

Resolution No. 24-15

**A RESOLUTION APPROVING A COMMISSIONING SERVICES PROPOSAL
BETWEEN THE VILLAGE OF EAST DUNDEE AND E-CUBE**

WHEREAS, the Village of East Dundee (the "Village") is a duly organized and validly existing home-rule municipality created in accordance with the Constitution of the State of Illinois of 1970 and the laws of the State; and,

WHEREAS, the Village obtained and reviewed a proposal from Nederland Refrigeration, Air Conditioning & Heating Corporation doing business as E-Cube for commissioning services to fulfill the requirements for LEED-NC Version 2009 Fundamental Commissioning Prerequisites, Enhanced Commissioning Credit, for the Village' Village Hall building program; and,

WHEREAS, the President and Board of Trustees of the Village of East Dundee find that it is in the best interests of the Village to accept the proposal for such commissioning services from Nederland Refrigeration, Air Conditioning & Heating Corporation.

NOW THEREFORE, BE IT RESOLVED, by the President and Board of Trustees of the Village of East Dundee, Cook and Kane Counties, Illinois, as follows:

Section 1: That the *COMMISSIONING SERVICES PROPOSAL*, dated February 26, 2014, which is attached hereto and made a part hereof by reference as Exhibit A, between Nederland Refrigeration, Air Conditioning & Heating Corporation and the Village be and is hereby approved in an amount not to exceed \$43,360 and the Village Administrator is hereby authorized to execute said Agreement on behalf of the Village.

Section 2: That this resolution shall be in full force and effect from and after its passage and approval according to law.

PASSED this 16th day of Feb, 2015, pursuant to a roll call vote as follows:

AYES: Trustees

Lynam, Skillicorn, Selep and Wood

NAYS: 0

ABSENT: Trustee Russulo
ABSTAIN: Trustee Gorman

APPROVED this 16th day of Feb, 2015

Attest: Heather Maieritsch
Heather Maieritsch, Village Clerk

Lael Miller
Lael Miller, Village President

COMMISSIONING SERVICES PROPOSAL

Village of East Dundee: Police Station and Village Hall Renovation

East Dundee, IL

prepared by:

ecube, inc.

Chicago • Boulder

February 26, 2014

(P13052)

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Introduction

February 26, 2014

Bob Skurla
Village of East Dundee
Village Administrator
120 Barrington Ave.
East Dundee, IL 60118

Re: East Dundee Projects – Commissioning Services Proposal

Dear Mr. Skurla,

Per our communications with Mr. Daniel Atilano of Dewberry Associates, we are pleased to present our proposal for commissioning services for the Village of East Dundee Police Station and Village Hall Renovation projects in East Dundee, IL. Herein, we have developed a scope of work that aims to accomplish the requirements of the LEED-NC Version 3.0 Fundamental Commissioning Prerequisite (EAPR1) and Enhanced Commissioning Credit (EACR3).

For this project we will be utilizing a seasoned commissioning team very similar to that on our past projects with Dewberry. Primary staff included in this industry-leading team are: Tom Vannatta, LEED-AP (Vice President of Engineering) acting as technical authority; Mandeep Singh, LEED-AP (Vice President) acting as project manager; and Jim Radzienda, Mike Romito, and Juan Guardian acting as commissioning engineers and specialists. Other staff may be utilized as needed and their resumes are available in this document.

Once you've had a chance to review the material on the following pages, please feel free to contact us if you have any questions or concerns, and please note that we will be happy to tailor our present proposal to meet your needs and budgets as this process moves forward, always striving to be as cost-effective as we can. We look forward to the possibility of once again assisting Dewberry with these exciting projects and send our best wishes for high-quality LEED facilities.

