MacDonald-Miller
FACILITY SOLUTIONS®

HIGHLIGHTS

PERSPECTIVE

VOLUME 12 | SUMMER/FALL | 2024

Pushing the boundaries of innovation

BY JARED AUGUST, SENIOR PROJECT EXECUTIVE

Hillsboro Data Center

Our team at MacDonald-Miller, in collaboration with general contractor, Lease Crutcher Lewis, recently turned over the first of eleven 6 MW vaults at the Hillsboro, Oregon data center. Each vault contains an average of 16,000 gallons of chilled water, contributing to a massive 25,530-ton system – the largest mechanical plant we've ever installed! The system moves a total of 11,014,945 CFM, equivalent to the airflow of over 7,000 average residential HVAC systems combined!

MAJOR COMPONENTS INCLUDE:

- **220 fan coil walls,** each moving 44,000 CFM
- **22 makeup air units** at 3,000 CFM each
- **4 rooftop units,** each moving 22,000 CFM
- **6.1 miles (32,209 LF)** of chilled water piping

This project faced several challenges, from technical complexities to logistical hurdles, which we overcame through teamwork and advanced problem-solving techniques.

Our Oregon and Washington fabrication teams partnered together to meet the intense fabrication schedule for this project. While most of the larger MTR racks were fabricated in Seattle, our Oregon Fab Shop really showed its capabilities in tackling many of the unique racks which allowed the Seattle shop to focus on a streamlined, repetitive production approach.

As we look to the future, we are excited about the upcoming phases of this project and other initiatives that continue to push the boundaries of innovation in mechanical contracting.

PHOTO BY NICOLE MARTIN

NEW CONSTRUCTION | PLAN-SPEC
TIMELINE: APRIL 2023 - DECEMBER 2026
BUILDING SIZE: 406,836 SF

The future is bright!

It's been a summer of action for MacDonald-Miller. During one hot spell, we gained over 50 new buildings as customers due to our timely service response. Organizing our business to meet peak demand creates the opportunity to be a hero. Speaking of heroic efforts, our Chief Leschi Performance Contracting project exceeded expectations, delivering a working school in only 100 days. The project often had a crew of over 100 people, all working to make the school come back to life.

Service Special Projects is having a record year for all kinds of work – ships, chillers, industrial piping, data center upgrades, boilers and more. The investment in retrofitting existing buildings is a bright spot in our local economy. In Oregon, we opened our new West Portland office to accommodate our growing business and stay close to our Portland metro clients. We now have 12 offices across the PNW! The Pittock Block Project in downtown Portland continues to progress well. Our Inland Northwest operation remains busy, and WSU continues to be a great customer. Go Cougs!

This summer has been busy preparing to pass the CEO torch to Rory Olson and working on organizational shifts for success in 2025. I sense a healthy energy building around this new era. As I look back, I am so proud of the company we've become – impacting our communities, clients, MacMiller families, trade partners, and the excellent reputation that follows our brand. When you compare our size and capability today to 15 years ago, it's exciting to imagine what the next 15 years will hold!

Be the choice. Execute with distinction. And the future will be bright.

Gus Simonds
CEO

QA QUALITY ASSURANCE

BY STEVE ADAMS, NORTH SOUND OPERATIONS MANAGER

For nearly a decade, our service operations team has followed a Quality Assurance Program to uphold and elevate the high standards of our service technicians. This initiative focuses on continuous improvement through an extensive review and feedback process.

The program mandates quarterly assessments for every technician during maintenance visits or scheduled repairs. These involve one-on-one sessions with supervisors and, when available, on-site customers. This practice strengthens customer relationships by ensuring high-quality service and fosters mentorship by allowing technicians to learn from those in advanced positions. When an issue arises, the lead technician collaborates with the service technician on-site, providing immediate feedback and mentoring. This hands-on approach ensures understanding and prevention of future problems. Critical tools in the program include checklists used by all foremen, featuring an HVAC Service Quality Assurance Review, completed during the after-check of the technician's work, and a Foreman Safety Audit to ensure safety standards are met.

With quality at the core of our operations, programs like this enable us to continuously evaluate and enhance our work, making our commitment to collaboration a reality.

GIVE IT UP FOR GIVING BACK

At MacDonald-Miller we believe that it is everyone's responsibility to build healthy and viable communities. MacMiller offers the Giving Fund to support our employees in their charitable work in our local communities and around the globe. To find out more about the Giving Fund's objectives, or to consider joining the committee reach out to Robert.Gibson@macmiller.com.

