

WALL FOREMAN QUALIFICATION SYLLABUS

*In response to the CFA Board of Directors Strategic Plan efforts from 2020, the following is a course syllabus that describes the first stage development for a qualification system for the principal workforce category of **Wall Foreman**.*

A Wall Foreman is described by the Concrete Foundations Association as the primary representative of the company for jobsite operations. Responsibilities include working with (or serving as) the project manager for residential foundation installations; directing all field crews from excavation through final site work (as applicable); managing material application, security, and efficiency; implementing and maintaining safety operations; on-site responsibility for equipment and operators; serving as Competent Person on-site for safety programming; and managing training operations for workforce development.

Goal: Establish a consistent set of courses through national education programs including the World of Concrete, Concrete Foundations Convention, and virtual Learning Management Systems.

Program Description (WOC2023):

During the World of Concrete 2023, the inaugural **Wall Foreman Qualifications Certificate** will be made available to registrants who achieve a total of 12-hours of qualifying education as selected and authorized by the CFA in consort with World of Concrete.

Attendees registering for education during WOC 2023 will be required to take six hours of specific residential concrete construction courses presented by industry experts on Thursday, January 16. The three required courses are described below. In addition, attendees will select the remaining six hours of qualifying education from a pre-approved list of WOC seminars, including the optional 4-hour ACI/CFA Residential Foundation Technician seminar (*written exam not required unless candidate is seeking full certification*).

Attendance will be verified at each session – badge credentials will be scanned by show staff and accumulated to ensure completion of the required 12-hour minimum. Approximately 3-4 weeks after end of WOC, CFA will send a certificate to each verified attendee to demonstrate their attainment of the 12-hours of qualifying course work, preparing them to be considered for advancement to a Wall Foreman level of responsibility at the discretion of their employer.

REGISTRATION: Available only through WOC2023. To access discount code from CFA Co-Sponsorship, use custom link https://www.compusystems.com/servlet/ar?evt_uid=130&promocode=A30. Note: CFA Co-Sponsorship code includes discounted \$25 for WOC Exhibits Only admission when registering by 12/12/2022.

EDUCATION OFFERINGS: The following courses comprise the required and elective coursework opportunities during the WOC2023 registration process to attain the Wall Foreman Qualifications Certificate.

CFA REQUIRED COURSEWORK (3 Industry Training Courses for total of 6 hours, Thursday Jan 19):

- **Concrete Basics that Impact the Residential Concrete Industry** - Joseph Daczko
[Session ID: CFA1] Thursday, January 19th (8:00 to 10:00 am)
 Concrete basics is a big part of the annual World of Concrete education. There are three courses to be presented in 2023. Yet, none of them really focus on the basics from a residential wall and what makes it different, high quality and performance influenced. This presentation will cover the current chemistry of the concrete mix and specifically focus on the three-legged stool performance of time, temperature, and humidity along with the basic internal risks or failure modes of plain concrete and what is being done about it.
- **Residential Wall Forming and Reinforcement Best Practices** - Brent Anderson
[Session ID: CFA2] Thursday, January 19th (11:00 am to 1:00 pm)
 From removable forms to insulated concrete forms, today's residential wall market has a broad spectrum of systems and applications. With each selection comes different truths and best practices to be effective in quality control and safety. Additionally, from shrinkage crack control to engineered foundations for higher loading conditions, plain concrete must be reinforced in different ways to deliver results. Once backfill is introduced to the foundation system, good decisions are rewarded, and bad decisions magnified.
- **Finishing the Residential Foundation Wall for Performance: Curing to Drainage** - Mike Hancock
[Session ID: CFA3] Thursday, January 19th (2:00 to 4:00 pm)
 The finished wall with forms removed or left in place is not the end of the construction. The true performance, aesthetically, structurally, and moisture-controlled, is impacted by the decisions made for curing practices influenced by climate conditions, the exposed nature of the finished surfaces, the selection of water barrier and the installation and maintenance of drainage systems. Together, these will literally make or break a foundation wall and establish a legacy of uncelebrated performance or compromised troubleshooting.

