Creating Distinctive Business Outcomes Through Leading Capital Project Delivery

The Value of CII Membership
Did You Know?

Your industry peers are collaborating with faculty from top Engineering and Business schools to generate game-changing, industry sector-focused research.

The Construction Industry Institute (CII), based at the University of Texas at Austin, is the research and development center for the capital projects industry. CII exists to leverage capital projects to produce distinctive business results for CII’s members.

CII is working closely with companies like General Motors, Chevron and DTE Energy to understand the Owner-Operator’s needs and with service providers like Jacobs, Fluor and Bechtel to accelerate a project’s financial returns to the owner. This unique collaboration between service providers, academics and owner-operators is what makes CII’s products and services so applicable and valuable.

Using CII Best Practices, owners & service providers reported SIGNIFICANT IMPROVEMENTS in:

- Costs
- Schedules
- Safety

CII Best Practices increase the PREDICTABILITY & CONSISTENCY of project performance. Gains in PROJECT QUALITY & PRODUCTIVITY are also realized. The CII approach creates improved business outcomes.
CII Knows:  

Your Time Matters  

- The benefits of a Materials Management Program result in 16% schedule improvement.  
- The use of Planning for Start-Up results in a 7.9% schedule improvement.  
- Implementation of Constructability reduces the project schedule by 7.5%. 

Your Budget Matters  

Using CII tools and Best Practices dramatically improves the safety, schedule and cost of a capital project. For every $1 spent of CII Front End Planning (FEP), members report a $3-7 ROI. Members report saving nearly $5 for every dollar spend on CII’s Advanced Work Packaging (AWP). It’s tried and true: Implementing CII’s Best Practices eliminates waste and improves productivity.

“It’s more cost effective to assess ‘Project Readiness’ with an industry-wide tool.”

“For more than a decade, we used a home-grown tool to assess project readiness. It aligned with our stage gate approval process and took approximately 1½ FTE’s just to maintain and keep it relevant. Once we realized how much effort it was taking, we decided to take a look at CII’s Project Definition Rating Index (PDRI). The PDRI tools have been validated to predict outcomes and modified to fit different industry sectors. In 2015, we shifted to CII’s PDRI for all of Lilly’s major capital projects. Using the PDRI checklist, we are able to compare our results to the rest of the industry, and this tool allows us to create our own ‘internal’ norm, as well.”

Rex Phillips, Eli Lilly and Company

When used together, FEP and AWP reduce the cost of a $100 million project by $8 million.

CII has a suite of PDRI Tools:  
- Industrial  
- Building  
- Infrastructure  
- Small Industrial  
- Small Infrastructure

CII’s Project Definition Rating Index tools have a benefit/cost ratio of:  

$24/1
“CII’s Advanced Work Packaging is delivering immediate value to our clients.”

“We’re working with a client who has been tracking their return on investment with the use of CII’s Advanced Work Packaging (AWP) best practice. They’ve reported seeing a 4.6 to 1 return, and they’re just getting started. They anticipate that will increase significantly over the lifecycle of the project. By implementing AWP using our Work Package Server and ConstructSim solution, our clients see immediate value. This value ranges from completed projects realizing 36 to 1 savings, to projects in the early stages realizing 4.5 to 1 returns on the cost of the implementation.”

Tannis Liviniuk, Bentley Systems

Supply Chain Management can provide savings of: 4% to 8%

For projects using CII Planning Best Practices, the average cost growth decreased from: 6.3% to -1.2%
The Value of CII Membership

Collaborative forum for company-to-company & company-to-academia relationships

Smarter, more confident, better prepared, employees

Transparent methodology to measure progress

Improved capital delivery

Proven implementation toolkit

Cutting-edge industry intelligence & knowledge

For information about CII Membership:
Jenny Bien, Associate Director
(512) 232-3005
jenny.bien@cii.utexas.edu
DID YOU KNOW YOUR INDUSTRY PEERS ARE COLLABORATING WITH LEADING ACADEMICS TO GENERATE GAME CHANGING, INDUSTRY SECTOR FOCUSED RESEARCH?

JOIN US @CIIProjSuccess
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(512) 232-3005
Jennifer A. Bien

BENEFITS OF CII MEMBERSHIP

- Collaboration with leading industry, government, and academic institutions on key industry issues
- Leadership development
- Networking leading to partnerships and long-term relationships
- Free, unlimited organizational access to the CII Knowledge Base, a 24/7 web-based resource of CII practices, products, and tools
- Education and training resources, including online courses, modules for self-instruction, workshops, and customized clinics
- Free access to all standard CII Benchmarking & Metrics reports
- Access to CII Performance Assessment System (PAS), a secure project database managed by CII, where self-analysis tools give members the ability to benchmark their projects against the best in the industry
- Implementation support to integrate CII practices into planning and execution phases of member companies’ capital facility life cycle needs.
- Member pricing on CII products, online training, clinics/workshops, and education modules
- Access to member-only products and events

JOIN US

CII SECTOR BUSINESS IMPERATIVES

Health and Safety Environment
Predictability
Transparency
Competitiveness
Improved Delivery / Process Flexibility

CAPTURING OPPORTUNITIES WITH YOUR PEERS

(Fluor) views its membership as a valuable long-term investment over the years. Our involvement in the development and implementation of CII practices has significantly enhanced our ability to deliver value to our customers.

