

powerline™

connecting Thomas & Betts employees worldwide

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The Best in the Nation

Facility Named Top Ten Plant by Major Publication

It's déjà vu for T&B's Athens, Tenn., facility. The plant recently was named one of the 10 best plants in North America by *Industry Week* magazine. Last year, the plant was honored by the magazine among the top 25.

"I think what put us 'over the top' is that we're seeing measurable results of the groundwork we've laid over the past few years in our transformation to lean manufacturing. Five years ago, we were doing good things and making little, incremental improvements. But we knew that we had to get better, faster. Today's recognition is testament to the hard work of our employees and their unwavering commitment to excellence and total customer satisfaction," said Herb Bradshaw, Athens plant manager.

Industry Week noted that "new expectations, goals and classic lean practices lead Thomas & Betts (Athens) to world-class performance."

**Successful
By Design**

*IndustryWeek's
2005 Best Plants*



In Good Company
*Industry Week's Top 10
Finalists include:*

Boston Scientific Corp., Wayne Operations
Wayne, N.J.

Bowater Inc., Catawba Operations
Catawba, S.C.

Dj Orthopedics LLC, Vista Facility
Vista, Calif.

General Cable Corp., Moose Jaw Plant
Moose Jaw, Saskatchewan, Canada

The HON Co., Cedartown Plant
Cedartown, Ga.

National Gypsum Co.
Apollo Beach Plant
Gibsonton, Fla.

Solectron Corp.
Columbia, S.C.

Storage Technology (Bermuda) Ltd.
Ponce, Puerto Rico

Thomas & Betts Corp.
Athens, Tenn., Operations
Athens, Tenn.

TRW OSS Mexican Operations
Reynosa, Tamaulipas, Mexico



What's in the Score?

The annual award recognizes outstanding manufacturing facilities that are on the leading edge of efforts to increase competitiveness, enhance customer satisfaction, and create stimulating and rewarding work environments.

Among other things, candidates are judged on their comprehensive effort to achieve:

- world-class manufacturing ability
- strong quality systems and results
- employee involvement and empowerment programs that drive continuous process improvement
- effective supplier-partnership programs
- proactive environmental and safety practices, and
- meaningful community involvement programs

ATHENS CONTINUES THE LEAN SIX SIGMA JOURNEY

In mid-year 2001, Thomas & Betts initiated a program based on the concept of lean manufacturing in order to improve efficiency at its major manufacturing facilities. Lean manufacturing identifies and eliminates waste in a process by using techniques such as Value Stream Mapping and formal Kaizen events. In 2002, the company added the complementary Six Sigma program to its efficiency efforts. Six Sigma is a statistical approach that increases profitability by reducing defects. In the simplest terms, Lean teaches speed and efficiency while Six Sigma is about consistency and quality.

"Lean Six Sigma is part of the fabric of our culture now and it is truly a team effort," said Bradshaw. "We are continually identifying potential opportunities and have improvement projects underway 365 days a year. We expect to continue to be a leader in plant efficiency and improvement well into the future."

The Athens facility is now in the fifth year of its Lean Six Sigma journey. All employees and management are trained in Lean Six Sigma concepts and techniques. Five employees have achieved Green Belt status and one has achieved Black Belt status – the highest ranking available in Six Sigma testing.

CHANGE IS GOOD

THE FOLLOWING IS AN EXCERPT OF THE INDUSTRY WEEK ARTICLE ON ATHENS' IMPROVEMENT PROJECTS.

The plant has undertaken 37 formal Kaizen events since 2002. For three to five days, salary and union employees (and occasionally suppliers) together solve tough problems as well as learn about waste identification, 5S, mapping and standardization. Support staff, such as maintenance and welding, assist as necessary. Eighty percent of the workforce has been trained in "Lean 101," mapping and Kaizen.

"The key was changing a 35-year-old production philosophy in this plant amid a stable environment, high seniority, high years of service," says Bradshaw.

