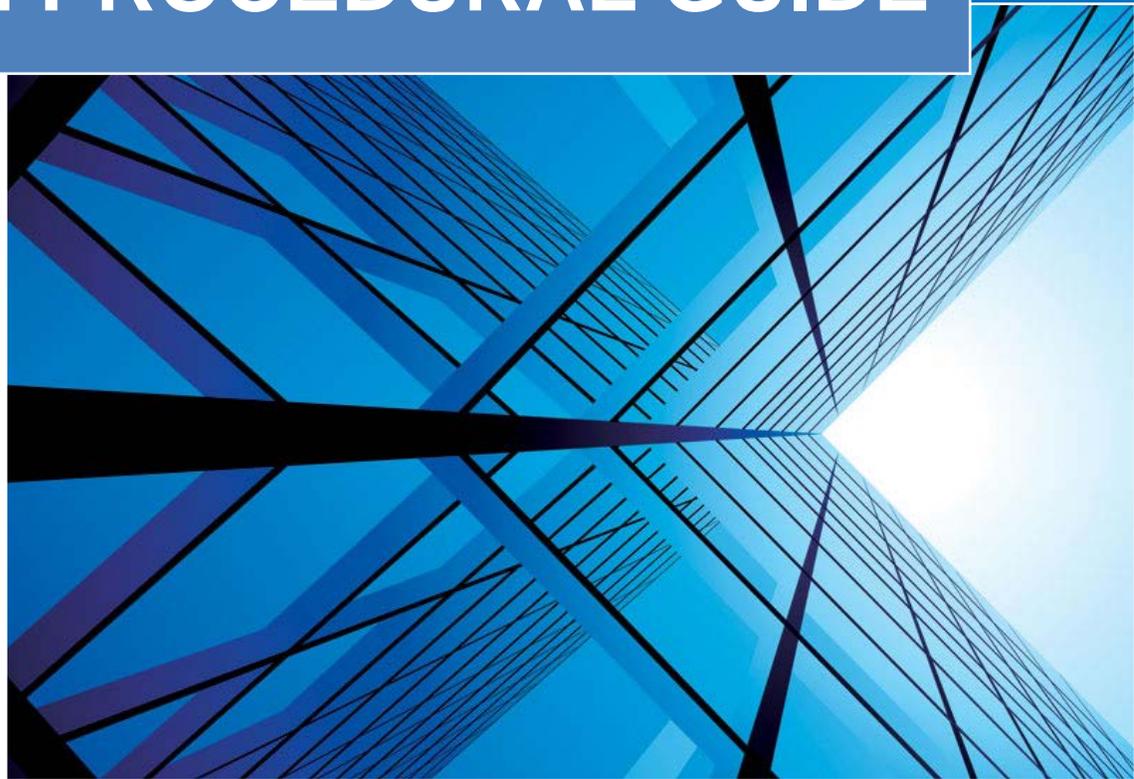




2019

PROGRAM PROCEDURAL GUIDE



#0961
ISO/IEC 17065
Process Certification Body

ARCHITECTURAL
GLASS AND METAL
CONTRACTORS

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How will certification help my organization?

Certification allows your organization to demonstrate evidence through an **independent third-party** that you have taken the right steps to deliver the **best end product**. Certification is a means of providing added **confidence** for end users of your products and services.

1.0 Foreword

The North American Contractor Certification Program (NACC) for Architectural Glass & Metal (AG&M) Contractors, hereafter referred to as the NACC Program, has been created with input and guidance from AG&M and construction industry experts. It is intended to serve as a minimum standard for company business practices, safety, quality, contract administrative processes, and glazing processes for AG&M contractors to industry accepted guidelines and principles.

The NACC Program is sponsored by the Architectural Glass and Metal Certification Council (AGMCC) and is a voluntary program available to all Architectural Glass & Metal Contractors.

The Certification Body (CB) for the NACC Program is Administrative Management Systems, Inc. (AMS) located in Sackets Harbor, New York. AMS provides administration of the program as well as assessments of contractors for the NACC Program.

1.1 Eligibility and Participation in the Program

The program is intended to be universally available to all AG&M Contractors that have a concentration of their business in the performance of one or more of the processes involved in the installation of commercial and/or residential architectural glass and metal products. This program applies to the fabrication and installation of interior as well as exterior AG&M products and services.

1.2 Voluntary Program

The program is available on a voluntary basis to contractors that complete a Licensee Application (FD-10), Licensee Agreement (FD-20), assessment, and pay the annual program fee to participate.

1.3 Procedural Guide

To ensure administration of the NACC Program in a uniform and equitable manner, this procedural guide (FD-30) has been prepared for the information and guidance of licensees (AG&M Contractors), the user community (Architects, Specifiers,

"As a Specifier, installer certification is important to me because it offers independent verification of minimum, industry accepted qualifications necessary to complete a specific type of work. Certification replaces all the subjective criteria normally specified to ensure qualified installers are bidding." -Leading Industry Specifier Quote

Building Owners, and General contractors), and the general public. The procedural guide provides details for requirements of the program as well as references to applicable documents required to apply for licensure and maintain certification status in the program. This procedural guide is an extension of the NACC License Agreement (FD-20) which is the governing document for operation of the certification program. This procedural guide describes administration procedures and routine operation of the certification program. This procedural guide and all related program documents are publicly available.

1.4 Certification Board

The NACC program is governed by a Certification Board. The board is comprised of an equal number of AG&M Contractors and User Community. This balance allows for equally weighted decisions regarding the NACC Program components and requirements. Organization and governance of the board is described in the NACC Bylaws (FD-35).

1.5 Accreditation of the Program

The NACC Program for AG&M Contractors is formally accredited through the **American National Standard Institute (ANSI)** in accordance with the requirements of **ISO/IEC 17065:2012**. Administrative Management Systems, Inc. (AMS) is the Program Administrator and Certification Body (CB) for the NACC Program. ISO/IEC 17065:2012 is an internationally-recognized standard, or set of requirements for bodies certifying products, processes, and services. ANSI Accreditation requires ongoing adherence to requirements and annual onsite assessments of the CB by ANSI Representatives.

*For more information on accreditation visit
www.naccprogram.com accreditation*

2.0 General Information

2.1 The Certification Concept

The NACC Program establishes requirements, as set forth in this program procedural guide, based on industry best practices of successful AG&M fabrication and installation. An evaluation assessment is performed by the NACC Program administrator to document the contractor organization's compliance with program requirements. The contractor must continue to comply with program requirements and participate in an annual assessment to establish and maintain certification status with the program.

2.2 Scope of Program

The NACC Program provides certification of the AG&M Contractor's company business practices, safety, quality, contract administrative processes, and glazing processes. The

program includes the fabrication and installation of AG&M products as evaluated through the program requirements and detailed in this Program Procedural Guide. AG&M Contractors must meet the requirements of the program to be listed as a certified contractor. The Architectural Glass & Metal Contractor Licensee can renew their certification annually, subject to an annual assessment and meeting program requirements (within each calendar year).

