

# The Conduit

Volume 7, Issue 1  
January & February 2010

## NEWS & VIEWS OF ELECTRICAL INSTALLATIONS, INC.



New Hampshire/  
Vermont Chapter

### Electrical Installations, Inc. Announces ABC Membership

Electrical Installations, Inc. is proud to announce that we have enthusiastically accepted our invitation to join the New Hampshire / Vermont Chapter of Associated Builders and Contractors, Inc. Membership provides numerous benefits including craft and safety training, superintendent courses, management seminars, cost savings plans, networking opportunities, and much more. We are excited about this new alliance and the resources, benefits and support that will now be available to us. Please visit [www.abcnhvt.org](http://www.abcnhvt.org) to learn more about the many advantages of ABC membership.



Darlene Fritz accepts Electrical Installations' ABC membership plaque from ABC representatives Carol Kuhns, Director of Learning and Development and Bruce Leonard, Director of Membership.



Number of hours worked  
without a "Lost Time" injury

447,861



# EMPLOYEE SPOTLIGHT



## Happy Birthday!



- 1/5 Keisha O'Connor
- 1/7 Dan Ronan
- 1/13 Wayne Wickens
- 1/18 Cory Glines
- 2/1 Paul Szalajeski
- 2/4 Tom Therrien
- 2/19 Sandra Ringelstein
- 2/19 Bryan Payne

### Anniversaries

- |                       |                 |
|-----------------------|-----------------|
| <i>Tom Therrien</i>   | <i>13 years</i> |
| <i>Mike Leary</i>     | <i>11 years</i> |
| <i>Shane Atkinson</i> | <i>4 years</i>  |

### Christmas Spirit

This was a difficult Christmas for many and we are proud to report that Electrical Installations continued its tradition of offering support through Christmas donations to the following organizations: The Salvation Army, St. Vincent de Paul, Cash-N-Cans, Meals on Wheels, Community Health & Hospice, David's House, Twin Rivers Interfaith Food Pantry, Habitat for Humanity, Community Caregivers, UMCOR, Carroll County Health & Home Care Services, Center Harbor Food Pantry and others.



MIX 94.1 FM morning DJ Fred Caruso accepts EI's annual Christmas donation to the station's Cash-N-Cans drive benefiting local food pantries and soup kitchens.

### EI Welcomes New Apprentice

Peter Valliere lives in Manchester NH and recently became a new father. His eleven-week-old baby boy is named Easton and he is a healthy happy addition to the family! In his spare time Peter enjoys snow mobiling, four wheeling, and riding his bike.

### FACTOID OF THE MONTH:

About 1 billion Valentine's Day cards are exchanged each year. That's the largest seasonal card-sending occasion of the year, next to Christmas.



### EI CHRISTMAS PARTY



# The Conduit

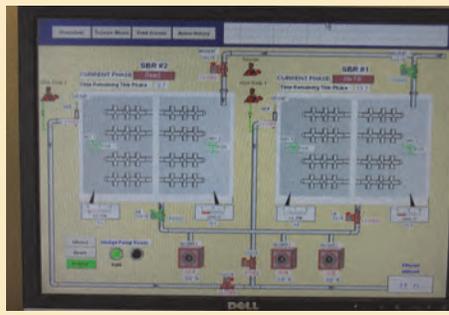
Volume 7, Issue 2  
March & April 2010

## NEWS & VIEWS OF ELECTRICAL INSTALLATIONS, INC.

### FEATURED PROJECT

#### Wastewater Treatment Facility Upgrade Morrisville, VT

The Village of Morrisville is located in Vermont's "Northern Kingdom", close to the Canadian border. The upgrade to the Village's Wastewater Treatment Facility consisted of new sequential batch reactors, blowers, effluent pumps, centrifuge sludge handling, and UV disinfection system. Electrical Installations installed a complete new electrical system including new service, complete new distribution system, VFD's and new lighting. We also furnished and installed a new SCADA system, PLC controls, and reporting. The project was completed as a subcontract to Keymont Construction, Inc. of Laconia, NH and project engineer was Forcier, Aldridge and Associates of Essex Junction, VT. This year-long project was completed under the supervision of Jim Fritz ably assisted on site by Wayne Wickens, Darin Lakus, Andrew Scheiner and Craig Sharpe. Thanks also to Jake Daku, Neil Davis, and Cory Glines for lending their expertise.



