

Planning Commission Application

02/22/2026 8:16 PM (MST)



Full Name Paul M. Leef, AIA, NCARB, LEED AP

Are you an Erie resident? Yes

Are you under the age of eighteen? No

Are you currently serving on the commission you are applying for? No

Home Address 2968 Hunt Court

Email paul.leef.aia@gmail.com

Primary Phone Number 303.885.8352

Alternate Phone Number 720.648.1125

Employer SmithGroup

Job Title/Occupation Vice President, Senior Principal, Architect

Have you ever been employed by the Town of Erie? No

Do you work for or own a company that does business with the Town of Erie? No

What is your highest level of education completed? Masters Degree or Higher

Why are you interested in serving on the Planning Commission and what specific talents or expertise do you bring if appointed?

I have spent most of my career in service to public institutions, and I believe in acting locally, in the place where my family and I live. I bring expertise that I believe will enhance the work of the Planning Commission:: a deep understanding of planning and the built environment and a commitment to collaboration and teamwork. I have degrees in both Engineering and Architecture; as a licensed architect, my entire professional career has focused on planning and design. I was the campus architect for both the Colorado School of Mines and CU Boulder during periods of unprecedented growth, not unlike what the town of Erie has experienced. As the first LEED Accredited Campus Architect for CU Boulder, a community of 40,000 people, I led the first campus planning effort that included sustainability as a major consideration. During my tenure, I established a positive and collaborative working relationship with the Executive Director of Planning & Sustainability for the City, and he subsequently hired me to manage the Boulder Civic area redevelopment. For over ten years, I have been consulting nationally on the planning efforts for leading universities such as Clemson, Duke, and Vanderbilt, as well as growing regional comprehensives such as San Diego State and Texas State. I am a Vice President at SmithGroup, the oldest architecture and engineering firm in the country, and one of the leading planning and design firms in the US. My planning

work has led me to present to legislatures in Oregon, Utah, and Florida about planning issues, and I lecture nationally at conferences. I belong to the Society of College and University Planners, the American Institute of Architects, and I am a faculty member for APPA, the leading national organization of facility managers, for whom I teach campus planning at APPA University.

Have you served on another board/commission in an advisory capacity? If so, please describe the board and what made serving in that capacity a good experience? What were the major concerns or issues?

I have served on several boards. I was the designated representative for the Colorado School of Mines on the city of Golden's chamber of commerce, where the issues were economic development and the growth of the campus. I also served on the CU Civil Engineering Advisory Board and the Board of Directors for an independent Montessori School in Boulder County. For the Montessori school, we engaged a board consultant to advise on governance and board strategy. As Campus Architect for CU Boulder, I was the campus liaison to the CU Design Review Board (DRB). As such, I advised the DRB on project design, project site selection, and the campus master plan, which I led. In higher education, campus plans are comprehensive plans that cover a multitude of technical components, which include land use, development capacity, mobility (parking and multi-modes of transportation), landscape, sustainability, wayfinding, place making, and utility infrastructure, to name a few. A campus plan seeks to align the strategic goals of a university community with a vision of the built environment of the future.

Please describe a situation where you were working with a small group and disagreed with the direction of the project, what did you do? What was the result?

1. As CU Campus Architect, my team and I were working with a nationally reknown architectural firm on what was the largest and most expensive project for CU at the time. I did not agree with the design direction of the building and worked with architect to develop alternative scenarios, which we brought to the CU Design Review Board. This collaborative process produced a significant change in direction and a better outcome.
2. Also at CU, we had a project to which some citizen groups objected. I worked closely with the Executive Director of Planning for the City to find a compromise solution. Together, we had instituted a series of quarterly meetings between my Planning office and the City's Planning office, which enhanced communication and improved our working relationship. In fact, we subsequently co-presented a session at the International Town & Gown Conference, and he later hired me to manage the City's largest redevelopment project, the Civic Area Redevelopment project.
3. While working or the City of Boulder Executive Director of Planning, we learned that my former employer, CU Boulder, was interested in develop CU owned property for a hotel conference center. The CU Director of Real Estate was focused on a site that did not benefit the City, while another site could help spur redevelopment of University Hill. We collaborated with the City's Downtown Board to fund a third party, independent feasibility study, which confirmed the City's preferred site. This is what was built.
4. In the last year, I was part of the team producing the ten year campus plan for Clemson University. We prepared three scenarios for growth, one of which included expansion to an off-campus site that was disconnected to the university community. This was less than ideal for a variety of reasons. As a proponent of data-informed planning, I presented data on the age and condition of some existing facilities and proximity to existing infrastructure, I helped develop an option for redevelopment of existing sites on the main campus and an infill strategy that leveraged existing infrastructure and helped promote a more connected university community. This strategy was incorporated into the plan which was adopted.

If you were appointed, what goals would you like to see accomplished on this board or commission?