"Just look at the numbers," advises Darrell Dumont, manufacturing engineering manager. "We're a 40-year-old plant, and we have equipment, some of which is older than 40-years-old. We're a union shop and a mature workforce, yet we can compete with anybody around. We can compete with China. We can compete with India. We're not afraid of those folks."

Lean simply has made Thomas & Betts more competitive. Since 2001, the plant has reduced the dollar volume of finished goods by 32%, raw material and WIP dollar volume by 74%, material storage space by 68%, manufacturing space by 29% (while absorbing 60,000 square feet of production), customer complaints by 50%, and customer rejects to 149 ppm. Plant sales volume has increased by 23%, and value of production per person has risen by about 38%. The continuous improvement has been complemented by strategic capital investments of more than \$6 million.

**"Change has been the only constant
for the last four years."**

"Change has been the only constant for the last four years," says Kim Miller, value stream manager, extrusion. And Thomas & Betts continues to change processes and streamline production, so much so that Bradshaw resists allowing the workforce to paint lines on the floors. By end of year, lean efforts will have cumulatively freed up 130,000 square feet of manufacturing space in the plant, allowing it to accommodate more new business. "If you open it up, it will come," Bradshaw says.

Building a Lean Culture

Standing in the Circle Helps Identify Waste

Visit a T&B manufacturing facility these days and you may see a lot of people standing around in circles. Don't panic if they ask you to join them...they won't make you hold hands and sing Kumbaya. But they will want your input into how to further implement Lean manufacturing at T&B.

“Building a Lean culture is all about how we continuously improve our processes by eliminating waste. It’s a journey, and our motto is that we’ll always only be halfway there.”



Pat Joyce, plant manager in Southaven, Miss., reviews the daily metrics.

The concept of “Standing in the Circle” is one of several tools and techniques designed to help the entire plant population experience things from another perspective...the operator’s.

“The goal of the exercise is to have each person stand in the circle and ‘open their eyes’ to any potential areas of waste – whether in process or product – on the shop floor. Ultimately, it’s about how we as leaders support the efforts of operators on the shop floor to deliver a quality product, on-time to customers,” said Coates.

During the time in the circle, potential areas of waste in the process are noted. Then, the process is reviewed with the group occasionally using video tapes. The group compiles a data sheet of their findings and recommendations for improvements. Some of the improvements are obvious and can be quickly fixed so the team is allowed to JDI (just do it) and make changes immediately. The group will then go back to the circle and watch the process again, verify findings and JDI activities on the data sheet and determine as a team how to best continue the improvement process.



Angie Martin, 2nd shift supervisor, Marta Velez, cell leader, and Kelvin Downes, plant manager, stand in the circle at the Orange, Mass. facility.

Lean Techniques at T&B

- *Customer pull*
- *Kaizen events*
- *JDI (Just Do it)*
- *Glass wall*
- *5S*
- *Daily walk*
- *Green belt/Black belt*
- *Stand in the Circle*
- *Value stream analysis*
- *Line Balancing*

“Building a Lean culture is all about how we continuously improve our processes by eliminating waste. It’s a journey, and our motto is that we’ll always only be halfway there,” said Tim Coates, vice president of operations for T&B’s Electrical division.

All Electrical division employees have undergone “Lean 101” training, and now the division is training plant managers, supervisors and cell leaders (operators) in advanced Lean techniques to help identify and eliminate waste.

All Electrical division plants have gone through the training. According to T&B’s Orange, Mass., plant manager Kelvin Downes, “Identifying waste, being empowered to make changes to processes that allow waste...that’s the core of our Lean effort. Our group has done an amazing job of grasping the concept and making it work for us.”

Lynne Langlois, Orange cell leader, said, “It sounds simple, but it’s a great way to help you look at things in a whole different light.”

What locations are finding is that ‘simple’ supports bottom-line results. At T&B’s Southaven, Miss. plant, the technique identified one improvement in the Haz-Lux Lighting assembly process that that increased output by 45 percent while reducing labor by 25 percent.

