CCHRB 2016 Spring Seminar
Chicago, Illinois
Tuesday, April 26, 2016

What: **"The Rise of the Urban Hospital: High Rise Healthcare Facilities for the 21st Century"**

Healthcare facilities are among the most complex building types to plan, design, construct and operate; and high rise hospitals offer intense challenges to the architect, contractor and owner. Unique concerns permeate the design and planning process – they coalesce to create a complex design and construction project of the highest magnitude.

Healthcare facilities are among the most complex building types to plan, design, construct and operate; and therefore they confront owners, design professionals and builders with a variety of intense and dynamic challenges. Unique concerns permeate the design and planning process – they coalesce to create a complex design and construction project of the highest magnitude.

It is well known that Chicago has been a world knowledge center of the planning, design, construction and operation of high rise office and residential; and that it pioneered and continues to be a leader in mixed use high rises. What is less well known is that in the last several decades Chicago has become one of the foremost leaders in high rise healthcare facilities; home of several of the tallest healthcare facilities in the world. In addition, he design and construction professionals here have significant roles in the completion of several others around the globe. The continued urbanization in developed and industrializing nations, and increasing focus on healthcare make these one of the most dynamic high rise building types. The Chicago Committee on High Rise Buildings has prepared a deeply informative and entertaining seminar to facilitate a discussion and as a catalyst for further research into the challenges of High Rise Healthcare Facilities.

This half day seminar will provide an informative overview of the major issues that challenge project designers, constructors and healthcare administrators for major high rise healthcare facilities, and will review some of the responses to those challenges by leaders in the design, construction and healthcare facilities community.

Who Should Attend: Anyone involved in the economic planning, design, construction and operation of large healthcare facilities of all types and heights, but especially high rises; both within the United States and elsewhere. This includes facilities managers, healthcare executives, developers, building owners, architects, interior designers, engineers, contractors, and subcontractors.

Date: **Tuesday afternoon, April 26, 2016. This afternoon event is planned to accommodate morning travel to Chicago and the potential of return-home evening travel, by out-of-town attendees.**

Time: **12:15 PM** Check in of attendees begins. Please bring a photo ID and allow adequate time to go through Building Security.

Program will start promptly at 1:00PM, and will conclude at 5:00PM

Location:

Harris Bank Auditorium
3rd Floor, Harris Bank Building
115 South LaSalle Street
Chicago, Illinois

The venue is generally accessible, however please contact matthew.kuhl@perkinswill.com if additional assistance is required.

Cost:

Includes coffee break

Registration

$150.00	Members of CCHRB or of a co-sponsoring organization
$175.00	Non-members
$50.00	Students [Student identification will be required at the check-in desk].

Large Firm Discounts of 5 tickets for the price of 4 are available.
Discount is payable only by check, and must be received before April 1st, 2016. All fees and registration deadlines noted above will apply.

Sponsor:

CCHRB: http://www.cchrb.org/index.html

Co-sponsors:

FOR OUTSIDE CCHRB: Co-sponsoring organizations are currently being confirmed, and will be identified here as they are added. See the CCHRB website for the current list.
FOR CCHRB WEBSITE:
Co-sponsoring organizations continue to be added as they are confirmed. Please check back later or contact CCHRB regarding potential co-sponsoring professional organizations not listed here:

On-Line Registration:

Online registration is available at http://www.cchrb.org/~shop/main.html

Mail-in Registration:

Forms for registration by mail and large firm discounts (with payment by check) can be downloaded at the link above or found at the end of this announcement Mail-in registration must be postmarked no later than April 1, 2016.

Additional Information:

Mr. Robert Grupe, CSI (312-371-7897)
Mr. Matthew Kuhl, AIA, matthew.kuhl@perkinswill.com

Continuing Education:

Four hours of HSW continuing education credits are available for members of AIA. A certificate for 4 hours of continuing education will be provided upon request for others. A handout will be available with reporting directions, or information will be found on the CCHRB Website at http://www.cchrb.org/2016-Seminar.html

Speakers and Presentations:

"Why a High Rise Healthcare Workshop", Doug King; Principal; VOA Associates, Incorporated; Chicago, IL.

"The Urban Healthcare Market: Where It is At, and Where it is Going"; Harris Meyer; Senior Reporter, Modern Healthcare Magazine; Chicago, IL.

"Code Impacts on High Rise Healthcare Facilities", Doug Erickson; CEO, Facilities Guidelines Institute; St. Louis, MO.

"Elevatoring Solutions in High Rise Healthcare Facilities", Jay Popp; Executive Vice President; Lerch-Bates, Inc., Chicago IL, Littleton CO. and Shanghai, China

"The Devil is the Details: Avoiding Problems in Exterior Enclosure Systems of Healthcare Facilities"; Wei Lam, Associate Principal; Wiss, Janney, Elstner; Boston, MA.

