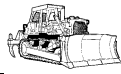


# Erik C. Backus, PhD., P.E., LEED AP BD+C, ENV SP, FMP

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## EDUCATION

Bachelor of Sci., Civil Engr., May 1997  
Clarkson Univ., Potsdam, NY  
GPA: 3.7/4.0  
Conc.: Infrastructure Technologies

Master of Sci., Civil Engr., Dec 2004  
Univ. of Missouri-Rolla, Rolla, MO  
GPA: 4.0/4.0  
Conc.: Const. Engr. and Mgmt.

Doctor of Philosophy, Engr. Sci., May 2023  
Clarkson Univ., Potsdam, NY  
Dissertation Topic: The Facility Decision Making Process

## EXPERIENCE

### Primary Facilities/Construction/Engineering/Planning Experience

#### ***Engineering Planner, George Mason University, Facilities Administration, Fairfax, VA, 9/11 to 10/14***

- Developed planning and design policy for the University; provided guidance on most building and infrastructure projects.
- Responsible for project scoping documents; leadership in feasibility studies and programming. Supervised and mentored an infrastructure and transportation planning intern.
- Led the effort to revamp the engineering and architectural design guidelines for capital and non-projects.
- Developed engineering and architectural design guidelines for capital and non-capital projects. Provided architectural and/or engineering design assistance to project management teams for all project types.
- Chief Resilience planner for all facilities and infrastructure; served as Facilities EOC staff plug for all emergencies
- Facilities liaison with the following campus units: Facilities and Infrastructure, Information Technology Unit, Intercollegiate Athletics, Mason Recreation and Auxiliary Enterprises (Patriot Center).
- Key Efforts: Campus Drive/West Campus Connector & Other Transportation Projects; Campus Infrastructure Development for three Campuses and several regional sites, Oversight of the Athletics and Recreation Master Plan

#### ***Chief, Engineering Division, Joint Base Myer – Henderson Hall DPW, Fort Myer, VA, 2/10 to 9/11***

- Leader of a 20 person Project Management, Architectural Design, and Construction Execution organization within the Directorate of Public Works (DPW) for the premier Joint Installation in the military, including Fort Myer, Fort McNair, and Henderson Hall Marine Activity; all in the heart of the Nation's Capital. Served also as Deputy for the entire DPW.
- Served primary clients of: The National Defense University; The US Army Band; Headquarters, US Army; Headquarters, US Marine Corps; the 3<sup>rd</sup> Infantry Regiment, The "Old Guard"; and Joint Headquarters, Military District of Washington
- Managed/Oversaw an annual Operations and Maintenance budget in excess of 5 million dollars and a Military Construction program of over 100 million dollars. Managed real property and served as the Installation Building Official.

#### ***Project Manager, George Mason University, Facilities Administration, Fairfax, VA, 2/06 to 1/10***

- Cradle to Grave Project Manager for University Capital Improvement Projects including: Science and Technology II Expansion/Renovation, Fairfax Aquatic and Fitness Center Renovation, PE Building (now called the Recreation and Athletic Complex, the "RAC") Renovation/Expansion, Patriot Center Renewal, New Child Development Center, West Campus Parking, and Nottoway and Mattaponi River Culvert Reconstruction. Value: over 95 million dollars.
- Executed all levels of construction project management from planning/budget/program development through punch-list/warranty. Planning/Executing numerous additional projects for the primary clients of the College of Science, the Patriot Center, and University Athletics across three campuses in Northern Virginia.
- Served as the process improvement manager for the entire Facilities Organization reporting directly to the Vice President. Responsible for executing and developing Facilities Engineering Management processes.

#### ***Project Manager, Centennial Contractors Enterprises, Inc., Fairfax County (VA) Government Project, 1/05 to 1/06***

- Executed JOC Contracts valued at over 7 million dollars for the Fairfax County Government including: Reston Community Center Locker Room Renovation, SWM Silt Removal Projects, Judicial Center Bio-Remediation Retention Pond Reconstruction, and the Laurel Hill Reconstruction Projects.
- Executed detailed R.S. Means line item estimates, schedules, constructability reviews, value engineering analysis, and high value quality control, and overall management for assigned projects.

