A’21 MN
The Minnesota Conference on Architecture
October 27 & November 3, 10, & 11, 2021 | Virtual
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For 65 years we’ve worked with architects, contractors and business owners to efficiently and sustainably bring air, power, light, and water to the places that matter.

*Let’s connect and do great things.*
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POSSIBILITIES
MCGOUGH IS A PROUD SUPPORTER OF THE
A'21 MN CONFERENCE!

BUILDING ON OUR LEGACY OF CRAFTSMANSHIP
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www.mcgough.com
Welcome to the 2021 Minnesota Conference on Architecture!

Every year, the Conference brings our professional community together to connect, learn, and share. It’s been a long time since we’ve been able to gather in person! I was looking forward to seeing many of you in real life in November but the rising COVID-19 Delta variant cases, a lack of vaccine availability for children under age 12, and the unpredictability of state and local regulation on indoor public events have shifted this conference back to a fully virtual event.

With the experience we gained from last year’s virtual conference, we know we can deliver exciting and powerful virtual programs and connect you to vendors with products that are important to your practice. We will have prominent keynote speakers and experts from across the country speaking to issues impacting our practice today, which will be both energizing and inspiring.

We’re making sure you have opportunities to connect and be social each day, even if we can’t be together in person. Please remember to visit the virtual exhibit hall to learn about new products and engage with vendors or sponsors that have generously supported our conference and your work.

I want to personally thank each of you who continue to engage with and support AIA Minnesota during this ongoing pandemic crisis; I look forward to connecting with you virtually during socials. I want to close with a big thanks to the AIA Minnesota staff team, the Conference Continuing Education Committee, our outstanding exhibitors and sponsors, and everyone who has put in the hard work to develop virtual programming to inspire and inform our architecture community.

We’ll “see” you at A’21 MN!

Anna Pravinata, AIA, NOMA
AIA Minnesota President
**Conference CE Committee**

This group of ten AIA members meet every Friday morning from March through August to plan programming for the AIA Minnesota Conference on Architecture. They review feedback from previous years, they brainstorm topics, speakers and keynote speakers, and they select the best proposals submitted in order to offer everyone who attends a quality continuing education experience. Best of all, they laugh and have fun as they do it! We appreciate their dedication and enthusiasm for working together as a team to make this happen.

**Co-chairs**

Jim Butler, AIA, LEED AP  
Rachel Usher, AIA, LEED AP, Mead & Hunt

**Committee Members**

Catherine Britt, AIA, LEED AP BD+C, Cuningham  
James Gaspar, Assoc. AIA, Best Buy  
Daniel Green, AIA, Miller Dunwiddie  
Michael Kisch, AIA, LEED AP BD+C, Mortenson  
Sarah St. Louis, Assoc. AIA, Best Buy  
Jonathan Strand, AIA, LEED AP BD+C, BTR  
Madelyn Sundberg, AIA, MacDonald & Mack Architects  
Nicole Washburn, AIA, LEED AP, JLG Architects

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**Join the discussion online!**

Use the hashtag **#A21MN** to connect with other conference attendees:

- facebook.com/aiaminnesota  
- twitter.com/aiamn  
- instagram.com/aiaminnesota

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**Online Registration**

Simple, speedy, and secure! Online registration features include:

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Register online today! [www.aia-mn.org/registration](http://www.aia-mn.org/registration)

Early bird registration ends October 13!

If you’d prefer to register by mail, email, or fax, please download the registration form.

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**INVEST IN THE MINNESOTA POLITICAL ACTION COMMITTEE TODAY!**

Your investment helps:

- **AMPLIFY** the voice of the architect at the Capitol and join your individual voice to the voices of 2,300 Minnesota architects in advocacy on our issues.  
- Donations are an important tool to help AIA Minnesota **BUILD** relationships with policymakers before they are needed.  
- **Relationships help ADVANCE** policy in areas that matter to architects: climate change, affordable housing, equity, livable communities, and more.  
- Relationships help **LEVEL THE PLAYING FIELD** with other interests who threaten our profession and who are well-represented at the Capitol and have well-funded PACs.

Your MAPAC dollars help position Minnesota architects as the voice of the design and construction industry by positively impacting the relationship with the legislature.

You can now make your MAPAC investment a recurring donation! Visit the website to learn more: [https://www.aia-mn.org/resources/mapac/](https://www.aia-mn.org/resources/mapac/)

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**VISIT THE VIRTUAL EXHIBIT HALL**

The Minnesota Conference on Architecture would not be the same without our valued partners. A’21 MN will host a virtual exhibit hall so that you can access the latest information on products and services and make contact for more information. We will have dedicated time in the conference schedule for you to visit the virtual hall.

When you click on a virtual Exhibit Hall booth, you will find:

- New product information
- Product photos
- Product videos
- Contact information

Each exhibitor will be reachable with an email link for more information or to set up an appointment.

Go to page 50 to get a sneak peek of who will be exhibiting and to preview the Virtual Exhibit Hall layout.
Program Sponsors

- AIA Minnesota Committees/Knowledge Communities:
  - AIA Minneapolis Advocacy Committee (Event D1-16)
  - Architects Licensing Advisory Committee (Event D4-63)
  - Building Codes Knowledge Community (Event D4-59)
  - Committee on Design (Events D2-22, D2-28, D3-54)
  - Committee on the Environment (Event D2-22)
  - Council of Firms Knowledge Community (Event D1-2)
  - Emerging Professionals Committee (Event D1-2)
  - Residential Committee (Events D2-25, D2-31)
  - Technology in Architecture Practice Knowledge Community (Events D4-62, D4-68, D4-72)
  - Women in Architecture Committee (Event D2-24)

- Bayer Built Woodworks (Event D1-12)
- Denlar Fire Suppression Hoods (Event D2-21)
- Dunham (Event D1-9)
- Emanuelson-Podas, Inc. (Keynote D1-13, Events D3-50, D4-71)
- Energy Panel Structures (Event D2-31)
- GRAEF (Event D1-BREAK)
- H+U Construction (Event D2-22)
- H. Robert Anderson & Assoc. (Events D1-6, D2-38, D2-42)
- IEMEG Corp. (Events D1-3, D4-72)
- JE Dunn (Keynote D3-51)
- Konik (Event D1-2)
- Kraus-Anderson Construction Company (Event D4-68)
- Kraus-Anderson Insurance (Events D3-44, D3-46, D3-54)
- Metro Brick Inc. (Keynote D2-32)
- Minnesota Architectural Foundation (Event D1-15)
- MG McGrath (Event D3-43)
- Michaud Cooley Erickson (Events D1-10, D3-48)
- SagePresence (Event D2-39)
- Sonus Interiors (Event D2-30)
- University of Minnesota (Event D1-15)
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## EVENTS SUMMARY

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<th>Start</th>
<th>End</th>
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<td>Welcome and Convening Remarks</td>
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<td>D1-2</td>
<td>Mentoring Reimagined</td>
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<td>Student-Centered Health Sciences Education Facility Design</td>
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<td>What Contractors Wish Architects Knew about Aluminum Framed Fenestrations</td>
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<td>Creating Net-Zero Missing Middle Housing in Minneapolis</td>
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<td>Hybrid Practice: Are You Ready?</td>
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<td>The Pandemic’s Impact on the Future of Healthcare Design</td>
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<td>Using Passive House to Achieve the AIA 2030 Commitment in Commercial and Large-Scale Buildings</td>
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<td>A Guide to Outdoor Performance Venues</td>
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<td>Page Street House #1: Intersection of Net-Zero, Equity, Affordability</td>
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<td>Understanding Pandemic Impacts on Architectural Practice</td>
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<td>D1-16</td>
<td>Community Co-Design: A Collaboration Structure for Equitable Design</td>
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<td>Wrenshall Residence: Case Study</td>
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<td>Interrupting Abusive Behavior in the Workplace</td>
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<td>Networking Social</td>
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<td><strong>WEDNESDAY, NOVEMBER 3</strong></td>
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<td>Welcome and Convening Remarks</td>
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<td>D2-21</td>
<td>Fire Service Features of the State Fire Code</td>
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<td>D2-22</td>
<td>Local Lessons from the COTE Top Ten</td>
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<td>Fabric’s Advantage for Shade Systems: Reducing Carbon Footprint</td>
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<td>Women in Architecture Networking Breakfast: Combating Racism in the Built Environment</td>
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<td>Toward a Mass Timber Agenda: House in A Garden</td>
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<td>Minnesota Amendments in the 2020 MN Accessibility Code</td>
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<td>D2-28</td>
<td>Honor Award Jurors Show Their Work</td>
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<td>NYC Decarbonization Planning Over Future Decades: A Case Study</td>
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<td>A Breath of Fresh Air: Health, Wellness, and Resilience for Persons and Place</td>
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<td>D2-31</td>
<td>Keys to a Net-Zero Energy Home</td>
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<td>Lunch Break</td>
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<td>D2-34</td>
<td>Energy Code Compliance: Paths and Case Studies</td>
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<td>Constructing Architectural Ecologies</td>
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<td>D2-36</td>
<td>Top 10 Ways to Reduce Concrete’s Carbon Footprint</td>
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<td>D2-37</td>
<td>Building Bridges to Design and STEAM Careers for BIPOC Youth in Minnesota</td>
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<td>D2-38</td>
<td>Rotting Roofs: Causes, Mitigation, and Code Requirements</td>
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<td>D2-39</td>
<td>Networking Social hosted by SagePresence</td>
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## Wednesday, November 10

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<th>Start Time</th>
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<td>D3-40</td>
<td>Welcome and Convening Remarks</td>
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<td>D3-41</td>
<td>Ethical Leadership for Today's Complex Business Environment</td>
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<td>The Adjacent Possible: Thinking Like A Generalist</td>
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<td>Tolerances, Technology, and Trade Gap</td>
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<td>Planning for Resilience in a Climate-Changed World</td>
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<td>Establishing a Culture of Risk Management</td>
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<td>A Guide to Landscape Lighting</td>
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<td>Implementing Embodied Carbon Reduction Requirements: When, Where, Why, and How</td>
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<td>History, Hurdles and Hope: Developing a Multi-Sector Change Agenda to Create 21st Century Development</td>
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<td>Project Team Perspectives on LBC Petal Certification</td>
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<td>Keynote Address with Denise DeLuca: Re-Aligning Nature — Designing for a Sustainable Planet</td>
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<td>D3-53</td>
<td>Current Business Conditions In Minnesota, and the Role of Labor Force in Future Growth</td>
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<td>D3-54</td>
<td>2+2: Empathy in Design</td>
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<td>2:30 p.m.</td>
<td>3:30 p.m.</td>
<td>D3-55</td>
<td>High-Performance Embodied Carbon: Leveraging Data to Define Targets</td>
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<td>2:30 p.m.</td>
<td>3:30 p.m.</td>
<td>D3-56</td>
<td>Benefits and Function of Automatic Slide and Swing Door Systems</td>
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<td>3:30 p.m.</td>
<td>4:00 p.m.</td>
<td>D3-57</td>
<td>Networking Social</td>
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## Thursday, November 11

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<thead>
<tr>
<th>Start Time</th>
<th>End Time</th>
<th>Event No.</th>
<th>Title</th>
<th>LUs</th>
<th>HSW</th>
<th>GBCI</th>
<th>Ethics</th>
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<tbody>
<tr>
<td>8:00 a.m.</td>
<td>8:15 a.m.</td>
<td>D4-58</td>
<td>Welcome and Convening Remarks</td>
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<tr>
<td>8:30 a.m.</td>
<td>10:00 a.m.</td>
<td>D4-59</td>
<td>Creating a Well-Crafted Building Code Analysis (From Both Sides of the Aisle)</td>
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<tr>
<td>8:30 a.m.</td>
<td>10:00 a.m.</td>
<td>D4-60</td>
<td>Transforming Public Spaces: Water Works at Mill Ruins Park</td>
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<tr>
<td>8:30 a.m.</td>
<td>10:00 a.m.</td>
<td>D4-61</td>
<td>Social and Ecological Design Process and 21CD</td>
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<tr>
<td>8:30 a.m.</td>
<td>10:00 a.m.</td>
<td>D4-62</td>
<td>Lifecycle Data Solutions for Architects: Transforming the Norm</td>
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<tr>
<td>8:30 a.m.</td>
<td>10:00 a.m.</td>
<td>D4-63</td>
<td>Navigating Architect Licensure: NCARB, the ARE, and You</td>
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<tr>
<td>10:00 a.m.</td>
<td>10:30 a.m.</td>
<td>D4-64</td>
<td>Virtual Exhibit Hall</td>
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<tr>
<td>10:30 a.m.</td>
<td>11:45 a.m.</td>
<td>D4-65</td>
<td>The Post-Pandemic City</td>
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<td>10:30 a.m.</td>
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<td>D4-66</td>
<td>The Restoration Process of Bowman Hall</td>
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<td>10:30 a.m.</td>
<td>11:45 a.m.</td>
<td>D4-67</td>
<td>AIA 2030: 10 Years to Net Zero</td>
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<tr>
<td>10:30 a.m.</td>
<td>11:45 a.m.</td>
<td>D4-68</td>
<td>Business Intelligence for Data-Driven Design, Construction, and Operations</td>
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<td>10:30 a.m.</td>
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<td>D4-69</td>
<td>Equitable Design: Building for Disability Differently</td>
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<tr>
<td>11:45 a.m.</td>
<td>12:30 p.m.</td>
<td>Lunch Break</td>
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<td>12:30 p.m.</td>
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<td>D4-70</td>
<td>Deconstruction and Building Material Reuse in Minnesota</td>
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<td>12:30 p.m.</td>
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<td>D4-71</td>
<td>Pathways to SB 2030: Three Minnesota Case Studies</td>
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<tr>
<td>12:30 p.m.</td>
<td>1:30 p.m.</td>
<td>D4-72</td>
<td>The Augmented Reality of Chickens</td>
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<tr>
<td>12:30 p.m.</td>
<td>1:30 p.m.</td>
<td>D4-73</td>
<td>Interrupting Abusive Behavior in the Workplace</td>
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<td>1:30 p.m.</td>
<td>2:00 p.m.</td>
<td>D4-74</td>
<td>Virtual Exhibit Hall</td>
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<td>2:00 p.m.</td>
<td>3:30 p.m.</td>
<td>D4-75</td>
<td>Member Congress</td>
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<td>3:30 p.m.</td>
<td>4:00 p.m.</td>
<td>D4-76</td>
<td>Networking Social</td>
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SCHEDULE & PROGRAM TRACKS

WEDNESDAY, OCTOBER 27

8:00 a.m.  D1-1. Welcome and Convening Remarks

9:00

D1-2. Mentoring Reimagined
D1-3. Student-Centered Health Sciences Education
D1-4. Enclosure Detailing: Balancing Performance & Aesthetics
D1-5. What Contractors Wish Architects Knew: Fenestrations
D1-6. Creating Net-Zero Missing Middle Housing in Minneapolis

10:00

D1-7. Virtual Exhibit Hall

11:00

D1-8. Hybrid Practice: Are You Ready?
D1-10. Using Passive House to Achieve AIA 2030
D1-11. A Guide to Outdoor Performance Venues
D1-12. Page Street House #1

12:00 p.m.

D1-BREAK. Break Time with GRAEF

1:00

D1-13. Keynote: Design is Ceremony

2:00

D1-14. Virtual Exhibit Hall

3:00

D1-15. Understanding Pandemic Impacts on Practice
D1-16. Community Co-Design: A Collaborative Structure
D1-17. Wrenshall Residence: A Case Study
D1-18. Interrupting Abusive Behavior in the Workplace

4:00

D1-19. Networking Social

WEDNESDAY, NOVEMBER 3

8:00 a.m.  D2-20. Welcome and Convening Remarks

9:00

D2-21. Minnesota State Fire Code
D2-22. Local Lessons from the COTE Top Ten
D2-23. Fabric’s Advantage for Shade Systems
D2-24. Women in Architecture Networking Breakfast
D2-25. Toward a Mass Timber Agenda: House in A Garden

10:00

D2-26. Virtual Exhibit Hall

11:00

D2-27. Accessibility Code
D2-28. Honor Award Jurors Show Their Work
D2-29. NYC Decarbonization Planning Over Future Decades
D2-30. A Breath of Fresh Air: Health, Wellness, & Resilience
D2-31. Keys to a Net-Zero Energy Home

12:00 p.m.

D2-32. Keynote: Community as Corporation

1:00

D2-33. Virtual Exhibit Hall

2:00

D2-34. Energy Code Compliance
D2-35. Constructing Architectural Ecologies
D2-36. Top 10 Ways to Reduce Concrete’s Carbon Footprint
D2-37. Building Bridges to Design & STEAM Careers
D2-38. Rotting Roots

3:00


PROGRAM TRACKS KEY

- Practice
- Health Design
- Residential Design
- Ethics
- Codes
- Preservation/Restoration
- Technology
WEDNESDAY, OCTOBER 27

8:00 a.m.– 8:15 a.m.

D1-1.
Welcome and Convening Remarks

8:30 a.m.– 10:00 a.m.

D1-2.
Mentoring Reimagined
Sponsored by Konik
1.5 LUs Experience Level: Entry

Like almost everything in the architectural profession, mentorships were transformed by the COVID-19 pandemic—in some ways, for the better. Physical barriers to mentorship dissolved as video conferencing and online communication became standard operating procedure in many workplaces. Professionals who once were too busy with commutes, travel, and client meetings to spend time on mentorships suddenly had additional capacity to meet virtually—and the prospect of some social interaction was an added incentive. While we made these gains we also lost, for a time, the happenstance mentorship that took place on a day-to-day basis in our collaborative studios.

This panel discussion brings together attendees of all levels of experience, from students to fellows, to reflect on how mentorships have changed post-pandemic and what mentors and mentees can do to advance the practice of mentorship in the hybrid workplaces that are currently emerging. Now, more than ever, it is important to find meaningful ways to reconnect with peers, mentors, and mentees. Join us, as we explore new and equitable ways of working in a post-pandemic world.

Alanna Carter is a vice president and principal at HGA. In addition, she serves as the Minneapolis healthcare practice group leader, with responsibility for driving the business, cultivating the practice, and elevating design. She is recognized in the industry for delivering innovative solutions to complex healthcare challenges. She is a hands-on visionary leader and spends time with healthcare leaders around the country staying abreast of the most current thinking across the industry. A frequent speaker with work published in many outlets, Alanna shares her knowledge to promote high-quality design in all aspects of the industry.

