

# WELCOME



## *Creating Effective Education & Industry Pathways for Construction, Maintenance & Energy Careers*

Stephen Healy, NCCER Executive Director, Pearson





# Nearly half of what will be the built environment in 2030 doesn't exist yet.

Brookings Institution - Metropolitan Policy Program Report, 2008

# ONE MILLION...



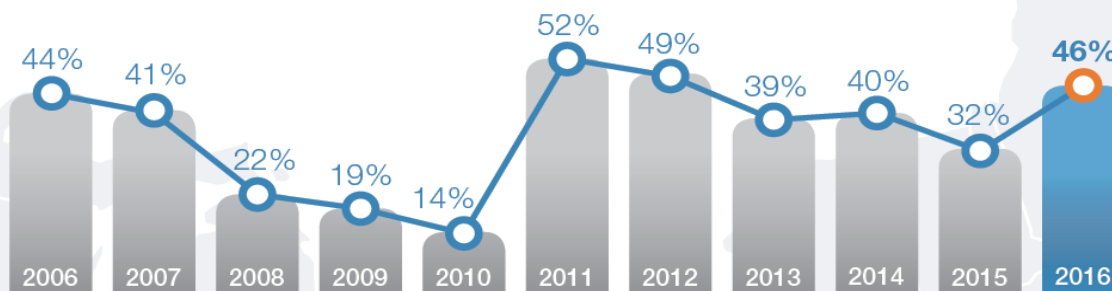
**...is the deficit of skilled construction craft professionals needed through 2020 to support \$3.5 trillion in non-residential construction spending.\***

\* Source: "Industry Papers Support the Quest for Better Productivity", pg. 25-27 in "The Voice", Summer 2016 edition, official magazine of the Construction Users Roundtable.



## HIGHLIGHTS FROM THE 2016/2017 U.S. TALENT SHORTAGE SURVEY

In the U.S., **46%** OF EMPLOYERS are having **DIFFICULTY FILLING JOBS**



### HARDEST JOBS TO FILL IN 2016



1 Skilled Trade Workers



2 Drivers



3 Sales Representatives



4 Teachers



5 Restaurant & Hotel Staff

For the seventh consecutive year, **SKILLED TRADES** vacancies are the **HARDEST JOBS TO FILL IN THE U.S.** And for the fifth consecutive year, skilled trades are the **HARDEST TO FILL GLOBALLY.**




### WHY JOBS AREN'T FILLED

**TALENT SHORTAGES ARE DRIVEN BY A LACK OF AVAILABLE APPLICANTS** — this reason is cited by nearly a quarter of employers as to why they cannot fill jobs.



# CONSTRUCTION CRAFT DEMAND





## CRAFT LABOR MAP

Menu

By State | By Craft

**CHOOSE YOUR STATE:**

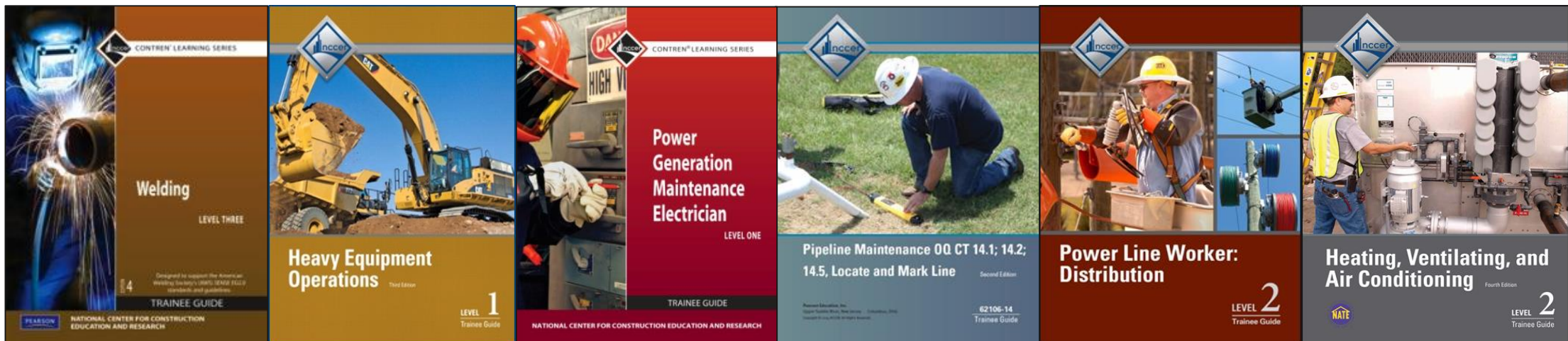
**Crafts With the Most Demand**  
Craft Professional Demand through August 2021: Data updated quarterly

