

Building Enclosure Commissioning - High Performance Buildings

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ABSTRACT

Building occupants now require more from buildings; energy efficiency, precise temperature and humidity control, no tolerance for condensation or mold, indoor air quality, and more. To meet these needs, a well designed and constructed building enclosure is critical. Building Enclosure Commissioning is an effective way to achieving a durable/energy efficient building with a healthy indoor environment for occupants.

While commissioning of many building systems has been around for many years, Building Enclosure Commissioning (BECx), is relatively newer to the design and construction industries. This presentation will provide an outline on the practice of BECx and its benefits with real world case studies. It will begin by walking through the fundamental building science principles pertaining to heat and moisture movement through building enclosure assemblies, as well as describe the function and order of importance of the primary environmental control layers (water, air, vapor and thermal). The building science principles will serve as foundation for understanding anticipated building performance and what is expected for high-performance buildings today while comparing to what was required historically.

The presentation will then dive further into the various approaches like ASTM E2813, specifically Fundamental and Enhanced Commissioning, focusing on the various activities performed during each construction phase. Each stage of the BECx process will be thoroughly described including the typical deliverables produced (e.g. BECx Plan/Record, BECx specifications examples, design peer reviews, construction observation, item tracking log, functional performance testing, etc.).

20th Annual New York State Green Building Conference

March 31 to April 28, 2022

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BIOGRAPHY

With over 14 years of engineering experience, **Adam Ugliuzza** focuses has been in building enclosure consulting and commissioning, working across the United States and abroad providing professional building enclosure consultation in both commercial and residential construction. Adam is also active in many industry associations including Air Barrier Association of America (ABAA), Passive House Institute US (PHIUS), Building Commissioning Association (BCxA), and more. Through this industry work, Adam has co-authored numerous technical papers, guidelines and standards such as the ABAA, Standard Method for Building Enclosure Airtightness Compliance Testing. Additionally, Adam manages the Mid Atlantic team of Intertek's Building Science Solutions group, where they strive to continue as industry leaders in building enclosure design consultation and testing.

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