ELECTIVES *(Select total of 6 hours from WOC courses below):*

- **Residential Foundations: Compliance and Competency Review** – James Baty
[Session ID: TU406] Tuesday, January 17th (8:00 am – 12:00 pm)
 Presented by the Concrete Foundations Association. The ACI/CFA Foundation Technician Certification Program was established to provide measurable quality assurance and demonstrate command of essential standards to the residential construction industry. This presentation highlights the resources and standards used with a focus on practical application. Attendees will identify advanced principles that define companies from coast to coast for quality and leadership while preparing to be recognized as Certified Foundation Technicians.
- **Concrete Basics I: Concrete Materials, Mixtures & Fresh Properties** - Jeff Groom, Rich Szecsy
[Session ID: MO01] Monday, January 16th (8:00 to 11:00 am)
 This seminar is the first in a three-part series introducing basic concrete technology. Topics will include introduction of raw materials, concrete mixture terminology and designs, along with descriptions of fresh concrete properties. Problems that can develop with mix design development and fresh concrete and common corrections will also be covered.

- **Concrete Basics II: Ordering, Producing, Placing & Finishing Concrete** - Jeff Groom, Rich Szecsy
[Session ID: MO02] Monday, January 16th (1:00 – 4:00 pm)
 This seminar is the second in a three-part series introducing basic concrete technology and will concentrate on how concrete is ordered, manufactured, sampled, and tested. The techniques, equipment and best practices for the proper placement, finishing and consolidation of concrete will also be covered in-depth.
- **Concrete Basics III: Troubleshooting Typical Problems, Tips & Trends** - Jeff Groom, Rich Szecsy
[Session ID: TU03] Tuesday, January 17th (8:00 – 11:00 am)
 Troubleshooting concrete hardened properties will be the focus of this third seminar in a three-part series introducing basic concrete technology. Trouble shooting of typical problems encountered with strength gain and volume change will be addressed. Concrete durability problems and concerns will be discussed, plus new applications and trends for concrete will be introduced.
- **Mix Design I: Evaluation of Mixtures** – Ken Hover
[Session ID: WE04] Wednesday, January 18th (8:00 – 11:00 am)
 Will the mix design presented meet project needs? Part I of this two-part series is an overview of how cement, water and aggregates interact in a concrete mix. Emphasis is on understanding reality, not theory. Attendees will follow a mix design through the submittal process and learn how to review a proposed mix for yield, expected strength, and durability, shrinkage, workability, and cost. This seminar highlights valuable information for anyone who may use, produce, place, finish, specify or approve concrete mixtures, or deal with complaints of cracking. Investigating aggregate grading effects and admixtures will be covered in Part II.
- **Troubleshooting Concrete Cracks: Understand & Minimize Cracking** – Kim Basham
[Session ID: MO06] Monday, January 16th (8:00 – 11:00 am)
 It is important to have a clear understanding of the types of cracks and how to minimize cracking. Cracks are caused by either structural loading or nonstructural effects. Attendees will learn the causes of structural cracks, mapping cracks, measuring cracks and tolerable crack widths. Other topics of discussion will include the causes of nonstructural cracks that occur before hardening (plastic shrinkage, plastic settlement) or after hardening (crazing, shrinkage, corrosion of embedded metals, alkali-aggregate reactions, and early thermal contraction) and how to minimize them.
- **Soft Skills for Hard Business** – Wally Adamchik
[Session ID: MO11] Monday, January 16th (8:00 – 11:00 am)
 Concrete contractors aren't exactly known for their bedside manner. Schedules must be met, production maintained, and people aren't always treated as the most important asset everyone says they are. Who has time for being "touchy feely" when there is work to do? Wrong attitude. But until concrete installs itself you will need people to make it happen. This thought-provoking session will help attendees optimize the people side of the business in pursuit of better retention, higher productivity and improved profits.
- **Improving Performance Through Effective Leadership** – Randy Anderson
[Session ID: TU13] Tuesday, January 17th (8:00 – 11:00 am)
 Poor performance, low productivity, lost-time accidents, reduced profits, and high turnover are only a few of the negative effects of disengaged employees. Employees that are simply showing up and going through the motions can cause problems company-wide. Do managers and supervisors in your organization utilize a "one size fits all situations" approach to leadership? This presentation will touch

on 5 key areas that will allow leaders to be more effective by helping them acclimate to the specific circumstances and variables that they will inevitably experience, and ultimately lead to a higher level of performance and productivity for employees. Attendees will learn the difference between two of the most long-standing and proven leadership styles that will deliver improved results. By understanding the strengths and weaknesses of these two approaches to developing people and environment, you'll be able to maximize influence and capitalize on the abilities team members possess. Walk away equipped to help managers and supervisors become more effective in creating and maintaining a culture that fosters employee engagement and an increased level of accountability.