In the public realm, a planning commission serves an important role in providing a community voice. As such, I would ensure that developers are held responsible for conducting a transparent and inclusive public process and are held accountable to community standards and needs. My grandson lives in Compass and could not ride his bike safely to either his grade school or our house, so walkability and connectivity would be priorities for me, in addition to ensuring Smart Growth..

What do you think are the most important planning and land use

As previously mentioned, I think that Smart Growth is one of the most important planning issues facing Erie. The recent citizen poll indicates that our small town feel

issues facing Erie? What insights could you bring to the Commission's deliberations and recommendations?

is important. At the same time, some growth is inevitable, and we have to ensure that we can achieve density for reasons of sustainability and affordability where it is appropriate. Furthermore, we need to recognize that growth places direct costs on our general fund and capital budgets, and developers need to share in the cost for infrastructure investments which they trigger. As the director of planning and design for the Colorado School of Mines and CU Boulder, I have worked with local planning departments on growth issues from the other side of the table. I also worked for the City of Boulder Planning office. I will gladly bring insights and understanding from those varied experiences to the commission if selected.

Upload resume and additional documents (optional)

 FAIA_2025_Leef_Paul - Reduced.pdf

Please read and agree with the following statement

I certify that the facts and statements contained in this Board and Commission Application are true and correct.

I further understand that false statements shall be sufficient cause for rejection of this application.

I further certify that I have not been convicted of a felony under the laws of the State of Colorado or in another jurisdiction.

I understand that falsification, omission or misrepresentation will result in a rejection of this application. Any falsification, omission or misrepresentation is evidence of perjury in the second degree.

If I become a Board or Commission member with the Town, this form is valid for the period of my term with the Town and the crime records may be updated periodically at the discretion of the Town.

I understand that this application is considered a public record and subject to the Colorado Open Records Act.

I Agree Yes

If appointed to the Planning Commission, I agree to follow the Erie Municipal Code, the Comprehensive Plan, and other applicable laws. Yes

All board and commission members must follow the rules and regulations in the Erie Municipal Code as well as the Town's policies related to harassment, anti-violence, and technology use. Yes

Acknowledgement Signature



October 4, 2024

Mr. Carl D'Silva, FAIA
Chair, Jury of Fellows
The American Institute of Architects

1735 New York Avenue NW, Washington, D.C. 20006-5292

RE: Sponsorship of Paul Leef, AIA

Dear Mr. D'Silva and Esteemed Jury Members:

I am proud to sponsor Paul Leef, AIA, for elevation into the College of Fellows in Object 4, Government (Education). As the former Colorado State Architect and practicing architect in Denver, I have known Paul personally and have collaborated with him professionally for over twenty-five years. I can attest to his successful and impactful leadership that has enhanced institutions of higher education through innovative planning and exceptional, sustainable design.

By working methodically and strategically and building relationships with public and private institutions of higher education, Paul has elevated the roles of University Architect and Campus Planner. In those two roles, he has transformed campus capital planning and design at the local, state, and national levels. He has done this by raising design standards and practices, instituting organizational restructuring, integrating analytical space utilization tools, which have saved institutions millions of dollars, and has initiated and implemented enabling legislation. Paul's efforts allow for the creation of collaborative learning environments that are sustainable, resilient, and evoke a sense of community for students and faculty—an example is his campus wide classroom improvement plan at the University of North Carolina Charlotte. Throughout his career, Paul has been an advocate for higher education and the essential role that the profession uniquely plays for the private and public sectors.

Since knowing Paul, I have had the good fortune as the State Architect of collaborating with him on campus planning and design, facility condition assessments, long-term maintenance planning, and funding strategies at the Colorado School of Mines and the University of Colorado at Boulder. In addition, Paul and I established standard contract language in collaboration with the local chapters of the American Institute of Architects and the Association of General Contractors for fast-track project delivery methods for institutions of higher education and state agencies in Colorado. Paul led the effort to author the first Design-Build and Integrated Project Delivery Method (IPD) contracts for the State. He then piloted the Design-Build contract as University Architect while at the Colorado School of Mines on the Mines Park Student Housing project and

later implemented IPD as University Architect while at the University of Colorado at Boulder for the Williams Village Student Housing project (Exhibit 3.2). Over \$2B in Colorado higher education projects have been delivered using these new delivery methods.

Paul clearly demonstrated the benefits of the fast-track delivery method to streamline the procurement process and expedite the overall project schedule, as well as monitor and control costs on state-funded projects. This consensus document became the required fast-track delivery contract for the entire Colorado state system and was subsequently shared with and utilized by other states. Building on this success, Paul and I co-wrote the legislation (HB 07-1342) now codified into the Colorado Revised Statutes (CRS) 24-93-101, which is the "Integrated Delivery Method for Public Projects Act."

Paul's process has been one of inclusion, efficiency, advocacy, integrity, and accomplishment. He has shared his knowledge locally, statewide, and nationally through articles, lectures, and presentations and has advanced the practice of space and campus planning. He was recently invited to join the faculty of the APPA Institute, the premier professional association of facility managers, and now teaches hundreds of facility professionals on space and campus planning. He is also co-authoring a chapter on Space Management for the APPA Book of Knowledge. Most importantly, though, his work has positively enhanced the experience of hundreds of thousands of students across the country and beyond.