John Dwyer, AIA, is the principal of John Dwyer Architecture and an associate professor at Dunwoody College of Technology in Minneapolis. In both practice and academia, John strives to expand the capacity for design toward environmental justice. John’s recognitions include the 2019 CityPages Artist of the Year Award, the 2018 AIA Minnesota Louis Lundgren Award for Service, the 2013 AIA National Young Architect Award, and the 2008 AIAS National Emerging Practice Award. He currently serves on the NCARB Experience Committee, the ACSA Degree Clarification Project, the executive board for cCCAP, and the Dean’s Council of the AIA Large Firm Roundtable.

Chris Hudson, Hon. AIAMN, is the editor-in-chief of ENTER digital weekly and print annual. Prior to launching ENTER in early 2021, he edited the award-winning Architecture MN magazine. In his spare time, he’s a hobby architectural photographer with an interest in midcentury buildings. Chris will serve as the moderator for this panel discussion.

Karishma Kurian is a designer at Wilkus Architects. With a recent master’s degree in architecture from the University of Minnesota, she entered the profession in the midst of a transition to virtual working. As the recipient of a Richard Morrill final project award in a project about her ancestral home, she approaches each new project engaged and excited about architecture’s connection to tradition, memory, and community. With more than four years in the profession and over three years as a teacher, she brings a unique perspective to mentorship’s role in architecture which is accompanied by her experience as an emerging professional in an increasingly virtual environment.

Rosemary McMonigal, FAIA, formed McMonigal Architects in 1984, and provides design leadership and project management. While her practice has included a number of corporate, institutional, and education projects, her major contributions have been in the area of housing. Rosemary advances the profession and strengthens its image through project-based research, technical innovation, and public outreach.

Kimberly Mezger, AIA, is an architect in HGA’s Minneapolis office. With over five years of experience, Kimberly has worked on projects ranging in size from corporate headquarters renovations to federal building modernizations. She is well-versed in code analysis, historic preservation, and all phases of the project process, from schematic design through construction administration. Kimberly believes in creating environments that holistically consider the wellbeing of all users and inhabitants now and into the future.

Jennifer Yoos, FAIA, became head of the School of Architecture in the University of Minnesota College of Design in 2020. She is also principal and president of VJAA, Inc. She received her Graduate Diploma in Design in 2020. She is also principal and president of VJAA, Inc. She received her Graduate Diploma in Design from the Architectural Association in London, her professional degree in architecture from the University of Minnesota and was awarded a Loeb Fellowship at the Harvard Graduate School of Design. She is co-author, with partner Vincent James, of a recent monograph on their practice published by Princeton Architectural Press as well as their book Parallel Cities: The Multilevel Metropolis (2016).

D1-3.
Student-Centered Health Sciences Education Facility Design
Sponsored by IMEC Corp.
1.5 LUs HSW Experience Level: Intermediate

Designing an array of high-tech, high-touch spaces that facilitate experiential, team-based learning across six health
D1-3. (continued)

Aesthetics

Enclosure Detailing: Balancing Performance and Aesthetics

Exterior envelope detailing is one of the most complex design challenges architects regularly face. Adding to the complexity are the ever-increasing performance requirements exterior enclosures must meet. So, how can architects maintain technical excellence when reaching the bare-minimum code can seem insurmountable?

This session will consist of an introductory discussion on fundamental detailing principles followed by case study examples of how these are employed in real-life conditions. Case studies will focus on midcentury modern works, revisiting the details that elevate their focus on performance to meet present-day goals while maintaining their notable design attributes. The case studies will cover a wide range of scales—from residential to commercial—and explore multiple materials, from wood, to steel, to concrete. The session will break down the complexities of envelope detailing into discrete, manageable stages that can be applied to any design. Revealing an understanding of why these principles are successful and the application of these principles by attendees is important so they can extrapolate the concept into their work when systems are beyond those discussed.

Doug Bergerl, AIA, is an architect and senior project designer with the Minneapolis studio of Perkins & Will, where he’s engaged in the design of cultural, corporate, and education building projects.

Heidi Costello, IIDA, CID, LEED AP ID+C, brings an adept understanding of the planning, programming, and design of large multifaceted medical education and highly technical simulation projects. Leveraging her work designing innovative learning environments, healthcare clinics and facilities, and corporate workplaces, she brings real-world experience to her academic health science projects. She has a passion for creating memorable spaces that directly impact the future of healthcare. She understands that healthcare is ever changing and stays up-to-speed on the latest trends and research to provide insight into opportunities to holistically approach a new building, program, and curriculum.

Marc Partridge, AIA, has 30 years of private-sector experience and has proven adept at providing firms, clients, and project teams with strategic guidance. As University Architect, he is currently shaping a reorganized capital management group at the University of Minnesota focused on planning, design, and project delivery, with a renewed emphasis on design quality.

Will Babbington, AIA, is a principal and the facade design director at Studio NYL Structural Engineers and Enclosure Designers. He is the current national chair for the Building Enclosure Council and sits on the special advisory council for the Facade Tectonics Institute. He is also a representative for AIA on the ASHRAE 90.1 envelope subcommittee and a contributor on the AIA Building Performance Definitions Project. Will is also on the ASTM Committee E06 on Performance of Buildings and is a developer and trainer for ASTM’s and NIBS’ new Building Enclosure Commissioning (BECx) certificate program.

Joe Simma, AIA, is a senior associate with Alliance and has focused his career on technical design excellence for complex public, higher education, and aviation projects, where he relishes the challenge of integrating disciplines, systems, and concepts to bring clarity to complexity. With 15 years of wide-ranging project experience, he has developed an expertise for high-performance envelope design and creatively solving constructability issues. Within the firm, Joe oversees envelope design and quality reviews, promotes analytical tools for building performance, and helps guide the firm’s digital direction and BIM efforts.

D1-5.

What Contractors Wish Architects Knew about Aluminum Framed Fenestrations

Enclosure Detailing: Balancing Performance and Aesthetics

When aluminum window, storefront, or curtain wall systems are applied to punched openings or ribbon configurations, the success of the assembly is as much dependent upon the convergence of materials and components at the rough opening interface as it is on the selection of the actual fenestration product. The same holds true when large expanses of glazing interface with opaque wall areas or soffits. Neglecting careful consideration of these interfaces will quite often lead to disappointment on the part of the designer, the constructor, and the end user.

This presentation will discuss common challenges to delivering a satisfactorily constructed opening that occur due to under-consideration during planning, design, and construction, and CONTINUED ON NEXT PAGE >
8:30 a.m. - 10:00 a.m.

**D1-5. (continued)**

Technical aspects that design professionals must be mindful of when specifying and detailing openings on their projects. Drawing on recurring issues encountered on the contractor's side and case studies illustrating best practices for contract documents and shop drawings, this presentation will highlight characteristics of aluminum framed openings that design professionals can leverage to ensure that the built systems will perform as expected and provide a satisfactory and serviceable function to the occupants of the interior space.

**Jonathan Porter, PE, Assoc. AIA**, is a licensed professional engineer with 25 years' experience in the design and construction industries and is the director of building science at Kraus-Anderson (KA). Jon's roles have included design consultant, owner's representative, forensic investigator, and general contractor. In his primary role, he serves as a resource to project teams in the areas of constructability, building materials technology, means and methods, workflow and sequencing, and condition assessment to ensure that KA delivers a customer experience that exceeds client’s expectations.

**Paul Whitenack, AIA, LEED AP**, is manager of building science at Kraus-Anderson with 29 years' experience in the design and construction industries. After starting his career in traditional architectural design firms in Milwaukee and Minneapolis, Paul has increasingly specialized in building science and enclosure technology, with an emphasis on field investigation, forensics, and quality assurance. Paul provides subject matter expertise as a project resource in the areas of historic restoration, constructability, testing and acceptance protocols, proper installation techniques, and building materials technology to ensure that project solutions are optimized to the needs of the client.

10:00 a.m. - 10:30 a.m.

**D1-6.**

Creating Net-Zero Missing Middle Housing in Minneapolis

Sponsored by H. Robert Anderson & Associates, Inc.

**1.5 LUs | HSW | GBCI | Experience Level: Intermediate**

The Sundial Building is a 12-unit, three-story walkup building, designed to achieve net-zero energy with all electric utilities. During its design, it has followed and tried to right-size requirements to meet objectives for the Living Building Challenge, LEED For Homes - Midrise and Green Communities, and performed Passive House energy modeling. The building is a pilot project for innovative stormwater management and rainwater reuse via grants from the Mississippi Watershed Management District and Hennepin County. The project is also a recipient of grants and rebates for energy efficiency, renewable energy and enhanced indoor air quality equipment from Xcel Energy and the City of Minneapolis. It is scheduled to break ground in the fall of 2021 and open in the spring of 2022.

Join the developer and energy modeler to hear about their experience creating an innovative sustainable building at this scale. We’ll discuss the overall project goals, design strategy, and approach to financing and implementation. We’ll explore the net-zero design process, including how energy modeling informed design decisions for this project scale where few precedents exist. Learn from our work comparing cost and energy performance where we found unexpected areas of highest impact.

**Jim Kumon** is co-owner of Heirloom Properties, a real estate development and property management company focusing on 1–12-unit new construction of missing middle scale housing in the Twin Cities. He is also principal at Electric Housing, an implementation-focused practice based in Minneapolis and working nationally to provide technical assistance to development industry professionals on sustainability, construction, urban design, and financial feasibility, especially as it relates to achieving all electric utility small scale housing projects. Early in his career, he served on the boards of the AIA Huron Valley, AIA Pasadena, ULI-LA Young Leaders Group and USGBC-LA Emerging Professionals.

**Janneke Schaap, AIA**, sustainable design associate at Precipitate, is passionate about process and thrives when leading project teams to successfully elevate the sustainability performance of their projects while navigating complex requirements. Her education in architecture and sustainability studies included comparative research of LEED for Homes, GreenStar and Passive House certification programs. Janneke brings eleven years of applied residential sustainability design and consulting expertise to the table with a focus on resource efficiency, designing for energy optimization and using green building and passive house standards as creative design tools. Janneke is a passionate advocate for sustainable lifestyles and is driven to create buildings that optimize the built environment’s role in climate change while creating thriving communities.

**Elizabeth Turner, AIA**, is an architect with a passion for finding synergies to create thriving, equitable communities that depend less on the purchase of energy, saving both operational costs and carbon emissions. She founded Precipitate in 2017 to explore emerging methods of holistically integrated design at the intersection of architecture, research, and education. She is a Certified Passive House Consultant through the Passive House Institute US (PHIUS) and teaches the capstone project class for the Sustainability Studies minor at the University of Minnesota, connecting students in support of communities.

**CONTINUED ON NEXT PAGE >**
more information or to set an appointment. Visit as many booths as possible for a chance to win a MN State Parks Pass and e-bike! Go to page 50 to preview the Virtual Exhibit Hall layout.

10:30 a.m.–11:45 a.m.

D1–8.
Hybrid Practice: Are You Ready?
1.25 LUs Experience Level: Advanced

How can you maintain a strong firm culture in a hybrid design practice? How can employees remain engaged and thrive, whether working from home or working in the office? Join innovative architect and author Evelyn Lee, FAIA, and a panel of Minnesota firm leaders as we explore how to navigate our new hybrid reality, giving insights into what it takes to create a successful practice today. The session will highlight new perspectives on operations, processes, policies, and tools to help individuals become better advocates for a more flexible workplace and help firm leaders understand the areas in their businesses that they need to adapt to build and run a successful hybrid practice.

Jennifer Christiaansen, AIA, is the operations director and corporate interiors practice leader for the Perkins+Will Minneapolis studio. She was the recipient of the AIA MN Young Architect Award in 2020. She has also served as the co-chair for the AIA MN Equity, Diversity & Inclusion Committee and is an active AIA Council of Firms member. As director of operations, Jennifer combines her design and business background to effectively lead the studio and deliver superior design and services. Jennifer is responsible for facilitating innovative architecture, empowering entrepreneurial staff, utilizing inventive technology, developing successful project delivery processes and cultivating a collaborative studio culture. Jennifer is dedicated to an innovative and successful studio. Through her commitment to accountability and communication she empowers all staff to reach their highest creative potential.

Evelyn Lee, FAIA, is the first-ever senior experience designer at Slack Technologies, founder of the Practice of Architecture, and co-host of the podcast, Practice Disrupted. Lee seamlessly integrates her business and architecture backgrounds with a qualitative and quantitative focus to build better experiences for organization’s employees, clients, and guests. She is widely published, wrote a monthly column for Contract magazine for over 3 years, and now is a frequent contributor to Architect Magazine. Evelyn has received numerous industry awards, including the 2016 40 Under 40 award for...
**D1-8. (continued)**

Building Design + Construction and the 2014 AIA National Young Architects Award. She currently serves as the first-ever female treasurer to the AIA National Board.

**Michael Meehan, AIA, LEED AP.** is a principal at BWBR in Saint Paul. His work focuses on human resources, workload management, and recruiting. Mike has gained his early experience in project-based roles including project management. For the past decade he has had a wide range of experiences behind the scenes, helping BWBR be more efficient and supportive of staff. His work has included project staffing, workload forecasting, managing performance reviews, recruiting, leading BWBR’s project management group, championing BWBR’s resource planning software, business operations, and outreach to architecture schools. In his current role with the HR group, he helps bring people into a hybrid environment in a company with multiple office locations.

**Mary Shaffer, AIA.** brings broad experience in architectural leadership and project management to her role as architecture department manager at Mead & Hunt. Her architectural experience includes traditional practice as well as project management on the consultant and owner side. She has a passion for mentoring students of all ages about our industry. Mary is engaged in multiple volunteer endeavors, including serving on the Minnesota Architectural Foundation Board, past co-chair of AIA Minnesota Council of Firms, serving as an NCARB Licensing Advisor, a member of the NAAB Visiting Teams Roster and serving on the advisory board for the annual BD+C Women in Design + Construction Conference.

**D1-9.**

The Pandemic’s Impact on the Future of Healthcare Design

Sponsored by **Dunham**

1.25 LUs | HSW | Experience Level: Intermediate

As we emerge into our post-pandemic world, we must reflect on how our healthcare environment either supported or worked against us during this trying time. Facing the likelihood of future pandemics, now is the time to ask how we can be proactive in improving the effectiveness and overall wellbeing of those who provide and receive care. This session will focus on national healthcare market trends, strategies for versatile design, the best rapid response construction methods, and review a case study of an existing ICU’s evolution to handle the next pandemic surge.

**Amy Kalar, AIA,** is a medical planner with GBBN. Amy has a love of architecture that is rooted in its ability to elicit an emotional response. Amy designs healthcare spaces that provide comfort and support to those who inhabit them, and she delights in the complexity of healthcare design — the extra layer of regulatory requirements, the changing technological landscape, and the existing spaces that shape the design. It’s a complicated puzzle, but, guided by a deep concern for the client and those who will use the space, Amy sees how it all fits together.

**D1-10.**

Using Passive House to Achieve the AIA 2030 Commitment in Commercial and Large-Scale Buildings

Sponsored by **Michaud Cooley Erickson**

1.25 LUs | HSW | GBCI | Experience Level: Intermediate

This program, organized by Passive House Minnesota, will be presented in two sections. The first section will be an overview of the Passive House method and how applying its five principles meets the 2030 Challenge. Case studies will then address how the building envelope issues change with larger and commercial buildings. These issues include the thermal bridging challenges, mechanical strategies, and how internal heat gains and larger surface/volume ratio makes a Passive House build more attainable in larger buildings.

**Jennifer Books, AIA, NCARB, CPHC,** has a varied background in commercial and residential design. Jennifer has been a Certified Passive House Consultant since 2012. By 2015, her professional focus shifted fully to net-zero energy (NZE) passive house design via market-rate delivery. In 2019, she joined NK Passive, a pioneer in North American Passive House and high-performance building design. Her roles include building planning, energy modeling, thermal bridge analysis, and envelope detailing. NK Passive consults with teams interested in the design and development of high performance NZE buildings, inclusive of PHI and/or PHIUS certifications.

CONTINUED ON NEXT PAGE >
D1-10. (continued)

Marcy Conrad Nultt, AIA, CPHD, LEED AP, is a licensed architect who has worked on a variety of small and large-scale commercial, institutional, and residential buildings in the US and Canada over the last 20 years. She is an architect at Alchemy in St Paul, where she spearheads the sustainability initiatives integrating Passive House and AIA 2030 into the firm’s daily work. She will be introducing and moderating the conversation.

Tim Delhey Eian, Dipl.-Ing., CPHD, is a German-born, naturalized American architectural engineer and certified Passive House Designer leading TE Studio Passive House Architecture in Minneapolis, MN. Tim designed the first certified Passive House projects in the Twin Cities, Wisconsin, and Michigan, while his business partner Stephan Tanner designed the first in the country. Tim is the founder of Passive House Minnesota. He lives in Minneapolis’ first certified Passive House Plus building, the Good Energy Haus. Tim and his firm have been instrumental in educating and transforming how Minnesota owners, developers, municipalities and building professionals think about high-performance buildings.

Etienne Gubler, CPHC, is the North American CEO at SIGA. A Swiss manufacture of high performance construction material to air and weather seal buildings. He is a strong advocate for energy efficient construction and has supports various national and international organizations to building better.

D1-11.
A Guide to Outdoor Performance Venues

As we slowly emerge from COVID-19, there is more and more interest in outdoor performance spaces. This presentation will examine design considerations and infrastructure needs for outdoor performance spaces of all shapes and sizes: from temporary performance spaces in a small park to large scale amphitheaters designed to support ticketed concerts and theatrical events, we will examine ways to make outdoor performance spaces that work for the community, audiences, performers, and staff. The presentation will include two case studies. The first will be an amphitheatre located in an urban park in Tulsa. The park was one of the first major elements that helped transform an underutilized industrial neighborhood into a busy entertainment area adjacent to downtown Tulsa. Beyond performances, this park serves as a community hub providing the neighborhood with leisure space, activities like yoga, space for food trucks, farmers markets, a café, and public restrooms. The second venue is an amphitheater dedicated to Shakespearean productions. This venue places a high level of theatrical function into an idyllic outdoor setting to support a busy summer production season of professional theatre.

D1-12.
Page Street House #1: Intersection of Net Zero, Equity, Affordability

St. Paul’s Page Street House #1 is under construction by students at the nonprofit GAP School. Students learn construction skills in class and onsite while earning a GED so they can be placed into higher paying construction jobs after high school. This is the first CONTINUED ON NEXT PAGE >
10:30 a.m.– 11:45 a.m.

D1-12. **(continued)**

of four single-family homes, sequentially built over eight years, each to be sold to low-income homeowners to build generational wealth. MSR Design, AKF, and BKBM are volunteering time while many suppliers are donating or offering discounted construction materials. USGBC and others volunteered to guide LEED for Homes certification. The home targets net-zero energy, making homeownership more affordable over time and teaching the students best practices.