- **How to Turn Inefficiency into Profitability** – Brad Humphrey

[Session ID: WE14] Wednesday, January 18th (8:00 am – 11:00 am)

This seminar "calls out" the poor preparation that is found in most construction companies for starting a project, keeping that project profitable during jobsite execution, and ensuring that the "close-out" is not a "profit dump" due to poor decisions and execution. Tools and techniques to prepare for projects will be presented in addition to important communication tips that project and field leaders can quickly adapt to make every phase of their project seamless, safe, and quality based. Attendees will be challenged to step up their game to bring a strategic closure to their project, one that leaves the finished work meeting customer needs and expectations, while building a "raving fan" relationship with their client, laying the seed for more work.

- **Preconstruction Checklist: Ensuring Project Success** – Brian Birdwell, Rocky Geans

[Session ID: MO102] Monday, January 16th (10:30 am – 12:00 pm)

Preconstruction is the first step in ensuring project success. Without a clear understanding of critical components such as owners' expectations and needs, scope, budget, and schedule, a project is behind before it even starts. In this interactive session, attendees will learn about the preconstruction process and the role they can play to ensure success of their business. Let's face it, most of us want to just jump on this project and get it underway, big mistake! Many times, you are putting yourself at risk. Trusting that all the others in the process have executed their due diligence is a big mistake. Trust but verify.

- **Fall Protection Best Practices: Industry Regulations & Guidelines** – Tim Neubauer

[Session ID: MO103] Monday, January 16th (1:00 – 2:30 pm)

This seminar will explore the current OSHA standards and ANSI/ASSE guidelines to help identify best practices and plans for fall protection. Who is responsible on a multi-employer work site, what the employer is responsible for providing, and how the employee is responsible for his/her behavior will be addressed. Attendees will review obligations for employers who fall under various titles within OSHA's Multi-Employer Citation Policy, responsibilities to provide fall protection, and methods of insulating workers from other trades. In conjunction with regulatory review, OSHA cases that have set precedents on duties of an employer will be evaluated. Presentation will include successful fall protection plans, strategies of plan implementation, evaluation of protection methods, and effectiveness of the hierarchy of controls from elimination to PPE.

- **Boss to Leader: The Necessary Transition** – Corey Adams

[Session ID: TU105] Tuesday, January 17th (8:30 – 10:00 am)

No one wants a boss. Employees do not respond well to micro-managers, hard liners, and stubbornness. Good employees want to follow a leader. The transition from boss to leader is necessary to foster growth within a company. In this session we will clearly define what leaders do differently

than bosses, and how people react to them. We will also examine how effective leadership can create higher production rates, less turnover, and foster internal growth for good employees.

- **Strategic Tactical Productivity: Execution Techniques to Improve Field Project Results** – Brad Humphrey

[Session ID: WE108] Wednesday, January 18th (1:30 – 3:00 pm)

“Ground Warfare” is a military term that represents an offensive positioning of troops drilled on following strategic and tactical processes to defeat the enemy! After completion of construction pre-planning, what happens at the job site must be executed correctly and construction leaders at the site must make field decisions to improve the projects results. This seminar will address how to get ahead of issues, problems, and roadblocks preventing your projects from greater productivity and profitable results. Discussions will also include field tested techniques and processes that eliminate almost all “7 Wastes” identified within Lean Construction principles.

- **How to Handle OSHA Inspections** – Matt Murphy

[Session ID: TH109] Thursday, January 19th (8:30 – 10:00 am)

OSHA has arrived, now what? Experience how an OSHA inspection takes place. This seminar dives into the reasons OSHA may visit your jobsite and basic rules to follow when handling an OSHA inspection. Topic discussions will also address what happens when you receive an OSHA citation and what steps you should take next.

- **Troubleshooting Masonry: Cracks, Moisture and Efflorescence** – Michael Schuller

[Session ID: TU115] Tuesday, January 17th (8:30 – 10:00 am)

Dealing with problems in masonry walls is not easy – and there are lots of ideas out there about the best way to troubleshoot tricky situations. In this seminar we will talk about the three most common types of masonry distress: cracks, moisture, and efflorescence, and understand that in many cases these three issues are related. We will learn about what causes different types of distress, how to diagnose problem situations, and the best way to treat these conditions to keep them from re-occurring.