2.3 Administration of the Program

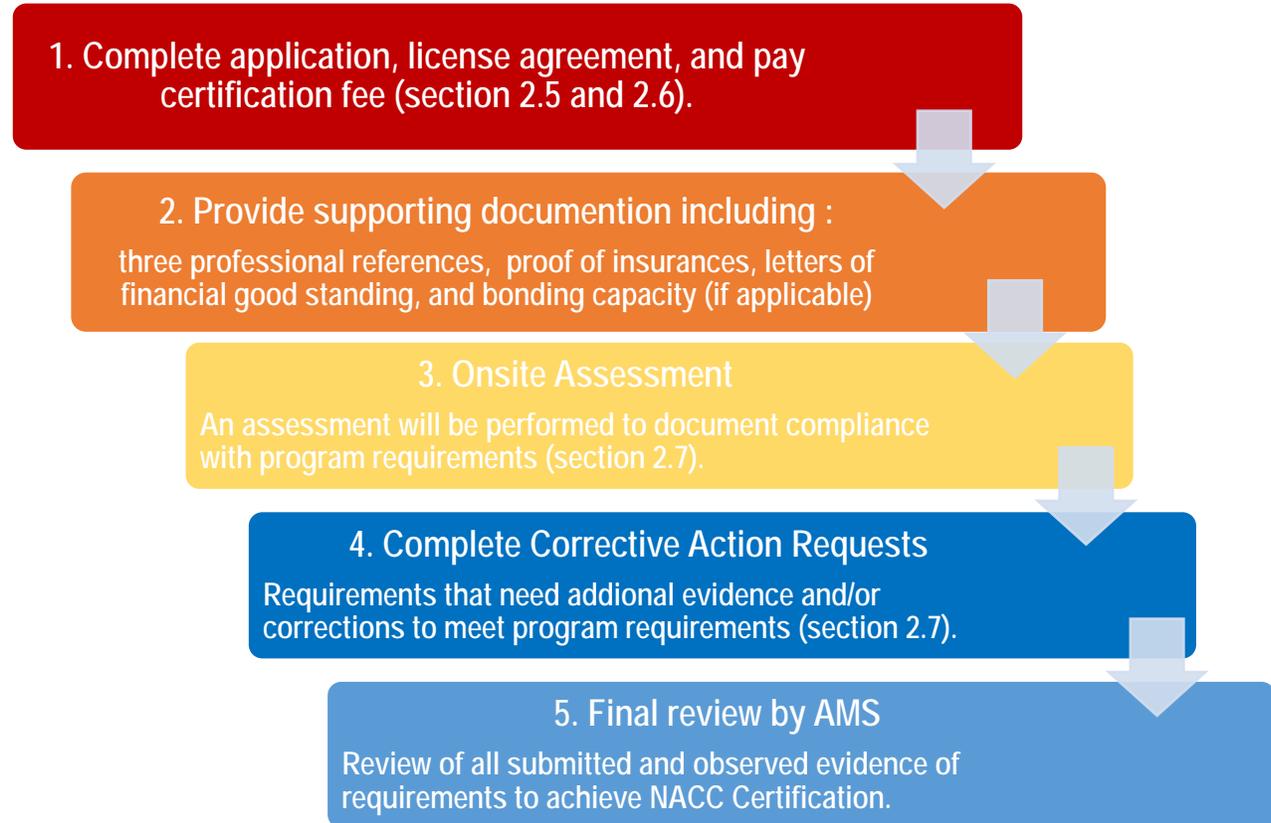
Administrative Management Systems, Inc. (AMS) headquartered in Sackets Harbor, NY is the Certification Body (CB) for the NACC Program and provides the day to day Administration for the program.

AMS, Inc.
205 West Main St.
Sackets Harbor, NY 13685
Phone: (315)646-2234
Website: www.amscert.com
www.naccprogram.com

The program is sponsored by AGMCC and governed through the NACC Certification Committee. The NACC Certification Committee operates in accordance with the AGMCC Bylaws (PD-35).

2.4 Steps to become certified

The following steps must be completed before AMS can list an Architectural Glass & Metal Contractor as certified in the NACC Program:



2.5 Application

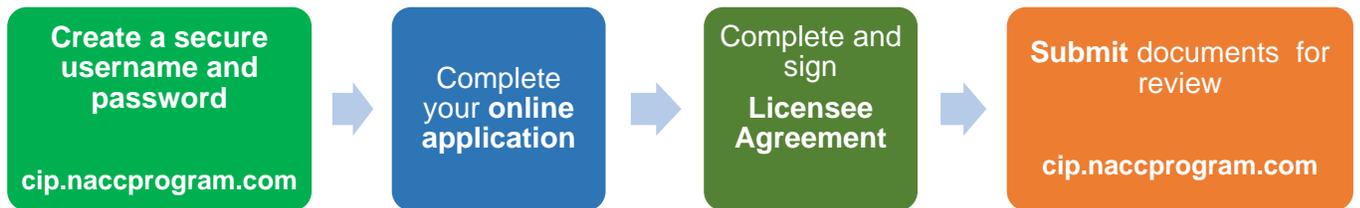
The prospective AG&M Contractor must submit an Application (FD-10) to AMS to request certification. The following is a sample of the application that is available to be completed online at cip.naccprogram.com.

Form FD-10

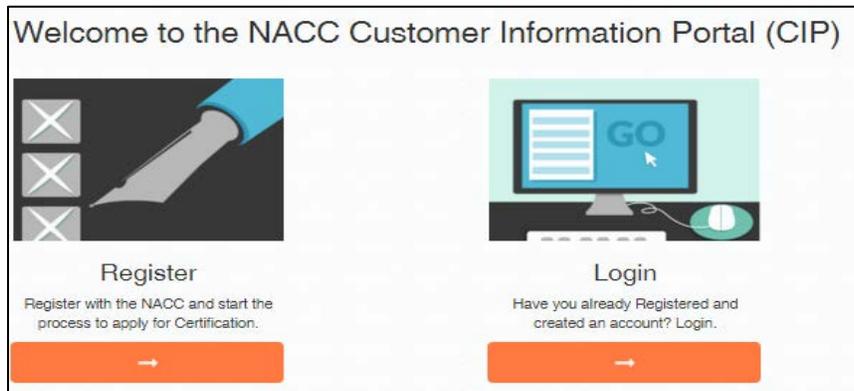
Application for NACC Certification

1. AG&M Contractor Company Name		2. Name of Company Owner (s)	
3. Name & Email of Company President or CEO			
4. Name and Title of person completing this application			
5. Company Physical Address	City	State	Zip Code
6. Company Mailing Address	City	State	Zip Code
7. Contact email address		8. Company Website	
9. Company Phone Number		10. Phone number for main contact person	
11. Additional Location(s)			
12. Is additional location a fabrication facility?			
13. Total Number of Employees	14. Number of staff in Estimating/ Project Management	15. Number of staff in Shop/ Fabrication	16. Number of staff in Field Operations
17. Estimated number of annual job sites			
18. What competency categories are you applying for per table 2c (please check boxes) <input type="checkbox"/> Interior and Entry Systems Glass <input type="checkbox"/> Building Envelope Low Rise <input type="checkbox"/> Building Envelope High Rise <input type="checkbox"/> Active Glass <input type="checkbox"/> Guardrails <input type="checkbox"/> Service Work		19. Company years of experience in AG&M	20. How many years has company been owned by current ownership?
21. In the past 3 years has your company been terminated from any project for any reason related to defective work? Yes No (circle one) 22. In the past 5 years have there been any judgments, claims, or arbitration proceedings or suits pending or outstanding against your company due to a construction defect? Yes No (circle one)			
Please provide explanation and completed resolution for any yes answers to be evaluated for certification.			

How to apply for certification online:



“SCREENSHOT” EXAMPLE OF CIP LOGIN PAGE and Application Wizard:



When you create your initial secure login, you will receive an email verification for added security. You can return to the portal as often as you wish at:

cip.naccprogram.com

For added security, only you can see your company information on the portal.

2.6 Program Fees

The AG&M Contractor must pay a fee for the program as outlined on the Program Fee Schedule (FD-40). The fee covers one year of certification including on site assessment for the program.

The fee shall initially be invoiced upon review and acceptance of application, and shall be payable within 30 days and prior to any assessment for certification. After the initial year, annual certification fees shall be invoiced approximately 90 days prior to your estimated site assessment date, which will generally be 12 months from the prior year assessment date.

2.7 Assessment and Evaluation

An assessment is performed to evaluate the AG&M contractor's evidence of compliance with requirements of the program. The requirements are detailed in this procedural guide (sections 3.0 through 8.0).

The assessment is conducted by a professional assessor that utilizes an Assessment Form (FD-45) as a checklist to document evidence of compliance with each requirement of the program.

HOW MUCH DOES IT COST TO BECOME CERTIFIED?

