

The New Era of Infrastructure

An overview of the Infrastructure Investment and Jobs Act

On November 15, 2021, President Biden signed the Infrastructure Investment and Jobs Act (IIJA) into law. The IIJA allocates \$1 trillion to infrastructure over the next five years, making it one of the largest funding packages of its kind in our nation's history. This timely legislation will provide funding to help modernize and fortify America's transportation infrastructure, much of which has gone unfunded and untouched for decades. It is also expected to create 2.4 million new jobs by the end of 2025¹, helping to lift the American workforce out of a time of economic uncertainty.

However, there's something even more groundbreaking about this bill. Because, for the first time in American history, the term 'infrastructure' is being re-defined.

Infrastructure as an Interconnected Ecosystem

A major goal of the IIJA is to transform our nation's infrastructure into a more resilient, sustainable, interconnected ecosystem that will benefit future generations. This revolutionary bill targets traditional infrastructure needs, but will also invest in new sectors that directly impact American citizens' quality of life, including widespread access to affordable housing, clean drinking water, broadband internet, and better cybersecurity.

This bill re-defines the term 'infrastructure' to include new programs and sectors, such as:



Broadband Internet



Congestion Relief



Cybersecurity



Electric
Vehicle Charging



Emissions Reduction



Porous Pavement



Transit Development

Funding from this legislation will allow for landmark initiatives in digital infrastructure, renewable energy, and reconnecting communities. At the same time, it will challenge the entire industry to expand their thinking about what it means to develop infrastructure.

Because now, the mission isn't solely to build a structure or repair a roadway. It's to build an interconnected ecosystem that uplifts communities by encouraging greater connection, resiliency, and sustainability. The mission has changed - **from building up, to building out.**

"This bill is a historic opportunity to rebuild America's roads, bridges and rails; expand access to clean drinking water; ensure that every American has access to high-speed internet; to tackle the climate crisis and advance environmental justice, while investing in communities – both urban and rural – that have too often been left behind."

Spending Breakdown

Understanding IIJA funding allocation

The IIJA allocates funding to over 350 distinct programs across more than a dozen federal departments and agencies².

Timely Investments

With these funds, traditional infrastructure will receive long-awaited investments in both new and existing programs to complete essential projects such as:

- Repairing thousands of roads and bridges
- Eliminating grade-level railroad crossings
- Replacing lead service lines to deliver clean water

Sustainable Spending

New infrastructure concepts defined in the bill will also receive funding for projects that promote the IIJA's digital infrastructure and renewable energy initiatives, such as:

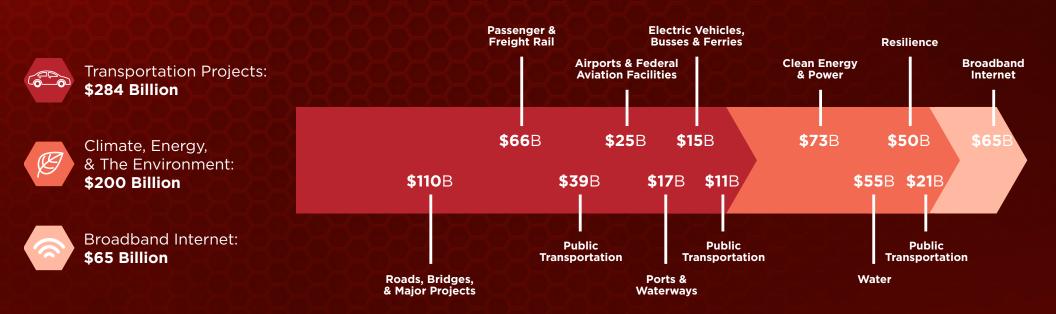
- Installing electric vehicle charging stations
- Mitigating cybersecurity threats
- Ensuring nationwide access to high-speed internet

Purpose-Driven Funding

Nearly \$550 billion in new federal funding will be distributed to infrastructure projects that complement the purposes of the bill - to build out a more resilient, sustainable future.

\$550 billion in new funding

The IIJA invests new federal funding dollars in infrastructure as an interconnected ecosystem comprising all built, natural, and social environments.



Opportunity for Infrastructure Experts

Anticipated five-year growth for Architecture, Engineering, and Construction

The IIJA promises these new federal funding amounts to projects that evolve the mission of infrastructure, such as **rebuilding America's roads**, **bridges**, **and rails**, **expanding access to clean drinking water**, **ensuring equitable access to high-speed internet**, **addressing the climate crisis**, **and advancing environmental justice**.

Evolving the mission of infrastructure will require the Architecture, Engineering, and Construction industry to create and innovate faster than ever. Here's a glimpse of the opportunities these sectors can expect by the year 2026:



Advancements in Architecture

Massive spending amounts are headed to the architecture market. For starters, the IIJA presents a \$213 billion investment³ for developing sustainable, affordable housing. The plan also provides funding to upgrade learning centers across the country, including \$100 billion for public schools, \$25 billion for childcare centers, and \$12 billion for community colleges. Preparing a plan that complements the purposes of the IIJA bill, such as digital infrastructure and renewable energy efforts, will put your firm in a good position to land one of these projects.



New Jobs in Engineering

The American Council of Engineering⁴ estimates that the IIJA will create more than **82,000 jobs in engineering and design.** This could **propel the sector's annual output by 18%,** from \$352 billion in 2021 to a projected \$416 billion by 2026. Get ready for this anticipated growth by leveraging data from newly completed projects to develop realistic plans for future work and identify any talent or technology gaps you may need to fill.

