

## Construction Alliance

November 15, 2019

The meeting was called to order at 7:32 am. In attendance were:

<b>AGC</b>	Jon Danuser, Johnson Controls Denise Hasty, AGC of Missouri Steve Tattitch, Murphy Company	<b>SLCCC</b>	
<b>ACEC/MO</b>	Marc Alper, Alper Audi, Inc. Mike Erdtmann, GBA, Inc. Dana Halladay, WSP Linda Moen, EFK Moen, LLC	<b>IFMA</b>	
		<b>CSI</b>	Greg Zipfel, BJC Const. & Real Est. Services
		<b>AIA</b>	Todd Jacobs, TRJ

### Minutes

Minutes of the September 20, 2019 meeting were approved.

Before proceeding with agenda items, D. Hasty asked that the alliance members discuss the current state of affairs regarding attendance/participation in the Construction Alliance meetings and the viability of the product produced by the Alliance – the Construction Guidelines. Hasty provided detailed information regarding

- Reduced participation by member organizations:
  - IFMA has not had active members in over 5 years
  - AGCMO has experienced a downturn in participation and has struggled to find general contractors available to participate
  - SLCCC participation has also dropped off, with only 1 member currently on the alliance
  - AIA has one current member on the alliance
  - More meetings have been cancelled due to lack of participation in 2019 than in the prior 10 years
- Has the “product” (the Construction Guidelines) run their course after 30+ years? D. Hasty provided website data indicating that between Jan. 1 and Aug. 31<sup>st</sup> the guidelines only received 74 hits and that includes staff hits in updating documents and preparing for meetings. Though AGCMO includes the Construction Guideline of the Month in its newsletter each month, only 5 hits have come to the guidelines from those articles.

Length discussion on these items followed. Members were clear that there is value to them in the discussion and give-and-take on industry topics at these meetings. All agreed that they often leave a meeting having learned something from others’ perspectives. Members discussed issues regarding definition of the real problem and how to move forward. Below is a list of action items (in no particular order):

1. May be a marketing issue of sorts. Develop list of keywords for the guidelines to aid in better search engine results. *[assignee: D. Hasty]*
  - a. Inquiry of IT procedures once a list of keywords is developed. *[assignee: L. Moen]*
2. Develop a brief description of the Construction Alliance and its purpose and product with the intent of each organization utilizing it in newsletters, etc. This document would also be forwarded to ConstructforSTL with the request of it being published in their weekly newsletter. *[assignee: D. Hasty]*
3. Recently, Washington University requested a full set of guidelines. Inquire as to purpose for use. *[assignee: D. Hasty]*
4. Distribute link to all AGCMO Student Chapters in Missouri. *[assignee: D. Hasty]*
5. Reach out to association staff of all entities in Alliance regarding this increased awareness/marketing effort and desire to revitalize the alliance in 2020. *[assignee: D. Hasty]*
  - a. Each Construction Alliance member will also reach to their appropriate association staff to ensure that they understand our efforts. *[assignees: all Alliance members]*
6. Continue with proposed 2020 meeting schedule (from agenda) and re-assess in a year. Poll current Alliance members regarding changing the start of the meeting to 8:00 AM. *[assignee: D. Hasty]*

### **Glossary Terms for Construction Guidelines**

The glossary continues on the agenda for updates at each meeting. No changes were made to the glossary during this meeting.

### **Guidelines under Development**

Items on agenda under this heading were deferred.

### **Updates on Guidelines in Process**

**Inspection of the Construction Project** (G. Zipfel/S. Gantner) – Alliance members made a few minor changes to this document before agreeing it was final and ready for posting on the web. The fully marked-up version is attached. Discussion on this guideline has been extensive, spanning multiple meetings. At a previous meeting, in discussing this guideline, it was decided that a glossary addition “Authorities Having Jurisdiction” and perhaps even “Owner” should be developed. Cary Duchene subsequently drafted these definitions. In this meeting, Alliance members adopted the definition for “Authorities Having Jurisdiction” and it has been added to the Glossary (see marked up version in these minutes). The definition for “owner” was not addressed due to lack of time; it will remain on the agenda for another meeting.

### **Review of Existing Guidelines**

These were deferred until the next meeting.

The meeting adjourned at 9:12 AM.

