

## **ASA Contractor Qualification Program**

The ASA Contractor Qualification Program (CQP) is a straight-forward program that helps to establish a shotcrete contractor's qualifications by review of the contractor's work, by the ASA Contractor's Qualification Review committee\*, whose members have extensive experience in successful shotcrete work. This qualification program provides a distinct service to the industry by assuring specifiers that shotcrete contractors reviewed here have a proven record for completion of successful projects of similar work and scope. This qualification program is based on the ASA Board position paper "Qualifications of the Shotcrete Construction Team".

### **The Problem and the ASA Solution**

A specifier needs to evaluate these checklist items before engaging a shotcrete contractor. However, many specifiers don't have knowledge of shotcrete as a construction process. Thus, the specifier may be hesitant to try and thoroughly evaluate the shotcrete contractor's equipment, crews and resources. This may lead some specifiers to simply accept a contractor's submittal for experience without looking at it critically.

This program lets ASA do the heavy lifting for the specifier in evaluating these checklist items that help to quantify a contractor's shotcrete experience. ASA has shotcrete experts (contractors, engineers, suppliers and educators), who will review and verify contractor submittals in all these checklist areas. Members of the Contractor Qualification Committee (CQC) will also talk with the contractor and key personnel to verify the provided information, as well as checking with all the supplied project references.

ASA administers the Shotcrete Contractor Qualification as a review service for shotcrete contractors. The CQC reviews the Contractor Qualification (CQ) Application for contractor's seeking qualification. The contractor must specify the level of qualification (Basic or Advanced) they are pursuing. The CQC reviews the materials submitted in the Application. Upon completion of the review, the CQC would provide the Contractor, a certificate or letter of qualification in either the Basic or Advanced categories. Specifiers are encouraged to require the ASA Shotcrete Contractor Qualification for their specific projects, selecting the appropriate level of qualification based on the difficulty of application.

### **Establishing the Contractor Qualification Committee (CQC)**

The CQC is made up of ASA members with a mix of practice areas (pools, repair, heavy structural, soil support, etc.), and representative of our membership – engineers, contractors, suppliers, owners and educators. The ASA Executive Director or Technical Director will be a member of the committee. The CQC draws from a large pool of members who could be assigned to review a particular CQ application. A review group would be assigned for each contractor review. This review group will be an impartial panel with no conflicts of interest with the contractor application they are reviewing. An assigned review group may be three or four members. The review group assigns a review chief, who is responsible for documenting the group's decision(s). Staff will assist in compiling, and organizing materials, verifying a complete application package before the review group starts the evaluation, and facilitating online meetings when required.

### **The Review Process**

The CQC review group evaluates the supplied documentation. After initial review of the supplied documentation the review group makes assignments to review group members to contact contractor and key personnel, plus the supplied project references to verify the supplied information. If there is a concern with the validity of the supplied information, the group may request additional documentation or a site visit (at additional cost to the Contractor) to inspect facilities, equipment and crew performance. After this evaluation, the review group

makes a recommendation for the approval or disapproval of the level of qualification sought or a recommendation for their appropriate level of qualification. This recommendation is then submitted to the main CQC for final review and approval. Once again, any members of the main CQC with a potential conflict of interest must abstain on the vote for a particular contractor.

### **Qualifying Individual**

The Qualifying Individual (QI) should be a representative from the company who has attended and successfully completed the CQ seminar and passed the written exam. Designation of a QI is required for ASA's CQ program. This individual will be tied to the company's qualification. Should the QI leave the company, ASA shall be notified in writing within thirty days. The company qualification will be put on a probationary status until a replacement QI who has also attended the CQ seminar and successfully passed the CQ written exam is submitted and reviewed before qualification is reinstated.

### **Levels of Qualification**

There are two levels of qualification, Basic and Advanced in the process(es), i.e. wet-mx or dry-mix appropriate to the work performed by applicant. When applying for both processes, 15 projects of each process must be submitted for review. Each level is established by the type and scope of shotcrete work the Contractor has previously successfully executed. The Contractor must specify in their application the level (basic or advanced) that best describes their work. The Contractor will be evaluated based on this level subject to review and modification by the review group.

