

# The *Electrical* CONTACTOR

THE OFFICIAL PUBLICATION OF THE FLORIDA  
ASSOCIATION OF ELECTRICAL CONTRACTORS

Volume 3 Number 4  
WINTER 2008

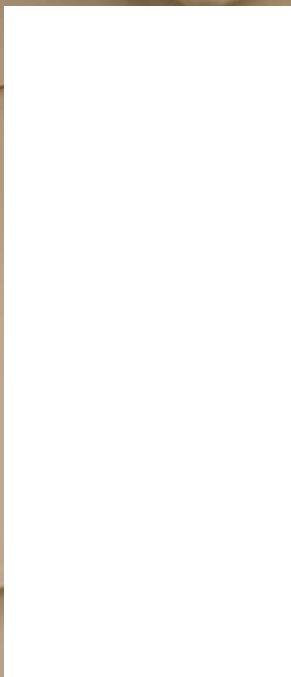


## Grounding Electrode Conductor Sizing & Installation

*By Mike Holt*

FAEC Spring Conference 2008  
2007 FAEC/CF Table Top Expo &  
Thomas A. Edison Award Re-Cap  
Preventing Injuries

Inside





# **SESCO LIGHTING**

**"When Day Turns to Light"**

**"Service makes a difference, try us"**

# The *Electrical* CONTACTOR

FAEC STATE BOARD OF DIRECTORS - 2007

## 2007 Officers

### PRESIDENT

MIKE CAUTHEN  
DMC INDUSTRIES INC.  
P.O. Box 473, Sparr, FL 32192  
Phone: 352-620-9322  
Fax: 352-622-3953  
Email: [driladillo@aol.com](mailto:driladillo@aol.com)

### 1ST VICE PRESIDENT

KEN CROSS  
FERRAN SERVICES &  
CONTRACTING, INC.  
530 Grand Street, Orlando, FL 32805  
Phone: 407-422-3551  
Fax: 407-648-0961  
Email: [kcross@ferran-services.com](mailto:kcross@ferran-services.com)

### SECRETARY

TIM QUIGLEY  
TERRY ELECTRIC  
600 N. Thacker Ave., Suite A  
Kissimmee, FL 34741  
Phone: 407-572-2100  
Fax: 407-932-1135  
Email: [timquigley@terryselectric.com](mailto:timquigley@terryselectric.com)

### TREASURER

ROY CAMPBELL  
HYPOWER, INC.  
6100 Canal Road, #22  
Orlando, FL 32827  
Phone: 407-658-1515  
Fax: 407-658-1415  
Email: [rcampbell@hypowerrinc.com](mailto:rcampbell@hypowerrinc.com)

### PAST PRESIDENT

HUSTON JOYNER, JR.  
JOYNER ELECTRIC, INC.  
P.O. Box 20020, Tallahassee, FL 32316  
Phone: 850-576-1125  
Fax: 850-575-7889  
Email: [joynerelec@aol.com](mailto:joynerelec@aol.com)

### CENTRAL FLORIDA

MIKE FREINER  
BRIGHT FUTURE ELECTRIC, INC.  
630 Kissimmee Avenue, Ocoee, FL 34761  
Phone: 407-654-0155  
Fax: 407-654-1455  
Cell: 407-217-3488  
Email: [mikep@brifutelectric.com](mailto:mikep@brifutelectric.com)

### ORLANDO

ROCKY SNEED  
TRI-CITY ELECTRICAL CONTRACTORS  
430 West Drive  
Altamonte Springs, FL 32714  
Phone: 407-788-3500  
Fax: 407-682-1096  
Email: [rocky.sneed@tceelectric.com](mailto:rocky.sneed@tceelectric.com)

### JACKSONVILLE

DAVID DEBERRY  
DEBERRY ELECTRIC COMPANY, INC.  
P.O. Box 26037, Jacksonville, FL 32226  
Phone: 904-757-8424  
Fax: 904-757-7811  
Email: [david@deberryelectric.com](mailto:david@deberryelectric.com)

### JACKSONVILLE

JEFF SANDERS  
COASTAL ELECTRIC OF FLORIDA  
2759 St. Johns Bluff Road  
Jacksonville, FL 32246  
Phone: 904-645-0026  
Fax: 904-645-6186  
Email: [jtsceco@bellsouth.net](mailto:jtsceco@bellsouth.net)

### JACKSONVILLE

KIM DEBERRY  
KIM'S ELECTRIC  
P.O. Box 28792  
Jacksonville, FL 32218-8792  
Phone: 904-757-6633  
Fax: 904-757-5375  
Email: [kim.kimsselectric@comcast.net](mailto:kim.kimsselectric@comcast.net)

### OCALA

BILL MANNING  
M & M ELECTRIC SERVICE  
10876 SW 91st Avenue, Ocala, FL 34481  
Phone: 352-854-8338  
Fax: 352-854-4009  
Email: [mmelectricinc@yahoo.com](mailto:mmelectricinc@yahoo.com)

### BREVARD: NEED REPRESENTATIVE

### TAMPA: NEED REPRESENTATIVE

#### ASSOCIATE DIRECTORS

#### INSURANCE PARTNER

ERIN RICHARDS  
FEDERATED MUTUAL INSURANCE  
P.O. Box 467500, Atlanta, GA 31146  
Phone: 404-497-8840  
Fax: 404-497-8845  
Email: [cdreger@fedins.com](mailto:cdreger@fedins.com)

#### ASSOCIATE

TIM MOORHEAD  
WRIGHT, FULFORD, MOORHEAD,  
BROWN, P.A.  
P.O. Box 2828, Orlando, FL 32802  
Phone: 407-425-0234  
Fax: 407-425-0260  
Email: [tmoorehead@wfmblaw.com](mailto:tmoorehead@wfmblaw.com)

#### Executive Vice President

JANICE FICARROTO  
FAEC  
P.O. Box 180458,  
Casselberry, FL 32718-0458  
Phone: 407-260-1511  
Fax: 407-260-5732  
Email: [janice@iag.net](mailto:janice@iag.net)

# INDEX

## TABLE OF CONTENTS

2008 FAEC Southeastern Tade Show .....	4
FAEC Membership Benefits.....	4
Miami "Road Block" Nabs Violators .....	5
FAEC Spring Conference 2008 .....	6
FAEC/CF Table Top Expo 2007 .....	8
FAEC/CF Thomas A. Edison Award .....	11
FAEC/CF Casino Night 2007 .....	12
Preventing Injuries <i>By Federated Insurance</i> ....	15
2007 FAEC Convention Follow-Up .....	16
Ocala Chapter Fundraiser, Golf Tournament & Apprentice School .....	18
Grounding vs. Bonding, Part 7: Grounding Electrode Conductor <i>By Mike Holt</i> .....	20
FAEC Membership Application .....	22

