

#### HIGHLIGHTS

- P2 Connected buildings, confident customers
- **P4** Spotlight on Oregon
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# PERSPECTIVE

**DTI** (DATA TRANSFER INTERFACE) **EGA** (EXHAUST GAS ANALYZER)

VOLUME 7 | SPRING | 2019

## Success is boiling over

**H** BY SCOTT GIDEON

Bill Kegley assisted with the start-up of the Seattle Center boiler plant with the original Autoflame controls almost 20 years ago! These boilers are part of a central heating and cooling plant that provides building heating and cooling throughout the center. There has never been a control failure in all that time, and the old MK6 controls still work perfectly. In fact, the only component failure was a servo motor and a flame scanner – this is a great testimonial to the quality of Autoflame controls.

Michael Nau, the chief engineer planning to retire soon, was aware that the MK6 controls were no longer supported by Autoflame and wanted to see his plant upgraded before he left. The industrial size boilers serve the remaining eight buildings at Seattle Center.

The old system was only comprised of the MK6 burner control, and the old MK6 DTI (Data Transfer Interface) had never been fully hooked up. Thus, the MacMiller industrial boiler team, working with Charlie Prib from Service Special Projects, proposed two additional components in the Autoflame MK8 series: the MK8 EGA and the MK8 DTI. These two components were essential to City of Seattle's goal of



energy conservation. The EGA is the exhaust gas analyzer that monitors combustion and "trims" the burner continuously for maximum efficiency and safety. We also installed a water level control and a new MK8 DTI that will be fully integrated into the network. DTI is the 'black box' between the boiler controls and their building automation controls. It also maintains storage for holding history up to 24 months, while providing programming that enables boiler room management where multiple boilers exist. Almost all industrial/large boilers have one or two backups as it would be quite disastrous if one went offline with no fail-safe present. This MK8 DTI can help manage how these boilers work together and remain efficient.

We also installed VFDs on the burner blowers that dramatically reduced noise in the boiler room while simultaneously reducing energy costs. We're excited about this project, especially because Michael can retire knowing his plant is ready for the next generation of boiler operators. And, MacMiller is poised to help keep the plant running at maximum efficiency.



## **Gus Simonds** President



## 2019 – The Journey Unfolds

The past few years have set us up nicely for an exciting 2019 – MacDonald-Miller will be immersed in the field on our Washington State Convention Center project and the Rainier Square Tower project. Pre-construction work will be vigorous on the Microsoft Campus Transformation and later this year Children's Hospital and 700 Dexter will be hitting the field as well. Our "Connected Building" initiative is no longer a new concept, now it's an essential offering our customers are embracing more and more, every day. Buildings speak and we respond!

In Oregon we are enjoying record growth in our Service, Special Projects and Controls work as well as two New Construction projects that will be adding to the Portland skyline.

To accommodate our growth we will be finishing up our remodel/expansion work on our main campus as well as moving to a larger facility for our Tacoma Office late this summer. I know the new Redmond facility we opened in 2018 has also been a big hit.

There's excitement in the air for what lies ahead of us in 2019, and 2020 is likely to be even more interesting. Let's roll! It's game time!

Car Innos

## Stop by and say

#### Our Eastside Office has moved. We outgrew our Bellevue Office and have new digs in Redmond. Stop by and check it out at 15207 NE 95th Street, Redmond, WA 98052, (206) 763-9400.



## E SHOUT OUTS!

## TO CHRIS LEWIS

"While on the job site Chris Lewis (Fitter) noticed a fire on the regulator of an acetylene bottle. Chris quickly assessed the situation, ensured his safety, located a nearby fire extinguisher, put the fire out and closed the valve on the acetylene tank.

The tanks in question were from another contractor and no one was injured. Great job Chris!"

Lee Pyfrom, Director of Safety, MacMiller

## TO JOSH KLINE

"This is an FYI to MacMiller about Josh Kline, working for the Everett Public School District at several of our locations. Josh's attitude is excellent! He continues to find the problems on the equipment that we have asked him to look at, as well as completing the maintenance. Josh has been terrific to work with because he's always on time (actually early) to the job site, and knows what to do to continually stay busy. He's also willing to ask for more information about the equipment he is working on, without any ego or desire to look good. I personally find this quality awesome. I look forward to working with Josh and MacMiller in 2019. Thank you again for all your help."