- **What is Wrong with my Concrete? Troubleshooting Concrete Quality** – Tyler Ley

[Session ID: MO124] Monday, January 16th (3:30 – 5:00 pm)

Each concrete project has a unique set of challenges that can make it difficult to consistently obtain high quality concrete. Typical field problems will be discussed, including low strength, poor workability, and variable air content. Contributing factors for each issue will be addressed as well. A simple framework for concrete quality will be presented that will help attendees identify possible issues with quality and determine strategies to improve concrete quality. Examples of real-world field problems will be provided to highlight the use of the framework.

- **Cold Weather: Managing Concrete in Winter Conditions** – Kim Basham

[Session ID: WE127] Wednesday, January 18th (8:30 – 10:00 am)

Learn why concrete placements during cold weather conditions require special planning and attention. Delayed setting, strength gain and early age freezing of freshly placed concrete can steal hard-earned profits. Learn how cold weather conditions affect both fresh and hardened concrete properties. Hear about cold weather protection and specifications, how to design and order cold weather concrete mixes and how to place, finish and protect freshly placed concrete from cold temperatures.

- **Hot Weather: Dealing with Concrete in Hot, Dry & Windy Conditions** – Kim Basham

[Session ID: WE128] Wednesday, January 18th (1:30 – 3:00 pm)

"Do not let hot, dry and windy conditions steal your profits! Hear how hot weather conditions affect fresh and hardened concrete properties. More importantly, learn how to avoid hot weather problems by properly ordering, placing, finishing and curing concrete. Discussions will address how to handle problems such as slump loss, rapid hardening, reduced concrete strength, reduced window of finishability, plastic shrinkage cracking, surface crusting and rain showers."

- **Slump-Loss, Setting & Shrinkage: Concrete Won't Wait!** – Ken Hover

[Session ID: TH130] Thursday, January 19th (1:30 – 3:00 pm)

Once the water hits the cement, Portland cement concrete has a mind of its own. The contractor is in a race with slump-loss, setting, shrinkage and strength-gain. When the contractor wins the race, life is beautiful! When the concrete wins the result can be a cold joint, lift lines, unacceptable finish or flatness, shrinkage cracks or a delay due to low strength. Find out how mix ingredients, admixtures and concrete temperatures combine to influence how long the contractor has to place, finish, saw-cut, remove forms and shores or apply prestressing forces.

- **SPANISH - Concrete Basics I: Materials, Mixtures & Fresh Properties** – Raul Bracamontes, Genaro Salinas

[Session ID: MOSP01] Monday, January 16th (8:00 – 11:00 am)

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- **SPANISH - Concrete Basics II: Ordering, Producing, Placing & Finishing** – Raul Bracamontes, Genaro Salinas

[Session ID: MOSP02] Monday, January 16th (1:00 – 4:00 pm)

This seminar is the second in a three-part series introducing basic concrete technology and will concentrate on how concrete is ordered, manufactured, sampled, and tested. The techniques, equipment, and best practices for the proper placement, finishing and consolidation of concrete will also be covered in-depth.

- **SPANISH - Concrete Basics III: Problems, Tips & Trends** – Raul Bracamontes, Genaro Salinas

[Session ID: TUSP03] Tuesday, January 17th (8:00 – 11:00 am)

Troubleshooting concrete hardened properties will be the focus of this third seminar in a three-part series introducing basic concrete technology. Trouble shooting of typical problems encountered with strength gain and volume change will be addressed. Concrete durability problems and concerns will be discussed, plus new applications and trends for concrete will be introduced.

- **SPANISH - Improve Leadership, Make Your Company More Competitive, & Increase Profitability** – Federico Jasso

[Session ID: THSP08] Thursday, January 19th (1:30 - 3:00 pm)

To execute construction projects with excellence, one may face substantial challenges to deliver results on time and with substance from the moment we contact a prospect until we get compensated for our services. This seminar will improve your leadership skills to maximize the individual and collective performance of your teammates, and it will cover how "Leadership and Coaching" can generate employee engagement. Examples of projects will explain how projects can be executed with safety, effectiveness, efficiency and how good communication can solve arousing conflicts.