



CONSTRUCTION SERVICES GROUP

Cx Services

SCHOOL BUILDING
COMMISSIONING

A PROGRAM OF EDUCATIONAL SERVICE DISTRICT 112
IN PARTNERSHIP WITH THE WASHINGTON STATE NETWORK OF EDUCATIONAL SERVICE DISTRICTS

*We're your partners
for the life of the building.*

As buildings and their systems have become more complex, the need for commissioning has grown. A good building commissioner acts like an ambassador to all the key parties involved in construction, representing your district's values and ensuring your priorities are met for the life of the building. A building commissioner also serves as a translator, speaking the languages of design, construction and maintenance fluently to ease the flow of communication between them.

Just as with an ambassador, it's important to choose a Cx team you can trust. CSG has been providing commissioning services exclusively within K-12 education in Washington State since 2001. Our team knows schools and understands the unique needs of students, teachers and staff.

Schools are the heart of the community and we make sure that the community gets the best school possible. Our team of experts can find solutions, troubleshoot problems, and enhance performance for an optimized learning environment.

- Rick Alexander
Associate Director, CSG Cx Services

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NEW BUILDING COMMISSIONING

Building commissioning can ensure that a new building begins its life cycle with systems at optimal productivity, and improve the likelihood that the building will maintain this level of performance throughout its lifetime.

Our program integrates commissioning into the school district's current planning, design, construction, and operations processes. The benefit for the district is that Cx is not an add-on service that changes from one consultant to the next. The program takes the quality tools and techniques of the total building commissioning process and integrates them into the district's standard procurement procedures. Further, once our program is adopted, any number of people can act as commissioning authority, ideally the district, itself.

Key enhancements often incorporated into the school district's current process are:

- Clear and concise documentation of requirements for a successful project.
- Verification of quality throughout design, construction, and operational phases.
- Early development of systems manual
- Focused comprehensive training program
- Repeatable tests and documentation showing original requirements achieved at occupancy

Desirable outcomes include:

- Lower total project costs through first year of operation
- Higher air quality and more comfortable working and learning conditions for employees and students

EXISTING BUILDING COMMISSIONING

Existing Building Commissioning (EBCx) of building systems can restore an existing building to high productivity, whether that building is five or 50 years old.

Through EBCx, we can improve the performance of school buildings, increase comfort levels and promote energy savings measures. We can also help provide important information to district leaders who are planning for future capital projects and even help extend the life of a building.

Our experienced team made up of HVAC and mechanical systems specialists ensures an efficient and fully-functional building and can help your district's facilities teams understand their building better.

EBCx services we offer include:

- Development of a current facility requirements (CFR) document that explains your building's needs
- A forensic study of your building's systems with a focus on comfort, performance and energy savings
- Functional performance testing on a building's systems and steps for resolution, including managing the correction process with contractors, designers and vendors
- Analysis of utility bills to determine where gains in performance can be made
- Continuous management of energy usage
- Long-term planning for potential capital facilities upgrades

For more information on CSG Cx, email csg.info@esd112.org or visit www.k12cx.org.



HANFORD HIGH SCHOOL AN EBCx CASE STUDY

The principal of Hanford High School in Richland, Washington had a mystery on his hands. His building was only 10 years old, yet staff and students were continuously complaining about being hot. After years of searching for answers, the district's superintendent contacted the CSG Cx team in the hopes of avoiding a costly cooling unit replacement.

CSG's Geert Aerts and Steven Nuñez inspected the cooling unit and researched its documentation, determining that it was adequately sized for the space. Upon closer inspection, they realized that the unit had been set to a threshold of 50% of its output when it was installed. They performed a series of tests, changed a setting, and for the first time in the building's existence, the school was comfortable for teaching, learning, activities and even athletics!

OUR Cx Team



RICK ALEXANDER, QCxP

Associate Director

Education: BS Construction Management

Years experience: over 40

Cx jobs: 37 districts (many schools)

Fun fact: Rick created CSG's Cx program and has had various assignments in 212 districts in his 20 years with CSG.



GEERT AERTS, PE, QCxP

Building Commissioning Manager

Education: BS Mechanical Engineering

Years experience: over 25

Cx jobs: 51 schools/educational facilities

Fun fact: Geert specializes in energy conservation and building comfort.



STEVEN NUÑEZ, QCxP

Senior Building Commissioning Manager

Education: BS Biology, AS Automotive Engineering

Years experience: over 25

Cx jobs: 100+ schools/educational facilities

Fun fact: Steven was a Test and Balance contractor for 15 years before joining CSG.



JOSH GOFFIN, CEM, QCxP

Building Commissioning Manager

Education: AS Energy Management

Years experience: over 15

Cx jobs: 12 schools/educational facilities

Fun fact: Josh has conducted ASHRAE energy audits on more than two million square feet of K-12 schools in the Pacific Northwest.



VLAD TYUTYUNNIK, QCxP

Building Commissioning Manager

Education: Certification on three BAS platforms

Years experience: over 15

Cx jobs: 38 schools/educational facilities

Fun fact: Most of Vlad's career has been in building automation systems.

School project teams speak different languages. Designers, engineers, builders, programmers, administrators, facilities staff, teachers and students can all have their own ideas for success. I enjoy the challenge of bridging those gaps to help ensure that a highly functional school building is delivered.



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- Steven Nuñez
Senior Building Commissioning Manager, CSG