## ADVERTISER INDEX

CED .....	11
FAEC Business Card Page.....	14
Ferran Services & Contracting.....	21
Federated Insurance.....	Inside Back Cover
GrayBar .....	15
Hughes/HD Supply .....	Back Cover
Mike Holt .....	10
Rams .....	5
Richard Watson .....	21
Sesco Lighting .....	Inside Front Cover
Surge Suppression .....	13

## FAEC Magazine

FLORIDA ASSOCIATION OF  
ELECTRICAL CONTRACTORS  
PO BOX 180458, CASSELBERRY, FL 32718-0458  
407-260-1511 • FAX 407-260-5732



Published four times a year by

#### TPI Custom Publishing

24 Arnett Avenue, Suite 200 • Lambertville, NJ 08530  
P. 609-397-5601 F. 609-397-5640  
[www.tpicustom.com](http://www.tpicustom.com)

Copyright 2007 by TPI Custom Publishing.  
No reproduction without permission.

Cover Image: ©iStockphoto.com/Edward Todd

#### For Advertising Information

Advertising Director – Cheryl DeFilippo  
FAEC - (407) 260-1511  
Email - [faec@iag.net](mailto:faec@iag.net)





## **Announcing The FAEC Southeastern Trade Show Hard Rock Hotel And Casino, Tampa, Florida April 4th & 5th, 2008**

### **Exhibitors as of This Printing Include:**

Advanced Protection Technologies, Inc.	Firex	Progress Lighting
Aflac	Fleet Boss GPS	Rams Staffing
Arlington Industries	Global Process Solutions	Rough-In Ready
Bussman	IlSCO	Rough-In Ready
Cooper Wiring Devices	Landis & Gyr	Scott Powerline & Utility Equipment
Enterprise Leasing	Makita USA, Inc.	Solar Source
FAEC Membership	Metra Associates	Surge Suppression of Jacksonville
Federated Insurance	NSI Industries, Inc.	
	Powerlogics, Inc.	

### **FAEC BENEFITS OF MEMBERSHIP INCLUDE:**

- A Voice in the Legislative Process through a full-time lobbyist in Tallahassee.
- An Annual "Spring Conference" & "Fall Convention" offering Continuing Education classes relative to license renewal.
- The official publication of FAEC — The "Contactor" bringing you up-to-date on association information and industry news.
- A Group Major Medical Insurance Program.
- A General Liability Insurance Program.
- An Annual Membership Directory.
- "Legislative Alerts" distributed throughout the session to keep you abreast of industry concerns.
- The opportunity to interact with fellow contractors to share industry concerns and discuss industry issues.

*Your Invitation  
to Membership  
In FAEC!*

**Join With An Elite Group...**

# Miami “Road Block” Nabs Violators

In early November the Department of Business and Professional Regulation (Department) worked with local law enforcement to target unlicensed contractors, resulting in the arrest of 15 people and the citation of 23 more. The Department in cooperation with the Miami-Dade Police Department’s Intergovernmental Bureau and the Miami-Dade Code Compliance Office set up a randomly selected vehicle stop on Augusto St. and Miami Homestead Avenue in Coral Gables in an ongoing effort to reduce unlicensed activity and non-compliance by licensees.

“I am very pleased with the hard work our Department and our local law enforcement partners put into this operation,” Secretary Holly Benson said. “We are committed to continuing these kinds of proactive measures in an effort to catch and discipline unlicensed contractors who harm consumers and divert business from licensed professionals.”

The joint effort produced 15 technical arrests (notices to appear) for misdemeanor county violations and 23 tickets for various violations of county codes, including ten for unlicensed

activity. Miami Dade officials were responsible for citing all violations.

The Department takes the threat of unlicensed activity seriously and works diligently through both enforcement and education efforts to deter and eliminate this dangerous activity. When hiring a contractor, consumers should:

- Always ask to see the contractor’s license.
- Note the license number and verify that the license is current and in good standing. To check a license, call 850.487.1395 or visit [www.MyFloridaLicense.com](http://www.MyFloridaLicense.com).
- Ask any potential contractor for references and check each one.
- Beware of scams when contractors ask for all the money up front, will only accept cash, or solicit door-to-door targeting the elderly and uninformed.
- Beware of contractors who arrive in unmarked vehicles, possibly from out-of-state.
- Never pay in cash, especially a large up-front deposit.

- Be cautious of writing checks made payable to individuals, especially when dealing with a company.

- Get everything in writing, including a detailed description of the work to be completed, a completion date and the total cost.

- Don’t sign the certificate of completion until you are satisfied with the work done.

Consumers are urged to report unlicensed activity of any of the professions regulated by the Department by calling 1.866.532.1440.

The Department licenses and regulates nearly 1,000,000 of Florida’s businesses and professionals.

*Andy D. Janeczek*  
 Government Analyst I  
 Construction Industry Licensing Board  
 Department of Business and Professional Regulation  
 1940 North Monroe Street, Mail Stop N-14  
 Tallahassee, FL 32399-1039  
 850.922.2887 | Fax: 850.921.4216



# RAMS<sup>®</sup>



FAMILY OF COMPANIES

## Alternate Workforce Solutions

RPG ▲ PSG ▲ TEC

*Properly Licensed in Florida*

*Qualified Professionals*

*Safety Trained*

*Drug-Free*

*Tooled*

*Deployable*

*Offices Throughout Florida!*

*Contact Us Today!*

(800) 577-1808

[www.RAMSinc.net](http://www.RAMSinc.net)



*Is Your Firm Benefiting From the Most Progressive and Recognized Training Program in Florida?*

## JumpStart

(P-065)

EC-13001300 CGC-1505350 CRC-043721



## ANNOUNCING FAEC 2008 ANNUAL SPRING CONFERENCE HARD ROCK HOTEL & CASINO, TAMPA, FLORIDA

APRIL 2-6, 2008

### REGISTRATION FORM

#### INSTRUCTIONS:

1. Complete all portions of this form and return to FAEC, P.O. Box 180458, Casselberry, FL 32718-0458. A check payable to FAEC must accompany this form in order to secure registration.
2. Your name and company will appear on your name badge and registration materials as you indicate below.
3. Type all portions of this form.