#### ***Lead Design Engineer/Project Manager, Major, US Army Active, 20<sup>th</sup> Engineer Brigade, US Army Active, Balad, Iraq, 5/07 to 6/08***

- Lead design engineer within Multi-National Corps-Iraq. Responsible for projects throughout the entire country of Iraq.
- Planner and Developer for the "Village of Hope" 13.1 million dollar community development; part of the first ever demilitarization, disarmament, and reintegration program, training Iraqi civilians in trade skills to rebuild their community.
- Oversaw the permanent redesign of the Iraq Route 1, Grand Canal Highway Bridges after the August 2007 IED attack

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- Design section manager of 8+ military and civilian personnel executing over 41 million dollars of design work for clients including the US State Department, Iraqi Ministry of Construction and Housing, and numerous others.
- Assisted in the management of a 65 million dollar troop labor construction program; providing QA and construction project management country wide; planning over 300 million dollars in coalition base and infrastructure work; ranging from small Operations and Maintenance, Army (OMA) funded projects to DD1391 Military Construction, Army (MCA) projects.

### Academic Experience

#### ***Professor and Director, Construction Engineering Management (CEM), Clarkson University, Potsdam, NY, 11/14 to Present***

- The Harold E. Lechler '48, MS '53, HD '78 Endowed Director for the Construction Engineering and Management program within the Department of Civil and Environmental Engineering (CEE); named Professor of Practice in 11/17
- Responsible for all instruction and coursework within the undergraduate CEM certificate program and CEM graduate emphasis area. Oversee one full time instructor and seven adjunct faculty, work with/under a corporate advisory board, and manage a separate funding budget for program activities. Raised over \$2 million in the first five years of the directorship.
- Named Best Master's Degree in Construction Engineering Management in 2020, 21, & 22; top 10 Best Value Masters in 2021 & 22
- Director and CEO of the Clarkson CEM Consulting Group (C3G) providing pre-professional engineering, facilities, and construction related services to municipalities, non-profit organizations and similar through the use of student internship and experiential learning (<https://sites.google.com/clarkson.edu/clarkson-c3g/>).
- Support and execute on-campus facilities activities, through internships and collaboration with Clarkson Facilities and Services, including feasibility studies, document review, sustainability qualification, and training.
- Leader and Primary Investigator, New York Olympic Region LEED for Communities, overseeing the certification of the first ever multi-jurisdictional LEED for Communities certification (LEED Gold, 9/19), current recertification (planned 9/24), and ongoing research of the effects of Sustainable Holistic Planning Systems through this laboratory (<https://webspaces.clarkson.edu/~ebackus/SHPS.htm>). Task Force Member for the Town and Village of Potsdam NYS Climate Smart Communities effort, & NYS Downtown Revitalization Initiative, Potsdam, Local Planning Committee in 2019-20.
- Developed new courses: CE409 Fundamentals of Building Systems and CE410/510 Sustainable Infrastructure and Building, CE499 Fundamentals of Engineering Exam Review, CE590 Graduate Project
- Courses Taught: CE212 Intro to Engineering Design, CE406 Infrastructure Construction, CE409, CE410/510, CE441 Reinforced Concrete Design, CE448 Intro to Architectural Engineering, CE490/492 Senior/Capstone Design, CE499, CE590
- Developed the Architectural & Facilities Engr. Minor curriculum, working with a panel of national experts.
- Member of the Campus Sustainability Committee. Phalanx Advisor, and Co-Advisor of the Clarkson Const. Club
- Member APPA (<https://www.appa.org/>) Credentialing Board
- Appointed to the Buildings Technical Working Group for the NYS Climate Impacts Assessment, 8/21 to 12/23
- Selected/appointed to the USGBC LEED for Cities & Communities Consensus Committee, 1/24 to present
- Served as the Department Executive Officer, managing the undergraduate Civil and Environmental Engineering programs of the entire CEE Department and serving as second to the Department Chair, 7/17 to 6/21.

#### ***Special Project Officer, Major, US Army Reserve, United States Army Engineer School, Fort Leonard Wood, MO, 1/12 to 9/12***

- Developed course curriculum for the US Army Engineer School Officer Advanced Course and Basic Course in the area of Construction Contracting. Specifically asked to serve in this capacity by the School Commandant.
- Developed a project based scenario and lead through exercise materials for small group instruction and classroom lecture for future iterations of these universal courses for all Army Engineers.
- Published white papers and information documents that enabled new concepts in education and training delivery by the Army Engineer School in these topics.