Southaven Plant Manager Pat Joyce, said “Our shift to Lean has been part of our culture change. In the past, training would have occurred only at the management level, and changes on the floor would have been management-led. Today employees are leading the way to identify improvements that help us get better in how we deliver to customers, and be more competitive globally.”



MARKETPLACE



Angler Recognized for Innovation

A difficult angle can make it time-consuming to fit a clamp to a pipe or conduit. T&B has responded for an electrician with the new one-piece Superstrut® Angler™ Pipe and Conduit Clamp that's quick and easy to install. The installer needs only to snap apart the two halves of the strut strap, fit to the pipe or conduit, slide the pre-threaded bolt through the innovative keyhole-shaped opening in the strap and tighten. The signature bent tab design allows the bolt to extend up to a 30 degree angle, allowing immediate access to the bolt with a screwdriver or power tool.

T&B was awarded a 2005 Innovation Award for its Angler product at the IEC (Independent Electrical Contractors) 28th Annual National Convention and IEC Electric Expo held in Baltimore, Maryland. The award – one of only 18 awarded to the entire Electrical industry – was from *Electric Contracting Products*, a magazine targeting decision-makers at the nation's leading electrical contracting firms.

The program recognizes outstanding companies whose products or services have best responded to electrical contractors market challenges by offering creative and innovative ideas. The 18 companies were presented with crystal awards recognizing their achievements in meeting the needs of the \$82 billion electrical contracting market.

The product finalists were rated on six criteria:

- *Innovation*
- *Quality contribution*
- *Ease of use*
- *Maintainability*
- *Cost effectiveness*
- *Productivity improvements*



Lighting Our Way

Since the 1940s, builders have been required to install emergency lighting in commercial buildings, industrial facilities and public spaces. Thomas & Betts provides thousands of emergency lighting systems each year to light pathways to safety on airplanes, cruise ships, shopping centers and in hazardous locations.

“When an emergency strikes, safety rests on the proper operation of emergency lighting and power products,” said Phil Morreo, vice president of Sales & Marketing for T&B’s emergency lighting business. “Therefore, products must perform reliably and on demand, without question.”

T&B has an extensive quality control program for both incoming and outgoing inspections. These stringent policies and procedures ensure that each product shipped meets T&B’s high standards of “life safety” – the business of the emergency lighting division.

T&B provides emergency lighting for all budgets, code requirements, and design features. The Emergi-Lite® Prestige Series™ and Distinction Series™ provide contractors an easy-to-install, self-powered, EnergyStar compliant, attractive emergency lighting that is a unique combination of safety and style.

