

TILT-UP CONCRETE ASSOCIATION
MEMBER PROSPECTUS





Dear Prospective Member,

It is with great pride that we invite you to consider membership in the Tilt-Up Concrete Association (TCA). As the international nonprofit trade organization for the global tilt-up concrete construction industry, we have been working since 1986 to promote growth and achievement in tilt-up design, construction and innovation. Our membership is composed of architects, engineers, suppliers, general contractors, concrete subcontractors, developers and others interested in the continued success and advancement of the tilt-up industry.

While the work of the Tilt-Up Concrete Association could be drawn out in a long list of benefits such as awards programs, networking, education, certification, etc., it is more appropriate to organize these benefits under two core guiding principles or objectives.

1. The first, is that we together serve as a powerful force advocating for increased demand of your product.
2. The second, is that we provide opportunities and tools to assist in improving that product.

Through the TCA, you have available to you a large group of professionals from across the globe, working together to make the world more receptive to what you do and more interested in what you do.

Additionally, we are working together to improve what you do. What WE do.

The larger we grow the more impact we can have. The more impact we have, the higher the demand for tilt-up; and the higher the demand for tilt-up, the higher the demand for good quality education to support it. This industry is versatile and our membership is diverse. These are great advantages that together, we can put to work for us all.

Join the TCA today to begin supporting these efforts. Through active participation, you will quickly discover just how valuable they are.

Sincerely,

A handwritten signature in black ink, appearing to read 'MBloomquist', with a long horizontal flourish extending to the right.

Mitch Bloomquist
Executive Director, Tilt-Up Concrete Association
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FOUNDED

1986

MISSION

Expand and improve the use of tilt-up as the preferred construction method by providing education and resources that enhance quality and performance.

FUNDAMENTAL CHARGES

Develop and expand tilt-up concrete markets
Maintain a professional stature as the best-informed organization on the subject of tilt-up concrete.

“INITIALLY, TCA WAS ESTABLISHED WITH THE INTENT TO IMPROVE THE QUALITY AND ACCEPTANCE OF TILT-UP CONSTRUCTION. TODAY, THROUGH EDUCATION, DEVELOPING STANDARDS AND CODE PROVISIONS TCA IS ACTIVELY MEETING THE GOALS SET FORTH. TCA HAS BECOME A MECCA FOR NETWORKING WITH THE BEST TILT-UP PROFESSIONALS IN THE WORLD.”

-Larry Clark, President of L.D. Clark Companies

ABOUT

THE TILT-UP CONCRETE ASSOCIATION

Promoting growth, achievement and innovation in tilt-up design and construction since 1986.

The Tilt-Up Concrete Association (TCA) was created by a dedicated group of construction professionals interested in improving the quality and acceptance of tilt-up construction.

In order to fulfill the goals of our mission, the TCA works with a specific set of guidelines or charges. From these charges, committees are formed, publications are proposed, events are planned and programs are established. While the TCA guidelines exist as a list of twenty items, they could be organized under two fundamental charges: to develop and expand tilt-up concrete markets and to maintain a professional stature as the best-informed organization on the subject of tilt-up concrete.

1. DEVELOP AND EXPAND TILT-UP CONCRETE MARKETS

- Create an image that inspires consumer confidence in our industry
- Encourage high standards for quality in design and construction
- Encourage, recognize and reward excellence in the use of tilt-up concrete
- Secure efficient cooperation between the tilt-up industry and architects, engineers, contractors, real estate developers, government officials and allied or related associations and institutes
- Communicate business opportunities to TCA members

2. MAINTAIN A PROFESSIONAL STATURE AS THE BEST-INFORMED ORGANIZATION ON THE SUBJECT OF TILT-UP CONCRETE

- Provide training and educational programs for the industry, its users and specifiers
- Develop standards, code provisions and specification to meet industry needs
- Achieve a large contractor, associate and professional membership
- Issue publications to disseminate information of value to its members, the public and government
- Represent the tilt-up concrete industry to users, designers and specifiers

These ambitions encompass the core responsibilities of the TCA and represent the most valuable long-term benefits to member companies.

