GRUNAU GRAM

EXCELLENCE SINCE 1920

Mechanical and Fire Protection Contractors and Engineers Summer/Fall 2003

The President's Corner

by Paul Grunau

As you enjoy this issue of the GrunauGram, you will read about some terrific projects that we have been fortunate to work on with some wonderful customers. One in particular is The John P. Raynor, S.J., Library at Marquette University. I am proud to say that, despite some unexpected adversity, this project has been a real success. We are also fortunate to be currently engaged in another exciting project at Marquette; The Al McGuire Center. This is a state-of-the-art facility on campus that will include a 4,000 seat arena for women's basketball games, as well as expansive training and practice facilities for men's and women's basketball and volleyball programs. You will certainly read more about this great project in an upcoming issue of the GrunauGram. Now the reason for bringing it up today.

Al McGuire had a great career at Marquette, leading the then Warriors to NCAA and NIT titles in the 1970's. Beyond his accomplishments on the court, Al McGuire was a dynamic motivator and leader, and a great speaker. He also recognized that it took the entire team, working together, to win on a regular basis.

One of my favorite Al McGuire stories has to do with a young college coach at a small school in Illinois who met Al McGuire at a clinic in the 1980's (after Al had retired from coaching). This young coach had an opportunity to ask Al one question and he wanted to capture the essence of successful coaching. So, he walked up to Al and asked . . ."Coach McGuire, what is the secret to being a great coach, and to putting great teams on the court year after year?" As the story goes, Al looked at the young coach and simply replied . . . "Make sure you recruit great players."

The correctness of this answer is obvious, yet incredibly elegant in its simplicity. Al acknowledged that the best way to put a great team on the court is to make sure the team consists of great players.

I believe the same principle applies to business. No matter how bold your sales literature is, or your business presentations are, there is no substitute for putting great players on the court every day. Ultimately we accomplish as much as our team sets out to accomplish.

The reason I love this story is because at the end of the day winning is simple; put great players on the court, inspire them to work as a team, and accept nothing less than excellence. Actually doing this requires daily attention and effort.

This issue of the GrunauGram highlights some of the terrific people we are fortunate to have on the Grunau Team, who, working with our wonderful customers, achieve great things.

We will continue working each day to build our team, so we can always put the best players on the court for our customers.

The John P. Raynor, S.J. Library

Celebrating the memory of Reverend John P. Raynor, S.J., Marquette University broke ground on this project on October 1, 2001, which by no coincidence was Fr. Raynor's birthday. The new library will help Marquette University to educate students and train leaders in the Ignatian ideals. A first among colleges and universities, this new facility will fulfill the Jesuit tradition of education by making learning dynamic and lively, to engage students in the real world, to encourage life-long learning, and to enable students to differentiate truth from information and turn information into knowledge.

When the doors open to students for the 2003 fall semester, they will find a library for the future which includes:

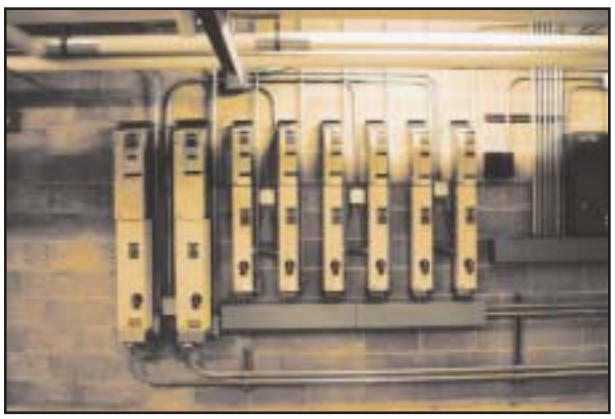
- Online access both for work stations and wireless connections for laptop computers.
- A teaching and learning center with the latest technologies for research and study.
- A conference center for large groups utilizing video conferencing and breakout rooms.
- Study spaces for small groups.
- Comfortable and safe late-night study space.
- A café, with light food and beverage service and internet access.

Making all this possible was a team of dedicated individuals. Headed by Opus North Corporation, construction manager, Grunau Company was subcontracted to complete the HVAC, plumbing, fire protection, and specialty metal fabrication on this 125,000 sq.ft., 3-story building.

