

# Achieving Tomorrow's Construction Workforce

## White Paper 1.2

**Dick Shaw, ACCA Technical Education Consultant; Professor Emeritus, HVACR Programs Director, Ferris State University**  
**Michael Honeycutt, Consultant, ACCA**  
**Gerry Kennedy, Chief Operating Officer, PHCC Educational Foundation**

**Purpose:** This is a second in a series of white papers to assist and promote the initial progress of building national and local coalitions to address the tremendous need for building a workforce for the construction industry of America. This paper is composed of three parts:

**Part I:** Will begin to identify the diverse construction industry, and association stakeholders.

**Part II:** Will provide a guide for state/local chapters of national trade associations to develop workforce coalitions for the HVACR and plumbing industry.

**Part III:** Identifies the tasks, qualifications and budget considerations to fund staff that can provide the cohesive union to bring success to a national coalition for tomorrow's workforce in construction.

### **Part I: The Construction Industry and Association Stakeholders**

The construction industry is not only a huge industry, employing millions of workers; it is also a very diverse industry. There are a multitude of trades (organized and open shop) involved with the building, finishing, providing fixtures and plumbing, HVAC, electrical, etc. After the construction of buildings there are the maintenance and service sectors that are necessary to keep buildings operating safely, economically and comfortably.

**Industry Stakeholders:** The industry stakeholders include material and equipment manufacturers, distributors, contractors, builders, developers, building owners and operators, utilities and associations. Following an incomplete list of the "Construction Trades" let's list some of the diverse entities within the stakeholders listed above:

- **Construction Trades:**
  - Brick, block and stone
  - Cement
  - Drywall
  - Electrical
  - Excavation
  - HVCR
  - Iron / steel
  - Lighting
  - Plumbing, piping/steam

- Roofers
- Sprinkler (fire)
- Terrazzo/tile
- Finish carpentry
- **Manufacturers, Material and Equipment:**
  - Lumber, steel, iron, piping (supply, waste, refrigeration, steam, sprinkler), drywall, kitchen/bath cabinets and counters.
  - Cement, block and terrazzo
  - Windows.
  - Electrical wiring, receptacles, breakers, distribution systems and lighting.
  - Construction glues, adhesives, fasteners, and caulking.
  - Plumbing fixtures: American Standard, Delta Faucet, Kohler and Moen, etc.
  - HVACR: American Standard/Trane, Carrier, ICP, Lennox, Nordyne, Rheem, Rudd, and York, etc.
- **Distributors:**
  - National wholesale distribution chains that include: All-Phase Electric, Ferguson, BTW, Grangers, Win Wholesale, Hajoca, HD Supply, etc.
  - Regional and local distributors and wholesalers
  - DIY retail distributors that include: Lowe's, Menards, ABC roofing, Home Depot, 84 Lumber, etc.
  - Local and regional corporate and independent distributors and wholesalers.
- **Contractors:**
  - From consolidated, national to independent contractors in EVERY construction trade listed above.
- **Developers, builders, building owners and operators:**
  - This would include the residential, commercial, industrial, single family, multi-family, single, multi-story and high-rise buildings.
- **Utilities:**
  - Regional, state and rural utilities.
- **Associations:**
  - Building:
    - Associated Builders and Contractors (ABC)
    - Associated General Contractors (AGC)
    - North American Contractors Association (NACA)
    - The Association of Union Contractors (TAUC)
    - Building Owners and Managers Association (BOMA)
    - Portland Cement Association (PCA)
    - Brick development association (BDA)

- Asphalt Roofing Manufacturers Association (ARMA)
- Roof Consultants Institute (RCI)
- New Buildings Institute (NBI)
- Cool Roof Rating Council (CRRC)
- Mechanical and Electrical:
  - Air Conditioning Contractors of America (ACCA)
  - Air-Conditioning and Refrigeration Institute (ARI)
  - American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE)
  - Gas Appliance Manufacturers Association (GAMA)
  - Mechanical Contractors Association of America (MCAA)
  - Mechanical Service Contractors of America (MSCA)
  - Plumbing-Heating-Cooling Contractors—National Assn. (PHCC)
  - Refrigeration Service Engineers Society (RSES)
  - Sheet Metal Air Conditioning Contractors’ National Association (SMACNA)
  - United Association of Journeyman and Apprentices of the Plumbing and Pipe Fitting Industry of the United States and Canada (UA)
- Realtors and Utilities:
  - National Association of Realtors. (NAR)
  - Consortium for Energy Efficiency (CEE)
  - National Rural Electric Cooperative Association (NRECA)
  - Tennessee Valley Authority (TVA)
- Distributors:
  - Heating, AirConditioning, Refrigeration Distributors Institute (HARDI)
  - American Supply Association (ASA)