Paul Leef will be a notable addition to the College of Fellows, as he exemplifies all that the College represents. I hope you will join me in recognizing his significant contributions to the profession.

Sincerely,

Lawrence J. Friedberg, FAIA
Member Emeritus #30113846
Retired, Colorado State Architect (1994–2019)

PAUL LEEF, AIA, NCARB

As university architect and campus planner, Paul Leef transforms the operational policies, campus planning and design of public institutions. His project delivery innovations and speaking engagements facilitate the work of other professionals locally and nationally

Transforming Institutions: Elevated Standards, Organizational Practices, and Legislation

Change in higher education is accomplished primarily through organizational structuring, policies, contracts, and legislation. Throughout his career in the public sector, Paul Leef has led changes that have elevated the profession in general and the role of planners and architects in particular. At the Colorado School of Mines (CSM), a preeminent doctoral engineering university, Leef transformed the position of manager of design and construction to that of university architect. Working closely with the Office of the State Architect (OSA), AIA, and AGC, **he authored the first design-build contract for the OSA**. This document has been used successfully to deliver affordable housing to thousands of students throughout the state. As the University Architect for the University of Colorado at Boulder (CU Boulder), he worked with the State Architect to raise statutory dollar thresholds for hiring architects. **He also authored the first contract to leverage Integrated Project Delivery (IPD) legislation** sponsored by the State Architect. This work has opened doors to the profession and improved project delivery throughout the state.

In service to public institutions while in private practice, Leef's work has advanced aspects of capital planning of the built environment, ranging from individual campuses across the country to statewide university systems. For the North Dakota University System, he redesigned their statewide system of capital planning, which improved relations with the state legislature and created a more integrated and strategic process to plan facility investments throughout the entire North Dakota system.

Enhancing University Communities: Design

Leef's career has been focused on providing leadership in creating collaborative learning environments and memorable place-based communities. His partnership with faculty and designers created a landmark building at CU Boulder—the Integrated Teaching and Learning Laboratory—that pioneered hands-on, project-based learning environments for engineering students. This building became a national model for its learning spaces and use of the building itself as a learning tool, earning the National Science Foundation's prestigious Gordon Prize in Engineering Innovation.

At CSM, he implemented projects that continued to change engineering education. The Center for Teaching and Learning Media building **revolutionized teaching pedagogy at Mines** by creating a center for active engagement teaching in studio learning environment. Its success led to other faculty adopting this studio-based pedagogy, from which thousands of students have benefited.

He also directed the progression of architectural design and sustainability at CSM, which experienced unprecedented, historic campus growth: **he elevated design standards** and introduced a modern vocabulary that has become the campus standard for the tens of thousands of students who have studied there.

At CU Boulder, he directed the evolution of the main campus "Tuscan vernacular" architecture into a new style appropriate for a sustainable, 21st-century research campus. The \$1B capital program that he directed included 7 LEED Platinum buildings and 12 LEED Gold buildings, enhancing the experience for hundreds of thousands of students.

Impacting University Communities: Planning for the Future

Leef, in his role as University Architect, led campus-planning efforts at two universities at pivotal times in their history and charted new directions for each.

At CSM, **he planned the expansion needed to double the student enrollment and double their research enterprise**. He led the effort to close and vacate streets and create housing facilities that transformed the campus into a residential, pedestrian campus, which has now achieved Carnegie Tier One research status.