## INSPECTION OF THE CONSTRUCTION PROJECT

Proper organization of inspection activities benefits all stakeholders.

-Inspection is an important element of the construction process and can reduce the detrimental effects of errors and provide clarifications and misunderstandings for during the fabrication, and installation and operation of the project construction systems. The goal is to confirm the construction is compliant with contract documents.

Inspections may be performed by representatives from the following:

- Public Agency
- Owner
- Third party inspection service
- Design Team

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The inspection services need to be properly organized to be effective. This starts with a clear understanding of the terms used and the role of each of the design and construction team parties.

### Terms:

"Inspection" - refer to Glossary Terms for Construction Guidelines, is the examination of construction activities and products for the purpose of verifying compliance with the construction documents and other project requirements. The Owner normally obtains this service under a direct contract with the Inspection Service that specifically delineates the inspection scope and documentation requirements.

"Observation" - refer to Project Visits and Observations guideline, is the collection of information, visually in most cases, during project walkthroughs. This normally occurs from time to time during the project and is intended to allow a design professional to become familiar with the progress of construction and the general conformance to the design intent.

"Testing" - refer to Testing Services During Construction guideline, is the physical measurement of attributes of the construction products such as strength, density, flow, temperature, system performance etc.

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**Inspection Responsibilities:**

**Owner ~~(and/or Owner's Owner's Third-Party Inspection Agent) Service~~**

The Owner ~~and/or -the~~ ~~third-party independent~~ inspection ~~agent~~ service can ~~provide complete~~ inspection ~~of the work~~ all systems to ~~confirm~~ give the Owner confidence that the project is accurately constructed in accordance with the Construction Documents ~~and applicable codes.~~

The Owner may expand the normal services of ~~one or more of~~ the Design Professionals Team to include more participation in the field up to and including providing inspection services. This can be advantageous to the entire project team since the Design Professionals have ~~a thorough~~ knowledge of the project and are already committed to achieving success.

Different building codes mandate independent inspection ~~for critical portions of the project~~ of much of the (structural work, ~~soils, masonry, etc.~~) ~~to be performed for most commercial projects.~~ ~~The~~ When required the Registered Design Professional, in responsible charge, shall submit a ~~list~~ statement of special inspections ~~identifying the inspection services required, and approved providers as a condition for issuance of the building permit.~~

~~Any deviations from the Contract Documents must be brought to the attention of the Owner, Design Professional and Contractor as soon as practical.~~

**Designer Professional**

On most projects the Designer Professional ~~will will~~ make ~~site visits for observation and may perform~~ inspections, periodic site visits. During these visits which are generally scheduled at intervals appropriate to the "Contractor's operations", the Designer will observe the Work to ensure that it is consistent with the design intent and approximate percentage of completed work. ~~The Designer must advise the Owner of any deviations from the Contract Documents. The Designer will observe the Work to ensure that it is consistent with the design intent and will make prompt written notification of non-conforming work, prompting additional inspection.~~

~~The frequency and nature of these visits does not constitute "inspection". These visits should give the Owner confidence that the intent of the design is being properly installed. Providing "inspection" services would be beyond normal basic services provided by Design Professionals, and may be included as additional services.~~

~~For a more complete description see the Guideline "Project Visits".~~

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**Contractor**

The General Contractor and the Subcontractors have the responsibility are responsible for overall quality, safety and execution of the project, in accordance with contract documents. Contractor shall confirm, coordinate and cooperate with inspection services through completion of the project. Quality Control. The specifications may require some other types of inspection as well.

These inspection efforts vary widely and are not under the control of the Owner or Designer except to monitor their effectiveness from time to time.

**Testing Agency**

The Testing Agency performs the material acceptance and other tests required in the Specifications and any other testing that may be ordered. Many Testing Agencies provide inspection also but only if specifically ordered.

For a more complete description see the Guideline "Testing Services During Construction."

**Public Agencies and/or Authorities Having Jurisdiction**

Public agencies provide inspection services to ensure that regulatory requirements are satisfied.

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**Recommendations:**

The Owner should retain an independent Inspection Agency or expand the services of one or more of the Design Professionals to perform and document complete inspection services.