Our design/build HVAC scope of work included the installation of one custom air-handling unit consisting of dual supply fans, humidifier, chilled water coil, hot water coil, and filters which provides the ventilation air for the entire building. Chilled water was brought in underground from Marquette's district chilled water system. Low pressure steam was also brought in from the WE Energy district steam system. The steam is utilized for building humidification and is converted via two shell and tube heat exchangers to provide hot water for building heating. Over 100 variable air volume (VAV) boxes with hot water heating coils provide zoned control throughout the building. Hot water finned-tube radiation is enclosed in architectural sills which provides heat throughout the perimeter of the building. A large dehumidification air-handling unit provides heating, cooling, and/or dehumidification for the large Special Collections room that houses the library's valuable items.

Our design/build plumbing work consisted of the installation of 110 plumbing fixtures, including 8 toilet rooms with electronic sensing fixtures. To pump sanitary and clearwater waste from the lower level, two duplex ejector systems were installed. Storm water on the roof is removed by two 10" vertical storm conductors. In order to protect the plumbing lines under the bridge area, Grunau had to electrical heat trace to prevent the pipes from freezing.

The fire protection portion of this project included the installation of four automatic fire protection systems. These systems required 1200 sprinklers to be installed to adequately protect this facility. Grunau also installed approximately 14,000 feet of sprinkler piping which was necessary to supply water to the sprinkler heads. Each floor is zoned separately with its own floor control valve and draw assembly. These



Variable Frequency Drives and Starters

Duplex Pumps for Storm and Sanitary

(Cont'd on Page 2)

Library (Con't)

systems were designed and coordinated by our in-house design department which provided Cad based installation drawings.

Grunau Metals fabricated and installed the miscellaneous metals portion of this project. Their scope of supply included: two 3-story stair towers, various ramp rails, support steel for the elevator, and approximately 6 tons of other miscellaneous metals. The Metals Department needed to carefully coordinate with all of the other trades as the work areas at times were rather congested.

Hand Rail

TEAM PLAYERS:

Marquette University, Owner
Tom Ganey, Assistant Director
Bob Koster, Project Manager
Kathy Kugi-Tom, Project Coordinator

Opus North Corporation, Construction Manager
Julie Ledger, Project Manager
Tom Kennedy, Vice President Construction
Mike Bowe, Superintendent
Josh Babiasz, Associate Project Manager II

Opus North Architects
Ed Gschneidner, Associate Manager – Architecture
Joe Mamer, Sr. Project Captain

Shipley Bulfinch Richardson & Abbott, Design Architect
Jan Heespelink, Project Architect

Staff Electric, Electrical Contractor
Mike Lochmann, President/Project Manager
Darryl Ramlow, Foreman

Insulation Industries, Mechanical Insulation
Roger Peot, Project Manager
Steve Nampel, Foreman

Johnson Controls, Inc., ATC Contractor
Jeff Marks, Project Manager
Mike Barrett, Technician

Grunau Company
Jeff Kuhnke, HVAC Project Manager
Eric Radke, Fire Protection Project Manager
Rick Lando, Grunau Metals Engineer
Rachel Donnelly, HVAC Engineer
Aaron Block, Plumbing Engineer
Don Peterson, Walter Kunde, Tim Pladies, Steam Fitter Foremen
Bob Stich, Art Sukowatey, Ken Baas, Sheet Metal Foremen
George Bachman, Plumbing Superintendent
Phil Mnuk, Plumbing Foreman
Steve Thelen, Paul Latus, Balancers
Dan Aranda, ATC Electrician
Dave O'Neill, Fire Protection Foreman

Fire at John P. Raynor, S.J. Library Creates Temporary Adversity

As the Raynor Library project was nearing completion, an event occurred that changed the course of the project for the coming months and became a testament to how strong relationships can overcome very difficult obstacles. In the early morning hours of Saturday, May 3, 2003, a Marquette security guard saw flames inside the nearly completed library. The fire was quickly extinguished, but not before smoke had found its way throughout the entire library. The cause of the fire was undetermined, however, the damage, particularly the smoke damage, was extensive.