Number of Hours  
Without a Lost Time Injury

**458,791**

### UPCOMING SUPERVISOR'S TRAINING

El's Annual Supervisors Meeting is being re-scheduled and re-formatted. So that we can better utilize the limited time that we can all get together, we will be holding a training day at a facility that specializes in our industry; we will then hold a short meeting at the end to cover company business. We look forward to participating in an enlightening professional development day with the EI crew. Details to follow as plans are finalized.

# EMPLOYEE SPOTLIGHT



## Happy Birthday!



- 3/4 Anne Riordan**
- 3/5 Ryan Pothier**
- 3/10 Eva Fritz**
- 4/7 James Hildreth**
- 4/30 Brian Chevrette**

### *Anniversaries*

Wayne Wickens	9 Years
Tom Brosious	6 Years
Matt Blood	6 Years
Anne Riordan	1 Year
Dennis Lloyd	1 Year
Dan Ronan	1 Year

### EI Welcomes New Master Electrician

James Hildreth moved to Manchester, NH from Hartford, CT and is currently working on the Leominster, MA project with Chuck Fritz. He has experience in industrial, commercial, and residential electrical work. His hobbies include motorcycles and wood working. Welcome to EI James!

### **Upcoming Projects**

- Hopkinton, MA - Fruit St. WWTF  
Waterline Industries
- Lunenburg, MA - Keating Well & Pump Station  
Fall River Electrical Associates Co., Inc.
- So. Paris, ME - Park St. PS Upgrade  
Apex Construction, Inc.
- Hopedale, MA - Greene St. WTP  
Winston Builders Corporation
- Franklin, NH - Winnepesaukee River Basin WWTP Upgd  
Methuen Construction Co., Inc.
- Maynard, MA - WWTP Improvements  
Carlin Contracting Co., Inc.
- Bristol, NH - Bristol Water System Improvements  
Penta Corporation
- White River Junction, VT - WWTP Upgrades  
Penta Corporation
- Hyannis, MA - Water System Scada Upgrades  
Fall River Electrical Associates Co., Inc.
- Raynham, MA - Fountain Well WTP  
Waterline Industries

### CHARLIE'S QUALITY CORNER

#### Motor Connections

Connections to most motors are subject to extremes of heat and vibration. It is imperative that tight, reliable and well-insulated connections are made on all motors regardless of size. Wire nuts should never be used except in the case of very small fractional-hp motors. When making connections to motors, thought should be given as to ease of disconnection for future motor removal and maintenance. Acceptable connection methods are compression lugs, nut, bolt, & lock washer, insulated with varnished cambric for abrasion resistance covered with Scotch 33 or 88 tape. We also use pre-insulated mechanical connectors such as Polaris lugs covered with a layer of Scotch 33 or 88. Remember to always megger the motor and the feeder before connecting and energizing.

### FACTOID OF THE MONTH:



**The St. Patrick's Day custom came to America in 1737. That was the first year St. Patrick's Day was publicly celebrated in this country, originating in Boston.**