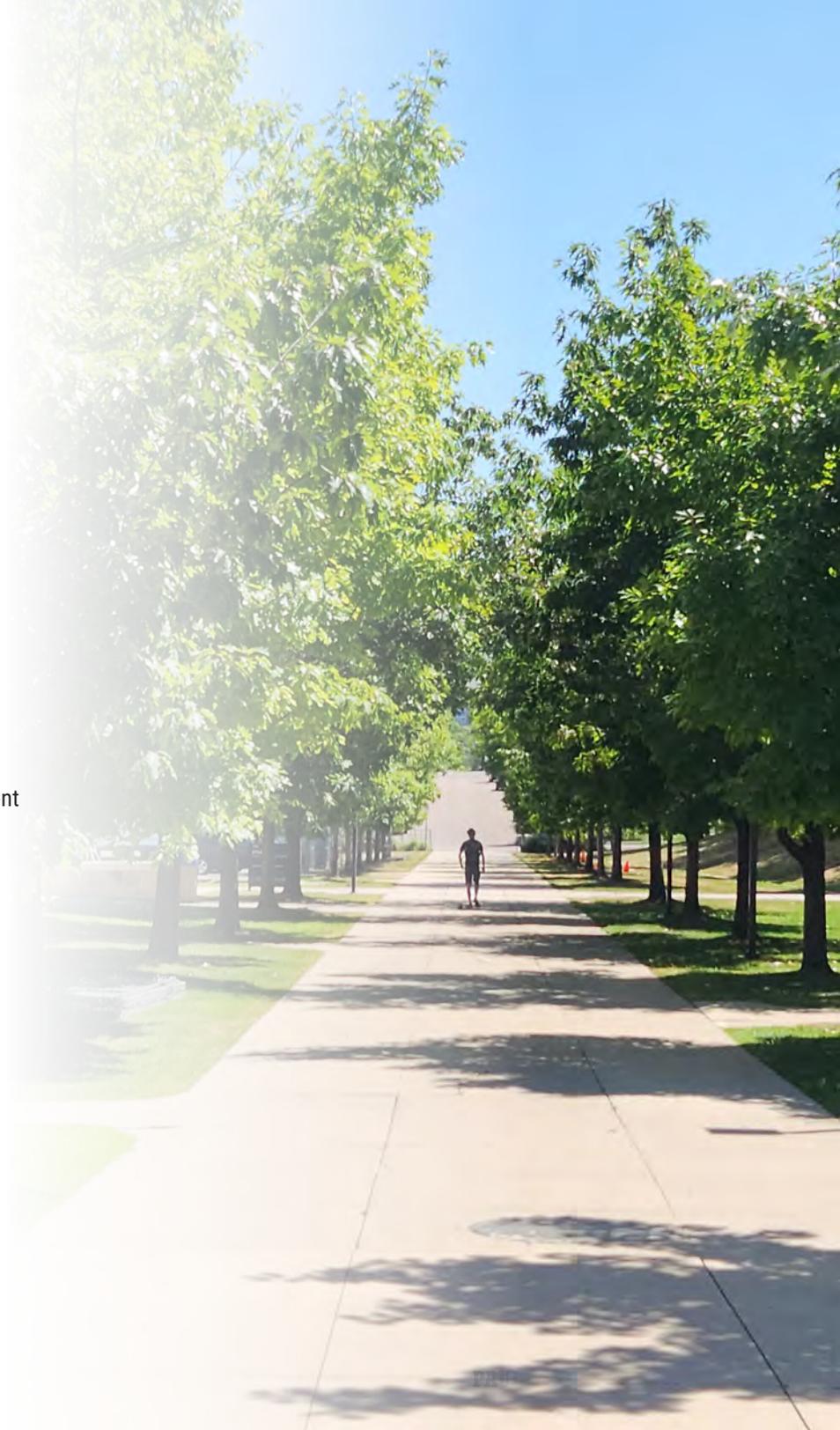
Leef's campus plan of CU boldly envisioned the transformation of a nearby office park into an extension of the academic campus. By organizing it around thematic, interdisciplinary neighborhoods of research, this radically changed the planning paradigm. This campus plan also broke ground as CU's first to incorporate a full chapter dedicated to sustainability and created a roadmap for constructing 1.2M GSF.

In private practice, Leef has focused on using data analytics to inform planning strategy and has presented on this topic at numerous national conferences.

His work on over 85 campuses with over a million students enrolled each year, has ranged from large public institutions such as the University of Texas at Austin, to regionals such as California State University-Chico. At Chico, his innovative analytics work drove the planning strategy and the plan received national planning award from the Society of College and University Planners. In recognition of his national leadership, he was recently asked to join the faculty of the APPA Institute, teach hundreds of facility professionals at national training events, and co-author a chapter in the APPA Book of Knowledge.

SECTION 2.0 CURRICULUM VITAE

- 2019–PRESENT **SMITHGROUP**
Vice President and Studio Leader, Campus Strategy & Analytics Studio
- 2014–2019 **PAULIEN & ASSOCIATES**
Vice President, President; led merger with SmithGroup (2019)
- 2013–2014 **CITY OF BOULDER**
Office of Planning and Sustainability; Civic Area Redevelopment Manager
- 2007–2013 **UNIVERSITY OF COLORADO BOULDER**
University Architect and Director of Planning, Design and Construction
- 1996–2007 **COLORADO SCHOOL OF MINES**
Campus Architect and Director of Campus Design, Construction and Development
- 1995–1996 **UNIVERSITY OF COLORADO**
Owner Representative, Integrated Teaching and Learning Lab
- 1985–1995 **UNIVERSITY OF VIRGINIA**
Staff Architect, Assistant Health Sciences Center Architect
- EDUCATION **UNIVERSITY OF VIRGINIA**
B.S. Civil Engineering
- UNIVERSITY OF VIRGINIA**
M.Arch



2.1.1 TRANSFORMING INSTITUTIONS: RAISING STANDARDS, PRACTICES, AND LEGISLATION

Change in higher education is accomplished primarily through organizational structuring, policies and procedures, and legislation. Paul Leef has led structural and contractual changes that have elevated the profession and the role of planners and architects.