A FORCE THAT IS ADVOCATING FOR INCREASED DEMAND OF YOUR PRODUCT, AND THE RESOURCES TO HELP YOU IMPROVE IT THAT ARE SECOND TO NONE.

While there are numerous benefits to joining the association without further involvement, the greatest return on that investment, the fulfillment of the aforementioned TCA guidelines, is accomplished only through the work of those members actively involved in the association.



ABOUT

JOINING THE TILT-UP CONCRETE ASSOCIATION

IT'S A GOOD IDEA

Your support of the TCA demonstrates your investment in the greater good and says a lot about your company's values. Beyond that, your involvement speaks to your expertise in the field and the effort you make to address important industry-wide issues related to economy, design and safety.

Through active participation, your company will discover time and money saving tips, make invaluable connections with the industry's top professionals and find the monies you invest in the TCA well worth it. We look forward to serving you!

DIVERSITY OF MEMBERSHIP

We often refer to the variety of tilt-up when touting the many benefits of the method. It is at the core of the building system's expansion beyond the box; it leads to its vast applicability. It is not just the construction process that allows for this quality, however. The variety in tilt-up is a product of and inherent in the very people engaged in supporting and growing the industry.

The multifarious collection of professionals participating in our industry includes architects, engineers, suppliers, general contractors concrete contractors, specialty trade contractors, educators and developers. Our Association attracts the very best our industry has to offer and provides a forum for their discourse and collaboration. Their variety is reflected in the richness of the Association's work and is a key component to the success of the industry.

ANNUAL DUES

TCA Memberships are corporate memberships. All individuals working for a member company are considered members of the association.

Membership extends 12 months from join date and includes all office/branch locations.

CONTRACTOR	\$750
ENGINEER	\$500
ARCHITECT	\$500
DEVELOPER	\$500
SUPPLIER	\$1,100
CONSULTANT	\$500

HOW TO JOIN

Visit tilt-up.org/join to fill out the simple application or give us a call at (319) 895-6911, Monday through Friday during regular business hours.



...or, you can always just call.

CONNECT

WITH THE TILT-UP CONCRETE ASSOCIATION

TCA HEADQUARTERS

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TCA WEBSITE - www.tilt-up.org

TCA's website has evolved to be the strongest collection of information, resources and evidence of modern tilt-up construction. The site features historical content, information about the Association and the network, technical solutions, resources, event information, and an ever-expanding buildings database where more than 1,500 projects can be searched by project type, location and more.

2018 BOARD OF DIRECTORS

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THE TOP FOUR REASONS PEOPLE VISIT THE TCA WEBSITE ARE TO VIEW PAGES RELATED TO MEMBER COMPANIES' PROJECTS, SERVICES AND NEWS.

1. Learn more about tilt-up construction (almost 25% of all page views are for the static pages about tilt-up basics, benefits, and frequently asked questions).
2. Look at projects (right at 20% of the page views are of project profiles, award profiles, Top Ten lists, or other project listings).
3. Find companies associated with tilt-up construction (just over 18% of all page views are for looking up a member in the directory and viewing member profile pages).
4. Read news about tilt-up and the TCA (about 10% of the page views are for the Tilt-Up TODAY Blog).

CONNECT WITH CLIENTS, PEERS AND COLLABORATORS

The most valuable asset of the Tilt-Up Concrete Association (TCA) is our network. That's why in 2018 we proudly announced a major investment in two critical tools for our membership improving the access, organization and presentation of member company data to potential clients, peers and collaborators.

Members of the Tilt-Up Concrete Association each have a robust online public profile at www.tilt-up.org. These pages present basic contact information for each member, their services offered, office/branch locations, associated projects from our database, awards received, association participation, and much more.