*Conference Registration: Includes all educational classes, CE Certificates, seminar hand-outs and meal functions.*

NAME: \_\_\_\_\_ NICKNAME: \_\_\_\_\_

YOUR STATE LICENSE NUMBER: \_\_\_\_\_

SPOUSE/GUEST: \_\_\_\_\_ NICKNAME: \_\_\_\_\_

COMPANY NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_ CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

PHONE: \_\_\_\_\_

#### REGISTRATION FEES:

Full Registration Fee must accompany this form. Full refund given if cancellation is received 14 days prior to event.

##### Early Bird Registration Fees Before Feb. 15, 2008

- \_\_\_\_\_ FAEC Member(s) @ \$300.00 per person
- \_\_\_\_\_ Project Manager/Key Personnel \$200.00 per person
- \_\_\_\_\_ Member Spouse/Guest(s) @ \$200.00 per person
- \_\_\_\_\_ Non-Member \$500.00 per person\*\*

##### After Feb. 15, 2008

- \_\_\_\_\_ FAEC Member(s) @ \$350.00 per person
- \_\_\_\_\_ Project Manager/Key Personnel \$250.00 per person
- \_\_\_\_\_ Member Spouse/Guest(s) @ \$225.00
- \_\_\_\_\_ Non-Member \$500.00 per person\*\*
- \_\_\_\_\_ Company Employee Friday Only \$100.00
- \_\_\_\_\_ Company Employee Saturday Only \$100.00

PLEASE MAKE ALL HOTEL ACCOMMODATIONS DIRECTLY WITH THE HARD ROCK HOTEL & CASINO.

866-762-5463 ... ROOMS BLOCKED ARE LIMITED! PLEASE BOOK QUICKLY!!! **Room Rate: Single/Double \$209/Per Night.**

\*For early arrivals/stayovers, the group rate will be honored to all attendees with no minimum/maximum required, subject to availability.

\*\* If non-member joins FAEC within 30 days of conference \$150.00 will be applied towards first years dues.

\*\*\*PLEASE NOTE THAT A CREDIT CARD AUTHORIZATION MUST BE USED TO SECURE ALL ROOMS!

PLEASE MAKE A COPY FOR YOUR RECORDS

REGISTRATION DEADLINE: **March 25, 2008**

RETURN TO: FAEC, P.O. BOX 180458, CASSELBERRY, FL 32718-0458  
(407) 260-1511 • FAX 407-260-5732

## FAEC ANNUAL SPRING CONFERENCE AGENDA

ECLB APPROVED SPONSOR #0000857

APRIL 2-6, 2008

### Wednesday, April 2, 2008

3:00-5:00 p.m.

Registration & check in for early member arrivals. Members can stop by and pick up their registration packages and familiarize themselves with the hotel.

9:00-11:00 a.m.

Committee Meetings – An informal meeting of the various FAEC committees to discuss their activities including plans and goals for this year along with preparation of committee agendas for presentation at the 3:00 p.m. Board of Director's meeting.

### Thursday, April 3, 2008

8:00-5:00 p.m.

Member Registration & check in. Members can stop by and pick up their registration packages anytime during the day.

3:00-5:00 p.m.

Spring Board of Directors Meeting. This is the Spring meeting of the FAEC State Board of Directors. Open to all attending.

5:00 – On

Open evening for visiting the Hotel's fivestar Restaurant or trying your "luck" in the Casino!



## Friday, April 4, 2008

8:00-5:00 pm.	Registration Desk Open – Staff will be available to help with member check-in and questions.
8:30 a.m.	Continental Breakfast Open for all attendees – enjoy a cup of coffee and a muffin before settling into the first class.
9:00-11:00a.m.	<p><b>CLASS I – ECLB APPROVAL PENDING 2 HRS Business CE “Planning for Your Company’s Future–A layman’s View”</b> Presented by Dan Petro, CEO, Bright Future Electric, Ocoee, Fl. Dan’s back with another informative session loaded with insight! Discussion will cover the following: Succession Planning for your Company-who will manage &amp; control when we retire &amp; move on Concerns for the Transfer of Ownership including key management buy-out, family transfer or ESOP Selling my Company, who, what, when &amp; where? Private Equity or Public Companies * Determining the Value of your Company – Today’s price and the future.</p>

## Friday, April 4, 2008

10:00 a.m.	Exhibitor Check-in and Set-up Begins Exhibitors may begin setting up their exhibits for the show which is scheduled to open at 12:00 noon.
10:30-10:45 a.m.	Refreshment Break – Time for a quick “pick me up” with fresh juice, and coffee .
9:30-12:00 Noon	Spouse Class – A special event for our spouses. Spouses will learn how to make beautiful Patriotic place mats with napkins & napkin rings – a complete set of four. Something to be used from Memorial Day through Labor Day! An event you won’t want to miss.
11:15-12:15	<b>CLASS II – ECLB PENDING- “Electrical Advanced Module-EnergyCode Update. 1 HR CE Mandatory for License Renewal A one hour over-view of the Florida Energy Code and the changes relative to electrical installation.</b>
12:15-4:00 pm	Exhibits Open with Lunch in Hall for all attendees Visit with over 40 Exhibitors and enjoy a bite of lunch. A good time to see “what’s new” in the industry, make new contacts and regenerate old ones.
4:00-5:30	“LET’S TALK”-A contractors networking session back by popular demand. An open, informal “roundtable” session for candid contractor discussion including issues such as labor, material supplies, trends in the industry, licensing, apprenticeship training, wages, etc. You are free to bring forth any issue you would like to discuss with fellow contractors. <b>THIS SESSION IS LIMITED TO CONTRACTOR OWNERS ONLY.</b> Moderator, Dan Petro, Bright Future Electric, Inc. Ocoee, Fl.
6:30-9:30 p.m.	Theme Party Dinner and Entertainment – A fun-filled event with prizes and Casino give-away’s for all....a great event you won’t want to

miss. Try your luck at our “tables” before hitting the real ones!