"HVAC and Technology Challenges in the High Rise Healthcare Environment", Mehdi Jalayerian, Executive Vice President and Chief of Innovation, ESD: Environmental Systems Design; Chicago, IL.

"Round Table Discussion", A panel discussion and Q&A session of all presenters moderated by Doug King and Harris Meyer

Schedule:

12:15 PM:	Commence Registration
1:00 PM:	Welcome – Kim Clawson, CCHRB Chair, Matthew Kuhl, CCHRB Seminar Task Force
1:15 PM:	Opening Remarks – "**Why a High Rise Healthcare Workshop?" –** Doug King
1:30 PM:	Opening Speaker - "**The Urban Healthcare Market"** – Harris Meyer
1:50 PM:	Presentation 1- "**Codes Impact on High Rise Health Care Facilities" –** Doug Erickson
2:30 PM:	Presentation 2- "**Elevatoring Solutions in High Rise Healthcare Facilities** – Jay Popp
3:10 PM:	Coffee Break
3:20 PM:	Presentation 3- "**The Devil is in the Details" –** Wei Lam
4:00 PM:	Presentation 4- "**HVAC, MEP, & Technology Challenges in High Rise Hospital Settings" –** Mehdi Jalayerian
4:20 PM:	Round Table Discussion and Q+A
5:00 PM:	Conclusion

DETAILED DESCRIPTIONS OF PRESENTATIONS AND PRESENTERS:

Opening Remarks: **Mr. Doug King**
Principal, VOA Associates, Incorporated

This presentation will provide an overview of the many issues that a design and construction team would encounter in the development of a high rise healthcare project. As the first conference dedicated to this topic, an overview of the many issues is necessary to provide a context for the vast array of opportunity for further research on this topic. This presentation will also provide a brief history and context of where the tallest and most complex hospitals have been erected, as a frame of reference, and briefly address issues to be encountered such as unique building siting considerations, healthcare planning, structural grid design, vertical transportation selection, exterior wall envelope, MEP Systems routing and construction phasing. Sustainable opportunities will be explored in the context of the hospital as a "responsible citizen" within the urban habitat.

Douglas King AIA CSI NCARB ACHA is a Principal with the global architecture, design and planning firm VOA Associates Incorporated, in their Healthcare Practice Group. Doug leads pursuit work for Federal Healthcare Projects and domestic healthcare assignments. He recently launched a blog series on VOA.com/blog focused on the challenges of High Rise Healthcare Design. These series of blog posts has been picked up by national industry magazines for distribution.

As the coordinating Project Architect on the NMH Feinberg Galter Pavilion (2.1 million SF, $732 million in 1994) and the Prentice Women's Hospital (945,000 SF, $330 million), Doug had an opportunity to influence the design of taller healthcare structures which have followed in the Chicagoland area. It is important to note that the NMH Feinberg Galter Pavilion is an "Icon" project designated by the AIA Academy for Health as one of the most influential hospitals ever built. Additionally the team won an international teaming award – the Fiabci Prix Award.

Doug has had significant leadership roles on Feinberg Galter, Prentice and other large scale healthcare work, which has honed his expertise in the design of high rise healthcare design projects, nationally and internationally. An example of acknowledgement of Doug's expertise is that he was a keynote speaker at the Arab Health Congress in 2008 on "Large Scale Healthcare Projects."

Opening Speaker: **Mr. Harris Meyer**
Senior Reporter, Modern Healthcare Magazine

Harris Meyer Harris Meyer has covered healthcare and law since 1983. He served as managing editior of Modern Healthcare from 2013 to 2015, and is now Senior Reporter, providing news and analysis on a broad range of healthcare topics. He has previously served as a freelance writer for Health Affairs, Kaiser Health News, the Oregonian, Medscape and other publications.

In addition, he previously served as law editor at the Daily Business Review in Miami; a staff writer at the New Times alternative weekly in Fort Lauderdale, Fla.; senior writer at Hospitals & Health Networks; national correspondent at American Medical News; and health unit researcher at WMAQ-TV News in Chicago.

Meyer has a bachelor's degree in communications from Northwestern University. In 2000 he was a winner of the Gerald Loeb Award for Distinguished Business and Financial Journalism. He joined Modern Healthcare in 2013.

Presentations by: **Mr. Doug Erickson**
CEO, Facilities Guideline Institute

Presentation #1
Codes Impact on High Rise Health Care Facilities

The world of health care codes and standards is sometimes like an alligator pit and it needs to be navigated with caution. In urban settings where land is a premium and the health care facility becomes a high rise it becomes even more complicated. The ability to functionally layout patient spaces that have good adjacencies, vertical transportation issues, use of lower levels for retail (mixed occupancies), fire protection, emergency response, exterior acoustics, etc. are all more difficult in a horizontally challenged environment. This session will take a high level look at the major standards impacting high rise health care facilities and some of those challenges that need to be overcome in design.