The project team had to quickly refocus its attention to evaluating what damage had occurred and then identify what needed to be cleaned and/or replaced. Within hours of the fire, Opus North had brought a new player onto the Raynor team, Paul Davis Restoration. Within hours, Paul Davis Restoration was cleaning all of the carpeting to keep the soot and smoke from becoming embedded. The following week was spent working together, inspecting all parts of the building and selectively demolishing ceilings, walls, ductwork and the like to assist the Paul Davis people with their evaluation. The first of three thorough cleanings commenced as well. A plan was then made for the cleaning, restoration, and replacement of part of the building.

The 10,000 square foot area in the immediate area of the fire required the most attention as it not only had components that had actually burned, but the soot (and smell) was obviously the most intense. In this area, the ceiling grid and tiles were replaced; the raised flooring was replaced; the light fixtures and the duct insulation was replaced; the concrete floor was shot blasted; and all of the walls and ceiling structure were repainted. The walls of the remainder of the first floor were also repainted and its ceiling grid and tiles were replaced as well.

At the time of the fire, Grunau Company's HVAC work was essentially complete, as the balancing and temperature control commissioning had been completed a few weeks earlier. However, we played a significant role in the clean-up process as it was determined that any ductwork that had internal duct liner needed to be replaced. This meant the replacement of 103 VAV boxes including the five to ten feet of ductwork downstream of the boxes. Also, 270 slot diffusers and flex duct needed to be replaced. We went from being virtually done to having to quickly ramp up again!

Other work that occurred throughout the building included replacing all of the ceiling tiles; all light fixtures were removed, dismantled, cleaned and reinstalled.

The demolition of the VAV boxes and slot diffusers was accomplished in about five days. With the help of Trane Company and Airflow Inc., we had new VAV boxes and slot diffusers by May 14th. We began reinstalling what we had just demolished that same day and crews worked nearly every day after that until June 6th. This was only possible due to the planning, coordination, and dedication of the team.

In addition to the sheet metal work required, our steamfitters had to disconnect the hot water heating coils which were then cleaned. Our electricians had to disconnect the control wiring and remove the DDC controllers, which were also cleaned by a specialty electronics cleaning contractor. The electronic components of the variable speed drives were also cleaned. The ceiling contractor, Quality Ceilings, and our insulators, Insulation Industries Inc., worked alongside our people to enable a speedy replacement process as well as to get areas completed as quickly as possible.

With all of the work complete, Lakewood Filters cleaned the inside of the entire heating system. By this time, the cleaning of the other parts of the building was wrapping up. We then rebalanced and recommissioned the entire airside system.

The Raynor Library opened its doors one month late on Monday, August 4, 2003, despite this unfortunate experience.

Relationships can sail through prosperous times, but they are truly tested and defined during adversity. We are proud not only of the members of the Grunau Team who committed themselves to the clean-up and recovery process, but also of the entire Team, Marquette University, Opus North Corporation, and all of the suppliers, whose strong relationships were tested, and ultimately taken to a new level.

Festival Bay Mall, Orlando, Florida

Enter into a complex that features unique retail shops combined with entertainment establishments, and you must be in the new Festival Bay Mall. This 850,000 square foot project is themed in tropical architectural design and displays Florida's upbeat lifestyle. The Water Front "Bay" at the Center Atrium with its fountains and lights, adds to the festive atmosphere. Grunau was proud to be chosen as a team member in the construction of this exciting project. Grunau designed, fabricated and installed over 7,000 sprinklers on 18 systems, which are fed by more than 14,000 feet of bulk supply piping, a 1000 GPM diesel fire pump complete within a self-contained structure, and 46 hose stations on a Class I standpipe system.

Special trade-off agreements were made with the design team and the City of Orlando due to the length of egress travel at the center retail corridors. Quick response sprinklers were installed throughout the complex and closely spaced sprinklers on 6-foot centers at the corridor openings, all the while meeting Factory Mutual design requirements.

The construction of the water feature was scheduled early in the project due to the complexity and the amount of work to be completed to finish with the Mall. Access to overhead fire sprinkler work became difficult to install, since work had to be performed using an 80-foot boom lift from either side of the fountain walls. The sprinkler protection of architectural free-standing structure at the arcade corri-

Festival Bay Mall (Con't)

dors and atrium required thoughtful planning to provide an adequate water supply, sprinkler placement for proper coverage, and a pipe routing that would not distract from the theme.

The challenges of unique architecture facades and complex structures fit well with the Grunau Team whose resume includes some of the most demanding Fire Sprinkler installations throughout the Central Florida area.