## Saturday, April 5, 2008

9:00-12:00 Noon	Exhibit Hall Open with Breakfast in Exhibit Hall for all attendees
1:00-2:00	<b>CLASS III- ECLB#0000632 – “Changes &amp; Updates to Florida’s Worker’s Compensation Law”</b> presented by Todd Bishop, Risk Consultant, Federated Insurance. 1 HR. Mandatory Credit for license Renewal. A review and update on the existing law along with any changes being considered during this legislative session.
2:00-3:00	<b>CLASS IV- ECLB #0000786-“Work Place Safety”</b> presented by Todd Bishop, Risk Consultant, Federated Insurance Company. 1 HR Mandatory Credit (S) for License Renewal. Let the professional inform you on how to implement Safety Programs that will help keep your company safe from OSHA violations and worker’s comp injuries. Turn your worker’s comp cost to a profit generating line-item on your financial reports!
1:00:-3:00	<b>CLASS V- ECLB APPROVAL PENDING “Introduction to GPS Fleet Management Strategies &amp; Practices” – 2 HRS General (G)</b> Presented by Dan Lee, Fleet Boss GPS, Fern Park, Fl. This program will help educate electrical contractors on the benefits of GPS technology beyond accountability needs. Service Businesses have used the technology for savings on fuel, insurance, maintenance and in addition to theft recovery for fixed assets such as copper. A program you won’t want to miss.
3:15-5:15	<b>CLASS VI- ECLB APPROVAL PENDING “Motor Control Update” – 2 HRS Technical (T)</b> presented by Gary Crandon, Crandon Electric, Ocala, Fl. An in-depth review on the following: - Discussion on component parts of a control circuit and how they operate including display of component parts of control circuit Video with handouts of lift station, waste water treatment plant and water treatment plant and controls relative thereto servicing equipment and emergency repairs - Open discussion and interaction among contractors
3:15-5:15	<b>CLASS VII-ECLB APPROVAL PENDING”Application &amp; Installation of Surge Protection Devices” – 2 HRS Technical – Credit Necessary for License Renewal.</b> Presented by Thomas Butcher, Vice President, Technical Services, Surge Suppression, Inc., Destin, Fl. An in-depth review of how and where to apply Surge Protection Devices including: - Origins of External & Internal Transients a review of the impulse & Oscillatory Transients a review of the Fixed Clamping & Sinewave Tracking SPDs Application and NEC Compliant Installation of SPDs
6:00 – On	Free Time to “play” in the Casino, have dinner with clients or just sit and relax prior to departing Sunday.



# ... FAEC/CF Table Top Expo ...

Dubsdread, Orlando, Florida

Craig Eddington, Sesco Lighting, Chairman

Thanks are extended to our exhibitors for making this a great event  
and many thanks for the wonderful crowd of attendees!



**Burndy**  
**Genlyte**  
**Gexpro**  
**Graybar**  
**Legrand**  
**Leviton**

**Mayer**  
**Rexel**  
**Southwire**  
**Summit**  
**Thomas & Betts**  
**Universal Ballasts**







# 2008 NEC

## Get Up to Speed



**NEW**

**Order Mike's Code Change Library and SAVE OVER \$225**

Mike Holt's Illustrated Guide to Changes to the NEC 2008 textbook has been completely redesigned with over 330 pages of easy-to-understand text. Practice questions and answers have also been added to give you the ultimate learning experience.

2008 Code Change Library Order Form		Products ship Fall 2007	
NAME _____	TITLE _____	<input type="checkbox"/> Changes to the NEC 2008 Textbook	\$48
COMPANY _____		<input type="checkbox"/> Online Training Part 1 (8 hours)	\$89
MAILING ADDRESS _____		<input type="checkbox"/> Online Training Part 2 (8 hours)	\$89
CITY _____	STATE _____ ZIP _____	<input type="checkbox"/> Textbook and DVD Program (2 DVDs)	\$198
PHONE _____	FAX _____	<input type="checkbox"/> Code Tabs	\$12
E-MAIL ADDRESS _____	WEB SITE _____	<input type="checkbox"/> MP3 Audio CD	\$59
<input type="checkbox"/> CHECK <input type="checkbox"/> VISA <input type="checkbox"/> MASTER CARD <input type="checkbox"/> DISCOVER <input type="checkbox"/> AMEX <input type="checkbox"/> MONEY ORDER		<input type="checkbox"/> <b>Code Change Library (includes everything above)</b> List \$495 You Pay <b>\$269</b>	
CREDIT CARD # : _____ EXP. DATE: _____		<b>Also Available</b> <input type="checkbox"/> 2008 NEC Spiral Code book \$79 <input type="checkbox"/> 2008 NEC Paper Back Code book \$75 <input type="checkbox"/> 2008 NEC Handbook \$130	
3 or 4 digit security number on front for AmEx on back for all others: _____		Sub-Total \$ _____ Sales Tax FLORIDA RESIDENTS ONLY add 6% \$ _____ Shipping (4% of Total Price) – Minimum \$7.50 \$ _____ <b>TOTAL \$ _____</b>	
<b>Mike Holt Enterprises, Inc.</b> 3604 Parkway Blvd. Suite 3, Leesburg, FL. 34748 • 1.888.NEC.CODE • 1.352.360.2620 • FAX 1.352.360.0983 • E-mail: Info@MikeHolt.com Visit <a href="http://www.MikeHolt.com">www.MikeHolt.com</a> to Order Online All prices and availability are subject to change. • If you are not 100% satisfied with your order, return it within 10 days and receive a full refund excluding shipping and handling.			

## FAEC/CF Thomas A. Edison Award

*“Genius is one percent inspiration and ninety-nine percent perspiration.”*

The Edison Award is presented to an individual who has unselfishly given their time and heart through charitable work and has strived to improve the electrical industry in Central Florida.

“These are the true craftsmen of our industry.”

We are proud to present the 2007 “Thomas A. Edison Award” to Mr. Craig Eddington.

Craig Eddington is no stranger to the electrical industry—or to the Central Florida Community—and is well known for his thankless work and dedication to both.

Craig started his adult life in 1970 by serving his country as a soldier in the United States Army as a helicopter pilot. After serving a four year term, he chose a career in electrical construction. Over the years he gained experience in many facets of the industry. From working for E.C.Ernst and running his own business with his father, to managing sales for large electrical suppliers such as GE Supply, Hughes Supply and currently as sales Manager with Sesco Lighting, his diverse knowledge and good moral character has earned him well deserved respect within our trade and community.

With his busy schedule, he still manages to donate countless hours of service to the electrical industry through his affiliation with the FAEC Central Florida Chapter. With eight years as an active board member, his leadership and contributions of time and endless energy has proven to be an invaluable asset to the organization. He has always been someone you can count on when the going gets tough.

Speaking with many people who have worked with him, he is well liked and respected as a leader and friend and has always taken time to mentor up-and-coming shining stars. Not only has he served his industry well, he is also revered throughout the Central Florida area for his many years of dedication and support to the Leukemia Lymphoma Society. For the last 10 years he has assisted in organizing and participating in the Marathon Golf Tournament.