- Glenn Gilkey (Ret.)
Fluor Corporation

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2016 Annual Report

Building Business Value.
OUR MISSION

The mission of CII is to inspire owners, contractors/suppliers, and academia to collaborate through research to produce best practices and implementation resources, creating innovative solutions that tangibly improve safety and capital efficiency.

OUR VISION

CII envisions a construction industry that builds predictable value for society and stakeholders.
Dear Valued CII Members:

Our 2016 was a busy year. As you know, the world looks to CII to advance the capital projects business. Since its founding in 1983, the Institute has developed a global reputation for making the industry’s projects safer, more productive, and increasingly predictable. But a great reputation comes with the responsibility and obligation to continually do more. CII made a number of significant changes in 2016 to accelerate the pace of industry advancement and dramatically increase the scale of business results possible from capital projects.

This year’s Annual Report outlines these changes and the impact that they’re already having on CII’s members and the industry at large.
To support the work of the Sector Committees and promote collaboration, CII created four repurposed functional committees, known as Standing Committees, along with Membership and Communications. At their core, these committees are designed to work across all sectors with a focus on the following areas:

**Funded Studies**  
To help choose research topics

**Implementation**  
To help members use this research, which includes overseeing a new Registered Advisor Program (RAP) of select independent consultants who can become certified to implement CII tools, methods, and change programs

**Performance Assessment**  
To determine how to measure success

**Professional Development**  
To train people to implement the research successfully

**Membership and Communications**  
To promote growth and share knowledge and successes across all sectors

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**CII’s Bold Transformation**

In April, CII’s Board of Advisors approved a new governance structure featuring **five new sector-specific committees, four repurposed functional committees, and three leadership committees**. Although the total number of committees has remained the same, CII is now able to create research and products tailored to the business needs of each industry sector while positioning the industry for the future. The Institute’s forward-looking, “overarching” research and development program is now designed to investigate major areas with breakthrough potential as identified by the Board of Advisors and the leadership committees. This helps move CII beyond incremental gains to achieve results that were previously unthinkable.

**Renewed Focus on Implementation**

After several years of development, CII launched the new Knowledge Base at the Annual Conference in August. **The Knowledge Base is the foundation for the industry’s future — it leverages three decades of CII research in a user-friendly, online format complete with the key findings and resources members need to quickly understand and assimilate learning.** However, unless the findings are put into action, CII’s research risks becoming just another report on a website. This is the Institute’s largest challenge – to leverage our research and development (R&D) activities to actually deliver measurable business results (as opposed to driving awareness and understanding).

To meet this challenge, CII is rethinking how our members should use the human, financial, and technological resources at their disposal. Our Implementation, Professional Development, and Performance Assessment Committees now work in parallel with Research Teams so that members have all the resources they need to deliver improved business results through the capital projects they plan and execute.
INTERESTING TRENDS

The realms of corporate finance and capital projects are on a collision course that is spawning new organizations and different forms of value creation. Developers, commonly found only in commercial construction, have migrated to all sectors of the capital projects business. Project completion is no longer a technical definition, but often a balance sheet algorithm as well. CII’s members are not immune to these changes. Fortunately, CII is able to stay ahead of these and other trends by conducting the research and development that positions capital projects for the future. In 2016, the Institute began casting a wider net to gather the best minds from all facets of academia and business to ensure that all issues and aspects are fully considered in the creation of solutions. Our committees were challenged to do the extraordinary and move beyond ordinary topics to seize on bold initiatives that will provide enhanced business value at both sector and industry levels. CII’s committees are rising to the challenge. The overall number of volunteers involved in CII activities is up. The energy level of our members is up. It’s apparent: CII’s leadership is creating what’s next in capital projects.

CURRENT CHALLENGES

98% of projects over $1B exhibit average cost overruns of 80%.