Doug Erickson provides expertise in healthcare facilities planning, design, and construction with more than 40 years of industry experience, including experience as a healthcare facility manager, consultant, an authority having jurisdiction, and the principal advocate representing the American Hospital Association (AHA)/American Society for Healthcare Engineering (ASHE) membership on national codes, standards, and built environment committees. He is a member of ASHE, the National Fire Protection Association (NFPA), and the American

Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE).

Doug has represented AHA/ASHE membership on over 15 NFPA Technical Committees in the course of the past 26 years and is the immediate past chair of NFPA 99 (*Health Care Facilities Code)* and NFPA 110 (*Emergency Power Supply Systems*.) Doug is also the chair of the Clinical Subcommittee of ASHRAE Standard 170 (*Ventilation in Healthcare Facilities).* He is a past chair of the NFPA's Health Care Section and served on the NFPA's Standards Council. He also served on the Joint Commission's Committee on Healthcare Safety for over 10 years.

Doug currently serves as the CEO of Facility Guidelines Institute (FGI), a not-for-profit organization responsible for producing the Guidelines for Design and Construction of Health Care Facilities and whose mission is to produce consensus-based guidelines in healthcare. He is a founding board member of FGI and has had a leadership position with the Guidelines since 1985 and a committee member since 1978. Doug currently chairs the 2018 edition and was the chair of the 2014 and 2010 editions and vice-chair of the 1987, 1992/92, 1996/97, 2001 and 2006 editions. Doug is also a senior advisor to Specified Technologies, Inc., the premier firestop authority, providing consultation and strategic leadership on the health care built environment.

Doug earned his Bachelor of Science in aerospace engineering at the University of Illinois/Champagne-Urbana and is the past Deputy Executive Director of ASHE, Director of Planning, Design and Construction for the AHA, and the Director of Engineering for the Joint Commission in Chicago, IL. He is a featured speaker at national and local conferences on health care facility codes, standards, guidelines, and environmental infection control. Doug was also selected for ASHE's highest membership award in 2013 – The Crystal Eagle.

Mr. Jay Popp
Executive Vice President, Lerch Bates, Inc.

Presentation #2
Elevatoring Solutions in High Rise Healthcare Facilities

High Rise Healthcare adds additional constraints on the performance of the various elevator groups over traditional low and mid-rise facilities. In particular meeting the required performance requirements placed on In – Patient elevators between the Bed Wards, OR's, ICU's, etc. as well as todays' requirements for patient care requiring larger Trauma elevators become more stringent. Segregation of traffic types of the different user groups (In-patient circulation, Staff, Logistics, etc.) to specific elevator groups together with the proper location(s) of these elevator groups is essential to efficient operation of the hospital. This session will highlight the basics of high rise hospital elevator design, the general requirements of the various stakeholders and their impact on elevator performance along with advanced elevator technologies available including multi – car solutions.

Jay Popp is the Executive Vice President International for Lerch Bates, Inc. whose global headquarters is located in Littleton, Colorado. He is responsible for the oversight of International and major projects for Lerch Bates, Inc. and has been involved in the design of the elevator and escalator systems for some of the most prestigious buildings worldwide. He has spent the majority of the past two years helping to establish Lerch Bates' newest office in Shanghai, China.

Jay has been widely published in Elevator World, Facilities Management, High Rise Facilities, Building Operating Management, and Archi-Tech among others. He has been a member of CCHRB since 2013 and is also a member of the ASME A17.1 International Standards Committee, the ISO TC178 WG6 committee, the NEII Performance Standards Committee, and the Elevator World Technical Advisory Group.

Mr. Wei Lam
Associate Principal, Wiss, Janney, Elstner Associates

Presentation # 3
The Devil is in the Details

Control of building pressures in high rise buildings relies on developing adequate compartmentalization and achieving excellent separation between the interior and exterior environments. This is especially true in severe climates where the difference between interior and exterior temperatures contributes to stack pressure dominated building pressure issues. The importance of building enclosure air tightness will be discussed with examples of some specific high rise details and conditions—some that work and some that don't. Examples of air barrier system continuity at transitions, entrances, and penetrations will be presented. The presentation will conclude with a discussion on the relevance, feasibility and importance of whole building air leakage testing as part of a building enclosure commissioning (BECx) process.