In addition, he plays an active role as a Mason and a Shriner and has been instrumental in collecting thousands of much needed dollars for the Children's burn hospital program.

This Award exemplifies dedication to industry and community, but perhaps more importantly, it is a privilege to award a person who exudes passion, enthusiasm and consistency of character.



*Congratulations to Mr. Craig Eddington and we truly thank you for your dedication and support!*





**CED RAYBRO**  
CONSOLIDATED ELECTRICAL DISTRIBUTORS, INC.  
SERVICE • INTEGRITY • RELIABILITY

1681 N.E. 6th Ave.                      Bus: (352) 629-7991  
Ocala, FL 34470                        Fax: (352) 368-6884



## FAEC/CF CASINO NIGHT 2007

Thanks to our event sponsors for their participation!!! .... And thanks to all who attended, were great participants, and had so much fun!!!

**Action Bolt & Tool**

**Bright Future Electric**

**F.E.A.T.**

**Hypower Electric,**

**JaFic, Inc.**

**Royal Electric**

**SESCO Lighting**

**Terry's Electric**

**World Electric Supply**





**Surge Suppression**  
for a Digital World™

**Surge**  
**Suppression**  
Jacksonville

**J. Keith McPherson**

**(904) 726-8980 • (888) 987-8877**  
P.O. Box 8632 • Jacksonville, Florida 32239  
[www.tvssprotector.com](http://www.tvssprotector.com) • [www.surgesuppression.com](http://www.surgesuppression.com)





630 Kissimmee Avenue  
Ocoee, FL 34761

**Michael Freiner**  
Vice President

Tel: 407-654-0155  
Fax: 407-654-5160  
Email: mikef@brifutelectric.com



**Installation & Service**  
Commerical - Residential  
Sate Cerified EC0001196

**WILLIAM L. MANNING**

10876 S.W. 91st Avenue  
Ocala, Florida 34481  
(352) 854-8338 Fax (352) 854-4009



A FULL SERVICE COMPANY SINCE 1970

P.O. Box 20029  
4955 Swamp Fox Road  
Tallahassee, FL 32316  
EC0001562

Coastal Electric Co. of Florida  
Jeff Sanders  
2759 St. Johns Bluff Road  
Jacksonville, FL 32246  
(904) 645-0026



**R.N. "Bobby" Parker III**  
General Manager / Senior V.P.

875 Jackson Avenue • Winter Park, Florida 32789  
407-646-8700 Ext. 774 • 407-647-8951 FAX  
State License #EC1658



Wiring Florida since 1958

Electrical Contractors, Inc.

430 West Drive • Altamonte Springs, FL 32714  
P: (407) 788-3500 F: (407) 682-1096  
C: (407) 402-1663

**ROCKY SNEED**  
Systems Department Manager  
E: rocky.sneed@tcelectric.com

ARC ACCREDITED QUALITY CONTRACTOR

EC0000981

Commercial • Industrial

**Kim's Electric, Inc.**

13619 N. Main St., Jacksonville, FL 32218  
EC 1092  
www.kimselectric.com

(904) 757-6633  
(904) 545-8684 Cell  
(904) 757-5375 Fax  
kim.kimselectric@comcast.net

Kimberly A. DeBerry  
President



**Timothy Quigley**  
President  
Residential & Service Division

"Safe Electrical Systems, From Our Family To Yours"

600 N. Thacker Ave., Suite "A"  
Kissimmee, FL 34741  
EC0002831  
www.terryselectric.com

PH: (407) 572-2100  
Fax: (407) 932-1135  
Toll Free: 1-888-278-3779  
timquigley@terryselectric.com

C-7037 ER 0007827 RF 0049903



Well Drilling • Electric • Plumbing

**MIKE CAUTHEN**  
President

P.O. Box 473  
352/620-9322 Sparr, FL 32192

Phone 757-8424  
Fax 757-7811

EC 864  
EN 210908

**DeBERRY ELECTRIC Co., Inc.**  
Commercial • Industrial

**David Alan DeBerry**  
President

P.O. Box 26037  
Jacksonville, FL 32226-6037



## Preventing Injuries

**H**ave you thought of partnering with your insurance carrier to control workplace injuries? Insurance companies handle thousands of injury claims every year. They can monitor industry loss data and analyze frequency and severity of injury types.

The benefit in working with large numbers is that the results are more reliable and can help identify specific areas that need attention. For instance, Federated's claims data for the year 2006 identified the most frequent "part-of-body" injuries and the most frequent causes as shown below.

Federated Insurance has conducted claims studies for several years and has developed "packaged programs," including industry-specific packages, to address a wide range of safety topics. Most packages contain a video and related printed material to help business owners or managers conduct safety meetings. The packages are available to insured businesses

free of charge. Printed materials are yours to keep, but we ask that the videos be returned within four weeks, using the preaddressed, postage-paid mailing box provided. For a list of topics or to order a packaged program, call Federated's Safety Topics line or order online by logging in at [federatedinsurance.com](http://federatedinsurance.com).

After all, doesn't it make sense to partner with the same people in preventing accidents that you will work with if an accident occurs?

Call Federated's Safety Topics line at 1-800-838-1760 to order Risk Management Packaged Programs, or order online at [www.federatedinsurance.com](http://www.federatedinsurance.com).

### Three most frequent "part-of-body" injuries in 2006:

Hand and Fingers	23.4%
Back	13.9%
Eyes	8.62%

### Three most frequent causes of injuries in 2006:

Strains	28.4%
Slip or Fall	16.3%
Cut, Puncture or Scrape	16.0%

*\* Data based on Federated Insurance workers compensation claims incurred for calendar year 2006*

*This article is an excerpt from The SHIELD™ a periodic newsletter published by Federated Insurance Companies with the mission to inform readers on important risk management issues. It is intended to provide general recommendations regarding risk prevention. It is not intended to include all steps or processes necessary to adequately protect you, your business or your customers. Copyright 2007, Federated Mutual Insurance Company. All rights reserved.*



Graybar  
Teamwork:  
a vital link  
in the  
supply chain



Our employee-owners work together with shared interests and a common mission: To be the vital link in the supply chain, adding value with efficient and cost-effective service and solutions for our customers and suppliers. When you partner with us, we can help you streamline your processes, reduce your inventory levels and consolidate your buying efforts to meet your long-term purchasing objectives.

**That's Graybar teamwork, and that works to your advantage.**

LEARN MORE ABOUT HOW GRAYBAR WORKS TO YOUR ADVANTAGE AT [WWW.GRAYBAR.COM](http://WWW.GRAYBAR.COM) OR CALL 1-800-GRAYBAR.