BRENDAN BECHTEL
CII, AC 2016

YOUR INSTITUTE

2016 marked the first 12 months of our 18-month evolution to create a revolution in the capital projects business. The transition is going well. Besides changes to CII’s committee structure and a laser-focus on business results, the Institute has also strengthened and expanded our partnerships around the world. Currently, CII has affiliates for its R&D efforts in Canada, Norway, Saudi Arabia, South Africa, Singapore and South Korea, and we continue to look for opportunities in new regions as well. Our global reach affords CII the benefits of expanded collaboration with additional universities and organizations that offer different and new perspectives. Ultimately, though, the future of our industry is dependent on you. CII needs you to invite colleagues from other departments in your company and colleagues from different organizations to participate in CII activities. Doing so gives the Institute the intellectual merit it needs to create the broad impact that you desire. It also allows us to honor the legacy of our 2016 Chairman Mike Elliott, who recently passed, by advancing the work of the Institute that he so ardently supported.
CII was fortunate to have Brendan Bechtel keynote our Annual Conference in August. While he shared his optimism for our industry’s future, he also highlighted symptoms of its current state: 98% of megaprojects (over $1 billion) are considered failures, exhibiting average cost overruns of 80% and average schedule losses of 20 months. We can do better. While I’m confident that CII can create the path forward, I’m also committed to the idea that most of the solutions for our industry’s future won’t resemble the strategies of the past. Precisely because the world looks to CII to advance the capital projects business, our collective work continues to be incredibly important. Important to the people who (knowingly or not) depend on our industry every moment of every day. We build the hospitals that care for people, facilities that manufacture medicines and products, projects that create energy, and infrastructure to transport everything to where it’s needed. Capital projects are the vehicle that improves people’s standard of living. CII is the engine that makes capital projects better!

Stephen Mulva
Director
Capital projects are the vehicle that improves people’s standard of living. CII is the engine that makes capital projects better.
Breaking New Ground with Bold Ideas.

Sector Research Initiatives

**Facilities and Healthcare**
- Beyond capital cost, how does the built environment impact the business case for a project?
  - BUSINESS IMPERATIVES
    - Renovation/Revamping of Existing Facilities
    - Portfolio Management
    - Technology Impacts to Construction Management (ex. BIM)
    - Life Cycle Costs

**Power, Utilities and Infrastructure**
- What is the regulatory impact on projects for their full life cycle?
- How can we improve the materials flow and visibility of the supply chain?
  - BUSINESS IMPERATIVES
    - System Reliability
    - Capital Efficiency
    - Customer Affordability
    - Government Regulations
    - Siting and Location of Projects
    - Environmentally Controlled
    - Cannot Set Own Prices
CII’s next-generation strategy includes expanding membership into more diverse areas within the capital projects industry. In 2016, we identified five industry sectors and created committees to represent each sector. Each committee develops policy and programs, and oversees research initiatives driven by the key business imperatives for their sectors.

Our goal is to enable more and different kinds of companies to have a voice – to ask the kinds of questions that are most relevant to their businesses – and produce research that can be applied directly to their capital projects. We see opportunities for more diverse thinking and even greater innovation that will increase the value CII delivers to its members.

We also see opportunities deliver more robust research results more quickly. To keep work focused and productive, each sector committee will conduct no more than two research initiatives at a time.

Every initiative will be fully formed, which means the results will include educational products and services, such as videos or events, and key performance indicators. CII members also will have access to Registered Advisors who are select independent consultants certified to implement CII tools, methods, and change programs. In other words, members will gain the tools and resources they need to apply the research successfully.
Driving Change.

Honoring Outstanding Leadership and Commitment

CARROLL H. DUNN
AWARD OF EXCELLENCE

Bernard Amadei

This year’s honoree, Dr. Bernard Amadei, Professor of Civil Engineering at the University of Colorado Boulder, is changing the world through engineering. His highly distinguished career of teaching and global industry leadership continues to reflect innovative thinking, creative collaboration and a call to the engineering community to contribute to the building of a more sustainable, stable and equitable world. As the founder of Engineers Without Borders – USA and co-founder of Engineers Without Borders – International, Amadei believes that global citizen engineers are called to operate in a multi-cultural world in which they deliver solutions that are done right from a technical point of view, are the right solutions for the planet and its people, and are developed for the right reasons. The Engineers Without Borders (EWB) network transforms lives and communities through engineering projects designed to empower communities to meet their basic human needs and equip leaders to solve the world’s most pressing challenges. His ongoing work continues to challenge the engineering and construction industry and push boundaries to improve our world.

RICHARD L. TUCKER
LEADERSHIP AND SERVICE AWARD

Jerry Eyink

For more than 30 years, Jerry Eyink has been a devoted and active member of CII whose outstanding involvement and volunteer efforts include a number of leadership roles. Eyink served on CII’s Executive Committee from 2005-2007 and the Executive Advisory Council in 2009. In 2008, he received CII’s Distinguished Service Award for his leadership and demonstrated commitment to improving the cost effectiveness of the capital project life cycle. Throughout his decades of service, he has also served on CII’s Board of Advisors, Strategic Planning Committee, Implementation Strategy Committee, Education Committees, Annual Conference Committee, Knowledge Management Committee and Research Teams. Eyink is an instructor for CII’s Executive Leadership Program, and he most recently helped manage a team of more than 200 volunteers to launch CII’s new Knowledge Base, which has transformed access to three decades of industry knowledge. For Eyink, this prestigious “Tucker Award” holds particular meaning, as Richard Tucker was the person who inspired Eyink in 1985 to participate in CII.

