

The logo features the NECA logo on the left, which includes a stylized wave and three stars. To its right, the text "North Florida Chapter" is in a serif font, and "CONNECTION" is in a large, bold, sans-serif font. The background of the header image is a dark blue with a complex network of glowing blue lines and dots, resembling a circuit board or a digital network.

# NECA North Florida Chapter CONNECTION

## Board of Directors

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## Upcoming Course Offerings

### Look in the Mirror: An Executives Role in Business Development

There is no person better at selling your company than the owners, president and executive team members. The first step to effective business development is freeing up the executive team so that they can sell the work and close the sale. Critical to making this happen is strong organizational structure and process, and consistent execution of well-defined processes. Once this structure is in place, you have the time to evaluate your company's potential for success, develop the strategy and ultimately align the marketing and branding to match the strategy so that the company, over time, can move to a dedicated sales force model. Sending the business development team off on a mission to "get work" is a recipe for failure. Learn how to put structure behind the business development process that will generate results.

**Monday, May 15th, 2023**

**8:00 a.m. - 12:00 p.m.**

***Will be held at the North Florida NECA office***

### Increasing Market Share with Process - Not Luck

Increasing your company's market share requires 90% process and 10% luck. Does that explain why your hit rate is so low? Are your numbers more like 90% luck and 10% process? In this program, you will learn how best-in-class organizations fix and overcome this challenge. The best companies position themselves for success by defining a tangible and specific direction, supported by the right tools that successfully deliver projects, and accounts that will forever transform your organization.

We will outline how strategy, structure, business development, systems, and process translate into trust and long-term relationships. When these aspects are in sync, your business will be on a path to

Wednesday, July 26th, 2023

8:00 a.m. - 12:00 p.m.

*Will be held at the North Florida NECA office*

## Delivering the Promise: The Executive's Role in Marketing and Branding

Your strategy distinguishes your company from competitors, identifies profitable markets and preferred clients, and ensures continuity. This strategy incorporates your mission, values, and the "promises" you make to customers. As the company grows, you are no longer the primary sales force in the organization and have hired leaders to manage the marketing and selling of the company's services. However, the role of the executive in the selling effort is still very critical. The purpose of this program is to outline the executive's role in the business development of the firm specifically in creating an effective strategy that is reflected in the branding, marketing and selling of the organization's services and culture.

Wednesday, September 6th, 2023

8:00 a.m. - 12:00 p.m.

*Will be held at the North Florida NECA office*

*\*More classes will be announced in the March North Florida Chapter Connection Newsletter*

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## 2022 Capitol Competition Dirksen Group



The North Florida Chapter is proud to announce that we have won the 2022 NECAPAC Capitol Competition Dirksen Group! The NECAPAC Capitol Competition is yearly competition where NECA Chapters compete against other chapters to raise the most funds for the NECAPAC. The Dirksen Group is for NECA Chapters with 14 members or less. In 2022, The North Florida Chapter raised the most funds out of 34 Chapters in the Dirksen Group.

The North Florida Chapter will be recognized at AEI 2023. AEI 2023 will be held on March 6th - 8th in Philadelphia, Pennsylvania.

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## Recognizing 50 Years with Giles Electric Company!

We are proud to recognize the **50th anniversary** of Giles Electric Company being a member of the North Florida Chapter NECA!

Thank you so much to Giles Electric Company for being a long standing member of the North Florida Chapter. We look forward to many more years of working together to provide the best electrical work to North Florida!



# Attrition Updates with Tracy Landers in April

In our next Membership Meeting, Tracy Landers will be presenting the Attrition Updates for 2023.

The attrition presentation is a visual that shows if an area is keeping up with attrition. Its initial purpose is to demonstrate the need for training programs to update to the most recent apprenticeship standards, allowing for easier access into our programs through direct entry. This will be a good tool going forward for Apprenticeship Committees and Chapter Boards to make good decisions.

We highly urge our Members to attend this meeting. The next Membership Meeting will be held at the North Florida NECA office on Tuesday, April 4th at 11:00 a.m.