Marie Gruel, SENIOR PROJECT EXECUTIVE, CSP

The Big Fix

Marie Gruel has been with MacDonald-Miller for 26 years. During this time, she has volunteered over 1,000 hours to animal non-profits and houses a few rescued pets herself. To help ease the burden on overwhelmed shelters and communities, she recently participated in "The Big Fix" – the largest spay/neuter clinic in Washington history – in Omak, Washington. This initiative was a partnership of Team Okanogan Animal Rescue and The Good Fix (of the Greater Good Charities). A fairground building was transformed into a high-capacity veterinary clinic, where a team of just six surgeons processed 1,027 animals in four days!

"It was a LOT of hard, messy work to pull off, but that one clinic can prevent roughly 50,000 unwanted animals in the first year alone. The success and demand for this clinic has the groups planning additional clinics. Thank you to the MacMiller Giving Fund for helping fund such a vital service to our community!" says Marie.

The next clinic will be taking place from October 13-18th in Omak. If you're interested in volunteering, reach out to Marie at marie.gruel@macmiller.com for more info!

Craig Moscaret, HEALTHCARE PROJECT COORDINATOR

Athletes for Kids

Athletes For Kids (AFK) is dedicated to supporting students from 1st to 12th grade through its unique mentorship program. AFK pairs children with disabilities or special needs with trained high school athlete mentors, who commit to a one- to three-year relationship.

The AFK stands out by fostering mutual growth and lasting relationships. The high school athletes and their "little buddy" spend time together and learn from each other, building a lasting bond of friendship. This relationship helps mentees navigate personal and social challenges, while mentors learn patience and humility from working with a younger person who struggles with a medical condition that impacts their life.

"Since my parents co-founded AFK 22 years ago, I have watched the organization grow to help nearly 3,000 youngsters to date. I am proud to have AFK as a significant part of my family," says Craig Moscaret.

MacDonald-Miller's donation from the Giving Fund is instrumental in fostering new mentor-mentee relationships. This support enables AFK to organize group events at public venues and expand outreach to high schools across the Puget Sound region, ensuring more students can benefit from these valuable connections.

To learn more about this cause, visit www.athletesforkids.org.

Craig and his original mentor, Simi Reynolds, reunite at the annual AFK Auction Dinner.

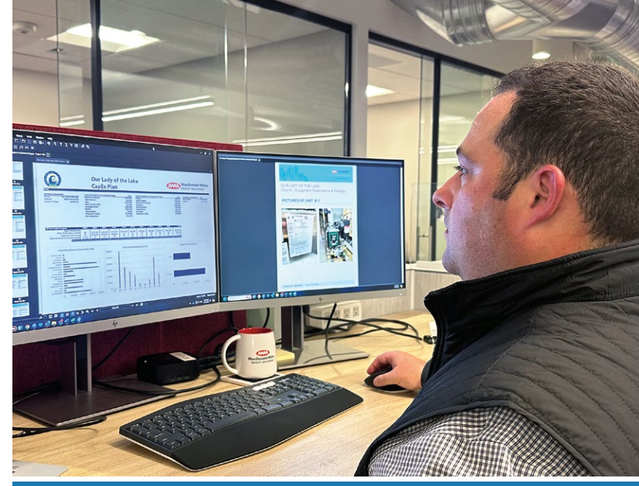
FAMILY

Work in progress during the big shut down.

PHOTO BY SARAH DUGAN HIGGINS

Kudos to Local 290, our amazing trade team.

PHOTO BY NATHAN AUNE



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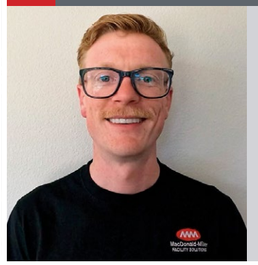


Aaron Parker, Pipefitter Foreman

» Years with MacMiller: Two

"At MacMiller, I've had the privilege of working with talented people. Pittock Block has been a unique project with many challenges. I'm proud to be part of it."

Zac Garrett, Pipefitter Foreman

» Years with MacMiller: Eight

"Pittock Block has unique install situations that test your abilities and problem-solving skills. I enjoy working for MacMiller because of the culture, diversity in work, and crew I have been working with since day one."

PITTOCK BLOCK PLAN-SPEC | DOWNTOWN PORTLAND | GC: WHITING TURNER

BY SARAH DUGAN HIGGINS, PROJECT MANAGER

Last November, MacDonald-Miller crews began Phase 1 of the Pittock Block Project. This involves adding critical mechanical infrastructure, including a chilled water system, generator fuel oil system, generator exhaust system, and generator glycol heat rejection system, to a historic downtown Portland building. Additionally, the fourth floor is being converted into a data center. Infrastructure for future floor conversions is included with redundant air-cooled chillers on the roof and chilled water risers stubbed into every floor of this 8-story building.