- **Shotcrete Contractor (Basic)** - is a company who has attended an ASA sponsored 1-day seminar on basic requirements for the shotcrete contractor and can document successful completion of at least fifteen projects in the last three years that qualify as Basic projects.
- **Shotcrete Contractor (Advanced)** - is a company who meets all the requirements of the Basic Level and is able to document successful completion of at least fifteen projects in the last five years that qualify as Advanced projects as listed in this Program Policy.

### **The Basic and Advanced Level descriptions**

Shotcrete's flexibility and versatility allow its use on a wide variety of work. Shotcrete has found application in many diverse areas such as new buildings, foundations, repairs, pools, skate parks, ground support, tunnels and underground facilities, marine structures, domes, tanks, bridges and architectural concrete. Thus, it is difficult to directly provide an *absolute* scale of projects that would be considered "Basic" or "Advanced". Also, a combination of all the factors necessary to complete a project successfully may make a project advanced, while portions of the work may be very straight forward and basic. Submittal of project experience in either the "Basic" or "Advanced" level is up to the judgment of the contractor. However, it will be reviewed by the CQC of ASA to make a final determination on its appropriate level during evaluation.

In general, thin, lightly-reinforced shotcrete sections that can be easily accessed and placed would be considered "Basic". Thick, heavily-reinforced sections or sections with difficult access would be considered "Advanced". Further descriptions of basic and advanced include:

#### Basic projects:

- Sections 6" or less in thickness
- One curtain of reinforcing with #5 or smaller bars and non-contact lap splices with 2.5" separation
- Shallow depth of 3' to 8' with slopes

- No problems with subgrade soils or ground water
- No overhead work
- Volume of shotcrete 30 cy or less

Examples of this type of project include:

- Small swimming pools and ponds
- V-ditches and channels
- Temporary shoring
- Slope paving/stabilization
- Architectural overlays
- Small, limited repair and patching

Advanced projects:

- Structures that require pre-construction test panels per the applicable Building Code
- Projects with reinforcing bars greater than #5 bars
- Sections that require two curtains of reinforcing or contact lap splices
- Projects with overhead shooting
- Sections greater than 6" in thickness
- Sections that require water stops or movement joints
- Projects that require scaffolding, man-lifts or use of safety harnesses
- Vertical height over 8'
- Pumping distance greater than 200' horizontally or 25' vertically
- Difficult access or environmental conditions

Examples of this type of project include:

- Structural concrete projects
- Seismic retrofitting
- Commercial or complex residential swimming pools
- Structural repair and overlays
- Permanent shoring, and retaining walls
- Liquid-storage tanks
- Domes and other free-form concrete structural shells
- Skateparks

**Alternate Qualifications** – It is understood that projects vary in terms of complexity, size, and scope. The experience requirements contained in this Program Manual are meant to ensure that all ASA Qualified Shotcrete Contractors have completed an amount of work that is deemed by the CQC as making a company “experienced.” A company who does not meet the strict “fifteen projects in three or five years” requirement but feels they have alternate means of showing equivalent experience may submit documentation for consideration by ASA. Such evidence must be marked as “Alternate Qualifications”, located at the end of the project list, and will be evaluated and considered at the discretion of ASA and its governing committees.

The initial evaluation will be made by ASA staff and/or its consultants, who may, at its discretion, submit the documentation for review and comment by the ASA CQC. If the Applicant’s alternate qualifications are denied by both the Staff and the CQC, the applicant may request to appeal the decision by the Appeals procedure. Note that a determination of what qualifies as equivalent experience will rest with the CQC, whose members will determine what constitutes equivalent experience. If requested, the CQC will review the process used by Staff to ensure that fair and equitable practice and procedures have been met.