## FAEC 2007 CONVENTION REPORT

If you were there...you had a great time! If you weren't...you missed out on a terrific event! The classes were excellent and the Friday night theme party was very "spooky"—not just all the decorations but the members also! We had some really great costumes, many loaded with originality. We even had an electrical cord and outlet—both had two feet and walked up-right. It was a fun night. But, best of all was the "dancing banana". For those of you who weren't there...you would NEVER believe who was under that costume. My lips are sealed! However, I am taking bribes in the form of chocolate to keep quiet.

In all seriousness, the Jacksonville convention lived up to all our expectations. Chuck Vander Kooi did a great job as usual and everyone thoroughly enjoyed him. Rick was on hand to provide an update on our Legislative activities and what to expect next year. Our ECLB is up for Sunset review once again and our Journeyman licensing issue is at the top of their agenda.

Now we're gearing up for the Spring Conference at the Hard Rock Hotel and Casino in Tampa on April 2-5, 2008. The early registration information is included in this publication so, fill out and return your forms early. Trade Show booths for this event are going quickly and we anticipate a great turn-out. Don't miss out on this event. We hope to see you all there.

# FAEC HALLOWEEN SPOOKTACULAR







# Ocala Chapter Annual Golf Tournament and Electrical Apprenticeship School

The Ocala Chapter's golf tournament is a fundraiser held each year in June for the apprenticeship program. This year they had 124 players, consisting of contractors, apprentices, and sponsors. They had prizes for 1st, 2nd and 3rd place teams, the longest drive, and closest to the pin. The chapter also sold raffle tickets during the outing for numerous prize drawings that took place at the luncheon.

The Apprenticeship program is a four-year program. This year the Ocala Chapter had so many first-year students they had to make two separate classes. This year the teachers were:

**1st year: Chris Bunting and Bobby Dempsey**

**2nd year: Steve Sutton**

**3rd year: Greg Ratliff**

**4th year: Gary Crandon**

The Ocala Chapter Apprenticeship Program was established in 1993. It is a great feeling to know we have outstanding students coming into this industry with the work knowledge and integrity they get from being in this program.



▲ Crandon Electrical Group



▲ More sponsors



▲ Refreshment cart (aka, beer wagon)



▲ CED Group

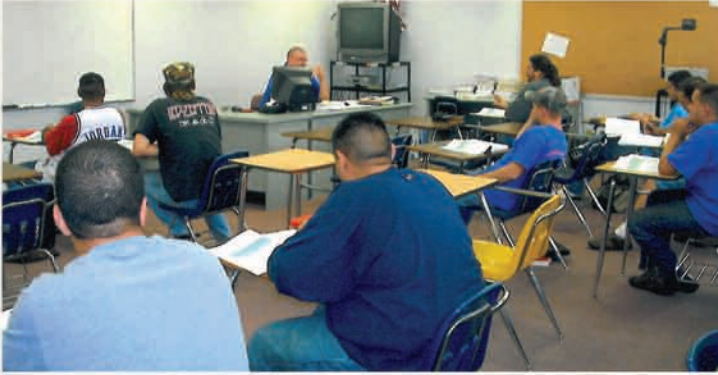


▲ Luncheon





## Apprentice Program



▲ 1st year, teacher Chris Bunting



▲ 1st year second class, teacher Steve Sutton



▲ 1st year second class



▲ 2nd year



▲ 3rd year



▲ 3rd year, teacher Greg Rutliff



4th year, teacher Gary Crandon



# GROUNDING VERSUS BONDING

By Mike Holt, NEC Expert

## Part 7: Grounding Electrode System

Grounding electrode conductor sizing and installation errors can cause the entire grounding system to fail.

In Part 6 of this series, we discussed grounding electrode systems. And, we compared them to the tires on NASCAR race cars. Now we look at the grounding electrode conductor (GEC), which you can think of as the suspension. A properly tuned suspension allows the tires to do their job and keep the car on the track. The GEC connects the “car” (grounding electrode conductor) to the “tires” (grounding electrode system).

The GEC performs this function at the service, at each building or structure (where supplied by a feeder), or at the source of a separately derived system [100].

The GEC can be solid or stranded, insulated or bare. Generally, it must be copper. You can use aluminum, if the GEC is not subjected to corrosive conditions and is not within 18 in. of the earth [250.64(A)].

The NEC doesn’t require you to identify the GEC. The generally accepted practice is to apply green marking tape, strip off a few extra inches of insulation (if used), or not identify the GEC at all.

### Size matters

Using the **Table** below, size the GEC for the largest service-entrance conductor (or equivalent area for parallel conductors)—unless the GEC connects to one of the three following electrode types:

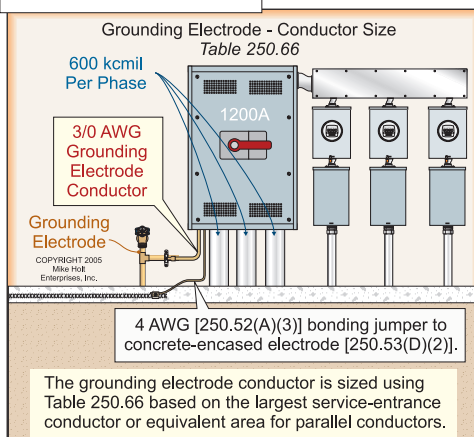
- Ground rod. That portion of the GEC that is the sole connection to the ground rod does not need to be larger than 6 AWG copper. Follow the ground rod installation requirements contained in 250.52(A)(5).
- Concrete-encased grounding electrode (Ufer ground). That portion of the GEC that is the sole connection to the concrete-encased electrode does not need to be larger than 4 AWG copper. Follow the concrete-encased electrode installation requirements contained in 250.52(A)(3).
- Ground ring [250.52(A)(4)]. That por-

tion of the GEC that is the sole connection to the ground ring does not need to be larger than the conductor used for the ground ring. A ground ring encircling the building or structure in direct contact with earth must consist of not less than 20 ft of bare copper conductor not smaller than 2 AWG.

Sizing the GEC is simpler than it might seem. Prove this to yourself by answering this question. What size GEC do you need for a 1,200A service supplied by three parallel sets of 600 kcmil copper conductors per phase (Figure 250-66 UN250-s116)?

