

Sustainability



Leadership in Energy & Environmental Design (LEED®)

Even before the launch of LEED in 2000, ESI incorporated green building concepts into their projects designs if it provided an economic benefit to clients. Originally LEED was not tailored for refrigerated warehousing, however as operating costs continue to rise, refrigerated facility owners are looking closely at how LEED concepts can help to create more efficient facilities. Presently, ESI has successfully completed the design for over 3 million square feet of LEED refrigerated facilities

Certified LEED® Projects

Silver: Buda, TX	290,000 sf Food D.C.
Gold: Sturtevant, WI	445,000 sf Food D.C.
Certified: Burlington, VT	137,000 sf Food D.C.
Gold: Montgomery, NY	508,000 sf Food D.C.

Upcoming Certified

Gold (Tracking): Prescott, WI	298,404 sf Food D.C.
Gold (Tracking): Gilroy, CA	433,000 sf Food D.C.
Silver (Tracking): Flowood, MS	271,000 sf Food D.C.
Silver (Tracking): N. Little Rock, AR	394,827 sf Food D.C.

About ESI

ESI Group USA (ESI) is a nationally recognized design-build engineering and construction management firm dedicated to smart building solutions. What makes us unique is that food distribution, logistics, and food processing is our only business.

We specialize in facility design, engineering, and construction but also excel at strategic logistics and material handling planning for food facilities. ESI Group is comprised of ESI Design Services, an innovative architecture and engineering firm and ESI Constructors, a leading construction management firm honoring a distinguished safety record.

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TOTAL BUILDING COMMISSIONING



*Designing and building quality
food facilities nationwide.*



Total Building Commissioning

15 Steps in Commissioning Process

According to ASHRAE and NIBS Guidelines, **Commissioning** is defined as “The process of ensuring that systems are designed, installed, functionally tested and capable of being operated and maintained to perform in conformity with the design intent.” At ESI, we believe commissioning requirements go beyond the start-up and documentation usually specified in the A/E’s basic services, including construction checklists, independent reviews, functional testing, seasonal testing, warranty review, owner training and the commissioning manual.



Our purpose is to ensure the project is meeting your goals.

Continuous **Commissioning** is a systematic way of identifying and correcting a building’s systems operational problems. ESI works with your Operations and Maintenance staff to establish a benchmark for energy usage and occupant comfort. Data is recorded and analyzed continuously to verify that the building systems continue to function optimally throughout the life of the equipment. ESI’s commissioning staff is skilled at analyzing Building Automation System (BAS) trend data to identify out of tolerance trends and correcting them before they affect your energy efficiency or system performance



1. **Identify Owner’s Project Requirements (OPR)**
 - a. Defines how the owner measures success for the project.
 - b. Shared with the entire construction team.
2. **Establish the Basis of Design (BoD)**
 - a. Defines the codes, assumptions, calculations, and design decisions of the design team.
 - b. Document to be reviewed by members of the Commissioning Team.
3. **Formulate Commissioning Plan**
 - a. Defines the specific roles and responsibilities of each commissioning team member.
 - b. Distributed to the owner, commissioning team, and construction contractors.
 - c. Becomes the framework for the final Commissioning Report.
4. **Provide Design Review**
 - a. CxA reviews for compliance with the OPR.
5. **Document Commissioning Specifications**
 - a. Define requirements for contractor’s Cx responsibilities.
 - b. Tasks, include construction checklists, testing, Cx personnel, meetings, timelines, training, and turnover requirements.
6. **Review Submittals**
 - a. CxA reviews applicable construction submittals for compliance with the OPR. Cx review comments are passed to the A/E and incorporated into the A/E comments.
7. **Conduct Commissioning Meetings**
 - a. Regular meetings outside of construction meetings.
 - b. Typical meeting includes a review of issues list, work sessions to resolve any open Cx issues, a review of new issues, and schedule.
8. **Maintain Issues List**
 - a. CxA identifies party(s) required for issue resolution and coordinates the implementation of corrective actions.
 - b. CxA verifies that corrective actions meet the OPR
9. **Create Construction Checklists**
 - a. Made project-specific by the CxTeam using the contractor’s submittals.
 - b. Generally implemented by contractor personnel.
10. **Document Functional Tests**
 - a. Made project-specific by the Cx Team using the contractor’s submittals and design criteria.
 - b. CxA coordinates testing scheduled with construction schedule.
 - c. Generally performed by contractor personnel.
 - d. Verified by the Cx Team.
 - e. Owner invited to participate in FPT for critical systems including building controls.
11. **Training Verification**
 - a. Training typically involves materials and instruction from several sources including trade contractors, vendors, A/E, and CxA.
 - b. Contractor submits agenda and content for each training session.
 - c. CxA will distribute training evaluations forms to verify that the training meets the OPR.
12. **Write Commissioning Report**
 - a. Comprehensive report that contains all the documentation of the Cx process, including the OPR, BoD, Cx, Plan, etc.
 - b. Satisfies LEED submittal requirements.
 - c. Submitted after completion of all commissioning tasks, except the 10-month Review.
13. **Conduct Seasonal Testing**
 - a. Accomplishes any functional testing that could not be completed (or fully completed) prior to turnover due to weather limitations.
14. **Perform 10-month Review**
 - a. Review and walk through with Facilities Director and user.
 - b. Occurs strategically prior to warranty walk through.
 - c. Allows two months for CxA to follow up prior to warranty expiration.
15. **Compile a Systems Manual**
 - a. A systems-focused and facility-specific manual for O&M and facilities management reference. Call-out – Our team can help you extend the life of your facility, increase building efficiency, increase your return on investment, and improve environmental quality of your facility.

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