

# GRUNAU GRAM

Spring 2005

I am writing this note to our customers, partners and team members as I sit in Starbucks Coffee® on a cold Wisconsin winter day.

As I review the terrific projects in this edition of the GrunauGram, I am continually thankful for the wonderful relationships that our team has been fortunate enough to be part of; not only on the projects highlighted here, but throughout our business each day.

Sitting in Starbucks, I am reminded again that we, like the coffee company, are in the customer service business. And some key success factors in the customer service business are: providing a differentiating experience and a predictable outcome. When we walk into Starbucks we know that we will have a unique experience and will walk out with a predictable outcome: great coffee served by friendly, energetic people.

If Grunau is to be successful over a long period of time, we recognize that we must provide the very same things to our customers: a differentiating experience and a predictable outcome. We do this not only through the quality of our work, but also through the way it is delivered. This includes the questions we ask, our ability to listen and our understanding that we must help our customers achieve their business objectives.

We continue to reinforce this message with our entire team and we continue to invest in technology, training, and most importantly, our "Lean" initiative, to enhance the experience we provide, as well as the predictability of the outcome.

As always, we greatly appreciate the opportunity to work as your partner and advocate, and we recognize the powerful responsibility we have to you and your business.

Thank you to Starbucks for setting a high standard.



Paul Grunau  
President, Grunau Company



**SERVICE**

## GRUNAU SERVICE AND MAINTENANCE TEAM COMPLETES NUMEROUS EXPANSION PROJECTS FOR AURORA HEALTH CARE

Grunau's service and maintenance team has a long-standing relationship with Aurora Health Care. Aurora appreciates Grunau's dedication to finding the best and most cost-effective solutions, and that recognition has prompted Aurora to ask Grunau to assist with numerous projects, including the expansion of two computer rooms.

In 2000, Aurora wanted to convert a computer room's air conditioning system to dry coolers to save money. The company also wanted to expand the room by almost one-third. Grunau's service and maintenance team helped Aurora design a system that used reusable glycol as the coolant, reducing the expensive water costs of the old system. The situation became tricky, however, when Aurora required the switch to occur without disruption or work stoppages. To prevent turning off the air conditioning units during the afternoon, the hottest time of day, the Grunau team worked in the early morning when it was cooler and before Aurora employees arrived for work. They installed the dry coolers on the roof and ran new piping to connect the Liebert cooling units to the dry coolers. Then, Grunau switched the system from city water to glycol, cooler by cooler. In the end, the service and maintenance team expanded the computer room by 2,000 square feet and added two new cooling units.

Throughout the expansion project, the service and maintenance team called on Grunau Metals to complete specialty metals work. The metals team fabricated and installed metal platforms for the rooftop dry coolers and the indoor pumping and control systems. They also built catwalks, railings and stairs to allow easy maintenance access to equipment.

In 2001, Aurora asked Grunau to assist with an update to the computer room's uninterrupted power source (UPS). The service and maintenance team installed a larger UPS unit and generator that could accommodate the previous year's expansion and add capacity for an anticipated second expansion.

Again, Grunau Metals assisted in the effort. The metals team helped install a platform and walkway for a fan coil unit used for backup to the UPS room cooling equipment. The installation required careful planning due to space constraints. If the team built the platform first, there wouldn't be room to bring in the units. The alternative, cutting a hole in the wall or ceiling, was too costly and impractical. The teams worked together, chaining the equipment to the steel structure above the space to allow Grunau Metals room to build. Once completed, the teams lowered the equipment into place on the platform.

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▲ Grunau's fire protection and electrical teams installed a new fire suppression system in Aurora Health Care's second computer room expansion.

◀ Grunau's service and maintenance team helped Aurora Health Care save money on air conditioning costs for its computer room by installing dry coolers on the roof of the facility.



## Grunau Exceeds Expectations on Fast-Paced Roundy's Project

Construction of Roundy's Inc.'s one million square-foot maintenance building, and dry and refrigerated warehouses, was well underway when Opus North, the construction manager for the project, asked Grunau Company's mechanical team and Grunau Metals to provide the HVAC, plumbing and specialty metal work.