Sincerely,



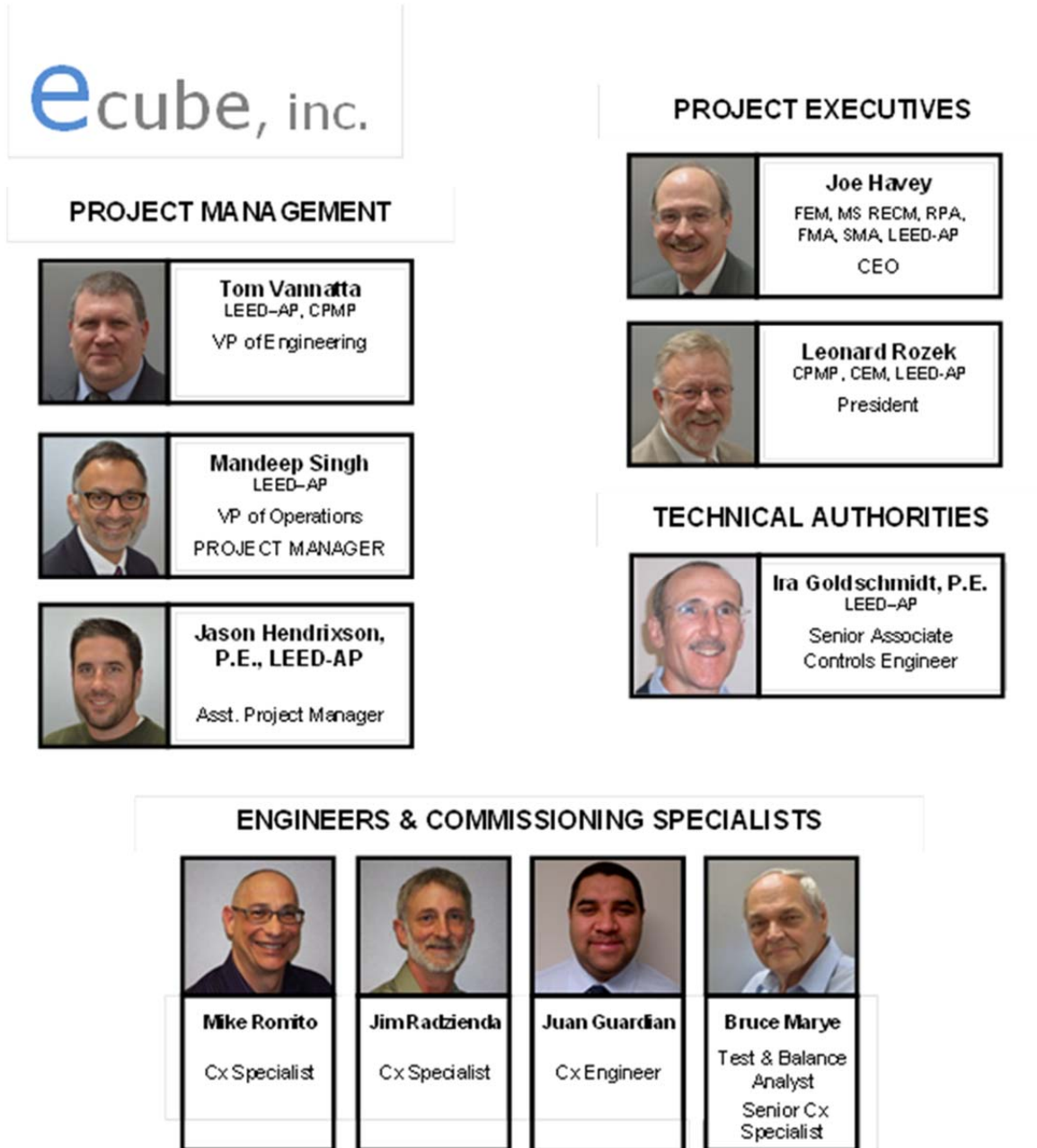
Leonard Rozek, CPMP, CEM, LEED-AP

President

E-Cube (the d.b.a. name of Nederland Refrigeration, Air Conditioning & Heating Corporation) is a SBA-certified small business (registered in ProNet), a Colorado-registered C Corporation and has years of excellent D&B ratings (Number 55-621-6281). E Cube and staff are members of the Building Commissioning Association, USGBC, active members of ASHE and ASHRAE, an endorser of GGHC, an Energy Star Partner and the U.S. Green Building Council.

1 Project Team

Staff Organization Chart



Please note that E-Cube utilizes a detailed manpower forecasting process to evaluate project needs and assignments. As such, the project team shown above will be able to begin work immediately upon approval of this proposal and can dedicate the time required to successfully complete this project.

Resumes



Joseph P. Havey, CEM[®], MS RECM, RPA[®], FMA[®], SMA[®], LEED[®] AP
CEO

As Chief Executive Officer of E Cube, Inc., Mr. Havey is responsible for overall management of the Firm, including business management/administration, oversight of projects/planning, and quality control for all projects. This includes developing project scope and budget, managing project efforts to ensure the E Cube team adequately meets the owner's objectives, and tracking financial and budgetary progress to ensure the highest possible efficiency. In addition, Mr. Havey acts as a technical advisor for the staff, drawing from 30 years of combined experience in sustainable design/construction, commissioning, energy-efficiency, building optimization, and O&M.

Recent Commissioning Projects

- Rehabilitation Institute of Chicago New Research Hospital, Chicago, IL
- Palomar Medical Center West, San Diego CA
- Advocate Christ Medical Center New Patient Tower, Oak Lawn IL
- VA Hospitals in Las Vegas NV and New Orleans LA
- Data centers for Facebook, FedEx and the National Center for Atmospheric Research (NCAR)

Recent Commissioning Experience

- Executive management and oversight
- Project scope and budget development
- Planning and scheduling
- Internal quality control

Overall Experience

- Joined E-Cube as COO in 2010, and is currently CEO.
- Prior to joining E-Cube, Mr. Havey was a Senior Vice President at Lehman Brothers where he was responsible for design, construction, facilities management, property management and leasing of Lehman's corporate real estate portfolio of over 100 locations. Included in this portfolio were mission-critical sites such as data centers, trading floors, call-centers, disaster recovery sites, branch banks, and service centers.
- Vice President of Operations and Equity Partner for nine years at Denver Place, a 2.7 million square foot mixed-use real estate project valued at \$350 million. Under Joe's direction (and E Cube's consulting services), Denver Place completed the largest energy retrofit in Denver history, was awarded one of the first Energy Star labels in the U.S. (pilot in 1999), and LEED-EB Gold (pilot in 2004). The project won BOMA International's Earth Award in 2005.
- Regional Chief Engineer for Hines managing several 50 story buildings and completing several large-scale energy retrofits on the 52 story Hines building in Denver.

Education

- Master of Science in Real Estate Finance and Construction Management (MS RECM) from University of Denver
- Bachelor of Science in Business Administration and Finance from Regis University.

Teaching and Certifications

- Adjunct Professor at the University of Denver's School of Real Estate and Construction Management, developing curriculum in Energy Efficiency, LEED BD&C and LEED EB O&M.
- Certified Energy Manager (CEM[®]).
- BOMI designations as a Facility Management Administrator (FMA[®]), Real Property Administrator (RPA[®]), and Systems Maintenance Administrator (SMA[®]).
- LEED[®] Accredited Professional-Building Design and Construction



Leonard R. Rozek, CPMP, CEM[®], CDSM, LEED-AP[®]
President

As the President of E Cube, Inc, Mr. Rozek has been active in the energy services, renewable energy, performance contracting, and mechanical engineering profession for 40 years. He has vast experience and knowledge in the analysis, engineering, design, construction and ongoing operation and maintenance of energy efficient technologies in commercial, industrial, and institutional facilities.