**FOR THE 2018
CERTIFICATION YEAR
THE TOTAL PROGRAM
FEES ARE \$3900.**

Please see the Program Fee Schedule (FD-40) for full details. You may also incur some internal expense preparing your company for and maintaining certification.

Program requirements are established as either mandatory or scored:

Mandatory

- Requirements that are mandatory **require full compliance.**

Scored

- Requirements are **scored based on evidence of compliance** as zero to three points
- 3 Points = full conformance with the requirement
- 2 Points = partial evidence of conformance
- 1 Point = intent of conformance demonstrated
- Zero indicates no evidence of compliance, **no individual item score may equal zero** for contractor to achieve certification

To achieve certification all mandatory items must be met along with a determined cumulative score of all scored items.

Additional documents as referenced in this procedural guide will be requested in advance of an on-site assessment. An on-site assessment shall then be scheduled and may take place at the AG&M Contractor's main office, fabrication facility, warehouse, active job site, and/or any permanent satellite facilities. Program requirements are divided into mandatory items, which the AG&M Contractor must demonstrate compliance with, and additional competencies which are scored. The contractor must satisfy the mandatory items. The cumulative score of the scored competencies must add to a determined total score and no individual item score may equal zero.

Once the assessment has concluded a copy of the completed assessment form (FD-45) will be provided to the contractor, along with any corrective action requests and findings. A sample assessment evaluation summary is included in appendix B.

All corrective action requests resulting from the assessment must be addressed by the contractor. The contractor shall provide response in writing to corrective action requests within 30 days from date of notice in writing to AMS for evaluation and resolution. If the licensee does not respond, a warning of possible removal of certification is sent giving an additional 30 days to respond (see section 9.2).

If corrective action requests are made during a Contractor's Initial Assessment Year, they shall have 6 months from date of assessment to correct them. If they do not correct them in that timeframe, reassessment may be necessary before certification can be granted.

Assessments of the prospective certified Architectural Glass & Metal Contractor Licensee are conducted by AMS appointed assessor(s) per Table 2a. Assessments are to be scheduled within 90 days of notice to the Architectural Glass & Metal Contractor.

The AG&M Contractor shall coordinate with General Contractor, Building Owner, and other parties in authority to obtain reasonable access to active job site(s) when required for the program evaluation.

What is Evidence of Compliance?

You have probably heard the old adage "Say what you do, do what you say...and have evidence to prove you did it".

Evidence of compliance means that you are able to show proof that your company meets the requirements that are specified in this procedural guide.

The evidence may be from logs, records, or documents from completed work or observations by the assessor or of work in-progress.

Table 2a

Evaluation Site Rotation Table	
Year 1 AG&M Contractor Primary Business Facility	Year 2 AG&M Processes at fabrication shop/ active job sites

Supporting documentation for certification will be reviewed **every year**. Assessments will **rotate each year** between AG&M Contractor Primary Business Facility and AG&M Processes. Additional assessments may occur in either rotation at Primary Business Facility, Fabrications Shop, and Active Job Sites as time and access allows.

2.8 Demonstrating Evidence of Certification Requirements

The AG&M Contractor must provide evidence of compliance with each requirement of the NACC Program as outlined in this Program Procedural Guide. Evidence may be provided through various methods including written evidence or evidence observed and documented by the assessor. Table 2b provides a list of typical evidence that is reviewed for evaluation of certification requirements:

Table 2b METHODS TO EVALUATE PROGRAM REQUIREMENTS	
Documents and Records	May include the following examples: <ul style="list-style-type: none"> ▪ Operational Manuals (examples: Quality Manual, Safety Manual, Employee Manual) ▪ Work instructions/ process instructions ▪ Manufacturer’s assembly/installation instructions ▪ Contract documents and drawings ▪ Completed job records ▪ Proof of Insurance and/or bonding ▪ Letters of “good standing” from accountant and bank (see table 5a) ▪ Certificates of Incorporation and ownership ▪ Employee records including training, assessments, and certificates ▪ Safety and quality records and filings ▪ Other support documents or records per program requirements

<p>On-site assessments:</p> <ul style="list-style-type: none"> ▪ Home Office ▪ Warehouse ▪ Fabrication ▪ Job Sites ▪ Permanent Satellite Facilities 	<p>Evaluation by appointed assessor of processes, procedures, personnel, and systems in use AG&M Contractor. Evaluation may include:</p> <ul style="list-style-type: none"> ▪ Observations ▪ Interviews with personnel ▪ Work in progress ▪ Instructions, drawings, contracts, and other documents or records in use ▪ Safety, quality, and other systems in use
<p>3rd Party References</p>	<p>Attestations of satisfactory performance for work completed by AG&M Contractor from end users on NACC Professional Reference Form (FD-15) See table 4b</p>

2.9 Architectural Glass & Metal Competency Categories

The AG&M industry includes a variety of categories of work that require different and specialized skills, equipment, and competency to complete. This program separates competency into categories to accurately separate the scope(s) of work that the AG&M Contractor is represented for in the certification. AG&M Contractors are evaluated in one or more designated industry categories based on evidence of experience in that category. The Acknowledgement of Certification (AC) (FD-60) and NACC Certified Contractor Directory (FD-65) will indicate the AG&M Categories that the AG&M Contractor has been certified for under the NACC Program. Categories are designated in Table 2c. AG&M Contractors must have experience in the category in the last 24 months.

<p>Table 2c Competency Categories Table</p>	
<p>Category</p>	<p>Sub Categories</p>
<p>Interior and Entry Systems Glass</p>	<ol style="list-style-type: none"> 1. Shower Door Enclosures 2. Interior walls 3. Mirrors 4. Doors (glass, aluminum, and other systems)

<p>Building Envelope</p> <p>LOW RISE</p>	<p>Typically Structures less than or equal to 3 stories above grade</p> <ol style="list-style-type: none"> 1. Framing systems that require internal support to meet project design wind load 2. Curtain wall systems (Field Glazed) 3. Unitized systems (Shop Glazed) 4. Point supported exterior glazed systems 5. Sloped Glass 6. Stone and Metal Panels 7. Steel supported and composite wall unitized systems 8. Skylight systems 9. Frames (aluminum and other) 10. Doors (Balcony, terrace, and other systems) 11. Storefront
<p>Building Envelope</p> <p>HIGH RISE</p>	<p>Typically structures greater than 3 stories above grade</p> <ol style="list-style-type: none"> 1. List inclusive of systems and components listed in low rise category used in high rise applications.
<p>Active Glass</p>	<ol style="list-style-type: none"> 1. Solar Panels 2. Electro chromatic 3. Embedded LED and other lighted applications 4. Switchable/Privacy Glass 5. Heated glass applications 6. Wiring of active glass 7. Framing systems for active glass
<p>Service Work</p>	<ol style="list-style-type: none"> 1. Emergency Services 2. Door and closer repair 3. Small scale glass replacement and glazing system components 4. Repair of leaks and other small scale glazing issues
<p>Guardrails</p>	<ol style="list-style-type: none"> 1. Glass railing systems 2. Glass Balconies 3. Temporary closing of exposed openings 4. Framed and frameless glass railings 5. Glass balustrades

Note: For the purpose of the NACC Program Low rise is typically commercial or residential buildings 3 stories above grade or less (high rise typically 4 stories or greater). This definition is commensurate with ASHRAE standard 90.1 that defines typical number of stories above grade for permanent residential buildings.

2.10 Licensing

The prospective AG&M Contractor signs the **NACC License Agreement (FD-20)** and sends to AMS to countersign. The Licensing Agreement outlines responsibilities of the contractor licensee and AMS as the program administrator.

2.11 Certification and Certification Listing

Once program requirements have been completed and verified through assessment and evaluation by AMS, the AG&M Contractor Licensee will be eligible for certification.