- (a) 1 AWG
- (b) 1/0 AWG
- (c) 2/0 AWG
- (d) 3/0 AWG

**FIGURE 250-66 UN250-s116**



Answer: (d) 3/0 AWG. The equivalent area of three parallel 600 kcmil is 1,800 kcmil. So, you look in the far left column of Table 250.66 for the row that pertains to an 1800 kcmil conductor. You can see that the last row, “Over 1100,” is the one you want. The GEC size denoted by that row is 3/0.

Note that where a water pipe is used as the grounding electrode as shown in Figure 250-66 UN250-s116, a supplemental electrode is required [250.53(D)(2)]. In this example, the concrete-encased electrode is the supplemental electrode and 4 AWG is the minimum bonding jumper required [250.66(B)].

### Installing the GEC

If your GEC runs across a surface (or behind panels that allow access), the NEC considers it

“exposed” [100]. You must provide protection for any exposed GEC [250.64(B)]. The first step in providing protection is to securely fasten the GEC to the surface on which it runs. The additional steps you take will depend on the size of the GEC. If the GEC is:

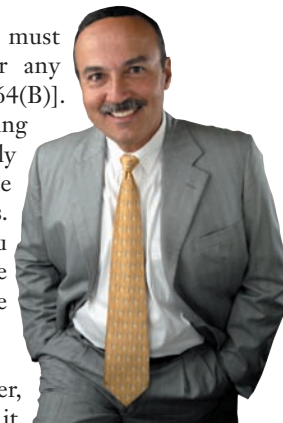
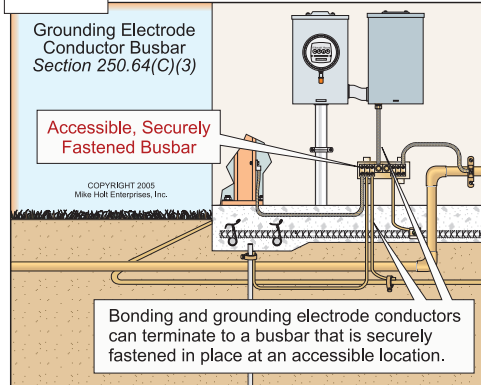
- 4 AWG or larger, you must protect it from physical damage [250.64(B)].
- 6 AWG and free from exposure to physical damage, you can run it along the surface of the building construction without metal covering. If a 6AWG GEC is exposed to physical damage, you must run it in rigid metal conduit (RMC), intermediate metal conduit (IMC), rigid non-metallic conduit (RNC), electrical metallic tubing (EMT), or cable armor.
- Smaller than 6 AWG, you must run it in RMC, IMC, RNC, EMT, or cable armor.

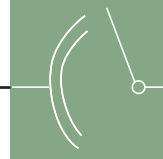
If you install the GEC in a ferrous metal raceway, you must make that raceway electrically continuous by bonding each end of the raceway to the GEC [250.64(E)].

### Splices

You can run the GEC to any convenient grounding electrode [250.64(F)]. But what if your GEC isn’t long enough to reach? Can you splice the GEC? Yes, but only if you use one of the methods provided in 250.64(C):

**FIGURE 1**





- Use compression-type connectors listed for grounding or exothermically weld the splice.

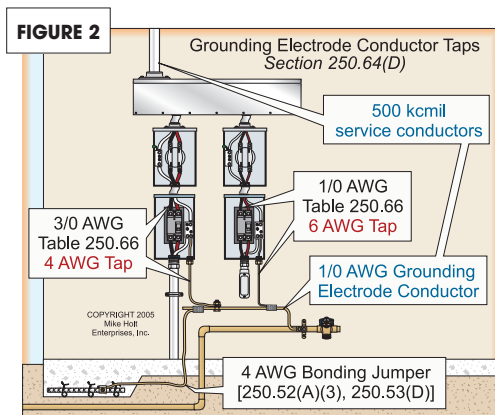
- If needed, connect sections of busbars together to form a GEC.

Terminate the GEC to a busbar sized not smaller than 1/4" x 2 in. Fasten the GEC securely in place at an accessible location. Make connections exothermically or with listed connectors (**Figure 1**).

## Taps

When a service consists of multiple disconnecting means as permitted in 230.71(A), you can use a grounding electrode tap from each disconnect to a common GEC [250.64(D)]. You must size the grounding electrode tap from each disconnect to the largest ungrounded conductor serving that disconnect per 250.66.

You size the common GEC for the grounding electrode taps per 250.66 also, but you must base its size on the service conductors feeding all the service disconnects (**Figure 2**).



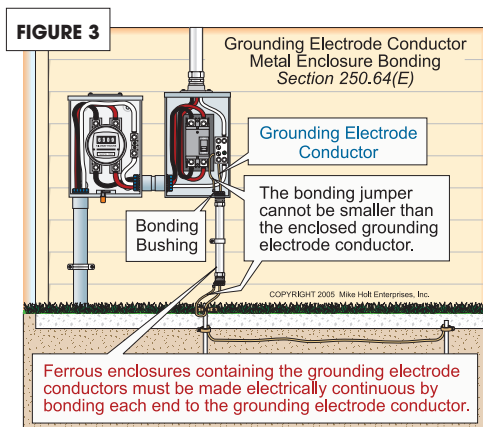
Each grounding electrode tap must terminate to the common GEC in such a manner that there will be no splices or joints in the common GEC. In addition, the grounding electrode tap cannot be made within the service-disconnect enclosure.

## Enclosures

Ferrous (iron/steel) raceways, boxes, and enclosures containing the GECs must have each end of the ferrous metal raceway, box, and enclosure bonded to the GEC [250.92(A)(3)].

Nonferrous metal raceways (such as aluminum RMC) enclosing the GEC don't need to meet the "bonding each end of the raceway to the GEC" provisions of this section.

If you use a bonding jumper with a bonding bushing or wedge [250.92(B)(4)] to bond the raceway to the GEC, you must size the bonding jumper no smaller than the enclosed GEC (**Figure 3**).



## The terminator

How should you terminate your GEC to grounding electrodes? First, ensure the GEC attachment fitting remains accessible [250.68(A)]. There are two exceptions to this rule:

- The grounding electrode attachment fitting to an encased or buried grounding electrode isn't required to be accessible. But when the grounding electrode attachment

fitting is encased in concrete or buried, it must be listed and identified for this purpose [250.70].

- An exothermic or compression connection to fireproofed structural metal isn't required to be accessible.

The second rule is to make the connection to the GEC in a manner that ensures a permanent and effective grounding path. If you have an underground metal water pipe electrode, you must install a bonding jumper around insulated joints and equipment likely to be disconnected for repairs or replacement [250.68(A)].