With only five months before the scheduled completion date, Grunau closely coordinated with Opus North to ensure that the mechanical team could install underground plumbing without disrupting the building's construction.

Grunau also carefully designed the HVAC system with Roundy's input to ensure that the system would meet Roundy's functionality requirements and that it could be completed on time. The team saved time by building the system in phases, completing approved portions while waiting for the authorization on others.

Grunau Metals also completed work on the fast-paced job, fabricating interior stairs and handrails, and the loading dock ramp railings and exit stairs. The metals team also installed rooftop ladders, exterior access and crossover stairs, and fire escape-style drop-down ladders. In addition, Grunau Metals completed handrails, a sliding gate and stairs in the maintenance building's mezzanine.

To help meet the tight deadlines and allow for quick on-site installation, the metals team first fabricated their work at the Grunau Metals' shop. Once the other trades completed their tasks, Grunau Metals was back on the job site to begin installation.

Throughout the project, the scope of Grunau Metals' work increased, often requiring the team to find solutions without using drawings. Their final task, installing a maintenance platform and handrails around rooftop units, was finished at the end of February, just in time for the project's completion.

"I really enjoyed working with Grunau Company because I knew that I didn't have to worry about their quality of work or whether they would finish on time," said Dan Nash, Opus North superintendent. "They knew the demanding schedule and completely exceeded any expectations."



**MECHANICAL**

## GRUNAU'S LEADERSHIP RESULTS IN FAST TURNAROUNDS FOR THOMSON BETA

Grunau Company's reputation as an effective and proactive leader for projects with time constraints won the firm the HVAC, plumbing, and fire and specialty suppression systems' installation job for Thomson BETA System's 65,000 square-foot data center in Hartland, Wisconsin.

The building's construction was divided into two phases: the data center and the office area. Construction of the data center began in late April 2004 and had to be completed by October. The project required careful coordination among the trades. The Grunau team began by assisting the building's engineers, Affiliated Engineers Inc., with the HVAC, plumbing and fire protection systems' designs.

"To stay on schedule, it was essential that everyone worked as a team instead of as individual contractors," said Ron Kwiatkowski, Grunau vice president for design/build. "We wanted to ensure everyone's needs were being addressed and met to prevent any delays or setbacks."

After helping the engineers design the systems, Grunau had a small window of time to install piping for the HVAC's Liebert cooling units in the data center's raised floor. The team had to complete its work before any of the other trades could begin, and before Thomson BETA could set up its computer system. Installing the computers was a long process, and the company's main business—daily stock transactions—required all systems to be running when the building opened or the company would lose money. To save valuable time, the mechanical team prefabricated large sections of the piping at Grunau's Oak Creek facility and delivered them to the job site for easy installation.

The plumbing team also had to quickly finish its work, including installation of all water and sewer services in both the interior and exterior of the building and completion of the reverse osmosis system for the HVAC's cooling units.

Grunau's fire protection team also completed work at the company. The team addressed Thomson BETA's unique needs by installing two waterless fire suppression systems in the data room. Grunau called on its Youngstown, Ohio, fire protection team, which specializes in special hazards, to help design a clean agent fire suppression system for the data center. A clean agent system uses gas to cause a chemical reaction that neutralizes the combustible vapors of the burning material. Grunau also installed a pre-action system that requires two forms of fire detection before discharging water into the piping to extinguish the fire. This allows the building's occupants time to manually extinguish the fire and prevent equipment damage. Waterless systems are ideal for protecting expensive equipment, like computer systems, that cannot get wet.

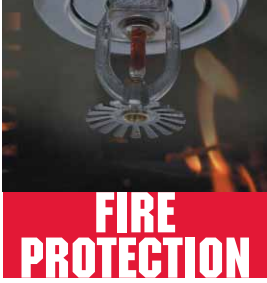
The fire protection team also installed wet sprinklers in the office areas and dry sprinklers in the generator rooms and on the loading dock—unheated areas of the building where wet sprinklers could have frozen in winter.

Thanks to careful planning and scheduling, all the Grunau teams completed their tasks, and Thomson BETA had plenty of time to set up its extensive computer system before the data center's scheduled opening.