AMS will list the AG&M Contractor on the NACC Certified Contractor Directory website (FD-65) and provide an Acknowledgment of Certification (AC) (FD-60). The Acknowledgment and Directory will list the contractor's competency categories (per table 2c). The certified contractor is encouraged to use the Certified Contractor Directory website and Acknowledgment of Certification as proof of their achievement of certification. Guidelines for use of the NACC Certification Mark (FD-100) shall be referenced for proper use of the Certification logo.

2.12 Certification requirement overview

The NACC Program encompasses broad and inclusive requirements that address the overall operation of the AG&M Contractor. The program breaks these requirements into 5 components as illustrated below:



3.0 AG&M Contractor Company Code of Ethics

The NACC Program Code of Ethics sets an expectation of conduct for contractors seeking certification. Certified AG&M Contractors that have strong core values and ethical business practices are positioned to deliver excellent service and a higher quality end product. As a means of capturing the spirit and intent of the NACC Program the following Code of Ethics is established as a guide to professional practices by each Certified AG&M Contractor. All contractors will be required, as a prerequisite, to establish and sign a statement of agreement to adhere to the Code of Ethics. Elements of the Code of Ethics may also be observed in the program evaluation process.

Table 3a
Code of Ethics Components

Component	Explanation
Integrity	Contractors should strive to maintain high standards of professionalism including making realistic commitments and following through on promised services and work.
Pursuit of Excellence	Contractors should strive to continue the development of professional knowledge and skills for their workforce through continued education to foster growth of capabilities and performance.
Quality	Contractors should utilize procedures, materials, and processes that meet or exceed contract and customer expectations and performance requirements.
Representation of Abilities and Qualifications	Contractors should responsibly bid jobs within the professional experience, technical competency, and financial reach of their organization.
Environmental Consciousness	Contractors should exercise responsible building practices including disposal and recycling of waste materials in a method that minimizes impact on the environment.
Elevating Industry Standards and Pride in The Profession	As a community, the group of all NACC certified contractors shall hold each other accountable through compliance with the program. This will promote recognition of the benefits of certification.
Accountability	Contractors should accept responsibility for their actions and actions of the workers under their responsibility.

4.0 Company Business Practice Requirements

Table 4a provides details on methods of ensuring that the applicant AG&M Contractor has demonstrated competency in operating a business in the AG&M field to meet requirements of the program.

Table 4a Company Requirements	
Years of experience	Method
Company Competency and Infrastructure	
5 Years of general AG&M experience <ul style="list-style-type: none"> If the contractor has multiple lines of business there shall be evidence of infrastructure for providing AG&M products for a minimum of 5 years. 	Contractor shall demonstrate experience by <u>2 or more</u> of the following to show 5 years' experience as an AG&M Contractor. <ul style="list-style-type: none"> Payroll Records Completed job files Certificate of incorporation Corporate meeting minutes Licensing in AG&M field
Ownership and principal management	<ul style="list-style-type: none"> Contractor shall demonstrate continual ownership during the past 5 years at time of initial NACC Program assessment. If ownership has changed, the AG&M Contractor shall provide credentials for new management showing 5 years of relevant experience.
Infrastructure in place for AG&M operations	Contractor shall have in place: <ul style="list-style-type: none"> Necessary buildings Process equipment Supporting services (communication, information, or transport systems)
Experience within a competency category	Contractor shall demonstrate 5 years of experience providing scopes of work relevant to the certification category.

<p>Professional References</p> <ul style="list-style-type: none"> • Provide 3 completed references (form FD-15) from Architects, AG&M Consultants, General Contractors, or Building Owners attesting to completion of work to required specifications and performance requirements. • References shall be from 3 different professionals referring to separate jobs or projects 	<ul style="list-style-type: none"> • 3 statements on NACC Professional Reference form (FD-15) with initial application for program for work performed in the last 24 months • 3 new statements on form FD-15 annually for certification renewal for work performed in the last 12 months. • Professional reference form (FD-15) includes the following: <ol style="list-style-type: none"> 1. Work experience with AG&M Contractor 2. Quality of work performed on a ratings scale 3. Performance of work including safety, payment for materials, or interference with other trades
<p>Company Financial</p>	
<p>Financial Accounting and record keeping</p>	<p>Contractor shall provide a letter from a Certified Public Accountant or equivalent accounting professional, signed within the last 12 months, stating that proper accounting practices are utilized by the contractor and/or a Certificate of Good Standing from an authority with jurisdiction in the home state or province of the contractor to demonstrate good financial standing and adherence to tax requirements.</p>
<p>Insurance Coverage</p>	<p>Contractor shall provide evidence of insurance coverages. Insurance coverage shall include the following:</p> <ul style="list-style-type: none"> • Worker’s Compensation/ Employer’s Liability Insurance • Commercial General Liability Insurance and/or Professional Liability Insurance • If AG&M Contractor provides delegated design/ engineering, then there must be proof of Professional Liability Insurance <p>Insurance coverage must extend to all states, provinces, regions, and countries where contractor conducts business.</p>

<p>Ability/Capacity for Bonding</p>	<p>Contractor shall demonstrate the bonding capabilities by one of the following methods:</p> <p>METHOD 1 Bonding is not specifically required by the program, however, the capability to bond a project shall be demonstrated by:</p> <ol style="list-style-type: none"> 1) Contractor shall submit a letter from their bonding company, stating the bonding capacity of the contractor. 2) Contractor shall be able to show that bonding capacity is adequate for currently awarded and backlog contract jobs. <p>METHOD 2 (alternate) Contractor may provide alternate means of demonstrating financial capacity to perform awarded work by providing a letter from their CPA stating that contractor’s working capital, net equity, and debt-to-equity ratio is adequate to perform currently awarded and backlog of contract jobs.</p>
<p>Financial Institution good standing</p>	<p>Contractor shall provide a “letter of good standing” from their financial institution that maintains the main business deposit account for the contractor. The letter shall include:</p> <ul style="list-style-type: none"> • Date that account and/or relationship was established. • Statement that contractor has maintained a satisfactory relationship with their financial institution and account is in good standing.

5.0 Safety

Table 5a provides program requirements for employee health and safety programs operated by the AG&M contractor to promote a safe working environment for employees and the adherence to OSHA and/or CANOSH requirements.

Table 5a Safety Requirements Table	
Category	Requirement
Corporate Health and Safety Program	<ol style="list-style-type: none"> 1) Contractor shall have a written Corporate Health and Safety Program based on current OSHA or other equivalent standards (CANOSH for Canada). 2) Corporate Health and Safety Program shall be approved and signed by corporate officer and reviewed on an annual basis.
Safety manual/safety program guide	<p>Safety Manual and/Program shall address the following general topics:</p> <ol style="list-style-type: none"> 1) Shop and machinery safety 2) Job site safety 3) Fall protection 4) Materials and Glass Handling 5) Fire prevention and hot work 6) Electrical hazards 7) Personnel Protective Equipment
Key competent person responsible for organization's safety program	<p>Contractor shall designate a key person with the following competencies:</p> <ol style="list-style-type: none"> 1) OSHA 30 completion (or CANOSH equivalent) or equivalent training. 2) Able to complete OSHA 300 and 300A documents (or CANOSH equivalent). 3) Knowledge of OSHA (or CANOSH) guidelines applicable to construction and fabrication.
Personal Protective Equipment (PPE)	<ol style="list-style-type: none"> 1) Appropriate PPE shall be available and in use at fabrication shop and at job sites. 2) PPE shall be maintained in proper working condition including inspecting, repairing, and/or replacing as needed.