Craft	Demand
Craft Laborer	1,533,709
Carpenter	1,357,462
Pipefitter	509,903
Mason	496,356
Heavy Equipment Operator	404,730
Electrician	351,777
Ironworker	328,003
Plumber	183,078
Sheet Metal Worker	176,447
Painter	150,673

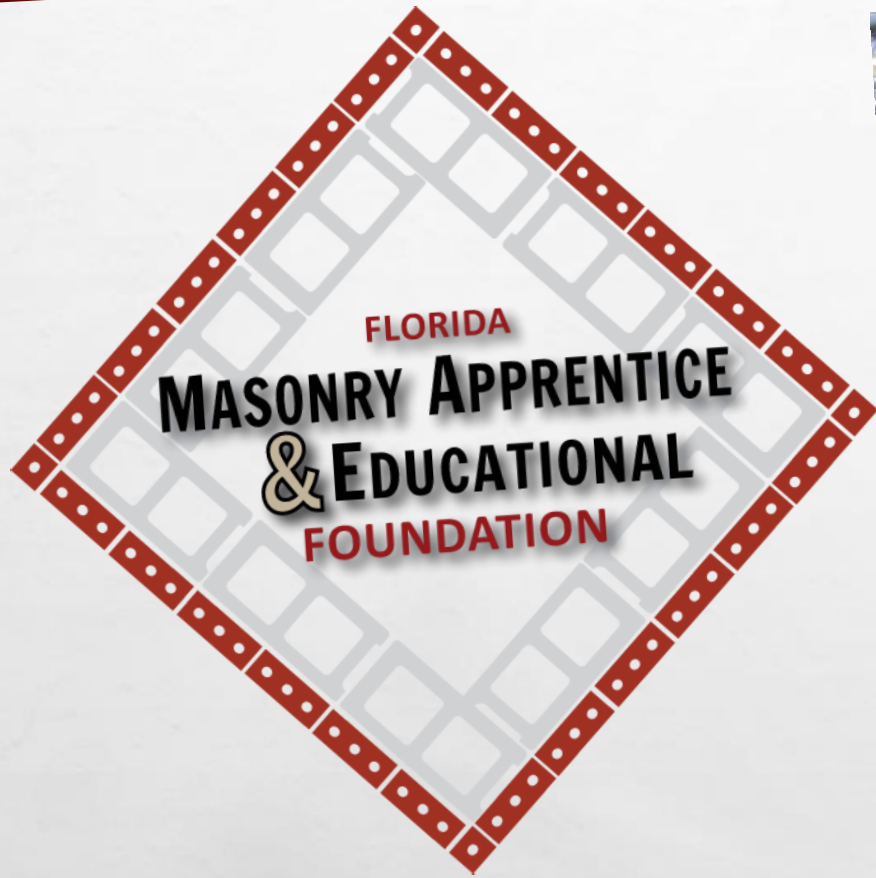
# A WORLD OF CAREER OPPORTUNITY



- **CONSTRUCTION** – New building, or, addition to existing structure
- **MAINTENANCE** – Repair and upkeep of industrial and commercial facilities (power plants, refineries, paper mills, transportation infrastructure, etc.)
- **ENERGY** - Construction and maintenance of electrical, gas and oil infrastructure