- This may also include quality assurance services to provide confidence that the testing and inspection required by the contract documents is also being properly performed.
- That the contract documents clearly indicate the inspection and testing required of the Contractor and the services planned to be provided by the Owner or Owner's Agent.
- That any deviations from the Contract Documents be brought to the attention of the Owner, Designer and Contractor as soon as practical.
- Inspection services are different than Testing Services. Refer to the separate Construction Guideline on "Testing Services During Construction."

**REFERENCES:**

International Code Council Code Books  
AIA Standard Form of Agreement between Owner and Architect  
EJCDC (Engineers' Joint Contract Documents Committee) Standard Form of Agreement between Owner and Engineer for Professional Services

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**Construction Guidelines for the Metropolitan St. Louis Construction Industry**

Construction Guidelines "Project Visits [& Observations](#)", "Commissioning" and "Testing Services During Construction"

CSI [Project Resource Manual](#) [Project Delivery Practice Guide](#)

AIA A201 General Conditions

ConsensusDOCS Form 240 Agreement between Owner and A/E

ConsensusDOCS Form 200 Agreement between Owner/Contract and General Conditions

Issued: 2004

Revised: 2008, 2013, [2019](#)

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## Glossary Terms for Construction Guidelines

**AABCA:** African American Business and Contractors Association

**ACEC/MO:** American Council of Engineering Companies of Missouri

**Addenda:** An update to a set of Bid Documents issued before bids are received.

**AGC:** Associated General Contractors of Missouri.

**AIA:** American Institute of Architects, St. Louis Chapter.

**Allowance:** A sum of money defined in the documents, to be included in the bid to cover the cost of work not fully defined by the documents.

**Alternates:** Amount to be added to or deducted from the base bid if the corresponding change in project scope or alternate materials and/or method of construction is accepted.

**Architects Supplemental Instruction (ASI):** A written document issued by the Architect for minor changes in the work that do not affect contract time or cost.

**Authorities Having Jurisdiction:** An entity with statutory authority to enforce codes, regulations or requirements within the context of the Project.

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**Bid Documents:** See Procurement Documents.

**Boring Logs:** Documentation of soil samples to be found at various depths with the purpose of estimating the load-carrying capacity of the soil and predicting subsurface conditions.

**Brooks Act:** Federal Property and Administrative Services Act of 1949 which provides guidelines for Qualification Based Selection of firms.

**Bid Bond:** The Bid Bond ensures the Owner that Contractor will execute a contract at their submitted bid amount.

**BIM:** Building Information Modeling. Building Information Modeling (BIM) is a digital representation of physical and functional characteristics of a facility. A BIM is a shared knowledge resource for information about a facility forming a reliable basis for decision making during its life-cycle; defined as existing from earliest conception to

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the end of its useful life. It relies on object-based, multi-dimensional modeling as the design of record and for as-constructed, as-built and as-operated information.

**Biological Hazards:** Also referred to as biohazards, refers to substances and contaminated materials that pose a threat to the health of living organisms, primarily humans. They include but are not limited to fungi (mold), bloodborne pathogens, bodily fluids, feces and sewage, viruses, bacteria, and plants, insects or other wildlife that may be poisonous, venomous or infectious.

**CAP:** Change Acceleration Process.

**Certificate of Occupancy:** The document prepared by the authority having jurisdiction certifying that the work is approved for the designated use.

**Certificate of Substantial Completion:** The document that is prepared by the design professional, after an inspection of the work, to establish that the work, or portion of the work, is sufficiently complete in accordance with the Construction Contract Documents that the owner can occupy or utilize the work for its intended use.

**Change Order:** A written order to the contractor signed by the owner or his authorized representative authorizing changes in the work or adjustments in the contract sum or the contract time. The change order must also be signed by the contractor to indicate his acceptance of the adjustment in the contract sum and the contract time. The contract sum and the contract time may be changed only by change order.

**ConsensusDOCS:** Standardized contract documents developed by organizations representing owners, contractors, subcontractors, designers and sureties originally released in September, 2007.

**Construction Management:** A professional management practice consisting of an array of services applied to construction projects and programs through the planning, design, construction and post construction phases for the purpose of achieving project objectives including quality, cost, time and scope.

**Construction Management at Risk:** Is a delivery method which entails a commitment by the construction manager to deliver the project within a Guaranteed Maximum Price (GMP). The construction manager acts as consultant to the owner in the development and design phases, and acts as the equivalent of a general contractor during the construction phase.