- » At the Colorado School of Mines(CSM), he **elevated the position of manager of design and construction into that of university architect**, a director-level position that was augmented to include campus planning; the position was elevated to report directly to the CFO to reflect the importance of planning & design for the campus. He built a professional staff to raise the bar of quality and professionalism, which has persisted beyond his tenure as university architect.
- » At CSM, he worked closely with the State Architect and Attorney General **to author the first design-build contract for the State Buildings Program**. This has been used successfully throughout the state by many institutions of higher education to deliver affordable housing to thousands of students across the state.
- » Working closely with the State Architect, he proposed new procurement thresholds in state statute for the procurement of professional design services Integrated Project Delivery (IPD) and advocated for them with the AIA and AGC. When these new thresholds were enacted into law, they simplified architect selection and **gave public institutions increased access to professional services**. He also worked with the State Architect to change the process for selecting As-Needed Architects at CU Boulder. This collaboration opened the door to over 175 consulting architects for the four campuses in the CU system.
- » As the University Architect at CU Boulder, following the passage of IPD legislation, **he authored a new model contract for integrated project delivery (IPD)**, which was used to deliver LEED Platinum and innovative living and learning communities for the campus.
- » At the CU System, Leef initiated a board retreat of the system's Design Review Board (DRB) and led the creation of a position on the DRB dedicated to sustainability—a position that to this day impacts all four major system campuses. He also led the effort to include sustainability as a selection criteria for all AE Requests for Qualifications (RFQs) issued by the 4 campus CU System, **impacting the practice of sustainable architecture throughout the region**.
- » At CU Boulder, he raised design standards, created an organizational ladder for advancement and built a professional staff by hiring licensed architects.
- » At the North Dakota University System, **he redesigned their statewide capital planning process** to be more rational, strategic and efficient. This affected all 11 institutions of higher education in the state university system and improved their relationship with the state legislature by creating an improved process.
- » For the Oregon Higher Education Coordinating Commission, his work **improved their strategic capital planning process for all public universities** in the state. There are 7 public universities in Oregon with over 180,000 students.
- » Leef's work for the Legislature and the State University System of Florida resulted in new rubrics for evaluating and prioritizing capital construction projects for their 14 universities, leading to a more rational and strategic use of resources.
- » His consulting work on **over 85 university campuses** has resulted in new planning policies, practices and structures for public institutions, ranging from San Diego State to Duke University. His work has created more strategic approaches to managing and allocating the valuable space assets of each university's built environment. His innovative work with space planning analytics has transformed how institutions evaluate and manage their multi-billion dollar space assets and has saved them millions of dollars in the process.

Selected projects completed using Design-Build or Design-Build IPD contracts created by Paul Leef:

- At CU Boulder: \$300M, 1 GSF of housing; 2,000 beds renovated; 1,200 new beds.
- At University of Colorado, Colorado Springs: \$100+M, 35,000 GSF academic building; 1,200 stall parking structure; 210,000 GSF Housing project of 200 beds.
- At Colorado State University: Almost \$1.6B, 24 projects ranging from residence halls to academic buildings.

2.1.2 ENHANCING UNIVERSITY COMMUNITIES: DESIGN

UNIVERSITY OF COLORADO BOULDER

At the state’s Flagship University with Carnegie Research Tier One Status, Leef led a historic period of facility growth and expansion for the campus. As the University Architect with responsibility for a capital program then valued at \$1B, he led all campus planning, design, and construction activity. During this period, the campus significantly expanded its research, innovation, and discovery—led by two Nobel laureates—and new types of collaborative facilities were critical in shaping this growth. In support of the Flagship 2030 Strategic Plan, Leef also delivered over 1,000 new beds with residential academic programming, new learning environments, and facilities needed for student services and recreation. Throughout his tenures as university architect, he championed sustainable design.

EXHIBIT 3.5



Jennie Smoly Caruthers Systems Biotechnology Building

This LEED Platinum, biochemistry, basic science and engineering research facility realized CU Nobel laureates’ vision of multidisciplinary research, design for flexibility and “productive social collisions.” Nearly 30% more energy efficient than ASHRAE 90.1, this building established new architectural vocabulary for transforming the CU research park into an academic science research campus. Leef’s new development pattern translated the main campus “Tuscan Vernacular” to reflect 21st century science and technology. The project was presented at the IS2L conference for its groundbreaking energy-efficient design.

Role: University Architect. Leef led the design selection process and instituted a reprogramming and visioning effort to address operational issues and add food service and conferencing facilities; he initiated a planning effort to reorient the building and create a campus-like context for future buildings. He provided leadership and guidance to CU’s leaders, its Design Review Board, and local officials, and led the process from design through construction. (*Design Architect: Robert AM Stern Architect; Architect of Record: HDR Inc.; Completed: 2011.*)



JILA “X-Wing” Addition

JILA is a cooperative joint research facility with NIST federal labs and home to Nobel Laureates and National Academy Fellows. The Atomic Molecular Optical Physics program—the top-rated program of its kind in the country with some of the world’s fastest lasers—was in desperate need of state-of-the-art research labs. To meet their needs, this LEED Platinum research facility features highly vibration-sensitive design and construction for ultra cold chemistry and laser research; it adds to existing buildings by Harry Weese but improves thermal performance. An excruciatingly tight site required just-in-time deliveries and structural separation from existing labs during construction.