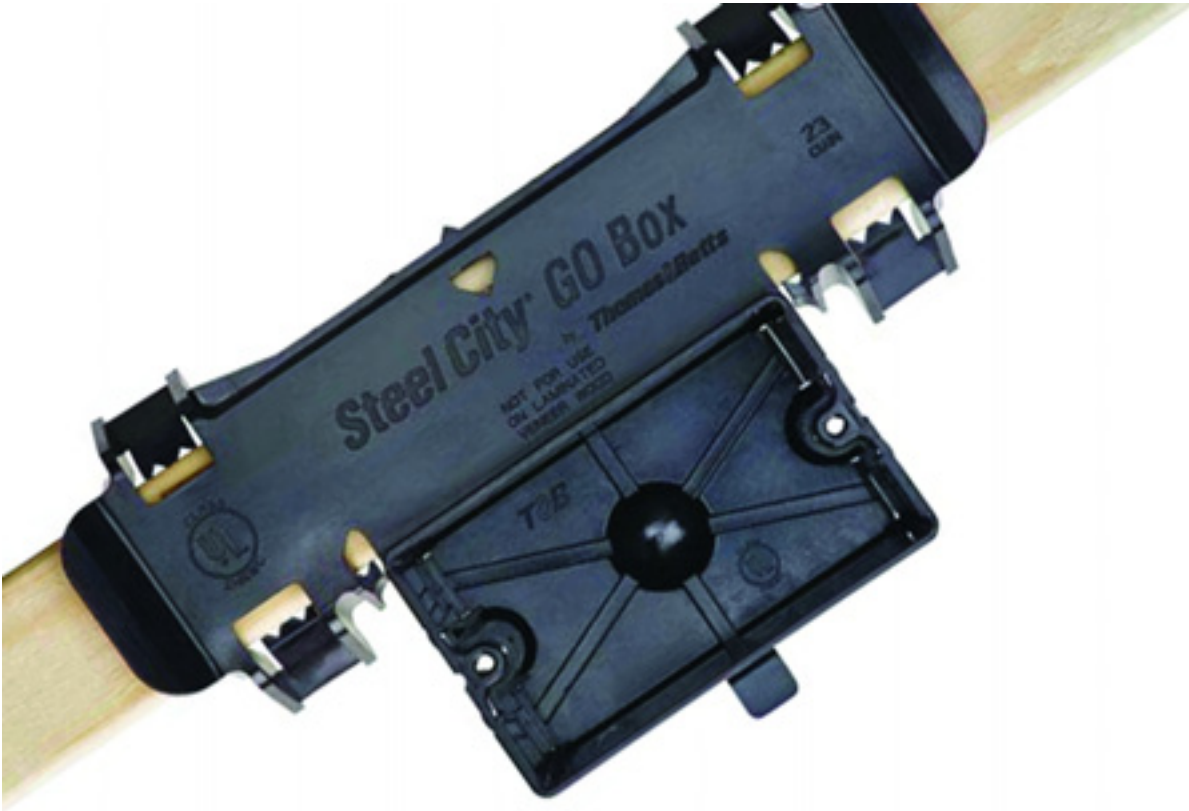
From T&B to a Store Near You

Did you know that T&B’s lighting products for new construction can be seen in many stores and businesses throughout North America?

- *Wal-Mart/Sam’s Clubs*
- *Kohl’s Department Stores*
- *Costco Stores*
- *Williams Sonoma Stores*
- *Marriott Courtyard Facilities*
- *Marriott Residence Inns*
- *Limited and Limited Too Stores*
- *Brooks Brother Stores*
- *Newly Constructed Sears Grand Stores*
- *Talbots Stores*

The latest product to go to market is the Literay™ Lite Series. This product builds on customers needs today to have all of the features and requirements necessary for emergency lighting in an attractive display. Like other products in the T&B emergency lighting product line, the Literay Series also carries the benefit of automatic diagnostic testing. In other words, the light automatically discharges each month, in addition to a yearly self-test. This eliminates the need to have someone manually test the emergency lighting devices monthly. The auto discharge also provides the benefit of “exercising” the battery, which increases its life.

Products are sold to electrical wholesale distributors through a nationwide network of independent lighting agents managed by a direct regional sales force. Lighting shows provide an important opportunity for the company to market its products to customers. In 2006, T&B will share the many benefits and features of these products at the Lightfair International Show in Las Vegas, Nev. The world’s largest architectural and commercial lighting trade show and conference, Lightfair reaches a broad audience and provides ample networking opportunities for marketing the division’s products.



Ready, Set, GO! **Steel City® GO Box™ Reduces Installation Time by 60%**

T&B has been working behind the scenes to revolutionize the way that residential contractors work. The new Steel City® GO Box™ will change the ballgame for contractors on high-volume residential projects. Despite recent forecasts that residential construction should be slowing down, the market remains at record-high levels.

T&B developed the GO Box™ after hearing from contractors about their difficulty in keeping up with builders as they install electrical systems in homes. For example, a typical 2,500 square-foot home requires 100 single gang plastic boxes – all which require the “swinging the hammer” method to nail the box to the stud. A key need for contractors is labor saving products to help them do more work in less time.