Continuity of the conductive bonding path for metal water piping as required by 250.104(A) cannot rely on water meters, filtering devices, or similar equipment [250.53(D)(1)].

The GEC must terminate to the grounding electrode by exothermic welding, listed lugs, listed pressure connectors, listed clamps, or other listed means. In addition, termination fittings must be listed for the materials of the grounding electrode. You cannot terminate more than one conductor on a single clamp or fitting, unless the clamp or fitting is listed for multiple connections [250.70].

When the termination to a grounding electrode is encased in concrete or buried, the termination fitting must be listed and identified for this purpose. Ground fittings listed for concrete encasement or direct burial are typically made from brass or bronze, not steel or aluminum alloy—so pay attention to the color of the fittings to reduce errors in the field.

You're now well-equipped to avoid mistakes in your GEC installations. You are able to ensure correct sizing, adequate protection, and proper termination. Now your grounding system won't skid off the track because of GEC errors.

**RICHARD WATSON**  
GOVERNMENT AFFAIRS CONSULTANT

---

108 E. JEFFERSON ST., SUITE C.  
TALLAHASSEE, FL 32301  
TELEPHONE — 850-222-0000  
FAX — 850-222-0095  
RWATSN@AOL.COM

**KENNETH CROSS**  
ELECTRICAL DIVISION MANAGER

www.ferran-services.com  
kcross@ferran-services.com

**FERRAN SERVICES & CONTRACTING**

<b>AIR CONDITIONING</b> CAC 010842	<b>ELECTRIC</b> EC 0001804	<b>PLUMBING</b> CFC 050579
530 GRAND STREET ORLANDO, FL 32805-4795 (407) 422-3551 FAX # (407) 648-0961	4420 EASTPORT PARK WAY PORT ORANGE, FL 32127-6044 (386) 322-6168 FAX # (386) 322-2259	



# Florida Association of Electrical Contractors

## Application for Membership

COMPLETE AND MAIL TO FAEC • PO BOX 180458 • CASSELBERRY, FL 32718-0458

**With your Check for the proper dues amount!**

Full year's dues must accompany application. Dues for second year will be prorated on applications received March 1 thru November 1.

I, \_\_\_\_\_, apply for membership in FAEC...a non-profit organization, devoted to the betterment of the Electrical Contracting Industry in the State of Florida.

Name: \_\_\_\_\_ Title: \_\_\_\_\_

Company: \_\_\_\_\_ Phone (\_\_\_\_) \_\_\_\_\_

Address: \_\_\_\_\_ Fax: (\_\_\_\_) \_\_\_\_\_

\_\_\_\_\_

City St. Zip County

### CONTRACTOR

*(open to all state registered or certified electrical contractors)*

**Dues Schedule (Check One):**

- New Member First Year Only, \$150**
- State Certified or Registered Electrical Contractor:** \$350.00 Per Year
- Certified Specialty Contractor:** licensed by ECLB \$200.00 Per Year
- Key Personnel:** Any person (non-master) in the employ of an electrical contractor desiring to support the interests and efforts of the Association whose responsibilities include overseeing construction projects, estimating, purchasing, safety programming, etc. \$50.00 Per Year
- Non-Contractor:** A master electrician not conducting electrical contracting \$50.00 Per Year

Company Contact Name: \_\_\_\_\_

ER or EC Number: \_\_\_\_\_

### AFFILIATE

(open to all manufacturers, distributors, suppliers, and others who wish to maintain close contact with the industry and support the goals of the association)

- New Member First Year Only, \$150**
- Dues Schedule: \$300.00 Per Year**

In 25 words or less describe what your firm sells to electrical contracting firms, or describe your interest in relation to FAEC.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

***I agree to assist, to the best of my ability, the efforts of FAEC to improve our industry and abide by the by-laws and code of ethics.***

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

Sponsored by: \_\_\_\_\_

Current FAEC Member

**Contractor Applicants ONLY!** *Please list 3 electrical material supplier references with whom you've done business with in the last 12 months.*

- |                        |                      |
|------------------------|----------------------|
| <small>Company</small> | <small>Phone</small> |
| 1) _____               | _____                |
| 2) _____               | _____                |
| 3) _____               | _____                |


***The ECLB (Electrical Contractors Licensing Board) Will be contacted for pending violations against your license...Please be sure the number you are supplying is absolutely correct!***





# DISTRACTED DRIVING

## AT WHAT COST?



**M**otor vehicle accidents are the leading cause of Death on the job. And driving distractions are the leading cause of motor vehicle accidents.\* Families, businesses, and communities can be changed forever by a brief moment of inattentiveness behind the wheel.

Employers should develop, communicate, and enforce clearly defined policies that address driving distractions while operating a company vehicle. Your local Federated representative can help! Call today.



*It's Our Business  
to Protect Yours.®*

**FEDERATED**  
**INSURANCE**®

\* National Highway Traffic Safety Administration Report, "What Do Traffic Crashes Cost? Total Cost to Employers by State and Industry," 1998-2000

The FEDERATED Insurance Companies  
Home Office: 121 East Park Square, Owatonna, Minnesota 55060  
(507) 455-5200 • [www.federatedinsurance.com](http://www.federatedinsurance.com)



**HUGHES**® is now



**Bradenton**  
941.753.5602

**Holly Hill**  
386.255.7008

**Marianna**  
850.526.3271

**Panama City Beach**  
850.236.3419

**Tallahassee**  
850.575.0138

**Fort Myers**  
239.931.4400

**Jacksonville**  
904.783.4567

**Melbourne**  
321.724.5880

**Perry**  
850.838.3400

**Tampa**  
813.621.9649

**Fort Pierce**  
772.464.1590

**Kissimmee**  
407.870.8558

**Naples**  
239.643.1044

**Pompano Beach**  
954.782.6712

**Tavares**  
352.343.8118

**Fort Walton Beach**  
850.244.2566

**Lady Lake**  
352.753.4555

**Ocala**  
352.732.2995

**Port Richey**  
727.847.1170

**Venice**  
941.485.4861

**Gainesville**  
352.377.0792

**Lake City**  
386.719.9860

**Orange City**  
386.775.8222

**Sarasota**  
941.955.4701

**West Palm Beach**  
561.684.7466

**Groveland**  
352.429.2977

**Lakeland**  
863.688.5511

**Orlando**  
407.841.4710

**Sebring**  
863.655.2411

**Winter Haven**  
863.294.8000

**ALWAYS ON THE JOB.**