Recent Commissioning Projects

- Palomar Medical Center West, San Diego CA
- VA Hospitals in Denver CO, Las Vegas NV and New Orleans LA
- Data centers for Facebook, FedEx and the National Center for Atmospheric Research (NCAR)
- State of Utah Unified Forensic & BSL-3 Laboratories, Salt Lake City UT
- La Ka-Shing Laboratory, University of California, Berkeley CA

Recent Commissioning Experience

- Executive management and oversight
- Project scope and budget development
- Commissioning design review.
- Business development

Overall Experience

- Joined E-Cube in 2005 as President
- Vice President of Mechanical Engineering and Manager of Construction at EUA Cogenex with responsibility for managing \$76 million dollars of annual performance contracting projects across the western US. Specific responsibilities included general management of offices in Boulder, Dallas and Austin, sales support, personnel management and oversight of engineering services.
- Co-Founder and Vice President of Mechanical Engineering at Highland Energy Group leading a dedicated group of engineers, construction project managers and administrative staff. Responsible for development and execution of energy efficient performance contracting projects for both for independent clients and as part major utilities DSM programs.
- Director of Operations for Environmental Research Groups, Inc. where Len developed system commissioning methodologies, energy-efficiency strategies and protocols for monitoring energy use in buildings. While at ERG, Len also worked on improving energy simulation models and using these models to identify potential energy saving measures.
- Founder and Vice President of Operations at Westover Controls Corporation, which acted as a regional distributor for Andover Controls. Responsible for operations and technical support for the design, installation, and programming of building automation systems.

Education

- BA in International Affairs from University of Colorado
- Associate of Arts in Economics from College of Lake County

Affiliations and Certifications

- ASHRAE Certified Commissioning Process Management Professional (CPMP[®])
- AEE Certified Energy Manager (CEM[®])
- AEE Certified Demand Side Manager (CDSM[®])
- LEED[®] Accredited Professional
- Member of ASHRAE, ASHE, USGBC, BCA & Western Resource Council



Tom Vannatta, LEED-AP®
Vice President of Engineering

As Vice President of Engineering, Mr. Vannatta heads E-Cube's Chicago office where he is responsible for on-site supervision and management of E Cube's commissioning, energy-efficiency and sustainable design activities. He draws from an extensive background in commissioning of new and existing facilities, sustainable energy-efficient design, and systems optimization. Tom has 14 years of experience as a commissioning agent and 20 years of experience as an energy engineer. He has commissioned a wide range of facilities and specializes in the commissioning of healthcare and laboratory facilities.

Recent Commissioning Projects

- Northwestern Memorial Hospital Replacement Hospital and New Prentice Women's Hospital, Chicago IL
- Advocate Christ Medical Center New Patient Tower, Oak Lawn IL
- Rehabilitation Institute of Chicago New Research Hospital, Chicago, IL
- Silverman Hall (Proteomics Research Building), Northwestern University, Evanston IL
- Knapp Center for Biomedical Discovery, University of Chicago Medical Center, Chicago IL
- Morton Hall BSL-3 Laboratories, Northwestern University, Chicago IL

Recent Commissioning Experience

- Project scope and budget development
- Management, planning and scheduling
- Development of commissioning specifications, plans and procedures
- Commissioning design review.
- Development and execution of prefunctional procedures
- Oversight of contractor testing and startup activities
- Development and review of test and balance procedures and verification of TAB reports
- Development and execution of functional procedures
- Review of O&M Manuals
- Development and coordination of owner training programs
- Commissioning reports and documentation

Overall Experience

- Joined E-Cube in 1994 and started E-Cube's Chicago office. VP of Engineering since 2006
- Managed commissioning of the New Prentice Women's Hospital and the Galter / Feinberg Pavilions, both at Northwestern Memorial Hospital
- Managed commissioning of numerous laboratory facilities including the Robert H. Lurie Medical Research Center, Northwestern University and Q-Building at Pharmacia (now Pfizer).

Education

- BS in Mechanical Engineering from Ohio State University
- BS and Master of Architecture from the University of Michigan
- Healthcare Construction Certificate from ASHE.

Affiliations and Certifications

- LEED® Accredited Professional
- Member of ASHRAE, ASHE, USGBC, BCA



Mandeep Singh, LEED-AP®
Vice President of Operations

Since joining E Cube in 2000 Mr. Singh has participated in many of E Cube's Chicago area commissioning projects and has extensive experience commissioning hospitals, data centers, trading floors, higher education and municipal facilities. Prior to joining E Cube, Mandeep had five years of experience as a mechanical design engineer with Environmental Systems Design in Chicago, IL where he worked primarily on the design of healthcare facilities. In his current role as Vice President, Mandeep manages many of our Chicago area projects including commissioning of new and existing buildings, facility optimization projects, and significant expertise in under-floor air distribution, natural ventilation, and geothermal systems.