<p>Safety reviews and Safety CAPA</p>	<ol style="list-style-type: none"> 1) Each project shall be reviewed by designated health and safety person for project and site-specific safety requirements prior to the job beginning. 2) A competent person per OSHA (or CANOSH) guidelines shall observe job sites. 3) Safety assessments and weekly “tool-box talks” shall be performed at job sites by designated Health and Safety Person. 4) Corrective actions and procedures shall be documented for accidents in a timely manner (generally 14 days).
<p>First Aid</p>	<p>First Aid Kits and eye wash stations shall be provided and accessible at every job site and fabrication shop</p>
<p>OSHA</p>	<ol style="list-style-type: none"> 1) OSHA injury and illness records shall be maintained and up to date (300 log and 300A summary log filed appropriately - written or electronic) 2) Accidents shall be reported and/or documented IAW appropriate regulatory authorities and contract requirements for specific job. 3) Corrective actions shall be documented for accidents in a timely manner.
<p>Drug policy and other substance abuse assistance</p>	<ol style="list-style-type: none"> 1) Contractor shall have a drug screening policy for all personnel as allowed by state and/or provincial regulatory requirements. 2) Information shall be made available to personnel on any available assistance and or training for substance dependency.

6.0 Contract Administration Processes

Management/Key Staff shall review bidding and awarded contracts prior to commencement of work for appropriate specifications, drawings, and requirements, per table 6a.

Table 6a Contract Administration Processes Requirement Table	
Category	Requirement
Contract evaluation, review, and distribution	<p>Awarded contracts shall be evaluated and requirements shall be distributed to key personnel involved in the project.</p> <p>The following shall be evaluated or reviewed:</p> <ol style="list-style-type: none"> 1) Design review, including proper plan stamps (PE if required) 2) Equipment and personnel requirements 3) Material requirements 4) Financial abilities and capacity (Contractor shall not bid on jobs that exceed the reasonable financial capacity of the company) 5) Specifications and contract requirements
Pre-Job meetings	<p>Contractor shall have a format for conducting pre-job meetings for personnel involved in a job.</p> <p>The meeting shall include, but not be limited to the following:</p> <ol style="list-style-type: none"> 1) Scope of the project 2) Job Site access requirements 3) Contract requirements and specifications 4) Materials and equipment - including staging and handling 5) Crane, lift, and elevator considerations 6) Safety and accident prevention
Communication of changes	<p>Contractor shall have a process for reviewing, distributing, and communicating changes that affect specifications or drawings after initial contract is awarded. Changes shall be communicated to key personnel involved in the job process in a timely manner.</p>

<p>Specification and contract document controls</p>	<ol style="list-style-type: none"> 1) Final revisions to specifications and drawing shall be available to key personnel during all phases of the project. 2) Contractor shall designate a key person responsible for evaluating interpretations and variations from specifications and drawings. 3) Interpretation and variations from specifications or drawings shall be documented and approved through building owner, general contractor, curtain wall consultant, or other appropriate and responsible party.
<p>Contract Special requirements</p>	<p>Contractor shall demonstrate that they have a process for assessing contract requirements for contracts requiring special environmental, hurricane (wind zone), impact, fire-rated, and seismic applications, geographical, or other state/ province mandated requirements prior to performing work.</p>

7.0 Quality Management Systems

Quality Management Systems includes policies, procedures, and other systems to help ensure that the end product meets customer expectations. Training and competency of staff is also paramount to Quality.

Table 7a Quality Management System Requirements Table	
Category	Requirement
Company policies	Contractor shall have evidence of communication of company policies to personnel through handbook, employee manual, meetings with sign in, or other appropriate means.
Quality Management System (QMS) in place and used throughout the organization. (See appendix C for additional explanation of terms)	Contractor shall have a QMS program that includes the following items: <ol style="list-style-type: none"> 1) A Quality Manual that outlines your Quality Management System the manual should be approved by management and available to all personnel. 2) Annual internal review of processes and procedures in Quality Management System with results recorded (Internal Audit) 3) Operational procedures and/or work instructions established and in use. 4) Equipment Maintenance and Accuracy – Measuring equipment should be uniquely identified, checked on a determined periodic frequency and documented. 5) Record retention policy to establish how long records (including completed jobs) are retained. 6) Document Control procedure defining how documents are approved for use and how they are revised. Changes and current version of documents shall be identified. 7) Corrective Action and Preventative Action (CAPA) procedure for identifying and correcting non-conformities or potential non-conformities affecting quality. 8) Procedure for handling customer feedback including warranty claims or service requests for completed jobs.
Organization Chart	Contractor shall have an organizational chart, showing key areas of responsibility and authority within the contractors organization

Personnel files/Employee Records	Contractor shall retain records on each employee including any contract labor help. Files shall include: 1) Resume or application showing applicable experience 2) Training and assessment records
Key qualified person responsible for Quality Management Systems	The contractor shall designate a key person responsible for Quality Management Systems. The designated person shall have a working knowledge of the contractor’s QMS.. The designated person may serve other duties for the contractor in addition to being responsible for the QMS.

7.1 Personnel Competency

Competency of key personnel is important to determining the overall ability of the AG&M Contractor to successfully perform according to job requirements in contract documents and specifications.

The NACC program recognizes the following as **key staff positions** (see appendix A for additional definitions):

1. **Key Technical Management**
2. **Estimating and Project Management**
3. **Fabrication Shop Crew including Shop Crew Supervisors**
4. **Field Crew including Field Crew Supervisors**

Due to the nature of the construction industry, the crews may be made up of various skill levels. Crew workers may be internal employees of the organization or external craft workers through contract or labor organization signatory agreements. It is the responsibility of the AG&M Contractor management to assign crew workers to crews that provide proper skill levels to perform work in accordance with job requirements in contract documents and specifications.

The table 7b below provides general competency requirements for all key staff positions:

Table 7b Personnel Competency (General) Requirements Table	
General competency requirements	Methods of documentation for key personnel
Trained skills and work experience	<p>Contractor shall maintain documents providing evidence of trained skills and work experience.</p> <p>Examples of documentation include one or more of the following:</p> <ul style="list-style-type: none"> • Resumes or biography- providing details of work experience • Training course completion documents, certificates, or diplomas • Professional designations from industry organizations • Professional licenses from government or other regulatory authorities • Accredited personnel certification programs • Department of Labor recognized classifications such as Journeyman or Apprentice • Documented on-the-job training hours
Assessments of skills to evaluate competence to perform job classification	<p>Contractor shall maintain written documents providing evidence of assessment of skills to evaluate competence in job classification.</p> <p>The assessment shall be performed by an evaluation method that is written, oral, or observed and performed by a qualified/competent person.</p>
Continuing Education and continued skill assessments (after the initial certification year)	<p>Contractor shall maintain documents providing evidence of continuing education and/or continuing assessments.</p> <p>Assessments shall be performed (as a minimum):</p> <ol style="list-style-type: none"> 1. Annually after initial certification year 2. When job duties significantly change to require new skills

Table 7c provides **specific** requirements for key personnel:

Table 7c Personnel Competency (Specific) Requirements Table		
Key Position	Staffing Requirement	Specific Competency Requirements
Front Office Personnel		
Key Technical Management	Key Personnel (identified by organizational chart)	<p>Contractor shall provide evidence of training and experience that demonstrates AG&M industry experience applicable for assigned duties.</p> <p>Experience shall include one or more of the following:</p> <ol style="list-style-type: none"> 1) AG&M field work history 2) Education and training 3) Professional industry designations 4) Current professional licenses 5) State, Province, or other regulatory authority licenses for AG&M and/or construction field <p>Demonstrate education and/ or experience in the following areas:</p> <ol style="list-style-type: none"> 1) Planning and Scheduling 2) Project costing and documentation 3) Communication 4) Problem-Solving 5) Conflict Resolution 6) Leadership
Estimating and Project Management	At least 1 per 10 of estimating and project management staff	<ol style="list-style-type: none"> 1) Shall demonstrate training and/or experience in construction documents and specifications. 2) Shall demonstrate knowledge of the following areas: <ul style="list-style-type: none"> • Construction contracts • Contract documents • Contract provisions • Procedures for modifications and substitutions • Interpreting construction documents 3) Architectural Glass & Metal Contractor shall document evidence of internal-assessment of competency of Key Estimating and Project Management key personnel in areas listed above or provide evidence of CSI Construction Document Technologist (CDT) designation.