Please feel free to reach out to our office if you have any questions.

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## Codes and Standards Report

### Standards Guide The Use of E-Stops

#### Touchscreen e-stops are not allowed

E-stops shall be located at each operator control station. In addition, other locations can be considered according to a risk analysis, including entrance and exit location. See ISO 13850-4, Safety Requirements; 3, Terms and Definitions; and 2, Normative References. In case of e-stop activation, locally or remotely, the machinery shall be inspected in order to detect the reason for activation.

Wireless e-stops are allowed, but, according to the IEC 60204-1, the wireless e-stop shall not be the sole means to initiate an emergency stop. In addition, according to ISO 13850, a wireless e-stop shall comply with Subsection 4.3.8, Subsection 4.3.9, Subsection 4.6.2 and a minimum of safety level PLC, according to ISO 13849, and/or SIL 1, according to IEC 62061. The safety level shall be consistent with a risk analysis of the machine. IEC 62745 deals with wireless control systems for electrical equipment of machinery, and, since March 2021, it is now harmonized for machinery directive in Europe.

Touchscreen e-stop is not allowed, because ISO 13850 and IEC 60947-5-5 require that the emergency-stop device shall comply with IEC 60947-5-1, Annex K, a direct opening action of the electrical contact. A touchscreen is not compliant with this requirement.

According to NFPA 79 10.7.2.3, emergency-stop switches shall not be flat switches or graphic representations based on software applications.

In Europe, in compliance with the Machinery Directive, in Annex 1, Subsection 1.2.4.3, emergency-stop machinery must be fitted with one or more emergency-stop devices to enable actual or impending danger to be averted.

The following exceptions apply for:

- machinery in which an emergency-stop device would not lessen the risk, either because it would not reduce the stopping time or because it would not enable the special measures required to deal with the risk to be taken
- portable handheld and/or hand-guided machinery.

For the e-stop, the NFPA standard is more suitable than OSHA regulations. The main requirements of the e-stop are defined in NFPA 79 standard for machinery. The requirements from NFPA 79 are based on IEC 60204-1 with some few specificities for the e-stop.

In case of e-stop activation, locally or remotely, the reset button shall be located in general in the machine, because the machine shall be inspected to detect the reason for activation.

*Wireless and remote e-stops are allowed but must follow strict guidelines for location and design*



Some new technologies are becoming available for wireless e-stops, remote e-stops and touchscreen e-stops. Are these allowable? Are there regulations governing

the use of anything besides a physical red button? What machine applications would these be used for? What does the Occupational Safety and Health Administration (OSHA) say about them? And where is the reset to resume operation?

### Pushbutton standards specify physical requirements

Yes, wireless e-stops and remote e-stops are allowable but must be compliant with the following:

- International Organization for Standardization (ISO) 13849—Safety of Machinery Package
- ISO 13850:2015 Safety of Machinery—Emergency Stop Function—Principles for Design
- American National Standards Institute (ANSI) B65.1-2005—Graphic Technology—Safety Standard—Printing Press
- International Electrotechnical Commission (IEC) 60204-1:2005 Safety of Machinery—Electrical Equipment of Machines—Part 1: general requirements
- IEC 62745 Safety of Machinery—Requirements for Cableless Control Systems of Machinery. This standard aims to define the guidelines of how wireless remote-control systems must be designed to comply with the minimum requirements of machine design and safety.

For touchscreen e-stops, graphical representations of a button—an icon—on an HMI or flat panel display are not an option. The same standards do not permit flush or membrane-style switches or touchscreen buttons/icons.

Yes, regulations are governing the use of anything besides a physical red button. For emergency-stop pushbuttons to be compliant, they must be designed as follows:

- with direct opening operation
- as self-latching and must be reset manually
- with mushroom-head shape to make it easy to push
- to remain unguarded
- to be located at each operator control station and at any other location where an emergency stop would be required
- colored red and mounted on a bright yellow background. The yellow background must be a minimum of 3 mm beyond—surrounding—the mounting collar and visible beyond the control actuator—the button itself—according to ANSI B65.1-2005.

