



# TRAINING news

UA Education and Training Department

APRIL 2024 | ISSUE 44

## UA GENERAL OFFICERS

*General President*  
Mark McManus  
*General Secretary-Treasurer*  
Derrick W. Kualapai  
*Assistant General President*  
Michael A. Pleasant

## EDUCATION AND TRAINING DEPARTMENT

*Director of Education and Training*  
Raymond W. Boyd

## UA SPECIAL REPRESENTATIVES

Laura Ceja, Training and Outreach  
Michael Gordon, Training/Canada  
Alanna Marklund, Youth, Diversity & Indigenous Relations/Canada

## ASSISTANT DIRECTOR OF EDUCATION AND TRAINING

Michael Galfano

## ITF ADMINISTRATOR

Jocelyn Crowder

## UA TRAINING SPECIALISTS

Bruce Dantley  
Robert Derby  
Joseph Fernandez, Jr.  
Randall Gandy  
Micheal Hazard  
Jennifer Massey  
Trenton Mauk  
Kenneth Schneider  
Robert Vilches

## UA CANADA TRAINING SPECIALISTS

Ray Lemieux  
Jamie McPherson  
Ryan Skalko

## HEALTH, SAFETY, AND ENVIRONMENTAL ADMINISTRATOR

Jennifer Massey

## ITF BOARD OF TRUSTEES

### LABOR TRUSTEES

Raymond W. Boyd, Chairman  
Kevin Bellew, Local Union 696  
Aaron L. Butler, Local Union 469  
Scott Gale, Local Union 15  
Gregory Lancette, Local Union 81  
Russell Scherber, Local Union 539

### MANAGEMENT TRUSTEES

Renee Fiorelli (MSCA), Co-Chairman  
Lance Gunnells (NFSA)  
Greg Fuller (MSCA)  
Brian Rich (PHCC)  
John McNeila (MCAA)  
Cordell Tietz (MCAA)

## Message from Raymond W. Boyd Director of Education and Training



### ITF Education and Training Progress in 2024

The first quarter of 2024 for the International Training Fund (ITF) has started on the right track. We are extremely pleased to have been able to host the Master Instructor's Boot Camp in Ann Arbor, MI, with nearly 200 ITF instructors in attendance. Also, the ITF hosted our New Training Directors/Coordinators meeting at UA Headquarters, with 26 in attendance. It was a huge success. Some topics discussed were the overall structure of the UA Education and Training Department, the apprentice selection process, structured interviewer training, diversity, equity, and inclusion, and training specialist assistance.

## MISSION STATEMENT

The mission of the UA Education and Training Department is to equip United Association locals with educational resources for developing the skills of their apprentices and journeypersons. By thus facilitating the training needs of the membership, we maximize their employability and prepare them for changes in the industry. We are committed to making training opportunities available across North America, allowing members to acquire new skills and remain competitive in the industry regardless of geography. In this way, we are determined to meet the needs of the piping industry and enhance employment opportunities for our members, while remaining fiscally responsible to the beneficiaries of the fund.

## INSIDE this ISSUE

Healthcare Industry-Medical Gas .....	p2
Supporting My Sisters: Why I Go to TWBN .....	p3
A Chris-Has Story .....	p4
New Apprenticeship Standards.....	p6
Duties of the Training Director .....	p6
A Bridge to a Career in the UA-The Model of Successful Operation .....	p7
UA Code Development Committee-"Getting Involved" .....	p10
2024 Construction Working Minds Summit.....	p11
A Computer-Savvy Membership .....	p12
The UA Construction Technology Committee.....	p13
NFPA Codes and Standards .....	p15
The Role of AI in Construction.....	p17
UA and XOI Work Together to Train for the Future...p18	

We also heard from the UA Organizing and Recruitment Department on organizing initiatives and how our two departments can work together in the future. This collaboration would allow us to continue to grow the United Association and meet the required workforce



Three Park Place • Annapolis, Maryland 21401  
Telephone (410) 269-2000 • Fax (410) 267-0382

demands. Our attendees were able to hear from the ITF legal counsel on matters related to guidelines for JATCs, audits and JATC insurance, ERISA pitfalls, 29 CFR 30 updates, and local union training centers' social media policies.

As we continue in 2024, we look forward to hosting our first Office Professionals (OPs) Seminar since 2018. We will offer two OP seminars, April 9th to 11th for Districts 1, 2, and 3, and April 16th to 18th for Districts 4, 5, and 6. We will be able to provide a series of workshops for the union office professional and the JATC office professional, and we are incredibly excited to offer this again.

The relationship that the United Association has developed with the Mechanical Contractors Association of America (MCAA) has paid dividends for both organizations and the Education and Training Department. Understanding the importance of collaborating on regional courses and course offerings at ITP has benefited us all. We are excited to partner with the MCAA on several safety initiatives, mental health and suicide prevention, and the UA Foreman Certification Program.

As I close, I would like to thank Cathy Merkel for her 34 years of service as the UA Registrar, and I would like to congratulate Carrie King, who will be the new UA Registrar, effective April 1st, 2024. Congratulations to you both! ■

---

## Healthcare Industry—Medical Gas

*Submitted by Michael Galfano, Assistant Director of Education and Training*

I hope this newsletter finds each of you well as you prepare for a busy 2024 training schedule.

As we have all heard, the UA will be experiencing incredible job growth in every sector of our industry. I would like to focus on the healthcare industry, specifically medical gas. There will be considerable work across the country in building new hospitals, renovations to existing hospitals, maintenance, and the new addition of chapter 15 devoted to the application of medical gas and vacuum systems in dentistry, which will certainly generate more work opportunities.

I would encourage all training directors and coordinators to evaluate their current medical gas training programs and needs. Do you have enough 6050 medical gas instructors? How many 6010 medical gas installers does your local have? Will you have to schedule more medical gas courses to meet these demands?

How can the ITF help with your training needs? Both of these courses will be held at the Instructor Training Program (ITP) in Ann Arbor. Registration for ITP is scheduled to open in early May. Please review registration course descriptions with your instructors before enrolling them. **Please make sure course prerequisites have been satisfied.** Below are the course descriptions that will be listed in the ITP course brochure for ITP: Course 4011, Medical Gas Instructor 6050, and Course 4012, Medical Gas Refresher.

### **4011 Medical Gas Instructor 6050**

Students must bring a laptop.

NITC Certification fees apply and are the responsibility of the student. For more detailed information, please review the Candidate Bulletin.

[https://nationalitc.com/files/galleries/Candidate\\_Bulletin-Medical\\_Gas\\_Instructor.pdf](https://nationalitc.com/files/galleries/Candidate_Bulletin-Medical_Gas_Instructor.pdf)

#### **Course Description:**

Candidates who successfully pass this course and exam will be certified by NITC as ASSE 6050 Medical Gas Instructors.

This course will cover NFPA 99 2021 codes and ASSE Series 6000 standards that govern all aspects of medical gas and medical/surgical vacuum piping systems.

This includes requirements for brazer qualification in accordance with ASME Section IX.

#### **Prerequisites:**

- The candidates for ASSE 6050 certification shall have a minimum of ten (10) years of documented experience in the installation of plumbing or mechanical piping systems.
- A minimum of two (2) years of documented experience in the installation of medical gas and vacuum systems.
- Instructors shall have a minimum of two (2) years of documented practical teaching experience.
- Instructors shall possess a current Medical Gas Systems Installer certification in compliance with ASSE Standard 6010.

#### **Textbooks:**

- NFPA-99, Health Care Facilities Code, 2021 Edition
- NFPA Medical Gas and Vacuum Systems Handbook, 2021 Edition
- ASSE 6000 Series Professional Qualifications Standard for Medical Gas Personnel, 2021 Edition

### **4012 Medical Gas Refresher**

Students must bring a laptop.

NITC Certification fees apply and are the responsibility of the student. For more detailed information, please review the Candidate Bulletin.

[https://nationalitc.com/files/galleries/Candidate\\_Bulletin-Medical\\_Gas\\_Instructor.pdf](https://nationalitc.com/files/galleries/Candidate_Bulletin-Medical_Gas_Instructor.pdf)

#### **Course Overview:**

This program is designed to provide the latest updates on the standards governing the installation of medical gas and medical/surgical vacuum piping systems, ensuring that certified medical gas instructors stay current. The content of this course focuses on the notable changes between the NFPA 2021 Code and the NFPA 2024 Code. Following the completion of the course, participants will undergo a proctored online exam. Successfully passing the exam will result in a three-year extension of NITC certification for medical gas instructors.