The screenshot shows a web browser window displaying the profile for Powers Brown Architecture on the Tilt-Up Concrete Association website. The browser address bar shows 'tilt-up.org'. The website header includes navigation links: TILT-UP CONCRETE ASSOCIATION, MEMBERSHIP, AWARDS, EVENTS, NEWS, RESOURCES, CERTIFICATION, PROJECTS, and CONSTRUCTION. The main content area is titled 'POWERS BROWN ARCHITECTURE' and contains a detailed description of the firm, contact information for John Cadenhead, and a list of representative projects. Below the projects is a search bar and a link to 'View All Projects by Powers Brown Architecture'. At the bottom, there is a section for 'TILT-UP TODAY MAGAZINE / MEMBERS IN THE NEWS' with sub-sections for 'PARTICIPATION' and 'RECOGNITION (PROJECT)'. The participation section lists Jeffrey Brown as a speaker and director in 2018, and Caroline Cobb as a member in 2017. The recognition section lists several awards from 2017 and 2015.

POWERS BROWN ARCHITECTURE

Powers Brown Architecture is a professional services firm practicing architecture, interior design, programming and urban design. Led by founding principal Jeffrey Brown, FAIA, OAA, NLAA along with Bruce Walck, AIA, OAA, NLAA, MRAIC and Nazir Khalife, AIA, RIBA the firm has built a reputation for specialized design and technical superiority, producing award-winning work and gaining recognition from local, regional and national organizations. Recently the firm was selected by IMAGES Publications as the focus of a monograph in their series Neo-Architecture, showcasing the work of emerging talent around the globe. The series, according to the publisher "...focuses on the work of the next generation of master architects. The work of the featured architects varies widely and includes conceptual and built projects, elaborate models and even more esoteric competition entries. The works are provocative and challenging, and represent the vanguard of international architectural practice." Based upon these accolades and honors, Powers Brown Architecture is considered one of the most innovative and critically active firms on the scene.

Membership
Sustaining Member since 2005

Location (View all locations)
2100 Travis St Ste 501
Houston, Texas 77002-8709
(713) 224-0456
powersbrown.com

Primary Contact
John Cadenhead
(713) 224-0456
cadenhead@powersbrown.com

Services
Architecture

REPRESENTATIVE WORK

- Daikin Texas Techno...**
Waller, TX
- Legacy at Fallbrook...**
Houston, TX
- Westway Park Office**
Houston, TX
- Frank's Internation...**
Alvin, TX
- Texas Instruments**
Sugar Land, TX
- Sierra Pines II**
The Woodlands, TX

Search for Projects | [View All Projects by Powers Brown Architecture](#) | [Submit a Project](#)

TILT-UP TODAY MAGAZINE / MEMBERS IN THE NEWS

PARTICIPATION

- 2018** Jeffrey Brown, FAIA, Speaker - Tilt-Up Series (St. Louis)
Jeffrey Brown, FAIA, Director - TCA Board of Directors
- 2017** Caroline Cobb, Member - Tilt-Up Series (Washington, DC) Planning Committee
Jeffrey Brown, FAIA, Speaker - Tilt-Up Series (Dallas)
Jeffrey Brown, FAIA, Speaker - Tilt-Up Series (Washington, DC)

RECOGNITION (PROJECT)

- 2017** Tilt-Up Achievement - Daikin Texas Technology Park
- 2015** Tilt-Up Achievement - Frank's International Alvin - Office
Tilt-Up Achievement - Texas Instruments
Excellence in Achievement - Sierra Pines II
Excellence in Achievement - Legacy at Fallbrook Phase I



CONNECT

TO TROUBLESHOOT ISSUES AND ASK QUESTIONS

Recently, the TCA expanded its support for members by offering a convenient way to participate in conversations about tilt-up construction. The Tilt-Up Cyber Round Table is an interactive service that offers greater input and access to our knowledge base, the membership. The community expanded from the TCA Hotline, a resource providing prompt access to our technical staff and corroboration from the TCA Technical Committee. Below is a sampling of the latest discussion topics.