Recent Commissioning Projects

- Northwestern Memorial Hospital New Prentice Women's Hospital, Chicago IL
- Village of Hoffman Estates Police Department and Fire Department, Hoffman Estates, IL
- Village of Skokie Police Department, Skokie, IL
- Livingston County Courthouse, Peoria, IL
- Tate & Lyle Project Hampton Food Sciences Laboratory, Hoffman Estates, IL
- Project Bright Lights Trading Floor, British Petroleum, Chicago IL

Recent Commissioning Experience

- Project scope and budget development
- Management, planning and scheduling
- Development of commissioning specifications, plans and procedures
- Commissioning design review.
- Prefunctional and Functional commissioning procedure development
- Coordination of contractor testing and startup activities
- Review of test and balance procedures and verification of TAB reports
- Review of O&M Manuals
- Development and coordination of owner training programs
- Commissioning reports and documentation

Overall Experience

- Joined E Cube in 2000 as a Senior Engineer. Vice President since 2011
- Currently managing commissioning of projects at University of Chicago, Loyola University, and Advocate Healthcare
- Managed commissioning of the New Patient Tower at Advocate Lutheran General Hospital and participated in commissioning of New Prentice Women's Hospital at Northwestern Memorial Hospital
- Managed commissioning of numerous mission critical facilities including trading floors for BP and Jump Trading and data centers for Ronin Capital and Northwestern Memorial Hospital
- 5 years experience as a mechanical design engineer at ESD where he worked on the design of the Galter/Feinberg Pavilions at Northwestern Memorial Hospital.

Education

- BS in Mechanical Engineering from the University of Illinois at Urbana-Champaign

Affiliations and Certifications

- LEED® Accredited Professional
- Member of ASHE, USGBC, BCA



Mike Romito
Commissioning Specialist

Mr. Romito has an extensive background in building automation systems including 26 years of experience working as an installation and service technician for Johnson Controls. Mike is also very experienced in the design, construction and operation of healthcare facilities. He worked as a controls technician on the construction of the Galter / Feinberg Pavilions at Northwestern Memorial Hospital and as Johnson Control's full-time on-site service technician at Galter / Feinberg for the first 2 years the facility was open. Since joining E-Cube in 2005, Mike has become proficient at all aspects of construction phase commissioning and has successfully worked on a wide range of projects including large hospital projects, laboratories, and data centers.

Recent Commissioning Projects

- Northwestern Memorial Hospital Replacement Hospital and New Prentice Women's Hospital, Chicago IL
- Village of Hoffman Estates Police Department and Fire Department, Hoffman Estates, IL
- Village of Skokie Police Department, Skokie, IL
- Project Hampton Research Center, Tate & Lyle, Hoffman Estates, IL
- Loyola University Center for Sustainable Urban Living, Chicago, IL
- Loyola University DiNobili Residence Hall, Chicago, IL
- Astellas Pharmaceutical Corporate Headquarters, Glenview, IL
- Village of Pingree Grove Police Department, Pingree Grove, IL

Recent Commissioning Experience

- Submittal review
- Development and execution of prefunctional commissioning procedures
- Oversight of contractor testing and startup activities
- Development and execution of functional commissioning procedures
- Oversight of test and balance procedures
- Troubleshooting and Issue Resolution
- Review of O&M Manuals
- Commissioning reports and documentation

Overall Experience

- Joined E-Cube in 2005 as a Commissioning Specialist with expertise in building automation systems and healthcare facilities.
- Healthcare commissioning experience includes New Prentice Women's Hospital at Northwestern Memorial Hospital, the new patient tower at Advocate Lutheran General Hospital in Park Ridge and the Kellogg Cancer Care Center in Evanston.
- Worked as a controls technician for Johnson Controls during the construction of the Galter / Feinberg Pavilions at Northwestern Memorial Hospital.
- Worked at Galter / Feinberg for 2 years after occupancy as Johnson Controls full-time on-site building automation support person.
- 26 years of experience as a controls technician with Johnson Controls

Education

- Bachelors in Electrical Engineering Technology, DeVry Institute of Technology



Jim Radzienda
Commissioning Specialist

Mr. Radzienda has a broad MEP background having been involved in the building systems industry since the mid-1980's. He has served as an industrial facility mechanic, a building engineer, a controls technician, and as a project manager for a number of controls companies. Additionally, he also has over 20 years of experience as a licensed electrician. Since joining E-Cube in 2007, Jim has successfully commissioned a number of high-profile projects including large central plants, hospitals, offices, higher education, and municipal facilities. Jim's areas of expertise include building electrical systems, building automation, mechanical systems, test and balance, and operation and maintenance.

Recent Commissioning Projects

- Loyola University Alumni Student Center, Chicago, IL
- Loyola University Center for Sustainable Urban Living, Chicago, IL
- Village of Hoffman Estates Police Department and Fire Department, Hoffman Estates, IL
- Livingston County Courthouse, Peoria, IL
- Chicago Theological Seminary, University of Chicago, Chicago IL
- Project Bright Lights Trading Floor, British Petroleum, Chicago IL
- Karl Jacobs Center for Science and Math, Rock Valley College, Rockford IL
- West and South Campus Central Chilled Water Plants, University of Chicago, Chicago IL

Recent Commissioning Experience

- Submittal review
- Development and execution of prefunctional commissioning procedures
- Oversight of contractor testing and startup activities
- Development and execution of functional commissioning procedures
- Oversight of test and balance procedures
- Troubleshooting and Issue Resolution
- Review of O&M Manuals
- Commissioning reports and documentation

Overall Experience

- Joined E-Cube in 2007 as a Commissioning Specialist with expertise in electrical and building automation systems.
- 6 years experience as a building engineer and systems specialist at the University of Chicago
- 12 years of experience as a controls technician and project manager with Landis - Staefa and Control Engineering Corporation
- 20 years of experience as a licensed electrician



Bruce Marye

Senior Commissioning Specialist / Test and Balance Analyst

Mr. Marye has been involved with the construction, installation, start-up, and Test, Adjust and Balance (TAB) work of HVAC systems for the last 33 years. Twenty-three of these have been in the TAB side of HVAC systems.. At E Cube since early 1999, Mr. Marye provides thorough execution of field commissioning activities and expert technical analysis of test and balance procedures. He is based in E Cube's Boulder, CO office and frequently works in the Chicago area. Bruce was a significant member of the E-Cube commissioning team at New Prentice Women's Hospital and has also commissioned a large mental health hospital in Utah and several laboratory projects including both vivaria and BSL-3 labs.

