



EXCELLENCE SINCE 1920

Mechanical and Fire Protection Contractors and Engineers

Winter/Spring 2000

The Grunau Mission

by Paul Grunau
President

As we continue our journey through the Grunau Mission I am very pleased to discuss the next two items, both of particular interest to me.

- Create partnerships and strategic alliances with our customers and vendors through effective TEAMWORK.

I believe that this strategic tenet of ours gets to the heart of why we exist; we are in business as a result of the relationships that we build and maintain.

An excellent source of success for any business is the volume of repeat business they perform. As I have stated previously in this column, our customers are our partners, and we are their advocates. When we define teamwork we do so outside the boundaries of our organization. We look at the TEAM as consisting of all individuals involved in a given project. To the extent that we are united in our approach, objectives, and in how we interact with one another, we will be successful.

As a result of this firm belief in partnerships, we are very selective in terms of opportunities that we pursue. Ideally we would like to work with and for customers who embrace the same fundamental principles we do; trust, honesty, integrity, fairness. The same goes for the companies that are our suppliers.

In keeping with a popular business trend we have dramatically reduced the number of suppliers we deal with. We view this as an opportunity not only to reduce our costs, but also to ensure that our partners have similar business philosophies. Ultimately this allows us to feel confident in our TEAM, and to deliver the best possible service to our customers.

- Maintain an information system that supports the business plan.

When we developed our Mission we spent considerable time discussing information management. I firmly believe that our ability to deliver the highest quality construction service is directly improved if we proactively manage information.

The Y2K issue has created tremendous focus on information systems and their viability. While we were 100% Y2K compliant well in advance of 1/1/00, I am more pleased that we have maintained an investment policy that enables us to keep our information systems very current.

More and more customers are requesting detailed information in support of our work. These requests come in different formats, with different timing. Our information system is extremely flexible, allowing us to provide information for our customers the way they want to see it. Ultimately, this is consistent with our desire to be customer-driven. In fact, we anticipate a day in the not too distant future when our customers are linked to our system, offering them immediate access to information, whenever they desire. That would be one more step in the partnership process.

Alterra Healthcare Corporate Headquarters

Alterra, formerly Alternative Living Services, recently relocated their corporate headquarters from Brookfield to the Milwaukee County Research Park in Wauwatosa, Wisconsin. Alterra is the largest assisted living provider in the United States, providing specialized care that serves the needs of older adults. Alterra currently operates 431 assisted living residences in 28 states and specializes in residences specifically designed for individuals with memory impairment like Alzheimer's Disease.

As subcontractor to Hunzinger Construction Company on this \$20 million project, Grunau Company was involved in providing design/build HVAC, site and interior plumbing for this new 165,000 sq.ft., three-story building. Construction began on this fast-track project in March 1999, and was completed as scheduled on January 6, 2000.

The HVAC system consists of four 90-ton electric rooftop units. Parallel flow fan-powered VAV boxes with hot water heat serve perimeter zones and single duct VAV boxes with hot water reheat serve interior zones. The ductwork design ties the two rooftop units on each wing together into one common system, providing redundancy in the event of a unit failure.

Three 1500 Mbh, high-efficiency boilers provide comfortable hot water heat to the entire building. The boiler plant was designed to accommodate another boiler, with little disruption to the system, in the event that another wing is added to the building. In addition, the venting of the boilers was designed utilizing draft inducers on the roof in an effort to hide the boiler flues behind the pitched copper roof of the building.

Alterra's operations rely heavily on a substantial computer system that is located in the building. Three 5-ton computer room units, with provisions for two additional units, provide this room with very reliable conditioned air 24 hours/day, 7 days/week. This entire room, as well as several other portions of the building, are supported by an emergency generator system.

Part of the basement consists of an underground parking garage, which is ventilated and heated by a 1400 Mbh direct-fired makeup air unit, several hot water unit heaters, and an exhaust fan. An energy saving Carbon Monoxide (CO) monitoring system serves the garage, de-energizing the fan and make-up air unit when CO levels are below a safe level.