This program will discuss lessons learned and describe the many layers of good that are propagating from this opportunity, and the benefits of creating affordable, contextual, healthy, high-performing homes for St. Paul’s west side, nonprofit Change, Inc. (which operates GAP School), the homeowners, and the community.

**Jill Johnson** is the associate director with Change, Inc. Jill has served the nonprofit sector for 15 years in many staff and volunteer roles. In 2019, she was promoted to the associate director role at Change, Inc. (a merged organization between Guadalupe Alternative Programs and Change Inc) where she leads administration, operations, and advancement activities. Jill believes nonprofit administration should lift up and support program operations to fuel mission and impact community.

**Paul Mellblom, FAIA, LEED AP BD+C,** is a principal at MSR Design. Paul’s interests focus primarily on designing affordable housing, facilities for nonprofit and for-profit corporate clients, and high-end housing. Paul shares leadership of the firm’s focus on creating highly sustainable, healthy living and work environments. He currently serves as part of the Urban Land Institute International Health Leaders Network and on the Tulane University Center for Public Service Board. Paul has spoken about various aspects of sustainable design, including co-presenting a talk on cold-climate, high-performance affordable housing at the 2015 GreenBuild EuroMed conference in Italy and last year co-presenting MSR Design’s office project’s Living Building Challenge focused office design to the USGBC Western North Central region.

**Sean Sonnebend, PE,** is the senior mechanical engineering leader in AKF’s Minneapolis office. He specializes in the development of mechanical system options and creating exacting energy models aimed at increasing system efficiency within new and existing building. Sean is an advocate for transparent collaborative designs that create equitable and resilient spaces. His passion for sustainability and thoughtful mechanical and plumbing design has proven immensely valuable to clients across the nation. With over 18 years of experience, Sean has been a driving force in the development of energy-efficient and sustainable building projects.

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years in the industry, Sean’s project experience includes a Living Building Challenge Certified Learning Center, Net-Zero Energy Dairy Milking Parlor, millions of square feet of LEED certified spaces and thousands of geothermal wells. Sean is a member of the AIA Equity, Diversity and Inclusion Committee.

Chris Wingate, Asoc. AIA, LEED AP, Certified Passive Building Consultant (CPHC), leads MSR Design’s research and development of new design tools and processes and oversees a student research partnership with the University of Minnesota. Chris is passionate about developing and applying a design-centric approach to sustainability that focuses on clarity of concept, design rigor, and inspiring visualization. Chris has given numerous talks for AIA and USGBC focused on energy modeling and other sustainable design measures. He also teaches sustainable design at the University of Minnesota School of Architecture. He has received numerous awards for his research and design work, including an AIA COTE Top Ten Award, a MN Honor Award, and multiple USGBC Mississippi Headwaters National Talent Design Competition First Prize Awards.

11:45 a.m. - 12:00 p.m.

D1-BREAK.
Break Time with GRAEF
GRAEF is a full services engineering, planning, and design firm. They will show a project where a drone was used to capture the facade and roof areas of the United Hospital in St Paul. Both regular and thermal images were created to determine the areas of heat loss and moisture. Engineering staff then used the data to analyze the smokestack for structural integrity. Join GRAEF for this short but interesting project example.

12:00 p.m. - 12:30 p.m.

Lunch Break
COVID-19 has had on the profession as a whole, as well as those with ‘differences that make a difference.’ The hypothesis was that some groups are more affected by COVID-19 than others, with particular focus on impact on caregivers. This presentation will define “differences that make a difference,” explore survey findings, and open a dialogue about how differences impact firm operations. Understanding the impacts of the ongoing pandemic across the architecture profession will better equip firms to respond resiliently and equitably to current challenges and prepare for future disruptions.

**Elizabeth Turner, AIA.** is an architect and Certified Passive Building Consultant. Elizabeth works with a passion for finding synergies to create thriving, equitable communities that depend less on the purchase of energy, saving both operational costs and carbon emissions. She founded Precipitate in 2017 to explore emerging methods of holistically integrated design at the intersection of architecture, research, and education. She is a Certified Passive House Consultant through the Passive House Institute US (PHIUS) and teaches the capstone project class for the Sustainability Studies minor at the University of Minnesota, connecting students in support of communities. Elizabeth volunteers extensively with the American Institute of Architects (AIA) Minnesota, advocating for public policy with a focus on equity and inclusion toward truly sustainable communities for all.

**Imani Mosher** is a recent graduate of St. Olaf College with a Bachelor of Arts in Political Science and a concentration in Environmental Studies. She is passionate about the intersections of political science and environmental studies as they relate to climate justice, and she is excited to bring this perspective to Precipitate. At St. Olaf, she was a co-founder of the Climate Justice Collective (CJC) an organization that drove the successful divestment campaign at the College and uplifted the movement to stop Line3 among students. She was also the Vice-President of Student Government where she used her platform to shed light on these issues and push the college to commit to more sustainable policies. At Precipitate, Imani supports research, leads our social media presence, and nourishes advocacy work.

**Kevin Bright, CEM, LEED Fellow, LEED AP BD+C and O+M,** is the energy and sustainability director for the Destination Medical Center (DMC) Economic Development Authority (EDA) and the City of Rochester. His main functions are to ensure the DMC development projects meet the energy and sustainability goals outlined in the DMC Development plan; convene the Energy Integration Committee, a collection of energy-focused stakeholders to discuss and implement high-level energy goals for development; and advocate for sustainability, health and wellness issues throughout the community. For the City of Rochester, his main functions are to realize the goals outlined in the City’s Climate Action Plan, and organizationally, reduce the City’s environmental impact and support wider community sustainable behavior adoption.

**Chao Mwatela** serves as the diversity, equity, and inclusion director for the City of Rochester. Her work is focused on advancing the city’s organizational culture that centers social equity, assessing and implementing equitable City policies, projects, and programs. These efforts are geared towards creating a vibrant, welcoming, and inclusive community. Professionally, Chao has also served as a K-12 teacher as well as a community college multicultural advisor.

**Jess Roberts** leads the CULTURE OF HEALTH BY DESIGN, an affiliated initiative of the Minnesota Design Center (University of Minnesota, College of Design). In this role, Jess offers guidance, applied learning and ongoing support to health organizations, government agencies, nonprofits and communities looking to build, practice and embed a competency and structure for human centered design (HCD) and co-design. He is an affiliate faculty member at the University of Minnesota, School of Nursing and School of Public Health where he leads the development and delivery of cross-disciplinary HCD and co-design curriculum.

**Elden Lindamood, AIA.** is an architect who has spent the last 20 years investigating, designing, and fretting about low energy, single family homes in cold climates. He and his partner Catherine built their own home in Wrenshall, Minnesota in 2016, giving him a chance to both “put his money where his mouth is,” and to closely monitor the results of his design exercises.
D1-18. CAPACITY 50
Interrupting Abusive Behavior in the Workplace

Experience Level: Entry

The history of the profession is rife with stories of hard-charging architects who brow beat their direct reports and colleagues, regularly hurling insults, demeaning comments, and even objects. While the most extreme displays of abusive behavior may be less common today, architects and architectural designers still report bullying and disrespect being tolerated within firm cultures.

This session will share research on abusive behavior in U.S. workplaces, how it shows up within the architecture profession, and what experts say can be done to counteract it. Rule 5.101 of the AIA Code of Ethics states that “Members shall treat their colleagues and employees with mutual respect…” – we’ll explore what respect looks like and feels like in today’s workplace. And in the spirit of Rule 4.2020, this session will be geared toward supervisors who must “make reasonable efforts to ensure that those over whom they have supervisory authority conform their conduct to this Code.” The session will be interactive, with participants engaging with scenarios and potential interventions.

Mary-Margaret Zindren, CAE, is the executive vice president / executive director of AIA Minnesota, the state’s three local chapters, and the Minnesota Architectural Foundation. For more nearly 30 years, Mary-Margaret has worked to further the common good through the collective efforts of communities and professionals, with experience leading associations related to city government, the law, and the profession of architecture. She is a frequent facilitator, moderator, panelist, and keynote speaker on organizational leadership, culture change, racial and gender equity, and currently serves as the vice president of the Council of Architectural Component Executives.

3:30 p.m.– 4:00 p.m.

D1-19.
Networking Social

WEDNESDAY, NOVEMBER 3

D2-20.
Welcome and Convening Remarks

8:00 a.m.– 8:15 a.m.

D2-21.
Fire Service Features of the State Fire Code

Sponsored by Denlar Fire Suppression Hoods

Experience Level: Intermediate

Most architects are familiar with applying the state building code fire safety features, such as height, area, and fire protection based on the type of construction, to a new building. Some, however, are not aware that the state fire code contains requirements for fire department vehicle access, fire lanes, and firefighting water supplies that may drive the need for additional fire protection or fire safety features. This session will explain these requirements and address why these may vary based on the features unique to the site being developed.

Jon Nisja has served as fire marshal for two communities and as a fire safety supervisor with the Minnesota State Fire Marshal Division since 1990. He supervises the fire loss data, fire protection, and training sections for the State Fire Marshal Division. He is a former President of the Fire Marshals Association of Minnesota (1997–2003) and is also a past president of the International Fire Marshals Association (2006–2008). Jon has authored chapters in five books. His areas of fire protection interest include fire safety history, means of egress, fire protection systems, building construction, and using performance measures to show effectiveness. Recognitions include the International Fire Marshals Association Meritorious Service Award (2009) and the NFPA Shannon Advocacy Medal (2019).

D2-22.
Local Lessons from the COTE Top Ten

Sponsored by H+U Construction

Experience Level: Entry

The future of design excellence requires a holistic approach, addressing the interdependence among people, buildings, infrastructure, and the environment. In support of this, the AIA Minnesota Honor Awards are evaluated using the AIA Framework for Design Excellence, formerly known as the COTE Top Ten Measures. This program will examine health, safety, and wellness through the lens of the multiple measures included in the framework. Three COTE Top Ten Award projects, designed by

CONTINUED ON NEXT PAGE >
D2-22. (continued)

three diverse firms reframe sustainable design as a primary driver of health, safety, and welfare innovation in the built environment. The panel provides a wealth of experience and perspective on these issues and uses a case study methodology to translate those lessons to the attendees through storytelling, discussion among panelists of the success and struggle of the projects, and critique of the outcome of these three acclaimed and elevated projects from the architecture community at large. The discussion will leave attendees with both a more intimate knowledge of each project’s process and success, and a means of transferring those lessons back to their own firm’s work with renewed awareness of the parallel goals of sustainable design and the primary tenets of our profession.

Harry Doyle, PE, is the senior principal for MODUS, having overseen its success and expansion for over 30 years. In addition to studies, design, renovations, and additions of structures of varied uses, Harry’s vast project experience also includes schematic development and design of many facilities. He has served numerous clients in the various market sectors throughout Iowa, and in doing so has established MODUS as one of the most successful MEPT firms in the state.

Douglas Farr, FAIA, is deemed one of Planetizen’s 100 most influential urbanists of all time. He co-chaired the development of the U.S. Green Building Council’s LEED for Neighborhood Development (LEED-ND) and has served on the boards of urban sustainability organizations including the Congress for the New Urbanism, Bioregional, EcoDistricts, and Elevate Energy. His design philosophy is centered on the notion that the world needs to change, and we are the ones to initiate it. According to Doug, change should start with the end in mind, and that end is carbon neutrality. How can we get there? By working together. By holding ourselves accountable. By modifying our habits. Shifting the industry. And ultimately, redefining our conception of beauty to include health, happiness, and equity.

Tyson K. McElvain, AIA, has a background that ranges from concept to construction, and brings a passion in merging design and construction to deliver projects that are both well-conceived and well-detailed. As the director of project delivery at Snow Kreilich, Ty is the firm’s leading voice for documentation, sustainability, project specifications and construction administration and has contributed to many of the firm’s most significant projects to date. He has a depth of experience with diverse project types from single family residences to large federal office buildings and historic preservation projects to modern sports facilities.

Malini Strivastava, AIA, assistant professor in resilient and regenerative design, and director of the Master of Science in Research Practices program in the UMN College of Design, will serve as moderator of this program. She is a 2018 recipient of the American Institute of Architects’ Young Architect Award and a 2014 recipient of the Archibald and Edyth Bush Fellowship. Her work spans research, teaching, and practice in urban-scale pervasive play frameworks, high-performance architecture, responsive building skins and other interventions to address energy use in the built environment. Malini is the co-principal of the award-winning firm, Dandelab. Her extensive involvement with projects has led to national and regional awards for design, preservation and efficiency. LEED certification, Passive House pre-certification and a COTE Top Ten award.

Channing Swanson, AIA, a native of Iowa, is strongly influenced by the relationship of the Iowa landscape and its built environment. Channing is a 1993 graduate of Iowa State University. Since 2011, Channing has been a Principal of Neumann Monson Architects, where he has helped lead the transformation of that firm. At Neumann Monson, Channing has worked on projects such as the West Campus Transportation Center at the University of Iowa, the Sukup Endzone Club in Jack Trice Stadium at Iowa State University, an operations center for MidwestOne Bank, a historic, adaptive reuse called Market One that is Iowa’s first commercial building that produces more energy than it consumes, and the acclaimed Des Moines Municipal Services Center.

D2-23.

Fabric’s Advantage for Shade Systems: Reducing Carbon Footprint

For centuries, humans have looked for ways to reduce the impact of the sun on their environment. One highly effective method that has stood the test of time is shade structures that block the sun’s damaging rays. Sustainable, durable textiles for shade are now the industry norm and when combined with modern designs can reduce energy consumption in buildings and minimized their carbon footprints. Fabric shades today provide a low-cost option that can lead to substantial energy cost savings as well as health benefits. This course will provide the participant with an in–depth look at the durability, value and sustainability benefits of industrial textile shade structures. Case studies combined with technical reports support the lecture.

Steve Fredrickson is sales director for Sattler Corp., North America. Steve has been in the textile manufacturing business for over 25 years, working in almost every aspect of the industry – from the production of fabrics to the installation of finished systems and projects. He is the former chairman of the Fabric Structures Association and a current advisor to multiple industry related boards. He has spoken at various AIA events throughout the country and has also presented seminars to various university and college classes.

Bruce N. Wright, FAIA, is an architect and writer whose publications, teaching, and technical expertise strengthen the profession’s knowledge base, especially in the area of new materials and architectural fabrics. Over the last 40 years, he has worked in architectural offices, written hundreds of articles, edited design journals, co-written books, and supported continuing education. For 17 years, Bruce served as editor-in-chief of the international journal, Fabric Architecture, generating themed issues that told stories of how architects could achieve lightweight, sustainable, and beautiful buildings through fabric applications. He helped to introduce ETFE and other breakthrough

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D2-23. (continued)

products to the profession through featuring prominent projects such as Zaha Hadid’s Serpentine Pavilion in London (2000), Herzog & de Meuron’s Alliance Stadium in Munich (2005), and KieranTimberlake Architects’ US Embassy in London (2012-2017).

D2-24. CAPACITY 90

Women in Architecture Networking Breakfast: Combating Racism in the Built Environment

Come to the table and join the conversation with women in architecture. At this virtual networking session, attendees will break into small groups and discuss topics related to combating racism in the built environment. Each conversation will include a discussion leader and volunteer moderator from the AIA Minnesota Women in Architecture Committee. Join these discussion leaders in a valuable conversation about professional practice and the challenges architects face when creating a built environment that is designed to combat racism. Topics will include how home interiors relate to the production of disparities; rebuilding after the 2020 civil unrest; and disproportionate negative environmental and health impact on communities of color. Men are welcome and encouraged to attend this session, because the changes proposed in these discussions require everyone’s contribution.

Abimbola Asojo, PhD, AIA, is the associate dean for research, creative scholarship and engagement and a professor of interior design at the UMN College of Design. She actively engages her students in community-based service-learning projects that tackle local and global societal challenges. Her research areas are cross-cultural design, architectural lighting design, African architecture, computing and design, globalization and design, sustainable design, post-occupancy evaluation and K-12 spaces. Her work has been widely published in international journals and books. She is a licensed architect and holds a National Council for Interior Design Qualification (NCIDQ) certification. She is a member of the American Institute of Architects (AIA), the Interior Design Educators Council (IDEC), and the Illuminating Engineering Society (IES).

Alicia Belton, AIA, NOMA With over 30 years of experience, Alicia Belton is founding principal of Urban Design Perspectives, an AIA 2030 Commitment signatory firm. She leads this African American, woman-owned practice that is committed to environmental stewardship, client advocacy, and equitable practices. Using the framework of architecture, project management, and community engagement, the firm creates housing, Let us assist you with your structural, civil, and technology needs. We are a full-service engineering consulting firm that prides ourselves in the use of technology to advance our clients’ experience.

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D2-24. (continued)

workplace, and religious spaces that reflect clients’ missions. She has served as president and treasurer of the Minnesota Architectural Foundation, chair of the Wigington Committee and co-chair of the AIA Minnesota Small Firms Committee. She currently serves on the Capital Area Architectural Planning Board, Hennepin County Designer Selection Committee, and the Twin Cities Habitat for Humanity Board of Directors. She is president-elect for AIA Minnesota.

Graciela Carrillo, AIA, LEED AP B+C Originally from Colombia, Graciela immigrated to the United States in 2003. Recently, she joined Nassau BOCES Facilities Services as a senior manager where she is managing school’s operational and capital projects. Graciela has been involved with AIA at the local, state, and national levels, currently serving as the state president and is the chapter’s Women in Architecture co-founder and co-chair. Graciela is also the co-founder of the Immigrant Architects Coalition, a group committed to helping and providing resources for immigrant architects to achieve a prosperous career in the US. Of particular interest is providing a voice for immigrant professionals established in the US and encouraging and supporting them in their path towards licensure and professional development. Last year, Graciela founded the Powerful Speeches platform to champion women architects, to promote, advance, and elevate women in our profession.

Damaris Hollingsworth, AIA, NOMA, is a TEDx speaker, inclusive architectural thought leader, and founder and principal architect at Design By Melo. Damaris creates sustainable places and spaces that remain relevant through the shifts of demographics and economics.

Tu-Anh Bui Johnson, Assoc. AIA, has a strong background in housing and healthcare design. Her passion is to advocate for sustainable and dignified environments for all. Tu-Anh’s design sensibility derives from an inclusive approach with stakeholders to create an environment that helps to fulfill clients’ strategic goals and missions. In 2011, Tu-Anh received the AIA National Associate Award. She has been a member of the Society for the Advancement of Gerontological Environments (SAGE) since 2013 and served as a design jury member for the Environments for Aging publication in 2014, 2015, and 2020 Design Showcase.