# The Conduit

Volume 7, Issue 4  
May & June 2010

## NEWS & VIEWS OF ELECTRICAL INSTALLATIONS, INC.

### FEATURED PROJECT OF THE MONTH Emergency Wastewater Treatment Plant Repairs West Warwick, Rhode Island

Flood levels not seen in Rhode Island since record-keeping began in the 1870s recently caused heavy damage to the West Warwick Wastewater Treatment Plant. The plant was overwhelmed when more than 9 inches of rain fell on March 30th causing the Pawtuxet River to rise to unprecedented levels. The treatment plant was evacuated as flood waters began to submerge processing units and the plant's main electrical switch gear. Nearby Warwick WWTP was also shut down and both plants spread untreated sewage wherever the river waters flowed. As the race began to restore the treatment plants to full functionality, Electrical Installations was summoned to assist the Town of West Warwick in a complete restoration of the treatment plant's control system. Tom Therrien immediately responded focusing his full attention on this race against time. His first priority was to restore communication to the plant's remote pump stations. Within 2 weeks the plant was fully converted from lease-line to a radio telemetry system encompassing the treatment plant, repeater, and 8 pump stations. To date, work has included recovering hard drive content from the plant's submerged computers, removing and rebuilding heavily damaged control panels and VFDs, and re-programming the plant's SCADA system. Every component of the plant's control system will be repaired and/or rebuilt as work progresses. With work spread among the facility's 15 buildings, this project is anticipated to progress for the

next 6 months. We are pleased to work once again with James J. Geremia & Associates Engineering assisting this long-time municipal customer. As *The Conduit* goes to press, it appears that the West Warwick WWTP will be back on line before the Warwick plant. Thanks also to Matt Blood, Casey Damon, Cory Glines, Brian Chevrette and Charlie Fritz for helping us to meet this unique challenge.



Tom Therrien works with Assistant Superintendent Marty Linstrom as restoration of the plant's control system progresses.



Floodwaters became contaminated as millions of gallons of raw sewage mingled with the Pawtuxet River.

Memorial Day is one of EI's recognized holidays. Take time to remember those who have fallen in service to our country.



Number of hours worked  
without a "Lost Time" injury

471,101

# EMPLOYEE SPOTLIGHT



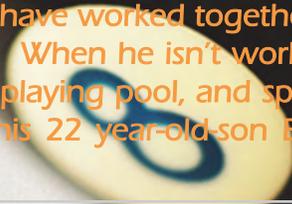
## Happy Birthday!



**June 8th**  
**Shane Atkinson**

### New Electrician Joins EI

EI welcomes Richard Grant, an experienced electrician currently assisting Tom Brosious in South Paris, Maine. Rick and Tom have known each other for 23 years and have worked together as electricians in the past. When he isn't working, Rick enjoys ice fishing, playing pool, and spending quality time with his 22 year-old-son Brandon.



### Anniversaries

Cory Glines	5 Years
Bryan Payne	5 Years
Mike Merrill	4 Years
Eva Fritz	4 Years
Casey Damon	3 Years

Don't forget mom on May 9th!

**Mother's Day**

### June is National Safety Month



The National Safety Council reminds us that June is National Safety Month. Accordingly, Electrical Installations' Joint Loss Management Committee would like to congratulate all EI employees on our firm's exemplary safety record. Our last lost-time injury occurred June 2, 2003. Since then, EI employees have worked safely for 471,101 hours experiencing only 4 recordable injuries in nearly 7 years. Considering the differing site conditions we experience and the many contractors with whom we work, our record is an incredible achievement. Besides setting the example for other contractors and protecting our employees, EI's focus on safety has made us an attractive firm for insurers and significantly reduced our Workers Compensation Experience Modification Rating thereby reducing our insurance premiums.

Please accept our thanks and hearty congratulations for always making safety our #1 priority.

**CELEBRATE  
FATHER'S  
DAY ON  
JUNE 20TH!**



### EI Welcomes New Apprentice

Daniel Flibbert comes to EI from Clinton, ME. He is currently working alongside Jake Daku on the Orono, ME WTF Upgrade project. He is grateful to be apart of the EI team utilizing his recent education! In his free time Dan likes to hunt and fish in the Belgrade Maine region.



Welcome Dan!