The entire HVAC system is controlled via a direct-digital control (DDC) system that monitors all equipment from a central location. All of the equipment, including all 140 VAV boxes, the four rooftop units, makeup air unit, fans,

and the computer room equipment are tied together via this system. This allows the equipment to all work together to create an integrated system. It also allows monitoring and alarming from off-site, providing the building operators a great level of support.

The site plumbing work included storm and sanitary systems, including 41 manholes and drainage inlet structures along with 3500 ft. of storm water main piping. The interior plumbing design was completed by the Grunau Company and included a kitchen, exercise area, bathrooms, including 137 upscale plumbing fixtures, and decorative fountain inside the building.

The design phase of this project was unique for several reasons. First, one of the significant advantages of design/build was called upon in order to maintain the project schedule. Our rough-in began prior to the completion of our design. Second, a great deal of time was spent on details in some of the high profile areas of the building. In addition to the hidden boiler flues, curved slot diffusers were used in the dining area and main lobby areas to coordinate with the ceiling design.

We would like to extend our thanks to the Project Team for their support and hard work throughout this project. The Alterra Corporate Headquarters will stand as a strong symbol of teamwork in design and construction.

PROJECT TEAM

Alterra Healthcare Corp., Owner

Thomas Komula, Chief Administration Officer

Hunzinger Construction Co., General Contractor

Jon Jansen, Senior Project Manager
Wayne Groeschel, Assistant Project Manager
Will Wright, Project Superintendent

Eppstein Uhen Architects

Jerry Bruscato, Project Manager

PSJ Engineering

Ed Gill, Senior Project Engineer

Grunau Company

Paul Schmidt, Vice President
Jeff Kuhnke, Senior HVAC Engineer
Rachel Eggebrecht, HVAC Engineer
Aaron Block, Plumbing Engineer
Bob Stich, Sheet Metal Foreman
Jerry Beiter, Piping Foreman
Al Bachman, Plumbing Superintendent
Don Czajka, Plumbing Foreman
Dennis Laney, Site Superintendent
Tim Sadowske, Site Plumbing Foreman



Alterra Healthcare Corporation, Wauwatosa, Wisconsin

HONEY CREEK CORPORATE CENTER

The Honey Creek Corporate Center is located at I-94 and 84th Street, in Milwaukee, Wisconsin. The campus combines a sophisticated prairie style architecture with eye-catching landscaping.

Opus North Corporation hired Grunau Company on a design/build basis to install the HVAC system on Phase II of the three-building project. The building was completed in June of 1999, with tenant work ongoing.

The HVAC system consists of three 130-ton rooftop units that serve the entire building. Variable air volume (VAV) boxes provide zone control in the tenant spaces. Fan-powered VAV boxes with electric heat serve perimeter zones, and single duct VAV boxes serve interior zones. Miscellaneous electric heating devices provide heat at entries and restrooms. One central toilet exhaust system ventilates the restrooms. The basement garage is ventilated and heated with electric unit heaters. An energy saving Carbon Monoxide (CO) monitoring system serves the

garage, de-energizing the fans when CO levels are below a safe level. The entire building is controlled via a direct-digital control (DDC) system that monitors all equipment from a central location and allows monitoring and alarming from off-site.

The ductwork design for the building is rather unique. All of the units are tied together into one common system, providing several advantages to the buildings operations. First, during partial occupancy periods, only one or two units need to operate, regardless of which portions of the building are occupied. This proves very useful during building lease-up to conserve energy and unit run-times. Second, in the event of a unit failure, other units can still provide air to the entire building.

The completion of Phase II of the Honey Creek Corporate Center was highlighted by Opus North selecting our team for design/build services on Phase III. We appreciate the opportunity, and are committed to continued success.