## 2018 ACTE REGION I CONFERENCE

Brad Kibbe – Executive Director



@masonryeducation

# FL MASONRY APPRENTICE & EDUCATIONAL FOUNDATION



- FOUNDED IN 2002
- APPRENTICE TRAINING REPRESENTATIVE
  - MASONRY ASSOCIATION OF FLORIDA
- ACCREDITED TRAINING SPONSOR FOR NCCER
  - HIGH SCHOOLS
  - FLORIDA DEPARTMENT OF CORRECTIONS
  - AMI KIDS
  - PRIVATE INDUSTRY



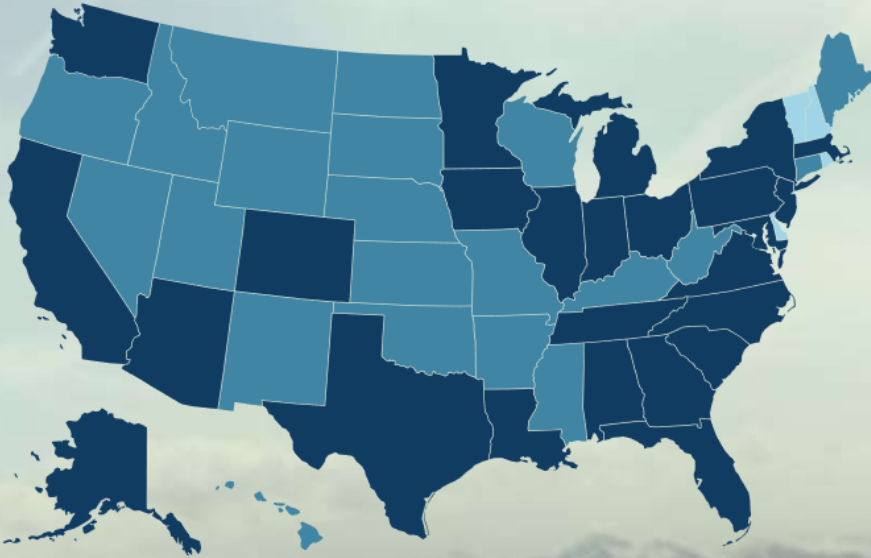


# FL MASONRY PROJECTS





# MASONRY CRAFT LABOR DEMAND



## CRAFT

By State

By Craft

CHOOSE YOUR CRAFT:

Mason

### States With the Most Demand

Craft Professional Demand through August 2021: Data updated quarterly

Demand for Mason	Demand
TX	42,687
FL	38,129
CA	32,248
NY	29,689
LA	21,895
GA	21,736
NC	18,514
OH	14,056
MD	13,841
PA	13,258

# GOALS/INITIATIVES



- DEVELOP AND MANAGE APPRENTICE PROGRAMS FOR M.A.F.
- EXPRESS THE IMPORTANCE OF CONSTRUCTION EDUCATION IN FLORIDA
- BUILD STRONG RELATIONSHIPS WITH LEA'S AND ORGANIZATIONS
- CREATE CAREER CONSTRUCTION PATHWAYS FOR STUDENTS
- DEVELOP INDUSTRY APPROVED ASSESSMENTS AND CERTIFICATIONS

## Apprenticeship Program Locations

Tallahassee Community College  
444 Appleyard Drive  
Tallahassee, FL 32304

Mid-Florida Tech  
2900 West Oak Ridge Rd  
Orlando, Florida 32809

Titan Block Plant  
Ft. Pierce, FL 34947

Atlantic Technical College  
4700 Coconut Creek Parkway  
Coconut Creek, FL 33063

CEMEX Yard  
9117 Florida Mining BLVD  
Tampa, FL 33634

Manatee Technical College  
6305 SR 70 East  
Bradenton, FL 34203

Immokalee Technical College  
508 North 9<sup>th</sup> Street  
Immokalee, FL 34142

William Turner Technical School  
10151 NW 19<sup>th</sup> Ave.  
Miami, FL 33147

Pinellas Technical College  
901 34<sup>th</sup> Street South  
St. Petersburg, FL 33711



Contact the Florida Masonry Apprentice & Educational Foundation for additional details:  
[www.masonryeducation.org](http://www.masonryeducation.org)