Tim Huggett, HVAC Everett Public School District





## **Connected buildings, confident customers**

BY MIKE JAMES

At MacDonald-Miller, Connected Building Solutions enhances our ability, and that of our customers, to make data-driven decisions when it comes to making buildings work better. Using multiple types of smart devices, we can connect to almost any facility and start directing real time building performance information to our very own Connected Buildings Center. Unlike many 'Smart Building' companies in the marketplace, MacMiller staffs a businesshour operating center to review building performance data and transform complicated data sets into information that is simple and actionable for our customers. Connected **Building Solutions embodies our dedication** to the customer experience through this unique pairing of data collection and real time HVAC expert analysis.



City of Bellevue

Washington Square Bellevue | Tower 1 and Tower 2

#### An example of our Connected Building Center at work is:

1 A customer's server room begins to increase in temperature beyond its design

2 MacMiller's Connected Building Center receives a critical event notification

3 Our Connected Building Technicians review building performance specifics such as discharge air relative to space temperature and equipment performance of nearby zones

4 A remote diagnosis is made that the temperature increase is due to the evaporative cooling loop failing

5 The customer is contacted to discuss best next steps

6 A MacMiller service technician is dispatched to repair the system with the knowledge of the root cause of the cooling failure

Thanks to our Connected Building Technician's expertise and integration with our Service

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Team we were able to save the customer time and money, all the while getting their critical space back to normal operations.

This excerpt from a dayin-the-life of a Connected

Building Technician showcases how our customer was able to effectively task their day with informed recommendations in addition to scheduling services with MacMiller, avoiding emergencies and downtime. Overall, the primary benefits our customers enjoy from Connected Buildings is knowing they have a true partnership with MacMiller in managing the equipment health and longevity on their sites.

19 T-stats across 7 fire stations and the Public Safety Training Center

Bothell, Fairwood, Federal Way, Sammamish, Shoreline, Bellevue, Redmond, Issaguah

#### **Bright Horizons** Everett | 16 T-stats across the center

**Tom Douglas Restaurants** 4 locations

**AAA Washington** Bellevue | Newport Towers

**Metro Properties** Seattle | Lake Union Building **Boeing/Teague** 8 sites installing soon

Westfield Southcenter Mall Tukwila | Installing soon

- **Portland Opera**
- **Red Wind Casino**
- **Seattle Aquarium**

# SPOTLIGHT ON OREGON

## MacMiller has Moxy \* BY GABRIEL HOY

MacDonald-Miller is bringing our design-build services to downtown Portland. The Moxy Hotel, featuring 197 guest rooms and retail space, is a new hotel tower in the center of downtown Portland operated by Marriott International. The property includes 12 stories above grade and a single-story basement that contains a fitness room, bike storage, offices, water tank and fire pump, and backup generator. Level 1 contains a bar that doubles as the reception desk, an open lobby, a central kitchen, and four restaurant tenant spaces intended for small food-cart vendors within the lobby space. The upper floor contains a hospitality suite, and the roof has an outdoor public patio and garden roof.

The primary HVAC systems for the building are VRF units at each individual hotel room with central subducted exhaust and Dedicated Outside Air System (DOAS) distribution. The hotel floor plumbing fixtures are served by a Sovent combined waste and vent system. Sovent is an engineered, single-stack plumbing waste system that provides increased flows and lower installation costs than traditional waste and vent plumbing systems.

Our full design-build scope of work includes mechanical HVAC Sheet Metal and Piping, Fitting, Plumbing, and Controls.

Construction for this project with our partner Howard S. Wright Construction started in February, and the project will be complete in November of 2020. 🛲

## **STATS**

PROJECT TYPE | Design-Build, HVAC & Plumbing DEVELOPER | Graves Hospitality GENERAL CONTRACTOR | Howard S. Wright ARCHITECT | DLR Group SF | 79,000

## **MOXY HOTEL** | PORTLAND, OR





## Shore-ing up a great relationship

BY OLIVIA WEAKLEY

The Trane Intellipak roof top unit (RTU) mechanical rebuild project at 4004 Kruse Way in Portland is another example of how MacDonald-Miller stands out from the competition. Kevin Kirk, Engineering Manager of Shorenstein Realty Services based in California, contacted Erv Garrison for his expertise and guidance regarding two Trane Intellipack RTUs at 4004 Kruse Way in Portland. Erv was recommended to Kevin as an expert by a mutual friend from Local 290. These RTU's needed to be replaced, yet the customer wasn't able to justify the cost of replacing both. Erv suggested a better solution that fell within the customer's budget – a complete mechanical rebuild of each RTU.