#### **Target Audience:**

- This course is for current ASSE 6050 certification holders to update their credentials.

#### **Textbooks:**

- NFPA-99, Health Care Facilities Code, 2024 Edition
- NFPA Medical Gas and Vacuum Systems Installation Handbook, 2024 Edition ASSE Series 6000 Medical Gas Professional Qualifications Standard

As General President McManus has said, “We provide skilled labor to our signatory contractors.” I believe we all have a responsibility to uphold our mission statement.

“The mission of the UA Education and Training Department is to equip United Association locals with educational resources for developing the skills of their apprentices and Journey workers. By thus facilitating the training needs of the membership, we maximize their employability and prepare them for changes in the industry. We are committed to making training opportunities available across North America, allowing members to acquire new skills and remain competitive in the industry regardless of geography. In this way, we are determined to meet the needs of the piping industry and enhance employment opportunities for our members while remaining fiscally responsible to the beneficiaries of the fund.”

Please feel free to contact me at [mgalfano@uanet.org](mailto:mgalfano@uanet.org) with any questions, or let me know if I can be of any assistance. ■

## Supporting My Sisters: Why I Go to Tradeswomen Build Nations

*Submitted by Laura Ceja, UA Special Representative  
Written by PJ Moss, Local 32 Training Coordinator*

Since I was young, I have always been surrounded by strong women—from my grandmother to my mom, my sister, and my wife. I am also the father of two amazing teenage daughters. Because of these women in my life, it’s never been a second thought for me to support my sisters in the UA and to help bring our UA family and the opportunity it represents to more women.

In 2018, Tradeswomen Build Nations came to my hometown of Seattle, WA, for its annual conference. Local 32 stepped up, and under the leadership of our Business Manager, any female journey-level worker who wanted to attend had their registration covered by our local. As Training Coordinator, I was able to extend that same opportunity to all of our female apprentices. This generated a lot of excitement for our members, and we had close to 30 Local 32 sisters attend the 2018 TWBN. Once the registrations were secured and the attendees notified, I felt good and felt like I was supporting my sisters.



Local 32 Sisters at the 2018 Banner Parade in Seattle

I can say in hindsight, yes, I was supporting my sisters, but I was supporting them by checking a box and saying I helped send women to a women’s event. Prior to 2018, I had never heard of TWBN, and to the point of covering registrations, I never made the effort to know what it was. This changed when our Assistant Training Coordinator and one of my best friends, Heather Winfrey, told me I should attend as well. I first asked her, “Why?” and followed that up with, “Are you sure?” This was one of the many





Local 32 Sisters who attended 2019 TWBN in Minneapolis

times I am grateful I listened to one of the strong women in my life. So, following Heather's advice, I signed up to attend.

I will be honest with you: leading up to the conference, I heard from other men in the labor movement that when I told them I was attending, they would tell me, "Why would you go to that?" "That's not for you; it's for them," and other variations of this. Now, not everyone said these things, but enough told me these things that five-plus years later, I remember those words very clearly.

The first day of the conference arrived, and seeing so many tradeswomen in one place was inspiring. When the call went out to recognize the individual trades by international craft, it was impressive to see and hear the number of UA members in attendance. I was able to attend breakout sessions during the first part of the day. One had a Seattle area advocacy group in which one of our apprentices spoke on a panel. I was excited to be able to be there to support one of our apprentices. It wasn't until we all came back together leading up to lunch that I had my "AH HA" moment. It is a core memory for me and a driving factor on why I support my sisters and support this movement.

A now-retired sister and fellow steamfitter came up to me and put her arm over my shoulders. I looked over, said hi, and she said something that I will never forget. With a little smile and a tone that was part friendly teasing and part serious question, she asked me, "How does it feel to be in the minority?" and then quietly chuckled. Without thinking, I responded that it felt fine. It was in the next few moments that the lightbulb turned on. Why did I feel fine? Why didn't I honestly feel outnumbered or like the odd person out? I instantly knew why. It was because my sisters accepted me for who I was; they treated me like they treated everyone else who was there, and they supported me 100 percent. Because of this, I realized that until all of our members feel accepted, supported, and treated equally whenever they step

onto a jobsite, into a classroom, and our union halls, there is still work that needs to be done.

Since 2018, I have had the great privilege of taking multiple apprentices back to the TWBN Conference. The apprentices we have been fortunate enough to take back have helped inspire me to continue my advocacy for this movement and this event.

This last year in D.C. was very special for me. One of the apprentices we took in 2019, who has now turned out, was able to come back to represent our local as not only a journeywoman but as a mentor and now instructor for our training center. To see firsthand that pathway to leadership and mentorship for our members is inspiring.

This is why I believe in the power of Tradeswomen Build Nations. ■



Local 32 Brother PJ Moss and Local 525 Sister Kathy England in Las Vegas 2022



Local 32 Sisters outside UA Headquarters before touring the General Offices while in D.C. for TWBN 2023

## A Chris-Has Story

Submitted by **Laura Ceja**, UA Special Representative

In December, while Ralphie was asking Santa for a Red Ryder BB Gun, I was asking Santa for a big turnout at the Tradeswomen Build Nations (TWBN) Conference. This was the seventh time I was tasked with coordinating and planning this great event

for the United Association. Unlike in previous years, this conference was taking place on the brink of winter in Washington, D.C., just before Christmas, so I was concerned about how many UA members would brave the elements to attend. But I was not disappointed. In 2023, we saw a record-high number of attendees—almost 4,000 tradesworkers were there. UA members were once again the largest part of the delegation, with 849 representatives. The UA doesn't need Kris Kringle when we have Chris Haslinger, Administrative Assistant to the General President. Thanks to his unwavering support and the support of our General President, Mark McManus, this event has become the single biggest recruitment and retention event for tradeswomen in the world.



Sister Ceja and Training Director Debbie Vukovich, LU 100, hoping Kris Kringle brings them a huge turnout at TWBN.

In 2008, at my first TWBN conference, there were about 100 tradesworkers at the event, and I was one of about a half a dozen UA attendees. I could never have imagined that one day, I would go from attending this event to planning, coordinating, and rallying over 800 UA members to participate. And, of course, I could not have done this alone. It took a lot of help from the elves at the UA, my UA brothers and sisters, ITF and UA staff. Thanks to all of you, the kid in this Christmas story got exactly what she wanted.



NABTU Tradeswomen Committee 2023

Women were encouraged to use the college credits they earned

But TWBN has become more than a recruitment and retention event. It has become a place where women at the UA can network and hone their leadership skills. On both Saturday and Sunday, we held leadership workshops. These workshops encouraged women to pursue leadership roles. It is not enough to have women in leadership positions at the UA. We must make sure the women who take the lead are prepared by getting the

training necessary to do the job. Women were encouraged to get experience in the private and public sector, and of course, they were encouraged to obtain as many certifications as possible. In order to take the reins of leadership, women must have the right resume. The activities and training at TWBN help promote highly qualified women candidates for leadership at the UA.

The new year saw a pause in my travels, so I took advantage of the time to keep one of my New Year's resolutions: I resolved to update the UAOLR Recruitment Resources web page. In January, I added the wallet-size brochure to our UAOLR Recruitment Resources web page. These amazing little brochures are now available to be ordered by your training directors. These brochures fit perfectly into a wallet and are designed to be carried by every member to hand out to anyone who asks them how they can join the UA. In February, like many of you, I attended a Superbowl party and broke every other resolution I had made; I ate too much, bet on the game, and got into a fight with some 49er fans for booing Taylor Swift. But I was able to hand out the two brochures I was carrying in my wallet and the one my husband was carrying in his. While I was cheering for TayTay's boyfriend to win the game, with the help of these little brochures, I was also recruiting new UA members.

Another addition I made to the UAOLR Recruitment Resources web page was the Origami Brochure. These brochures are aimed at young people, but I'm sure anyone would like to get one. A recruitment tool is only good if it grabs your attention. The Origami Brochure does just this by seemingly being able to infinitely flip and fold. And each time it's flipped or folded, you see a different trade, or how to join, or the benefits available to UA members. I handed these out at the annual FFA Convention in Indianapolis, and all the kids wanted one. And of course, as soon as they walked away, they were showing them to their friends and sharing the information (Both of these items are now available to be ordered by training directors, click on the link to place your order: [UAJoin.org](http://UAJoin.org)).