**Experience and Company Capabilities Considered in the Qualification Review**

<b>Shotcrete Contractor Qualification Evaluation Checklist</b>		
<input type="checkbox"/>	Years of experience as a shotcrete contractor - 5 yrs for advanced or 3 yrs for basic.	M
<input type="checkbox"/>	Physical office, shop or other business address	10
<input type="checkbox"/>	Contractor is a Sustaining Corporate or Corporate Member of the ASA	5
<input type="checkbox"/>	Participation in ASA’s one-day seminar and successful completion of the corresponding written exam by the company’s Qualifying Individual.	M
<input type="checkbox"/>	Certificate as a “Business in Good Standing” or equivalent (license) from the state(s) that the company works in	M
<input type="checkbox"/>	Proof of Company Insurance in good standing, meeting all state minimum requirements. (including but not limited General Liability, Workman’s Compensation)	M
<input type="checkbox"/>	Letter of bonding capacity from the Bonding Company or a Letter of Credit.	10
<input type="checkbox"/>	Contractor has disclosed any criminal or fraudulent ruling for shotcrete work against former or current company owners in 5 year period, if any.	M
<input type="checkbox"/>	Company Affiliations (ASA,ACI, AGC, ABC, etc.)	5
<input type="checkbox"/>	Proof of appropriate continuing educational session credits for construction support staff (safety, general superintendent, project managers, construction managers, etc.)	2
<input type="checkbox"/>	Hosted an ASA/ACI Nozzleman Certification session within the last 5 years	5
<input type="checkbox"/>	Shotcrete Contractor self-performs all shotcrete-related work and has provided an experience listing of minimum crew(s) to be used on the project (see additional list for the Shotcrete Field Team Qualifications)	20
<input type="checkbox"/>	Owens all necessary shotcrete specific equipment (pumps, guns, hoses, nozzles) to accomplish job-based qualification level. Shotcrete Contractor has submitted size and model for all Shotcrete equipment to be used – including full equipment backup in case of equipment breakdown.	5
<input type="checkbox"/>	Appropriate number of projects in the level and process sought, with shotcrete projects of similar size, scope and shotcrete process used (dry-mix or wet-mix) successfully completed in the corresponding requisite 3 or 5 year periods with proper documentation and references	40
<b>Note: 80 Points minimum required for Qualification (total of 102 available)</b>		

<b>Shotcrete Field Team Qualification Checklist</b>	
<input type="checkbox"/>	Shotcrete Contractor has submitted names, positions and experience of field team members, including (some positions may be filled by one person): <ul style="list-style-type: none"> <li>a. Project engineer, Project manager or Superintendent</li> <li>b. Shotcrete foreman</li> <li>c. Nozzleman (at least 1 ACI-certified nozzleman on the project)</li> <li>d. Gun or pump operator</li> <li>e. Assistant nozzlemen/Nozzlemen trainee(s)</li> <li>f. Wireman</li> <li>g. Blowpipe/air lance controller</li> <li>h. Rodman or Finishers</li> <li>i. Mixerman</li> <li>j. Hose tenders</li> </ul>
<input type="checkbox"/>	Project engineer, Project manager or Superintendent – minimum 3 years of relevant experience
<input type="checkbox"/>	Shotcrete Foreman – minimum 2 years of shotcrete experience
<input type="checkbox"/>	Nozzleman – Holds current ACI nozzleman certification appropriate for the process and orientation of work this application is seeking. Additionally, has completed at least one application/project as a nozzleman <i>for</i> the Shotcrete Contractor similar to if not for the projects listed in this submission.
<input type="checkbox"/>	Gunman or Pump Operator - should have at least one year of experience operating the owner’s equipment and be familiar with all manufacturer’s safety guides and operation
<input type="checkbox"/>	Assistant Nozzleman/Nozzleman Trainee – should have six months of experience in various shotcrete field operations that may include finishing, gun or pump operation, blowpipe/air lance control, and hose tending. When shooting, work must be under the direction of an ACI-Certified Nozzleman
<input type="checkbox"/>	Wireman – should have a minimum of one year of experience in setting grades and profiles on shotcrete work
<input type="checkbox"/>	Blowpipe/air lance controller – should have experience in finishing shotcrete and has proven successful manipulation of the blowpipe on previous jobs as directed by an ACI Certified Nozzleman, Shotcrete Foreman or Superintendent
<input type="checkbox"/>	Rodman or Finisher – has proven successful shotcrete finishing on previous shotcrete projects
<input type="checkbox"/>	Mixerman - should have a minimum of six months running the specific (or similar) mixing equipment listed in this application.