Recent Commissioning Projects

- Northwestern Memorial Hospital New Prentice Women's Hospital, Chicago IL
- Neuropsychology Institute. University of Utah, Salt Lake City UT
- USTAR Research Laboratories, Utah State University, Ogden UT
- State of Utah Unified Forensic & BSL-3 Laboratories, Salt Lake City UT
- Astellas Pharmaceutical Corporate Headquarters, Glenview, IL
- Knapp Center for Biomedical Discovery, University of Chicago Medical Center, Chicago IL
- College of Agriculture Building, Utah State University, Ogden UT

Recent Commissioning Experience

- Submittal review
- Development and execution of prefunctional commissioning procedures
- Oversight of contractor testing and startup activities
- Development and execution of functional commissioning procedures
- Development and review of test and balance procedures
- Review of TAB reports and field verification of TAB results
- Troubleshooting and Issue Resolution
- Review of O&M Manuals
- Commissioning reports and documentation

Overall Experience

- Joined E-Cube in 1999 as a Commissioning Specialist with expertise in air and hydronic system test and balance.
- Healthcare commissioning experience includes New Prentice Women's Hospital at Northwestern Memorial Hospital and the Neuropsychology Institute at the University of Utah.
- He holds a NEBB (National Environmental Balancing Bureau) certification in Air and Hydronic TAB, Sound and Vibration Measurements, and Building Systems Commissioning
- Past President and Technical Chairman for the Denver, CO chapter of NEBB.
- Past member of NEBB National Board of Directions
- Member of NEBB Sound and Vibration National Committee
- Past instructor for Denver Public Schools TAB program



Jason Hendrixson, P.E., LEED-AP
Commissioning Engineer – Assistant Project Manager

Prior to joining the E-Cube team in 2010, Mr. Hendrixson worked for an M/E/P engineering consulting firm for over a year. He also participated in an engineering co-op at a medical device sterilization and packaging facility, while in college. Jason has been involved in the commissioning of several large hospitals and major data centers.

Recent Commissioning Projects

- Palomar Medical Center West, San Diego CA
- Neuropsychology Institute. University of Utah, Salt Lake City UT
- USTAR Research Laboratories, Utah State University, Logan UT
- State of Utah Unified Forensic & BSL-3 Laboratories, Salt Lake City UT
- College of Agriculture Building, Utah State University, Logan UT
- Multiple Projects (Student Recreation Center/Academic Instructional Building/Parmelee Hall (Dorm), Colorado State University, Fort Collins, Co

Recent Commissioning Experience:

- Commissioning of Mechanical Systems
- Verified AHU, VAV and Phoenix valve functionality during Blackout testing
- Performed preliminary review of smoke evacuation system design and controls Sequence of Operation
- Worked with contractors to ensure mechanical systems are working properly
- Prepared/Developed Systems Manual for Owner
- Prepared/Developed Final Cx Report

Overall Experience

- 4 years commissioning experience

Education

- Licensed Professional Engineer
- BS in Mechanical Engineering, New Mexico State University
- LEED® Accredited Professional



Juan Guardian
Commissioning Engineer

Mr. Guardian has 4 years of experience in the building systems industry, joining E Cube in 2007 after completing his Mechanical Engineering degree at the University of Illinois at Chicago. As an assistant commissioning engineer, he has participated in the commissioning of several major healthcare projects including the New Prentice Women's Hospital at Northwestern Memorial Hospital, the new patient tower at Advocate Lutheran General Hospital and the Kellogg Cancer Care Center in Evanston. In addition to his commissioning work, Juan is responsible for maintenance and calibration of E-Cube Chicago's instrumentation and commissioning tools. He also manages numerous day-to-day commissioning process support activities.

Recent Commissioning Projects

- Loyola University Alumni Student Center, Chicago, IL
- Loyola University Center for Sustainable Urban Living, Chicago, IL
- Loyola University DiNobili Residence Hall, Chicago, IL
- Northwestern Memorial Hospital New Prentice Women's Hospital, Chicago IL
- Kellogg Cancer Care Center, Evanston Northwest Healthcare, Evanston IL
- Advocate Christ Medical Center New Patient Tower, Oak Lawn IL
- Advocate Lutheran General New Bed Tower, Park Ridge IL
- Kellogg Cancer Care Center, Evanston Northwest Healthcare, Evanston IL
- Astellas Pharmaceutical Corporate Headquarters, Glenview, IL

Overall Experience

- 4 years of commissioning experience

Education

- BS in Mechanical Engineering, University of Illinois Chicago



Ira Goldschmidt, P.E., LEED-AP®
Senior Associate Controls Systems Engineer

Ira Goldschmidt has over 30 years of design, commissioning, contracting and business development experience in the Building HVAC, Controls and Energy Management industry. He developed some of the first commercial DDC systems and is a leader in the application of building automation system for HVAC control, energy management, commissioning, and life safety. Additionally, he is known throughout the industry for his ability to help building owners/managers, designers and contractors with complex comfort, temperature control and integration design and operating issues.

Role on this Project

Mr. Goldschmidt will serve as a Senior Associate and provide Design Review assistance and Controls expertise.