"I love seeing the results of my hard work... After a few years, my pay will double... there will be numerous opportunities to apply myself."  
June Day, Apprentice Plumber & HVACR ServiceTech

UA TRADES

- HVACR Service Tech
- Pipefitter
- Plumber
- Sprinkler Fitter
- Welder

EARN WHILE YOU LEARN

The UA provides free job training, job placement, educational and employment opportunities and great benefits for its members.

New members learn on-the-job from experienced instructors and receive in-person training at state-of-the-art facilities.

UA.ORG/JOIN

Infinitely foldable, fun origami brochure. You have to see it to believe it.



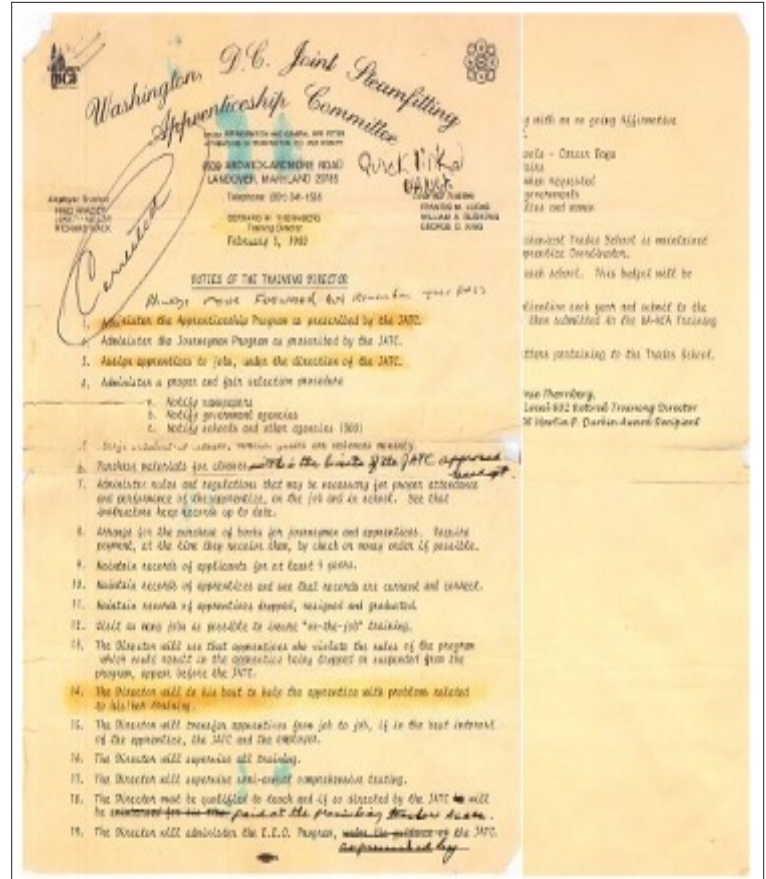
## New Apprenticeship Standards

Submitted by Bruce Dantley, UA Training Specialist

The UA Education and Training Department has worked diligently to amend and revise the Apprenticeship Standards. The new standards reaffirm the commitment to promoting and maintaining a safe and positive learning environment. In addition, to be inclusive for all participants regardless of race, creed, color, sexual, and or gender identity, the local union training centers have agreed to maintain enforcement of the standards to ensure a highly trained workforce is developed. ■



UA Local 602, Washington, D.C.  
Fifth-Year Piping Class (2010)



Bernie Thornberg, UA Local 602 Retired Training Director; 2006 Martin P. Durkin Award Recipient (Original Letter 1980)

## Duties of the Training Director

Submitted by Bruce Dantley, UA Training Specialist

When I was an apprentice 44 years ago at UA Local 602, I asked my training director, Bernie Thornberg, what are a training director's duties. The next day, he handed me this letter and I have held on to it ever since. Although 44 years old, these duties apply today, and I would like to share Bernie's wisdom.

1. Administer the Apprenticeship Program as prescribed by the JATC.
2. Administer the Journeyman Program as prescribed by the JATC.
3. Assign apprentices to jobs, under the direction of the JATC.
4. Administer a proper and fair selection procedure.
  - a. Notify newspapers.
  - b. Notify government agencies.
  - c. Notify schools and other agencies.
5. Assign students to classes, monitor grades and absences monthly.
6. Purchase materials for classes within the limits of the JATC approved budget.
7. Administer rules and regulations that may be necessary for proper attendance and performance of the apprentice, on the job and in school. See that instructors keep records up to date.

8. Arrange for the purchase of books for journeymen and apprentices. Require payment, at the time they receive them, by check or money order if possible.
9. Maintain records of applicants for at least 5 years.
10. Maintain records of apprentices and see that records are current and correct.
11. Maintain records of apprentices dropped, resigned, and graduated.
12. Visit as many jobs as possible to ensure “on-the-job” training.
13. The Director will see that apprentices who violate the rules of the program, which could result in the apprentice being dropped or suspended from the program, appear before the JATC.
14. The Director will do his best to help the apprentice with problems related to his/her training.
15. The Director will transfer apprentices from job to job, if in the best interest of the apprentice, the JATC and the employer.
16. The Director will supervise all training.
17. The Director will supervise semi-annual comprehensive testing.
18. The Director must be qualified to teach and if so directed by the JATC will be paid at the prevailing teacher scale.
19. The Director will administer the E.E.O. Program as prescribed by the JATC.
20. The Director will represent the industry with an ongoing Affirmative Action Program, as directed by the JATC.
  - a. Visit numerous high schools – Career Days
  - b. Participate in Career Fairs
  - c. Make public appearances when requested.
  - d. Participate with local governments.
  - e. Actively recruit minorities and women
  - f. Document records.
21. The Director will see that the U.A. Mechanical Trades School is maintained properly in conjunction with Local 5 Apprentice Coordinator.
22. The Director will prepare a budget for each school. This budget will be presented at the September meeting.
23. The Director will prepare the grant applications each year and submit to the JATC for approval. This application is then submitted to the UA-NCA Training Trust Fund Committee in the Spring.
24. The Director will advise the JATC on matters pertaining to the Trades School. ■

## A Bridge to a Career in the UA—The Model of Successful Operation

**UA Welder Finishing School, Local 577, Portsmouth, Ohio**

*Submitted by Bob Derby, UA Training Specialist, Administrator of the UA Welder Certification Program*



As a member who was organized into the UA, I realize the value of what this great organization has to offer. Through outreach, the UA and the ITF continue to support efforts to market the value of being a UA member and provide career-long training opportunities to ensure UA workers are the best qualified in the industry.

The message of UA careers might seem clear to many of us; however, there are some great people with mechanical aptitude who have begun their journey to a welding career in another fashion. This journey might have begun in high school, at a career tech center, or at a technical school or college. Some may have found entry-level work positions to get started in the industry. Regardless of the previous path, people who have taken the initiative on their own to pursue training in the field of welding could have an opportunity to participate in free training intended to provide a direct connection to a career with a local union. We often forget that there are people in some areas who may have never been exposed to a local union; therefore, they chase a welding job, not a career, in other sectors of the industry. Those potential candidates may never make it to the UA because they were unaware of its existence.



*Instructor Matt Ruggles observes the root penetration of the weld bead through a dark lens, rated for viewing the welding arc, to provide real-time guidance and feedback to the student participant.*



This could have been me. I stumbled upon an opportunity accidentally. I knew I wanted to work union but didn't know where to begin. If the UA welder finishing schools had been available after I completed college for welding, I would have been excited to take my training to the next level by going to a "finishing" school to learn welding specifically for the pipe trades. Fortunately, this is the reality now, and there is a proven model with a history of success. Due to many determined individuals with compassion for people, UA Local 577 is that model.