#### ***Assistant Professor of Military Science, Major, US Army Reserve, George Mason University, Fairfax, VA, 8/08 to 1/12***

- Provided countless hours of classroom instruction, field experience, and one-on-one mentorship/advising of students.
- Subject Areas/Courses Taught:
  - MLSC300 & MLSC301 Applied Leadership I and II: Tactics (Patrolling, Movement to Contact, Meeting Engagements, etc.), Sustainment Operations, Security Operations, Offensive Operations, Defensive Operations, Physical Fitness, Campcraft (Land Navigation, Patrol Base Operations, Basecamp Development, etc.), Leadership Principles, Pres. Skills.
  - MLSC400 Leadership and Management: Logistics Systems Management, Officership, Applied Military History, Training Management, Physical Fitness, Decision Making Processes, Briefing Skills.
  - MLSC401 Leadership and Ethics: Military and Professional Ethics, Principles of War, Advanced Battle Analysis, Regulatory Compliance, Staff Management, Supervisory Responsibilities.
- Served also as the National Capital Region Officer in Charge of all Adjunct Military Science Faculty 6/10 to 1/12
- Served as a Faculty Advisor of the George Mason University student chapter of the Society of American Military Engineers.

## Erik C. Backus, PhD., P.E., LEED AP BD+C, ENV SP, FMP

### ***Teaching Assistant, University of Missouri – Rolla (now Missouri S&T), Rolla, MO, Civil Eng. Dept., 8/01 to 12/04***

- Chancellor's Fellow and Teaching Assistant for several courses while pursuing a Master degree in Civil Engineering.
- Subject Areas Taught:
  - CE 241 Economy of Engineering Design: Engineering decision-making procedures; time value of money principles; present, annual, and future worth analysis; rate of return and benefit/cost ratio method; effects of taxes, depreciation, and inflation on project viability; sensitivity analysis; design component optimization; project financing costs; and applications.
  - CE 211 Transportation Engineering: Operating characteristics of transportation modes including highways, railways, inland waterways, airways, and pipelines. Consideration of traffic control devices, safety, system capacity, design of routes, planning of urban transportation systems, and economic evaluation of transportation alternatives.
- Primarily served as paper grader and in-class assistant for lab periods; in-class instruction for several distinct class sessions.

### ***Training & Executive Officer, Lieutenant, US Army Active, C Company, 1st Battalion, 10th Infantry Regt., Fort Leonard Wood, MO, 10/97 to 1/99***

- Training and Company Executive Officer for a Basic Combat Training Company training over 1000 soldiers per annum.
- Subject Areas Taught:
  - Prevention of Subversion and Espionage Against the Department of the Army (SEADA), Alcohol Awareness, Suicide Prevention, Law of War, Ethical Decision Making
- Only Commissioned Officer recognized for Training Excellence by the 3d Tng. Bde. Quality Assurance Div. in 1998.

### ***Teaching Assistant, Clarkson University, Potsdam, NY, Civil Engineering Department, 8/94 to 5/97***

- Undergraduate Teaching Assistant and Paper-grader while pursuing a Bachelor degree in Civil Engineering.
- Subject Areas/Courses Taught:
  - CE 212 - Introduction to Engineering Design: Introduction to the concepts of engineering design. Solving engineering design problems using computer programs and experimental investigations by teams of students; concepts of design functionality, economics, and ethics.
  - CE 441 - Reinforced Concrete Design: The investigation and design of reinforced structural elements such as beams, slabs, columns and footings to meet ACI 318 code requirements.
  - CE 442 - Steel Design: Determination of loads for design; behavior and design of tension members, columns, beams, beam-columns, bolted connections, and welded connections; use of LRFD specifications and the Uniform Building Code.
  - CE 461 - Transportation Systems Design: Planning and design of transportation systems with emphasis on highway geometric design components, highway pavement, airport and other selected topics.
  - LC 150 - Star Trek & the Future,: Study of the interactive effects of technology on leadership and how leadership shapes the development and/or use of technology in the future, using the universe envisioned by Gene Roddenberry's Star Trek™ series as the base construct.
- Served primarily as paper-grader and in-class mentor for Civil Engineering Courses; selected over graduate students.
- Co-developed and taught an innovative course on futurism and its ethical, developmental, and leadership implications.