Recent Commissioning Projects

- RADY Children's Hospital and Central Plant, San Diego, CO
- VA Hospital Central Plants in New Orleans LA and Las Vegas NV
- USTAR Research Laboratories, Utah State University, Ogden UT
- Palomar Medical Center West – Escondido, CA

Recent Commissioning Experience

- Design review assistance

Overall Experience

- With E Cube since 1992
- 30 years of design, commissioning, contracting and business development experience in the Building HVAC, Controls and Energy Management industry
- Extensive experience in developing and managing a wide variety of engineering and E/A projects
- A Leader in the application of building automation system for HVAC control, energy management, commissioning and life safety
- Mr. Goldschmidt developed some of the first commercial DDC Systems
- Recognized throughout industry for his ability to help building owners/managers, designers and contractors with complex comfort, temperature control and integration design & operating issues

Education

- Bachelor of Arts Degree in Physics – Hobart College
- Bachelor of Arts Degree in Music – Hobart College
- Master of Science Degree in Mechanical Engineering – University of Virginia
- Master of Computer Information Systems Degree – University of Denver

Affiliations and Certifications

- Licensed Professional Engineer
- LEED® Accredited Professional
- Member and former Board of Directors of the Colorado Association of Healthcare Engineers and Directors (CAHED)
- Member of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)
- ENERGY STAR® Partner

Publications

- Co-author of the ASHRAE Guideline 13 "Specifying Direct Digital Control Systems"

2 Scope of Work

Services

The scope of commissioning services is to fulfill the requirements for LEED-NC Version 2009 Fundamental Commissioning Prerequisite, Enhanced Commissioning Credit. The following is list of representative tasks that will be completed to meet this goal. Please refer to the LEED-NC Ratings Guide for a full list and description of tasks. This scope will be applied to each project – Police Station and Village Hall Renovation.

LEED Fundamental Commissioning (EAPR1):

1. Review Owner's Project Requirements and Basis of Design Documents developed by the design team
2. Develop Commissioning Specifications and Commissioning Plan
3. Conduct a Commissioning Kick-Off meeting at the beginning of the construction phase
4. Conduct periodic commissioning meetings
5. Maintain a master issues log (Field Observation Notes)
6. Maintain a master commissioning status tracking log (Cx Status Report)
7. Develop Commissioning Pre-Functional Checklists to be completed by trade contractors. Conduct Pre-functional (installation verification) procedures.
8. Review and witness a portion of contractor pre-startup test procedures and documentation (i.e. pipe and duct leak testing, electrical meggar testing, controls point-to-point testing, etc.)
9. Review and witness a portion of the contractor startup procedures and reports
10. Review and witness a portion of test and balance procedures and report
11. Develop Functional Checklists and conduct Functional Procedures with assistance from trade contractors
12. Develop a final Commissioning Report
13. Conduct opposite season or deferred Cx procedures as necessary

LEED Enhanced Commissioning (EACR3):

1. Review Owner's Project Requirements and Basis of Design Documents during design development
2. Review Design at the mid-construction documents phase and provide one back-check prior to the bid documents phase
3. Review contractor submittals for systems/equipment under the scope of work
4. Review contractor's training program
5. Develop a Systems Re-Commissioning Manual
6. Conduct a Warranty Phase Review 10 months after the start of the warranty period

Systems and Equipment

The following systems and equipment will be included in the commissioning scope, as outlined in the project Cx RFP and the LEED 2009 ratings guide. This scope will be applied to each project – Police Station and Village Hall Renovation.

Base Scope of Work:

- Central building automation system
- All equipment of the heating, ventilating, and air conditioning systems
- Lighting controls (i.e. switches, occupancy sensors, programmable systems, daylight dimming, window shades, etc.)
- Plumbing domestic water system (i.e. domestic water pumps, water heaters, piping, controls, accessories)
- Renewable Energy Systems (if applicable)

Commissioning services for the following equipment is available if desired, but currently NOT included in this proposal:

- Electrical normal power distribution
- Emergency power generators and automatic transfer switching including a facility-wide Blackout Test
- Uninterruptible power supply systems
- Life safety systems (i.e. fire protection, fire alarm, egress pressurization)
- Data and communication (i.e. backbone cables and wiring only)
- Security system (i.e. cameras, card readers, door locks, panels, devices, wiring, etc.)

Schedule

The scope of work and fee estimate is based on the following estimated project schedule based on information provided by Dewberry. Our understanding is that both the Police Station and Village Hall projects will be designed and built on a concurrent schedule as shown below. Please note that any significant changes to the project schedule may require additional fees.

- Current Phase: Schematic Design
- Design Phase end: July 2014
- Construction Phase start: October 2014
- Construction Phase end: February 2015
- Occupancy: March 2015
- Warranty Phase: December 2015

3 Presentation of Costs

The following table summarizes our estimated fees for Commissioning services only. The values listed are FIXED FEE amounts. The hours shown in the below tables are our best estimates at this time – during the project, hours may be moved from one task to another as appropriate and necessary.

E3 will provide services as detailed in the Scope of Work, above. The tasks and effort will follow the attached Level of Effort Table (below) with the total effort being consistent with the hours shown.

Please note that changes in scope, schedule repeat procedures and other items may impact project budgets. Should additional funds be needed for items beyond E-Cube’s control, we will contact the client for approval prior to proceeding with the additional work.