Again, this list is incomplete, and will likely become a “work-in-progress” list. But, at some point this list will need to identify the entities that are best positioned to take leadership roles, undertake the work, provide support (and what kind, monetary or manpower), and/or endorse the initiative. Contact names and addresses will have to be added, etc.

## **Part II: A Guide for Organizing State/Local Workforce Development Coalitions for the HVACR and Plumbing Industry**

This section of the white paper is designed to help state and local chapters of national trade associations develop and implement plans to organize state and/or local workforce development coalitions. The authors caution that while this guide will identify several fundamental steps to be considered, the circumstances in each state and/or local jurisdiction will require different strategies to accomplish the overall goal.

**Goal:** The goal is to develop postsecondary educational programs to train the skilled workers needed by the HVACR and plumbing industry. Existing programs should also be identified and strengthened. A basic tenant is that skilled workers must be trained to industry standards so that owners of HVACR and plumbing businesses will employ them. Other segments of the construction industry may be interested in joining state and local coalitions, thus broadening the base.

**Fundamental Steps:**

- 1) Contact key stakeholders in your state/local area, such as
  - a) State/local chapter leaders and members of national trade associations
    - i) Air Conditioning Contractors of America (<http://acca.org>)
    - ii) Plumbing-Heating-Cooling Contractors—National Assn. (<http://phccweb.org>)
    - iii) Refrigeration Service Engineers Society (<http://rses.org>)
    - iv) American Supply Association (local members) (<http://asa.net>)
    - v) Heating, Airconditioning & Refrigeration Distributors International (local members) (<http://hardinet.org>)
  - b) State career/technical education directors [http://www.careertech.org/state\\_director](http://www.careertech.org/state_director)
  - c) CEOs of state/local postsecondary educational institutions (<http://aacc.nche.edu>)
  - d) State chapter leaders of Association for Career and Technical Education (<http://actonline.org>)
  - e) SkillsUSA (<http://skillsusa.org>)
  - f) State/regional workforce development or economic development boards
  - g) State department of labor
  - h) State department of commerce
  - i) State/local Chambers of Commerce
- 2) Offer to get involved in preparing skilled workers OR
- 3) Organize an exploratory meeting
  - a) Invite representatives of key stakeholders
  - b) Determine workforce development programs that exist in your jurisdiction
  - c) Determine the need for skilled workers in your jurisdiction (for demographic information see <http://bls.gov>)
  - d) Discuss workforce development challenges in your area
  - e) Review the potential labor pool in your area, especially non-traditional workers
  - f) Develop and implement a plan to address workforce development issues
    - i) Form employer advisory committees to work with educators
    - ii) Provide educators with student and instructor training materials developed by ACCA, PHCC and RSES
    - iii) Identify and develop an instructor cadre; send instructors to the Industry HVACR and Plumbing Instructor Workshop
    - iv) Provide opportunities for student internships
    - v) Develop image/recruiting plans; conduct career day programs
    - vi) Work with suppliers to develop equipment donation programs
    - vii) Prepare a “Call to Action” for your jurisdiction
    - viii) Apply for funding through state/local sources
    - ix) Designate a coordinator and establish working subcommittees

### **Part III: Staffing a National Coalition for Tomorrow's Construction Workforce**

The following section of the white paper will address the need for organizational structure, funding mechanism and staffing that can provide the cohesive union to bring success to the important workforce needs of the entire construction industry. By recruiting multiple organizations to dedicate resources and engage their staff specialists in the project such an undertaking can be successful. Project research and development by a coalition has many benefits, including a larger and often more representative sample size, division of costs and wider distribution and promotion of the results.