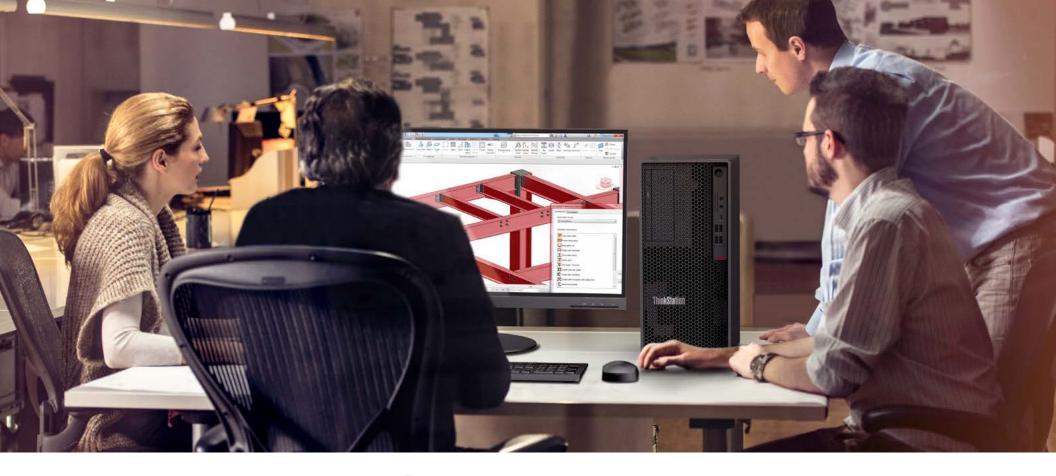


Revenue Growth in Construction

This infrastructure investment is expected to have a lasting effect on the U.S. economy and the construction industry. In fact, it is estimated that each dollar of infrastructure spending will increase gross output by two dollars. A further \$100 million over five years will be allocated to digital construction management solutions as part of the federal government's effort to promote efficiency and sustainability with more powerful technology.

"The relationship between efficiency and technology cannot be overlooked, especially when it comes to rebuilding the nation's infrastructure."

-Jobsite (Powered by Procore)6



Power Up Your Projects

Leverage modern tech to get the job done

The IIJA brings technology to the forefront as no other bill has before. With focuses on digital infrastructure, stronger cybersecurity, and equitable access to the internet, this legislation reinforces that technology is no longer a luxury, it's a necessity.

This is especially true for the Architecture, Engineering, and Construction industry, where pen and paper renderings and legacy software solutions simply can't keep up with the demands of today's accelerated projects. Your firm needs reliable, powerful technology that can work just as fast as you do. You need Lenovo Workstations.

Lenovo Workstations

Lenovo Workstations are equipped with the processing power and software necessary to handle even the most demanding workflows, but are still easy to use and proven to be up to 20% more reliable than other vendors.

These workstations are built with the latest Intel® Core and Xeon® processors and NVIDIA® graphics to offer the raw compute power and unmatched visual software needed to empower innovation and creativity. With MILSPEC tested reliability, optimal processing power, and incredible graphics capabilities in your corner, your firm will be ready to compete for IIJA funding dollars.

Why Lenovo

Empowering infrastructure experts in the new era

Lenovo P Series Workstations are designed specifically for power users like you. Built with the latest Intel® Core and Xeon® processors and enhanced with NVIDIA® graphics, Lenovo Workstations are equipped to handle the most demanding workloads without compromising efficiency. Plus, these powerful solutions are ISV-certified to run industry CAD, CAE, CAM, and CAS applications, including but not limited to:

- ANSYS Multiphysics
- Autodesk CFD and Autodesk Revit
- Bentley AutoPLANT
- Creo CAM
- Dassault ICEM Surf
- Dassault CATIA

Our Desktop and Mobile Workstations allow you to deploy the configuration that works best for your firm. All are equipped with the reliable software, hardware, and support services you need to inspire innovation.

Discover NVIDIA®

NVIDIA RTX™ Graphics Fuels Innovation

By deploying a Workstation equipped with NVIDIA graphics, your firm can take advantage of incredible software technologies such as:

- · Real-time ray tracing
- Virtual reality (VR)
- 3D graphics virtualization
- Al-augmented tools

In addition to unrivaled graphics firepower, NVIDIA offers services built to empower the AEC sector. NVIDIA Omniverse™ Enterprise, for instance, can help your design team connect, collaborate, and innovate together in real-time, from anywhere.



Performance-Driven Innovation

Equip your team with the raw power and performance you need to evolve the mission of infrastructure along with the IIJA. With powerful Lenovo Workstations and unmatched NVIDIA graphics, your firm will be ready to innovate smarter and faster than ever before.



Empower Your Business with Lenovo Workstations

LEARN MORE

¹ Anchin. "The \$1.2 Trillion Infrastructure Bill and What it Means for A&E and Construction Companies." 2021.

² The White House. "Building a Better America: A Guidebook to the Bipartisan Infrastructure Law for State, Local, Tribal, and Territorial Governments, and Other Partners." 2021.

³ Architectural Record. "What Biden's \$2 Trillion Infrastructure Proposal Could Mean for Architects." 2021.

⁴ Newforma. "Infrastructure Bill Impact on the Construction Industry Workforce." 2021.

⁵ GEP. "US Infrastructure Bill and Its Impact on the Construction Industry." 2022.

⁶ Procore. "What the Infrastructure Bill Means for Public Sector Construction." 2022.