### **Other Facilities/Construction/Engineering Experience**

#### ***Battalion Commander, Lieutenant Colonel, US Army Reserve, 479rd Engineer Battalion, Fort Drum, NY, 3/17 to 6/17***

- Responsible for the activities of a combat const. engineer battalion of over 500 soldiers and over 100 million dollars of equipment.
- Oversaw the Battalion for 3 months during a critical leadership transition. Initiated the ECS-1 Drainage Repair project.

#### ***Design Engineer, Lieutenant Colonel, US Army Reserve, 411th Engineer Brigade, Stewart Air Base, New Windsor, NY, 11/15 to 3/17 and 6/17 to 12/17***

- Responsible for all design and construction management for US Army Engineer units from North Carolina to Maine.
- Published the Brigade Construction SOP in March 2016. Oversaw the completion of over 5 million dollars of construction to complete the Fort AP Hill Ammunition Holding Area Expansion project in the summer of 2016
- Concurrently served as Brigade Executive Officer from 8/16 to 3/17
- Developed project packages for the Mattydale Tree Clearing Project and the ECS-1 Drainage repair project at Fort Drum.

#### ***Project Officer, Lieutenant Colonel, US Army Reserve, Office of the Chief, Army Reserve, G33 (Operations), Fort Belvoir, VA and The Pentagon, Arlington, VA, 10/12 to 11/14***

- FEMA Liaison, Pentagon Army Alternate Operations Ctr. & DOMS Desk Manager, and COOP Plan Facilitator
- Developed and oversaw the construction in support of the OCAR COOP site location as a result of the BRAC cycle
- Provided support to Defense Support of Civil Authorities (DSCA) for natural disaster recovery/prevention events from Hurricane/Super Storm Sandy (2012) to the Okanogan Complex fire (2015). Graduate of the FEMA EMAC Training Course.
- Supported several DSCA exercises and senior leadership conferences during my tenure

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### ***Company Construction Officer, Captain, US Army Active, 389<sup>th</sup> Engineer Battalion, US Army Active, Baghdad, Iraq, 2/03 to 5/04***

- Responsible for the activities of a combat const. engineer company of 141 soldiers and over 18 million dollars of equipment. Master developer for Camp War Eagle executing the construction of six, 160 soldier barracks and numerous other projects valued at over 10 million dollars.
- Responsible for the development of this base-camp from the ground up; to include managing/developing the master plan, whole site drainage plan, and contract management inclusive of US Government and Iraqi personnel.
- Executed onsite facilities inspection and work progress inspections on a weekly basis, to include detailed progress reports. Served as Contracting Officer's Representative and Contracting Officer's Technical Representative.
- Designed and lead construction of over 20 million dollars of work on Camp Victory North/Baghdad International Airport to include a permanent culvert and anti-terrorism/force protection entry/access control point.
- Designed a Level II Medical Treatment Facility capable of treating over 500 personnel on a weekly basis.

### ***Commander, Captain, US Army Reserve, 955<sup>th</sup> Engineer Company (Pipeline Const.), Fort Leonard Wood, MO, 7/01 to 2/03 and 7/04 to 1/05***

- Responsible for a US Army const. company of 170 soldiers and over 10 million dollars of equipment.
- Led and directed numerous construction projects on the Fort Leonard Wood installation and nearby sites.
- Led the installation of 8.9 miles of IPDS Aluminum Pipeline and other construction valued over \$100,000 at Fort Hunter-Liggett, CA from 1 to 14 June 02.

### ***Summer Operations Intern, Alberici Constructors, Inc., St. Louis, MO, 5/02 to 9/02***

- Helped manage an over 9.6 million dollar addition to the Phelps County Regional Medical Center; CM project delivery
- Directed all civil and retaining structure construction for the project, including all parking areas.
- Developed details and designed small elements in consultation with the architect of record

### ***Assault and Obstacle Platoon Leader, Lieutenant, US Army Active, 5<sup>th</sup> Engineer Battalion, Fort Leonard Wood, MO, 10/99 to 11/00***

- Responsible for the activities of a combat const. engineer platoon of 31 soldiers and over 3 million dollars of equipment.
- Lead and directed the construction of over 1 mile of anti-vehicular barrier along the US/Mexican border.
- Executed two deployments to the National Training Center, conducting over 180 hours of earthwork operations.
- Served as construction management POC for the company; developed CPM and logistical plans for several projects.