ABOUT THE AWARD

As one of our industry’s most prestigious recognitions, this award was named in honor of Carroll H. Dunn, Project Director of the Construction Industry Cost Effectiveness Project, which formed the foundation of CII, to honor an individual for significant achievements in improving the engineering and construction industry.

ABOUT THE AWARD

Named for Dr. Richard L. Tucker, who led the founding of CII in 1983, this award recognizes individuals who have made a significant contribution to CII’s mission and success.
CII Members

**OWNERS**

Abbott  
Ameren Corporation  
American Transmission Company, LLC  
Anadarko Petroleum Corporation  
Anheuser-Busch InBev  
Aramco Services Company  
ArcelorMittal  
Architect of the Capitol  
Ascend Performance Materials  
AstraZeneca  
BP America, Inc.  
Cargill, Inc.  
Chevron  
ConocoPhillips  
Consolidated Edison Company of New York  
The Dow Chemical Company  
DTE Energy  
Eastman Chemical Company  
Eli Lilly and Company  
Enbridge, Inc.  
EnLink Midstream  
ExxonMobil Corporation  
General Electric Company  
General Motors Company  
GlaxoSmithKline  
Global Infrastructure Partners  
Greater Toronto Airports Authority  
Honeywell International, Inc.  
Huntsman Corporation  
Irving Oil Limited  
Kaiser Permanente  
Koch Industries, Inc.  
LyondellBasell  
Marathon Petroleum Corporation  
National Aeronautics & Space Administration  
NOVA Chemicals Corporation  
Occidental Petroleum Corporation  
ONEOK, Inc.  
Ontario Power Generation  
Petroleo Brasileiro S/A - Petrobras  
Petronas  
Phillips 66  
Pioneer Natural Resources  
Potash Corporation of Saskatchewan  
The Procter & Gamble Company  
Public Service Electric & Gas Company  
Reliance Industries Limited (RIL)  
SABIC - Saudi Basic Industries Corporation  
Shell Global Solutions US, Inc.  
Smithsonian Institution  
Southern Company  
Tennessee Valley Authority  
Tesorro Corporation  
TransCanada Corporation  
U.S. Army Corps of Engineers  
U.S. Department of Commerce/ NIST/EL  
U.S. Department of Defense/TriCare Management Activity  
U.S. Department of Energy  
U.S. Department of State  
U.S. Department of Veterans Affairs  
U.S. General Services Administration  
The Williams Companies, Inc.

**CONTRACTORS**

AECOM  
Affiliated Construction Services, Inc.  
AMEC Foster Wheeler  
Atlas RFID Solutions  
Autodesk, Inc.  
AZCO, Inc.  
Baker Concrete Construction, Inc.  
Barton Malow Company  
Bechtel Group, Inc.  
Benham, A Haskell Company  
Bentley Systems, Inc.  
Bilfinger Industrial Services, Inc.  
Black & Veatch  
Burns & McDonnell  
CB&I  
CCC Group  
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CH2M  
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Continuum Advisory Group  
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Enstoa, Inc.  
ePM  
Faithful+Gould  
Fluor Corporation  
Hargrove Engineers + Constructors  
Hilti Corporation  
I.M.P.A.C.T.  
IHI E&C International Corporation  
IHS  
Jacobs  
JMJ Associates, LLC  
JV Driver Projects, Inc.  
KBR  
Kiewit Corporation  
Lauren Engineers & Constructors, Inc.  
Matrix Service Company  
McCarthy Building Companies, Inc.  
McKinsey & Company, Inc.  
Midwest Steel, Inc.  
Parsons  
Pathfinder, LLC  
PCL Constructors, Inc.  
PricewaterhouseCoopers Advisory Services, LLC  
PTAG, Inc.  
Quality Execution, Inc.  
Richard Industrial Group  
S & B Engineers and Constructors, Ltd.  
SBM Offshore  
Skanska USA  
SNC-Lavalin Constructors, Inc.  
Supreme Group  
Technip  
UniversalPegasus International  
Victronic  
Wanzek Construction, Inc.  
The Weitz Company, Inc.  
Wilhelm Construction, Inc.  
Wood Group  
WorleyParsons  
Zachry Group  
Zurich

For more information about joining CII, please visit www.construction-institute.org
Collaboration That Delivers Business Results.

CII has long understood the benefit of teamwork. As part of CII’s transformation, its work with Process Industry Practices (PIP) and Fiatech to deliver business results from capital projects has become more important than ever.