Since June 5, 2018, Local 577, located in Portsmouth, OH, has been operating a UA Welder Finishing School with great success. As of mid-May 2024, under the leadership of Instructor Matt Ruggles, Portsmouth surpassed 1,000 welder certifications performed at the finishing school alone. This does not include



*Instructor Matt Ruggles observes a student participant as he demonstrates the new and efficient welding techniques that he has learned.*

welder certification tests performed by Local 577 members resulting from regular apprentice and journeyworker training. At the time this article was written, 351 welders passed 1,003 certifications spanning over 253 weeks. Those welders have become members of 48 different local unions. These statistics will continue to grow. Matt has layers of support to ensure he can continue to provide training to "finish" welders who demonstrate the skill to enter the program. Program success is the result of many entities collaborating with a common goal. It is imperative that the UA international representative maintain involvement with the program from the beginning. The international rep has access to all the necessary personnel and therefore can coordinate efforts for the program. State and local organizers work closely with the instructor to identify that the minimum skill level exists for the potential student to be successful. Organizers assist with placing the students into local union membership. The local union business manager authorizes the availability of weld booths and training space to host the welder training program. The Portsmouth UA Welder Finishing School continues to turn out welders with certifications in a timely manner due to the efforts of the leadership personnel involved. Local 577 Business Manager Bobby Cole wholeheartedly supports the program at his local. His leadership and confidence allow Matt the freedom to run the program efficiently. Training Coordinator Kenny Bailey compiles invoices and supporting documents to track the funding separately from the local training fund. UA International

Rep Kenny Ruggles stays involved with the ongoing operation of the school. His interaction with the organizers helps maintain continuity, from finding potential candidates to placing them in local union membership. International reps from outside Ohio contribute by working with local union business managers and organizers in their respective areas to receive UA-certified welders who have exited the program into membership.



*From left to right: Richard Ochocki (Lead Organizer, Ohio State Association), Kelly Lipinski (UA Special Rep, Organizing Department), Alan Winters (Organizer, Ohio State Association), Kenny Ruggles (UA International Rep, Ohio/West Virginia), Bobby Cole (Business Manager, UA Local 577), Orion Manley Flores (Organizer, Ohio State Association), Matt Ruggles (Welding Instructor, Portsmouth Weld School).*

The UA and the ITF provide support and funding for the operational business of the program, but the personal compassion and dedication that Matt brings to the learning environment, which must not go unnoticed, contributes to the success of the program. From the beginning, Matt instills open dialog with the students to give them a thorough understanding of the requirements and commitments involved while participating in the program. He commits to helping them work on improving their welding skills from what they already possess upon entry to passing multiple UA weld certifications. After the students obtain the necessary welding certifications and exit the program, they move on to membership and employment in a local union. Matt communicates with them after they have been at their respective unions to see how they are doing. Some of the prior students reach out to Matt with appreciation of what the program has done for them.



*Instructor Matt Ruggles demonstrates an efficient uphill welding technique in the 5G position to student participants.*





Latest group of welders from across the country preparing to perform weld tests at Portsmouth Weld School.

Here are just a couple of testimonies from current UA members that exited the Portsmouth program.

To whom it may concern:

*My name is Sergio Cardenas. I've been working in the welding/fabrication industry for the last 14 years non-union. My career path started in Texas and I've worked in many different locations welding on all different kinds of projects for non union contractors.*

*In the year of 2022 my coworker informed me of the UA and suggested I give local 50 a call because he thought that I deserve fair work and compensation for my skills. I spoke with local 50 and explained I needed to fine tune my "stick welding" skills to be more employable with the UA although I was very confident in my TIG skills. Fortunately local 50 introduced me to Matt Ruggles from the Portsmouth local. Matt was very helpful and knowledgeable of all welding techniques and really helped me fine tune my stick welding skills.*

*I now feel more comfortable taking an employment test in any welding process required and I have been steadily employed with UA local 50 since then and look forward to working out of the hall till I retire.*

*Without a doubt, I will be forever thankful to Matt and I highly recommend him to anyone in need of a skilled tradesman with the patients [sic] and knowledge required to be a great teacher, brother, or supportive authority.*

—Sergio Cardenas, LU 50

*I've been going now for 15 years in the pipe industry from rolling out pre fab to welding things I can't talk about in places I'm not allowed to discuss. I started out down south where the industry is very cutthroat and hard to pave your own way, meaning that there's a heavy presence of going*

*into a job to take a test and "fake it till you make it." This industry is already very dangerous and casualty heavy without the added dangers of being improperly trained and reluctant to admit your lack of knowledge for fear of lost employment.*

*I got into working around Ohio for a couple years and got wind of the Pipefitters Union and decided to dip my toes in and see what it's all about. A few weeks later, I was signed up to go take a test down in Portsmouth at the 577 to see where I stood with my welding capabilities and what needed work.*

*This is where I met Matt Ruggles, and let me tell you, I haven't been as impressed with an individual's ability to not just go and recite words out of a book to get someone through a course, but the perseverance and the compassion to be able to approach the same subject from multiple directions to make sure that YOU specifically are hearing what needs to be done in order for you to excel ... 577 has such a nice facility with all the information ... available for you to learn any type of welding process you could imagine. But that almost pales in comparison to the knowledge and teaching ability of Mr. Ruggles himself, which I believe makes the welding program a home run when you set your sights on the pipe industry.*

*Working with the union has been a very nice experience. It is relieving when you can sit back and understand that the people working next to you have the best training that can be offered on the subject...If you plan on making a career in the pipe industry, I'd recommend finding a local that you enjoy living near, go sign up, and find out how big this brotherhood actually is."*

—Trevor McMahan, LU 162

There have been hundreds of people who have benefitted from UA Welder Finishing Schools. In addition to Local 577 in Portsmouth, OH, there is currently another UA Welder Finishing School located at Local 353 in Peoria, IL. These welder training programs are intended for people who already have welding skills, offering them the resources to fine-tune their skills to be able to pass welder certification tests to UA standards within eight weeks. Some participants enter with advanced welding skills and need little time to prepare to take a weld test. They only participate in the program for a couple of weeks or less. This is not a program to teach people to weld. It is to provide a path for an existing welder to gain an opportunity to have a successful career as a UA member. Open communication between local union management and the finishing school instructor



Local 577 has a new orbital tube welding lab to prepare members to work on high-purity jobsites such as those found in the semiconductor, pharmaceutical, and food and beverage industries.

identifies specific welding certifications, if any, that are needed in the jurisdiction that the candidate will join upon exiting the program. The instructor can adjust the training appropriately to fulfill the requests of the receiving local. Anyone who wants to work in the piping industry and has good foundational welding skills deserves an opportunity to take advantage of this training.

The projection of work for the piping industry looks good for the UA. Various initiatives support many of the projects across the United States. "It is a great time to be a member of the United Association" is a phrase that I hear often as my work responsibilities take me to different regions of the country. It is indeed a great time to be a member. But what about those who are not members of the UA? As the industry continues to grow and workers continue to achieve retirement age, new members will be needed to fill the gap. Where will the new members come from? Some will come through traditional apprenticeship selection processes that are in place. Others will come from non-traditional opportunities such as prior training or experience. Organizing is another traditional avenue for workers to get connected with the UA. There are people outside the UA who are performing work consistent with the work covered under local collective bargaining agreements without a definite career path in mind. The UA Education and Training Department funds UA Welder Finishing Schools to provide detailed training for individuals to prepare for and successfully perform welder qualification tests to UA standards. The UA Welder Finishing School can be the catalyst to create a career path for a welder and ultimately improve the lives of families.

I am proud of the programs that provide UA membership opportunities to people, and even more proud of the dedicated people within the UA who make it possible. ■

## UA Code Development Committee— "Getting Involved"

Submitted by Joe Fernandez Jr., UA Training Specialist

It's easy for us in the trades to take various piping systems and our traditional way of installing them for granted. Truth be told, often we install a system just according to whatever the codes dictate or how we were taught in the field. Have you ever wondered why codes are implemented and the reason they are written, or what effect codes have on our industry, including man-hours?

Last year, under the direction of Tom Bigley, Director of Plumbing Services, I tasked myself and others to form a committee that would be involved in the code development process, with the sole purpose of representing our membership and having a voice and vote during the process to better our industry.

**The UA Code Development Committee (UA CDC) was developed for the following purpose:**

- To exemplify the UA's commitment to protecting the **health and safety** of our members and the public.
- To recommend/propose code updates to **IAPMO and the ICC Code Bodies**.
- To **align code language** between the code producers—UPC, UMC, IPC, IMC, and IFGC.
- Review **other people/organization(s) proposed changes** to these codes and decide to take a support/non-support/no opinion on these proposed changes.
- Attend Code Hearings for IAPMO and ICC and represent the **UA's position** as directed by the UA through the UA CDC.
- Work with other **Industry Partners** to accomplish the above purposes/missions.