# PRE-APPRENTICE PROGRAMS



- HIGH SCHOOL CTE PROGRAMS
  - 116 ACTIVE CONSTRUCTION RELATED PROGRAMS
  - 5168 SECONDARY STUDENTS TESTING ONLINE AS OF 4/12/18
  - NCCER CURRICULUM AND ACCREDITED TRAINING SPONSOR
  
- FLORIDA DEPARTMENT OF CORRECTION
  - 10 PROGRAMS IN FDC FACILITIES – RE-ENTRY PROGRAMS
  - 13 AMI KIDS/DJJ PROGRAMS IN THE SOUTHEAST
  - VARIOUS TRANSITION FACILITIES/ YOUTHBUILD PROGRAMS
  
- PRIVATE COMPANY TRAINING

# FMAEF – 2018 INITIATIVES

- APPLY TO BECOME AN NCCER ACCREDITED ASSESSMENT CENTER ( AAC )
- DEVELOP AND IMPLEMENT YEAR 1 & 2 KNOWLEDGE AND PERFORMANCE EXAMS (NCCER & MCAA PARTNERSHIP)
- DEVELOP PRE-APPRENTICE PROGRAM TO FRONT LOAD YEAR 1 TRAINING
  - PILOT AT SELECT MAF APPRENTICE PROGRAMS
  - PILOT AT SELECT DEPARTMENT OF CORRECTIONS PROGRAMS
  - BUILD INTO ARTICULATION PROCESS
  - RECEIVED NCMA GRANT TO DEVELOP MASONRY ONLINE CURRICULUM

# PRE-APPRENTICESHIP CURRICULUM

## MASONRY RELATED TRAINING – 20 WEEK PROGRAM



### YEAR 1 – TENDER/INSTALLER

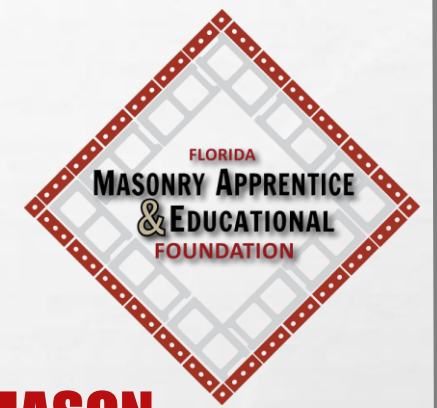
#### NCCER - CORE AND MASONRY LEVEL1

- BASIC SAFETY / OSHA / FIRST AID
  - CONSTRUCTION MATH
  - COMMUNICATION / EMPLOYABILITY
  - MEASUREMENT, DRAWING & SPECS
  - MORTAR / MATERIAL HANDLING
  - MASONRY UNITS & INSTALLATION
  - RESIDENTIAL MASONRY
- 240 HOURS OF CLASSROOM AND LAB TRAINING
  - DIRECTLY ARTICULATED TO APPRENTICESHIP
  - JOB PLACEMENT AFTER COMPLETED TRAINING
  - OSHA, FORKLIFT, FIRST-AID, CPR, SCAFFOLD
  - END OF LEVEL WRITTEN AND PRACTICAL EXAM

[www.masonryeducation.org](http://www.masonryeducation.org)

# APPRENTICESHIP CURRICULUM

## MASONRY RELATED TRAINING



### YEAR 1 – TENDER/INSTALLER

#### NCCER - CORE AND MASONRY LEVEL 1

- BASIC SAFETY / OSHA / FIRST AID
- CONSTRUCTION MATH
- COMMUNICATION / EMPLOYABILITY
- MEASUREMENT, DRAWING & SPECS
- MORTAR / MATERIAL HANDLING
- MASONRY UNITS & INSTALLATION
- RESIDENTIAL MASONRY

### YEAR 2 – BLOCK INSTALLER

#### NCCER - MASONRY LEVELS 1 & 2

- REINFORCED MASONRY
- OPENINGS & METALWORK
- ADVANCED LAYING TECHNIQUES
- EFFECTS OF CLIMATE ON MASONRY
- INSPECTION & QUALITY CONTROL
- ELEVATED MASONRY
- SPECIALIZED MATERIALS & TECHNIQUES