PROJECT TEAM

Opus North Corporation, Developer and General Contractor

Matthew Bratzke, Associate Project Manager
Mike Bowe, Superintendent

Grunau Company

Jeff Kuhnke, Project Manager/Engineer
Bob Stich, Sheet Metal Foreman
Marge Mosey, Temperature Controls Foreman
Dick Wirt, Air Balancing and System Commissioning



Honey Creek Corporate Center

WHITEWATER MIDDLE SCHOOL

The Whitewater School District consists of five educational facilities, all of which are currently being renovated to improve their educational programs. Our team worked in partnership with Johnson Controls to provide design/build services for the renovations of, and additions to, Whitewater Middle School.

This design/build project consisted of replacing the entire high pressure hot water heating system (original system installed in 1958), complete piping, sheet metal, electrical, and control wiring.

The new hot water system has two 4.5 MMBH gas-fired water tube boilers. The boilers are pumped in a primary/secondary arrangement. New mains were extended from the boiler room to various parts of the school to serve 47 new classroom unit ventilators, 19 cabinet heaters, and new hot water coils in the existing air handling units. The placement of the hot water main pipes was critical, and most of the pipes were concealed. The existing Instruction Material Center area was also up-graded by installing five ceiling recessed unit ventilators. The entire system was designed and installed to accommodate future air-conditioning, with year-round schooling in mind.

The scope of work also included minor remodeling at Lakeview Elementary School, including the replacement of (15) classroom unit ventilators.

Our team up-graded all pneumatic controls and provided a complete electrical service for the new equipment.

This was a fast-track project with important deadlines. Coordination with the general contractor's curtain wall installation, along with the timing of some equipment deliveries, required critical planning in order to complete the project before the start of the school year.



Hot Water Boilers

Whitewater School personnel provided full cooperation in making the project a success. Team members from Bray & Associates and Johnson Controls also made significant contributions toward the ultimate success of the project. We are proud to say that all deadlines were met, and the students returned to a beautifully renovated facility this past fall!

PROJECT TEAM

Whitewater School District, Owner

Dr. John Negley, District Administrator
Steve Ryan, Principal
Mike Channing, Supervisor of Buildings and Grounds

Johnson Controls, Inc., General Contractor

Nick Laubusch, Sales Manager
Steve Brinkman, Sales Owner Direct
Dave Smith, Project Manager
Paul Gustafson, Lead Energy Engineer

Bray & Associates, Architect

Rick Jasinski, Director of Construction Related Services
Rick Lundeen, Architectural Designer

Grunau Company

Ken Bhatia, Project Manager
Tom Owen, Electrical Project Manager
Randy Duemke, Steamfitter Foreman
Steve Redell, Steamfitter Foreman
Ralph Przybylski, Electrical Foreman
Dale Poweleit, Temperature Control Foreman

AURORA HEALTH CARE – FOREST HOME BUSINESS CENTER

The next time you walk through your Pick'n Save try to imagine it as an office space for key operating functions of a large health care provider in Milwaukee. The former Pick'n Save at 3307 West Forest Home Avenue became available and the challenge was out for the owner, architect, construction manager, and design/build team.

Grunau Company became part of the team and performed the plumbing, HVAC, fire protection, temperature control, and miscellaneous metals work for this project on a design/build basis.

The plumbing work included new toilet rooms, central domestic water heater and kitchenette services for the offices.

The fire protection design and installation had to cope with the variation of ceiling systems from lay-in to exposed to private offices in island huts with curved ceilings. The system design also required coordinating systems with other mechanical and electrical trades to allow not only for proper coverage, but also, symmetry in appearance.

The design of the HVAC system precluded reuse of existing mechanical equipment. The HVAC system consists of nine new VAV DX rooftop units with 200-tons of cooling with gas heat, supplemented by electric heat at perimeter offices and entrances, all sized by department use. Rooftop equipment required supplemental steel installed by Grunau Metals for structural support. Care in installation of spiral duct in exposed areas was required to maintain appearance for painting.

DDC controls, installed by Grunau technicians, allow the owner to monitor equipment operations and reset space and unit temperature through local panels.

Grunau Air Balancing Technicians, working in conjunction with Grunau Service Technicians, balanced and commissioned the systems.

