

LEED v4 Building Enclosure Commissioning: Sounds fun....You bet!!

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ABSTRACT

While commissioning of many building systems has been around for many years, Building Enclosure Commissioning (BECx), specifically LEED v4 Enhanced Commissioning, Option 2 Envelope Commissioning, 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 as defined by LEED v4 and other industry standards 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.).

BIOGRAPHY

Adam brings 16 years of engineering experience focusing on building science and the building enclosure construction industry. Discipline expertise includes building enclosure consulting and commissioning services for new and existing construction, in addition to forensic investigations to determine root cause of building performance issues. He also brings industry leading expertise in large building whole building airtightness testing, which is at the forefront of high-performance building construction. Adam continues to work on projects across the United States and abroad providing professional building enclosure consultation in both the residential and commercial space for all types of construction, ranging from multi-family wood/timber framed buildings to high performance institutional/healthcare facilities to high-rise construction. Through this experience, Adam brings a unique approach to building enclosure consulting and testing, concentrating on enclosure interface coordination in design and construction phases of the project that overlays a holistic approach, critical to achieving high performance building construction; the goal to help ensure all the materials, systems, and assemblies are properly connected to provide continuous environmental control. His extensive testing knowledge allows him to be deliberate and methodical in his approach to interweaving functional testing to verify performance. Adam is also active in many industry associations including Air Barrier Association of America (ABAA), Passive House Institute US (PHIUS), Construction Owners Association of America (COAA), United States Green Building Council (USGBC), etc. and has co-authored numerous technical papers, guidelines and standards, fundamental to an industry leading professional.