let's start with Bill Ryan...

And now let's hear from Hal Fuglevand...

Now let's hear from Kenna Smith...

And from Kim Sargent...

And now let's open things up for questions.

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