### FACTOID OF THE MONTH:



**1962: Belden released Beldfoil shielding tape, which became the industry standard for cable shielding technology.**

# The Conduit

Volume 7, Issue 6  
July & August 2010

## NEWS & VIEWS OF ELECTRICAL INSTALLATIONS, INC.

### Ultimate Field Trip for Engineering Hopefuls

Thanks to EI's ongoing relationship with Howe & Howe Technologies, our local high school Engineering Mentoring Group was treated to the most popular field trip in recent memory. Moultonboro Academy students traveled to Waterboro, Maine to visit the Howe & Howe Technologies facility, site of extreme vehicle fabrication & design and the filming location of *Howe & Howe Tech*, one of the Discovery Channel's most popular television series. Much of Howe & Howe's recognition stems from the development of the world's fastest dual tracked vehicle, "Ripsaw". Electrical Installations, Inc. played an integral part in Ripsaw's development, having designed and built the motion controls for this unmanned vehicle which was specifically designed for the U.S. Army. Chuck Fritz spent countless hours with the Howe & Howe team perfecting remote control of Ripsaw functions. Mike Howe, president, and Geof Howe, CEO, were on hand to provide the Moultonboro Academy students a tour of their now-famous facility, to answer questions, and to offer insight into their company which prides itself on "outside the box" thinking.



Many thanks to Mike and Geof for their time, hospitality and enthusiasm giving a lucky group of future engineers a day to remember! Go to [howeandhowetechnologies.com](http://howeandhowetechnologies.com) to learn more about the innovative Howe brothers who are currently filming Season 2 of *Howe & Howe Tech*.



# Happy 4th of July!

EI's office will be closed Monday, July 5th in celebration of the Holiday

# EMPLOYEE SPOTLIGHT



## Happy Birthday!



- 7/1 Jimmy Fritz
- 7/2 Jake Daku
- 7/9 Darlene Chevrette
- 7/9 Craig Sharpe
- 7/28 Charlie Fritz
- 8/6 Rick Grant
- 8/11 Andy Fritz
- 8/13 Dan Flibbert
- 8/26 Zack Fritz

### Anniversaries

<i>Brian Chevrette</i>	14 years
<i>Neil Davis</i>	14 years
<i>Darlene Chevrette</i>	14 years
<i>Ryan Pothier</i>	5 years
<i>Keisha O'Connor</i>	2 years

### Manchester School of Technology

Chuck and Jim Fritz recently taught a PLC class as part of the electrical program at Manchester School of Technology. Three 2.5 hour sessions were conducted teaching a total of 60 students. This is the third year that Chuck has conducted a PLC class at MST. Ironically, several of EI's current electricians have attended the same MST class as part of their electrical training.



Number of hours worked  
without a "Lost Time" injury

**483,540**

### Summer Tips You Didn't Know

**Get Spicy to Stay Cool.** Eat spicy foods to help you stay cool. Believe it or not, spicy foods dilate your peripheral blood vessels, making you perspire which cools your body.

**Scream for Ice Cream.** Substitute grilled fruit for fat-laden ice cream or cake. The dry heat of grilling intensifies and caramelizes the natural sugars in fruits.

**Ward off Sunburn.** In addition to sunscreen, load up on red, yellow and orange fruits and vegetables. These have carotenoids that may help naturally reduce sunburn risk.

### CHARLIE'S QUALITY CORNER

#### Conduit Sealings

Although this has been discussed many times, I keep seeing conduits that pass from one temperature zone to another or conduits that are installed underground that are not sealed. This has cost us thousands of dollars in the past several years due to condensation forming and equipment being damaged. You can use ductseal to seal these conduits but they must be sealed to prevent air movement and resulting condensation from forming. Remember, even empty conduits must be sealed. This is a code requirement and just good practice .

### Factoid of the Month



To date, EI's panel shop has manufactured 1,863 UL-listed industrial control panels.

# The Conduit

Volume 7, Issue 9  
September & October 2010

## NEWS & VIEWS OF ELECTRICAL INSTALLATIONS, INC.

### ORONO • VEAZIE *Water District*

Our featured project is the Bennoch Road Water Treatment Facility Upgrade Project in Orono, Maine. This treatment plant is the sole water source for the University of Maine, Orono campus, which made it critical that the project remain on schedule ensuring that the plant be back on-line prior to students returning for the Fall semester. The improvements to this Water Treatment Facility included six pressure filtration units and associated piping, valves, HVAC, electrical and SCADA control systems, buildings, one new submersible well pump and piping installation, as well as installation of a 115,000 gallon underground concrete tank. Under the able supervision of Jake Daku, Electrical Installations has been on site since October 2009 completing all electrical work associated with this massive upgrade. As this project nears completion,

we would like to thank Dan Flibbert, Jimmy Fritz, Andy Fritz, and Matt Blood, all of whom worked on-site helping to ensure that all electrical work was completed on schedule.