- Stacking Panels with Floor Dowel Requirements
- Caulking and Painting Application Specifications
- Paintable Caulking Options
- Performance-Based vs. Specification-Based Engineering
- Walking Cranes On Panels
- Nail & Brace Hole Patching for Floors
- Continuous Roof Diaphragm Chord Options
- Embedding Natural Stone in Tilt-Up Exterior Faces
- Timing of Brace Removal
- Recommended Panel Design Software Options
- Critical Lift Plans for Tilt-Up Panel Erections
- Bond Release on Rebar
- Panel Collapse Cause Review

PARTICIPATION IS QUITE EASY

- Step 1: Interested persons request participation by emailing hotline@tilt-up.org with the subject of “Add Me” or something similar.
- Step 2: TCA staff will confirm the active status of the individuals membership or work with them to establish effective membership. Once satisfied, the person is added to the communication list for the Tilt-Up Cyber Round Table.
- Step 3: Any member may access the hotline by sending a question directly to the hotline or to TCA staff. TCA’s manager for technical and regulatory affairs, Jim Baty, will review the nature of the question and distribute it to the hotline participant list. Each participant will receive the question but not the list of participants.
- Step 4: Recipients decide whether they have anything to contribute to the inquiry. A response is sent easily as a reply to hotmail@tilt-up.org according to the original email.
- Step 5: All responses are reviewed and recirculated once again to the participants. It is up to the respondents whether they wish to include their contact information (highly recommended) for follow-up direct communication.

Using this service, there is never a question received nor a response offered that isn’t first reviewed by TCA staff. Censorship is never intended, but review is offered to ensure quality and consistency in the communication.

A common suggestion of many non-profit organizations, such as trade associations, is that the association belongs to and is shaped by its members. When it comes to the TCA, this is absolutely the case. Oftentimes, this fact is overlooked by existing and potential members. While there are numerous benefits to joining the association without further involvement, the greatest return on that investment is accomplished only through the work of those members actively involved in the association.

The power of your new network is immeasurable, and the potential for its impact on your business is extremely great. Take advantage of this network by integrating yourself and your business into the association.

GET INVOLVED

PLAY AN ACTIVE ROLE IN ADVANCING THE INDUSTRY

Perhaps the most important benefit of TCA membership is that it allows one to play an active role in advancing the industry. Involvement can be as simple as giving us a call with an idea or submitting company news for inclusion in Tilt-Up Today magazine.

To get further involved, serve on an event planning committee, participate on the Tilt-Up Cyber Roundtable, speak at convention, submit articles for publication, and initiate new charges.

This is your organization; shape it to be what you need it to be.

EVENT HOST/PLANNING COMMITTEE

Each year the TCA hosts events in various locations across North America. The educational content is updated to reflect current industry issues, advancements in technology, changes in market conditions, building codes, and the ever-changing needs of the TCA membership.

The mission of various planning and host committees is to ensure the event is relevant to host market and host region. Additionally, the committees are charged with discovering, documenting and connecting the existing network of the region.

Watch for invitations to join these committees as events come to your area.

TCA TASK GROUPS

At each meeting of the TCA Board of Directors, new initiatives are discussed and task groups are formed to dive deeper into issues, focus on specific projects and research areas. These task groups are lead by a member of the board and often include industry leaders from outside of the board.

Let us know if you'd like to participate in these efforts.

TECHNICAL REVIEW COMMITTEE

With increasing frequency, we are creating and publishing technical positions, articles and statements regarding the work this industry is pursuing and completing. As such, we believe it is a great opportunity for members to participate in technical review. A person serving on the Technical Review Committee will be given an invitation to participate with an RSVP deadline. The document will then be sent with a maximum duration for review. The final product as compiled from the review will then be issued to the participating reviewers subject to any final work necessary to complete the finished piece.

If you are interested in being listed as part of the TCA Technical Review Committee and participating as a potential reviewer, please contact James Baty, FACI, manager for technical and regulatory affairs for the TCA. There is no minimum or maximum participation, it will be based solely on how many reviewers we indicate for a piece and a first-come first-serve or responses within the allotted time frame.