### ***Design Consultant/Laborer/Craftsman, 2B Contracting Inc., Baldwinsville, NY, 6/89 to 5/97***

- Designed residential structural elements and architectural elements for this residential contracting firm
- Developed, and updated as required, working drawings, utilizing AutoCAD and 3D Home Arch. as the primary design platforms
- Executed retail/commercial interior finish work for such companies as The Express Inc. and Bath and Body Works.
- Worked as a general laborer/carpenter learning most aspects of various trades, serving as team leader
- Work included: Carpentry, Plumbing, Dry Wall, Electrical, HVAC, and Masonry, Roofing, and Concrete
- Worked and coordinated directly with several inspecting agencies to include the Under Writers Laboratories (UL)

### **Other Experience**

#### ***Captain, United States Army, Active, Fort Leonard Wood, MO, 5/97 to 6/01***

- Personnel Officer, 5<sup>th</sup> Engineer Battalion, US Army Active, Responsible for the Human Resource Mgmt. of 454 soldiers.
- Assistant Operations Officer, 3d Training Brigade, US Army Active, Provided continuity during senior leadership change.
- Operations Officer, 1<sup>st</sup> Battalion, 10<sup>th</sup> Infantry Regiment, US Army Active, Planned and executed the closure of this unit.
- Executive Officer, C Company, 1<sup>st</sup> Battalion, 10<sup>th</sup> Infantry Regiment, US Army Active, Managed all supply and logistics operations for a company that trained over 1000 soldiers annually; served as Battalion Safety Officer.

#### ***Major, United States Army Reserve, 1/05 to 5/07 and 7/08 to 10/12***

- Special Project Officer, United States Army Engineer School, Fort Leonard Wood, MO, Developing curricula and training for the Army in the area of Construction contracting from 1/12 to 9/12.
- Assistant Professor of Military Science, George Mason University, Fairfax, VA, Training and developing the next generation of US Army Leaders. Serving also as the National Capital Region Officer in Charge since 6/10.
- Assistant Operations Officer, Facility Engineer Center – North East, Fort Meade, MD, Coordinated the Facility Management of US Army Reserve Facilities from Virginia to Maine.



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### TRAINING/AWARDS/LICENSES/ACCREDITATIONS

Training: Engineer Officer Basic Course; Engineer Officer Advanced Course; Combined Arms Staff and Services School; US Army Engineer Center (USAEC) Office Ergonomics Course; USAEC Safety Officer/Accident Investigator Course; US Army Corps of Engineers CQM Course; RS Means Estimating Course – Facilities Cost Data; OSHA 10-Hour Course; American Red Cross CPR and First Aid; Leadership in Environmental and Energy Design (LEED®) Technical Review – NC; Commonwealth of Virginia, Bureau of Capital Outlay Management, Construction and Professional Services Manual (CPSM) and VCCO Seminar, US Army COR Course, George Mason University Professional Certificate in Facility Management Program, US Army Command and General Staff College Common Core Graduate, Constructive Credit US Army Advanced Operations Course, Lutherans Restoring Creation Synodical Trainer.

Military/Academic Awards: Bronze Star Medal, Combat Action Badge, four Army Commendation Medals, two Army Achievement Medals, Bronze Order de Fluery Medal, Distinguished Military Graduate, Phalanx Commendable Leadership Award  
Military Operator's Licenses: Caterpillar D7G Dozer, Freightliner Long haul Tractor, and the John Deere 310 Backhoe

Other Awards: USGBC Community Leader of the Quarter in February 2022, "Professor to know in Civil Engineering (and related fields)" by Online Engineering Programs.com, 2020, George Mason University Facilities Employee of the Month, August 2013; George Mason University Sustainability Hero Award, 2012; Best Paper Award, ICEIS 2013, Area: Artificial Intelligence and Decision Support Systems

Engineer Intern (EI) Certificate, NY, #080498; Professional Engineer (PE), MO, #2005000498; Virginia Construction Contracting Officer, VCCO-138