The historic façade of the building disguises its status as the most connected data center in downtown Portland and one of the most densely connected on the west coast. With over 302,200 SF of space and an 8 MW capacity, Pittock Block sits on seven subsea cable terminations, providing exceptional connectivity between US and Asian markets. MacMiller was brought on to build and install chilled water pipe to feed 16 computer room air handlers, three 36-ton rooftop chillers, and a custom fabricated lightwell rack for their critical systems. The upgraded system will host a generator and cooling system to provide up to 7 MW of power in an outage.

What makes Pittock unique is not just its use, but the age of the building. Built in 1913, this has presented many opportunities for the team to problem-solve. Between our union team members installation, and detailing teams, Pittock Block is advancing to the forefront of modern connectivity through the crews' persistence and determination. Estimated to be completed in April 2025, this project will continue to pose opportunities for the MacMiller team to shine in what they do best – getting the job done right!

37,500 HOURS in base contract (equivalent to 1550 days)

MORE THAN 54 TONS of equipment will be installed on the roof

CLOSE TO $2.5M in change orders so far

ABOUT 9000' OF PIPE = Elevation of Mt Bachelor in Oregon

Optimizing asset management

BY ISOBEL POWELL, MARKETING COORDINATOR

Q&A WITH ROBERT GIBSON, INSIDE SALES MANAGER

Q: Tell us about your role at MacDonald-Miller.

I'm in my 14th year at MacMiller and currently lead our Inside Sales Capital Expenditure (CapEx) Initiative that supports our customers' long-term planning efforts. My day-to-day involves using live data from over 61,000 assets, continuously updated by our service technician teams. This data drives our culture of recommendation, because over half of these units are past their useful life!

Q: What are CapEx and Condition Assessment Reports and why is MacMiller offering them?

CapEx reporting provides detailed forecasting for long-term investment needs in HVAC, Plumbing, Controls, Electrical and Lighting Systems for our customers' properties. These reports help customers plan for future expenditures and educate on local and state Clean Buildings legislative requirements.

Condition Assessment Reports evaluate the current state of customers' assets and systems by identifying maintenance, repair and replacement needs. This helps educate customers on overall system reliability, preventing costly downtime in the future.

Q: Who could benefit from receiving a report?

Facility managers, building owners, and building engineering teams benefit from our reports by gaining critical insights for planning, budgeting, and ensuring system efficiency and longevity. Our thorough and collaborative CapEx and Condition Assessment addresses specific goals and needs. Whether providing long-term capital spending projections or assessing building assets' condition, our goal is to help customers optimize efficiency, reduce operational costs, and support their business objectives and sustainability initiatives.

PROJECT HIGHLIGHT

Inland Northwest | DESIGN-BUILD

Washington State University (WSU) Building Systems Infrastructure Upgrades

Multi-location

SCOPE OF WORK:
Engineering, Sheet Metal, Fitting, Plumbing, Electrical, Controls

PROJECT TIMELINE:
November 2023 - May 2025

PROJECT DESCRIPTION:
The WSU Building Systems Infrastructure Upgrades Project is taking place across four campuses and 19 buildings: Pullman (14 buildings), Prosser (two buildings), Puyallup (two buildings) and Spokane (one building). Five of the buildings have full mechanical, electrical, and plumbing scope, and 11 require only Controls upgrades.

UNIQUE CHALLENGES:

- Managing 19 separate buildings within a single project demanded exceptional organizational skills, strategic planning, and effective coordination to ensure that each building's unique requirements were met while maintaining a cohesive and unified project outcome.
- Working with historically significant buildings, some dating back to 1913, with aging HVAC equipment from the 1960s, electrical systems from 1948, and a centralized steam power station managing pneumatic controls and steam/hydronic HVAC systems, required a deep understanding of legacy systems and innovative approaches to seamlessly integrate modern technology while preserving the buildings' historical integrity.

PROJECT HIGHLIGHT

Pacific Northwest | DESIGN-BUILD

UW Medical Center Chiller Replacements

Seattle, WA

SCOPE OF WORK:
Engineering, Sheet metal, Fitting, Controls

GENERAL CONTRACTOR:
Abbott Construction

PROJECT TIMELINE:
A year of pre-planning and a 4-week turnaround in May/June from existing chillers going offline and new chillers going live.

PROJECT DESCRIPTION:
Tenant improvement on a live hospital serving both cancer care wards and compounding pharmacies.