Karen Lu, AIA, NOMA, is a senior associate at Snow Krelich Architects in Minneapolis. Karen’s commitment to design excellence and to positively impacting future generations of architecture professionals and global citizens is evident in her professional work and service to AIA and her community. She has led and collaborated on projects that have won National AIA Honor Awards, AIA/COTE Top Ten Green Project Awards, AIA Minnesota Honor Awards, and Progressive Architecture Awards. Karen has been recognized for her leadership both locally and nationally with the AIA Minnesota and National AIA Young Architect Awards. Currently, Karen serves as the AIA Minnesota immediate past president and a board adviser to MSP NOMA.

Anna Pravinata, AIA, NOMA, has dedicated much of her professional career to designing leading-edge research facilities for both corporate and academic institutions. Her passion stems from her deep admiration for researchers whose work foster discoveries to tackle today’s challenges, from cancer and heart disease research to leading-edge robotics. Anna utilizes her strengths in comprehensive planning, client communication, and design and construction team management to translate clients’ needs into exceptional research environments. As part of AIA Minnesota Board of Directors, Anna advocates for inclusive culture in the architectural profession.

Taylor Smirkárova (née Cooper) Prior to joining the Redesign team, Taylor worked in mixed-use development at The Excelsior Group, in both commercial real estate and architecture at THOR Companies, and office renovations at RSP Architects. She also worked in residential architecture at Nelson Architects in Washington DC, commercial mortgages at Capital One, and assisted homeowners during the Home Affordable Refinance Program (HARP) after the 2008 crisis while at Domer Law & Title Services in Boston. Her passion is real estate development that not only satiates investors, but truly uplifts end users from all walks of life. She values the full urban experience and gets excited about large and difficult mixed-use developments that feature mixed income housing. Taylor holds a bachelor of science in architecture from Northeastern University and a Master of Real Estate Development from the University of Maryland.

D2-25.

Toward a Mass Timber Agenda: House in A Garden

What has the first cross laminated timber structure in Miami-Dade County revealed about mass timber building within the United States and the evolving global industry? Toward a mass timber agenda recounts the process of building the first mass timber structure in Miami-Dade County through the lens of policy, system integration, material ecologies and design. The project, “House in a Garden,” at its core is an exercise in education through innovation. Outwardly, the streamlined process of building with cross laminated timber (CLT) through off-site digital prefabrication exploits industry knowledge and reduces on-site unskilled labor; in reality, CLT building required teaching everyone associated with the project something—everyone innovated within their trade—including at the policy level. The presentation will focus on the important predesign questions to explore with manufacturers, the logistics of CLT in urban environments at the scale of residential structures, and the integration of environmental systems.

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D2-25. (continued)

Christopher Meyer, AIA, is a principal at Atelier Mey, a design practice interested in confronting the realities of the built environment. The work of Atelier Mey strives to be conscious and generative. Architectural explorations are informed by cultural and environmental narratives and driven by a collaborative design process. A tireless search for the embedded logics of material and place connects our building to the people and environments they emerge from. Ambitiously, our design process endeavors to balance an intellectual pursuit of architecture with the practicality in building assemblies, tectonics and making. Co-founded by Christopher and Shawna Meyer, Atelier Mey is grounded in Miami and operates from the ambitions of our passionate clients.

10:00 a.m. - 10:30 a.m.

D2-26.
Virtual Exhibit Hall

Check out the latest information on products and services and make contact for more information. When you click on a virtual Exhibit Hall booth, you will find new product information, product photos, product videos, and contact information. Each exhibitor will be reachable with an email link for more information or to set an appointment. Visit as many booths as possible for a chance to win a MN State Parks Pass and an e-bike!

Go to page 50 to preview the Virtual Exhibit Hall layout.

10:30 a.m. - 11:45 a.m.

D2-27.
Minnesota Amendments in the 2020 MN Accessibility Code

This course will highlight some of the significant Minnesota Amendments in the 2020 Minnesota Accessibility Code including:

- changes between the 2015 and 2020 Minnesota Accessibility Rule 1341;
- the Minnesota modifications to the 2018 IBC Accessibility requirements;
- reasons for the changes; and
- where to find the changes within the code sections.

Karen Gridley is an accessibility specialist with the Minnesota Department of Labor & Industry, in the Construction Codes Plan Review unit. She has degree from the University of Minnesota and 25 years of work experience implementing accessibility codes, including both state and federal accessibility regulations. She holds several Accessibility Specialist certifications and has worked in multiple areas of the industry including an architecture firm, in the corporate environment as an owner’s representative for accessible design, construction, and litigation services, as well as working in code enforcement agencies, and as a member on national and local rulemaking committees.

D2-28.
Honor Award Jurors Show Their Work

Featured in this session are the three nationally recognized architects on this year’s AIA Minnesota Honor Awards jury. Each will speak of their practice and unique projects through a presentation of their work.

Mark Lee is the chair of the Department of Architecture at the Harvard Graduate School of Design and a principal and founding partner of the Los Angeles–based architecture firm Johnston Marklee. Since its establishment in 1998, Johnston Marklee has been recognized internationally with over 50 major honors and awards. The firm’s work spans 13 countries and resides in the permanent collections of several museums. Recent projects include the Menil Drawing Institute in Houston, Texas; a renovation of the Museum of Contemporary Art Chicago; the design of the new Dropbox global headquarters in San Francisco, California; and the new UCLA Graduate Art Studios campus in Culver City, California. Together with partner Sharon Johnston, FAIA, Lee served as co-artistic director for the 2017 Chicago Architecture Biennial.

Curtis J. Moody, FAIA, established his firm in Columbus, Ohio, in 1982 on a foundation of diversity of thought. In the years since, Moody has continuously challenged the status quo and created a corporate environment at Moody Nolan that is both inclusive and equitable. With more than 230 employees in 11 offices across the U.S., Moody Nolan is now the largest African American architecture firm in the country. The firm has won over 330 awards, including 49 from the American Institute of Architects (AIA) and 45 from the National Organization of Minority Architects (NOMA). In 1992, Moody received the AIA’s prestigious Whitney M. Young Jr. Award, named after the civil rights leader who challenged the profession to pursue progressive values in architecture. In 2021, Moody Nolan became the first African American–owned firm to win the AIA Firm Award.

Jane Weinzapfel, FAIA, is principal at Leers Weinzapfel Associates, the Boston firm she co-founded with Andrea Leers, FAIA. Past recipient of the Boston Society of Architects Award of Honor, Weinzapfel is a design leader in academic facilities and campus design in general, with a special expertise in award-winning infrastructure and transportation design. Dedicated to the craft and technology of design, she has led many of the firm’s investigations of new materials and systems. Weinzapfel has been a visiting faculty member at MIT’s School of Architecture and Planning and at the University of Arizona College of Architecture and Landscape Architecture. She has served on the Mayor’s Boston Transportation Advisory Committee, the Mayor’s Government Center Plaza Task Force, and the Massachusetts Executive Office of Community Development Designer Selection Board.
NYC Decarbonization Planning Over Future Decades: A Case Study

New York City passed Local Law 97 (LL97) in 2019 which established a mandate to reduce carbon emissions from City government operations 40% by 2025 and 50% by 2030. The NYC Department of Energy Management (DEM) serves as the hub of energy management for City government operations, including over 4,000 municipal buildings. DEM hired Willdan in 2020 to develop an Implementation Action Plan (IAP) to achieve the LL97 decarbonization mandates. Willdan leveraged its building energy modeling and building engineering capabilities to perform a bottom-up assessment of the emission reduction opportunities available to NYC buildings. Willdan then fed this analysis into a top-down multi-sector Pathways model, to develop an IAP that achieves decarbonization goals through the most cost-effective expenditure of resources.

This work has relevance to owners, their advisors, and designers in Minnesota and the Upper Midwest as Minnesota cities are implementing climate targets and associated plans. The cities of St. Paul and Minneapolis have both implemented emissions reduction targets and have created compliance plans. In addition, addressing peak winter demands in the region will have a significant impact on emissions reductions. More granular work will be required to move toward the goals, and New York City’s experience can teach us much about how to do so effectively.

Rich Peske, AIA, joined Willdan in 2015 and works out of the Minnetonka office. Rich provides building energy design leadership through efficiency programs in seven states and has been instrumental in connecting local Willdan projects to the advancing SB 2030 standards using cost-effective measures. Rich led the data analysis team at Willdan for the NYC DCAS Implementation Action Plan to help Willdan develop prototype models for each City agency tuned to their existing performance. Prior to joining Willdan, Rich holds a Master of Architecture from the University of Minnesota and is a frequent presenter on topics related to energy efficiency and energy analysis at AIA and other industry events, as well as directly to design firms.

McKenzie (Kenzie) Schwartz is a Senior Consultant at E3, a Willdan subsidiary. She joined the company in 2020 and works out of the New York City office. At E3, Kenzie helps clients plan for a low-carbon future. Her work focuses on building electrification and the future of utilities. Prior to joining Willdan, Kenzie worked for National Grid in New York where her primary focus was developing policies and programs tailored to decarbonizing the heating sector. Kenzie has a Master of Public Administration in Environmental Science and Policy from Columbia’s School of International and Public Affairs.

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Several concurrent mega-trends are driving significant change for individuals, groups, and organizations. Many organizations are experiencing challenges rapidly adapting and responding to these unprecedented changes. The frontier of sustainability is exploring the connections between the built environment and individual health, wellness, and resilience. This session will present information from several experts combined in a way that yields unique insights and addresses health benefits such as improved cognitive functions, physical and emotional health, and improved mood. Everything from eye health to how well we perform is affected.

**Dr. Jerica Berge** is a Professor and Vice Chair for Research in the Department of Family Medicine and Community Health at the UMN Medical School. Dr. Berge is both a researcher and behavioral medicine clinician. She is a licensed mental health therapist and supervisor who specializes in integrated care and community-based partnerships to address family health issues. She is also the director of the Healthy Eating and Activity across the Lifespan (HEAL) Center and the Principal Investigator of the Building Interdisciplinary Research Careers in Women’s Health (BIRCWH) K-12 grant. Additionally, she is the director of the Center for Women in Medicine and Science (CWIMS) at the UMN Medical School.

**Jeffrey Chipman, MD.** is a professor and chief in the Division of Critical Care/Acute Care Surgery, Department of Surgery, at the UMN Medical School. He is also a general surgeon and surgical intensivist.

**Stanton Stafford** is a mechanical engineer, principal, and US east business development lead with Integral Group. Recognized as a green building and sustainability leader, Stanton brings 20 years of experience designing, modeling, and commissioning mechanical systems for a variety of building types. With a goal of maximizing the potential of every building, Stanton’s passion is working with clients from ideas to implementation to impact to drive value through high performance design and operations solutions. Nationally, Stanton is helping promote healthy, resilient, low-energy, low-water use buildings as the Chair of ASHRAE Technical Committee 2.8 – Building Environmental Impacts and Sustainability and Secretary of ASHRAE Standard 228P – Standard Method of Evaluating Zero Net Energy Building Performance.

**Patrick Thibaudeau, Assoc. AIA, LEED Fellow, ILFI,** is a research partner with UC Berkley Center for the Built Environment and was an original member of the national Large Firm Roundtable group that introduced the AIA commitment for carbon neutral design by 2030. Most recently he led a working group that produced the “Playbook for Sustainability Action” and is working on the rewrite of the AIA Framework for Design Excellence. He has led efforts that resulted in hundreds of projects achieving net-zero energy, third-party certifications such as LEED Platinum and Living Building Challenge, met or exceeded the 2030 targets and has pioneered sweeping adoption of the AIA Framework for Design Excellence high performance level for every project at JLG Architects.

**D2-31.**

**Keys to a Net-Zero Energy Home**  
Sponsored by [Energy Panel Structures](#)  
**1.25 LUs | HSW** | **Experience Level: Intermediate**

For high-performance, net-zero energy homes, it is critical to get the building enclosure and mechanical systems right. While renewable energy can be added or acquired later, it is not as easy to change the overall efficiency of the building enclosure or HVAC system. In the design phase it is critical to identify cost-effective approaches to get the loads low and efficiencies high. This session will explore specific design and technologies strategies for a single family (detached or attached) net-zero energy home today. It all comes down to systems optimization — not spending too much in one area or too little in another — with the goal of keeping the cost of a renewable energy system more accessible and affordable today or in the future.

**Pat Huelman** is an associate professor in energy and building systems with the UMN Department of Bioproducts and Biosystems Engineering and serves as coordinator of the Cold Climate Housing Program. He is a lead faculty member for the Building Science and Technology undergraduate degree program. Currently, Pat is the Project Lead for NorthernSTAR, one of the Department of Energy’s Building America Teams. Pat’s long-term focus has been on heat, air, and moisture movement in buildings and his primary expertise is in building systems and technologies for high performance homes. With more than 35 years in the field, Pat brings extensive experience and expertise in energy-efficient design and construction, innovative building systems, mechanical ventilation, and indoor air quality.

**11:45 a.m.–12:30 p.m.**

Lunch Break
D2-32.  
**Keynote Address: Community as Corporation — Talent-Retention in Low-Status America**  
Sponsored by Metro Brick Inc.  
[1.5 LUs] Experience Level: Entry

This program is free and available without conference registration. To register for this session only, visit [https://www.aia-mn.org/misc-event/community-as-corporation/](https://www.aia-mn.org/misc-event/community-as-corporation/).

This keynote address is the final event of the inaugural lecture series, Conversations in Equity and Design, presented jointly by Dunwoody College of Technology, the Walker Art Center, and MSP NOMA with AIA Minnesota. The focus of the series is to address questions of ethics, equity, justice, and culture in relation to design practices and education.

The lecture will feature Majora Carter in conversation with Aarón Regla Bretón, AIA, NOMA, president of MSP NOMA.

Billions of dollars go into education, training, health, and other support for low-status communities in America, yet economic stagnation persists — at times interrupted only by displacement as a result of population increases from re-urbanization and infrastructure improvements such as transit, parks, and traffic calming measures. For those minority families who defied the odds and were able to purchase properties during the era of White-flight, many are liquidating too early and too cheap, at a time when they could be experiencing unprecedented wealth generation. Why is this happening? What is being done to thwart this trend? What are the long-term consequences of not acting to use this economic tide change to benefit municipalities and all levels of government obligations? What is the cost of doing nothing?

Majora Carter is a real estate developer, urban revitalization strategy consultant, MacArthur Fellow and Peabody Award winning broadcaster. She is responsible for the creation and successful implementation of numerous economic developments, technology & green-infrastructure projects, policies and job training & placement systems. Carter applies her corporate consulting practice focused on talent-retention to reducing Brain Drain in American low-status communities. She has firsthand experience pioneering sustainable economic development in one of America’s most storied low-status communities: the South Bronx.

She and her teams develop vision, strategies and the type of development that transforms low-status communities into thriving mixed-use local economies. Her approach harnesses capital flows resulting from American re-urbanization to help increase wealth building opportunities across demographics left out of all historic financial tide changes. Majora’s work produces long term fiscal benefits for governments, residents, and private real estate developments throughout North America.

D2-33.  
**Virtual Exhibit Hall**  
Check out the latest information on products and services and make contact for more information. When you click on a virtual Exhibit Hall booth, you will find new product information, product photos, product videos, and contact information. Each exhibitor will be reachable with an email link for more information or to set an appointment. Visit as many booths as possible for a chance to win a MN State Parks Pass and an e-bike!  
[Go to page 50](#) to preview the Virtual Exhibit Hall layout.

D2-34.  
**Energy Code Compliance: Paths and Case Studies**  
[1.0 LU] [HSW] Experience Level: Intermediate

This program will walk participants through the subtleties and the pros and cons of the different energy code compliance paths built into the current Minnesota Energy Code. The program will provide design teams with a structure and resources to determine which path best serves their clients. Two case studies will be presented to demonstrate the process.

**Majora Carter**  
Majora is quoted on the walls of the Smithsonian Museum of African-American History and Culture in DC.

“Nobody should have to move out of their neighborhood to live in a better one.”
D2-34. (continued)
Kevin is determined to continue learning the unique challenges that face building system design with a mission to reduce resources, improve efficiency, and find solutions to satisfy all parties involved in the design and operation processes. Kevin is a graduate of North Dakota State University with a Bachelor of Science in mechanical engineering. He is currently a registered Professional Engineer in Minnesota.

D2-35. Constructing Architectural Ecologies

This presentation will discuss the work of the Architectural Ecologies Lab, a research group at California College of the Arts in San Francisco. Lab director Adam Marcus will present several projects that explore the ways in which collaborations between architects, scientists, and manufacturers can develop innovative approaches to ecological challenges such as sea level rise and habitat restoration. These include the Buoyant Ecologies Float Lab, a prototype for an ecologically productive floating architecture deployed in San Francisco Bay, and Public Sediment for Alameda Creek, a master plan developed with a collaborative team for the Resilient by Design Bay Area Challenge. The work focuses on the design and fabrication of ecologically optimized material substrates that benefit multiple species at multiple scales.

Adam Marcus directs Variable Projects, an architecture and design studio in Oakland, California, and he is also a partner in Futures North, a Twin Cities-based public art collaborative dedicated to exploring the aesthetics of data. Adam is associate professor of architecture at California College of the Arts in San Francisco, where he co-directs the Architectural Ecologies Lab, a platform for collaborative and experimental research integrating design, science, and advanced manufacturing. His work is notable for its innovative blend of design computation, digital fabrication, and ecological engagement.

D2-36. Top 10 Ways to Reduce Concrete’s Carbon Footprint

This program is being presented by the Minnesota Concrete Council and the National Ready Mixed Concrete Association.

Concrete is unique among building materials. Its formulation is highly influenced by its application. Concrete can be made stronger, lighter, more flowable, stiffer, less permeable, and even weaker depending on performance needs. No other building material is that versatile. Design professionals have a greater influence on concrete formulation than they do with other building products. This presentation will discuss how design and construction teams can implement ten simple strategies to reduce concrete’s carbon footprint today. In addition, the strategies are meant to achieve a lower carbon footprint without impacting other desired performance capabilities for the concrete.

Donn C. Thompson, AIA, LEED AP BD+C, is the senior director, building innovations for the National Ready Mixed Concrete Association. He supports the Build with Strength program, demonstrating the first cost and long-term advantages of ready mixed concrete building systems throughout eight Midwest states including Minnesota. A licensed architect and LEED accredited professional, Donn has over 20 years of practical experience in design and construction. More recently he has worked for over 23 years in the cement and concrete industry holding a variety of technical, promotion, and sales positions. Donn holds a bachelor’s and master’s degree in architecture from the University of Illinois, Chicago.