IT PAYS TO ATTEND THE TILT-UP CONVENTION

Post-event surveys show 92% of attendees estimate they will save their company or clients at least \$2,000 on their next project as a direct result of their attendance. 35% of respondents say they will save at least \$5,000 and 17% say they will save more than \$10,000 on their next project alone. Most importantly, well over 90% of attendees say they learned something at convention that will make their jobsite, or that of their client, safer.

Participation in this important industry event also ensures effective utilization of the greatest, and most diverse network of tilt-up professionals on the planet. The connections made between attendees prove to be very beneficial. Post-event surveys conclude that 67% of participants make new connections that will help them grow professionally, 60% make new connections that their company or firm may collaborate with on future projects, and 73% make connections that could help troubleshoot issues on their next project.

GET INVOLVED

PARTICIPATE IN TCA EVENTS AND INITIATIVES

TCA members receive preferred pricing on our wide variety of educational and networking events throughout the year, like the Tilt-Up Convention and Expo, local and regional seminars, the Winter Tilt-Up Jubilee (held each year during World of Concrete) and other valuable events.

For up-to-the-minute details and registration information visit www.tilt-up.org/events.

TILT-UP CONVENTION AND EXPO

Held each fall in a different location, the Tilt-Up Convention is the premier gathering of the tilt-up industry. The event brings together architects, contractors, engineers, developers, students and suppliers with an interest in tilt-up for three days of education, exhibits, awards, demonstrations, tours and networking. The Tilt-Up Convention is packed with opportunities for attendees to discover money and time saving strategies, life-saving safety tips and fresh marketing strategies. There is no other place to get this concentration of industry-specific information.

WORLD OF CONCRETE

The TCA is proud to be a cosponsor of World of Concrete. As such, the TCA encourages all members to participate in the event and offers discounted registration for exhibits and education seminars. Watch www.tilt-up.org/events for details each year.

WINTER TILT-UP JUBILEE

Held in conjunction with World of Concrete, this event is the annual membership meeting of the TCA. Presenting the state of the association, celebrating the past year's accomplishments and introducing the coming year's goals and ambitions are all on the agenda for this festive networking event.

TILT-UP SERIES

Tilt-Up Series is a collection of regional events meant to stimulate the conversation at a local level between construction and design professionals. The events bring together developers, architects, engineers and contractors from the local market for certification, education and a networking reception at the end of the day.

TILT-UP FUTURE THINK

In a business climate where everyone is being asked to do more with less, today's design and construction professionals have little time to devote to research of emerging technologies and the future of their industry. As such, the Tilt-Up Concrete Association (TCA) Board of Director's has established a task force to curate and review emerging technologies with potential benefit or impact on the tilt-up industry.

Tilt-Up Future Think, held every other year presents a series of talks focused on emerging technologies and ideas with promising applicability for the tilt-up concrete construction industry. The talks are followed by a panel discussion where global experts in tilt-up design, engineering and construction will discuss the potential of each idea and how it could shape tilt-up of the future. The event is designed as a focused review of these technologies.

8 WAYS TO PUT YOUR TILT-UP ACHIEVEMENT AWARDS TO WORK FOR YOU!

1. Make them the center of marketing efforts that separate you from your competition
2. Link to your project's award profile from your website
3. Share press releases about your award with your network via e-mail and social media and publish them in your newsletters
4. Create your own press releases announcing your award
5. Distribute copies of TILT-UPTODAY featuring your project to your customers, clients and friends
6. Utilize the TCA Achievement Awards Winner logo on your website and wherever you publish your project
7. Prominently display your plaque at your headquarters
8. Deliver a TCA Achievement Award Winner Plaque to your owners and other project team members

TAKE ADVANTAGE

UTILIZE VALUABLE PROGRAMS TO YOUR ADVANTAGE

RECOGNITION

Each year, the Tilt-Up Concrete Association honors those organizations, people and projects that successfully illustrate the variety, beauty and flexibility of tilt-up construction. The diversity of participants is highlighted by the four distinct awards programs.

Honorees are celebrated at the Annual Tilt-Up Awards Gala held in conjunction with the International Tilt-Up Convention and Expo.