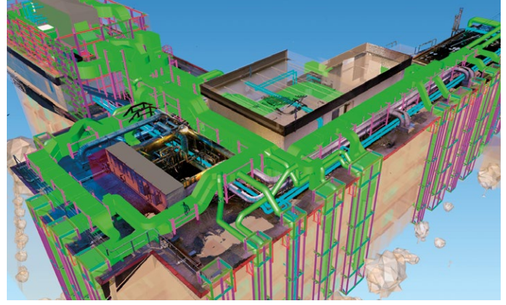
UNIQUE CHALLENGES/INNOVATION:
This project required a quick turnaround due to the needs of the patient and compounding pharmacy spaces served by the original units, which could not go without cooling during rising outdoor temperatures. Initially, the project was planned to have a longer construction period, but permitting issues with the tower crane delayed it from winter to late spring. Despite this compressed schedule, MacMiller teams, led by Dustin Williams and Brad Young, found creative solutions and worked long hours to ensure that both units were operational for the hospital before the first early summer heat wave.

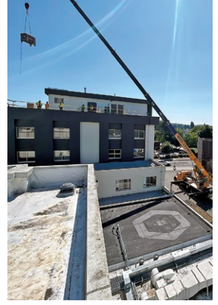
INTERNAL PROJECT TEAM:
Engineering/Chris Lee and Daniel Vu; Account Executive/Zach Simard; Fitting Foreman/Dustin Williams and Brad Young; Sheetmetal Foreman/Cliff Prussman and Kris Bergnes

FACES OF SUCCESS

Dustin Williams
Piping Foreman
» Years with MacMiller: 15

"What I enjoy about MacMiller are the awesome crews I get to work with and the variety of work I get to do with them – from welding to working on steam systems, and now getting to run a team."





NEW PROJECT AWARD

Pacific Northwest | PLAN-SPEC

MultiCare Health Systems Auburn Medical Center

Auburn, WA

This project consists of two existing patient towers (1975 and 1981). Both are currently fed from their own individual air handling systems. During the preconstruction phase MacMiller worked with MultiCare, Abbott, and the design team on a plan to minimize impact to patient care by installing one new larger air handling system, in a new unoccupied location, that will serve as the air handling infrastructure for both towers. The new air handling system will be located on top of the 1981 building's penthouse and will not require shutting down either of the building's air handling systems until after the new combined system is installed and fully commissioned. All the work outlined in Phases 1 & 2 of the project plan occurs on the exterior of the building and will be installed without modification to the existing mechanical systems. In Phase 3 we move into the building interior where a scheduled block of rooms will be removed from service so the new terminal units and low-pressure distribution can be installed. After each block is complete and tied into the new infrastructure, it will be returned to service and a new block of rooms will be removed from service. This will continue until each phase is complete and both buildings are entirely served by the new infrastructure. The final phase of the project takes place within mechanical rooms or on the exterior of the building and consists of removing the old, now abandoned, mechanical infrastructure.

AWARD!

MacDonald-Miller is honored to receive the Mechanical Contractors Association of Western Washington (MCAWW) Safety Excellence Award for the fifth time!

"Receiving this award is humbling, especially considering the caliber of companies within the MCAWW community, all dedicated to their safety programs. The rigorous application process makes this recognition even more meaningful. This award signifies that we hold one of the lowest rates of injuries and continually strive to innovate our safety protocols. What truly resonates is the acknowledgment that our employees embrace our safety culture wholeheartedly. It underscores that at MacMiller, prioritizing safe work practices is paramount, followed by delivering a quality product. This alignment between our team and our safety values is the cornerstone of our success." – ***Lee Pyfrom, Director of Safety***

SHOUT OUTS!

TO BRADEN RIGGS AND SHAWN KEPLINGER

» CONTROLS SERVICES, INW REGION «

"I want to take a second to give a HUGE shout out to Braden Riggs and Shawn Keplinger. Braden identified some issues with a new VFD that had been recently replaced. He went above and beyond to assist me in troubleshooting the drive, and we were able to get it back working, and scaled correctly. Shawn was always available and ready to jump in with any troubleshooting that we were doing, and identified optimizations very quickly, applied them to the other areas and reduced his time in front of the panel wiring by half. Ownership and driving results in this way is the reason that I advocated for MacMiller to be out here!"

Casey Wilson-Williams, AWS

TO NATE BEASON

» PLUMBING SERVICES, SEATTLE REGION «

"I wanted to give Nate Beason a big shout out for helping us at The Waverly to resolve the plumbing issues. He has been extremely awesome in delegating and discovering the issue, along with resolving the issue at hand, with the late hours and being here over the weekend. We couldn't have done it without Nate's help!"

Nicholas Kolosov, The Waverly

TO JAMES WITTE AND TORRENCE SHARP

» BOILER SERVICES, INW REGION «

"I just wanted to extend some gratitude to you and your team for getting the job done in a timely manner and providing me with insight into our boiler system. I learned a lot from James Witte and Torrence Sharp, and I really appreciate what you guys did to keep us up and operational over the weekend."

Josh Plummer, Huntwood

HIGHLIGHTS

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Hillsboro Data Center

The project will be designed to LEED certification with the goal of LEED Certified under Building Core & Shell.