*Grunau recently completed mechanical, plumbing and fire protection work on a building for Thomson BETA Systems. Headquartered in Milwaukee, Thomson BETA is one of the largest data-processing firms in the country.*





## GRUNAU FIRE PROTECTION HELPS BRING “MUMMY” TO LIFE AT UNIVERSAL STUDIOS

Grunau Company's Orlando fire protection office recently finished a complete renovation of a Universal Studios' roller coaster, “Kongfrontation,” transforming it into “Revenge of the Mummy.” The work on the new roller coaster included some minor cosmetic work, but the majority of the project was completed inside the building. Approximately 74,000 square-feet of floor space was renovated, and the upper and lower levels of the attraction were combined.

The project was on a fast track and required tight coordination among the trades. Grunau met the challenge, carefully planning and working simultaneously with the other trades to complete the ride on time. The team also worked closely with Universal Studios to ensure that the modern fire protection equipment would not conflict with the ride's ancient Egyptian design.

The fire protection team relocated the existing riser manifold and risers to accommodate new scenery. Grunau installed 600 sprinklers, strategically placing some piping and sprinklers behind scenery and in areas out of public view to maintain the authenticity of the ancient Egyptian backdrop. Coordinating with the architect and set designers, Grunau also installed several camouflaged sprinkler heads so they would blend in with the paint schemes and elaborate hieroglyphics.

The Grunau fire protection team took into account the ride's expensive equipment when choosing fire protection and suppression systems. In the ride control room, Grunau opted for a CO<sub>2</sub> system instead of a water-based system because, if activated, it would lower the likelihood of

equipment damage. The fire protection team also installed a pre-action system in the show control room, which controls the ride's animatronics and lighting features. This type of system prevents serious water damage from premature sprinkler operation by using a pre-action valve that detects heat and sounds an alarm. The alarm notifies the building occupants of a fire, giving them an opportunity to manually extinguish the fire before the sprinklers release water that could damage the equipment.

As always, when dealing with theme park rides and existing building renovations, “Revenge of the Mummy” was a project with a large degree of difficulty. The project combined new and existing fire protection systems with many structural changes. Universal Studios demanded the highest quality and perfection throughout the renovation. The fire protection team's craftsmanship and dedication helped the theme park bring the thrill of ancient Egypt to the 21st Century.



*Grunau carefully placed camouflaged sprinkler heads in the ceiling of the “Revenge of the Mummy” amusement park ride to blend in with the attraction's hieroglyphics.*

### CONTINUED FROM SERVICE, PAGE 1

Aurora was so impressed with Grunau's work that they retained the service and maintenance team as the lead construction manager on the second computer room expansion. In late 2004, Grunau began work on a 4,600 square-foot addition. The service and maintenance team once again called on Grunau Metals to supply support steel for the rooftop equipment and in the space behind the second floor office. Grunau's fire protection and electrical teams also are working on the project installing new fire suppression systems. The service and maintenance team is overseeing the installation of a raised floor for the underfloor HVAC system, piping and computer wiring. Once complete, they will install five new

Liebert cooling units on stands in the room and four additional dry coolers on the roof. The space and systems will provide more capacity than currently needed to allow for future expansion.

“We have a long-standing, solid relationship with Grunau Company because of the high-quality work they produce and their responsiveness to our needs,” said Gary Weckwerth, director of technical systems for Aurora Health Care. “We are a 24-hour business and Grunau works extremely hard to complete all work without any interference in our business operations, like costly computer shutdowns.”

Grunau is expecting to complete the project in April, almost a month ahead of schedule.

## The Doctor's In: A Spring Check-Up from Grunau

Now that spring is approaching and the Wisconsin winter is waning, it's a great time to evaluate your mechanical systems. Grunau's service and maintenance team has some cost-saving suggestions for improving system efficiency.

1. Schedule a comprehensive compressor oil analysis. This allows ample time to take corrective measures before a problem worsens.
2. Clean condenser and evaporator coils to increase energy efficiency and reduce operating costs. Cleaning also will lengthen the life of the equipment.
3. Regularly replace air filters to help ensure good indoor air quality.
4. Schedule preventive maintenance programs to reduce unplanned service calls and equipment breakdowns.