- **Tilt-Up Achievement Awards** - As a TCA Member, you have the opportunity to submit for, and receive, highly acclaimed TCA Achievement Awards, which will provide you with industry and world-wide recognition.
- **TCA Professional Awards** - The professional awards program honors outstanding contributions to the field of tilt-up design, construction and innovation.
- **TCA Safety Awards** - The main purpose for the Alphonse Engelman Safety Awards program is to recognize TCA contractor members for their continuing efforts of creating safer tilt-up working environments for their employees.
- **TCA College of Fellows** - The College of Fellows cultivates awareness for the community of professionals dedicated to the mission of the Association, and elevates the service of its members to the entire industry. Fellows establish this service through their organization's commitment to membership and participation.

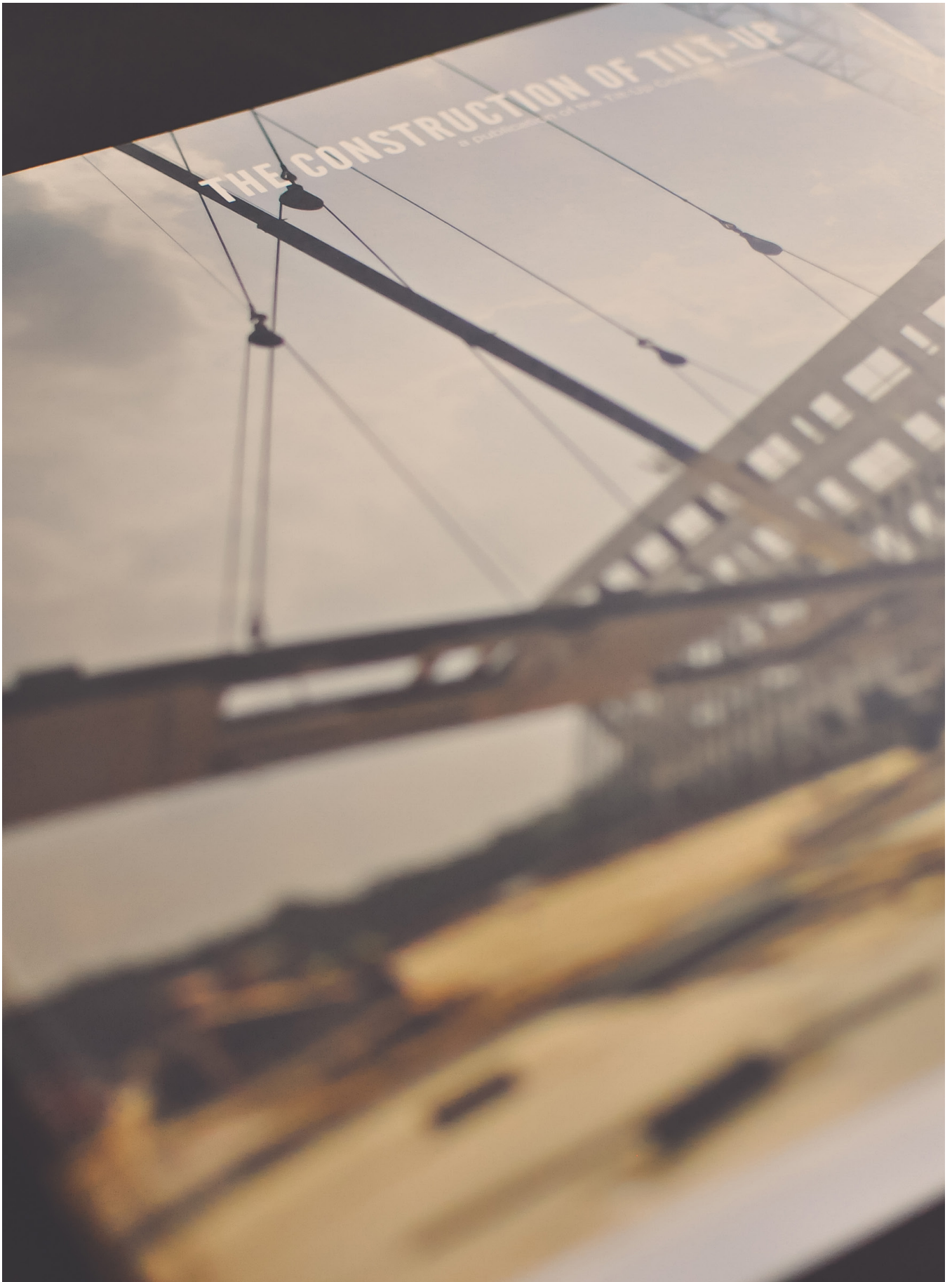
Learn more about the various tilt-up awards programs at www.tilt-up.org/awards.