### YEAR 3 - MASON

#### NCCER – MASONRY LEVELS 2 & 3

- REPAIR & RESTORATION
- COMMERCIAL DRAWINGS
- ESTIMATING
- ELEVATED MASONRY
- STONE MASONRY
- SITE LAYOUT – MEASUREMENT & LEVELING
- FUNDAMENTALS OF CREW LEADERSHIP



# ARTICULATION



## Levels Completed for Credit:

NCCER Core Curriculum = 75 hours (articulated credit)

NCCER Core + Masonry 1 = 150 hours related training (articulated credit)

NCCER Core + Masonry 1 + 2 = 225 hours related training (articulated credit)

NCCER Core + Masonry 1, 2 + 3 = 300 hours related training (articulated credit)

## Certification Testing for Credit:

FMAEF Level 1 certification exam = 150 hours related training (articulated credit)

FMAEF Level 2 certification exam = 300 hours related training (articulated credit)

[www.masonryeducation.org](http://www.masonryeducation.org)

# MCAA – A TRADE ASSOCIATION

- **944 MEMBER COMPANIES**
- **726 MASON CONTRACTOR COMPANIES**
- **171 SUPPLIERS**
- **22 INSTRUCTORS**
- **2 STUDENTS**
- **5 ENGINEERS**

The screenshot shows the MCAA website's navigation bar with links for MCAA, MASONRY, NEWS & EVENTS, TECHNICAL, ADVOCACY, EDUCATION, SAFETY, CAREERS, SHOP, LOG IN, and JOIN. A search bar is also present. Below the navigation bar, there are three main content sections:

- TECHNICAL: THE STATE OF MASONRY EDUCATION FOR ENGINEERING STUDENTS**  
An article with a photo of two people looking at colorful blocks. The text states: "Engineers tend to design using materials and methods that they are most comfortable with. For this reason, the education of future engineers should be something that catches the attention of the entire masonry industry. **Full**"
- story EDUCATION: OBSTACLES TO LEADERSHIP HIGH PAYOFF ACTIVITIES WEBINAR**  
An article with a photo of a person on a construction site. The text states: "The Mason Contractors Association of America (MCAA) will present 'Obstacles to Leadership High Payoff Activities' on Wednesday, March 21, 2018 at 10:00 AM CST. **Full story**"
- MASONRY: THIN BRICK: MODERN MATERIAL, CLASSIC CHARM**  
An article with a photo of a brick building. The text states: "Thin brick has an easy installation with a traditional look. MASONRY takes a look at the different specs and installation process. **Read at MASONRY Magazine**"

On the right side of the screenshot, there is a red sidebar for a webinar titled "OBSTACLES TO LEADERSHIP HIGH PAYOFF ACTIVITIES". It includes a calendar icon, the date "Wednesday, March 21, 2018", a clock icon, the time "10:00 AM - 11:00 AM CDT", and the text "FREE TO ALL ATTENDEES". A "Register" button is located at the bottom of the sidebar. Below the sidebar, there is a red button labeled "MCAA POLL".

# PROUD SUPPORTER OF SKILLS USA



**Olivia Bruening, RiverOak Technical College  
1<sup>st</sup> Place, 2017, FL SkillsUSA Masonry Contest.**



# TAKEAWAYS AND RESOURCES...

- [CHAPTERS OF THE MASONRY CONTRACTORS ASSOCIATION OF AMERICA](#)
- [BUILD YOUR FUTURE – CONSTRUCTION CAREER RESOURCES](#)
- [NATIONAL CENTER FOR CONSTRUCTION EDUCATION AND RESEARCH \(NCCER\)](#)
- [SKILLSUSA](#)
- [2018 NCCER CURRICULUM CATALOG](#)



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# ??? QUESTIONS ???



The Florida Masonry Apprentice & Educational Foundation is a registered NCCER Accredited Training Sponsor (ATS)