Cx Fee Summary

Police Station Scope of Work

Item	Hours	Fee
LEED Fundamental Cx (EA-PR1) Labor	142	\$ 20,464
LEED Enhanced Cx (EA-CR3) Labor	21	\$ 3,026
Estimated Expenses (at 0.5%)	N/A	\$ 470
Total Base Commissioning	163	\$ 23,960

Police Station Grand Total

\$ 23,960 Twenty-Three Thousand Nine Hundred Sixty Dollars

Village Hall Scope of Work

Item	Hours	Fee
LEED Fundamental Cx (EA-PR1) Labor	112	\$16,141
LEED Enhanced Cx (EA-CR3) Labor	20	\$ 2,882
Estimated Expenses (at 0.5%)	N/A	\$ 377
Total Base Commissioning	132	\$ 19,400

Village Hall Grand Total

\$ 19,400 Nineteen Thousand Four Hundred Dollars

Payment Terms:

E Cube will invoice monthly, net 30 without retainage for labor and expenses for that month. E Cube will supply the standard AIA G702 and G703 forms with each invoice. Invoices that are not paid in full after 60 days will bear a 1 ½ % late charge against all outstanding balances until paid in full.

This proposed fee is based upon E Cube’s interpretation of the projects needs and our estimation of the required level of effort in man hours and trips to the project site. This is all based on our experience with adding value to projects of this design and desire for LEED certification. Should you have any questions or concerns regarding our interpretation of the desired scope of services, please do not hesitate to contact us to discuss these matters.

Detailed Level of Effort Table – Police Station

Taskcode	Description	Hours	Notes
Design Phase			
1	Design Phase PM	2	
2	Design Phase Meetings	2	
3	OPR/BOD Review	2	
4	Cx Specification	2	
5	Cx Plan	6	
8	Design Review	4	
13	Design Phase LEED Support	2	
	Subtotal	20	
Construction Phase - General			
20	Construction Phase PM	8	
21	Construction Phase Meetings	12	
22	Submittal Review	4	
23	Prefunctional Form Development	6	
24	Functional Form Development	8	
25	Field Observation Notes	12	
26	Construction Phase Design Review	2	
30	TAB Planning & Overview	4	
40	O&M Manual Review	3	
41	Training Coordination	3	
42	Construction Phase LEED	2	
50	Corrective & Repeat Services	3	
90	Contractor Testing and Startup Observ.	6	
Construction Phase - System Specific			
100	Prefunctional Procedures	24	
101	MEP Functional Procedures	8	
102	BAS Functional Procedures	18	
	Subtotal	123	
Post-Occupancy			
60	Cx Report	6	
61	Systems Manual	4	
62	Seasonal Cx	4	
63	Warranty Review	4	
64	Post-Occ Support	2	
	Subtotal	20	
	Labor		
	Total Hours	163	

Detailed Level of Effort – Village Hall

Taskcode	Description	Hours	Notes
Design Phase			
1	Design Phase PM	2	
2	Design Phase Meetings	2	
3	OPR/BOD Review	3	
4	Cx Specification	2	
5	Cx Plan	6	
8	Design Review	4	
13	Design Phase LEED Support	2	
	Subtotal	21	
Construction Phase - General			
20	Construction Phase PM	6	
21	Construction Phase Meetings	8	
22	Submittal Review	3	
23	Prefunctional Form Development	4	
24	Functional Form Development	6	
25	Field Observation Notes	8	
26	Construction Phase Design Review	2	
30	TAB Planning & Overview	4	
40	O&M Manual Review	2	
41	Training Coordination	2	
42	Construction Phase LEED	2	
50	Corrective & Repeat Services	2	
90	Contractor Testing and Startup Observ.	4	
Construction Phase - System Specific			
100	Prefunctional Procedures	18	
101	MEP Functional Procedures	6	
102	BAS Functional Procedures	14	
	Subtotal	91	
Post-Occupancy			
60	Cx Report	6	
61	Systems Manual	4	
62	Seasonal Cx	4	
63	Warranty Review	4	
64	Post-Occ Support	2	
	Subtotal	20	
	Labor		
	Total Hours	132	

Expenses

E-Cube, Inc. makes a point of aggressively managing reimbursable expenses so that project costs may be used for more productive purposes such as additional time on-site working with the contractors. With this goal in mind, we will re-allocate any remaining expense budgets to additional field time as appropriate.

Nonetheless, reasonable and normal reimbursable expenses including long distance calls, printing, reproduction, shipping, equipment rental, and mileage expenses, will be billed at their direct cost with no markup, and are estimated in this document.

Project-related expenses will be itemized and invoiced at our direct cost. Vehicle charges will be invoiced at \$0.425/mile for project-related travel in 2013 or IRS approved rate, whichever is lower.

Rates

In the case of hourly work above and beyond the scope described in this document, the following rates will apply. Please note that this schedule is in effect for project work during 2013. Remaining work in 2014 and beyond will be charged at the above rates plus a 3% increase per year. Note that these escalations are included in the “Cx Fee Estimate” shown previously in this proposal.

Hourly Rates	2013	2014	2015	2016
Principals, Project Executives	\$ 194	200	206	212
VPs, Senior Associates	168	173	178	184
Senior Project Managers	153	158	162	167
PMs, Associates, Senior Engineers	143	147	152	156
Staff Engineers & Analyst, Level III	139	143	147	152
Staff Engineers & Analyst, Level II	137	141	145	150
Staff Engineers & Analyst, Level I	130	134	138	142
Project Resource Manager	65	67	69	71

- Principals, Project Executives
 Presently included in this group are:
 Joe Havey, CEM, RPA, FMA, SMA, LEED-AP; Leonard Rozek, CPMP, CEM, CDSM, LEED-AP
- VPs, Senior Associates
 Presently included in this group are:
 Jerry Deall, LEED-AP; Tom Vannatta, LEED-AP; Mandeep Singh, LEED-AP; Truman King, LEED-AP; Ira Goldschmidt, P.E., LEED-AP;
- Senior Project Managers
 Presently included in this group are:
- Associates, Project Managers, Project Engineers
 Presently included in this group are: Rick Lemieux; Bill Brown, LEED-AP
- Staff Engineers & Analyst, Level III
 Presently included in this group are: Mike Romito; Fred Bores; Jim Radzienda;
- Staff Engineers & Analysts, Level II
 Presently included in this group are: Bruce Marye; Steve Guinard; Fred Bores; John Twenty