The cost to replace both RTU's would have been roughly \$400,000. The mechanical rebuild project was a total cost of \$104,220.

Because Providence Medical had just moved into the third floor of the building, the customer needed the project to happen during the weekend when the building was empty.

Friday 10/19: Crane lift 6am-8am. Material/parts and setup - crane must be offsite by 8am. Saturday 10/20: Shutdown starts. Technicians work a 12 hr day. Sunday 10/21: Shutdown continues. Brought unit back online for Monday morning – 12 hrs per technician. 10/22-10/26: Continue refresh work with units back online. Wednesday 10/31: Crane lift 6am-8am to bring materials back down. Crane must be offsite by 8am.

Erv noted that this project was executed flawlessly. It illustrated that our service guys can do anything they put their minds to, and this level of dedication translated into a big win for us. Shorenstein hadn't previously done business with MacMiller, however due to the hard work and dedication of our talented technicians, we now maintain a strong partnership with them.

#### The Shorenstein MacMiller Team:

Erv Garrison | Ashleigh Wright | Chris McCoy | Brandon Thomas Brock Lillard | Jose Guzman | David Vidales | Alexander Houts



## A physical rehab of a building

¥ BY PETE DAVILA

## Lake Road Medical | Milwaukie, OR

Lake Road Medical is an 18,000 SF orthopedic and sports medicine medical office building located in the city of Milwaukie, Oregon. Though the building itself had been recently updated with state-of-the art technology spread throughout the six medical practices' clinical spaces, new elevators and lobby, the HVAC system was running on its last leg.

Lake Road Medical has been a loyal customer of MacDonald-Miller since 2015. Our service technicians have managed to keep the building bandaged up to get it by, and we've done so for a very price driven and high attention-to-detail customer. In Fall of 2017, after learning that the Building Performance Group (BPG) Energy Team could help our Service side through incentive dollars that offset some of the costs to "rehabilitate" this customer's building, they made the call to bring us in.

We pulled together a team consisting of the Service Operations Manager, Demand Service Sales, and the Service Technicians that handle this account. In early 2018, we secured the funding to complete an Energy Study to determine how much savings were available. After some logistical issues with the customer's schedule, studying the boiler, AHU, CU 1 & 2, and pneumatic controls, we presented our report to Energy Trust of Oregon in late spring.

Energy Trust had the incentive offer for the project returned to us by the end of June, and to our surprise it covered about 65% of the total project costs. With the calculated amount of annual savings, this retrofit would have a simple pay back of just over six months - with the final install taking place in December of 2018. I would like to recognize the team that helped pull off this amazing project:

#### **Ashleigh Wright**

Oregon Demand Team that builds the proposals and corresponds with the customer.

**Randy Short & Jeremy Schumacher** Oregon Service Team that knocked the project out of the park.

John VanCamp **Oregon Service Operations** main correspondence link with the customer.



## Teamwork makes the dream work

Over the past 24 months, we've been heavily focused on integrating all of MacDonald-Miller's full-service offerings to further support our healthcare partners. It takes individuals collaborating from all departments, constant communication and a common goal to make our healthcare partners' buildings work better so they can continue to focus on patient care.

Our healthcare clients manage complex mechanical systems and depend on MacMiller for a variety of needs. We've become the first choice for many of our partners, whose locales range from Tacoma to Everett. "We're a big part of the team," says Frank Tinnin, plumbing general foreman who has been on First Hill for the last seven years. "We're always right here on hand to support the hospitals."

> Identifying the right solution to complete a task in the most effective and efficient way is our approach, and working



closely within our MacMiller offerings has been key to this success. Our Service, Building Performance, New Construction, Engineering, Operations, Maintenance, Accounting, Estimating, TAB, Chiller and Boiler groups have all been part of this recipe, as well as, Marketing, IT and Administrative Staff.

Through the expertise of three full-time NEBB TAB technicians and four full-time medical gas-licensed plumbers, we help accomplish regulatory compliance requirements for the campuses we serve. This also extends into the Service side, where we work closely with service technicians and coordinators to provide incredible support to our healthcare clients. In addition to the dedicated field personnel from departments 81, 83, 84 and 90, we have three full-time service experts performing repairs, assisting with troubleshooting and responding to urgent healthcare calls in a timely fashion.