For more than two decades, Process Industry Practices (PIP) has been developing and implementing common industry practices for facility design, procurement, construction, operations and maintenance that help reduce a facility’s total cost of ownership. It is a self-funded consortium of process industry owners and engineering construction contractors organized under the Institute inside the Cockrell School of Engineering at The University of Texas at Austin. More than 300 members and volunteers worldwide collaborate to harmonize internal company standards and best practices into industry-wide PIP Practices for members to use. Today, there are more than 600 PIP Practices in 12 engineering disciplines.

CII established Fiatech more than 15 years ago to identify and develop new technologies to enable capital project efficiencies. Because technology today has become so integral to all areas of business, Fiatech and CII decided in 2016 to more closely integrate their operations. Fiatech will continue to advance technology research and adoption as part of the larger CII strategic effort to drive business results.
## PIP Member List

### OWNERS

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<th>Company/Institution</th>
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<td>3M Company</td>
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<td>LyondellBasell</td>
</tr>
<tr>
<td>Mallinckrodt</td>
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<tr>
<td>Monsanto</td>
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<tr>
<td>Mosaic Fertilizer</td>
</tr>
<tr>
<td>NORAM E&amp;C</td>
</tr>
<tr>
<td>Nuclear Fuel Services</td>
</tr>
<tr>
<td>Occidental Oil &amp; Gas</td>
</tr>
<tr>
<td>OLIN Corp.</td>
</tr>
<tr>
<td>Pasadena Refining</td>
</tr>
<tr>
<td>PESRM (Philadelphia Energy Solutions R&amp;M)</td>
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<tr>
<td>Phillips 66</td>
</tr>
<tr>
<td>Pioneer Natural Resources</td>
</tr>
<tr>
<td>PVS Chemicals</td>
</tr>
<tr>
<td>REC Silicon</td>
</tr>
<tr>
<td>RES Kaidi</td>
</tr>
<tr>
<td>REXtac, LLC</td>
</tr>
<tr>
<td>Saudi Basic Industries Corporation – SABI</td>
</tr>
<tr>
<td>Sekisui Specialty Chemicals</td>
</tr>
<tr>
<td>Tesoro Corporation</td>
</tr>
<tr>
<td>WestRock</td>
</tr>
<tr>
<td>Zeon Chemicals L.P.</td>
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</tbody>
</table>

### CONTRACTORS

<table>
<thead>
<tr>
<th>Firm</th>
</tr>
</thead>
<tbody>
<tr>
<td>AECOM</td>
</tr>
<tr>
<td>Ambitech</td>
</tr>
<tr>
<td>Audubon</td>
</tr>
<tr>
<td>Babcock &amp; Wilcox</td>
</tr>
<tr>
<td>Bechtel</td>
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<tr>
<td>Benham</td>
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<tr>
<td>Burns &amp; McDonnell</td>
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<tr>
<td>Burrow Global</td>
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<tr>
<td>CB&amp;I</td>
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<tr>
<td>CDI Corporation</td>
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<tr>
<td>CH2M HILL</td>
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<tr>
<td>Chart Energy</td>
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<tr>
<td>Chiyoda Corporation</td>
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<tr>
<td>ENGlobal Engineering</td>
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<tr>
<td>Fluor</td>
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<tr>
<td>HQC</td>
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<tr>
<td>IHI E&amp;C International Corporation</td>
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<tr>
<td>Jacobs</td>
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<tr>
<td>JGC America</td>
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<tr>
<td>KBR</td>
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<tr>
<td>Kiewit Engineering &amp; Design</td>
</tr>
<tr>
<td>Merrick &amp; Company</td>
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<td>Middough</td>
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<tr>
<td>OnQuest</td>
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<tr>
<td>Preferred Engineering</td>
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<tr>
<td>Ref-Chem</td>
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<tr>
<td>S &amp; B Engineers and Constructors</td>
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<tr>
<td>Samsung</td>
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<tr>
<td>SK E&amp;C USA</td>
</tr>
<tr>
<td>SNC-Lavalin</td>
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<tr>
<td>Technip</td>
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<tr>
<td>WorleyParsons</td>
</tr>
<tr>
<td>Zachry</td>
</tr>
</tbody>
</table>