John Lee, PE, LEED AP, is the director of business development for Cemstone. John works with owners, specifiers, contractors, and municipalities in further establishing Cemstone as the leader in supplying construction material related products. John’s efforts are focused on the development and design phase of a project where he promotes the use of concrete as well as Cemstone’s numerous products and services. John has been working in the Twin Cities construction industry for over 25 years. He attended the University of Minnesota, where he received a bachelor’s degree in civil engineering in 1992.

D2-37. Building Bridges to Design and STEAM Careers for BIPOC Youth in Minnesota

The Building Bridges to Design Careers program engages K-12 participants in creative problem solving and making exercises focused on cultural expressions in design through panels, workshops and summer camps. The interdisciplinary online program, delivered in summer 2020, focused on the intersection between design and mathematics. Through extensive collaboration with university researchers, community and school partners, the collaborative co-designed and created the Building Bridges to Design and STEAM Careers programs. It piloted the online and culturally-responsive pedagogy that utilizes design, geometry, algebra, and 3D modeling to support learning for K-12 students. The program uses an inclusive and culturally sensitive lens from Black, Hmong, Somali, and Vietnamese rich ethnic minority communities to teach educational content and promote access and career options in communities that have experienced educational disparities in Minnesota.

Research findings highlight that participants were engaged and learned about design and STEAM fields. As the United States Bureau of Labor Statistics documents that only 3.4% of employees in design services are Black or African American, 7.7% are Asian American and 13.1% are Hispanic or Latino,
D2-34. (continued)

programs like this can provide pathways to bridge the educational and professional disparities gap. This session shares program highlights and key learnings.

Dr. Abimbola Asojo, AIA, IES, NCIDO, IDEC, is the associate dean for research, creative scholarship and engagement and a professor in the College of Design at the University of Minnesota. Her teaching areas are architectural lighting design; design and human factors; computing and design; corporate design; and commercial design. Her research areas are cross-cultural design, architectural lighting design, African architecture, computing and design, globalization and design, sustainable design, post-occupancy evaluation and K-12 spaces. Her work has been widely published in international journals and books. In 2020, she received the University of Minnesota Outstanding Community Service Faculty Award, the highest honor the University of Minnesota gives to a faculty member for service to the community.

Dr. Lesa Clarkson is a professor of math education at the STEM learning center at the UMN College of Education and Human Development. Clarkson’s research focuses on mathematics in the urban classroom, specifically identifying successful strategies that increase student achievement primarily among underrepresented student groups. Her research examines best practices that will provide all students with engaging mathematics experiences in addition to the basic tools that are essential for students to use in the actual engagement phase. She runs the Prepare2Nspire math program for middle and high school underrepresented students at UROC in North Minneapolis.

Dr. Hoa Vo is an assistant professor in interior design at the Welch School of Art and Design. Her research focuses on adaptive technologies in teaching, accessibility, equity, and intersectional collaborations in design, creativity and feedback practices in design, and physical experiences in the built environment. She has published and co-authored in Academic Exchange Quarterly, the International Journal of Designs for Learning, and Design: Thinking and Making at a Community-Engaged University (The UMN College of Design Anniversary Compendium), and multiple peer-reviewed conference proceedings. Her teaching and professional experience started in 2011 and currently focuses on residential and commercial projects. She is a member of the Interior Design Educators Council, the Illuminating Engineering Society, and the Association for Computing Machinery.

D2-38.

Rotting Roofs: Causes, Mitigation, and Code Requirements

Sponsored by H. Robert Anderson & Associates, Inc.

1.0 LU | HSW | Experience Level: Intermediate

Recently investigated roofs on three multifamily residential buildings located in northern climates uncovered premature failure caused by moisture infiltration. Investigations, including the use of hygrothermal modeling, into the causation of the failure of all three roof assemblies clearly demonstrated the well-intended cost saving measure to insulate within the truss space resulted in moisture infiltration, which led to the premature roof failure, requiring expensive repairs including complete replacement of the roof covering and roof deck, along with repairs to the structural trusses, and installation of new insulation.

The current design of some wood-framed nonventilated roof assemblies in northern climates results in discontinuities in the vapor/air barriers which allows moisture-laden air to migrate into the truss space and condense. This results in excessive moisture, leading to extensive problems early in the roof’s service life, including mold, rot, and structural issues. Designs allowing for a continuous vapor/air barrier from the wall to the roof should be utilized in roof assemblies of this sort in northern climates to avoid potentially dangerous and very costly failures. This presentation provides an interesting story of this real-world case study detailing the initial discovery of the problem, the investigation, and designed solutions.

Michael Remington, PE, has been employed as a civil engineer with Inspec since 1988, serving as project engineer on hundreds of pavement and athletic facility assignments nationwide. He is responsible for field evaluations, data collection, supervision of project plans and specifications, construction administration services, project material submittal review and approval, construction observation, and quality control testing. He has served as an expert witness in several legal cases for pavement-related issues and frequently gives technical presentations for trade associations and at university venues. Michael has also served as lead engineer on over one hundred exterior wall evaluation and design projects.

D2-39.

Networking Social

Sponsored by SagePresence

SagePresence will share tips for having a productive networking conversation, then allow participants to practice using the tips in rounds of breakout room conversations.
8:00 a.m. - 8:15 a.m.

D3-40.
Welcome and Convening Remarks

8:00 a.m. - 10:00 a.m.

D3-41. NOTE TWO HOUR SESSION LENGTH.
Ethical Leadership for Today’s Complex Business Environment

2.0 LUs | Ethics | Experience Level: Intermediate

To say that today’s business and employment environments are complex is a vast understatement. Leaders are facing situations and making decisions related to discrimination, harassment, health and safety, diversity, equity, business and personal confidentiality, individual responsibility, skyrocketing prices, competitive challenges and so much more! So how do we make decisions that are fair, ethical, and good for the business? This workshop offers a perspective that ethical leadership guides good decision-making and leads to a more fair, positive, and engaging workplace, which gives you competitive advantage.

Debby Magnuson, MA, CPCC, is an executive coach and leadership consultant with more than 25 years of experience working with clients to accelerate individual and team development. She is co-author of the books, Work with Me: A New Lens on the Multigenerational Workforce and The ReFirement Workbook. She has served on the faculty of AIA Minnesota’s Leadership Forum since 2010, teaching topics including managing generational differences, courageous conversations, and creating motivation and engagement in today’s complex workplace. She taught business and professional ethics and strategic communications at the graduate level at St. Catherine University in St. Paul. Debby holds a Master’s degree in counseling psychology from St. Thomas University and she is an ICF-accredited Certified Professional Coach.
Architects have been trained in a specialized profession and we share similar educational and work experiences. But our value to our clients and communities increases as we learn to generalize beyond the profession, adding new, outside ideas to our mental frameworks and to our practice. Whether an idea comes from one of the allied professions like planning or landscape architecture, or from seemingly unrelated disciplines from cell biology to music and astrophysics, we have all had the experience of coming across an idea that has nothing to do with the discipline of the architecture and yet somehow helps us think differently—and more broadly—about how to do our day-to-day work better.

In his book Range: Why Generalists Thrive in Specialized World, Richard Epstein argues that many of the most accomplished people are those who branch out and try different things over the course of their lives and careers, rather than specializing in just one thing. This program will focus on how architects, as “reflective practitioners,” can combine our education and experience with big ideas from other fields to expand our range, become better generalists, grow personally and professionally, have more fun, and create better projects for our communities.

Jonathan Bartling, AIA, is the director of HGA’s Digital Practice Group, a multidisciplinary studio focused on using technology to better understand people, design, and the future of the built environment. He leads a team structured around computation, visualization, Building Information Modeling (BIM), and fabrication. He and his team have received national recognition for their work including an award featured in Architect Magazine for the “Empathy Effect,” which used virtual reality to foster empathetic design. A frequent lecturer, Jonathan has shared his expertise at numerous symposiums and conferences across the country including the Monterey Design Conference, Autodesk University, EDRA, Advancing Computation Building Design, BIM Futures Symposium, and more. Jonathan believes innovative solutions are organized around people, design, and technology.

Peter Hendee Brown, AIA, is an architect, planner, and development consultant. His focus is public-private, urban public realm projects, and since 2010 he has consulted to the City of Minneapolis on the US Bank Stadium, the Downtown East Commons, Nicollet Mall, Hennepin Avenue, the City Public Service Building, and Peavey Plaza. Peter is affiliated faculty at the UMN Humphrey School of Public Affairs, where he teaches courses in private sector development and planning and design for the urban public realm. He is the author of How Real Estate Developers Think: Design, Profits, and Community, and since 2010 he has shared his expertise at numerous symposiums and conferences across the country including the Monterey Design Conference, Autodesk University, EDRA, Advancing Computation Building Design, BIM Futures Symposium, and more. Peter believes innovative solutions are organized around people, design, and technology.

Nathan Johnson, AIA, NOMA, is an innovator. He leverages his exceptional thinking to devise design solutions that are empathetic to community needs, creatively applied to the built form, and technically executed with precision. An elite-level architect, Nathan’s professional knowledge offers fresh perspective with unparalleled thoughtfulness. Nathan is a registered architect in the state of Minnesota with a Bachelor of Architecture degree from Cornell University in Ithaca, NY. Currently, Nathan teaches Architectural Technology at Minneapolis Community and Technical College and is a LEED-Accredited Professional. He is a recipient of the AIA MN 2009 Young Architect Award, a 2021 Bush Fellowship, and in 2018, Nathan was the first African American to serve as AIA Minnesota President.

Kim Loken, AIA, has industry experience that spans civic, commercial, and residential projects. Her approach to each is further informed by a storytelling mindset cultivated in scenic design work for film and theater. As an associate at Beyer Blinder Belle Architects and Planners, she helmed a variety of adaptive reuse, historic preservation and new construction projects in New York City and led the exhibit design for the Red Star Line Museum in Antwerp, Belgium. Teaching invigorates her practice and provides the opportunity to mentor young designers in a variety of disciplines. Kim’s teaching, research, and professional interests include design thinking, interdisciplinary design, large-scale collaborative projects, phenomenology, narrative-driven design, place-making, critical regionalism, cultural history, and adaptive re-use.

Alissa Luepke Pier, AIA, is a national award-winning architect and is the former vice president of the Minneapolis Planning Commission, where she decided on over 5,500 land use applications and weighed in on key urban planning policy for over a decade. She is frequently a guest speaker at events related to housing, land use policy, architecture and sustainability. A 20+ year resident of North Minneapolis, she is particularly interested in the impacts and repercussions that planning policy and design can have on communities such as hers. She is principal at A.D.L. Pier Design, Inc., an architecture firm specializing in residential design, urban design, community engagement, artistic incorporation, and small commercial design.

In most every building, there is a large room for error afforded to most building trades in terms of construction tolerances. Façade trades, however, require much, much tighter tolerances in their fabrication and installation. No matter how small, tall, geometrically violent, or straightforward your building, the joints that marry the façade to the rest of the construction, and their varying tolerances, can be problematic.

Fortunately, various technologies continue to emerge that can be leveraged toward solving such issues in design, fabrication, and installation. Moreover, processes and other project controls and delivery methods are evolving to further bridge these gaps between trades and their design counterparts. Through the lenses of multiple case studies, our expert panelists will discuss real-world problems, processes, and solutions specific to this pertinent topic.

CONTINUED ON NEXT PAGE >
**D3-43. (continued)**

**Will Babbington, AIA.** is a principal and the facade design director at Studio NYL Structural Engineers and Enclosure Designers. He is the current national chair for the Building Enclosure Council and sits on the special advisory council for the Facade Tectonics Institute. He is also a representative for AIA on the ASHRAE 90.1 envelope subcommittee and a contributor on the AIA Building Performance Definitions Project. Will is also on the ASTM Committee E06 on Performance of Buildings and is a developer and trainer for ASTM’s and NIBS’ new Building Enclosure Commissioning (BECx) certificate program.

**Ryan Rademacher, AIA.** currently serves as the director of business development at MG McGrath and has over 20 years of experience in the architecture, design, and construction industry. He brings previous knowledge and experience of executing work from the planning and programming phases all the way through to final construction and project closeout. Ryan is a licensed architect and has a Bachelor’s degree in architecture from the University of Minnesota, as well as a Master of Architecture Degree from Parsons School of Design. Ryan specializes in complex and high-performance façade designs, digital fabrication, sustainability, project management, project estimating, and strategic operations planning. In addition, he is responsible for the daily management, supervision, coordination, and successful completion of the pre-construction phase of the projects to meet the design and cost objectives.

**Jaydon Serbousek** is the design department Manager of Permasteelisa North America. He graduated from Iowa State University in 2001 and has spent his entire post-graduate career with Permasteelisa. Jaydon has held several different positions from structural engineer, site engineer, project manager, project director, and most recently design department manager. He has worked on many iconic, complex projects during his career both in design and project management. In his current role, he is focusing on how to make design more efficient, using better management practices and new technology.

**D3-44.**

**Planning for Resilience in a Climate-Changed World**

Sponsored by [Kraus-Anderson Insurance](#)

1.5 LUs | |  | GBCI | Experience Level: Advanced

The world is focused on COVID-19 right now, but the pandemic is just a dress rehearsal for a world where chaos reigns: the climate is warmer, weather events are more extreme, and infrastructure fails to perform as expected. If COVID-19 upended the economy and society, what will it be like when the world is 1.5 to 2°C warmer? Thanks to research conducted by NOAA and other US agencies, we know the answers.

This presentation demonstrates a five-step process that design firms can use to mitigate climate change risks, both physical and from a professional liability perspective. The buildings designed and constructed in the next five years will still be around when the number of cooling degree days has increased substantially. If professional firms don’t design for this new normal, our buildings and cities will literally cook occupants, just like the frog in a pot of water that’s steadily getting hotter.

**Andrée Iffrig, ISSP-CSP, LEED AP BD+C, CC-P.** is a green building and sustainability professional with more than a decade of experience who brings a diverse skillset to climate change-related project work. Trained as an architect, she works as a senior sustainability strategist at DIALOG, advising clients on sustainable building design. She is the Chair of the firm’s national Green Practice Roundtable and a champion for DIALOG’s commitment to reducing climate change impacts from its projects and operations. Andrée is a Certified Climate Change Professional (CC-P) with the Association of Climate Change Officers. Her framework for integrating climate change impacts into early-stage design was released in 2020 at The Buildings Change Show and is also a course offered through the Royal Architectural Institute of Canada.

**D3-45.**

**Virtual Exhibit Hall**

Visit the vendors and see get up to speed on new products and services. When you click on a virtual Exhibit Hall booth, you will find new product information, product photos, product videos, and contact information. Each exhibitor will be reachable with an email link for more information or to set an appointment. Visit as many booths as possible for a chance to win a MN State Parks Pass and an e-bike!

**Go to page 50** to preview the Virtual Exhibit Hall layout.

**D3-46.**

**Establishing a Culture of Risk Management**

Sponsored by [Kraus-Anderson Insurance](#)

1.25 LUs | Experience Level: Advanced

Over time, the role of the architect has conformed around parts of the process that entail less risk, and we have lost the role of master builder. What more could be taken out of our field of expertise and practice without a change in how we see risk? This session will take the stigma out of the word “risk” and prepare participants to embrace a culture of risk management that involves the entire team, including the owner and end user. Real-world examples will demonstrate strategies to understand and manage risk in all stages of the design and construction process.

CONTINUED ON NEXT PAGE >
WEDNESDAY, NOVEMBER 10

10:30 a.m. – 11:45 a.m.

D3-46. (continued)

In the end, participants will be equipped to improve the levels of success on your projects and in your relationships through a culture of risk management on your projects and in your firm.

Dillon Donovan serves as a client advocate for the Willis Towers Watson Architects and Engineers team, Willis A&E. As a specialty broker exclusively dedicated to the A&E industry, Dillon has developed considerable expertise in all aspects of A&E property and casualty insurance broking, underwriting, and consulting, including risk management support and education for clients in educating their staff to mitigate their A&E risk and avoid costly client disputes.

Mark Kalar, AIA, is general counsel at Cuningham, where he is responsible for contracts, risk and claims management, and licensing. He also serves as co-chair of the AIA Minnesota Government Affairs Committee and is a member of the AIA National Risk Management Committee. Mark frequently speaks and writes on ethics, public policy, risk management, and other topics related to the intersection of law and the built environment.

Ivan Swenson is a construction consultant with 30 years of experience in general contracting, multiple building types, and risk management. Has built a successful perspective of managing risk from the architect of record and end user point of views. He strives to build a level of collaborative coordination for owners, developers, and design teams. Ivan is always working toward a set of coordinated construction documents that accurately depict what will and can be built to the budgets set by all. His construction background brings a set of eyes to the field during construction through completion, helping identify issues and finding strategies to avoid future problems.

Nicole Washburn, AIA, is a principal and the director of operations for JLG Architects, with a focus in project management, project delivery, workforce management and risk/claims management. Intentionally charting a career course as a generalist, Nicole has worked in most roles within the design continuum including construction administrator, project manager, and principal practice studio leader. Her passion for a well-managed design process has guided her along this path into her current role, which includes a daily focus on strategies to set and keep a project on a course for success.

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D3-47.
A Guide to Landscape Lighting

Emily Lorenz, PE. is an independent consultant in the areas of LCA, EPDs, PCRs, green building, and sustainability. She serves as an engineer in the areas of green structures and practices, energy efficiency, thermal properties, and moisture mitigation. Lorenz also specializes in building code and standards work and advocacy. Lorenz actively participates as chair of the ASTM International Committee E60 on Sustainability, as a subcommittee member of the American Concrete Institute’s building code committee (sustainability), as an expert to ISO TC59/SC17/WG3 Environmental Declarations of Products, and as a consultant to the Envelope Subcommittee of ASHRAE 90.1.

D3-48.
Implementing Embodied Carbon Reduction Requirements: When, Where, Why, and How

Paul Whitaker, AIA, principal, Schuler Shook, has a broad range of experience in architectural lighting, theatre planning and theatrical lighting design for theatre, opera, and dance. Paul continues to work as a theatrical lighting designer off-broadway, regionally, and internationally. Paul has taught theatrical design at Amherst College and the California State Polytechnic Institute, Pomona. With extensive experience as both a theatrical designer and educator, Paul brings a variety of knowledge and skill to the planning and design of performance spaces and theatrical systems. His work in the theatre as well as his work on LEED projects gives him a unique ability to provide lighting design that is both dramatic and sustainable.