Wei Lam is an Associate Principal with Wiss, Janney, Elstner Associates (WJE) in their Boston, Massachusetts office. He brings over fifteen years of dedicated experience in building enclosure and building science consulting. Mr. Lam's experience has focused on specifying, designing and verifying the performance of building enclosures with respect to their control and response to environmental loads. At WJE, Mr. Lam provides hands-on leadership and knowledge related to building enclosure related investigations, peer reviews,

commissioning, hygrothermal analysis, system performance evaluation, and diagnostic testing. He regularly consults on a wide variety of building types, including major hospital, university, laboratory, museum, high rise condominium, hotel, and office building projects throughout the United States. Wei is a registered professional engineer and an active member of ASHRAE and the Building Enclosure Council in Boston.

Mr. Mehdi Jalayerian, PE
Executive Vice President & Chief of Innovation, ESD, Chicago

Presentation # 4
HVAC, MEP, & Technology Challenges in High Rise Hospital Settings

High rise hospital settings require a new way of thinking when it comes to the building system infrastructure design, construction, and operations. Challenges stem from a desire of hospital operators to minimize operating costs, provide a healthy, reliable and productive environment for their staff and patients, and navigate governmental regulations and the changes technology are driving. From building envelopes to the equipment needed to provide the latest advancements in care to their patients, all of a building's systems impact the design of infrastructure systems for modern high rise healthcare structures.

Topics to cover:
- Current trends in healthcare HVAC design and how they are applied in a healthcare setting.
- Differences between typical high rise design and construction with the design and construction of healthcare high rises.
- Research opportunities to incorporate the most appropriate infrastructure system design solutions for future healthcare high rise structures.

This presentation will examine why we need to rethink our approach to hospitals as it relates to long-term benefits for society as a whole and offer attendees a broader perspective for consideration relative to urban high-rise hospital development. CCHRB member Mehdi Jalayerian, will present best practices to consider according to the challenges in the design of high rise hospitals– providing attendees with insight gained through 20+ years of personal experience designing building systems for high rise hospitals.

Mehdi Jalayerian is known for his contributions to the built environment by leading design and consulting services for major super-tall and high-rise buildings, assembly venues, convention / hotel facilities, mission critical facilities, healthcare, education / government and central cooling / heating / electric plants, and projects throughout the world. Mehdi hold Master of Science Degree in Mechanical Engineering from University of Kansas and is Registered Professional Engineer in 10 states. Mehdi has received eight ASHRAE Excellence in Engineering and Technology awards, an Illinois Engineering Council award, and a Chicago Building Congress Award for his projects and has completed numerous LEED Certified projects.

He has published and presented several articles pertaining to integrated mechanical design with a focus on sustainable and high performance design, system operational flexibility and building life safety and phased occupancy planning, and is major contributing author of ASHRAE Design Guild for Tall, Supertall and Mega Tall Buildings. He is a member and chairman of the Energy and Sustainability task force at the Chicago Committee on High Rise Buildings, and has served as Adjunct / Research Professor for the Illinois Institute of Technology (IIT) Department of Architecture and on the Advisory Group for the Council on Tall Buildings and Urban Habitat (CTBUH). Mr. Jalayerian has over 30 years of experience in HVAC and sustainable design practice, during which he has been responsible for building system design for numerous worldwide projects including many high rises and supertall buildings such as Sir H.N. Hospital in Mumbai, Trump Tower in Chicago, Kingdom Tower in Jeddah, KSA and the world's first positive energy large scale building known as Masdar Headquarters in Abu Dhabi, UAE.

Mr. Doug King - Moderator
Principal, VOA Associates, Incorporated

Mr. Harris Meyer – Co-Moderator
Editor, Modern Healthcare Magazine

Mr. Doug Erickson - Panelist
CEO, Facilities Guideline Institute

Mr. Jay Popp - Panelist
Executive Vice President, Lerch Bates, Inc.

Mr. Wei Lam - Panelist
Associate Principal, Wiss, Janney, Elstner Associates

Mr. Mehdi Jalayerian, PE - Panelist
Executive Vice President & Chief of Innovation, ESD, Chicago

Presentation # 5
A Round Table discussion of Panelists

Notes:

The Chicago Committee on High Rise Buildings (CCHRB) is a not-for-profit organization founded to investigate problems or enhancements; support research and disseminate information for economic design; construction; operation and rehabilitation of high rise buildings. Its members are experienced and skilled in the design, construction and operation of high rise buildings. CCHRB was formally established in 1969, reportedly making it the first organization in the world established to specifically advance knowledge of high rise buildings.

Proceeds from this annual Half-Day Seminar help fund the Chicago Committee on High-Rise Buildings (CCHRB) Scholarship program. This $5,000 yearly scholarship supports Graduate students and highly qualified senior and junior-level undergraduates at any college or university with an alumnus who serves as a member of the CCHRB, provided the student's area of study is directly related to some aspect of the design, construction, operation and/or rehabilitation of high rise buildings. Applicants must submit an essay or proposal, and demonstrate academic achievement, community service, extracurricular activities and financial need.