CERTIFICATION

Certification is no longer a luxury or added feature in today's business world. In nearly every corner of business, certification is the means of identifying commitment to employee, customer and quality and the construction industry is no exception. Certification programs establish standards for education and ensure commitment to quality through rigorous evaluation and verification processes. For individuals, certification goes beyond training by providing tangible measurement to knowledge and experience. For companies, certification plays an important role in developing and maintaining a qualified workforce and commitment to benchmarks for quality, safety and business performance.

- **TCA Company Certification** - The goal of the TCA Company Certification Program is to provide owners, specifiers, and designers with a method for assuring the experience, quality and performance of tilt-up concrete contractors. The program will certify that companies who manage the tilt-up construction process have met the criteria established for evaluation. The criteria includes analysis of company policies, procedures, and ability to consistently deliver a quality product and that they hire trained, certified and qualified personnel in all aspects of the tilt-up construction process.
- **ACI/TCA Individual Certification** - The Tilt-Up Supervisor and Technician Certification Program is a collaborative effort between the American Concrete Institute (ACI) and the Tilt-Up Concrete Association (TCA). There are two types of individual tilt-up certifications available through this program.

Additional information on both programs can be found at www.tilt-up.org/certification.



TAKE ADVANTAGE

BECOME FAMILIAR WITH AVAILABLE TCA RESOURCES

In addition to a world-class technical hotline available to members and an extensive products directory, the Tilt-Up Concrete Association maintains a library of publications, guidelines and technical documents to assist with the planning, design, engineering and construction of tilt-up buildings.

THE ARCHITECTURE OF TILT-UP

The Architecture of Tilt-Up, 3rd edition, compiled by Mitch Bloomquist, Executive Director of the TCA, has been re-imagined as a series of individually bound sections presenting project case studies organized by building type. With each book, readers will find a quick introduction to tilt-up followed by education related to a specific building type, along with an impressive collection of representative projects.

THE CONSTRUCTION OF TILT-UP

The Construction of Tilt-Up, in its second edition is a completely new, bilingual volume of information that contractors (or any professional) can use to become well acquainted with the planning, process and strategies of building with this method.

This new version offers much new content including the important study references that have been included for years to prepare tilt-up professionals to pass the ACI/TCA Tilt-Up Certification. Readers will find information pertaining to the basics of the principle materials that comprise tilt-up systems; developing a solid tilt-up construction team; understanding the design aspects of tilt-up panels fully; detailed construction processes and, of course many troubleshooting tips and tricks as well as common areas for concern.

ENGINEERING TILT-UP

Engineering Tilt-Up contains basic engineering principles and code interpretation as well as in depth analysis of a tilt-up structure and its components. The thorough guide breaks down tilt-up design to educate beginners as well as experienced engineers. Authored by Timothy W. Mays, Ph.D., P.E. and Joseph J. Steinbicker, P.E., S.E., Engineering Tilt-Up contains 325 pages of completely new content. According to Mays, Associate Professor of Civil Engineering at The Citadel in Charleston, S.C., “The organization of the chapters making up the main body of the text are ideal for engineers just beginning with tilt-up or for seasoned tilt-up engineers looking for excellent example problems that focus on the latest codes and standards such as the 2012 IBC and ASCE/SEI 7-10.”