**Construction Manager (CMA or CMC):** An entity that typically contracts with the owner to provide construction management services. The Construction Manager as Agent (CMA) is employed by the owner to act as an adviser during both the pre-construction and construction phases. The construction manager as contractor (CMC) is engaged to provide pre-construction and construction services. During pre-construction the CMC provides construction expertise, estimating, and scheduling services. During construction, the CMC performs contracting, purchasing, and supervising of construction by guaranteeing the cost of the project and signing subcontracts, in which case the construction manager acts as a contractor and not an adviser.

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**Construction Contract Documents:** The owner-contractor agreement, the conditions of the contract (general, supplementary and other conditions), the drawings, the specifications, and all addenda issued prior to execution to the contract, all modifications thereto, and any other items specifically stipulated as being included in the construction contract documents.

**Contractor Controlled Insurance Program (CCIP):** The General Contractor provides certain insurance coverage for all contractors on the project site under an umbrella program through an insurance company. CCIP will normally reduce the cost of the project insurance since the umbrella rates would be lower than the sum of individual contractor rates on the job. An additional benefit is to provide unified insurance coverage for the entire project rather than piecemeal coverage that may result in cross claim coverage.

**Constructability:** Ability to construct the designed work in a timely and cost effective manner. The extent to which the design of a facility provides for ease of construction yet meets the overall requirements. The integration of construction knowledge and experience in the planning, design, procurement, and construction phases of projects consistent with overall project objectives.

**CSI:** Construction Specifications Institute, Greater St. Louis Chapter.

**Date of Substantial Completion:** The date certified by the design professional when the work or a designated portion thereof is sufficiently complete, in accordance with the construction contract documents, so the owner may occupy the space or designated portion thereof for the use for which it is intended.

**Disadvantaged Business Enterprise (DBE):** Entity that is at least 51% owned and day-to-day operations are controlled by one or more socially and economically disadvantaged individuals. Title 49 Part 26 of the Code of Federal Regulations is frequently imposed when Federal funds are part of the project's funding.

**Design/Bid/Build:** A project delivery method in which the Owner engages a designer to prepare the design of the complete facility, including construction contract documents and other contract documents. Once completed, the bid package is presented to interested general contractors (GC), who prepare bids for the work. In many cases, the qualified contractor submitting the lowest responsive bid is selected to perform the construction.

**Design/Build:** The project delivery method by which a single team develops a project including the design as well as construction.

**Design Competition:** A process in which design professionals submit their preliminary design solutions in response to a written narrative describing a proposed project.

**Design Professionals:** Designation reserved, usually by law, for a person or organization professionally qualified and duly licensed to perform either architectural or engineering services.

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**Design Team:** The "Design Team" includes all participants involved in the project design process. The Owner or Owner's Representative is always part of the design team, and participates when necessary providing guidance and making decisions that affect contract details, cost, aesthetics, or quality. These participants will vary depending on the nature of each project, (e.g. buildings, or public works projects...), and on the project delivery method, (e.g. design-bid-build, design-build, CM,...). This team typically falls under the leadership of the contracted prime design professional, and may be either Architect or lead Engineer. The Design Team includes appropriate staff from the Architect (on building projects), and necessary consultant disciplines, (which could include structural, civil, mechanical, electrical, plumbing, fire protection, geotechnical, interiors, as well as specialty consultants such as process, kitchen, lab, curtainwall, or elevators as needed), whether these sub-consultants are directly under contract to the prime professional, or are brought to the project by the Owner, Contractor or otherwise. In design-build or CM projects, the necessary contractor disciplines are also included on the design team, and may include GC's, and subcontractors of each major component.

**Diversity:** The inclusion of minority and women owned businesses and employee workforce (boots on the ground) in the industry.

**EJCDC:** Engineers' Joint Contract Documents Committee.

**Environmental Site Assessment (E.S.A.):** Phase I provides preliminary site investigation; Phase II is performed if site contamination is believed to be present.