Role: University Architect. Leef led planning, architect selection, and design; advised campus leaders on federal appropriation and budget negotiations with NIST; and led the project through multiple approvals. (*Architect of Record: HDR; Completed: 2011.*)

“

The JILA “X-Wing” Addition] was a tricky project. Through the process, Paul Leef and I were allies, and occasionally adversaries, but I always respected his thoughtfulness in difficult situations. The finished project, which has been everything we hoped for, attests to the quality of his leadership.

Dr. Eric Cornell, Nobel Laureate



UNIVERSITY OF COLORADO BOULDER (CONT.)

**Center For Community (“C4C”) Residential Dining Facility**   

CU Boulder needed to provide more opportunities for students to connect with peers, access services, and engage with student organizations to enhance retention and student success. This LEED Platinum, fast-tracked, complex, 180,000 GSF hybrid building consists of “one-stop” student services, housing offices, student organizations, and a 900-seat dining hall over a 325-car underground garage. Innovative sustainability features include an evaporative cooling system—unique for a dining facility—and the campus’s first non-gendered restrooms.

Role: University Architect. Leef championed sustainability efforts and design; advised campus leaders; led the project from architect selection through construction. (*Design Architect: Centerbrook; Architect: Davis Partnership; Completed: 2010.*)

Williams Village North   

The Flagship 2030 Strategic Plan identified the need for living/learning communities to increase student recruitment and enhance retention and success. The LEED Platinum, design-build facility delivered classrooms, faculty apartments, and 450 beds to support Residential Academic Programs. LEED features include solar panels and an innovative gray water system.

Role: University Architect. Leef championed sustainability efforts; led design-build (DB) selection using the DB contract he authored; oversaw design and construction, advised campus leaders; and led the project through approvals. (*Design-Build Team: Whiting-Turner with Mitchell Mackey; Completed: 2011.*)

Integrated Teaching and Learning Laboratory (ITLL)   

A new type of space was needed to achieve a college-wide strategic goal to reform engineering education with multidisciplinary, hands-on learning environments. The ITLL was conceived and developed to deliver a unique cross-department curriculum in a hands-on, team-based, design-focused, active learning, studio-like environment, featuring daylighting, data-rich learning environments, student-focused product design and development areas, and group study rooms—none of which previously existed.

Role: University Architect, Design and Construction Coordinator. At first hired by the College of Engineering and Applied Science, Leef’s responsibility grew to encompass developing and implementing the sensor-rich Building-as-Learning-Tool features in collaboration with faculty, students and designers to put building technology on display in real-time, making the building interactive and alive with hundreds of embedded sensors and exposed structural features. (*Architect: CannonDesign, formerly Klipp; Completed: 1997.*)

Sustainability Energy and Environment Complex 

The transformation of the research office park into a research cluster centered around energy and the environment to increase collaboration with the National Renewal Energy Lab. This required renovating a former corporate office building for faculty and federal lab use, connected with new wet laboratory research facilities.

Role: University Architect. Leef led site planning to create a gateway building for the east campus, led architect selection and design that artfully blended existing building with new aesthetic he created for the east campus; advised campus leaders; and led the project through necessary approvals. (*Architect: CannonDesign, formerly Klipp, with HDR as lab planner; Completed: 2016.*)

EXHIBIT 3.2



EXHIBIT 3.3



UNIVERSITY OF COLORADO BOULDER (CONT.)


Recreation Center Addition and Renovation




The circa 1970s recreation facilities were outdated and no longer met student needs. The project added an indoor ice arena; expanded cardio, fitness and weight training; an outdoor pool; outdoor recreation center; offices and a climbing wall. The design bridged between the original building and a Charles Klauder gym of “Tuscan vernacular.” A new front door engaged a primary pedestrian path. Sustainability features included energy transfer to use heat rejection from the ice sheet to heat the indoor pool.

Role: University Architect. Leef championed sustainability efforts; led architect selection process, led the design team to bridge between an existing, brutal 1970’s building and an adjacent historic gymnasium; led through approvals and construction; advised board members, campus leaders and the student council (funding source). (*Design Architect: CannonDesign; Architect: Davis Partnership; Completed: 2014.*)


Basketball and Volleyball Practice Facility



To recruit a new Division 1 men’s basketball coach and address deficiencies with women’s volleyball, a promise of new facilities became contract clauses for the new coach. Attached to a brutalist concrete basketball arena, the addition created a new entry more harmonious with surrounding campus architecture and welcomed the first visit of a sitting president in 2012.