- Staff Engineers & Analyst, Level I
Presently included in this group are: Juan Guardian, Terrell Thomas; Jason Hendrixson, P.E., LEED-AP
- Project Resource Manager
Presently included in this group are: John Magnuson, Jody Baca

Assumptions and Clarifications

1. This quotation is based on the allocation of hours as shown in the detailed Level of Effort Table above. Hours may be moved between tasks as needed and appropriate.
2. This quotation/estimate is based on the construction schedule, current specifications and plans as currently presented to us by the Owner/Construction Team.
3. In terms of altered schedules, two changes in schedule that incur no added cost as well as two that will add cost, are considered here as follows:
 - No added cost:
 - if the schedule shifts by one or more weeks but remains the same overall length
 - if the schedule lengthens but the commissioning team is still on-site for the same total amount of time
 - Added cost:
 - if the schedule lengthens and, as a result, there are delays but the commissioning team is still needed on-site due to the lengthening schedule
 - if the schedule is compressed and, as a result, the commissioning team is required to work overtime to meet the new schedule. Note that from a practical standpoint, this compression is probably limited to approximately 3/4 of the allowed time for a given sequence of tasks. Overtime will be billed at an agreed upon differential
4. An addition of equipment or an increase in complexity to the scope shall result in an incremental increase in the commissioning costs included.
5. Should specialty trend logging information be desired (particularly medium voltage electric values and/or power quality event recording from operating equipment); E-Cube will notify Owner/Construction Team as soon as possible and will only proceed after obtaining authorization for any additional cost.
6. The contract amount herein is contingent upon no-cost access (to E3) of the “front end” software for the controls system for remote monitoring. In addition, appropriate manuals, proper control system passwords, and access levels, to the projects will be needed for complete monitoring and commissioning shall be provided. Web-based access is acceptable.
7. The CxA will assist the Cx Team and work with the Owner/Construction Team to develop training requirements and guidelines for the PROJECT. Coordination and scheduling of training sessions shall be a joint effort by the Cx Team, and the Owner. The CxA will advise on coordination and scheduling of training sessions. To ensure a high-quality training program, the contractors shall submit training session agendas and trainer resumes for review and approval by the Cx Team and the Owner prior to each training session. Detailed procedures and requirements for Owner Training will be included in the Cx Spec. E3 will provide planning guidance and program overviews followed by the contractor providing a proposed agenda and schedule of the training beforehand for review and ultimately approval by the project team. E3 will not necessarily attend the actual training sessions.
8. Owner/Construction Team will arrange or provide facilities for all scheduled meetings, and training.
9. Functional procedures will be started upon systems being ready (go-ahead from Owner/Construction Team).
10. The appropriate contractors shall provide special tools and test equipment for use during the commissioning process and/or as required by the commissioning spec.


11. This quotation is based on equipment vendors (including owner supplied equipment) perform their respective factory prescribed start-ups, and properly document these procedures and results. E3 will observe these factory/vendor start-ups as appropriate.
12. Systems that turn out to not be ready for successful completion of functional procedures, after being represented as ready, will be subject to additional incurred costs (hourly rate(s), travel and other expenses) if additional work is required. These situations will be carefully documented and reported to the Owner/Construction Team for authorization to proceed.
13. Once deficiencies or problems are noted, reported and commented on, E-Cube will be available for one additional effort to establish that these items have been corrected. E-Cube's scope does not include further efforts should problems remain unresolved; and, all work beyond the scope of this letter and scope description will be an added charge.
14. Pricing is based on full cooperation from contractors including furnishing technicians as needed to carry out performance verification. Appropriate technicians will be provided at no cost to the E3 team along with all-necessary specialty tools and equipment.
15. Only the equipment and/or system points installed under the above-mentioned "systems to commission" will be commissioned.
16. Measurement & Verification (M&V), if included, will require that the Temperature Controls contractor provide and implement detailed trending, including file archiving in an exportable/importable standard format. Additionally, TC contractor needs to confirm trend collection is operating properly by furnishing trend files promptly at the end of each month for the first 3 months and then quarterly for the remaining 9 months.
17. Factory Witness Testing (time or expenses) are available but not included in this Proposal (Contract)
18. E3 will not authorize and/or approve any changes in construction schedule, cost (including change-orders), or contractual requirements.
19. E3 is not responsible for any construction means and methods, site safety, or site security.
20. All project communication and instruction will be channeled through Owner/Construction Team. It will be necessary that Owner/Construction Team will coordinate site visit logistics and will coordinate with the appropriate parties involved in functional procedures. In addition, E-Cube, Inc. is not responsible for schedule slips due to incomplete systems or unforeseen problems or delays.
21. This proposal assumes that any utility power outage simulation (blackout) testing is NOT included.

4 Approval

Approved by:

February 26, 2014

E-Cube, Inc

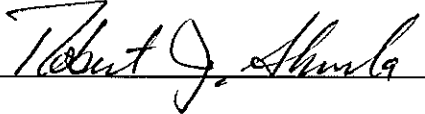
Date	Company	
Leonard Rozek	President	
Authorized Agent	Title	Signature

Approved and Accepted by:

Please initial on the appropriate line(s):

Police Station _____
Village Hall TRIS

February 12, 2015	Village of East Dundee
Date	Company

Robert J. Skurla	Village Administrator	
Authorized Agent	Title	Signature

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