Jake Daku and Dan Flibbert install lighting.



Jake Daku wires valve controls.



Happy Anniversary  
Electrical Installations, Inc.  
Celebrating 23 years of excellence  
October 5, 2010



# EMPLOYEE SPOTLIGHT



## Happy Birthday!

9/9	Chuck Fritz
9/14	Casey Damon
9/15	Matt Blood
9/17	Jim Fritz
10/28	Darlene Fritz



## Anniversaries

CHARLIE FRITZ	23 YEARS
DARLENE FRITZ	23 YEARS
CHUCK FRITZ	23 YEARS
JIM FRITZ	23 YEARS
JAKE DAKU	16 YEARS
KIM SOUZA	2 YEARS
PAUL SZALAJESKI	1 YEAR

### Welcome, Dan Gagnon

Dan Gagnon came to EI by way of a temp tradesmen agency when more help was needed to complete our South Paris, ME projects. We are pleased to report that Dan has officially joined our crew in central Maine as a permanent employee. A Master Electrician, Dan lives in Hollis Center, Maine and enjoys hunting, fishing and spending time with his granddaughter.

Number of hours worked without a "Lost Time" Injury  **495,960**

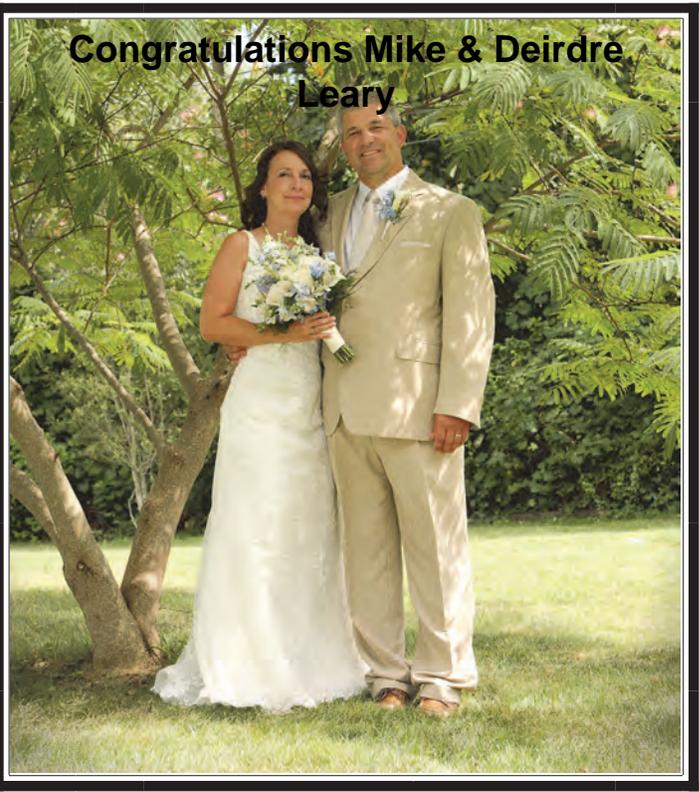
### CHARLIE'S QUALITY CORNER

#### Safety

We have just experienced an OSHA inspection on one of our projects which resulted in a citation.

The major violation was the temporary lighting. All temporary lights must be fed with hard or extra hard duty cable (SO cord) and UL listed and OSHA compliant. Light strings using individual conductors or type NM cable are NOT acceptable. Also, the strings may not be supported by the cord, only by the fixture hangers.

Worth noting, OSHA is enforcing the fact that all boxes containing live wires must be covered. That means even 4" square junction boxes, not just panelboards. Also, all unused openings must be covered.



Congratulations Mike & Deirdre Leary

### Factoid of the Month



Of all the candy sold annually, one quarter of it is sold during Halloween time (September - November 10) making it the sweetest holiday of the year.