Role: University Architect. Leef led the effort to expand the scope to create a new welcoming entry experience to the Coors Event Center with monumental stairs, ADA access, ticket windows, and a pre-function patio. He also championed sustainability efforts and led the entire project process, while advising campus leaders. (*Architect: Perkins+Will, formerly Sink Combs Defthles; Completed: 2011.*)


Kittredge West and Commons Renovation




As part of a strategic plan to add 2,000 beds to accommodate enrollment growth and create living/learning communities to reduce judicial violations and improve student success, the two projects provided over 500 beds and a new informal study commons and academic advising space.

Role: University Architect. The project was delivered using Design-Build Contracts developed by Leef. He also championed sustainability efforts, led design-builder selection and design through approvals and construction; and advised campus leaders. (*Architect: 4240 Architecture; Completed: 2013.*)



COLORADO SCHOOL OF MINES (CSM)

As campus architect for this premier engineering university, Paul Leef worked closely with the Provost to develop a strategic plan that envisioned doubling enrollment and research expenditures. As a result, Leef led historic planning and development of the campus. The following CSM projects were completed while Leef was campus university architect and director of planning, design and construction. As such, he was instrumental in providing leadership in planning the growth, directing most projects, and raising design standards. His leadership was instrumental in the campus achieving the university's goals of doubling enrollment and research and becoming recognized as a Carnegie Tier One Research university.

Center for Technology and Learning Media   

Responding to an opportunity to receive legislative appropriation, Leef worked with the provost to conceive and articulate a program for a new center for hands-on, active learning. As the first new building on campus in 25 years, this facility established a departure from traditional masonry structures and introduced transparency and daylighting in a technology-rich environment for studio physics and engineering teaching labs, including a day-lit lecture hall and classroom spaces, a tier two data center and academic computer center, and study labs. It was the first CSM building with LEED as an articulated goal.

Role: University Architect. Leef programmed the building, determined the site planning which created a new pedestrian mall, championed LEED for design, which was a first for the campus, by authoring an RFP with ambitious sustainability goals; led design-selection and design, approvals and construction; and advised campus leaders. (*Design Architect: Anderson Mason Dale; Architect: Anderson Mason Dale; Completed: 2000.*)

Marquez Hall Petroleum Engineering Building   

A new academic building for the Department of Petroleum Engineering includes exhibit space, teaching labs and classrooms, administrative and faculty offices, and labs for wet and high bay research.

Role: University Architect. Leef championed sustainability efforts; led programming to include student space; set high standards for design in the architect selection process, led planning and design through design development; provided guidance to campus leadership; and led the project through approvals. (*Design Architect: Bohlin Cywinski Jackson; Architect: Anderson Mason Dale; Completed: 2012.*)

Mines Park Phases 1, 2, 3 Apartment Complexes  

A key component to support the strategic goal of enrollment growth was the creation of more residential student housing. To fast-track the delivery of affordable units, Leef authored the first Design-Build contract for Colorado state agencies. The stick-built two- and three-story apartment buildings were designed for upper division, graduate student and family housing. The complex includes a mix of one-, two- and three-bedroom units, as well as community centers, a convenience store and maintenance building, and was successfully delivered using new Design-Build contracts; presented at a SCUP conference on project delivery.

Role: University Architect. Leef authored State Buildings' first design-build contract and led the entire project from planning through construction while advising campus leaders on progress. (*Design-Build Team: Alliance with PBA Architects; Completed 1996 & 2011.*)



EXHIBIT 3.4



EXHIBIT 3.6



EXHIBIT 3.2



COLORADO SCHOOL OF MINES (CONT.)**Recreation Center**  

Leef led a programming study that determined 80% of the student body participated in intramural and recreational sports despite a dire lack of appropriate space. This 108,000 GSF project included a 2,500-seat competition basketball/volleyball court, recreation gym and running track, competition pool venue, café and game room. The project was featured in the Athletic Business Architectural Showcase and has hosted tens of thousands of spectators each year.

Role: University Architect. Leef led negotiations with the city to redevelop the block and vacate city streets to enhance pedestrian circulation in and around the building and campus. As part of his on-going sustainability efforts, he initiated an RFP to salvage houses being removed for use by non-profits. Leef led the AE team to implement his vision to express structural engineering principles on the exterior of the building, for the benefit of the engineering students. The project also implemented Leef's plan to create a circulation path through the building (outside of security) to connect recreation fields and Greek life with the academic core of campus. He also championed sustainable design and led the project from planning through construction. *(Architect: Perkins + Will, formerly Sink Combs Defthles; Completed: 2007.)*

**Geology Museum/General Research Lab**  

The campus had two strategic needs: increase research and find a suitable home for a rare collection of gems and minerals curated by the Geology Department. This hybrid building provided a new public museum and state-of-the-art general research space. The museum both educates students and is on City of Golden's list of public attractions.