**UA CDC Goals:**

- Provide education and training about the codes.
- Work with groups such as IAPMO on base codes—Uniform Plumbing Code (UPC), and Uniform Mechanical Code (UMC).
- Work with the International Code Committee (ICC) on its model codes—International Plumbing Code (IPC), International Residential Plumbing Code (IRPC), International Fuel Gas Code (IFGC), and International Mechanical Code (IMC).
- Work with local unions to pass state amendments to base codes or develop state or local codes.



### Educating Our Membership:

Recently, the UA CDC held a membership educational conference in January for our members who are serving on the different code bodies. The goal for this meeting was to have our committee members educated on the processes of both code bodies.

This meeting ran in conjunction with the UA-ITF NFPA Technical Committee Training Conference, which is led by Brother Ken Schneider, UA Training Specialist. UA-ITF NFPA TC's goals and purpose are run with the same mission: "To educate and train members on the code implementation process for all NFPA Code Committees." It was a weeklong conference in which the TC members broke out into groups and worked on reviewing code proposals, code submittals, and parliamentary procedures pertaining to the code body in which they serve.

For the first time, UA members are members of the ICC Code Committees and will have a voice and vote on the model code changes to the 2027 code process. Historically, UA members were not involved with the ICC. We now have members specifically serving on the IPC, IMC, IRPC, and IFGC.

The UA and IAPMO have always had a great relationship which is evident in the number of members involved with the Uniform Codes. We have several members who serve on TC committees for the UPC and UMC.

We have heard it time and time again, "If you're not at the table, then you are on the menu," and we are at the table. We want to ensure that our membership continues to grow, have a voice, and continue to protect and create manhours.

Let's face it, not everyone is a "Code Expert" throughout the UA, but every local does have at least a couple of members who are, and those are the ones we would love to have participate. If you or you know of a member who would like to get involved in the code implementation process, please reach out to me for further inquiries. ■

## 2024 Construction Working Minds Summit

*Submitted by Micheal Hazard, UA Training Specialist*

On February 26-29, 2024, nearly 500 international participants gathered in Kansas City, MO, for the third annual Construction Working Minds Summit, which focuses on Mental Health Promotion, Suicide Prevention, and Addiction Recovery at work.

The UA was a proud presenting sponsor for the third year in a row. Twenty-eight UA members from 13 Local Unions across the United States and Canada were in attendance!

UA Local 100 Business Manager Ben Bradshaw had an amazing experience at the Construction Working Minds Summit. "It was so encouraging and inspirational to see so many groups from our industry come together to help further such an important cause," he said.

The summit kicked off on February 26th with the Eye of the Survivor Storytelling Retreat. As part of suicide prevention, addiction recovery, and mental health promotion strategy, stories let others know they are not alone, and collectively, they can tell a powerful tale of hope, recovery, and change. Omar Galindo, Organizer for Local 78, said, "The storytelling retreat taught me that my story was not just one terrible event. It was a consequence of years of not dealing with my PTSD, anxiety, and depression in a positive manner. It made me realize there is still work to be done, and I will do it!"

The pre-conference workshops continued on February 27th. Rachel LaBlance, UA Local 101, Camp Lejeune VIP Welding Instructor, called the Summit eye-opening and said the storytelling had a huge impact. "We take it for granted that we're all in this industry together, and we don't really think about what someone is actually dealing with every day," she said.

LaBlance found the Recovery First Aid Certification workshop powerful, which focused on creating a culture that addresses substance use disorder, how it impacts employees and their families, and how to be an ambassador within your organization. "I thought it was awesome that over 400 doses of Narcan were distributed to attendees," she said.

The Summit officially kicked off Wednesday, February 28th, with several keynote speakers. The exhibit hall was in full swing. Dave Gibson, Local 32, Joint Base Lewis-McChord (JBLM) VIP HVACR Instructor, praised the summit as a great opportunity to learn more about mental health.

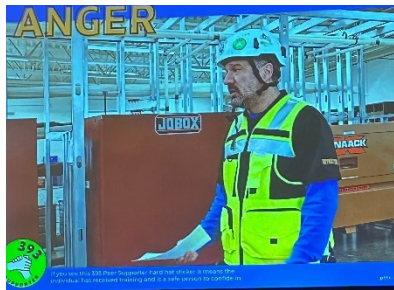
"It was great to talk to the different trades and contractors about the resources they use to start the conversation with members in need of help," Gibson said. "It is humbling to know that so many people care and how much more these programs need to grow."





UA VIP Program Manager Mike Hazard and VIP Welding Instructors Jose Ballejo and Rachel LaBlance hosted a breakout panel focused on Scaling Mental Health Support in Military-to-Civilian Transitions. They addressed the physical and environmental root causes for mental health challenges through storytelling of their personal experiences transitioning out of the military.

UA members gathered at Union Station Wednesday evening to attend the Awards and Networking Gala. We are so proud of Local 393 Director of Training Brian Murphy for winning the Toolbox Talk Challenge for his video submission on Anger.



The Summit wrapped up on Thursday, February 29th, with a full day of keynotes and panels. UA Canada Special Representative Alanna Marklund spoke on a Soul Care in Construction panel.

“All the hardhats and steel toes on site won’t help if our members are not able to focus on the task at hand because we are too consumed with what else is going on in our lives when we are feeling like we are drowning. When we are facing anxiety, depression, or substance abuse, it exhausts our soul, and it clouds our better judgement, and it feels consuming. This is so dangerous in a skilled trades environment. We need to be completely present in everything we are doing. Peer support and suicide prevention in the construction industry is a form of Soul Care for all of us—it ensures that we are able to look out for each other—regardless of our cultural, personal, or religious views, our gender, or our race. It’s humans looking after humans—using empathy and care for each other—to make sure that we are OK. This is the Soul Care that promotes community, unity, and togetherness. It’s also breaking the stereotype that people in construction need to be tough, strong, and hide their feelings,” she said.



“Mental health is not a single destination, and what works for one person may not work for you. There are so many resources we can use and have yet to learn to help us change the culture,” said JBLM VIP Welding Instructor Jeremy Rood.

The Summit brings together the most passionate and dedicated mental health champions from all areas of the construction industry to stand in solidarity and learn as a community. We hope to see you all there next year! ■



## A Computer-Savvy Membership

The technology boom is here. Are we ready?

Submitted by Trenton Mauk, UA Training Specialist

Quick question: How many training centers out there still have that dedicated computer room that needs to be better utilized? Are you just using them for all our third-party testing, or do you have a program in place that teaches our members the soft skills of computers?

Like many of my instructing peers, I have always assumed that this younger generation has technology down pat. I was about three years out of high school when they stopped playing Oregon Trail and really started teaching kids computer science. As time passed and technology exploded, I figured most of our incoming apprentices would be all over it. Until one day, about three years ago, I was in the middle of instructing a Foreman’s Certification class to my fifth-year apprentices. I began to talk about keeping a daily log with Word and tracking work hours on



an Excel spreadsheet. I got that look from half the class that they didn't know what I was talking about. I asked for a show of hands who didn't know what Word, Excel, or any of the other Microsoft Suite products were. Half the class raised their hands. I was shocked, to say the least, because the majority that raised their hands were twenty-somethings. I started thinking about some of the emails I had received from some of them, and it hit me. I had assumed that because they were all younger than 40 years old, these brothers and sisters had this technology thing down. In front of the class, I laid my head on the front table and told them I had failed them as an instructor. Here we were with less than 10 classes left in their apprenticeship, and I had no wiggle room to add any additional related training. So, as we so often say, it is what it is.

I reflected on this problem to help provide a reason for my assumption. It dawned on me where I had gotten such an idea. I had watched these apprentices over the last four-and-a-half years. At every given moment, they would bury their noses in their phones. This NEW generation has traversed the internet, apps, and social media like no other. As they say, "If you are having problems with your phone, just hand it to a kid, and they will figure it out."

Now, it goes without saying that there are fantastic apps that are being used in the field. These cubs will hit a home run once they get them, but what about the basics of computer use? Especially those that we hope someday to take that seat over from our aging supervision. Are we to assume they will get the training when they become a new Foreman? They will learn on the fly how to construct a proper email when they correspond with a supply house, an engineer, or a general contractor. How about an email with a customer? This same individual doesn't even know there's a spell check feature or apps out there to help with their grammar when constructing a sentence (Grammarly). What kind of impression do we leave on those end-users? Through no fault of their own, these unsuspecting apprentices and journeymen who lack these tools represent your local and our brand.

