**Summer MiAPPA Conference 2022**

**Presentation Summary**

1. **Physical Plant and Building Performance Issues**

Miller Canfield Attorneys and Allana, Buick and Bers, Forensic Engineers pool their experience and offer how to best prepare for and handle concerns with new improvements; from building envelopes to the most complicated “smart” systems. Once your product is delivered, complex warranties and other claims periods often frustrate the resolution of significant issues with building and system performance and the financial close out of change orders and allowances. Time deadlines abound, insurance coverage can complicate, if not drive decision making and the myriad of techniques, from mediation to arbitration, do not always invite the proper parties to the table for the most efficient resolutions. Learn to “navigate the swirling waters” of those first few years of ownership and operation; preserving for the owner all possible options leading to successful resolutions.

Presenters:

James Spurr, Esq., Miller Canfield

Kim Allana, Allana Buick & Bers

1. **Overcoming Facility Operations Challenges Through Technology: Building**

**Intelligence, Knowledge Continuity, and Emergency Response Planning**

*What to look for when considering a technology solution*

There are many challenges faced when managing one facility. Those challenges are

magnified exponentially when multiple facilities are in play, especially when considering

the scope and scale of higher education campuses. From day-to-day operational tasks,

to recurring or emergency maintenance, to planning for emergency scenarios, facilities

managers are faced with a near-continuous set of challenges in an environment where

resource availability and personnel turnover can hamper even the most experienced

staff.

With these factors in mind, consider the immense value of the ability to view – remotely,

from a smart phone, tablet, or laptop - infrastructure details, established operations and

response plans, and key contacts for any or all of the facilities on campus.

*When trying to determine what’s best for your organization, this presentation is*

*designed to show you the available tools in the marketplace and educate our*

*audience on what key features you may want to consider when deciding which*

*direction to take your organization.*

By providing quick and intuitive access to on-the-ground knowledge during routine

daily operations, disaster scenarios, or even property loss, mobile technology is

instrumental in helping organizations and their key staff to actively manage and stabilize

incidents when every second counts.

Presenters:

Jim Thams, Director of Facilities and Campus Planning, Northern Michigan University

Matt Wandrie - General Manager, BELFOR Alert

**3. Health, Healing, and Hope: A higher Ed P3 delivery with alignment of a university’s mission to attract partners and a developer’s appetite for risk & innovation**

Michigan State University established a College of Human Medicine presence in Grand Rapids in 2010 with the mission to bring “health, healing, and hope” for health care innovation with partners in Grand Rapids and across the state of Michigan. Wishing to enhance the college’s impact and to augment biomedical research work being done at its Grand Rapids Research Center, MSU set its sights on the development of an innovation research park to drive the

commercialization of the research with clinical, engineering, manufacturing, and investor collaborations. To address a limited institutional resource environment, MSU turned to P3 Development as the answer. MSU would not be the master lease holder of the development so the Developer would need to accept the risk of for managing the occupancy for the

project. Topics of this discussion will include the Mission of the College, why a Private Public Partnership was selected as a delivery method, how partnerships were developed and how the project was executed. Current Grand Rapids Innovation Park occupants include Michigan State University, Spectrum Health, City of Grand Rapids Smartzone innovation space, precision health provider BAMF Health and the pharmaceutical giant Perrigo.

Presenters:

Richard (Dick) J. Temple, Assistant Vice President for Real Estate and Capital Planning, Michigan State University

Nick Salowich, Principal, Science & Technology Leader, SmithGroup

1. **Nanobubbles: A Water Quality Hero for Your Facility Maintenance Adventures**

What villains are plaguing the water systems in buildings on your campus? Calcium buildup? Biofilm growth? Pressure drops? The high cost of chemicals and energy use? Give your facilities team a new superpower to attack these challenges with nanobubble technology. Attendees will learn:

* The science behind nanobubbles – what they are and why they matter.
* Where nanobubble technology can save costs on campus – from equipment maintenance, heat transfer efficiency, chemical costs and more.
* How to add nanobubbles to different water systems: domestic hot water, cooling towers, boilers, process water and others.
* How Western Michigan University solved a major domestic hot water problem with a nanobubble pilot program – preventing more than $17,000 annually in equipment cleaning costs at a single student housing building.
* Additional real-world examples where nanobubbles saved the day (no cape required).

Presenters:

Stephan Macomber, Supervisor in Maintenance Services, Western Michigan University

Rick Atkins, Director of Business Development, Rapid Water Technologies

1. **Adventures in Analytics – Embracing your data for healthy & efficient buildings!**

Are you using and getting the most out of the energy data and technologies in buildings that you already own? Come along with us on an adventure and open discussion how Commissioning and integrated software helped Western Michigan University maximize the use of Monitoring Based Commissioning (MBCx) to better understand their existing infrastructure, improve operations, and find measurable energy savings. We will explain the methods implemented, gain insight from WMU’s perspective and value, and how a simple processes and tools were used to find annual energy savings (lowering operational costs) and also identified operational issues. Through real-life examples, we'll discuss and reveal how MBCx and Energy Management Information Systems (EMIS) can help you find the unseen energy losses and thermal comfort issues in your building. How do you plan on starting your adventure in energy data analytics for a healthier and more efficient building?