<p>Estimating and Project Management (continued)</p>		<p>4) Shall have annual continuing education including one or more of the following:</p> <ul style="list-style-type: none"> • CSI – CDT Boot Camp • GANA Blue Print Reading and Labor Estimating Course • GANA Project Managers Reference Manual – self study • GANA Glazing Manual – self study • Manufacturers Training • Other relevant courses
<p>Shop Crew</p>	<p>Varies</p>	<p>There shall be evidence that all shop crew shall have completed OSHA 10 requirements (or CANOSH equivalent)</p> <p>There shall be documentation of training for shop craft workers that includes one or more of the following:</p> <ol style="list-style-type: none"> 1) AG&M industry-specific training or vocational course completed by industry-recognized provider or recognized by the US Department of Labor or Canadian Provincial College of Trades. 2) In-house or on-the-job training as a crafts worker in-training shall be recorded including number of hours, skills instructed, and the name and title of the person(s) providing training including relative experience and credentials. <p>Craft workers in training shall work under observation of craft workers that have completed training.</p> <p>Assessments shall be performed and documented for craft workers.</p> <p>Craft workers shall complete continuing education or continuing assessments after the initial certification year.</p> <p>Continuing education may include one or more of the following:</p> <ol style="list-style-type: none"> 1) Industry-specific courses 2) Documented internal training 3) Manufacturer training <p>Note: It is the intention of the NACC program to require the assessment of crew worker personnel by an independent nationally-recognized accredited organization that operates in accordance with ISO/IEC 17024 requirements (General requirements for bodies operating certifications of persons) when such programs are available</p>

<p>Shop Supervisor(s)</p>	<p>1 per crew of 10 workers.</p> <p>No one shall supervise more than 10 craft workers</p>	<p>In <u>addition</u> to requirements for shop crew:</p> <ol style="list-style-type: none"> 1) Each fabricating crew shall have at least one supervisor that has demonstrated experience as a craft worker with expertise that is adequate to perform any reasonable task within the fabrication craft. 2) Fabricating supervisor shall have at least 4 year of experience as a fabricator.
<p>Field Crew</p>	<p>Varies</p>	<p>There shall be evidence that all field crews will consist of a competent person (as defined by OSHA) that has completed OSHA 30 and all crew members shall have completed OSHA 10 (or CANOSH equivalent)</p> <p>There shall be documentation of training for field craft workers that includes one or more of the following:</p> <ol style="list-style-type: none"> 1) AG&M industry specific training or vocational course completed by industry recognized provider or recognized by the US Department of Labor or Canadian Provincial College of Trades. 2) In-house or on-the-job training as a crafts worker in-training shall be recorded, including number of hours, skills instructed, and the name and title of the person(s) providing training. <p>Craft workers in-training shall work under observation of craft workers that have completed training.</p> <p>Assessments shall be performed and documented for craft workers.</p> <p>Craft workers shall complete continuing education or continuing assessments after the initial certification year.</p> <p>Continuing education may include one or more of the following:</p> <ol style="list-style-type: none"> 1) Industry-specific courses 2) Documented internal training 3) Manufacturer training <p>Note: It is the intention of the NACC program to require the assessment of crew worker personnel by an independent nationally-recognized accredited organization that operates in accordance with ISO/IEC 17024 requirements (General requirements for bodies operating certifications of persons) when such programs are available.</p>

<p>Field Crew Supervisor</p>	<p>1 supervisor for a crew of 5.</p> <p>1 additional experienced craft worker per additional crew of 5 craft workers.</p>	<p>In <u>addition</u> to requirements for field crew:</p> <ol style="list-style-type: none"> 1) Each field crew shall have at least one supervisor that has demonstrated experience as a craft worker with expertise that is adequate to perform any reasonable task within the scope of the AG&M category they are working in. 2) AG&M supervisor shall have at least 4 years of experience as a glazier.
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8.0 Glazing Processes

Project management processes address the controls of materials to be utilized and the processes for storing, transporting, preparing, and final installation in the AG&M project. Table 8a provides details of process requirements for the NACC Program.

Table 8a Glazing Process Requirements Table	
Category	Requirement
Materials Handling	
Materials Receiving	<p>Contractor shall show adequate control of materials receiving and evaluate such materials for compliance with required specifications.</p> <p>Controls shall include:</p> <ol style="list-style-type: none"> 1) inspection of received materials 2) receiving log 3) controlled material holding or storage area 4) labeling or other identification for job destination
Material Suppliers	<p>Contractor shall have in place:</p> <ol style="list-style-type: none"> 1) Criteria or standards for evaluation and review of key/trusted/accepted suppliers. 2) A supplier matrix or list that can be used to identify proper suppliers by material line
Storage/warehousing/traceability	<ol style="list-style-type: none"> 1) Contractor shall have a system for maintaining inventory controls or other traceable warehouse control system. Inventory controls can include one or more of the following: <ol style="list-style-type: none"> a. cataloging b. color coding c. job coding d. numbering e. rack/shelf identification and location log 2) Record of materials for jobs shall be maintained to provide traceability. <p>Warehouse storage considerations shall include:</p> <ol style="list-style-type: none"> 1) Temperature (overheating or freezing) 2) Reasonably clean, organized, and free of debris 3) Appropriate containments, walls, barriers, or other protections to prevent material integrity degradation to materials from shop and machinery dust, oils, and other foreign matters 4) Protection can also be provided by crates, poly wrap, boxes, or other shipping containers.

<p>Transportation/staging</p>	<ol style="list-style-type: none"> 1) Materials transferred to job site shall be updated in the inventory control system 2) Adequate protection of materials shall be provided during transfer to job site for weather, road debris, and other deleterious conditions
<p>Material controls –All phases</p>	<p>Control of materials shall be maintained during all phases of the job process (from receipt to installation), to protect material integrity and maintain appropriate control:</p> <ol style="list-style-type: none"> 1) Materials shall be staged in a manner appropriate for the type of material. 2) Appropriate controls shall be established and utilized to address temperature, weather, direct sunlight, condensation, dust, debris, and other perils 3) Security shall be addressed to prevent theft, vandalism, or other malicious acts 4) Responsible person at job site can be designated to contact shop and/or supplier to notify of shortages or damage
<p>Fabrication and Installation</p>	
<p>Acceptance and preparations of opening to be glazed</p>	<p>A process shall be in place to verify the opening to be glazed</p> <p>This may include, for example:</p> <ol style="list-style-type: none"> 1) Tolerance 2) Plumb 3) In-Plane 4) Free of Obstructions 5) Clean 6) Free of debris <p>Opening shall be properly prepared for installation.</p> <p>This may include, for example:</p> <ol style="list-style-type: none"> 1) Verifying free of moisture, grease, dirt, oil, or other deleterious material 2) Proper cleaning, abrasion, or chemical preparation

<p>Manufacturer Installation Instruction</p>	<p>Installation and manufacturer instructions shall be available at point of use and followed.</p> <p>This may include, for example:</p> <ol style="list-style-type: none"> 1) Application temperature for wet sealants, putty, or glazing compounds 2) Temperature conditions that are within limits for sealants gasket, or other materials with manufacturer’s storage and application temperature requirements
<p>Framing and metal work</p>	<p>Proper installation of framing and metal work shall be verified.</p> <p>This may include, for example:</p> <ol style="list-style-type: none"> 1) Dimensions 2) Placement of fasteners 3) Visual inspection of welded joints
<p>Sealant and gasket installations</p>	<p>Proper application of sealants shall be verified.</p> <p>This may include, for example:</p> <ol style="list-style-type: none"> 1) Continuous flow of bead 2) Proper width of bead 3) Adherence to surface 4) Appropriate areas sealed completely <p>Proper application of gaskets shall be verified.</p> <p>This may include, for example:</p> <ol style="list-style-type: none"> 1) Proper torque and/or compression of gasket material 2) Complete coverage of gasket material to surface
<p>Glass considerations</p>	<ol style="list-style-type: none"> 1) Glass dimensions and glass condition, including edge conditions, shall be verified prior to installation 2) Glass shall be verified to comply with required specifications. 3) Glass shall be handled with appropriate equipment including rolling blocks and suction cups, to avoid damage during installation. 4) A process shall be in place for craft workers to identify proper glass positioning. <p>This may include, for example:</p> <ol style="list-style-type: none"> a. Proper side out/proper side in b. Labeling “this end up” or “this side out” or other identification c. Clearance d. Blocking e. Bite