The GO stands for “Grip-On.” Installers can just push the box onto a stud and the specially designed clamps hold it in place. No tools or fasteners are required, reducing installation time by approximately 60 percent for a 2,500 square foot home.

The GO Box™ eliminates the most expensive part of installing the box – the nailing process. In just one second, the installer can locate the box on the stud and push the box onto the stud by hand – no tools required. Not only does this reduce installation time, but it also allows installers to maintain a high level of productivity along the way...and reduces the potential for banged-up thumbs. Additionally, the box can be easily repositioned for jobsite flexibility.

The new GO Box™ also offers integral “Fast-Set” device mounting holes for quick and easy device mounting. This is a new, patented version of the “Fast-Set” design that does not require a metal clip to be inserted into the plastic box.

The GO Box™ gives T&B an innovative product that commands a price premium that will help the company compete as the market cools off and price pressures increase because it provides tangible savings to residential contractors.



New Ty-Duct™ Wiring Duct Simplifies Wire Management

T&B has expanded its wire management offering with the recent introduction of Ty-Duct™ Wiring Duct. Used to control cables in electrical enclosures, machine building, data/communications panels and closets, and point to point wiring, Ty-Duct™ offers many advantages over existing products, including a two-point contact design allowing installation with less force than other wiring duct products, triple-restricted slots which speed up installation and allow better wire retention in the duct, a patented universal mounting clip that permits use of a snap-in divider, to accommodate nylon cable ties or hook and loop fasteners and UL-recognized continuous use temperature range from -40 to 140°F.

Feelin' Hot, Hot, Hot!

Ty-Rap® has introduced two new products that beat the heat. The first is the Ty-Rap Heat Stabilized/UV Resistant Cable Tie, made with a combination black nylon material. The tie is targeted for OEM applications such as transportation, lawn, garden, farm, construction equipment, and recreational vehicles.

The second is the Ty-Rap Extra High Temperature Cable Tie, which can withstand temperature extremes from -40°F/-40°C to 302°F/150°C. The new polymer material Ty-Rap can be used in applications such as metal processing, lighting, automotive and refineries.





WORLD OF T&B



Southaven Plant Stays Fast, Flexible and Customer-Focused to Meet Changing Customer Needs



As an assembler, Alberta Greer plays a role in the facility's success of meeting the customers' needs.

T&B's Southaven, Miss. plant is located just over the border from T&B Corporate headquarters in Memphis, Tenn. While some might say that's "TCTM" (for all of you at Corporate, that's "Too Close To Memphis"), Plant Manager Pat Joyce and Southaven's 160 employees are making proximity to Corporate work for them.

The plant, with 175,000 square feet of manufacturing space, produces 16 different product lines, including T&B's powerhouse brands of Superstrut®, Kindorf®, Russellstoll®, T&B® Cable Tray, and Hazlux®. About 50 percent of the volume of the plant is "made to stock" for Byhalia's Miss., distribution center. The other 50 percent is "made to order" based on daily customer orders.

"Our biggest challenges revolve around our ability to react to changing customer needs," said Joyce. "Replenishment of stock to our distribution network is a little more predictable compared to those customers who ask us to make their products to order; we've got to be fast and flexible."



A long-time employee of Thomas & Betts, Ernest Bolen, machinist, has witnessed all of the changes during Southaven's journey.

Said Joyce, “We’re much more focused on how we as a leadership team support those who are closest to the product and the customer. Historically, we had daily planning and production meetings in an office conference room, today we have them out on the floor. We call it the ‘daily walk.’ We spend 45 minutes as a management team – and that also includes our supervisors, planners and operators – moving from one key point in the building to the next to look at our daily metrics.

“This process helps us build collective understanding at all levels around, ‘did we win yesterday,’ and ‘are we poised to win today.’ If the answer is no, than it’s pretty easy to zero in with those involved as to whether it’s an information flow, material flow, or people flow issue, and fix it quickly,” he said.