Recent accomplishments include completion of four boiler Autoflame retrofits - two took place at Seattle Children's Hospital, and the other two at Swedish Cherry Hill. Additionally, through support from our Maintenance group, we secured chiller and boiler contracts in four medical office buildings on First Hill, and utilized the chiller team's skill set to perform multiple compressor overhauls and chiller replacements.

Our healthcare partners have ever-increasing technology needs for their living buildings. Our Connected Building Solutions ICONICS platform has been overwhelmingly successful in meeting their energy conservation and automated fault detection and diagnostic needs.

MacMiller's Healthcare Group thrives due to our focus on customer commitment, successful collaboration and healthy partnerships. At the core of our delivery to our clients is teamwork, and that comes from every aspect of every department within our great MacMiller family.

Thank you from the Healthcare Team. 🚥

## The merging of great minds

+: BY D'WAYNE KENDRICK

#### **SMARTCAP | Everett, WA**

MacDonald-Miller consistently pioneers how the mechanical industry approaches performance contracting in the private sector, and SMARTCAP leads the way in the real estate investment market. Thus, it was destined that the two organizations connected to form a mutually beneficial relationship. We are at a pivotal time in the mechanical contracting industry, as we are witnessing increased focus on providing high value utility programs and a driving need for creative funding sources. That is why MacMiller, over the last several years, has doubled down on leveraging these resources to provide an innovative performance contracting strategy. Yet, a strategy is only as good as its ability to be digested and implemented in a real-life scenario; otherwise, all you end up with is a cool idea. The leadership at SMARTCAP, founded by its previous Microsoft tech executive's CEO, Tim Shoultz and COO, Joe Ollis, quickly understood our strategy and how to use the associated benefits for purchasing the Quad I-5 Buildings A and B properties.

Tim and Joe had a singular vision when they engaged MacMiller for the Quad I–5 properties: turn desired properties in the Snohomish County area to properties whose HVAC infrastructure and lighting technology rivals that of any Seattle high-rise building.

However, they also have an obligation to their organization's stakeholders to ensure any investment in infrastructure provides a return worthy of the dollars spent. Therefore, driven to provide tech-leading HVAC and lighting systems and the requirement to align with specific financial criteria, we commenced our development process over several months of collaboration to arrive at the project currently underway. This includes the upgrades of all interior and exterior lights to LEDs, HVAC controls, lighting control and replacement of the (4) 90-ton rooftop units.

Anchoring our tech strategy is an emerging technology from Siemens that incorporates both lighting (switches, occupancy sensors and lights) and HVAC control into a singular device. This creates a streamlined approach for driving energy savings to levels never realized before while providing an atypical aesthetic advantage.

We are excited to get these systems running and witness how much energy savings we are going to generate in excess of the 90+ energy star score already forecasted. Indeed, this is new ground. The potential upside of this collaboration is immensely promising, and we will keep everyone posted as the results come in.



## **SHOUT OUTS!**

## 🐑 TO JOSH ROBARGE & CHRIS McCOY

"Josh Robarge and Chris McCoy have my 100% trust in what they are doing with our chillers in our plant."

Kermit Hanson, OHSU

## 🕪 TO PAUL LANDINO

"The field techs (Paul Landino) call me if they find a problem and let me know about it; as well as letting me know when everything is normal. I really appreciate that as a building owner. Your competitors rarely call and let me know if I have a problem until I get a call from a tenant."

Greg Nelson, Underwood 21

## TO ZACH BURGY

"Zach Burgy is such a pleasure to work with, and his communication skills and documentation are excellent. Having managed North Pointe Owners Association for approximately 20 years, and managed properties for 35+ years, I am well aware that it's critical to have great vendors. Zach provided me photos of exhaust fans that are being impacted by residents who are not taking care of their lint from dryers or not replacing their furnace filters - and this type of initiative is invaluable. On behalf of the North Pointe Owners Association, we are impressed by Zach's efforts."

Pat Weber, Property Manager, North Pointe Owner Association

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# PERSPECTIVE

VOLUME 7 | SPRING | 2019

At Vigor Shipyard in Portland, Oregon, we recently worked on our first US Army vessel. The USAV Worthy (T-AGOS-14) is a Missile Range Instrumentation Ship operated by the United States Army. Our scope of work included equipment replacement and replacing galvanized duct work with stainless steel.

> Ship buffs might know that the USAV Worthy was previously a Stalwart-class Modified Tactical Auxiliary General Ocean Surveillance Ship of the United States Navy.

WORTHY