Grunau can perform all of the above services. Call Chuck Neumeyer at (414) 216-6900 to schedule a service check-up or for more information.

To receive the GrunauGram electronically, please e-mail [info@grunau.com](mailto:info@grunau.com) and include your first and last name and the name of your company. Please indicate “Receive Electronic GrunauGram” in the subject. Thank you!



*To allow room for an underfloor HVAC system, piping and computer wiring, Grunau's service and maintenance team oversaw the installation of a raised floor for Aurora Health Care's second computer room expansion.*



## METALS

# GRUNAU IS CENTER STAGE AT THE MILWAUKEE YOUTH ARTS CENTER

Grunau Metals and Grunau Company's plumbing and fire protection teams recently completed renovation work on a former Schlitz Brewing Company garage, transforming it into the new Milwaukee Youth Arts Center. The teams were on a tight schedule to complete the nearly year-long, 56,000 square-foot project by its January 29, 2005 opening. The center is jointly owned by the Milwaukee Youth Symphony Orchestra and First Stage Children's Theater—a first-ever collaboration of the groups.

Grunau Metals assisted in the renovation by installing structural support steel for a front entrance addition and a partial mezzanine that was added to house office space. All of the new structural work was tied into the existing structural steel, making the project more challenging.

The metals team also built a 40' x 40' HVAC support platform on the roof. Installation of the HVAC system was complicated by its location in an inaccessible area. The team had to use a crane to complete the project.

"The renovation of the old building created some challenges," said Mark Gall, vice president and division manager of Grunau Metals. "But after seeing the building we were able to do some problem-solving and modify parts of the original plans. For example, we needed to add reinforcements on the roof, which were not originally planned."

Grunau Metals also installed pipe grids in the ceiling, which provide attachments for lights and speakers. To prevent delaying other trades, the metals team painted the grids at the Grunau Metals shop instead of at the job site. The metals team also completed specialty metals work, including theater guardrails, and all the hand railings and stairs.

The Grunau plumbing team installed a new storm sewer for the building's addition and completed an extensive renovation of the interior plumbing system.



Grunau's fire protection team participated in the project, updating the building's existing fire protection systems by performing hydraulic calculations and testing the existing fire pump to ensure everything met current NFPA standards.

The team modified the fire protection systems in phases to maintain the tight schedule. They replaced portions of the existing system and all sprinkler heads before additional walls could be built. After the contractor finished the walls, Grunau returned to the site and installed additional sprinkler heads and expanded one of the three existing wet systems to provide coverage for the front addition.

All Grunau teams completed quality work while maintaining a strict timeline, providing the Milwaukee Youth Arts Center with a facility that will bring performing arts education and experience to 800 young musicians and 1,700 aspiring actors in Southeastern Wisconsin.

◀ *The Milwaukee Youth Arts Center is home to the Milwaukee Youth Symphony Orchestra and the First Stage Children's Theater.*

*Grunau Metals installed a pipe grid system that provides attachments for lights and speakers at the new Milwaukee Youth Arts Center.*



## GRUNAU METALS

EDITOR:  
Christine Owens

PUBLISHED BY:  
Grunau Company, Inc.  
1100 W. Anderson Ct.  
Oak Creek, WI 53154  
T (414) 216-6900  
F (414) 768-7950  
www.grunau.com

TECHNICAL CONTRIBUTORS: (story – contributor)

**Aurora Health Care** – Chuck Neumeyer, Vice President, Service Manager

**Roundy's** – Jeff Kuhnke, Senior HVAC Engineer; Mark Gall, Vice President, Metals Division Manager

**Milwaukee Youth Arts Center** – Mark Gall; Eric Radke, Fire Protection Project Manager; Brian Nysse, Metals Detail Engineer; Aaron Block, Plumbing Project Manager

**Revenge of the Mummy** – Greg Trammel, Fire Protection Project Manager/Designer

**Thomson BETA** – Ron Kwiatkowski, Vice President, Design/Build; Eric Radke; Brad Moore, Plumbing Foreman

**Spring Check-up** – Kurt Fies, Service Sales Representative

## GRUNAU

Grunau Company, Inc.  
P.O. Box 479  
Milwaukee, WI 53201

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