While the office expansion work was being performed, team members were required to relocate and expand the office lunch room and food preparation service without affecting building operations. Relocated rooftop and exhaust fans provided the HVAC requirements for this area, while the

plumbing system provided connections for the relocation of the dishwasher and grease trap to a new dishwashing room.

The challenge of completing the project on schedule was overcome as the owner, construction manager, and Grunau team members reacted to and solved design problems at the site.

PROJECT TEAM

Aurora Health Care, Owner

Karen Krueger, Facilities Specialist
Myron Ciesielski, Supervisor Plant Operations

Grunau Project Development, Construction Manager

Kevin Lenius, Project Manager
Brad Beyer, Superintendent

Welman Architects

R.G. Keller, Director of Design
Ray Rodenbeck, Project Manager

Grunau Company

Ron Kwiatkowski, Vice President
Ken Dottai, HVAC Engineer
John Schneider, Plumbing Project Manager
Eric Radke, Fire Protection Project Manager
Greg Herzog, Fire Protection Foreman
Dennis Laney, Inside Underground Superintendent
Jim Minesal, Plumbing Foreman
Ken Baas, Sheet Metal Foreman
Chuck Ashley, Steam Fitter Foreman
Marge Mosey, Electrical/ATC Foreman
Dick Wirt, Test & Balance Foreman
Bill Arends, Test & Balance Foreman



Aurora Health Care

ORLANDO FIRE PROTECTION

MILLENNIUM VILLAGE

Who else would you expect to throw a 15-month millennium celebration? Walt Disney Company, of course. They opened the biggest party in their history on October 1, 1999.

Located in EPCOT Center, "Millennium Village" guests discover different countries and nations. Grunau Company worked on many of the attractions within the new addition. Under American Bridge Company, our team performed the base build out. The facility has three separate fire protection systems with over 1,000 sprinkler heads, as well as a deluge system for exposure protection to the structure. Portions of the building reach to heights of over 45 feet.

Working with Mivan Florida, Inc. Grunau Company provided 75 sprinkler heads for the Israeli Exhibit and Performance Platforms. This attraction features a simulator ride that takes guests on a tour through city streets of Jerusalem.

Our team also worked with Buena Vista Construction Company on the exhibits for Brazil, Scotland, Saudi Arabia, and the Swedish Eggs. These pavilions, with a combined total of over 100 sprinkler heads, allows guests to experience different cultures and traditions.

One of the most enjoyable aspects of working with Walt Disney Company is an opportunity to see the relentless innovation and ingenuity that has kept guests entertained for generations.

PROJECT TEAM

American Bridge, General Contractor

Brendan Lynam, Project Manager

Mivan Florida, Inc., General Contractor (Exhibits)

Donald McKay, Project Manager

B.V.C.S., General Contractor (Exhibits)

Glen Mullins, Project Manager

Grunau Company

Mark Peters, Vice President
Tony Callaghan, Project Manager
Greg Trammel, Project Engineer
Cliff Bommer, General Foreman

EARLY SPACE EXPLORATION

Grunau Company Orlando had the privilege of working on the newest expansion for NASA. The Kennedy Space Center has recently been on a new mission: tourism. The most recent makeover on the facility was done in an effort to entertain and educate a new generation.

"Early Space Exploration" is a new exhibit that focuses on the Mercury & Gemini space programs. Visitors begin the experience in a 1960's style kitchen and living room, learning background information about the space program from Kennedy-era television sets. They are then escorted into the actual Mercury Mission Control Room where they view the control panels and consoles.

Early Space Exploration is protected by a single wet pipe sprinkler system with 300 heads, both above and below this 38,000 sq.ft. exhibit.

Our team was also involved in the Millennium addition. This exhibit, also protected by a single wet pipe sprinkler system, focuses on space exploration of the future.

According to NASA we are at the beginning stages of space exploration. It is exciting to imagine what the next millennium holds.