## Fiatech Members & Partners

### MEMBERS & PARTNERS

<table>
<thead>
<tr>
<th>Firm</th>
</tr>
</thead>
<tbody>
<tr>
<td>4SPECS, Inc.</td>
</tr>
<tr>
<td>Arizona State University</td>
</tr>
<tr>
<td>Atlas RFID</td>
</tr>
<tr>
<td>Autodesk</td>
</tr>
<tr>
<td>AVEVA</td>
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<tr>
<td>Bechtel</td>
</tr>
<tr>
<td>Bentley Systems, Inc.</td>
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<tr>
<td>BergerAVART, Inc.</td>
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<tr>
<td>Black &amp; Veatch</td>
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<tr>
<td>buildingSMART alliance™</td>
</tr>
<tr>
<td>Burnham Nationwide</td>
</tr>
<tr>
<td>Cardno TEC</td>
</tr>
<tr>
<td>Carnegie Melon University</td>
</tr>
<tr>
<td>CCC - Consolidated</td>
</tr>
<tr>
<td>Contractors Company</td>
</tr>
<tr>
<td>CCT - Computer &amp; Communication Technology</td>
</tr>
<tr>
<td>CH2M</td>
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<tr>
<td>Chevron</td>
</tr>
<tr>
<td>Conspectus, Inc.</td>
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<tr>
<td>Construct-X</td>
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<tr>
<td>ConXtech, Inc</td>
</tr>
<tr>
<td>Dassault Systèmes SE</td>
</tr>
<tr>
<td>DMS Corporation (Formerly Beijing)</td>
</tr>
<tr>
<td>Douglas Day Associates</td>
</tr>
<tr>
<td>Eastman Chemical Company</td>
</tr>
<tr>
<td>Enable My Team</td>
</tr>
<tr>
<td>ExxonMobil Research and Engineering</td>
</tr>
<tr>
<td>Faithful &amp; Gould (division of Atkins)</td>
</tr>
<tr>
<td>Fluor</td>
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<tr>
<td>Goodman, Allen &amp; Filetti</td>
</tr>
<tr>
<td>Hatch, Ltd.</td>
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<tr>
<td>Hitachi Document Solutions</td>
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<tr>
<td>iConstruct</td>
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<tr>
<td>Index AR Solutions</td>
</tr>
<tr>
<td>InEight (Hard Dollar)</td>
</tr>
<tr>
<td>Intelliwave Technologies</td>
</tr>
<tr>
<td>Intergraph Corporation</td>
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<tr>
<td>JKB Architectural Specifications</td>
</tr>
<tr>
<td>KAIST, Korea Advanced Institute of Science and Technology</td>
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<tr>
<td>Myongji University</td>
</tr>
<tr>
<td>OnTrack Engineering, Ltd.</td>
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<tr>
<td>PerfectProjects, Inc.</td>
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<td>Petronas</td>
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<tr>
<td>Phusion IM</td>
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<tr>
<td>PowerGenEgr&amp;ServCo (PGESCo)</td>
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<tr>
<td>QPS Engineering</td>
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<tr>
<td>Ruby + Associates, Inc.</td>
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<tr>
<td>Shell</td>
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<tr>
<td>Siemens</td>
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<tr>
<td>Skanska USA Building, Inc.</td>
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<tr>
<td>Solibri</td>
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<tr>
<td>Southern Company Services, Inc.</td>
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<tr>
<td>Synchro Software, Ltd.</td>
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<tr>
<td>Target</td>
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<tr>
<td>TEAM Integrated Engineering, Inc.</td>
</tr>
<tr>
<td>Tecgraf / PUC-Rio University</td>
</tr>
<tr>
<td>Texas A&amp;M University</td>
</tr>
<tr>
<td>Thalden - Boyd Architects</td>
</tr>
<tr>
<td>The Dow Chemical Company</td>
</tr>
<tr>
<td>University College of London</td>
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<tr>
<td>University of Alberta</td>
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<tr>
<td>University of Cambridge</td>
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<tr>
<td>University of Illinois at Urbana-Champaign</td>
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<td>University of Kansas</td>
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<td>University of Liverpool</td>
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<td>University of Michigan</td>
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<tr>
<td>University of San Antonio</td>
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<tr>
<td>University of South California</td>
</tr>
<tr>
<td>WorleyParsons, Ltd.</td>
</tr>
<tr>
<td>WRENCH Solutions</td>
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<tr>
<td>Zachry</td>
</tr>
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</table>

2016 CII ANNUAL REPORT | 13
## Financials

Construction Industry Institute, The University of Texas at Austin
2016 Financial Report
December 31, 2016