St. Luke's Central Plant Expansion and Remodel

The Central Plant Expansion and Remodel at St. Luke's Hospital consisted of a 3-story 10,000 square foot addition to the existing plant for which Grunau Company is performing the HVAC and plumbing portions of the project. The HVAC work consisted of removing five existing cooling towers of which two are being reused, the addition of a new boiler and two new emergency generators, modifying the existing fuel oil system, ventilation for the new plant addition and the piping work associated with adding this equipment to the new facility. The cooling towers were located on grade within the footprint of the new addition so they needed to removed and relocated for the new building to be erected. Once the steel for the new building was in place the two reused towers were then placed on the new roof and a new 676 ton cooling tower was added for a total of three towers for the new plant. Since the towers were now placed on the roof level of the new addition, existing piping and pumps were then modified to accommodate the new locations. The team also had to get the new condenser water system up and running in mid-March to accommodate the hospital's cooling needs during the spring months with only having a shell of the new addition in place and continuing the construction process around the operating equipment.

The addition to the plant was sized to accommodate three new boilers for the hospital. Currently we have added one new 30,000 lbs/hr boiler operating at 165 psig with two spaces for future. In order to add this boiler into the system Grunau had to add piping and modify the existing steam, condensate, feed water, natural gas, and fuel oil systems. This work involved close coordination with the hospital for numerous off hours shutdowns required to complete our tie in work.

St. Luke's (Con't)

Part of the reason for this additional boiler capacity is the hospital's addition of the 12-story Patient Tower currently under construction. In order to deliver the new steam from the Central Plant to the new tower approximately 800'-0" of 12" high pressure steam and 6" pumped condensate were installed underground using the Rovanco piping system. As part of this underground system, three concrete pits were constructed to accommodate changes in direction as well as expansion joints and valving. Again, close coordination was required with the hospital in order to phase the underground work in such a way to minimize the disruption to the hospital's traffic pattern and parking needs. Grunau Company worked on the Thanksgiving 2002 holiday in the effort to complete underground work across the loading docks to avoid disruptions to the hospital's constant delivery needs.

In order to accommodate the exhaust requirements for the new boiler, Grunau Metals constructed and installed 80'-0" of new 58" diameter breeching from the new boiler up thru the second story of the new addition across the roof of the existing hospital and tied into the existing brick chimney of the hospital. Gibraltar Chimney was subcontracted to perform the cutting, patching, and reinforcing work on the chimney. Again, close coordination was required with the hospital in order for the team to shutdown the hospital's existing operations to inspect and install the new breeching connections and remedial work on the existing chimney. To accommodate the hospital's needs, Grunau constructed a temporary exhaust stack to allow minimal operation of the existing boilers while the new work was performed.

In order to accommodate the fuel requirements for the new boiler, Grunau Company coordinated shut downs with the hospital on the main gas supply to modify the existing piping for the new boiler. The new boiler as well as the new generators also require fuel oil for which Petroleum Equipment was subcontracted to perform the fuel oil system work. This work involved the replacement of the man ways on the two existing underground 20,000 gallon storage tanks, new underground piping to the addition and existing plant, new piping for the boiler and generators, modifications and tie ins to the existing piping, and the addition of a new fuel oil fill station.

Ventilation for the new addition is accomplished through a series of exhaust fans and a large air handling unit on the second level. The two new emergency generators require a large amount of airflow for proper operation. The intake openings for the new generators consist of 12'-0" x 12'-0" and 16'-0" x 12'-0" duct sleeves with multiple motor operated dampers for control. The exhaust openings for the new generators consist of a duct transition from the generator radiators to 12'-0" x 12'-0" openings in the wall. Multiple motor operated dampers were installed for control. The generators utilize fuel oil to operate and thus require exhaust. Grunau installed new 18" diameter double wall stack from the generators on the third floor up to the roof to three 21,900 cfm Strobic Air fans.

Plumbing work consisted of the underground site work for storm and sanitary, the extension of water service through the existing plant, the installation of underground sump pumps for storm and sanitary, the sanitary waste and vent system for the new addition, the roof conductor system, and a new air compressor and compressed air piping.