LEED® Accredited Professional (LEED AP, 2008; LEED AP BD+C, 2009); Facility Management Professional (FMP, 2011); Envision Sustainability Professional (ENV SP, 2017); USGBC® Faculty (2020), LEED for Cities and Communities Rating System Pro (2023), LEED for Cities and Communities Certification Process Pro (2023), USGBC Resilience Badge (2023)

#### Military Rank and Status:

Lieutenant Colonel, US Army Corps of Engineers, United States Army, Reserve, 10/12 to 12/17 (Retired 1/18 to Present)

Major, US Army Corps of Engineers, United States Army, Reserve, 7/08 to 10/12

Major, US Army Corps of Engineers, United States Army, Active, 7/07 to 6/08

Captain, US Army Corps of Engineers, United States Army, Active, 5/07 to 6/07

Captain, US Army Corps of Engineers, United States Army, Reserve, 7/01 to 5/07

Captain, US Army Corps of Engineers, United States Army, Active, 12/00 to 6/01

Lieutenant, US Army Corps of Engineers, United States Army, Active, 5/97 to 12/00

Security Clearance Level: None. (Last investigation complete date: 7 Jul 2013, formerly Top Secret/SCI)

### COMPUTER SKILLS

Extensive experience with Unix, Lynix, Windows, Microsoft Office Suite, P3, MS Project, AutoCAD, ArcGIS, and other software/systems; Past leader in an Internet programming endeavor; a strong background in software/hardware installation

### PUBLICATIONS (ORCID: 0000-0002-4348-8216)

- Rajkovich, N. B., Brown, C., Azaroff, I., **Backus, E.**, Clarke, S., Enriquez, J., Greenaway, B., Holtan, M. T., Lewis, J., Ornektekin, O., & Schoeman, L. (2024). Chapter 4: Buildings. In A. Stevens (Ed.), New York State Climate Impacts Assessment [Interim version for public release], <https://nysclimateimpacts.org/wp-content/uploads/2024/01/Assessment-ch4-buildings-01-31-24.pdf>
- Backus, Erik**, (2023), "Decisions, Decisions, Decisions—The Time is Now to Decide How You Decide", Facilities Manager, Vol. 39, No. 5, APPA (September/October 2023), <https://www.appa.org/facilities-manager/decisions-decisions-decisions-the-time-is-now-to-decide-how-you-decide/>
- Backus, E. C.** (2023), The facilities decision-making process: A focused, systematic, and abductive reasoning based decision-making framework for superior outcomes in facilities and infrastructure projects (Order No. 30487030). Available from Dissertations & Theses @ Clarkson University. (2822891511). Retrieved from <https://www.proquest.com/dissertations-theses/facilities-decision-making-process-focused/docview/2822891511/se-2>
- Backus, Erik**, Hogue, Markus, Olson, Jacob, and Agarwal, Lalit (2022), Chapter 11: Facilities Information Systems, Operational Guidelines for Educational Facilities: Maintenance, Third Edition, J. Thomas Becker, Editor in Chief, and Theodore J. Weidner, Editor and Project Lead, APPA, ISBN 978-0-913359-19-8 (9780913359198), 2022
- Olson, Jacob and **Backus, Erik** (2021), "Informatics: A Data-Visualization Paradigm", Facilities Manager, Vol. 37, No. 6, APPA (November/December 2021), <https://www.appa.org/facilities-manager/informatics-a-data-visualization-paradigm/>

