Outdoor Exhibition Featuring Five Large-Scale Structures Morphing Materials Into Innovative Forms Opens at the California College of the Arts

Imagined by Architects, Engineers, Students, Scientist and More Projects Reach New Technical Feats and Strides in Sustainability

On View September 28, 2017 – December 22, 2017

San Francisco, CA—September 28, 2017—An outdoor exhibition featuring five original and site-specific architecture structures and pavilions opened in the sprawling Back Lot of the California College of the Arts (CCA). Each work uses material and form in ways that have rarely been seen before, from concrete that has been transformed into thin, screen-like walls to a 2000-pound sculpture that can be moved with ease. The result of extensive research and collaboration between architects and partners—including industry leaders such as CEMEX as well as engineers, students, chemists, biologists, farmers, and more—*Designing Material Innovation* is co-presented by CCA and the University of Michigan Taubman College of Architecture and Urban Planning (Taubman College). It is curated by Jonathan Massey, current dean of the Taubman College and recent dean of architecture at CCA, and designed by CCA Assistant Professor of Architecture Clark Thenhaus.

"*Designing Material Innovation* shows how designers and industry leaders partner to achieve great things, whether that is making concrete structures light and delicate, promoting ecological diversity, or repurposing waste," said curator Jonathan Massey, dean of the Taubman College and former dean of architecture at CCA. "The prototypes displayed on the Back Lot show how students and faculty at CCA and Michigan are among the field leaders breaking new ground at the intersection of formal and material research."

"This exhibition is at the very heart of our mission here at CCA to empower our students to change the world through art, architecture, craft and design," said Stephen Beal, President of the California College of the Arts, "We hope the show inspires both our own community and the public-at-large to see the incredible potential architecture has to move our society forward."

The exhibition marks the first large-scale exhibition mounted on the CCA's Back Lot—an expansive ground for making and displaying art, staging events, and socializing. It features both site-specific and new works and includes:

California College of the Arts

- ***Thinness*** – a structure created by APTUM Architecture in collaboration with CEMEX—one of the world's largest concrete and cement companies. The cross-vaulted pavilion utilizes high-performance, lightweight concrete to create hollow, perforated, and half-inch thick walls that mimic the light and shadow play more often associated with metal. APTUM and CEMEX have used similar strategies together to create a floating lightweight concrete island in Cambodia that helps bolster mangrove restoration.

- ***Polymorph Pavilion*** – This ongoing design/build project initiated in Spring 2017 during an advanced architectural design studio at CCA. Students worked collectively to research, develop, and fabricate a small experimental structure for CCA's Backlot that could provide a sheltered space to cast concrete and plaster during workshops and classes. The structure--created from upcycling foam waste material from local Bay Area fabricator Kreysler & Associates into lightweight masonry blocks--was made through the use of parametric modeling, structural analysis, and robotic fabrication techniques and serves as an icon of CCA's strength in digital craft.

- ***Buoyant Ecologies Float Lab*** – Serving as a prototype for a floating breakwater, this structure uses variation in surface to create distinctive habitats both above and below the water, promoting ecological diversity to ensure a more sustainable and resilient ecosystem. The project was the result of three years of research and studios led by faculty Adam Marcus, Margaret Ikeda, and Evan Jones at CCA's Digital Craft Lab. It is made from an ecologically friendly material—a fiber-reinforced polymer composite substrate—that the team developed with Kreysler & Associates and the Benthic Lab at Moss Landing Marine Laboratories. It will be deployed in San Francisco Bay in 2018 to further develop the substrate research and understand the prototype's potential to reduce waves and mitigate coastal erosion.

- ***Clastic Order*** – Created by the Taubman College of Architecture and Urban Planning Assistant Professors Thom Moran, Ellie Abrons, Adam Fure, and Meredith Miller (T+E+A+M), this pavilion transforms the fragments of buildings—including brick, concrete, glass, pipes, and more—into a hybrid material resembling rock to create free-standing columns that have uniform, stone-like surfaces. The concept is part of ongoing research at the college to support a project that would convert rising plastic pollution in oceans into building materials.

- ***McKnelly Megalith*** – This 2000-pound, 16-foot-long, glass fiber reinforced, concrete structure is the result of a collaboration between Matter Design and MIT Architecture. Inspired by determining the mystery behind Easter Island's giant standing stone sculptures *moai*, MIT students used digital design to control the distribution of weight within this massive object that can be walked horizontally and stood vertically with little effort.