Joyce said that from a management standpoint, the 45 minute investment in communication frees up his entire day to be able to focus on areas of continuous improvement for customers.

The environment being built at Southaven is a win for employees, and for the company.

“The environment being built at Southaven is a win for employees, and for the company.”

Building a fast, flexible and customer-focused work environment has been a journey for Southaven. Over the past five years, the plant has undergone a shift in culture from one that was management-driven, to one that’s employee-involved. Today, the work environment is much more interactive and team-based, and the lean manufacturing initiatives the plant has adopted – such as identifying waste in its material, information and people flow – are led by teams that include frontline operators. Lean tools such as Lean 101 training, Standing in the Circle, Line Balancing, Black and Green Belt projects also contributed to the cultural change in Southaven.

“Three years ago, we had a 20 percent turnover rate for employees,” said Joanna Donati, human resources manager. “Today, it’s in the single digits. This has decreased our cost of doing business, because we don’t have to spend time hiring and training new people. I also like to think that our employees are ‘voting with their feet.’ In other words, they like where they work, so they’re staying around.”

The plant has made great strides against other key metrics, such as safety and productivity. These performance improvements have paid off for the plant.

As T&B has consolidated manufacturing work, the plant has gained production formerly done at plants in Pennsylvania, Florida and Texas.

“It’s all about meeting changing customer needs – for us, measured by reducing lead times and maintaining our promise dates. We can’t sit back and rest on our success – that was yesterday, and we’ve got to keep moving ahead,” said Joyce.



EMPOWERED PEOPLE



Deanah Mack, human resources administrator, Memphis, Tenn.



Lending a Passion for Winning to a Good Cause

Deanah Mack, human resources administrator in Memphis, applied her passion for winning to a more personal goal recently: training for and completing a half marathon (13.1 miles) to raise funds for the American Stroke Association (ASA). Inspired by both her mother and a good friend who are stroke survivors, Mack raised more than \$7,300 for the ASA, one of the highest individual contributions in the event. The donation will support the ASA in efforts to increase awareness and funding for research and services specifically focused on stroke, stroke survivors and stroke prevention.

Lancaster Delivers Rapid Response to PEC

Progress Energy Carolinas recently recognized T&B's Lancaster, S.C. Facility for the efforts to go the extra mile to meet PEC's need to restore a four-mile section of downed transmission line.

“On behalf of PEC, please accept my sincere gratitude for your rapid response. You were able to manufacture and ship many of the steel poles to the job site during the weekend after the accident that downed the line, and were able to ship all the remaining poles the next week. This is outstanding performance and demonstrates the value of the business relationship between PEC and Thomas & Betts,” said Steve Wilson, project manager for PEC.





Kelly Harlow, cell leader for T&B's Orange, Mass. facility (above), and Dwain Becton, manager of transportation services (below), are both recent Green Belt graduates.

Green Belt Graduates Fight Hard to Improve Processes

As T&B continues to implement Lean Six Sigma throughout the business, employees who have achieved “Green Belt” certification play an important role. They will either lead projects or participate as a team member on Black Belt projects. (Black Belt certification requires more extensive training in quality tools and formal testing of the concepts than Green Belt certification.)

T&B’s Green Belts are trained and certified to use and apply Lean Six Sigma methodology to serve as change agents who drive local improvements within their facility, department, or natural work group.

The requirements of each candidate are intense. He or she must complete the Green Belt training material and pass the final exam as the first phase of the certification. Finally, to become a Green Belt at T&B, the candidate must also complete one green belt project. Each project is identified based on one of the following key points: 1) Improve the top line; 2) Improve the bottom line; 3) Address a business issue.