**Program Implementation Details**

**Code of Conduct** – An ASA Qualified Shotcrete Contractor shall adhere to the following code of conduct:

*As an ASA Qualified Shotcrete Contractor, we agree to ongoing compliance with the requirements and standards set forth in the ASA Shotcrete Contractor Qualification Program Description. We will not knowingly or purposefully violate any project specifications or requirements. We agree to maintain required insurance coverage, staff our projects with trained and certified personnel, and strive to produce a high-quality product in a safe and professional manner.*

Failure to adhere to this code of conduct may result in disciplinary action which may include being placed on probation or losing Qualified Shotcrete Contractor status. Code of Conduct shall be acknowledged in submittal of the application.

**Fees** – \$3500/\$4500 (member/non-member) Fee. The required one-day seminar and corresponding written exam, along with reference materials is \$650; and the seminar with reference materials but without the exam is \$550. This will be collected separately when registering for a specific seminar. *The seminar must be attended, and the exam must be passed by the QI before submitting an application for Qualification.* (The seminar will also provide helpful insights for completion of the CQ application.)

Renewals, additional qualification in a different process or reapplication for upgrading to the Advanced level, will be \$750/\$1500 (member/non-member).

**Renewals** – Contractors previously qualified under this program will be eligible to renew their qualification after a five (5) year period. Checklist items documenting work in the *last 5 years* shall be submitted to be reviewed for requalification in the same level as previously qualified. If a Shotcrete Contractor (Basic) is applying to move up to a Shotcrete Contractor (Advanced), all information in the checklist to substantiate the new category shall be provided for review.

**Compliance with Program Requirements** - Compliance with the requirements of this program will be verified by a comprehensive review of the application documents, and verification by past and current clients regarding the quality of work performed.

By applying for qualification, the applicant agrees (a) that the ASA decisions concerning qualification, including but not limited to the decision of the CQC, shall be final and binding; (b) that the applicant will not institute legal action of any kind to challenge those decisions; (c) that neither the ASA nor its members, officers, employees or representatives (including but not limited to the members of the CQC) shall be subject to any claim for legal or equitable relief (including but not limited to money judgments and injunctive relief) arising out of those decisions; and, in any event, (d) that neither the ASA nor its members, officers, employees or representatives (including but not limited to the members of the CQC) shall be liable for consequential or incidental damages of any kind as a result of the ASA qualification program. By applying for qualification, the applicant further agrees that if it commences legal action in violation of this paragraph, it shall be responsible for paying all costs and expenses, including attorney fees, incurred by ASA and/or its members, officers, employees or representatives in the course of defending that legal action.

**Non-compliance** – Companies deemed non-compliant with the provisions of this program following a review of documentation will receive written notification of the areas of deficiencies and areas of non-compliance. The company will be given ninety days to correct deficiencies. Failure to remedy the conditions in the ninety-day period will result in forfeiture of all fees and the company will be dropped from further consideration in the program under the current application. The company may re-apply at any time by submitting a new application and paying the current fees.

**Ongoing Program Requirements** - Qualified Shotcrete Contractors must maintain compliance with these program requirements on an on-going basis. Any evidence brought to the attention of ASA that indicates that a Qualified Shotcrete Contractor is not continuing to comply or perform at the Level of Qualification conferred, may result in the company returning to probationary status for a maximum period of ninety-days subject to the provisions outlined in the public complaints and appeals sections. If a company is placed on probationary status, it must take corrective actions prescribed below under probationary status or it will forfeit all fees paid and the company will lose its qualification status.