Hardware Installation	A process shall be in place to verify proper installation and operation for hardware including locks, operators, closers, and panic hardware
Operation and installation performance	<p>A process shall be in place to manage weep system and/or water management to allow infiltrated water uninhibited flow quickly to exterior and away from glazing, frame, and sash</p> <p>Particular attention shall be given to verify proper installation of materials joining building envelope systems to other roof and wall systems to avoid water leakage in these areas.</p>

9.0 Appeals, Review, and Decertification

9.1 Monetary

AMS, Inc. reserves the right to remove authorization to use the Certified AG&M Contractor certification mark or advertise, communicate, or promote the licensee’s business as a certified Architectural Glass & Metal Contractor if licensee fails to pay monies for this program due AMS, Inc., within 60 days of the invoice date.

9.2 Failure to comply

If contractor fails to comply with program requirements or required responses to corrective actions, or fails to meet any obligation of the program, AMS, Inc. may consider the licensee as failing to comply with the program and remove certification from the certified licensee. After the designated corrective action resolution period (see 2.7), a final notice of pending decertification will be issued giving the contractor 7 more days to resolve any outstanding issues. At the conclusion of the final 7-day period, if resolution is not reached, certification shall be removed from the licensee.

9.3 Authorization to use Certification mark or listing

Licensee may only use certification mark or listing with consent of AMS, Inc. and must only do so with full compliance to program guidelines and Rules of Use of the NACC Certification Mark (FD-100)

9.4 Appeals and Complaints

A Licensee or other interested parties may appeal in writing any adverse decision made within the program, assessments or findings, or may appeal or challenge the validity of any licensees’ certification. Appeals in the first instance shall be to AMS, Inc. who will provide proper notice of the appeals and complaint process.

Appendix A – Definitions

NACC	The North American Contractor Certification Program for Architectural Glass & Metal Contractors. The NACC Program is owned by the Architectural Glass and Metal Certification Committee (AGMCC) and administration is provided by AMS, Inc.
AG&M	Architectural Glass and Metal
Assessment	A method of determination of conformance with NACC Program requirements by direct observation, document reviews, and other applicable records by a qualified assessor.
CANOSH	Canadian National Occupational Health and Safety guidelines for workers
Certification Body	The organization providing conformity assessment to program requirements.
Conformance	Directly or indirectly fulfilling requirements set forth by the NACC Program requirements
Construction Documents	Contracts and drawings that provide detail and requirements for completing construction and AG&M process.
Construction Specifications	A document that instructs a contractor the details of the job to be performed at a construction site. This will typically list materials to be used on a construction project including where they shall be used and how much shall be used.
Craft Worker	A worker in the architectural glass and metal installation or fabrication field that has experience and/or training to perform job duties.
Craft Worker in-training	A worker that performs architectural glass & metal installation or fabrication under direct supervision of an experienced craft worker.
Fabricator	See Shop Crew
Architectural Glass and Metal Certification Committee	The Architectural Glass and Metal Certification Committee (AGMCC) is made up of Industry representatives (such as glazing contractors and technicians) and general interest representatives (such as glazing suppliers & manufacturers, as well as members of the public). AGMCC's goal is to help develop certification programs that assure services to the public are performed in a manner that will tend to minimize defects and failures and to promote standard levels of competence and/or performance requirements. AGMCC owns both the NACC and AGMT Certification Programs.
Field Crew	A crew consists of AG&M installers or AG&M craft workers that may install various types of architectural glass and metal products, hardware, or curtain wall.
Field Supervisor	An experienced craft worker in the architectural glass and metal field that has responsibility for overseeing other field crew members.

Architectural Glass & Metal Contractor	The company that provides fabrication and/or installation of architectural and/or residential glass and/or façade materials.
Glazing Installer	See Field Crew
Licensee	An Architectural Glass & Metal Contractor in the NACC Program that has completed the application process and certification.
OSHA	A division of the United States Department of Labor that provides guidelines for occupational health and safety of workers.
Participant	Includes Architectural Glass & Metal Contractors, Building Owners, Specifiers, Architects, Manufacturers, and other AG&M stakeholders, AG&M user community, and AG&M general interest categories. (see NACC Bylaws FD-35)
Principal Business Technical Management	Members of the Architectural Glass & Metal Contractors staff that have management responsibilities related to the overall specifications and technical details for AG&M fabrication and installation services.
Shop Crew	A shop crew consists of fabrication craft workers that fabricate components utilized in architectural glass and metal installations usually working at a permanent fabrication facility of the AG&M contractor.
Shop Supervisor	An experienced craft worker in the fabrication field that oversees fabrication processes performed by fabrication craft workers.
Stake holder	A person or party that has an investment, share, or interest in the AG&M project being performed. This may include building owners, architects, general contractors, or others involved in the project.

Appendix B – Sample Assessment Evaluation

Sample Assessment Evaluation Summary form and Assessment requirements **Summary**

This document is intended to:

1. Summarize the key elements of the NACC assessment process
2. Differentiate between elements that are mandatory and the scoring of elements that are considered additional competencies
3. Provide an example of a typical completed Assessment Evaluation Summary form (items shown in red in below table)

Evaluation and assessment elements are explained in detail in the applicable sections referenced to the NACC Procedural Guide. Mandatory items “**MUST**” be met to be certified in the NACC program. Scored additional competencies are considered important elements of architectural glass and metal contracting, but it is recognized that it may be unreasonable to expect quality companies to meet all such requirements in the early years of the NACC program. For this reason, a scoring system was agreed upon where Architectural Glass & Metal Contractors could be recognized for their competency, while, allowing room for continuous improvement. It is fully expected that requirements, and the passing score for the additional competencies, will become more rigorous over time.

The NACC Program consists of 17 mandatory items and 27 scored items.

The following scoring system is utilized for the scored items in the program:

Scoring:

0	=	No evidence of conformance
1	=	Intent of conformance demonstrated
2	=	Partial evidence of conformance available
3	=	Full conformance

Requirement	Section	Type	Mandatory Compliance (yes/no)	Additional Competencies Scored (0,1,2,3)	Comments
Code Of Ethics					
Signed Code of Ethics	3.0	Mandatory	Yes		
Company Business Practices					
5 Years of general AG&M experience	4.0 table 4a	Scored		3	
Infrastructure in place for AG&M operations	4.0 table 4a	Mandatory	Yes		
Ownership and principal management –continuous ownership 5 years/ credentials of business experience	4.0 table 4a	Scored		3	
Experience within a AG&M category	4.0 table 4a	Scored		3	
3 professional statements from stakeholders	4.0 table 4a	Mandatory	Yes		
Financial					
CPA letter of good standing	4.0 table 4a	Mandatory	Yes		
Insurance coverages in place	4.0 table 4a	Mandatory	Yes		
Ability/capacity for bonding	4.0 table 4a	Scored		3	
Financial Institution letter of good standing	4.0 table 4a	Scored		2	
Safety					
Corporate Health and Safety Program signed by management	5.0 table 5a	Mandatory	Yes		
Safety Manual outlining policies (20 topics)	5.0 table 5a	Mandatory	Yes		
Key competent person responsible for safety	5.0 table 5a	Mandatory	Yes		
PPE in use (shop and field)	5.0 table 5a	Mandatory	Yes		
Safety Reviews/assessments and Safety CAPA in place	5.0 table 5a	Scored		1	
First Aid kits	5.0 table 5a	Scored		2	

