



# GRAHAM-KAPOWSIN HIGH SCHOOL HEALTH CENTER CASE STUDY

## AT A GLANCE

The Performance Validation Team completed a comprehensive commissioning project for the expansion and renovation of the Graham-Kapowsin High School Health Center, situated within the Bethel School District. This initiative aimed at significantly enhancing energy efficiency, operational proficiency, and ensuring seamless system functionality across 60,000 square feet of classrooms, an auxiliary gym, and a community health clinic. The cornerstone of our success hinged on effective communication and unwavering persistence, which led to the project's completion on time and within budget.

Our engineering expertise was showcased through the commissioning process, leveraging the Washington Sustainable Schools Protocol (WSSP) E4.0 Fundamental and Enhanced Commissioning standards E4.1.1, E4.1.2, & E4.1.3. A significant focus was placed on HVAC and HVAC controls, encompassing an in-depth assessment of dedicated outside air systems, air handling units, variable air volume (VAV) terminal units, exhaust fans, unit heaters, and more. This rigorous testing regime ensured not just meeting but exceeding project goals for optimal system performance.

The facility, owned by Bethel School District and operated by Community Health Care, marks a pioneering step towards integrating comprehensive medical services within an educational setting, offering medical, dental, behavioral, and pharmacy services. As the first of its kind developed by Community Health Care, and a unique provider of behavioral health services within the area, the health center enhances educational facilities while establishing a vital community space for the Bethel School District. Through this project, our commitment extended beyond delivering to the building owner to making a tangible impact on community health and well-being.

## WSSP COMPLIANCE – ELEVATING BUILDING STANDARDS THROUGH COMMISSIONING



The commissioning of the Graham-Kapowsin High School Health Center, underpinned by the Washington Sustainable Schools Protocol (WSSP), exemplifies the tangible benefits that clients receive from Performance Validation's (PV) focused expertise. This project, with its expansive scope of expansion and renovation within the Bethel School District, showcases the direct advantages of aligning building projects with the stringent sustainability and efficiency criteria set forth by the WSSP.

From the outset, our team embarked on this project with a clear understanding of the WSSP's criteria, ensuring that every phase of the commissioning process was aligned with the protocol's sustainability goals. This alignment was critical not only for achieving state-matched funding but also for delivering a facility that sets new benchmarks in efficient, sustainable operation within an educational setting.

Our approach to WSSP compliance began with a comprehensive review of the Owners Project Requirements (OPR) and Basis of Design (BOD), setting the stage for a project that was designed with sustainability at its core. Throughout the commissioning process, we conducted detailed assessments and verifications across all building systems—focusing on HVAC, lighting controls, and energy metering—to ensure they met the stringent WSSP standards for energy use, water conservation, and indoor environmental quality.



The commissioning of the 60,000 square foot Graham-Kapowsin High School Health Center, encompassing both expansion and renovation, represents a significant stride towards achieving operational efficiency, energy savings, and enhanced occupant comfort. This project's scope spanned the HVAC, electrical, and plumbing systems, with a particular focus on the sophisticated Variable Air Volume (VAV) air handling unit and its 13 zone terminal units. The testing and evaluation of these systems, alongside the lighting control systems and Building Management System (BMS), underscore the comprehensive approach taken to ensure every aspect of the building's performance was optimized for the client's benefit.

This endeavor was rooted in the primary objectives of enhancing energy efficiency, empowering the building's stakeholders with operational knowledge, and ensuring the proper functioning of all building systems. By collaborating closely with Metrix Engineers and other team members within the health clinic, the project prioritized not just the technical aspects of commissioning but also the real-world impact on patient care and facility operations. The attention to detail in programming, testing, and fine-tuning the systems ensured that the goals were not only designed but fully realized, demonstrating a commitment to delivering tangible benefits to the client.

The ongoing engagement with the building through the warranty period highlights a proactive approach to building management. By organizing a post-occupancy review meeting that brings together the design, construction, operations, and maintenance teams, along with building occupants, the project ensures that any issues are identified and resolved promptly. This not only mitigates potential costs and disruptions but also guarantees that the building continues to operate at peak performance, aligning with the client's operational and care delivery objectives.