To remedy this problem, we must ensure they are taught soft computer skills early in their training. Very soon, if not already, they will be programming a total station, moving about in a BIM model, cataloging documents out of Bluebeam, and extrapolating specifications out of Procore. Our training is rapidly changing, and we need to plant those seeds today rather than tomorrow. Even if you aren't seeing a lot of tech in your area now, that piece of construction is here. We need to do our due diligence to ensure our members aren't just trained for today's market but the market they will see in five years. All it takes is one out-of-town contractor to land a job requiring someone to run a total station, as happened to me, or your local contractors losing a job to our ever-increasing com-

petition. Whether it's an open shop or another trade, we need to change our perspective.

Not to worry though, you don't have to have a full-blown tech program in full swing by tomorrow, but you should get started on it. An excellent resource to begin with would be Local 342's "Intro to Computers," which can be found on DADO. Their syllabus for this class is an excellent place for any local to get their program off the ground. If you aren't on DADO yet, email me your email at [tmauk@uanet.org](mailto:tmauk@uanet.org). I'll make sure you get an invite to the Instructor Resource on DADO.

In conclusion, as directors/coordinators, and instructors, it is our job to provide our members with the training that will allow them to step up and take that torch from our tired arms. If we are preparing them only to ride horses, what will they do when the first car drives by? Taking a proactive attitude towards technology is essential to ensuring our time-honored obligation to not only those in front of us but those behind us as well.

Be safe out there and thank you for all that you do for your local! ■

## The United Association Construction Technology Committee

### Key Takeaways from the 2024 MCAA MEP Innovation Conference

*Submitted by John W. Russell, Jr., VDC Coordinator, Local Union 5*



Members of the United Association Construction Technology Committee attended the 2024 MCAA MEP Innovation Conference held in Orlando, FL, January 30th through February 1st, 2024. Following is a synopsis of the general sessions, breakout

and roundtable sessions, and networking events, concluding with key takeaways realized from the wealth of information provided during the week.

### General Session

The four general sessions held the first two days of the conference focused on a variety of subjects. These included predictive analytics, robotics integration, project delays, international construction processes, and also a team collaboration exercise assembling a mechanical hand for the project, Give A Hand charity.

These general sessions provided insight into the primary issues currently confronting our signatory contractors and demonstrated innovative approaches to embracing the latest construction technologies, including productive applications of these technologies for maximizing ROI.

### Breakout Session

The numerous breakout and roundtable sessions presented over the three-day event addressed a variety of issues currently affecting our signatory contractors.

Several of these sessions addressed workforce development, including workplace culture, workplace inclusivity, recruiting, and methods for cross training. Many others focused on technology issues such as implementation methods, efficient workflows, and maximizing tech ROI, while also including sessions demonstrating the advancements in artificial intelligence, generative design, reality capture, and augmented reality.

A large portion of the breakout sessions also addressed VDC utilization, detailing processes, coordination methods, and fabrication database management, as well as fab-to-field fabrication shop technologies with the latest advancements in cloud-based fabrication management tools.

### Networking

One of the most noteworthy aspects of the conference was the opportunity to network daily with peers between sessions at impromptu evening get-togethers, and also during several planned events held by the MCAA and GTP STRATUS at off-site venues. These gatherings were very effective for promoting discussion and sharing ideas across multiple segments of our industry, as well as providing relationship building opportunities that may continue collaboration for long periods and begin new friendships. New contacts are acquired, opinions are shared on a personal basis, ideas are formed and discarded, and significant knowledge and insight can be gained during these networking events.

### Key Takeaways

In the interest of remaining ahead of the curve with our VDC and technology training, four key topics emerged during the conference that should warrant further discussion by the UA Construction Tech Committee to develop strategies for addressing their impact and integration into our curriculums. These topics include areas that we have currently incorporated into our courses, but also new areas that we must explore to ensure that our workforce is educated in the use and application of these technology tools as they arrive:

- Artificial Intelligence (AI)

The extremely fast pace of Artificial Intelligence development over the last few years, and its impact on our daily activities, should provide notice that AI's impact on the construction industry and the mechanical trades must be addressed in our training immediately. The application possibilities to our industry are in their infancy, and we must begin now to develop a familiarity with AI within our workforce so that this technology is understood and embraced as it expands into aspects of our workflows that we have yet to imagine.

There are many applications of AI that are now being utilized in everyday life: Chat GTP, voice assistance, predictive analytics, generative design, machine learning, robotics, etc., that can be explored in a course to provide students with insight into what AI is now changing, and could be changing, in their everyday workplace.

In addition to the impact of AI in our workplaces, we as trainers must also evaluate AI applications as instructional tools. The possibility for developing syllabuses, lesson plans, lectures, exams, etc. with AI currently exists and eventually these tools will be applied in some form by our instructors. Training them in the use of AI for developing our curriculums would ensure not only that the AI tools are learned, but also instruction in a uniform method of AI application could promote consistency of its use in all aspects of our training.

- Model Based Technologies

One constant that was integral to a majority of the concepts, workflows, and technology tools presented during the conference was the use of a model as the basis for the required data and the processes demonstrated.

With the model at the center of so many of these technology applications, the accuracy of the model, and also the model developer, have become critical to the efficient performance of these tools.



Considering this fact, continued training of our workforce in model development and model production is critical. We must continue to grow our robust Revit, BIM, and VDC training curriculums that work to promote UA piping modelers as the elite workforce for the production of accurate and high quality models for construction and fabrication.

- **Coordination/Detailing**

Nearly one quarter of the breakout sessions conducted related in some way to detailing and coordination processes, and as noted above, model accuracy has become critical to the efficient performance of many construction-based technological applications. In addition to the production of the construction model, a critical aspect of model accuracy, as evidenced by the conference emphasis, is the efficient coordination of trades' systems components to realize the minimum amount of constructability clashes possible.

For many years, UA detailers have traditionally taken the lead to manage the coordination processes with other trades in order to provide a high degree of model accuracy on many of our contractors' projects. In recent years however, management of coordination on larger projects has also been performed by general contractors' personnel. These coordination and detailing skills: Efficiently managing trades' coordination, efficiently coordinating piping installations, reviewing and applying the large amount of detailed technical information required, and interacting with architectural and mechanical design professionals, are now primarily acquired by our members only on the job. Although our courses in advanced plan reading, Revit modeling, and piping fabrication may touch upon model coordination topics, we currently have no UA training curriculums that specifically address all aspects of model coordination, including those skills mentioned above.

With the future introduction of a Mechanical Draftsman classification for our UA members to pursue as a specialization, the introduction of a specific coordination/detailing curriculum may warrant discussion by the CTC.

- **ITM Objects as a Modeling Standard**

In the constant evolution of piping modeling content, it appears that the Autodesk Fabrication ITM 3D object format has emerged as the current dominant format for construction trades model production in the U.S. Many popular VDC software tools, including modeling software, fabrication shop management tools, and estimating software, have incorporated ITM functionality into their plat-

forms. With the popularity of ITM content currently utilized in VDC tools continuing to grow, emphasizing training in managing ITM content and databases, within our current curriculums, may also be a subject to consider for discussion by the CTC.

### Conclusion

The 2024 MCAA MEP Innovation Conference was an excellent event to attend for any member of our industry. The information available during the week via the various sessions, workshops, and roundtable discussions was specific to the current technology issues experienced by our UA members and signatory contractors. Future trends in construction technology were demonstrated, and many topics that could be considered in our training discussions were apparent in addition to the takeaways described here.