T&B is proud to recognize its most recent Green Belt graduates:

Larry Hensley
Jonesboro

Cindy Hutchens
Electrical Customer Service

Tony Kolznak
Electrical Product Management

George Wright
Byhalia

Jeremy Pruitt
Jonesboro

Brigitte Hayes
Southaven

Dwain Becton
Memphis Transportation

Robert Goss
Electrical Purchasing

Beth Gaudet
Memphis Human Resources

Kelly Harlow
Orange

Jeff Gieger
Hackettstown

Angie Wilkinson
Memphis Human Resources

Bill Custead
Athens

Jose Cadena
HVAC Mexico



Johnny Phillips and Anthony Foreman reduced set-up time at Jonesboro by 80%.

Employee Innovation Improves Productivity at Jonesboro Facility

Anthony Foreman, set-up operator at the Jonesboro plant, had a problem: the eight hours it took to set up the 2-inch and 1-inch locknut press. He turned to Johnny Phillips, tool and die maker, to help him create a solution. The result: a method that now takes Foreman only 1 hour, 15 minutes to set up the press.

The “old way” meant that the bolster plate, chute and die would have to be unbolted and removed from under the press bed. This step consumed a significant amount of time, and affected the amount of work process inventory would have to keep on hand before each setup. The new solution allows Foreman to safely change the chute and die from the top of the machine – without removing the bolster.



TIDS & BITS

Appointed to Key Utility Advisory Council

Barry Minatra, director of product management for the Utility products group, recently was appointed to serve on the Advisory Council for the National Rural Electric Cooperatives Association (NRECA). The NRECA is the national service organization dedicated to representing the national interests of cooperative electric utilities and the consumers they serve. It has more than 900 member cooperatives serving 37 million people in 47 states.

T&B has been active in the NRECA for a number of years, including as a primary sponsor for the TechAdvantage Engineering & Operations Conference in 2004 and 2005. Minatra's appointment of Advisory Council will provide the NRECA with a manufacturer's vantage point on technology and development issues related to products and product development initiatives.



Mary O'Malley (center) spent time with Jennie Jordan and Kim Dunn gathering real world business examples.

Orange Facility Schools Local Teachers

T&B's Orange, Mass., facility is partnering with a local high school teacher in a "School to Work" externship program to provide real world business examples that will support curriculum for a business course.

Mary O'Malley, a teacher from Athol High School, spent time with Jennie Jordan, accounts payable clerk at Orange, to better understand the petty cash system. She also worked with Kim Gray, planner at Orange, to understand the different forms of computerized systems that are used in the scheduling process.

In addition to these on-the-job skills, Kim Dunn, Orange human resources manager, worked with O'Malley to incorporate tips into the curriculum on completing a job application and what employers are looking for in an interview. Dunn also shared the perspective of what corporations today are doing to engage employees in the business. She gave O'Malley an overview of T&B's work to build a great culture for employees via the Guiding Principles, and the employee reward and recognition focus via the Strongest Link award.



PLUGGED IN



Employees should take care to properly shut down their computers every night.

Proper Shutdown Keeps PCs Safe, Programs Current

T&B's Information Technology (IT) group is asking employees to support their efforts to maximize computer uptime and protect information security.

Before leaving for the day, employees should close all applications that are open, and shutdown their computers by going to the Windows Start menu, choosing "Shutdown" and then selecting "Restart" from the options in the drop-down box.

This leaves PCs in the ready-to-login mode. In this mode, IT can "push" patches (programs to fix bugs in the system) across the network at night while PCs are idle. Although there may be some applications that must be deployed during the workday,

IT department will use the night time deployment whenever possible to maximize uptime and productivity for office employees.

Also, during the workday, employees should set up a password protected screen saver to secure unauthorized access to their PCs. Screen savers already are on each PC; they're supplied in all the Microsoft operating systems. Right click anywhere on the Windows Desktop, choose "Properties," and then the "Screen Saver" tab. Check the box provided to password protect your screen.

Powerline Online!

Powerline is now available on T&B's intranet homepage. Click on the "Departments" link and then on the "HR" link.

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