CONTINUED ON NEXT PAGE >
Project Team Perspectives on LBC Petal Certification

Sponsored by Emanuelson-Podas, Inc.
[1.25 LUs] Experience Level: Entry

Members of the project team from MSR Design’s new Living Building Challenge (LBC) Petal Certified studio in downtown Minneapolis share their perspectives from working on the project to achieve the Materials Petal. Recapping this popular presentation from the spring 2021 Materials Matter series, the panel includes team members from client and architect MSR Design, general contractor Stahl Construction, and subcontractor Ben Franklin Electric. We will discuss the concepts of LBC and team education; the complexities of the Materials Petal and dividing up work scopes; creating and working with a limited palette of materials; searching for salvaged materials to incorporate into our new space; and thinking outside the box and creating partnerships. We’ll discuss our approach to the Materials Petal Imperatives including red list, embodied carbon, responsible industry, living economy sourcing, and net positive waste, including details such as sourcing lighting and electrical components to meet red list free requirements, the use of salvaged marble, and the complexities of Materials Petal LBC documentation, in and amongst stories about how working on an LBC project inspired and transformed each of the team members.

**Daniel Handeen, Assoc. AIA, LEED AP**, is a research fellow at the Center for Sustainable Building Research (CSBR) who focuses on facilitating, researching, and communicating healthy, durable, just, and environmentally sensitive building methods to professionals and lay people. He works with Greater Minnesota communities to engage stakeholders and facilitate design assistance through CSBR’s Design for Community Resilience program. He co-authored the 21st Century Design matrix in partnership with AIA Minnesota, and guides net-zero projects on wall assembly, material selection, and moisture safety. He has developed the passive solar greenhouse prototype designs for Minnesota winter crop production in partnership with the UMN Extension service.

**Jeff Mandyck, AIA, NCARB, LEED AP** As strategy leader for Cuningham’s Grow studio, Jeff does what he loves best: collaborating with remarkable people and create places that make a difference. Jeff is inspired by the intersection of light, nature, and art, and this informs his work on learning environments, student experiences, campus planning, and higher education. Jeff’s ability to thoughtfully engage project stakeholders leads to collaborations where shared visions and values are transformed into meaningful places that embrace culture, identity, and inclusivity. Jeff also serves as Adjunct Professor for the UMN College of Design’s Architecture program where he helps guide the next generation of designers. His studies emphasize the integration of architecture, infrastructure, culture, and the environment.

**Mary-Margaret Zindren, CAE**, is the executive vice president / executive director of AIA Minnesota, the state’s three local chapters, and the Minnesota Architectural Foundation. For more nearly 30 years, Mary-Margaret has worked to further the common good of professional architects, with experience leading associations related to city government, the law, and the profession of architecture. She is a frequent speaker at international conferences.

**Simona Fischer, AIA**, is an architect, sustainable design professional, and associate with MSR Design. Simona develops and tests processes to integrate sustainable design seamlessly into the workflow of architectural practice. Her experience includes project management, Living Building Challenge documentation, and firmwide sustainable design implementation. Simona serves on the Healthy Building Network Home Free Champions advisory group, which works to build momentum in healthier materials for affordable housing. She currently co-chairs the AIA Minnesota Committee on the Environment (COTE).

**Paul Hansen** started in construction right out of high school. His first few jobs were “demo and grunt work,” until he found exterior siding. This then led him to the drywall world. Two projects that stand out to Paul in his career are the US Bank Stadium and the MSR studio buildout. Both jobs were very demanding, in completely different ways. Paul absolutely loves working with his hands and his mind, from small projects to large stadiums that hold 80,000 people.

**Jessie Houlihan** As an impact-driven leader, Jessie focuses on integrating and elevating the processes of real estate development, design and construction. Under her leadership Stahl has grown, diversified, and realigned around deep core values and mission. Jessie has a Bachelor of Science in environmental science, policy and management and a degree in journalism from the University of Minnesota. She serves on the Urban Land Institute of MN Executive Committee and co-chaired the creation of the Resilient Communities Product Council.

**Rhys Whyte MacPherson** With a deep focus and commitment to human centered-design with sustainability at its core, Rhys has touched a broad range of projects including libraries, cultural facilities, nonprofit institutions and affordable housing. He has a deep interest in data driven design, considering the art and science of design in balance with equity. His work has received multiple design awards, including an Urban Land Institute (ULI) Jack Kemp Excellence Award. He has guest-lectured at national and international conferences.

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10:30 a.m. – 11:45 a.m.

**D3-50. (continued)**

**John Odeen** joined the MSR Design S10 Marquette project as part of Ben Franklin Electric, a commercial and industrial electrical contractor in the Twin Cities area of Minnesota. Previously, he had spent 17 years as an estimator and project manager for a residential electrical contractor. He enjoys what he does and looks forward to the finished projects. John has been married for 43 years with three grown children and three grandchildren, and one more on the way. He loves spending time with his family and loves watching all sports and participating in just a few.

11:45 a.m.– 12:30 p.m.

Lunch Break

12:30 p.m.-2:00 p.m.

**D3-51.**

**Keynote Address:** Re-Aligning with Nature: Designing for a Sustainable Planet

Sponsored by [JE Dunn](https://www.jedunn.com)

1.5 LUs | HSW  
Experience Level: Entry

Denise’s previous roles include education director for the [International Living Future Institute](https://livingfutureresearch.org), project manager for Swedish Biomimetics 3000, and outreach director for [The Biomimicry Institute](https://www.biomimicry.org). Denise is a licensed civil engineer (PE) and holds a master's degree in civil and environmental engineering with a focus on modeling landscape-scale surface and groundwater interactions. In addition, Denise is a Biomimicry Fellow and a member of the [Advisory Council of The Biomimicry Institute](https://www.biomimicry.org/boards/advisory-council). board president of the [International Society of Sustainability Professionals (ISSP)](https://www.issp.org), on the editorial board of the [Journal of Bionic Engineering](https://www.jbe-journal.org), and an expert with [Katera](https://www.katera.com). Denise is based in Oregon.

2:00 p.m.-2:30 p.m.

**D3-52.**

**Virtual Exhibit Hall**

Support our project partners and see the latest information on products and services. When you click on a virtual Exhibit Hall booth, you will find new product information, product photos, product videos, and contact information. Each exhibitor will be reachable with an email link for more information or to set an appointment. Visit as many booths as possible for a chance to win a MN State Parks Pass and an e-bike!

Go to page 50 to preview the Virtual Exhibit Hall layout.

2:30 p.m.-3:30 p.m.

**D3-53.**

**Current Business Conditions in Minnesota, and the Role of Labor Force in Future Growth**

1.0 LUs  
Experience Level: Entry

Using recent data and ongoing surveys by the Minneapolis Fed, Ron will discuss the speed and breadth of recovery in the construction sector and broader Minnesota economy, and role of labor force on economic growth going forward. Using an interactive survey, Ron will also gauge sentiment among event attendees regarding recent business activity, hiring demand, labor and wage trends, and outlook.

Ron Wirtz is a regional outreach director for the Federal Reserve Bank of Minneapolis. Ron’s primary responsibilities involve tracking current business conditions across the six-state Ninth Federal Reserve District, which includes northwest Wisconsin, Michigan’s Upper Peninsula, Minnesota, the Dakotas and Montana. Among many areas of the economy, Ron pays special attention to employment and wages – which are central to the Federal Reserve’s dual mandate of promoting stable prices and maximum employment – along with construction, real estate, consumer spending and tourism. Ron’s work includes extensive outreach to business and community leaders, and he gives frequent speeches on economic conditions across the Ninth District.
D3-54.
2+2: Empathy in Design
Sponsored by Kraus-Anderson Insurance
1.0 LU  Experience Level: Entry

2+2 is an annual conference program hosted by AIA Minnesota’s Committee on Design that brings together two recent AIA fellows and two recent recipients of the Young Architect Award to present work and discuss a common theme. This year's theme is "Empathy in Design."

Successful projects are ones that correctly identify their varied stakeholders and creatively address their needs and aspirations. This program will highlight the importance of designing with empathy. It will explore the methods for how architects can identify their stakeholders, especially traditionally overlooked ones, and to deeply understand and relate with the people and communities they design for. Real-world examples will be presented by two AIA College of Fellows members recognized for design excellence and two recipients of the AIA Minnesota Young Architects Award. Following this will be a discussion of the role of empathy in the objectives of the Framework for Design Excellence.

Adam Ariano, AIA, is a designer of public spaces, mentor, and volunteer who has dedicated himself to elevating the well-being of others. He has designed numerous, award-winning airport projects across the country and internationally. This includes the recent renovation of Terminal 1 at the Minneapolis - St. Paul Airport, where expanded passenger accessibility and the provision of equitable restroom facilities were top priorities. Adam is also the co-chair of AIA Minnesota’s Committee on Design, where he is responsible for promoting the values of our profession and the design excellence of our state’s practitioners to the public. In addition to the regular business of managing the chapter’s design awards, he has led a special focus on modernizing the awards program to prioritize the profession’s commitment to the values of sustainability, equity, and diversity.

Nancy Blankfard, FAIA, is recognized for her expertise and commitment to design excellence, and is a skilled collaborator, adept at instilling a sense of place in her designs. With over 25 years of experience on a variety of cultural, arts and community projects, her work engages users in novel ways and inspires healthy, vibrant communities. Specializing in high-performance buildings that require integrated solutions, Nancy capitalizes on her breadth of research and related to materials, digital technologies, and the environment as an associate in the research group at KieranTimberlake. She works with teams to translate novel analysis practices into design workflows. She was a core member of the award-winning development team for Tally, founder of Philadelphia’s Dynamo User Group, and Philadelphia Women in Architecture Descriptions.

Nancy Blankfard, FAIA

Dagmara Larsen, AIA, is a native of Poland who has worked in Europe, South America, and the United States, offers a truly international perspective. A principal with MSR Design, she has served as project manager and lead project designer for a wide range of projects, including public and academic libraries, higher education facilities, office buildings, and private residences. Dagmara's ability to simultaneously balance a project's programmatic needs, aesthetics, and sustainable drivers has been recognized by the clients she works with and by her peers through various awards. She is currently chair of the Articulture Board of Directors, a nonprofit visual arts organization.

Dagmara Larsen, AIA

Geoffrey Warner, FAIA, is the principal architect and founder of Alchemy and the weeHouse. He received the distinction of Fellow by The American Institute of Architects in 2021, recognized for his design work embracing Big Thinking for Small Projects. We need to find better ways to deliver design for both high-end and low-end projects. Alchemy has been integrating very small projects from the wee-house to the lightHouse ADU to the Envision (Homeless) Community to create meaningful work that balances aesthetics, efficient material use, and practical production methods, while still being sustainable and achievable at all budgets. Each project, regardless of size or intent, is a new opportunity to become influential as Architecture or Art.

Geoffrey Warner, FAIA

Daniel Yudchitz, AIA, Growing up as the son of an architect undoubtedly instilled a passion to create and explore the built environment. He believes architecture is about allocating resources strategically to achieve maximum impact, which requires meaningful architectural expression within constraints of time and money. He focuses on creating strategies for aspirational design expressions to reinforce the client’s mission and enhance building functionality in a sustainable, economical, and impactful manner. Buildings are not standalone objects; every project is an opportunity to meaningfully contribute to the larger systems and context that surround us. Dan will share a series of projects, at a variety of scales, that engage the social, cultural, environmental, and economic systems that envelop and shape the built environment.

Daniel Yudchitz, AIA

D3-55.
High Performance Embodied Carbon: Leveraging Data to Define Targets
1.0 LU  HSW  Experience Level: Entry

To solve the climate crisis, we must radically reduce carbon emissions. Embodied carbon will be responsible for at least half of AEC carbon emissions between now and 2050. There has been a rapid acceleration in awareness, research, tools, and projects addressing this topic. Yet do we know what "good" embodied carbon targets are?

This session will present the latest data on embodied carbon and unpack what it reveals about developing appropriate targets, highlighting crucial next steps for robust target development, and outlining immediate and impactful reductions while target development continues. Presenters will share perspectives as a designer, tool developer, and Zero-Carbon certifier. Participants will engage in a collective discussion of leveraging actionable information to positively impact embodied carbon in their next project.

Efrie Escott, AIA, LFA, LEED AP BD+C, explores topics related to materials, digital technologies, and the environment as an associate in the research group at KieranTimberlake. She works with teams to translate data-driven research into building design and integrates novel analysis practices into design workflows. She was a core member of the award-winning development team for Tally, founder of Philadelphia’s Dynamo User Group, and Philadelphia Women in Architecture Descriptions.

Efrie Escott, AIA, LFA, LEED AP BD+C

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2:30 p.m. - 3:30 p.m.

D3-55. (continued)

Architecture co-chair. Efrie lectures internationally about environmental research and digital design processes and teaches at the University of Pennsylvania. She earned a Master of Environmental Management at Yale and a Master of Architecture at the University of Michigan.

Kevin Flynn, AIA, is a driven servant leader and systems thinker who works and thinks broadly while considering the future impact of design decisions and the connections between disparate systems and ideas while working across building types, roles, and methods according to need. Kevin engages clients, owners, developers, A/E professionals, and contractors of all stripes and sizes to achieve goals and can discover and connect opportunities to find solutions that are environmentally responsible, economically sound and socially fair. Kevin believes we must transform the way buildings and places are conceived, created, constructed, and operated. Mitigating the impact our buildings and practices have on our only home is no longer enough. We need to do better. Let’s design like it matters — because it does.

Haley Gardner, EIT, LFA, is the manager of energy and carbon at the Living Future Institute. Haley supports the Zero Energy and Zero Carbon Certification programs at the International Living Future Institute. She provides technical guidance on how buildings can achieve net-positive carbon on a life cycle scale while maximizing their energy efficiency. She completed her master’s thesis wherein she performed a whole-building life cycle assessment (LCA) of a Living Building to identify where high environmental impacts occur over the building’s life cycle. She brings this knowledge of both Living Buildings and LCA to ILFI in order to administer the Zero Energy and Zero Carbon Certifications through a technical lens while considering comprehensive life cycle impacts; this allows her to approach problems with a systems perspective.

Erin McDade, Assoc. AIA, is Architecture 2030’s senior program director. She leads Architecture 2030’s public policy and embodied carbon initiatives, focusing on developing data-driven solutions for building sector decarbonization. Recently she led the development of building-level, sector-wide decarbonization policy impact assessment models for each of the eleven municipal Zero Cities partners to support the development of city-specific policy roadmaps. She is a proud resident of Bellingham, Washington and recently completed a 15-month tenure as a city council-appointed volunteer member of the Bellingham Climate Action Taskforce. She led the taskforce in the creation of a comprehensive, data-driven roadmap and set of policy recommendations for building sector decarbonization that respond to the city’s specific context, strengths, and challenges and which, if implemented, will help enable Bellingham to achieve its goal of carbon-neutrality by 2035.
Benefits and Function of Automatic Slide and Swing Door Systems

This presentation discusses automatic sliding door systems and their function and advantage in commercial development applications. In addition, we will analyze the difference between high and low energy swing door operators, and the requirements for meeting ADA compliance. We will also discuss the latest technological advancements in the automatic door industry as well as recent code requirements dictated by ANSI 156.10 and 156.19. The participant will also become more familiar with The American Association of Automatic Door Manufacturers (AAADM) and how adding their requirements in the specification helps to ensure a professional and reliable installation.

Mark Huntsman is director of technical sales for record-usa. He entered the automatic door industry in 1999 as an installer helper. He quickly moved up to lead installer and then service technician. From there he moved into a business development position. He has performed multiple roles within the record organization, and in his current role, is responsible for bridging the gap between standard products and architectural desires. Mark is also the corporate product trainer and AAADM trainer and has trained thousands of people nationwide.

D3-57.
Networking Social

3:30 p.m. – 4:00 p.m.
THURSDAY, NOVEMBER 11

8:00 a.m. - 8:15 a.m.

D4-58. Welcome and Convening Remarks

8:30 a.m. - 10:00 a.m.

D4-59. Creating a Well-Crafted Building Code Analysis (from Both Sides of the Aisle)

C. Scott Anderson, AIA, is the building plan review supervisor for the City of Minneapolis. First licensed as an architect in California in 1989, he has been involved in a wide variety of projects in several states, including schools and universities, government facilities, churches, apartment buildings, restaurants, and car dealerships. Scott’s long-time interest in code development and compliance led him to join the City of Minneapolis as a plans examiner in 2012. Scott is a licensed architect, ICC Certified Plans Examiner, ICC + Minnesota Certified Building Official. He also serves on the ICC Code interpretation committee and is the AIA’s representative to the Governor’s Council on Fire Prevention and Control.

Gerhard Guth, AIA, has almost 35 years in the architecture profession. Also, since 2002, he has held the title of a Certified Building Official, therein offering code guidance specialization for all architectural and engineering staff, most recently at HGA as of 2008. He is the current co-chair of the AIA Minnesota Building Code Knowledge Community, and currently resides as the appointed licensed architect on the Construction Codes Advisory Council through January of 2023.

D4-60. Transforming Public Spaces: Water Works at Mill Ruins Park

Creating inspiring public spaces builds strong connections between communities. Access to cultural resources opens opportunities for learning and a deeper connection to history and people. This program will focus on Water Works at Mill Ruins Park, which provides visitor services, recreational amenities and a variety of interpretative interventions to one of Minnesota’s most highly visited areas: St. Anthony Falls and the Stone Arch Bridge. Access for all and attention to historic preservation for both the project site and building rehabilitation were key tenets applied throughout the development of this Minneapolis Parks and Recreation Board project.

Jean Garbarini, ASLA, has been practicing landscape architecture for over 28 years. Her work has focused on the creation of engaging, sustainable and livable environments in the public domain and for private clients. She has experience on a wide range of projects, including community master planning, campus planning, park design, historic landscape research and private gardens. Jean has been the lead landscape architect on multiple LEED projects, two of which have been awarded platinum certification. She has served on the ASLA-MN executive board and remains linked to the University of Minnesota as a guest critic in design studios at the College of Design.

Todd Grover, AIA, has worked with MacDonald & Mack since 1999 and became a principal in 2004. Prior to joining the firm, he worked for the International Council of Monuments and Sites in collaboration with the Transylvania Trust Foundation in Cluj-Napoca, Romania documenting 18th and 19th century vernacular churches and farmhouses. In 2012, he received the Young Architect Award from AIA Minnesota. In addition to his work at MacDonald & Mack, Todd is an Adjunct Assistant Professor at the University of Minnesota and serves on the national board of Docomomo, an international organization devoted to the documentation and conservation of buildings, sites and neighborhoods of the modern movement. Todd is especially interested in and knowledgeable about buildings of this era.

Michael Hara, AIA, has eleven years of experience working on award-winning projects of multiple scales. As a project designer specializing in arts, community and higher education work, Michael engenders a thoughtful analytical approach to design that is cross-disciplinary and integrative. His work has been published in local and national publications, and most recently he was a recipient of the Ralph Rapson Fellowship in 2019.