In addition, many of the conference attendees and presenters were tech industry leaders who are employed by contractors and have presented in past years at various conference events such as Autodesk University, Faro Signals, Stratus Innovate, etc. The networking and relationship building opportunities were considerable resulting in a robust exchange of ideas and leaving many of us to agree that the 2025 MCAA MEP Innovation Conference will only grow and improve and will become a premier technology event for unionized MEP contractors. ■

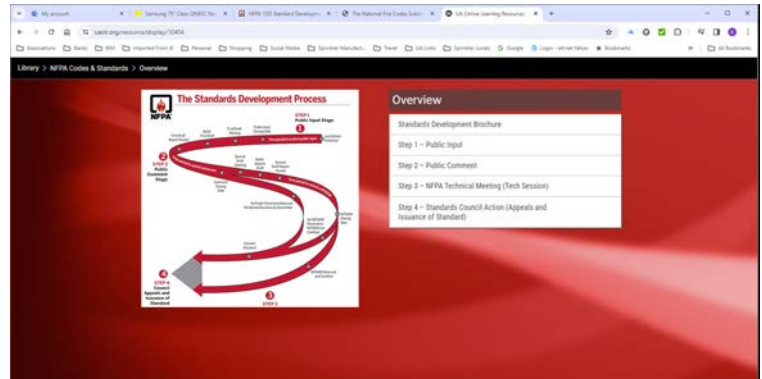
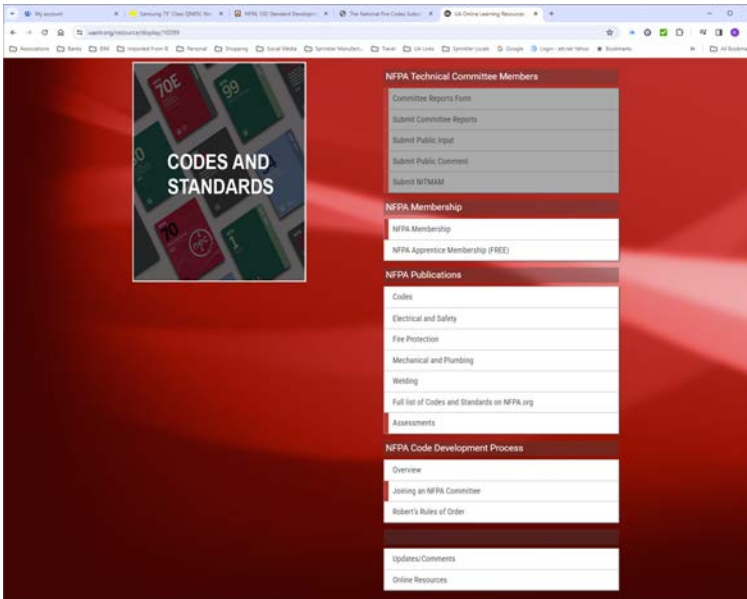
---

## NFPA Codes and Standards

*Submitted by Kenneth Schneider, UA Training Specialist*

At the 2021 UA Convention, two UA members, who were state senators, debated about political parties. They may not have agreed on political party, but they both agreed on this, "If you are not at the table, you are surely on the menu!" This holds true for the codes that affect our careers as piping professionals. We all have questioned, "Why does the code state this?" or "Why doesn't the code state this?" The answer is simple. We are not participating in the code process to improve our professional careers! These technical committees generally meet twice in a three-year cycle to discuss and debate good code language. Sure, you will have to read the code and the public inputs and comments that come to the committee. This puts us at the table, ready to debate our professions as qualified personnel who install and maintain these piping systems. No one is better trained and equipped to discuss the installation, commissioning, and maintenance of these piping systems than UA members.

So, how do you get involved? I thought you would never ask. It's simple, go on the UA-OLR and do some homework. The OLR has a new tab, NFPA Codes and Standards. This tab is filled with information, from an overview of each code or standard that affects our crafts to applying for a technical committee seat. You can learn the process and the commitment to be a committee member.



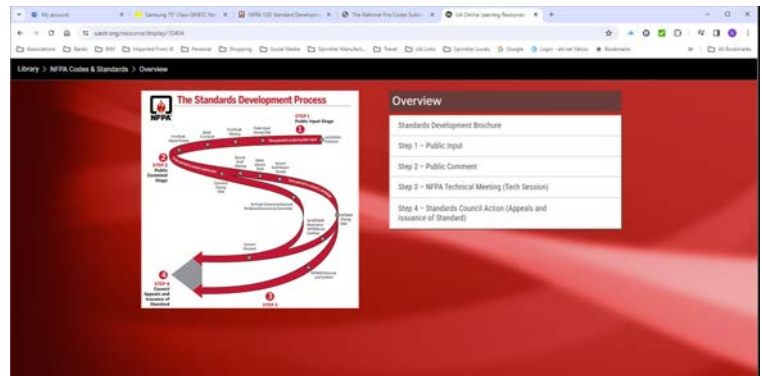
participation, we can reach these numbers and, more importantly, sit at the table and craft language that enables the UA to continue to grow and remain a leader in the construction industry. Together, we can make a difference. Together, we can have a voice and a seat at the table!

Last year, under the direction of Tom Bigley, Director of Plumbing Services, Brother Joe Fernandez Jr., UA Training Specialist, was tasked with assembling a Code Development Committee. Together, Joe and I, as well as many other UA members, collaborated to create a training conference where we train and educate one another. This conference was a big success and will continue into the foreseeable future. Joe Fernandez wrote an article about the UA CDC in this newsletter. Read his article and get involved!

We will also be holding a class this fall, NFPA Codes 101: A Beginner's Guide to Standards Development.

- This course offers a comprehensive overview of the National Fire Protection Association (NFPA) Code Development process, providing students with a foundational understanding of the principles, procedures, and practices involved in the creation and maintenance of NFPA codes and standards. Through instruction, discussions, and interactive exercises, students will gain practical insights into the intricacies of NFPA code development, equipping them with the knowledge and skills necessary to navigate and understand the ongoing evolution of these documents. This course serves as an essential foundation for individuals seeking to contribute to the code development process as a technical committee member on an NFPA code or standard.

UA NFPA TC will soon occupy more than 100 seats, utilizing about 60 UA members, which is a great accomplishment; however, we have much room to grow. Our goal is to see this group grow to 100 UA members, occupying 200 seats by the end of 2025. This is an attainable goal, and with your help and partici-



2025 UA - ITF NFPA Training Conference and UA Code Development Committee

For a second consecutive year, the UA NFPA TC members and the UA Code Development Committee will meet and collaborate on the upcoming code cycles, along with training our members to write, debate, and improve the codes and standards that affect our livelihoods. This meeting will take place in Tempe, AZ, January 21-23, 2025. I hope to see you there. Get involved, get educated, and make a difference!

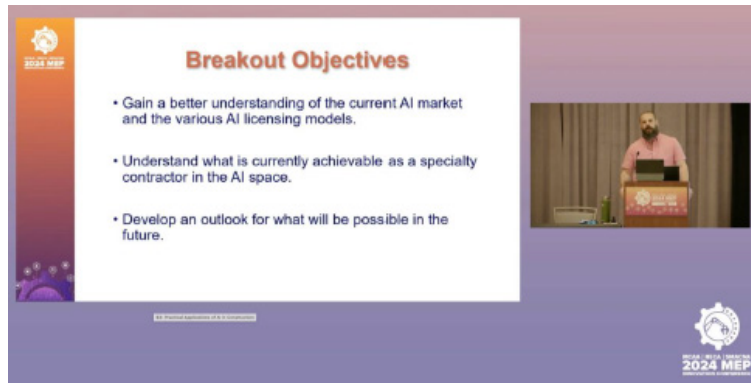


Please check out the UA-OLR, NFPA Codes and Standards, for more information and reach out to me for additional information at [kens@uanet.org](mailto:kens@uanet.org).

Be safe and get involved! ■

## The Role of AI in Construction

Submitted by Jeffrey Van Rhyn, Jr., Director of Education and Training Operations, Local Union 669

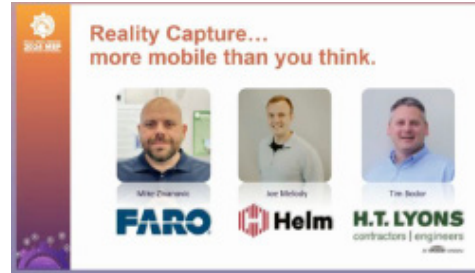


The 2024 MCAA, NECA, and SMACNA's MEP Innovation Conference was held in Orlando, FL, on January 29-31. The conference had 730 registered individuals and offered almost 50 educational breakout sessions, workshops, and roundtables for attendees to choose from over the course of two and a half days. The UA Construction Technology Committee (UA-CTC) team was in attendance and ensured that there was a member from the committee in every session offered.

I had the opportunity to attend several of these workshops and network with the leading industry professionals in MEP innovation.