Due to an existing underground tunnel running under the addition, Grunau installed sanitary and storm sump pumps to drain the east half of the addition and pump over the tunnel to the west side. Once outside the building the underground sanitary system was rerouted to the existing sanitary sewer. The underground storm includes a backwater valve for protection of sewer back ups due to the elevations involved and then continues onto the existing MMSD box conduit to which we connected.

TEAM PLAYERS:

St. Luke's Hospital, Owner
Mike Connor, Regional Director of Plant Operations
Ernie Busse, Project Coordinator Plant Operations
Steve Nowakowski, Plant Specialist Mechanical/Electrical
James Jopek, Engineering Supervisor
Cherian Varghese, HVAC Supervisor
Mark Schmidt, Construction Coordinator

Hammes Company, Owner's Representative
Pat Rossmiller, Sr. Project Manager

Oscar J. Boldt Construction Company, General Contractor
Nick Stromer, Vice President Healthcare Projects
Dennis Buxrude, Sr. Project Manager
Craig Wallen, Project Manager
Randy Heinzelman, Superintendent
Joe Wagner, Superintendent

Kahler Slater Architects, Inc.
Harold Davis, Associate

Ring & DuChateau, Inc., Engineer
Frank Lopez, P.E., HVAC Engineer
Dave Rawls, P.E., Plumbing Engineer

Johnson Controls, Inc., Controls Contractor
James Simpson, Project Team Manager

Insulation Industries, Insulation
Roger Peot, Project Manager
Alan Najmabadi, Foreman

Petroleum Equipment, Inc., Fuel Oil System
Tom Hyslop, President

Gibraltar Chimney International, LLC
Bill Nolan, President

Grunau Company
Larry Loomis, Project Manager
Mark Gall, Grunau Metals Manager
Rick Lando, Grunau Metals Design Engineer
Brian Zwiebel, Grunau Metals Design Engineer
Tom Owen, Electrical Project Manager
Dennis Laney, Site Utilities Superintendent
George Bachman, Plumbing Superintendent
Paul Lentz, Steam Fitter Superintendent
Gerry Gelhaar, Steam Fitter General Foreman
Dan Bolan, Steam Fitter Foreman
Mike Lagerman, Sheet Metal Foreman
Jon Donovan, Plumbing Foreman
Tim Sadowske, Site Utilities Foreman
Joe Naylor, Site Utilities Foreman
Bob Antczak, Grunau Metals Foreman

EMPLOYEE SERVICE AWARDS PRESENTED

40 YEAR – Paul Schmidt with Ron Kwiatkowski and Paul Grunau.

35 YEAR – Bill Scheinoha with Ron Kwiatkowski and Paul Grunau. Not pictured (Milwaukee) David Bartoshevich.

30 YEAR – Howard Schneider, Don Hecker, Ken Dottai with Paul Grunau and Ron Kwiatkowski. Not pictured (Milwaukee) Mike Tully, (Indianapolis) Bob Woods.

25 YEAR – Mark Gall, Kevin Vermillion, Gary Lando, Arlene Skarr, Dan Fenney with Ron Kwiatkowski and Paul Grunau. Not pictured (Milwaukee) Jim Ciechanowski.

15 YEAR – Tom Bongard, Ruth Swartout, Sandy Rapant, Tom Owen with Ron Kwiatkowski and Paul Grunau. Not pictured: (Milwaukee) Paul Latus, (Pittsburgh) Stacey Gasior, (Orlando) Stephen Gauvreau, Scott Orians.

10 YEAR – Randy Haapakoski, T.J. Laney with Paul Grunau and Ron Kwiatkowski. Not pictured: (Milwaukee) Dave Brown, Bob Campo, Rick Herrmann, Gene Lehmann, Rick Mattice, Mike Rossa, (Pittsburgh) Henry Barron, (Indianapolis) Kenny McKean, Paul Meunier.

20 YEAR – Not pictured: (Milwaukee) Mike Sommers, (Orlando) Charlie Adams, Herman Adams, Jr., Ken Cross, Bill Peters, Jr.

IN MEMORIUM

Johnnie Lee Reed passed away peacefully on June 5, 2003 at the age of 86 at his daughter, Lori Reed's home in Charlotte, NC. Johnnie was employed by the Grunau Company for 34 years until his retirement in 1978. His relationship with the Grunau family remained strong throughout his life. Our thoughts and prayers go out to his family and friends.

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