Presenters:

DeVon Miller, Building Commissioning Specialist, Western Michigan University

Mike Hodgkinson, Associate Group Leader, db|HMS

1. **Moving Your Campus Towards Net Zero and Carbon Neutrality: Things to Know Today and Tomorrow**

Net Zero buildings play an increasingly important role in meeting institutional sustainability goals, though the definitions of "Net Zero" are as varied as the architectural and engineering solutions used to achieve it. Decisions made during the design of your first Net Zero or De-Carbonized building can affect the sustainable construction strategies of a campus for decades.

Attendees will learn about:

* Defining what Net Zero actually means to your organization
* How Net Zero building philosophy differs from LEED
* Generating and using de-carbonized heating hot water
* Cold climate effects on heat pumps and geothermal fields
* How utility costs may affect design decisions
* Quantifying end-user impacts on Net Zero performance

Presenter:

Aaron Frantz, PE, Peter Basso Associates

1. **The Midyear Transition: Opening New Residence Halls Throughout Phased Construction**

In 2016, Northern Michigan University partnered with Greystar to embark on a two-year, $80 million, 1229 bed construction project intended to replace their aging residence hall facilities in three phases. Each phase presented its own challenges, including the logistics of assigning and moving over 300 students in the middle of winter, working without a permanent front desk operation, providing 24/7 maintenance response out of a temporary trailer, and coordinating the demands of ongoing construction. Many of these challenges took on new life at each stage of the project; for example, operations that worked at move-in for the new buildings in Fall 2017 needed to be adapted for new challenges at move-in in Winter 2018, and then tweaked again for move-in in Fall 2018. The NMU Housing and Greystar team successfully navigated these challenges as a result of creative problem-solving, collaboration, and a commitment to cultivating a positive student experience.

Learning Outcomes

* Participants will be able to identify successful strategies for facilitating a midyear move.
* Participants will learn considerations for operations and occupied facilities while working with construction.
* Participants will learn ways in which universities and public-private partnerships can work together to create a cohesive, student-centered approach to operations.

Presenter:

Jeff Korpi, Director of Partnerships and Events, Northern Michigan University

**8. Space Planning - Tools, Best Practices & Current Trends**

Space is one of the largest, most valuable assets of any university and it is increasingly expensive to build, operate and maintain. The costs related to this asset coupled with the enrollment struggles that most Michigan colleges and universities are experiencing is forcing higher education to take a critical look at how they utilize and assign existing spaces, plan for a new building or, in some cases, demolish facilities.

In this session, the presenters will review the practical application of space utilization used by Northern Michigan University as a planning tool, review best practices to understand how space is being used and optimized, look at specific policies, procedures and tools that can be helpful in this effort and review national trends and emerging issues related to space utilization and design.

Presenters:

Jim Thams, Director of Facilities and Campus Planning, Northern Michigan University

Steve Schonberger, AIA, SmithGroup Principal in the Campus Strategy & Analytics studio

Doug Kozma, PLA, ASLA, SmithGroup, Vice President and Director of National Campus Practice

**9. Navigating the Decarbonization Journey through Resilient Campuses**

Through this presentation and panel discussion, attendees will be better equipped to identify where their institution is on its unique decarbonization journey - covering the steps of the journey to Net Zero that extend well beyond baselining and planning, with a focus on executing and financing.  Looking at making campus infrastructure energy efficient, operating sustainably, distributed energy resources and renewable energy supply options, both offsite and onsite (e.g. solar, EV charging and battery storage with Grid Interactive Optimization).  Presentation includes a panel conversation with higher education and municipal leaders to uncover the questions to ask when considering upgrades, and to explain with industry examples how a different way of thinking can help higher education institutions fund green, future-ready projects that will support efforts to attract and retain students, faculty and benefactors.  Attendees will walk away with concrete next steps that can be applied to make real progress towards their own decarbonization and efficiency targets.

Learning objectives include:

* Describing the eight steps along the nonlinear journey to Net Zero – from goal setting all the way to certifying and recognizing impact
* Understanding how other institutions have determined the most favorable format of decarbonization work on campus, considering factors such as risk tolerance, debt capacity, regulatory requirements and public ESG commitments
* Identifying technology solutions that can be employed in support of decarbonization and energy independence efforts
* Determining how combining innovative financing approaches can achieve campus sustainability and resilience goals

Presenters:

Kathy Richards, PE, CEFP, Northern Michigan University

James Rosner, PE, CEM, Johnson Controls, Inc.

Jaime Paris Boisvert, CEFP, Johnson Controls, Inc.