A program for *Designing Material Innovation,* including an essay by curator Jonathan Massey, is being distributed at the exhibition. In addition, CCA is organizing programming in conjunction with the exhibition including an opening celebration, a lecture exploring the show's themes, and a symposium gathering convened by exhibition designer Clark Thenhaus.

ABOUT PROGRAMMING

Designing Material Innovation Opening Celebration
September 28, 2017 at 5:30 p.m.
CCA's Back Lot

Designing Material Innovation: An Exploration of Process
October 2, 2017 at 7:00 p.m.
Timken Lecture Hall
CCA faculty present their structures which are part of the "Designing Material Innovation" exhibition. Participants include: Andrew Kudless (Casting pavilion); Adam Marcus, Margaret Ikeda, and Evan Jones (Float Lab); and Clark Thenhaus (Confetti Urbanism).

Designing Material Innovation Symposium
Keynote and Reception October 26, 2017 at 6:00 p.m.
Keynote by Philippe Block, ETH Zürich; Block Research Group

Panels and Presentations Oct 27, 20167 from 9:00 a.m.- 4:30 p.m.
Nave Alcove Presentation Space
Participants to include nationally and internationally distinguished speakers from architecture, engineering, industry, and materials science. A full list can be found online here.

SPONSORSHIP

Designing Material Innovation is supported by generous gifts from CEMEX, Swissnex San Francisco, Grants for the Arts / San Francisco Hotel Tax Fund, and individual donors.

ABOUT UNIVERSITY OF MICHIGAN TAUBMAN COLLEGE OF ARCHITECTURE AND URBAN PLANNING

The University of Michigan is one of the nation's leading public universities, according to the U.S. News & World Report. Of the 130 UM graduate programs evaluated by U.S. News & World Report, 99 are ranked in the top ten. Only three other universities have more top-ten graduate programs than the University of Michigan. Over the years, the university has grown to include 19 schools and colleges covering the liberal arts and sciences as well as most professions and has a population of almost 44,000 undergraduate, graduate, and professional students. According to the National Science Foundation, the university's expenditures on research represent more than any other U.S. public university.

Taubman College of Architecture and Urban Planning at U-M is a leader in interdisciplinary education and research with a focus on creating a more beautiful, inclusive and better built environment. The college and its alumni are committed to pushing the boundaries of architectural practice, advancing global engagement, and significantly enhancing diversity in the profession. The college offers the following degrees: Bachelor of Science in Architecture, Master of Architecture, Master of Science in Architecture, Master of Urban Planning, Master of Urban Design, and PhD programs.

ABOUT CCA ARCHITECTURE DIVISION

CCA's Architecture Division is a globally recognized leader in education and innovation. Its programs prepare students for creative practice where material and formal experimentation meet social engagement and technological innovation. The Division offers four accredited degrees in Interior Design(BFA), Architecture (B.Arch), Architecture (M.Arch), and a post professional Master of Advanced Architectural Design (MAAD). Led by award winning faculty, the Division operates four research, teaching, and learning labs: Build Lab, Digital Craft Lab, Experimental History Project, and the Urban Works Agency.

ABOUT CALIFORNIA COLLEGE OF THE ARTS

Founded in 1907, California College of the Arts (CCA) educates the creative leaders of tomorrow to make powerful contributions to society. CCA's distinctive project-based educational model emphasizes interdisciplinary experimentation, risk-taking, and innovation.

CCA offers a rich curriculum of 22 undergraduate and 13 graduate programs in art, design, architecture, and writing taught by a faculty of expert practitioners. Students study a wide range of disciplines—from animation to architecture, fashion design to film, illustration to industrial design, and poetry to painting. Coursework is guided by CCA's founding vision that connecting artists to social,

economic, and political life deepens the power of creative work and can change our world for the better.

Alumni and faculty have received top honors in their fields including Academy Awards, Rhodes Scholarships, Fulbright Scholarships, Emmy Awards, the Ordway Prize, the Rome Prize, the MacArthur Award, AIGA Medals, and the National Medal of Arts. CCA attracts promising students from across the United States and from 54 countries around the world. Graduates have gone on to work at Pixar/Disney, Apple, Intel, Facebook, Gensler, Google, IDEO, Autodesk, Mattel, and Nike, and many have launched their own successful businesses.

CCA is creating a new, expanded college campus at its current site in San Francisco that will open in the 2021-22 academic year. Unifying all of its programs in art, crafts, design, architecture, and writing, the new campus features a newly designed sustainable building by award-winning architecture firm Studio Gang, new student housing addressing a growing need within the city, and more. More information on expansion plans can be found online here.

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