PROJECT TEAM

Ivey's Construction, General Contractor

Steve Sergis, Project Manager

Grunau Company

Mark Peters, Vice President
Mike Smith, Project Engineer
Bruce Poole, General Foreman

EPPSTEIN UHEN ARCHITECTS MOVE TO HISTORIC THIRD WARD

The Historic Third Ward in Milwaukee, Wisconsin is quickly developing into a popular area for office, restaurant, and retail development. The latest addition comes from an architect's vision of the past and future. The 333 East Chicago building was an old shoe factory/warehouse, constructed of wood and brick. After a 12-month renovation, Eppstein Uhen Architects (EUA) now occupies virtually the entire building. Some space on the first floor is available for lease.

Greg Uhen, President of EUA, and his staff, selected Berghammer Corporation, Staff Electric, and Grunau Company as members of their design/build construction team. Grunau Company was responsible for the HVAC, plumbing and fire protection.

Our fire protection team fabricated and installed an automatic sprinkler system for the building. This required the installation of 350 automatic sprinklers, along with a wet standpipe serving each floor. An antifreeze system was also installed to protect a covered portion of the building that was exposed to the elements.

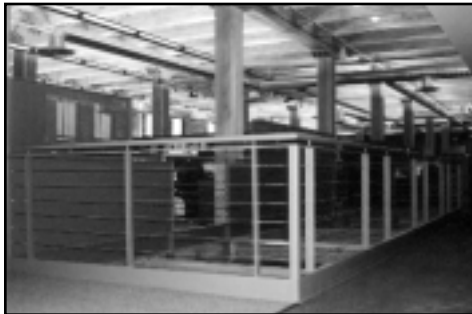
The plumbing design encompassed a new domestic water service, sewers, water heater, and distribution piping to all fixtures. Our team worked closely with EUA to satisfy their desire for a unique look to the plumbing fixtures.



The HVAC design consisted of a single 150-ton VAV/DX rooftop unit with gas heat for morning warm-up, and 27 VAV zones. A sealed combustion hot water boiler located in the basement provides hot water for supplemental heating at entrances, below windows, and in support areas. The fin tube radiation was closely coordinated with the furniture and room layouts to provide for maximum surface area for all the work spaces. The temperature controls, installed by Grunau technicians, are completely DDC, and have exceptional flexibility in control and system operation.

Grunau Metals was responsible for the fabrication and installation of the stairs and railings, metal signage, HVAC supports, and picketed exterior security fencing and gates. The project was especially challenging because all the stairs needed to be retrofitted into the existing building. The 2nd floor atrium features a stainless steel cable rail system.

EUA moved into their space in late December. This was a very demanding, fast-track project. We are very proud of the final product, and are pleased to have been part of the design/build team providing EUA with a landmark headquarters.



Stainless Steel Cable Rail System



Distribution Ductwork In Open Office Area

PROJECT TEAM

Eppstein Uhen Architects, Owner

Greg Uhen, AIA, President
Mark Lewandowski, AIA, Architect
T.J. Morley, Senior Design Architect
Dave Dell'Agnese, Project Manager

Berghammer Corporation, General Contractor

Leif Nesheim, President
Jon Nord, Project Manager
Craig Eischen, Project Manager
Leonard Bahr, Field Superintendent

Staff Electric

Mike Lochmann, President
Daryl Romlow, Electrical Foreman

Grunau Company

Ron Kwiatkowski, Vice President
Jeff Kuhnke, Senior HVAC Engineer
Howie Laumer, Plumbing Engineer
Eric Radke, Fire Protection Project Manager
Mark Gall, Metal Fabrication Manager
Jay Schwanke, Metal Fabrication Project Manager
Greg Herzog, Fire Protection Foreman
Dennis Laney, Underground Superintendent
Gary Lando, Metal Shop Manager
Bob Antczak, Metals Foreman
Rick Coates, Metals Foreman
George Bachman, Plumbing Foreman
Rob LaChapelle, Plumbing Foreman
Mike Sommers, Sheet Metal Foreman
Bob Sindric, Steam Fitter Foreman
Marge Mosey, Electrical/ATC Foreman
Dick Wirt, Test & Balance Foreman
Bill Arends, Test & Balance Foreman



Architectural Metal Sign

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