Kate Lamers, PLA, LEED AP, is a landscape architect with experience in urban redevelopment and park planning and design. Kate has worked with numerous communities throughout the Midwest to transform underutilized waterfronts into public green spaces. Prior to starting at the Minneapolis Park and Recreation Board in 2014, Kate worked at large and small multidisciplinary firms in Colorado and the Twin Cities. Her project experience includes parks, aquatic centers, streetscapes, mixed use urban redevelopment areas, and bicycle and pedestrian facilities, from the initial planning stages through construction implementation.

D4-61. Social and Ecological Design Process and 2ICD

Sustainable design has failed to fundamentally transform the performance of the built environment in the most critical indicator: social-ecological impact. Design has focused on making systems more efficient, instead of redesigning the system to continually enhance natural processes and center the welfare of the people who live, work, and experience the built environment.

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D4-61. (continued)

Buildings, neighborhoods, and infrastructure must be imagined using a social, ecological, and technological systems approach connecting the social needs of the community within the constraints of biophysical systems. We present an approach in the evolution of sustainable design, one that builds on green design and regenerative design, but advances a social-ecological design methodology—one that is sensitive to scale, adopts a systems approach, is future-oriented, and centers social needs in design. This process will be integrated with AIA Minnesota’s 21st Century Development Framework.

Paul D. Bauknight, Jr. trained as an architect, is an urban designer, design activist and community leader. Working in community-based design and development for over 30 years, he is passionately committed to working at the intersection of social, cultural, economic, and spatial systems creating solutions that are equitable and steeped in place, that benefit the community. As the project implementation director for the Minneapolis Parks Foundation, he leads the Foundation’s programming through the interaction of human, social, cultural, environmental, institutional, and physical systems in the development stewardship and advocacy for parks and the public realm. He is the co-chair for the Equity in Place Committee of Reimagining The Civic Commons, a national learning network of cities using civic assets as platforms for social and economic change.

Richard Graves, AIA, is the director of the UMN Center for Sustainable Building Research (CSBR) and an associate professor in the College of Design. His research focuses on integrating regenerative design into the practice of architecture and planning across scales (from the building to the neighborhood to the city) to achieve sustainable and resilient development in a dynamic world. He has developed a design process and a set of social and ecosystem metrics to compare regenerative design scenarios. Working with his team at the CSBR, they have integrated regenerative design thinking and metrics into the Minnesota Sustainable Building Guidelines.

Daniel Handeen, Assoc. AIA, LEED AP, is a research fellow at the Center for Sustainable Building Research (CSBR) who focuses on facilitating, researching, and communicating healthy, durable, just, and environmentally sensitive building methods to professionals and lay people. He works with Greater Minnesota communities to engage stakeholders and facilitate design assistance through CSBR’s Design for Community Resilience program. He co-authored the 21st Century Design matrix in partnership with AIA Minnesota, and guides net-zero projects on wall assembly, material selection, and moisture safety. He has developed the passive solar greenhouse prototype designs for Minnesota winter crop production in partnership with the UMN Extension service.

Tabitha Montgomery is passionate about serving people. She is currently the executive director of the Powderhorn Park Neighborhood Association (PPNA) where she and the staff proactively look for creative ways to advance its advocacy, events, and programs in the community. Tabitha has spent more than twenty years tapping into her gifts of management, communication, and visioning to serve a wide array of people, businesses, and organizations.

D4-62.

Lifecycle Data Solutions for Architects: Transforming the Norm

The session will focus on emerging technologies and concepts that leverage data and introduce new value propositions. Not concerned with flashy solutions or short-lived benefits, this talk will highlight the meaningful ways in which designers can transform the practice of architecture.

Connor Christian, PE, is a licensed professional engineer in Minnesota with 16 years’ experience. He has focused on bringing new technology into daily practice by creating procedures and tools that can be used by everyone, by developing processes that meet the needs of his partners and clients, and by interfacing with other industry experts to ensure the latest methods are being employed. Connor is currently product manager for Procore Technologies and CEO of Vendetta Software.

Rachel Riopel, AIA, is HDR’s digital practice leader, and a registered architect with over 16 years of experience in multidisciplinary architectural practice and technology leadership. She has been involved with both international industry and government-focused collaboration efforts, and champions practical approaches to innovation and applied design technology. Her mission is to empower HDR’s practices with effective applications of technology. Her primary focus is to maximize efficiency and improve quality of project delivery by driving measurable results.

Adam Wilbrecht, AIA, is a principal and director of design technology at Cuningham. He is also a co-founder of software startup, CONCERTvdc (getconcert.com). Adam is a registered architect and specialist in both building + design technologies for 30 years. His core interests currently focus on IoT edge technologies for buildings, blockchain based services, and enabling digitalization of the design, construction and building operations industries.

D4-63.

Navigating Architect Licensure: NCARB, the ARE, and You

Experience Level: Entry

This program is free and available without conference registration. To register for this session only, visit https://www.aia-mn.org/event/navigating-architect-licensure/.

Are you actively taking or preparing for the Architect Registration Examination (ARE)? This session will offer insights from NCARB on how to approach the licensure path, including a successful ARE. Join NCARB vice president of examination, Jared Zurn, for an in-depth presentation that will cover several licensure-related topics including:

CONTINUED ON NEXT PAGE >
8:30 a.m. - 10:00 a.m.

**D4-61. (continued)**

- What’s changing? What’s new?
- What resources are available to prepare?
- Is there a best order for taking the six divisions of the ARE?
- What is there to be learned from the ARE stats found in NCARB by the Numbers?

The session will include time at the end for questions and answers. Attend and reduce your anxiety by knowing what to expect and how to best prepare.

_Jared N. Zurn, AIA_, vice president, examination, serves as a member of the senior leadership team at the National Council of Architectural Registration Boards. Zurn has responsibility for the strategic direction of examination related initiatives, professional ethics initiatives, as well as oversight of and participation in research regarding the current and future states of the architectural profession. Zurn is a licensed architect and Certified Association Executive. Before joining NCARB, Zurn operated a sole proprietorship architectural design firm in northern Minnesota. He also served as faculty of the architectural technology program at Minnesota State Community and Technical College where he served as a division chair and led the architectural technology program in the areas of curriculum development, course assessment, and program outcome assessment.

10:00 a.m.-10:30 a.m.

**D4-64.**

Virtual Exhibit Hall

Last day to peruse the Exhibit Hall. Visit as many booths as possible for a chance to win our Grand Prize e-bike, hidden under one of the booths! Check out the new products and services from our partners who support the industry. Each exhibitor will be reachable with an email link for more information or to set an appointment.

[Go to page 50](#) to preview the Virtual Exhibit Hall layout.
D4-65.
The Post-Pandemic City

Pandemics have profound effects on cities. The 19th century cholera pandemic triggered the rise of industrial cities and 20th century flu pandemic prompted suburban sprawl. The COVID-19 pandemic has led to a rebalancing of the digital and physical worlds, giving us choices as to whether we do things remotely or in person. That will have dramatic impacts on land use, as commercial demand dwindles and housing demand booms; on transportation, as parking lots empty and delivery vehicles prevail; and on zoning, as old categories no longer align with how people will likely be living and working in the future.

The Minnesota Design Center (MDC) has engaged in a year-long series of workshops, webinars, and podcasts related to the post-pandemic city. The MDC will have a publication coming out in late 2021 on this topic and the MDC’s director has written a new book on the post-pandemic city, which Routledge will publish in 2022 and excerpts of which have appeared in ENTER.

Abimbola Asojo, PhD, AIA, is the associate dean for research, creative scholarship and engagement and a professor of interior design at the UMN College of Design. She actively engages her students in community-based service-learning projects that tackle local and global societal challenges. Her research areas are cross-cultural design, architectural lighting design, African architecture, computing and design, globalization and design, sustainable design, post-occupancy evaluation and K-12 spaces. Her work has been widely published in international journals and books. She is a licensed architect and holds a National Council for Interior Design Qualification (NCIDQ) certification. She is a member of the American Institute of Architects (AIA), the Interior Design Educators Council (IDEC), and the Illuminating Engineering Society (IES).

Thomas Fisher, Assoc. AIA, is a professor in the School of Architecture and the director of the Minnesota Design Center in the UMN College of Design. His recent research has focused on the impact of pandemics on the built environment, and he has a book coming out in 2022, published by Routledge, about the post-pandemic world. He has also led a research effort on the impact of the pandemic on various parts of the Twin Cities and has participated in a webinar series and podcasts with the other two panelists in this session.

Virajita Singh associate vice provost, senior research fellow, University of Minnesota, is an educator, researcher, university administrator, and artist. Trained in architecture, she engages principles of deep creativity and partnership to catalyze and empower individuals and communities to change systems and create socially and environmentally just futures. Her mantra meditation practice sustains her and offers hope, while her art is currently emerging in a small co-op of women artists.

D4-66.
The Restoration Process of Bowman Hall

The Bowman Hall Exterior Envelope Restoration project was undertaken to undo the detrimental “repair” projects of the past and bring back the original character of the historic 1897 building on the University of Wisconsin-Stout campus in Menomonie, WI utilizing traditional techniques and the Secretary of Interior Standards. This $8.8 million project repaired and restored more than 30,000 square feet of brick and stone masonry envelope, including lime-putty mortar pointing. It replaced 233 failing aluminum windows and doorways with historic replica aluminum-clad, wood windows and custom wood entrances. There was also a copper tower roof replacement; spire and weathervane restoration; and metals/wood/paint restoration at the historic dormers, gutters, downspouts, and wood roof elements.

The design team and contractors performed a series of intensive surveys and scans to develop project-specific technical protocols for the restoration methods to maintain the historic features. Working directly with the contractors, early masonry training, ongoing punch lists, and window mock-ups allowed the team to understand the physicality of the restoration process and prepare mutually agreeable standards of care for the work. With this award-winning restoration project, the restored, high-integrity envelope will allow Bowman Hall to serve as the beautiful icon for the UW-Stout Campus for the next generation of students.

Mark Bailey, Jr. is a construction project manager and architectural technician at Building Restoration Corporation, the Midwest’s premier masonry restoration contractor. His specialty is focused on preserving and restoring buildings that carry local, state or national designations that require strict adherence to preservation standards and practices. He takes pride in his collaborative project approach which involves knowing and understanding the insights and perspectives of everyone involved with any project from the owner, the A/E, general contractors, consultants and subcontractors.

Stacey Z. Keller, AIA, is a senior project architect at Mead & Hunt. Her expertise is in renovations and historic preservation/adaptive reuse projects, exceeding the requirements of the Secretary of Interior Standards for a historic architect. Stacey is responsible for the planning, design and delivery of architectural projects for government agencies at the federal, state and local levels. She’s held numerous roles in the AIA, from chapter president to the Young Architect Regional Director, and now chair of AIA National’s Center for Practice. Stacey was recognized in 2020 with the AIA Young Architects Award at both the state and national levels, and the Athena Award from The Business Forum.

Bruce Petersen is a senior architectural project manager for Marvin. He became passionate about historic buildings nearly 20 years ago. Bruce received his training working with John Speweik, co-author of Preservation Brief #2: Repointing Mortar Joints in Historic Masonry Buildings. He applied the lessons
D4-66. (continued)

learned from masonry buildings to the fenestration part of the historic building to restoration projects throughout Wisconsin and upper Michigan. For him, there is nothing more satisfying than starting with a 100-year-old broken window, rotting parts and pieces, and restoring the window with your own hands. Bruce feels that the key to a successful historic fenestration project is the initial research conducted by a competent team. “The building will tell you what it needs, if you listen.”

D4-67.

AIA 2030: 10 Years to Net Zero

As energy prices rise and the impact of climate change continues to escalate, the built environment is a primary culprit of energy consumption. The construction process combined with building system functions, such as heating, cooling, and lighting, account for 40% of greenhouse gas emissions in the U.S. alone. As architects, designers, and engineers, it is our responsibility to implement energy-efficient strategies into the building sector from project conception.

In this program, you will learn about the standards that apply to the AIA 2030 Commitment and acquire knowledge for how we can work together as an industry to reduce energy consumption and increase renewable production to achieve net zero design. Upon completion of this course, participants will be equipped with the knowledge of how to approach net-zero design. It is our goal to showcase the AIA 2030 Commitment and net zero in a new light; a light that is a little less intimidating, confusing, and overwhelming than it was prior to the course.

Kaeko Leitch, PE, LEED AP, mechanical senior project manager III, Obernel Engineering, has over 22 years of mechanical and electrical engineering and project management experience with various facilities. Her expertise includes designing plumbing, HVAC, electrical systems, and their controls for different building types.

As a licensed mechanical and electrical professional engineer, Kaeko’s experience with both mechanical and electrical systems yields her a unique understanding of how MEP systems work together in a facility. As a previous small business owner, Kaeko is passionate about serving her local community. Over the past decade, she has donated both time and resources to South Central College – North Mankato serving as an advisory board member of the Architectural Drafting, Design Department and volunteering her time as an instructor.

Brent A. Wavra, PE, LEED AP, managing principal, director of business, Obernel Engineering, has over 22 years of engineering experience and has led the design of innovative mechanical systems for various facility types. He is seasoned in the design of plumbing, heating, ventilation, air conditioning, fire protection, and control systems.

CONTINUED ON NEXT PAGE >
D4-67. (continued)
systems. Brent’s background yields valuable insight into the mechanical systems design and commissioning. He has enthusiastically focused his work around a passion for energy efficient technologies and sustainable building design. He constantly strives to balance optimized energy consumption with performance and client satisfaction. His knowledge in energy recovery systems, low temperature air systems, variable primary chilled water systems, and condensing boiler systems provides potential for new and innovative design approaches.

D4-68.
Business Intelligence for Data-Driven Design, Construction, and Operations
Sponsored by Kraus-Anderson Construction Company
[1.25 LUs] Experience Level: Intermediate
Business Intelligence (BI) refers to technologies and processes that provide historical, correlated, and predictive views of an organization’s data resources. As designers and builders create and leverage data-rich toolsets, the use of BI is becoming increasingly integral to leverage data among a variety of tools and resources. The program will discuss and present opportunities for architects, engineers, contractors, and owners to take advantage of Business Intelligence and will share specific use cases for how BI can be used to guide and support decisions related to design, construction, and operations.

Nate Miller is founder and CEO of Proving Ground, a new business venture that delivers data-driven solutions for architects, engineers, contractors, and owners. Proving Ground has worked with some of the most reputable organizations in the building industry to create digital transformation strategies and custom software. Nate’s work in data and computation has impacted the design and delivery of a wide range of built environments including offices, stadiums, hospitals, and museums.

D4-69.
Equitable Design: Building for Disability Differently
[1.25 LUs] HSW Experience Level: Intermediate
Designing buildings for equity is making them equitable to people with differences that extend to race, class, color, gender, disability, and/or sexuality. Disability is a form of ‘Otherness;’ how society perceives Otherness is shaped to a large extent by design, and the sensibilities of designers in making spaces inclusive and attempting to reduce the distance from the Other. Since the Americans with Disabilities Act (ADA) was established over 30 years ago, thinking in the disability world has evolved. Disability is seen as natural—not as merely a problem to fix, but part of the human experience, seeking greater visibility and inclusiveness. We need to rethink accessibility beyond literally getting in the door, even beyond universal design and move from mere regulatory compliance to design that focuses on visibility and inclusion. While other differences (such as race, class, etc.) can perhaps primarily be addressed by policy and operations, disability is one difference that building design can impact directly.

How can architects see our diverse abilities to interact in buildings to rethink design? How can accessibility provisions be integral to the design rather than overlays? Buildings that are considered sustainable become truly equitable when inclusion is second nature to the design mindset. The session will seek to answer these questions and provide examples of more equitable design for disability.

Ganesh Nayak, AIA, NOMA, LEED, GGP, is a principal at Metier Inc. in Atlanta, GA consulting on sustainable design and accessibility. He has over twenty-five years of experience in a variety of project types. He has published, taught, and presented extensively on architecture, sustainability, and disability. He is an ICC-certified accessibility specialist. He is fully involved in the day-to-day care of his teenaged son with developmental disabilities and brings his own voice and experience to bear on issues of equity, design, and advocacy for disability. He serves as chair of the Georgia Department of Education’s State Advisory Panel for Special Education for the 2020-21 academic year. He also served on the Kansas Governor’s Council for Developmental Disabilities as a parent.

D4-70.
Deconstruction and Building Material Reuse in Minnesota
[1.0 LU] Experience Level: Entry
This session will build off one of the sessions presented this spring at AIA Minnesota’s Materials Matter Series. Speakers will dig into construction and demolition (C&D) waste and discuss deconstruction and building material salvage as an alternative to standard demolition from a local and state government perspective. The purpose of this session is to introduce real-life solutions to reduce C&D waste on projects that involve renovation or demolition, offer resources for connecting with local salvage organizations, and highlight the importance of incorporating used building materials back into project designs.

CONTINUED ON NEXT PAGE >
D4-71.
Pathways to SB 2030: Three Minnesota Case Studies
Sponsored by Emanuelson-Podas, Inc.

Olivia Cashman is an environmental protection specialist with Hennepin County’s Environment and Energy Department where she works to promote reuse and recycling of construction and demolition waste and ensure proper disposal of hazardous building materials. Olivia coordinates the county’s recently developed deconstruction grant and pre-demolition inspection programs. Olivia has a Bachelor of Science in environmental science from the University of Minnesota and has prior work experience in environmental, health, and safety in manufacturing industries.

Molly Flynn is an environmental health specialist with Ramsey County. Molly graduated from the College of Saint Benedict with degrees in environmental studies and business management. After college, she worked with an environmental consulting firm completing environmental site investigations, and natural and cultural resource consultation. In her current role at the county, Molly is both a hazardous waste and pre-demolition inspector. Being an integrated component to the demolition process, Molly is working to raise awareness and facilitate more reuse of building materials in the hopes of diverting them from the landfill.

Melissa Wenzel has worked for the Minnesota Pollution Control Agency for nearly two decades, and currently works for the agency within the Sustainable Materials Management program. She is the Minnesota Pollution Control Agency’s Built Environment Sustainability Administrator, and her current focus is on creating system-wide change within the building material management system. With key stakeholders across the state, Melissa is working to prevent C&D materials going to landfills by encouraging preservation, reuse, repair, and recycling of building materials. Previously, she was the state’s industrial stormwater program coordinator. Over the years, she coordinates project-specific sustainability efforts within the agency and as a volunteer, within her community.

The SB 2030 program now defines a hierarchy of renewable energy options, starting with on-site or on-campus, then moving to in-portfolio for owners that have multiple buildings, before moving to renewable energy credits as a last resort. Panelists who worked on recent SB 2030 projects will emphasize the architect’s role in design for carbon reduction, highlighting three MN case studies that demonstrate different pathways to meet program requirements. Session attendees will come away with strategies for reducing the carbon impact of their design projects.