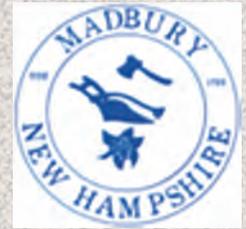
# The Conduit

Volume 7, Issue 10  
November & December 2010

## NEWS & VIEWS OF ELECTRICAL INSTALLATIONS, INC.



### FEATURED PROJECT CITY OF PORTSMOUTH MADBURY WATER TREATMENT PLANT AND BELLAMY RESERVOIR IMPROVEMENTS



This two-year project involves construction of a new water treatment plant that will replace the existing plant which was constructed in 1958 by the Army Corps of Engineers. The Madbury Water Treatment Plant is being constructed at the existing site in Madbury and includes dissolved air flotation, new dual media rapid filters, additional clear well capacity, improved solids handling facilities and a new process control building. This job will be one of the largest instrumentation and control projects completed in northern New England in the past five years and it will establish control and monitoring of the entire water supply for the City of Portsmouth.

As part of the control system, Electrical Installations designed and manufactured more than a dozen UL-listed industrial control panels all of which required extensive evaluation and testing prior to being placed in service. On September 27<sup>th</sup> representatives from Hazen and Sawyer (Environmental Engineers), SMR Engineering (Consulting Engineers), the City of Portsmouth, and Penta Corporation (General Contractor) assembled at EI headquarters in Moultonboro to begin two days of extensive witnessed factory testing of all components of the proposed water treatment plant control system. Thanks to the collaborative efforts of all participants, all testing and documentation was completed flawlessly. Special thanks to Matt Blood and Casey Damon for their exemplary efforts in EI's panel shop and to all who contributed to the success of this critical benchmark. We look forward to full implementation and start-up of the Madbury Water Treatment plant control system early next year.





# EMPLOYEE SPOTLIGHT



## Happy Birthday!

- 11/2 Mike Leary
- 11/3 Dennis Lloyd
- 11/9 Neil Davis
- 11/3 Mike Merrill
- 11/14 Tom Brosious
- 11/14 Brad Hall
- 12/10 Dan Gagnon
- 12/20 Kim Souza



## Anniversaries

Sandra Ringelstein	12 years
Craig Sharpe	1 year

Number of hours worked  
without a "Lost Time" Injury



**506,792**



### Welcome to Our New Employees...

**Dan Wolff** - Dan comes to us from the construction field and likes to spend his free time outdoors doing whatever sport fits the season and enjoying the lake. He is currently working with Bryan Payne on a number of projects.

**Brad Hall** - Brad comes from the construction and paramedical fields. He has two sons, Daniel and Brandon, and enjoys hiking and lake activities and playing the guitar. Brad will be working with Neil Davis.

**Rob Vaccaro** - Rob is a journeyman electrician who recently relocated to Danbury, NH. He is currently working at the White River Junction WWTP with Neil Davis. Rob enjoys gun collecting and his Harley and he is looking forward to an August wedding to his longtime sweetheart, Kristen.

### CHARLIE'S QUALITY CORNER

It's the simple things...

I find lately that the simple things are costing us a great deal of money due to returns and repairs. The number one culprit is moisture due to condensation or otherwise entering conduits and enclosures. To reiterate, hopefully for the last time, all conduits that travel from one temperature extreme to another must be sealed to prevent the passage of air and the ensuing condensation. Also, any conduits coming into a building should be arranged to drain. An effective method is to drill a small weep hole before the conductors are installed. Also, wires entering a service cap should be bent down on a sharp angle to keep water from traveling along the conductor, into the cap, and into the conduit system. Always assume that any conduit installed outside or underground will eventually have water buildup inside.

### SAVE THE DATE

### EI CHRISTMAS PARTY

SATURDAY, DECEMBER 11, 2010

6:00 PM TO 9:00 PM

THE BOB HOUSE

520 ROUTE 25

MOULTONBORO, NH

RSVP - 603-253-4525

### Factoid of the Month



Of the over 400 million Christmas trees currently growing in the US, approximately 40 to 45 million are sold each year.