<table>
<thead>
<tr>
<th>YTD (12/31/2016)</th>
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</thead>
<tbody>
<tr>
<td><strong>REVENUES</strong></td>
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</tr>
<tr>
<td>Membership Dues</td>
<td>$4,698,520</td>
</tr>
<tr>
<td>Assessment</td>
<td>1,069,898</td>
</tr>
<tr>
<td>Membership &amp; Branding</td>
<td>868,493</td>
</tr>
<tr>
<td>Dissemination</td>
<td>558,567</td>
</tr>
<tr>
<td>General &amp; Administrative</td>
<td>192,032</td>
</tr>
<tr>
<td>Knowledge Creation</td>
<td>169,016</td>
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<tr>
<td>Product Subscriber Program</td>
<td>19,820</td>
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<tr>
<td><strong>TOTAL REVENUES</strong></td>
<td>$7,576,346</td>
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<tr>
<td><strong>EXPENSES</strong></td>
<td></td>
</tr>
<tr>
<td>Salary &amp; Fringe</td>
<td>2,707,935</td>
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<tr>
<td>Knowledge Creation</td>
<td>2,030,927</td>
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<tr>
<td>Membership &amp; Branding</td>
<td>1,049,875</td>
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<tr>
<td>Assessment</td>
<td>996,061</td>
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<tr>
<td>General &amp; Administrative</td>
<td>544,995</td>
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<tr>
<td>Knowledge Management</td>
<td>460,158</td>
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<tr>
<td>Dissemination</td>
<td>364,008</td>
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<tr>
<td><strong>TOTAL EXPENSES</strong></td>
<td>$8,153,959</td>
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</table>

<table>
<thead>
<tr>
<th>Change in Available Funds Balance</th>
<th>$ (577,613)</th>
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</thead>
<tbody>
<tr>
<td>Beginning Available Funds Balance</td>
<td>2,559,503</td>
</tr>
<tr>
<td>Ending Available Funds Balance</td>
<td>$1,981,890</td>
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</tbody>
</table>

### Composition of Available Funds

<table>
<thead>
<tr>
<th>Available Funds</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Required reserves</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>Director's discretionary</td>
<td>12,973</td>
</tr>
<tr>
<td>Other available funds</td>
<td>968,917</td>
</tr>
<tr>
<td><strong>Ending Available Funds Balance</strong></td>
<td>$1,981,890</td>
</tr>
</tbody>
</table>
INDEPENDENT ACCOUNTANTS’ REPORT
ON APPLYING AGREED-UPON PROCEDURES

To the Management and Board of Advisors
Construction Industry Institute
Cockrell School of Engineering
The University of Texas at Austin

We have performed the procedures enumerated below, which were agreed to by Construction Industry Institute (Institute) management, on Membership Dues and Available Funds reported in the Institute’s 2016 financial statement to be included in its annual report. The Institute’s management is responsible for Membership Dues and Available Funds reported in the 2016 financial statement. The sufficiency of these procedures is solely the responsibility of the Institute’s management. Consequently, we make no representation regarding the sufficiency of the procedures described below either for the purpose for which this report has been requested or for any other purpose.

Our procedures and associated findings are as follows:

- We obtained from management the 2016 financial statement to be included in the annual report.
- We obtained from management financial reports from *DEFINE, The University of Texas at Austin’s software that accounts for the Institute’s financial transactions.
- We have provided below a reconciliation of the Institute’s “membership dues” revenues from balances reported in *DEFINE to the 2016 financial statement.
- We have provided below a reconciliation of the Institute’s ending “available funds” balance from *DEFINE to the 2016 financial statement.

Reconciliation of Membership Dues per *DEFINE to the 2016 financial statement:

Membership payments received per *DEFINE:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016 member dues payments received in 2016</td>
<td>$3,450,218</td>
</tr>
<tr>
<td>2016 member dues payments received in 2015</td>
<td>$514,805</td>
</tr>
<tr>
<td>Total 2016 membership payments received per *DEFINE</td>
<td>$3,965,023</td>
</tr>
</tbody>
</table>

Reconciling items:

- Add: 2016 member dues accrued (receivable) 752,400
- Add: 2016 member dues recognized for in-kind contributions 39,600
- Add: Miscellaneous reconciling items 897
- Less: Reversal of 2015 accruals for dropped memberships (59,400)

Membership dues reported in Annual Report $4,698,520

CONTINUED ON NEXT PAGE
Reconciliation of Available Funds per DEFINE to the 2016 financial statement:

Free Balances per DEFINE: $1,244,362

Adjustments to DEFINE balances:
- Add: Encumbered funds (not yet spent) $1,907,211
- Add: UT overhead charged, but not yet incurred 72,518
- Add: Contract balances in excess of payments received 126,516
- Add: Posting error 33,573
- Less: UT's overhead portion included in Free Balance (216,207)
- Less: PIP funds held in CII account (1,067,907)

Adjusted Free Balances per DEFINE: $2,100,066

Reconciling items:
- Add: 2016 membership dues revenues accrued (unpaid) 752,400
- Add: 2015 membership dues revenues accrued (unpaid) 9,920
- Add: 2017 prepaid rent (Jan, Feb) 36,990
- Add: 2017 prepaid Executive Leadership Program expenses 27,356
- Add: 2017 prepaid Association Tech Solution expense 30,636
- Add: Additional CII funds available in PIP account 26,877
- Add: Annual report overstated by in-kind membership entry 39,600
- Less: 2017 membership dues revenues deferred (435,600)
- Less: 2017 Executive Leadership Program revenues deferred (296,600)
- Less: 2016 travel stipends accrued (unpaid) (107,250)
- Less: 2016 deposits not reflected in annual report (77,905)
- Less: Miscellaneous other identified reconciling items (28,122)
- Unreconciled difference (96,478)