Stephane McShane with Maxim Consulting Group hosted the first breakout session I attended, titled "Success in Technology Implementation." Throughout this session, Stephane provided examples of how the implementation of technology continues to be a challenge for contractors. (No surprise there). However, she outlined that the solution to overcome these lies in the specific workflow first, then the evaluation of the current technology available to insert into the workflow to streamline the process. Finally, standardization of the workflow enables staff to learn effectively and ramp up quickly in order to drive project success sooner.

There is a myriad of technology solutions available for just about every process, but Stephane's most important message was to only engage with the technology solutions that will help your business to be more productive or more automated. Most importantly, never invest in a technology to solve an issue that does not help with one of those two principles. Doing so is a sure recipe for disaster.



Mike Zivanovic, FARO's Senior Solutions Manager and Local 597 member, hosted a breakout session titled "Reality Capture...more mobile than you think." In this session, Mike discussed

what reality capture is and what the best approach should be to create a digital asset.

"The first question you should ask yourself," Mike said, "is what are you using the data for?" Are you planning on prefabbing from the data created or are you performing quality control and jobsite tracking. If using the data for prefabbing, this may require millimeter accuracy which would be best captured by using a laser scanner. However, if the goal is to create data for estimating, jobsite tracking, quality control, pulling dimensions, or coordination, then the best approach may be to use their mobile SLAM scanner called the FARO Orbis.

SLAM stands for Simultaneous Localization and Mapping. The benefit to this type of scanner is speed. It is much faster to capture a project using this scanner as opposed to a laser scanner that would take hundreds of scans which would create terabytes of data. This mobile mapper greatly reduces the time it takes to create a



digital twin while it also has the capability to create two to four millimeter accuracy for target areas using their Orbis Flash tool.

While there were many innovative educational sessions offered at this year's MEP MCAA Conference, the most eye-opening session I attended was a session called "Practical Applications of AI in Construction." In this session, Jeff Elwell of EM Dug-

gan, outlined his vision and implementation of AI in the construction industry. We are already seeing the implementation of AI in jobsite safety monitoring which uses software to detect whether personnel are wearing the appropriate PPE or not. We have also seen the use of AI in apps such as Document Crunch, which searches construction contracts to automatically identify potential problematic language within the document.

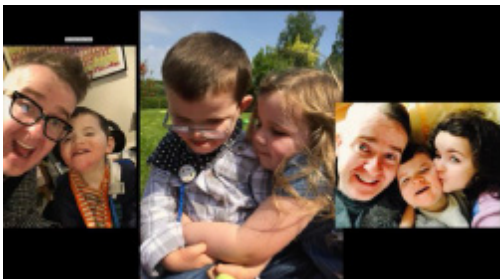
The next level of evolution for AI in the construction industry is to use AI powered generative design methods. Generative design uses AI to automatically complete repetitive tasks or assist with design optimization to cut down on the use of building materials and are starting to be implemented in Autodesk products such as Autocad.

Inventory management is another use for AI that is emerging in the construction industry. I'm sure you have seen the robot that roams up and down the aisles scanning the shelves at stores such as Walmart. This innovative approach for inventory management uses a method called *computer vision* to determine which products are running low in stock and automatically places an order to replenish the needed items. Computer vision accomplishes this by having an understanding of the depth of the rack, how many items can fit on that rack and how many items are currently on that rack. Some construction companies have already started to adopt this same approach to restock the components used for fabrication in their shops.

The next big leap for AI in construction will be for the autonomous robots and drones to understand the human element of construction. To understand how we work, what our preferences are, and how we remain safe while doing so. Right now, there are already autonomous systems such as drones and Spot being used on construction sites for jobsite documentation and quality control, but they are running their missions without an understanding of how we complete our work. The next big leap will happen when these robots shift from being siloed in their work to be collaborative in ours.

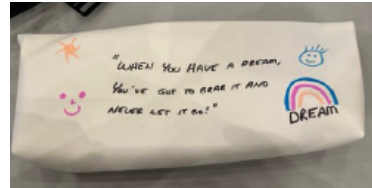
The highlight of my week, however, was having the opportunity to participate in the general session project, "Give a Hand." David Meade, from Lightbulb Teams, gave a personal presentation about a life-changing experience that created his passion for involvement in an organization that provides prosthetics to developing nations.

These prosthetics are designed to be easy to use and easy to take



off within less than a minute. Right now, these are limited to a hand prosthetic with three fixed fingers and two ratcheting fingers. The ratcheting fingers are released through an action on the wrist of the prosthetic.

We had the amazing opportunity to build one of these prosthetics ourselves for distribution



to a person in need. With a current wait-list of more than 2,400, the recipient could be a man, woman, or even a child.

This was a rewarding and humbling experience for me and even emotional at times. I feel very fortunate to have had the opportunity to participate in such a wonderful cause and be able to contribute to the work this amazing foundation does on a daily basis.

My only hope is that the recipient is not offended by my team's lack of artistic ability and, instead, benefits from our capable building skills.

In conclusion, the UA was well represented at this conference, and we are grateful to have MCAA, NECA, and SMACNA as partners in innovation as we all look forward to the future. ■



## UA and XO*i* Work Together to Train for the Future

Submitted by Robert Vilches, UA Training Specialist



[XO\*i\* Technologies](#), a leading provider of technician-focused technology solutions, and the United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry of the United States, Canada (UA)

announce a partnership that delivers XO*i*'s innovative AI-based tech-enablement solution to HVACR instructors and registered service apprentices across the United States.



"XOi combines many critical functions for UA instructors and apprentices and other field professionals in a single platform," said UA Training Specialist Robert Vilches. "In addition to its streamlined workflows and best-in-class data indexing and analytics, XOi keeps UA apprentices and instructors connected in the field and provides instructors with unrivaled insight into how students perform on the job. And, XOi's first-to-market virtual mentor support extends training from the classroom to the jobsite, so apprentices can continue to learn while they're in the field."

XOi's deep-data cataloging capabilities, advanced AI-driven analytics, and intuitive remote support options enhance the value of the UA's training programs, giving the organization resources to help contractors close the skilled labor gap.

"This partnership is an opportunity to maximize the UA's proven training programs and to strategically extend XOi's position as a top innovator in the industry," said Aaron Salow, founder and CEO of XOi. "By equipping their apprentices and instructors with our powerful solutions, the UA is empowering the next generation of skilled labor talent with in-depth, hands-on education that will help contractors face the continuing labor shortage in the service industry."

XOi's advanced cloud-based solution allows field-service technicians to utilize, aggregate, and analyze critical job data and maximize customer value through industry-leading efficiency, accuracy, and accountability. With a full suite of standardized workflows, job documentation capabilities, and technician training and enablement solutions, teams can build deep and easily accessible institutional knowledge bases that support real-time decision-making and data-based continuity. Service teams can apply these extensive data-science capabilities to analyze those foundational elements and strategically respond to evolving data trends and forecasts.

For more information regarding the partnership with XOi and to request an account, please contact ITF Training Specialist Robert Vilches at [rvilches@uanet.org](mailto:rvilches@uanet.org). ■

### EDUCATION AND TRAINING DEPARTMENT OFFICE PROFESSIONALS STAFF

**ADMINISTRATIVE ASSISTANT**  
Suzanne Ellis

**ITF MEETING & EVENTS PLANNER**  
Cindy Williams

**VIP PROGRAM ADMINISTRATOR**  
Nicole Jeup

**VIP ADMINISTRATIVE ASSISTANT**  
Tammie Parezo

### REGISTRAR/CERTIFICATION DEPARTMENT

Carrie King, *Registrar*  
Kristyn Ivey  
Tyler Masengale  
Angie Sterling  
Agatha Wolyn

**IPTJTC BOOKSTORE**  
Dianne Lash, *Office Manager*  
Peggy Jarrett  
Jay Meadows  
David Parmenter

**ITF COMPTROLLER**  
Matthew Robertson

**ITF FINANCE DEPARTMENT**  
Helen Holmboe  
Kathy Walker  
Tracy Webster

**INSTRUCTIONAL  
TECHNOLOGY COORDINATOR**  
Lauren Friedman

**RECRUITMENT**  
Kiva Straser

Save the  
**DATES**

The following are  
important upcoming  
training events for 2024.

**Office Professional Seminar**  
April 9 - 11 (Districts 1, 2, and 3)  
April 16 - 18 (Districts 4, 5, and 6)

**Instructor Training Program (ITP)**  
August 10 - 16, 2024

Mark your *Calendar!*