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- Backus, Erik C.** and Hogue, Markus (2021), “How to Leverage Your Data for Your Institution’s Success and Value”, Facilities Manager, Vol. 37, No. 5, APPA (September/October 2021), <https://www.appa.org/facilities-manager/how-to-leverage-your-data-for-your-institutions-success-and-value/>
- Backus, Erik C.** and Bruhl, Jakob (2021), “The Need for a Comprehensive Facility Decision Making Process”, Facilities, Vol. 40, No. 1/2, pp. 40-55, July 2021, <https://doi.org/10.1108/F-06-2020-0081>.
- Backus, Erik C.** and Bird, Stephen (2021), “Assessing and Implementing a Sustainable Holistic Planning System: LEED for Communities and the New York Olympic Region”, Case Studies in the Environment, March 2021, <https://doi.org/10.1525/cse.2021.1245219>
- Hogue, Markus and **Backus, Erik C.** (2020), “Informatics Next Steps: A Journey to Better Knowledge”, Facilities Manager, APPA (September/October 2020), <https://www.appa.org/facilities-manager/informatics-next-steps-a-journey-to-better-knowledge/>
- Smith, Dana K., Thieme, Ana, **Backus, Erik C.**, et. al. (2020), ANSI/APPA 1000-2 Total Cost of Ownership for Facilities Asset Management (TCO) – Part 2: Implementation and Data Elements, January 2020, ISBN 978-0-913359-10-5 (9780913359105)
- Backus, Erik C.**, Lieutenant Colonel (Retired) and Park, Kevin, Captain (2019), “Getting the Right ACS for USACE Utilization”, Engineer Bulletin May-August 2019; Volume 49 PB 5-19-2, pp. 21-23,
- Slavin, Peter (2018), “Design and Construction Standards in Higher Education”, Facilities Manager, APPA (July/August 2018), **un-cited author**, <https://www1.appa.org/FacilitiesManager/article.cfm?ItemNumber=4238&parentid=2729>
- Backus, Erik C.** (2107), “Technology, Trends, and How to Not be Swept Away”, CONEXPO/CONAGG News, September 26, 2017, <http://www.conexpoconagg.com/news/september-2017/technology-trends-and-how-to-not-be-swept-away/>
- Backus, Erik C.** and Weidner, Ted (2017), “Getting the Most out of APPA’s FPI Survey and Report Tool—And a Preview of What’s to Come”, Facilities Manager, APPA (September/October 2017), pp 49-51, <https://www1.appa.org/FacilitiesManager/article.cfm?ItemNumber=4175&parentid=2724>
- Hogue, Markus, **Backus, Erik C.**, Smeds, Christopher, and Webb, Mark (2016), Code Talkers: Informatics Moving Forward, Facilities Manager, APPA (November/December 2016), pp. 32-33, <https://www1.appa.org/FacilitiesManager/article.cfm?ItemNumber=4092&parentid=2719>
- Backus, Erik C.**; Schay, Alan; Theimier, Ana (2016), APPA Facilities Informatics Maturity Matrix Technical Report, July 2016, APPA, ISBN 1-890956-93-7 (1890956937), [https://www1.appa.org/bookstore/product\\_browse.cfm?itemnumber=1306](https://www1.appa.org/bookstore/product_browse.cfm?itemnumber=1306)
- Backus, Erik** (2014), “Lighting Your Worship Space Primer: Bringing in the Light, Sustainably”, <http://docs.google.com/viewer?a=v&pid=sites&scid=bHV0aGVyYW5zcmVzdG9yaW5nY3JlYXRpb24ub3JnfHd3d3xneDo0N2UxMTAyYTIwYTBhOGMy>, 4 December 2014
- Backus, Erik** (2013), “George Mason University Design Process Standards”, <https://facilities.gmu.edu/wp-content/uploads/2-DESIGN-PROCEDURES.pdf>, June 28, 2013
- Backus, Erik** and Lo Margaret (2013), “George Mason University Environmental Design Standards”, <https://facilities.gmu.edu/wp-content/uploads/3-4-ENVIRONMENTAL-STANDARDS.pdf>, June 28, 2013
- Ngan, Chun-Kit, Brodsky, Alexander, Egge, Nathan, and **Backus, Erik** (2013), “A Decision-Guided Energy Framework for Optimal Power, Heating, and Cooling Capacity Investment”, ICEIS 1, page 357-369. SciTePress, [https://doi.org/10.1007/978-3-319-09492-2\\_10](https://doi.org/10.1007/978-3-319-09492-2_10), (2013); Best Paper Award
- Backus, Erik** (2011), “True Sustainability: A Rubric for Evaluating Infrastructure Rating Systems and Resiliency”, The Infrastructure Security Partnership, <http://adweb.clarkson.edu/~ebackus/TISP.pdf>, November 20, 2011
- Showalter, William Eric and **Backus, Erik Carl** (2010). “Recruiting Construction Leaders and Managers for the Future.” The 10th International Conference "Modern Building Materials, Structures and Techniques", Vilnius Gediminas Technical University Publishing House "Technika" May 19, 2010, Lithuania, pp. 524–531, ISBN 978-995528594-6 (9789955285946).
- Backus, Erik C.**, Maj. (2008), “Field Force and Facility Engineer Training.” Engineer Bulletin Apr-Jun 2008; Vol. 38 PB 5-08-2, pp. 40-42.
- Backus, Erik C.**, Maj. (2008), “A Time for Hope: Iraq Finds a New Kind of Village.” Castle Chronicle Feb-Jul 2008; Vol. 2, pp. 6-9
- Backus, Erik C.**, Maj. (2008), “Warrior Focused Construction: Tips for Success.” Castle Chronicle Aug 2007-Jan 2008; Vol. 1, pp. 22-24