### Services Provided

- Owners Project Requirements (OPR) Review
- Basis of Design (BOD) Review
- Construction Document Review
- Submittal Review Report
- Control Submittal Review with Emphasis on Sequence of Operations
- Conducted Frequent Commissioning Coordination Meetings
- Lead the Project Through Pre-Design, Design, Construction, & Post Occupancy
- Site Observation & Startup Witness with Observation Reports
- Rigorous Functional Performance Testing for Commissioned Equipment
- Commissioning Issues List with Deficiencies
- Systems Manual Created for Commissioned Equipment

### STRATEGIC FLEXIBILITY: NAVIGATING CHALLENGES WITH SOLUTIONS AND ADAPTABILITY



Throughout the commissioning of Graham-Kapowsin High School Health Center, our team encountered and adeptly navigated a series of challenges, demonstrating resilience and strategic flexibility. Each issue, whether related to lighting and HVAC controls, sequencing, or scheduling, was met with a tailored approach that prioritized problem-solving and collaboration, ensuring the project remained on track without compromising on quality or timelines.

One notable challenge involved the initial lighting control vendor's inability to continue supporting the project. This situation required swift action to source parts from an alternative vendor, necessitating agile coordination to ensure these new components were integrated seamlessly into the existing system without disrupting the project timeline. This was achieved through effective communication and collaboration, highlighting our team's ability to adapt to unforeseen circumstances while maintaining project integrity.

Additionally, specific sequencing requirements for the health clinic's temperature-controlled room, crucial for storing pharmaceuticals, became apparent later in the project. Our responsive approach ensured these specialized needs were addressed promptly, securing the necessary adjustments to maintain compliant temperature conditions for sensitive medications and supplies. This not only demonstrated our team's commitment to meeting the project's unique requirements but also underscored our dedication to ensuring the facility's functionality and safety.

Despite these challenges, the continuous and proactive engagement with all team members facilitated the resolution of issues as they arose. Our commitment to dynamic working relationships and the ability to evolve the commissioning plan as needed were instrumental in overcoming these hurdles. Through consistent communication and a proactive stance on testing and verification, we ensured the project adhered to its scheduled completion, showcasing our team's capacity to deliver successful outcomes under varying circumstances.

## ENSURING LONG-TERM EXCELLENCE: POST-PROJECT SUPPORT AND WARRANTY PERIOD COMMITMENT



As we approach the final stages of the Graham-Kapowsin High School Health Center project, Performance Validation's commitment to our client's ongoing success is unwavering. Specifically tailored to this project, we will deliver a comprehensive functional test procedure, inclusive of findings, to provide valuable insights into the performance of the building systems.

Throughout the warranty period for this project, our team will be actively engaged, proactively tracking and resolving any issues that may arise. This ensures that the Graham-Kapowsin Health Center operates flawlessly, meeting the unique needs of the Bethel School District and Community Health Care.

Our focus on long-term operational excellence for this project guarantees that the health center will continue to serve the community efficiently and reliably, aligning perfectly with our client's mission of providing top-tier healthcare and educational facilities.

## PROJECT SUMMARY



The Graham-Kapowsin High School Health Center project stands as a remarkable achievement in sustainability and engineering excellence. From its inception, our primary focus has been on delivering tangible benefits to our client and the community. PV diligently aligned with the stringent criteria of the Washington Sustainable Schools Protocol (WSSP), not only to secure essential funding but also to enhance operational efficiency. The approach to optimizing building systems ensures not just energy efficiency but also empowers stakeholders with invaluable knowledge.

Throughout the project, PV encountered and adeptly navigated challenges, demonstrating resilience and a commitment to solutions. As we near the end of this project, our dedication extends into the future. We remain committed to providing ongoing support, ensuring the continued excellence of the Graham-Kapowsin Health Center in serving the community. This project is not just a testament to our engineering expertise; it's a testament to our unwavering dedication to client success and sustainability.

## YOUR VALIDATION PARTNER FOR WHAT'S NEXT



Performance Validation (PV) is a global validation partner for pharmaceutical and medical device manufacturers. Headquartered in Indianapolis, IN, we specialize in turning compressed timelines into compliant ones using innovative, adaptive approaches that balance production realities with strict regulatory requirements. Our best-in-class, cGMP-compliant services cover diverse needs from fully managed CQV to on-demand temperature mapping, smoke studies, software assurance, and more. With a dedicated team consisting of more than 95% engineers, we work closely with regulators and equipment suppliers to keep validation ahead of production curves and keep quality moving forward.