Ending Available Funds Balance per Annual Report $1,981,890

This agreed-upon procedures engagement was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. We were not engaged to and did not conduct an audit or review, the objective of which would be the expression of an opinion or conclusion, respectively, on Membership Dues and Available Funds reported in the Institute's 2016 financial statement. Accordingly, we do not express such an opinion or conclusion. Had we performed additional procedures, other matters might have come to our attention that would have been reported to you.

This report is intended solely for the information and use of Management and the Board of Advisors of the Institute and is not intended to be and should not be used by anyone other than these specified parties.

Austin, Texas; March 15, 2017
Sharing Knowledge to Create ‘What’s Next’.

CII is a learning organization with a wealth of knowledge and information. We offer opportunities throughout the year for meaningful collaboration – from conferences to technology showcases to our Annual Conference – that ultimately improve safety and capital efficiency.

CII’s Annual Conference 2016 in National Harbor, Md., attracted about 600 industry leaders and featured key research presentations, breakout sessions, awards presentations and dynamic keynote speakers. From the top: Yangmin Shi, Texas A&M, explains his poster project to a conference attendee; 2016 CII Chair Mike Elliott, Phillips 66, and 2015 CII Chair Jim Backes, Hargrove EPC; keynote speaker Brenden Bechtel, CEO of Bechtel Company; CII 2016 Annual Conference Chair Ann Marie Sweet-Abshire, US Veterans Affairs, presenting Georgia Tech’s Pardis Pishdad-Bozorgi with CII’s Outstanding Researcher Award.
CII Directory

DIRECTOR
Stephen Mulva
Director

SENIOR STAFF

Kim Allen
Associate Director, Industry Sector Leadership
Sector Leadership Committee and Communities of Practice

Jennifer Bien
Associate Director for Membership & Communications
Healthcare and Facilities Sector Committee

John Borcherding
Interim Associate Director, Funded Studies
Power, Utilities, and Infrastructure Sector Committee

Cynthia King
Associate Director, Professional Development
Upstream, Midstream, and Mining Sector Committee

Robert Ritter
Associate Director, Performance Assessment
Manufacturing and Life Sciences Sector Committee

Chris Tisdal
Associate Director, Implementation & Globalization
Downstream and Chemicals Sector Committee

Terri Buvia
Manager of Shared Services

Deborah DeGezelle
Manager of Information Services

Daniel Oliveira
Manager of Research Services

Hong Zhao
Manager of Financial Services

STAFF LISTING

Ila Awasthi
Software Developer/Analyst

Nuria Ayala
Project Manager

Jessica Ballew
Communications Specialist

Michael Burns
Technical Writer/Editor IV

Jay Choi
Graduate Research Assistant

Erika Corbell
Project Manager

Frances DeCoux
Senior Administrative Associate

Kristi Delaney
Project Manager

Beatriz Guerra
Graduate Assistant

Kelly Lenig
Project Manager

Hyeon-Yong Park
Graduate Research Assistant

Susan Quaglino
Technical Writer

Pipper Ramsey
Administrative Associate

Donna Rinehart
Senior Administrative Associate

Bernie Rosenblatt
Senior Financial Analyst

Debbie Samilpa
Senior Administrative Associate

Stevan Wilsan
Systems Administrator II

Zhe Yin
Graduate Research Assistant
The Construction Industry Institute, based at The University of Texas at Austin, is a consortium of more than 130 leading owner, engineering-contractor, and supplier firms from both the public and private arenas. These organizations have joined together to enhance the business effectiveness and sustainability of the capital facility life cycle through CII research, related initiatives, and industry alliances. A learning organization with a wealth of knowledge and information, CII is unique in the engineering and construction industry.

IN MEMORIAM

Mike Elliott
CII Board of Advisors - Chair, 2016
CII Executive Committee, Strategic Planning Committee, Annual Conference Committee, and Implementation Strategy Committee
Co-author of a design and construction manual

Robert F. Jortberg
CII Associate Director, 1988 – 1998
National Academy of Construction – Founding Member
Honored in 1992 with The Robert F. Jortberg Endowed Graduate Fellowship in Engineering at The University of Texas at Austin

C. Hilton “Stretch” Dunn, Jr.
Active CII supporter and member, 1995 – 2004
Instructor, CII’s Executive Leader Program
Son of Letha and Carroll Dunn, after whom the Carroll H. Dunn Award of Excellence was named