A common application where wireless e-stops are superior to wired e-stops is during crane operations. This allows greater operator freedom for their positioning to view crane movements, and lower costs for system implementation. The wiring alone, in a traditional wired e-stop system, can be a significant portion of the cost and complexity of an e-stop-based safety system implementation.

OSHA and relevant standards such as IEC 60204-1 state that an e-stop must be readily accessible to the operator. Additionally, it should be unobstructed—no collars or actuation restrictions—and easily accessible without having to reach over, under or around to actuate. Machine-building standards such as ANSI B11, B11-19 and National Fire Protection Agency (NFPA) 79 also address specifics in regard to safety devices such as an e-stop.

OSHA and relevant standards such as IEC 60204-1 further state that resetting of the e-stop alone shall not resume operation. A second deliberate action is needed, such as the pressing of a reset button. This could include twisting the mushroom button and allowing it to spring back up or pulling the button back up to reset. It cannot automatically reset.

### Wireless e-stops enhance maintenance safety

After looking through OSHA regulations and other global standards, I could not find anything that specifically says wireless e-stops are not allowed. In fact, there is an offering for a wireless e-stop that actually meets ISO 13849 Category 3 specifications for functional safety systems. There isn't much in the way of where an e-stop button should be located and what it should look like other than "easily accessible

and within arm's length," red button on a yellow background and requiring only a manual reset.

OSHA uses NFPA and other global standards, such as ISO, to form its standards. NFPA 79—Electrical Safety Standard for Industrial Machinery—sets out what is allowable for emergency-stop buttons. This includes pull-cord-operated, foot-operated, push-bar-operated and rod-operated switches. NFPA 79 does not allow emergency stops to be flat switches or a graphical/digital representation. So, while wireless e-stops would be allowable, touchscreen e-stops would not be.

Any machine or process could theoretically use a wireless e-stop. More specifically, imagine a scenario where a technician has to be physically inside a machine or is working on a section of the machine where the e-stop might be just out of reach. Having a wireless button that can stop the machine from anywhere would be a great benefit. Another scenario could be operators that keep wireless buttons on their person for potential need. They see someone who shouldn't be operating or performing maintenance on a machine. It takes time to get to the nearest button to e-stop the machine so being able to press one that's currently with them on hand could potentially save a life or limb.

The wireless button would need to have a manual reset, whether that be a twist-to-release or a pull-to-release function. Once that's done, assuming the safety system is a manual/manual, monitored setup, the resume operation would be as usual. Press the reset button. If the safety system is an automatic reset, manually releasing the e-stop button would reset the safety system to a ready state. Most likely, the machine itself will need to be rehomed and/or have the process reset/acknowledge button pressed to restart the production process.

### **E-stop differs from an emergency-off switch**

The short answer is yes. Wireless and remote e-stops are allowed with very strict regulations. The standards that dictate how an e-stop switch works are ISO 13850:2015, Safety of Machinery – Emergency Stop Function—Principles for Design; and IEC 60947-5-5, Low-Voltage Switchgear and Controlgear—Part 5.5: Control Circuit Devices and Switching Elements—Electrical Emergency Stop Device with Mechanical Latching Function.

These standards require a physical e-stop that opens a contact and, at the same time, latches. This means no latching without opening the contact and no opening without latching is allowed. ISO 13850 is the so-called machinery directive, which lists several other requirements for operating and resetting an e-stop.

It is important to note that there must be a physical e-stop, no matter what (Figure 1). A physical e-stop, which must open a physical contact, could be connected to a wireless or remote technology to activate it. It sends a signal, and the physical freeze of a machine is activated. It's also important to note the difference between an e-stop and an emergency-off switch. While an e-stop freezes the machine, an emergency-off shuts off the power, which is not necessarily the case for e-stops.