**Experience Modification Rating (EMR):** This is an adjustment that is made to the Workers' Compensation insurance premium of companies that meet or exceed a certain size threshold. This means that an adjustment factor will be calculated for a company based on prior years' payroll and loss data, essentially comparing the loss data of that particular company to average loss data for all other employers in that state who share the same classification codes. Experience modifiers are calculated by rating bureaus (or as they are now designated, Advisory Organizations). Most states use NCCI for this work. NCCI is a private corporation, created and funded by member insurance companies.

**Green Guide for Health Care (G.G.H.C.):** Similar to LEED, but also addresses health care operational aspects.

**Hazardous Communication Standard (HCS):** An OSHA standard that outlines the protocols for handling hazardous materials.

**I.F.M.A.:** International Facilities Management Association, St. Louis Chapter.

**Inspection:** The examination of construction activities and products for the purpose of verifying compliance with the construction documents and other project requirements. The Owner normally obtains this service under a direct contract with the Inspection Service that specifically delineates the inspection scope and documentation requirements.

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**International Building Code (IBC):** Construction codes and standards that address design, installation, testing and materials related to building construction.

**Integrated Project Delivery (IPD):** An alternative project delivery method that is characterized by a formal contractual relationship between the Owner, Design Professionals, General Contractors and key subcontractors. IPD may be used by the Owner to optimize project results and is best utilized on large and complex projects. This incentivizes collaborative behavior and team risk-sharing to enhance project success criteria.

**Latent Conditions:** Conditions, which are hidden or unforeseen through reasonable interpretation of construction contract documents and site investigation.

**Lean Construction:** A Project Management Delivery approach focused on maximum value and minimum waste. A system intended to manage and improve overall performance by using input from all team members. Lean Construction focuses on optimization of labor, materials and time assets rather than costs.

**LEED:** Leadership in Energy & Environmental Design. The LEED Green Building Rating System® developed by the U.S. Green Building Council is a voluntary, consensus-based national standard for developing high-performance, sustainable buildings.

**LEED Accredited Professional (LEED AP):** LEED accreditation is awarded to building industry practitioners with detailed knowledge of LEED project certification requirements and processes and a command of integrated design principles. These proficiencies have to be successfully demonstrated on a comprehensive exam administered by the U.S. Green Building Council.

**Lien Waivers:** An instrument by which a person or organization who has or may have a right of mechanics lien or materials lien against the property relinquishes such right.

**Material Safety Data Sheets (MSDS):** Written or printed material concerning a hazardous chemical. These sheets shall be developed by chemical manufacturers and employers shall have material safety data sheet for each hazardous chemical, which they use.

**MEP:** The acronym, "MEP," stands for "Mechanical, Electrical and Plumbing" services and is a significant component of the design and construction industry. The mechanical component of MEP is also often referred to as HVAC (heating, ventilation and air conditioning systems). When necessary, the mechanical component also includes air filtration, smoke control and exhaust. The electrical component includes not only powering equipment and appliances but also utility power distribution, lighting, switches, fire alarms, security systems, as well as lightning protection when necessary. The plumbing component focuses on the delivery of water and the draining/removal of waste and storm water. Sometimes fire protection may be included as part of the design and construction services under the plumbing component.

**Minority Business Enterprise (MBE):** Entity that is at least 51% owned and day-to-day operations are controlled by a minority.

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**MOKAN:** An organization of minority and women owned businesses.

**Multiple Prime Contractors:** Circumstance on project where more than one contractor has a contract directly with the owner.

**Observation:** The collection of information, visually in most cases, during project walkthroughs. This normally occurs from time to time during the project and is intended to allow a design professional to become familiar with the progress of construction and the general conformance to the design intent.

**OSHA:** Occupational Safety and Health Administration.

**Owner Controlled Insurance Program (OCIP):** The owner provides certain insurance coverage for all contractors on the project site under an umbrella program through an insurance company. OCIP will normally reduce the cost of the project insurance since the umbrella rates would be lower than the sum of individual contractor rates on the job. An additional benefit is to provide unified insurance coverage for the entire project rather than piecemeal coverage that may result in cross claim coverage.

**Payment Bond:** Payment Bonds guarantee the payment of all bills incurred by the Contractor for labor and materials in connection with the project.

**Performance Bond:** Performance Bonds will indemnify the Owner (or General Contractor in the case of Subcontractor bond) against loss resulting from the failure of the Contractor to complete the work in accordance with the Contract Documents.

