BUILDING

THE FOUNDATIONS FOR TOMORROW

The Purdue Applied Research Institute's Infrastructure and Innovation Laboratory (PIIL) creates, develops and supports innovative construction solutions that provide superior and resilient structural performance with optimized schedules and cost for nuclear, energy, defense and transportation projects.

PIIL uses Purdue University's world-renowned Bowen Large Scale Structural Testing Laboratory and the Purdue Energetics Research Center for testing assemblies, benchmarking numerical models, nurturing new construction technologies, innovating design validation and supporting federal and state regulatory construction licensing.

PIIL's Joshua Harmon, Amit Varma and Sanjeev Malushte at Bowen Labs. (Charles Jischke)

THE BEST AND THE BRIGHTEST

PIIL staff has decades of collective experimental, computational, design and analysis experience. Our expertise assures consistent, effective results for complex projects in the advanced energy, defense and transportation infrastructure sectors. Our staff also supports creating structured financial strategies for large projects, especially in the field of nuclear power.

The staff includes talented engineers and researchers with advanced degrees and a large cohort of capable graduate students who are pursuing master's or doctoral degrees in civil, structural and mechanical engineering at Purdue.

(ABOVE) Nick Gallek and Zaire Lawrence work on the Split Hopkinson Bar Test Setup, used to characterize the behavior of materials like concrete and steel at high strain rates, at the Bowen Large Scale Structural Testing Laboratory at Purdue. (Charles Jischke)

50+

YEARS OF EXPERIENCE IN ADVANCED ENGINEERING AND RESEARCH

20

YEARS OF OPERATION AT BOWEN LABS

LOCATIONS IN
West Lafayette, IN and Washington, DC

LEARN MORE

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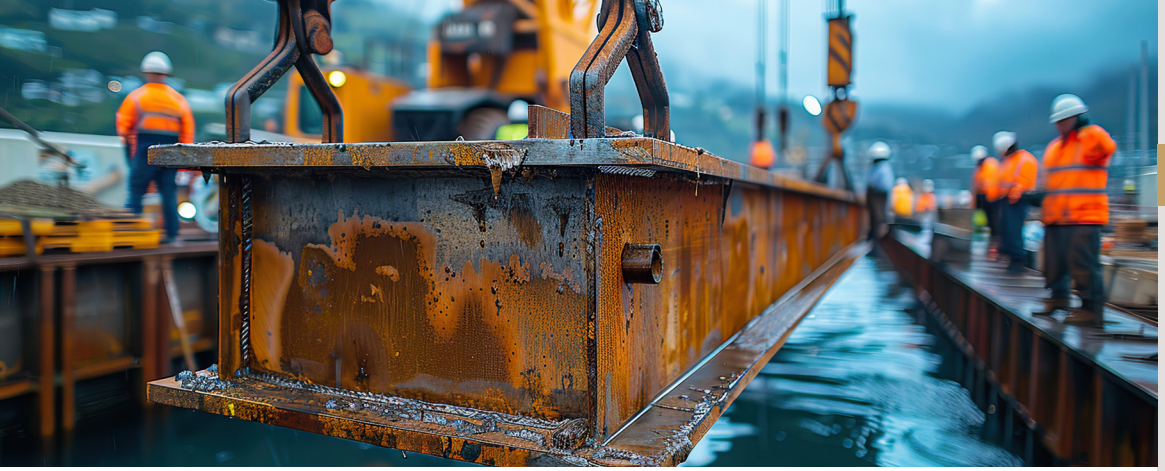
PURDUE
APPLIED RESEARCH INSTITUTE



FOUR SPECIALITY DIVISIONS

PIIL caters to civil and structural engineering related research, innovation and training needs. We develop and apply novel construction technologies for nuclear, energy, defense and transportation projects through our four divisions.

Bridge and Transportation Infrastructure Division (BTID)
BTID is founded on decades of real-world experience. Our team employs innovative engineering, testing and design practices to support new projects and determine end-of-life extensions to critical aging transportation assets within the United States. Our experts apply the latest research to solve individual or system-level problems in a way that is balanced with tried-and-true practices to ensure the most reliable long-term solutions.

Infrastructure Finance Division (IFD)
IFD supports U.S. initiatives for energy security by creating innovative economic practices and standards. Our team formulates advanced energy deployment strategies with minimum federal or state subsidies. IFD resources include Purdue University, key industry partners and experienced staff with more than 25 years of industrial development and energy finance experience. IFD has forged key industry alliances that allow our team exclusive access to industrial power users (off-take partners) and specialized finance opportunities that support deployment of advanced energy technology, including small modular and micro reactors.

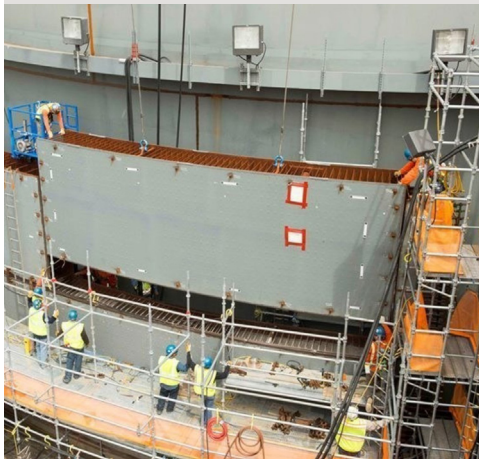
Infrastructure Security and Defense Division (ISD)
ISD focuses on improved design and construction of secured facilities and protective structures using cost-effective modular design and construction techniques. ISD solutions reduce construction duration and field-labor requirements while delivering superior structural performance through greater strength and ductility. Specific services and solutions include delay and denial features (internal or security perimeter), protective structures, hardened structures for resisting missile and external blast loads, fixed or portable chambers for safe disposal of suspected explosive packages and more.

Nuclear Infrastructure Division (NID)
NID provides comprehensive structural engineering and construction-related solutions for advanced light-water reactors (Gen III+), small modular reactors, advanced reactors (Gen IV) and microreactors and fuel processing facilities. We develop innovative reactor-specific and reactor-agnostic solutions and perform the necessary research and development, especially in modular steel-plate composite construction and seismic isolation. This helps minimize overall plant costs and reduce the construction duration and field-labor requirements.

STRENGTH THROUGH COLLABORATION

PIIL is a proud partner with government and private-sector entities. Together we advance the cause of infrastructure and innovation excellence.

- Aalo Atomics
- Bechtel
- Boston Government Services LLC
- Duke Energy Corp.
- General Electric Co.
- Hitachi
- Holtec International Inc.
- Idaho National Laboratory
- Kiewit Corp.
- Los Alamos National Laboratory
- National Nuclear Security Administration
- National Reactor Innovation Center
- Nucor Corp.
- Panattoni Development Co.
- Rolls-Royce Corp.
- Schuff Steel
- U.S. Energy Department
- Westinghouse Electric Corp.



(Georgia Power Company)