In addition to the chapter material, Engineering Tilt-Up features three, full-building design examples presenting simplified standard practice approaches to design on realistic yet complex situations and constraints that are considered on actual projects. “Adhering to the latest codes and standards, the book serves as a one-of-a-kind resource for tilt-up engineers looking for an excellent summary of standard practice in tilt-up and alternative ways to seek code compliance,” said Mays.

TCA GUIDELINE FOR TEMPORARY WIND BRACING OF TILT-UP CONCRETE PANELS

The Occupational Safety and Health Association (OSHA) regulates the construction of buildings with tilt-up concrete panels by requiring the panels to be temporarily braced to prevent panels from overturning or collapsing during construction. As OSHA does not specify how to prevent tilt-up wall panels from overturning or collapsing, the Tilt-Up Concrete Association (TCA) developed a temporary bracing guideline for use by the tilt-up construction industry to provide a recognized standard for this critical phase of the project.

Learn more about these and other resources available from the TCA at www.tilt-up.org/resources.

**THE TILT-UP CONCRETE ASSOCIATION IS
YOUR ADVOCATE,
YOUR VOICE,
AND YOUR PARTNER.**

TAKE PRIDE

IN YOUR SUPPORT OF INDUSTRY-WIDE ADVOCACY

A primary benefit of an industry trade group such as the TCA is advocacy, or working on your behalf. As a single company or as many individual companies, the ability to bring about change, develop and implement standards, raise awareness and support safe and intelligent practices is a near impossibility.

ACI CODES & STANDARDS

Leading TCA members and TCA staff are active members of key committees for the American Concrete Institute (ACI). Through these committees, industry practices become standards and guides. ACI 117, the manual of tolerances used by engineers and architects world-wide now includes a dedicated section on tilt-up concrete, in step with TCA's Guideline Specifications. ACI 301, the standard specification for concrete recommended for engineers and architects, now incorporates a specific section on tilt-up concrete, also largely developed from the base three-part specification crafted by the TCA. ACI 551, the Tilt-Up Concrete Committee has published state-of-the-art guides for the construction of tilt-up and the engineering design of common tilt-up elements.

OSHA CONSTRUCTION SAFETY

TCA staff has participated at meetings of the Advisory Council for Construction Safety and Health (ACCSH). A council used by OSHA to investigate issues that may lead to or change regulations related to construction safety practices or health concerns. Additionally, TCA's Bracing Guideline is referenced by OSHA as a resource for 1926.704. Through this involvement, the industry is able to weigh in on development issues, be advised of pending regulatory action and provide statistics to support or refute proposed development.

GLOBAL MEDIA

TCA staff maintains rigorous attention to the volume of articles published annually in relation to the tilt-up industry. Strategic efforts are made at researching, writing and publishing articles that further define the state-of-the-art for this industry as well as support the industry in the face of pressure. For example, TCA's Natural Disaster Task Force challenged the claims made against tilt-up construction following catastrophic wind storms. The report generated evidences the strength and durability of tilt-up concrete wall panels while establishing the concern for underestimated pressures and weaknesses in companion building systems. Similar efforts were put forth decades ago during earthquakes in California and more recently for the seismic events in Christchurch, New Zealand.

INDUSTRY CODE DEVELOPMENT AND REGULATION

The TCA participates as a founding and contributing member to the Alliance for Concrete Codes and Standards. This industry alliance brings together the major associations and related interests with focus on concrete to share the responsibility for oversight and development of major industry codes and standards. Through the efforts of ACCS, TCA is advised to take positions of support or refute on issues concerning ASCE, BSSC, ACI, IBC, NEHERP and a variety of other major industry bodies.

The TCA is also an active member of the North American Concrete Alliance (NACA). Formed in 2004, NACA is a coalition of eleven concrete and cement-related associations dedicated to addressing industry-wide priorities in the areas of research, safety, education and government affairs. Cement and concrete product manufacturing directly or indirectly employs approximately half a million people, and our collective industries contribute approximately \$100 billion to the U.S. economy.