**Permits:** Written approvals by appropriate governmental or municipal agencies required to begin work on a project.

**Plans:** Drawings developed by a Design Professional that show the horizontal layouts. Contract Drawings include plans, sections, elevations, diagrams, schedules and details.

**Prime Contractor:** A contractor on a project having an agreement directly with the owner.

**Procurement Documents:** The documents used to obtain pricing from prospective contractors. In a competitive bidding process, these documents include the advertisement or invitation to bid, instruction to bidders, the bid form and the proposed construction contract documents including any addenda issued prior to receipt of bids.

**Professional Seal:** Design professionals' seal signifying that they are registered and licensed to practice in a specific state.

**Project Closeout:** Deliverables at the end of the construction phase and beginning of occupancy phase to close out the construction effort and to allow final payment. This includes operational demonstrations,

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submission of warranties, operation and maintenance manuals, consent of surety, punch list completion, record drawings, and record project manuals.

**Project Manual:** Contracting requirements and specifications usually bound into one or more volumes.

**Punch List:** The comprehensive list of uncompleted items and corrections as prepared by the Contractor, Design Professional and Owner, required for completion of the Work.

**QBS:** Qualification Based Selection. Selection based on qualifications of firm, team, experience and project capability.

**RFI:** Request for Information. A written request for more specific information about a certain aspect of a project.

**RFP:** Request for Proposals. A written request from an owner, design professional or contractor for cost proposals for design, management or construction services. The RFP defines the scope of proposed Work.

**RFQ:** Request for Qualifications. A written request from an owner, design professional or contractor documenting a scope of Work and requesting professional qualifications for that scope of Work.

**RUCC (Regional Union Construction Center):** A nonprofit incubator, established by PRIDE of St. Louis, Inc., the area's construction labor-management organization, to help minority owners of union construction companies that have shown the desire to grow their businesses and are interested in a structured program to learn improved methods of operating a business.

**SLCCC:** St. Louis Council of Construction Consumers

**Shop Drawings:** Detailed drawings by suppliers and manufacturers of various material and equipment. They must conform to the original drawings, but are not construction contract documents. Drawings, diagrams, illustrations, schedules, performance charts, calculations, brochures and other data prepared by the contractor or subcontractor, manufacturer, supplier or distributor, which illustrate how specific portions of the Work are to be fabricated or installed.

**Specifications:** A description of the performance, materials and workmanship required in a construction project. The specifications may be included in a project manual or shown on the drawings or both. The written material containing the standard provisions and special provisions as may be necessary, pertaining to the types and qualities of material to be furnished under the contract.

**Standards:** A rule or principle that is used as a basis for judgment as established by authority, custom, or general consent as a model or example, sometimes set up and established by authority as a rule for the measure of quantity, weight, extent, value or quality. For example, there are Owner standards, standards for drawings, operations and maintenance, quality assurance / control, sustainability, testing and certification.

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**Submittals:** Shop Drawings, product data, samples, certifications, calculations and project closeout documents prepared and submitted to the design professional by the contractor/subcontractor. Submittals more fully describe the work the contractor/subcontractor will install that the design professional needs to review for general compliance with the design intent. The information is typically more detailed than what is shown in the construction contract documents and provides specific data on the material to be used. Submittals are not construction contract documents but they are contract requirements.

**Testing:** The physical measurement of attributes of the construction products such as strength, density, flow, temperature, system performance etc.

**U.S. Green Building Council (U.S.G.B.C.):** A national organization that promotes buildings that are environmentally responsible, profitable and healthy places to live and work. They have established the LEED Green Building Rating System® which is a voluntary, consensus-based national standard for developing high-performance, sustainable buildings.

**Value Engineering (VE):** A process whose objective is to affect economy in the cost of constructing a project or to improve the constructability without detrimental impact on project quality. VE includes evaluating any object's function and modifying the object in terms of cost and functional objectives while maintaining or enhancing quality.

**Women Business Enterprise (WBE):** Entity that is at least 51% owned and day-to-day operations are controlled by a female.

Revised: January, 2011  
March, 2013 and November, 2013  
May, 2014 and November, 2014  
January, 2015, May, 2015, July, 2015, and September, 2015  
January, 2016  
January 2018  
September 2018  
January 2019

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