OSHA 300 and 300A logs completed	5.0 table 5a	Scored		2	
Drug Policy and Substance Abuse Assistance	5.0 table 5a	Scored		1	
Contract Administration					
Contracts evaluated, reviewed, and distributed	6.0 table 6a	Scored		3	
Pre-job meetings conducted	6.0 table 6a	Scored		3	
Contract and specification change process in place	6.0 table 6a	Scored		2	
Specification and drawings available/utilized – all phases	6.0 table 6a	Scored		2	
Contracts shall be evaluated for special regulatory and environmental conditions	6.0 table 6a	Scored		2	
Quality Management Systems					
Company Policies – communicated by employee manual or other means	7.0 table 7a	Scored		2	
Quality Management System in place	7.0 table 7a	Mandatory	Yes		
Quality procedures in use – shop/field	7.0 Table 7a	Mandatory	Yes		
Organizational chart showing key roles including Safety/QMS	7.0 table 7a	Mandatory	Yes		
Personnel files/ Employee records maintained	7.0 table 7a	Mandatory	Yes		
Key/qualified person responsible for QMS	7.0 table 7a	Mandatory	Yes		
Competency of Key Technical Management	7.1 table 7c	Mandatory	Yes		
Competency of Estimator/Project Management staff	7.1 table 7c	Scored		2	
Competency of Shop Crew	7.1 table 7c	Scored		3	
Competency of Field Crew	7.1 table 7c	Scored		2	

Glazing Processes					
Material receiving and verify compliance with specs	8.0 table 8a	Mandatory	Yes		
Criteria for evaluation and review of suppliers	8.0 table 8a	Scored		1	
Inventory/warehousing controls and traceability in place	8.0 table 8a	Scored		2	
Control and protection of materials during transportation/staging – all phases	8.0 table 8a	Scored		2	
Acceptance and prep of opening to be glazed	8.0 table 8a	Scored		2	
Follow manufacturer/installation instructions	8.0 table 8a	Scored		3	
Verification of metal work	8.0 table 8a	Scored		0	
Sealant and/or gasket application	8.0 table 8a	Scored		3	
Glass Handling and installation process	8.0 table 8a	Scored		2	
Hardware installation	8.0 table 8a	Scored		2	
Performance and water management	8.0 table 8a	Mandatory	Yes		
TOTAL			<u>17</u> of required 17 items	<u>72</u> % or 58 of 81 points (27 items)	

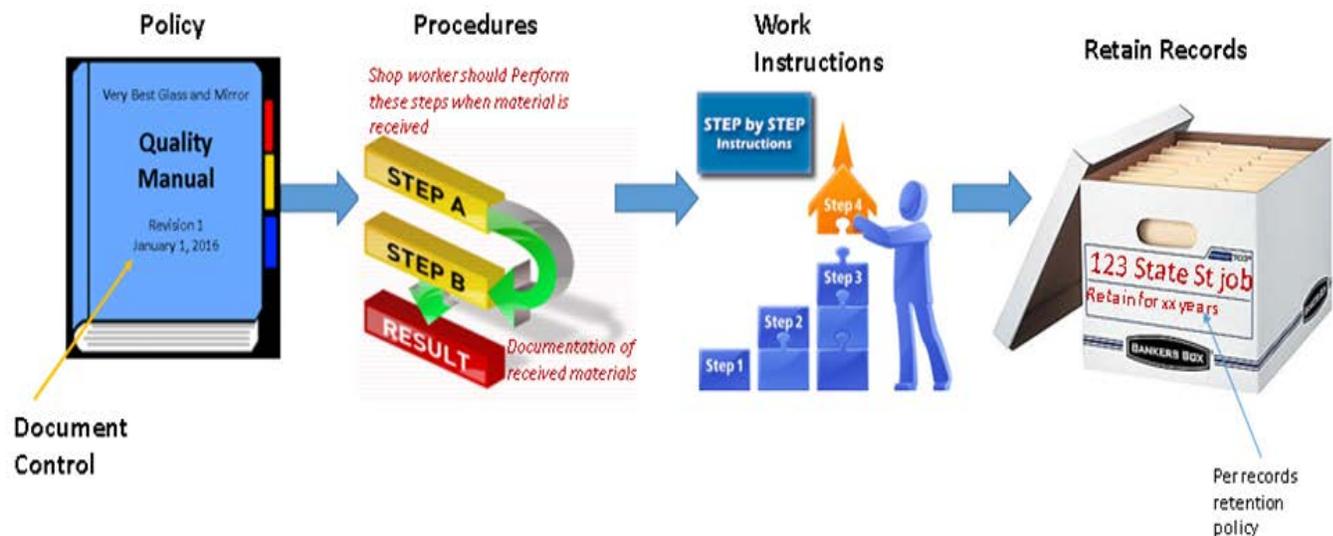
Appendix C – Quality Management Systems

This appendix expands on the terms used for Quality Management Systems Requirements of the NACC Program as indicated in Table 7a.

Explanation of Components:

Quality Manual – This document is an outline of your Quality Management System including policies, objectives, and procedures (or reference to them). This manual helps define how your company will perform work to meet customer expectations and contract requirements.

SAMPLE Quality Management Process diagram



Procedures – Documents that describe a process that is carried out in your organization (for example; purchasing). The procedure may describe who will be responsible for a specific process, when the process should be done, what materials may be required, and what documentation may be required to document the process (example; purchase order form).

Work Instructions – Documented step by step details on how to perform a specific task (example: how to write a purchase order). Work instructions should typically be available at the point where the task is being performed. If documentation of completion of a task is required (for example; initial a checklist) it should be indicated on the work instruction. In some cases work instructions may be from an external source including; manufacturer's installation instructions, supplier handling instructions, equipment manuals, or other external instructions that have been reviewed by your organization and approved for use in your Quality Management System.

Accuracy of measuring equipment or devices - Calibration and Calibration Checks may be used to verify the accuracy of devices or equipment used to provide critical measurements that affect the quality and performance of the end product. Calibration can be thought of as a comparison. The comparison is

made by taking a device of known accuracy and correctness and comparing it to the measuring device you are verifying. Calibration may include the act of performing adjustments to the tested device while calibration checks are performed periodically to verify the device has retained its accuracy. In some cases electronic equipment can perform self-checks or zeroing as a calibration. Measuring devices are typically identified by a unique identification or serial number. The calibration is typically recorded on frequency established by your Quality Management System.

Records Retention Policy – a written policy that identifies the types of records that your organization retains and how long you retain them. Some examples may be “Job Records kept for xx years or the term of the warranty” or “Financial records kept for xx years” (xx would be completed as the number of years established for your organization).

Document Control – A system to track and control documents including control of revisions to the documents. Documents may contain policies, procedures, directives, or instructions and may be modified or edited as needs of the organization change. Control of documents includes identifying who can modify the documents and tracking of when revisions are made to the document.

Annual Internal Review (Internal Audit) – This is a review of your Quality Management System. The review is typically performed by the designated person responsible for QMS or other staff member that may be familiar with the system or process that is being inspected, however, not the person that normally operates that system or process (this way there is a second set of eyes). The purpose of the review is to take a fresh look at the system or process to uncover opportunities for improvement or areas that need attention. This method helps uncover issues or problems internally before they are recognized by the customer or end user.

Annual Internal Review illustration



Corrective Action and Preventive Action (CAPA) – A proactive method of identifying, documenting, and tracking non-conformances or undesirable issues in an organization. The process includes identifying

the non-conformance (or potential non-conformance), taking action to correct it, and implementing steps to prevent recurrence (as necessary an investigation of the root cause of the deviation). It is helpful to track corrective actions (for example: log book or spreadsheet) so that you can tell if the actions taken are effective and working. In its simplest terms a CAPA Log is a “to-do” list of correcting and preventing discrepancies.

Customer Feedback Tracking – Can include complaints, warranty claims, improvement suggestions, and service requests from sources external to your company. Feedback may also be identified for root cause analysis and added to the CAPA Log for easier tracking and analysis of trends.