Becky Alexander, AIA, is an architect and researcher at LHB where she does a combination of sustainable building research and architectural design. Becky plays a key role in several significant state-wide initiatives to reduce energy consumption and greenhouse gas emissions in Minnesota. Her research involves collecting, analyzing, visualizing, and synthesizing data at building, organization, and city-wide scales. She is the primary researcher for the Regional Indicators Initiative (RII), a program that tracks annual performance metrics for Minnesota cities. She is also on the management team for the State of Minnesota’s B3 and SB 2030 programs, where she tracks performance metrics and sustainable strategies of State-funded buildings through her work managing the online B3 Case Studies Database.

Matthew Finn, AIA, project manager, LHB, has 17 years of experience in the design and documentation of affordable and supportive housing across scales, programs, and housing typologies. From the largest public–private housing partnership in Minnesota history, to single–family and duplex renovations, he has led projects throughout the Twin Cities. Past and ongoing projects include housing for long-term homeless, youth, adults with HIV/AIDS, veterans, and seniors all with a focus on housing and services to ensure long-term stability and vitality for residents and the communities they live in. Matthew has also served as an adjunct faculty member at the University of Minnesota for more than a decade and continues to serve as a leader on AIA Minnesota’s Housing Advocacy Committee.

Amber Sausen, AIA, is a principal at Alliance, working primarily in the public and workplace sectors. She is a leader in Alliance’s sustainability efforts, with over a dozen years of experience working on projects using the Minnesota B3 Guidelines. Having received Change Leadership and Change Management certificates from Cornell University, Amber co-leads Alliance’s change management team and utilizes her strong communication skills to help clients navigate complex issues. She was recognized for her commitment to advancing understanding of the value of architecture to the broader community with the 2019 AIA Minnesota Young Architects Award and 2020 AIA National Young Architects Award.

Elizabeth Turner, AIA, is an architect and Certified Passive Building Consultant. Elizabeth works with a passion for finding synergies to create thriving, equitable communities that depend less on the purchase of energy, saving both operational costs and carbon emissions. She founded Precipitate in 2017 to explore emerging methods of holistically integrated design at the intersection of architecture, research, and education. She is a Certified Passive House Consultant through the Passive House Institute US (PHIUS) and teaches the capstone project class for the Sustainability Studies minor at the University of Minnesota, connecting students in support of communities. Elizabeth volunteers extensively with the American Institute of Architects (AIA) Minnesota, advocating for public policy with a focus on equity and inclusion toward truly sustainable communities for all.
**D4-72.**

The Augmented Reality of Chickens

**Sponsored by IMEG Corp.**

**D4-72.
**1.0 LU | Experience Level: Entry

Over the last year we have been making use of augmented reality (AR) headsets to aid in site visits where access has been limited by travel or gathering restrictions. That’s led to some new workflows involving using AR tools to generate reality capture data sets to use in both design and construction administration. It also meant that I needed some ways to test data and workflows in ways that weren’t necessarily “live” projects.

This case study will look at how off-label use of technology generated useful data, and how that feedback led to live reality capture features in software that makes AR useful back in the office as well as on the jobsite. We’ll also look at why all of that was helpful in building a back yard chicken coop, and where AR was not as useful in replacing some traditional construction practices.

**Michael Freiert** is a BIM manager and project captain, at Pope Architects. He has many hobbies, has had a few professions, and is a strong believer in cross-discipline problem solving. He has worked in ACAD since R12, Revit since 6.1, and has learned a bunch of things from working with Legos, wood, scenic design, SFX, security, machining, sewing, cooking, explosives, and gardening—all influencing his design philosophy, choice of tools, and preference for using apt, if sometimes unconventional, implements. For the last two decades he’s been focused heavily on BIM.

**D4-73.**

**CAPACITY 50**

Interrupting Abusive Behavior in the Workplace

**1.0 LU | Ethics | Experience Level: Entry**

The history of the profession is rife with stories of hard-charging architects who brow beat their direct reports and colleagues, regularly hurling insults, demeaning comments, and even objects. While the most extreme displays of abusive behavior may be less common today, architects and architectural designers still report bullying and disrespect being tolerated within firm cultures.

This session will share research on abusive behavior in U.S. workplaces, how it shows up within the architecture profession, and what experts say can be done to counteract it. Rule 5.101 of the AIA Code of Ethics states that “Members shall treat their colleagues and employees with mutual respect...” – we’ll explore what respect looks like and feels like in today’s workplace. And in the spirit of Rule 4.2020, this session will be geared toward supervisors who must “make reasonable efforts to ensure that those over whom they have supervisory authority conform their conduct to this Code.” The session will be interactive, with participants engaging with scenarios and potential interventions.

**Mary-Margaret Zindren, CAE**, is the executive vice president / executive director of AIA Minnesota, the state’s three local chapters, and the Minnesota Architectural Foundation. For more nearly 30 years, Mary-Margaret has worked to further the common good through the collective efforts of communities and professionals, with experience leading associations related to city government, the law, and the profession of architecture. She is a frequent facilitator, moderator, panelist, and keynote speaker on organizational leadership, culture change, racial and gender equity, and currently serves as the vice president of the Council of Architectural Component Executives.

**D4-74.**

Virtual Exhibit Hall

Last chance to peruse the Exhibit Hall. Visit as many booths as possible for a chance to win our Grand Prize e-bike, hidden under one of the booths! Check out the new products and services from our partners who support the industry. Each exhibitor will be reachable with an email link for more information or to set an appointment.

Go to page 50 to preview the Virtual Exhibit Hall layout.

**2:00 p.m.-3:30 p.m.**

**D4-75.**

**Member Congress**

This program is free and available without conference registration. To register for this session only, visit https://www.aia-mn.org/event/member-congress/.

A’21 MN will wrap up with the AIA Minnesota Annual Meeting. Join officers and staff leadership to celebrate all we’ve accomplished in 2021, and to explore the road ahead. We’ll formally elect our new Board of Directors, recognize member leaders for their contributions, celebrate our newly-licensed architect community, and much, much more!

**3:30 p.m.-4:00 p.m.**

**D4-76.**

Networking Social
Visit the Exhibit Hall

The Minnesota Conference on Architecture would not be the same without our valued partners. A’21 MN will host a virtual exhibit hall so that you can access the latest information on products and services and make contact for more information.

When you click on a virtual Exhibit Hall booth, you will find:

- New product information
- Product photos
- Product videos
- Contact information

Each exhibitor will be reachable with an email link for more information or to set an appointment.

Each day of the Conference has dedicated times to view the Exhibit Hall—but are you welcome to visit it anytime you’re online during those days!

Exhibitors who have signed up, as of September 20, include:


WIN PRIZES FOR VISITING THE VIRTUAL EXHIBIT HALL!

Each day of the conference, a prize will be virtually hidden under one exhibit booth. Visit as many exhibit booths as you can for a chance to win. At the end of each of the first three conference days, one winner will be selected from those who visit the exhibit booth which holds the prize. On the last day of the conference, we will be awarding the Grand Prize to a randomly-selected person who visited the exhibit booth which holds the prize. The Grand Prize will include booth visitors from all four days of the conference.

Days 1, 2, and 3: Win a MN State Parks Pass (valued at $35)
Day 4: Win a $1,000 gift certificate for an electric bike (or another type of bike, or bike-related gear) from Minnesota-based retailer Erik’s Bike Shop.

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HOW TO REGISTER

Register early! Early bird registration ends October 13.

Catch the early bird registration rate through October 13, 2021. Rates will increase on October 14, 2021.

Registration deadlines for each Conference date are listed below:

- Registration for sessions on October 27 ends at 8:00 pm CST on October 26, 2021
- Registration for sessions on November 3 ends at 8:00 pm CST on November 2, 2021
- Registration for sessions on November 10 and 11 ends at 8:00 pm CST on November 9, 2021

USE THIS FORM TO REGISTER BY MAIL/FAX/EMAIL ONLY.

Complete the entire form and mail your completed form with check to AIA Minnesota, 105 5th Avenue South, Suite 485, Minneapolis, MN 55401. If you prefer to fax or email your registration, please call in your credit card, and send the completed form to Amber Allardyce: 612-338-7981 (fax) or allardyce@aia-mn.org. Do not fax, mail, or email after October 25, 2021.

STEP 1: SELECT YOUR REGISTRATION PACKAGE AND RATE

REGISTRATION PACKAGES & RATES

1. Full Conference Registration

   Enjoy four days of events during the Conference. Please indicate on pages 2–4 which events you plan to attend.

   $315 Member    $420 Non-Member

   Register online and receive a $25 discount off this package: $290 Member / $395 Non-Member.

2. Emeritus Member Registration

   AIA Emeritus members can choose any number of events. Please indicate on pages 2–4 which events you plan to attend.

   $158

   Register online and receive a $13 discount.

3. Associate Member Registration

   AIA Associate members can choose any number of events. Please indicate on pages 2–4 which events you plan to attend.

   $158

   Register online and receive a $13 discount.

4. Student Full Conference Registration

   Choose any number of events. Please indicate on pages 2–4 which events you plan to attend.

   $25

5. Single Day Registration

   Choose one or more days to attend and select any number of events during that day(s). Price is per day. Please indicate on pages 2–4 which events you plan to attend.

   $150/day Member    $200/day Non-member

   Select which day(s) you will attend.

   October 27    November 3    November 10    November 11

TOTAL AMOUNT: $

STEP 2: ATTENDEE & PAYMENT INFORMATION

Name:

(If applicable, please indicate AIA, FAIA, or Assoc. AIA, etc.)

AIA Member #: 

OR write in associated membership:

(See qualifying list on next page.)

Title:

Firm:

Address:

City: State: Zip:

Phone:

E-mail:

(Required to receive confirmation)

REGISTRATION FORM CONTINUES ON NEXT PAGE >
**Assistance Request**

AIA Minnesota strives to ensure that this conference is accessible to all individuals. All programs will offer closed captions. Please check the box and a member of the AIA Minnesota staff will contact you to learn what services or assistance we can provide to enable your full participation in our conference (i.e., closed-captioning, language interpretation services). Although we will attempt to meet all accessibility requests, request submitted after Wednesday, October 20 may not be fulfilled.

**Virtual Attendee Code of Conduct**

Please check the box to confirm that you acknowledge receipt, review, and acceptance of the Virtual Attendee Code of Conduct. As an A’21 MN Conference on Architecture attendee, you are agreeing to adhere to the Virtual Attendee Code of Conduct. Please follow the link to review: https://www.aia-mn.org/wp-content/uploads/Virtual-Attendee-Code-of-Conduct.pdf. Any violation of the Virtual Attendee Code of Conduct will result in revoking of your virtual meeting access with no refund. We thank you for respecting your colleagues and peers.

**Yes, I’d like to make a donation to the Minnesota Architectural Foundation** and invest in the Excellence, Leadership, Discovery, and Equity in the profession of architecture.

- $20
- $50
- $100
- Other Amount:

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**Total Amount Due $**

**Method of Payment** (Check one.)

- Check (enclosed) \- MC
- Visa
- AmEx
- Discover

Account Number: Exp. Date: CVV/CID:

**Name on Card:**

(If different from attendee.)

**Note:** If emailing or faxing this registration form, please leave the credit card fields blank and call us at (612) 338-6763 with specific information.

**Member Rates**

Members of the following organizations may register at the Member rate: AIA, ACEC, AGC, APA, ASID, ASLA, AWI, BOMA, CHSA, CMAA, CSI, IALD, IFDA, IFMA, IIDA, IMI, MSPE, NOMA, PAM, SAH, SDA, SLUC, SMPS, ULI, USGBC

**Conference Registration Cancellation/Refund Policy**

Cancellations requests must be received in writing on or before October 25, 2021. E-mail or fax your request to: allardyce@aia-mn.org; fax: 612-338-7981. Cancellations received by October 25, 2021 will receive a refund minus the $50 processing fee. No refunds are available after October 25, 2021. Contact Amber at AIA Minnesota, 612-338-6763 or allardyce@aia-mn.org with any questions.

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**STEP 3: CHOOSE YOUR EVENTS**

Enjoy up to four days of events during the Conference. Please indicate on pages 2–4 which events you plan to attend.

**Wednesday, October 27**

8:00 a.m. – 8:15 a.m.

- DI-1. Welcome and Convening Remarks

8:30 a.m. – 10:00 a.m.

- DI-2. Mentoring Reimagined
- DI-3. Student-Centered Health Science Education Facility Design
- DI-4. Enclosure Detailing: Balancing Performance and Aesthetics
- DI-5. What Contractors Wish Architects Knew About Aluminum Framed Fenestrations
- DI-6. Creating Net-Zero Missing Middle Housing in Minneapolis

10:00 a.m. – 10:30 a.m.

- DI-7. Virtual Exhibit Hall

10:30 a.m. – 11:45 a.m.

- DI-8. Hybrid Practice: Are You Ready?
- DI-10. Using Passive House to Achieve the AIA 2030 Commitment in Commercial and Large-Scale Buildings
- DI-12. Page Street House #1: Intersection of Net Zero, Equity, Affordability

11:45 a.m. - 12:00 p.m.

- DI-BREAK. Break time with GRAEF

12:30 p.m. – 2:00 p.m.

- DI-13 Keynote Address: Design is Ceremony

2:00 p.m. – 2:30 p.m.

- DI-14. Virtual Exhibit Hall

2:30 p.m. – 3:30 p.m.

- DI-15. Understanding Pandemic Impacts on Architectural Practice
- DI-17. Wenshall Residence: Case Study
- DI-18. Interrupting Abusive Behavior in the Workplace

3:30 p.m. – 4:00 p.m.

- DI-19. Networking Social

REGISTRATION FORM CONTINUES ON NEXT PAGE >
Wednesday, November 3
8:00 a.m. – 8:15 a.m.
☐ D2-20. Welcome and Convening Remarks

8:30 a.m. – 10:00 a.m.
☐ D2-21. Fire Service Features of the State Fire Code
☐ D2-22. Local Lessons from the COTE Top Ten
☐ D2-23. Fabric’s Advantage for Shade Systems: Reducing Carbon Footprint
☐ D2-24. Women in Architecture Networking Breakfast: Combatting Racism in the Built Environment
☐ D2-25. Toward a Mass Timber Agenda: House in A Garden

10:00 a.m. – 10:30 a.m.
☐ D2-26. Virtual Exhibit Hall

10:30 a.m. – 11:45 a.m.
☐ D2-27. Minnesota Amendments in the 2020 MN Accessibility Code
☐ D2-28. Honor Award Jurors Show Their Work
☐ D2-29. NYC Decarbonization Planning Over Future Decades: A Case Study
☐ D2-30. A Breath of Fresh Air: Health, Wellness, and Resilience for Persons and Place
☐ D2-31. Keys to a Net-Zero Energy Home

12:30 p.m. – 2:00 p.m.
☐ D2-32. Keynote Address — Community as Corporation: Talent-Retention in Low-Status America FREE Program

2:00 p.m. – 2:30 p.m.
☐ D2-33. Virtual Exhibit Hall

2:30 p.m. – 3:30 p.m.
☐ D2-34. Energy Code Compliance: Paths and Case Studies
☐ D2-35. Constructing Architectural Ecologies
☐ D2-36. Top 10 Ways to Reduce Concrete’s Carbon Footprint
☐ D2-37. Building Bridges to Design and STEAM Careers for BIPOC Youth in Minnesota
☐ D2-38. Rotting Roofs: Causes, Mitigation, and Code Requirements

3:30 p.m. – 4:00 p.m.
☐ D2-39. Networking Social with SagePresence

Wednesday, November 10
8:00 a.m. – 8:15 a.m.
☐ D3-40. Welcome and Convening Remarks

8:00 a.m. – 10:00 a.m.
☐ D3-41. Ethical Leadership for Today’s Complex Business Environment

8:30 a.m. – 10:00 a.m.
☐ D3-42. The Adjacent Possible: Thinking Like A Generalist
☐ D3-43. Tolerance, Technology, and Trade Gap
☐ D3-44. Planning for Resilience in a Climate-Changed World

10:00 a.m. – 10:30 a.m.
☐ D3-45. Virtual Exhibit Hall

10:30 a.m. – 11:45 a.m.
☐ D3-46. Establishing a Culture of Risk Management
☐ D3-47. A Guide to Landscape Lighting
☐ D3-49. History, Hurdles and Hope: Developing a Multi-Sector Change Agenda to Create 21st Century Development
☐ D3-50. Project Team Perspectives on LBC Petal Certification

12:30 p.m. – 2:00 p.m.

2:00 p.m. – 2:30 p.m.
☐ D3-52. Virtual Exhibit Hall

2:30 p.m. – 3:30 p.m.
☐ D3-54. 2+2: Empathy in Design
☐ D3-55. High-Performance Embodied Carbon: Leveraging Data to Define Targets
☐ D3-56. Benefits and Function of Automatic Slide and Swing Door Systems

3:30 p.m. – 4:00 p.m.
☐ D3-57. Networking Social

REGISTRATION FORM CONTINUES ON NEXT PAGE >
### Thursday, November 11

#### 8:00 a.m. – 8:15 a.m.
- D4-58. Welcome and Convening Remarks
- D4-59. Creating a Well Crafted Building Code Analysis (From Both Sides of the Aisle)
- D4-60. Transforming Public Spaces: Water Works at Mill Ruins Park
- D4-61. Social and Ecological Design Process and 21CD
- D4-62. Lifecycle Data Solutions for Architects: Transforming the Norm
- D4-63. Navigating Architect Licensure: NCARB, the ARE, and You [FREE Program](#)

#### 10:00 a.m. - 10:30 a.m.
- D4-64. Virtual Exhibit Hall

#### 10:30 a.m. - 11:45 a.m.
- D4-65. The Post-Pandemic City
- D4-66. The Restoration Process of Bowman Hall
- D4-67. AIA 2030: 10 Years to Net Zero
- D4-68. Business Intelligence for Data-Driven Design, Construction, and Operations
- D4-69. Equitable Design: Building for Disability Differently

#### 12:30 p.m. - 1:30 p.m.
- D4-70. Deconstruction and Building Material Reuse in Minnesota
- D4-71. Pathways to SB 2030: Three Minnesota Case Studies
- D4-72. The Augmented Reality of Chickens
- D4-73. Interrupting Abusive Behavior in the Workplace

#### 1:30 p.m. - 2:00 p.m.
- D4-74. Virtual Exhibit Hall

#### 2:00 p.m. - 3:30 p.m.
- D4-75. Member Congress [FREE Program](#)

#### 3:30 p.m. - 4:00 p.m.
- D4-76. Networking Social