### OTHER LEADERSHIP/ACTIVITIES

#### Present Roles

- Board Member, Rock Charitable Fund, 1/20 to Present
- Member, US Green Building Council (USGBC), 6/12 to Present
- Member, US Green Building Council (USGBC), Cities & Communities Consensus Committee, 1/24 to Present
- Member, APPA Credentialing Board, 8/19 to Present
- Member, Academic Committee, Institute of Sustainable Infrastructure, 6/12 to Present
- Member, Society of American Military Engineers (SAME, Environ./Energy, Resilience, and Sustainability COI), 6/06 to Present
- Member, New England Synod, ELCA, Green Team, 6/15 to Present
- Synod Trainer, Lutherans Restoring Creation, 11/11 to Present

## **Erik C. Backus, PhD., P.E., LEED AP BD+C, ENV SP, FMP**

Council Member, Lutheran Church of the Holy Trinity, Potsdam and Saranac Lake, NY, 6/19 to Present  
National President for Omega Lambda Tau Inc., 1/24 to Present  
Advisor of Phalanx, Clarkson University Honorary Leadership Society  
Member of Tau Beta Pi and Chi Epsilon Honorary Professional Societies  
Member of the American Society of Civil Engineers  
Life Member, Army Engineer Association  
Life Member, Veterans of Foreign Wars & The American Legion  
Eagle Scout, BSA

### **Past Roles**

Member, NYS Downtown Revitalization Initiative, Potsdam, Local Planning Committee, 12/19 to 10/20  
Volunteer-Chair, USGBC, New York Upstate Community, Market Leadership Advisory Board, 1/18 to 12/19  
Member of the APPA Total Cost of Ownership Working Group, Information Gathering Sub-Group and co-author of ANSI/APPA1000-2-2020, 6/18 to 12/19  
Vice Chair, USGBC, New York Upstate Chapter, Market Leadership Advisory Board, 1/17 to 12/17  
Member, USGBC, New York Upstate Chapter/Community, Market Leadership Advisory Board, 1/16 to 3/24  
Member, US Green Building Council, LEED for Cities & Communities Working Group, LEED for Communities Expert Group, 9/21 to 12/23  
Co-Advisor, Clarkson University Chapter of Bridges to Prosperity (B2P), 1/15 to 12/19  
Member, The Infrastructure Security Partnership (TISP, now merged into SAME, Resilience Committee), 10/11 to 10/16  
Member, Metropolitan Washington DC Synod, ELCA, Caring for Creation Team, 11/12 to 10/14  
Member, Community Council, Faith Alliance for Climate Solutions, 6/14 to 10/14  
President, Hope Lutheran Church, Annandale, VA, 7/06 to 5/07, 7/10 to 6/14  
Vice President, Hope Lutheran Church, Annandale, VA, 7/09 to 6/10  
Youth Director and Member of Council, Hope Lutheran Church, Annandale, VA, 7/05 to 6/06  
Vice President, Hope Lutheran Church, Rolla, MO, 1/02 - 2/03 and 9/04 to 1/05  
National Vice President of Development for Omega Lambda Tau Inc., 2/01 to 2/03  
National Vice President of Administration for Omega Lambda Tau Inc., 10/15 to 12/23  
Member of Phalanx, Clarkson University Honorary Leadership Society  
Member of the National Society of Professional Engineers (inactive)  
Faculty Advisor, Student Chapter of the Society of American Military Engineers at George Mason University, 7/08 to 11/15  
Leader in the City of Schenectady, NY LEED for Cities certification 6/17 to 3/20  
Faculty Advisor, Clarkson Chapter of Bridges to Prosperity (B2P), 11/14 to 5/19  
Co-Chair, APPA Facilities Informatics Working Group, 5/18 to 9/23 (Member, 8/15 to 9/23)