We believe these issues will ultimately determine the short- and long-term success and credibility of any coalition which results from the decisions reached from our white paper recommendations. This project would certainly be one where the whole is greater than the sum of the parts. A healthy, robust coalition will prove invaluable when dealing with government and regulatory agencies and with national business entities.

The organizational structure would need to determine the roles that each of the various stakeholders would play in this endeavor.

- What are the established criteria for stakeholder involvement?
- Would every stakeholder be afforded equal participation based solely on their intent or would their financial (or other agreed-upon equity) investments determine the level of participation? This factor would need to be decided early on.
- Would there be a limit on the numbers and/or job position titles that each stakeholder could have involved in the coalition? Each participating organization would need to provide a representative who has decision making authority to keep the project moving forward without having to seek approval on every issue from a higher-up.
- How would the governing board be structured? Would every stakeholder be represented on the board? What would terms of service be for board members and officers?

The funding mechanism would be of primary concern as the work of this coalition is going to be expensive. There will need to be agreed upon financial agreements prior to any potential coalition member signing on. The financial commitment will have to be clearly outlined in terms of time, payment schedule, and how expenditures are to be determined. Development of an agreement for ownership and access to the data, privacy, financial commitment of each participating organization, and communication findings must be done.

An undertaking of this scope will ultimately need a dedicated staff leader – a secretariat if you will who shepherds the day-to-day work of the coalition in concert with coalition leaders. A kiss of death for the project would be the coalition members getting caught in

all of the details, missing deliverables, running over budget or having interest among the stakeholders dwindle and disappear.

Hiring a staff person (from funding from each coalition member) who represents the whole project and is not influenced by an individual organization or participant is crucial to the overall success. He or she can serve as a project administrator and reduce the need for administrative resources from participating stakeholders or other agencies. This would help keep project participation voluntary. Stakeholders who feel forced to deal with the day to day operations won't be enthusiastic about it and will probably slow it down.

The staff leader could assist with the overall coordination of a number of issues, including but not limited to:

- Facilitate agreement on the purpose and end product of the project, as well as how decisions will be made (consensus or majority rules, for instance).
- Outline the process and assign tasks – review of what the stakeholders are currently doing in workforce development, development of data-collection tools, data analysis and writing of report findings.
- Establish and monitor timelines but be sure all participants understand the need for flexibility. The staff leader would be required to manage the timeline and provide updates or revisions as necessary.
- Save coalition “bog-down” by writing policies and bylaws and keeping accurate minutes of all proceedings.

In this age of technology, the staff leader could work from any geographic location and would need only rudimentary office equipment.

One of the primary benefits of having a staff leader would be to collect and help synthesize the needs and possible contributions of all the stakeholders, identify and effectively coordinate the staff and other resources available from coalition members and establishing and maintain contacts among the stakeholders and leaders among government, regulatory and business.

The stakeholders would have to be agreeable to empowering the staff leader to manage the process and communicate updates and deadlines to all coalition members. It would also be important to have the project treated as a separate entity in order to allow the staff leader to avoid politics and focus on the end goal of workforce development.

## **Executive Summary**

The construction industry is not only huge, it is most diverse. An effective coalition needs to be inclusive relative to its membership, with as many entities with-in the trades that have a vested interest in growing their workforce as possible become members. Since the authors of this white paper represent the HVAC and plumbing industries, it would be

difficult to present a “guide” for organizing state and local coalitions in the other industries. However, it is felt that the time is now to grow an HVAC and plumbing workforce by training to industry standards, and this is best done through collaborative efforts at the local, regional or state level with sister organizations, contractors, schools and state agencies. Together, we can make a difference.

There are hundreds of “professionals” in the construction industry who realize the cost of doing nothing relative to growing the construction workforce, and are working diligently to effect change. These professionals possess expertise, passion and are willing to invest resources and sweat equity that will create change by growing the workforce, but have demanding day jobs that leave little time for managing the day-to-day operation of a coalition. This endeavor needs glue. A staff that can bring structure and cohesiveness to a diverse coalition of associations, government, business and education is imperative.

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