**Probationary Status** - A company may be placed on probationary status for a maximum of ninety days from ASA receiving notification for any single event. A company may be placed on probationary status as a new applicant, loss of QI or for a noted deficiency as described in Ongoing Program Requirements. A company who fails to meet the conditions necessary for the removal from probationary status within the time allotted will forfeit all fees paid and lose their qualified status. A company that has its qualified status revoked must apply as a new applicant if it wishes to be reconsidered for qualification in the future. All outstanding fees due must be paid by an applicant prior to applying for reconsideration.

A company that is on probationary status as a new applicant or for a noted deficiency as notified by ASA, must successfully complete its qualification review within ninety days. A company that is placed on probationary status due to a subsequent deficiency must take the following actions within the times prescribed:

- Notify ASA in writing within thirty days of receipt of the notice of deficiency, regarding the company's intent to take corrective action. Failure to provide this notification within thirty days will result in forfeiture of all fees paid and the company will lose its qualification status.
- Complete all necessary corrective actions within the ninety-day probationary period. The company must provide necessary documentation as directed by ASA within this 90-day period.

A company that is on probationary status due to the loss of their QI, must submit the name of their QI replacement within thirty days and make plans for this individual to participate in the Shotcrete Contractor Education Seminar and take the written exam, if not previously completed. The company will then remain in probationary status until the completion of the new QI's seminar/exam requirements. Companies may consider sending more than one individual to the seminar and take the exam to have an alternate QI within the company for this reason.

### **Public Complaints**

ASA will maintain a list of ASA Qualified Shotcrete Contractors available for review by the public on the ASA website. Complaints about a Qualified Shotcrete Contractor will be recorded by ASA and, provided they meet the minimum requirements described herein, will be investigated to determine if the Qualified Shotcrete Contractor is failing to meet ongoing program requirements. For ASA to investigate complaints against a Qualified Shotcrete Contractor, the complaint must be made in writing and must contain the following information with as much detail as possible:

- Qualified contractor's name
- Complainant's name and contact information (both phone and email)
- Specific project name and location if applicable
- Specific dates of violations if applicable
- Detailed description of the alleged violation(s) or program deficiencies
- Disclosure of any direct or indirect relationship the complainant may have to the Qualified Company

If ASA determines that an investigation is warranted, it will contact the Qualified Shotcrete Contractor for a response and will provide the identity of the complainant. The ASA CQC will assign a group of three committee members along with the ASA Executive Director to review the complaint. ASA may ask for verification of corrected deficiencies. If there is no evidence of actions taken by the Contractor to correct deficiencies ASA may

place the Qualified Shotcrete Contractor on probationary status, subject to the provisions listed in the Appeals section.

**Appeals** – All appeals to decisions made under this program must conform to the procedures outlined in this section. Appeals under this section are limited to disputes over interpretations of the requirements contained in this Program Description and/or an applicant’s conformance with these requirements. Appeals under this section can only be made by an Applicant or a Qualified Company. All appeals must be made in writing per the procedures outlined herein and should clearly state that it is an appeal from an applicant or Qualified Shotcrete Contractor.

A written appeal should be sent to ASA, notifying them of the intent to appeal and requesting a review. This notification is to be sent within thirty days of the event being appealed. ASA staff will respond to the company within thirty days of receipt of the notice with their decision regarding the appeal.

If this response is not accepted by the company, they may submit a request to ASA to have the appeal reviewed by the CQC. This request must include all prior documentation and correspondence including the initial appeal letter and the response. It is the appealing company’s responsibility to provide all documentation and evidence.

**Indemnification** – In the event that any party asserts a claim for personal injury, property damage, economic loss or other damages against ASA and/or its members, officers, employees or representatives arising out of or relating to the acts or omissions of a ASA Qualified Shotcrete Contractor, the ASA Qualified Shotcrete Contractor shall, upon request, defend and indemnify ASA and/or its members, officers, employees or representatives and hold them harmless from all damages, judgments, costs, losses and expenses, including attorney fees, resulting from said claim.