When it comes to resetting or resuming operation, there are safety regulations and protocols in place. For example, you are allowed to connect a normal-stop switch in a way that, if you push it, the machine stops or freezes. Once you release it, the machine runs again. That is for a normal-stop switch. However, with an e-stop, once you press it, the machine freezes and stops. If you release the emergency-stop switch, the machine must not run, it will stay stopped. For safety reasons, there must be another separate mechanism to restart the machine.

*From an article in Control/Design Magazine by Anna Townshend. January 9, 2023.*

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## **JATC Apprenticeship Reports**

### **Jacksonville JATC**

To the members of the North Florida Chapter of N.E.C.A. -

January started out busy as ever!!

The Electrical Training Alliance of Jacksonville began a new Math Boot Camp for the new first year class that was accepted into the program mid-winter. This class will be the first class to utilize the 1st Year Computer Mediated Learning curriculum. CML is a computer based curriculum that will allow instructors to focus more class time on lecture and 'hands-on' lab based instruction. This new curriculum will enable the students to focus their academic studies more at home via the LMS, rather than the classroom. Instructors will be able to monitor student progress more effectively as the CML will not allow students to continue their course work until all online course assignments have been completed progressively. Once



a student has completed the CML online course assignments, which has several learning objective quizzes throughout the course, they will be allowed to take the course exam for a final completion grade.

An EPS Level 1 class will begin February 7th and be completed on the 16th. Currently there are plenty of openings left for this class. If you know anyone who needs this journey person level class please have them contact us at the ETAJ for enrollment information.

The Nassau County School District started a new Adult Pre-Apprenticeship Class in January. The class currently has 10 students enrolled and is being held at the Bean Center in Yulee. This pre-apprenticeship class is funded through a workforce development grant which provided Nassau County School District with computers, books and tools. If you know anyone who may be interested in this opportunity, please have them contact Elaine Libby at 904-548-1720. Those who complete the Nassau County pre-apprenticeship, and are accepted into the apprenticeship, may qualify for advanced placement.

The Baker County School District also began an adult pre-apprenticeship class in January. This class has 12 students currently enrolled. If you know anyone who may be interested in attending the Baker County pre-apprenticeship class, please have them contact Brandy Davis at 904-259-0406. Those who complete the Baker County pre-apprenticeship, and are accepted into the apprenticeship, may qualify for advanced placement.

If you know of anyone who may be interested in beginning a new career in the electrical trade, please have them contact us at the Electrical Training Alliance of Jacksonville or they can make their application online at – [etajax.org](http://etajax.org).

As always, I am here to answer any questions you may have. Feel free to contact me if I can help with anything. On behalf of the Trustees of the Apprenticeship Committee, thank you for your continuing support.

Daniel Van Sickle  
Apprenticeship and Training Director

Daniel McEachern  
Assistant Training Director

## Daytona Beach JATC

Hello from Daytona Beach!

In December of 2022, we graduated 26 students from our apprenticeship program! We have been working closely with Daytona State College and have received some great items from grant funds for our program. We have purchased some Evitp trainers as well as some virtual reality courses for our students.

We currently have 75 apprentices working and look forward to starting between 20-40 in August. We have been really focusing on bringing hands on activities into our classrooms and hope to see these activities reflected in the education of our Apprentices.

Robert Cruz MAED  
Training Director

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## ELECTRI Research Report

ELECTRI International is proud to present Best Practices: Internships in the Electrical Construction Industry - a complete toolkit to support contractors through the full lifecycle of an internship program.

The toolkit includes:

- Quick Guide
- Things to Consider
- Developing an Internship Program
- Managing the Internship Program
- After the Internship Program
- Sample Documents

[Get the full report here!](#)

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## Looking Forward

- **April 4th, 2023-** *Membership Meeting*
- **May 15th, 2023-** *Look in the Mirror: An Executive's Role in Business Development*
- **July 26th, 2023-** *Increasing market Share with Process - Not Luck*
- **August 22nd, 2023-** *Membership Meeting*
- **September 6th, 2023-** *Delivering the Promise: The Executive's Role in Marketing and Branding*
- **December 8th, 2023-** *Membership Meeting*

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