Role: University Architect. Leef led the planning, site planning, and architect selection process, design and construction; provided guidance to campus leadership and led the project through campus and city approvals. *(Architect: Anderson Mason Dale; Completed: 2002.)*

**Petroleum Institute (now Khalifa University), Abu Dhabi, United Arab Emirates**

The Petroleum Institute (PI) was established in 2001 by an Emiri decree under the direction of His Highness Sheikh Khalifa bin Zayed Al Nahyan, ruler of Abu Dhabi, and subsequently merged with the Masdar Institute of Science and Technology. The PI contracted with the Colorado School of Mines to create academic programs and plan the new campus. Leef partnered with NBBJ to develop the new campus's space program, which was constructed and is now part of Khalifa University.

Role: University Architect. Leef led selection of the planning consultant and oversaw space programming for the new campus, which enhanced the Mines brand internationally. *(Architect: NBBJ; Completed: 2007.)*



2.1.3 IMPACTING UNIVERSITY COMMUNITIES: PLANNING FOR THE FUTURE

The role of the planner is to first understand the desired future state, to translate that into the physical environments necessary to achieve that future state, and then to chart the steps needed to realize the vision. In his career as a university architect and planner, Leef has been at the forefront of the strategic and physical planning of university communities and civic areas. His leadership has resulted in significant and long-lasting improvements in numerous communities.



Paul began his tenure as CU University Architect around the same time I began serving as the City of Boulder's planning director. Paul's desire to engage with the City in new and constructive ways and ability to creatively problem-solve helped to overcome the wariness of both City and University leadership, ushering in a period of significant collaboration on everything from new campus development to overall master planning and sustainability initiatives.

- David Driskell, Former Executive Director of Planning and Sustainability, City of Boulder

EXHIBIT 3.7



Colorado School of Mines Campus Plan

Once a strategic plan for doubling enrollment and research was approved, it became necessary to determine the facilities needed to support these goals. Leef partnered with JBA and 5Design to assess space needs and develop a plan for the campus's physical development, including key land acquisitions. The plan proved transformational by promoting residential facilities, new academic buildings, and first-of-its-kind local street closures for a more pedestrian oriented campus.

Role: University Architect and Director of Planning, Design and Development. Leef led the planning effort and campus engagement, negotiated an agreement with an adjacent historic district, and obtained approvals from the Board of Trustees and Colorado Commission on Higher Education. Leef presented this project at the Association of University Architects annual conference. *(Golden, CO; Completed: 2006.)*

EXHIBIT 3.8



University of Colorado Boulder Campus 10-Year Facilities Master Plan

Referred to by the Colorado Commission on Higher Education as “exemplary,” this plan features a highly inclusive process of engaging internal and external stakeholders and a transformative vision for the 200-acre east campus, closely aligned with the Flagship 2030 Strategic Plan. This document included plans for housing at Williams Village and North of Boulder Creek that have been implemented and are still being followed, impacting a campus of 30,000 students and 8,000 employees each year for decades.

Role: University Architect and Director of Planning, Design and Construction. Leef uncovered and highlighted a finding that a high percentage of campus buildings were more than 50 years old, with a growing deferred maintenance backlog. His work resulted in a focus on capital renewal projects and creation of an annual deferred maintenance program. He championed the first integration of sustainability into a CU campus plan. Leef led the campus planning effort and both internal and external community outreach and relations, obtaining approvals from City Planning Board and City Council, CU Cabinet, Board of Trustees, and Colorado Commission on Higher Education. *(Architect: CU Planning Office; Paulien & Associates for Space needs; Boulder, CO; Completed: 2011.)*



CU System

In addition to including sustainability in the campus plan, Leef led a reform of the CU System Request for Proposal (RFQ) process to include sustainability as a criteria for AE consultant Selection. He also successfully campaigned to have CU System administrative policy revised to formally designate one member of the Design Review Board focused on sustainability.



Paul's leadership, vision and spirit of partnership helped to transform the working relationship between the City of Boulder and the University of Colorado from one of contention and mistrust to one of mutual respect and creative collaboration. That transformation led to what is now being realized in built form: from Boulder's revitalized Civic Area to the new CU Hotel and Conference Center that will serve as a vital connection between downtown Boulder, University Hill and the CU campus.

- **David Driskell**, Former Executive Director of Planning and Sustainability, City of Boulder Institute of Technology

EXHIBIT 3.8

**CU/City of Boulder Hotel Conference Center**

With the new the CU campus plan, which Leef led as University Architect, CU Boulder identified the need for a hotel conference center to support the university's desires to further academic prominence. Subsequently, the City of Boulder's directors of planning and economic development expressed a desire to positively impact economic redevelopment and patronage of city businesses. They commissioned a jointly funded feasibility study to evaluate two potential sites for the project. The study resulted in the project moving forward and is currently under construction and will serve tens of thousands of visitors each year.

Role: Planner, City of Boulder. Leef led the commissioning of the study and contracting between CU and the city. He also led architect selection, selection of convention planning consultant, collaborations between CU and the city, site analysis and approvals. *(Boulder, CO; Est. Completed: 2025.)*

**Boulder Civic Area Redevelopment**

Leef co-directed the redeveloped plans for the Boulder Civic Area, a 20+ acre municipal campus and public park to become the city's cultural and civic heart and used by tens of thousands of residents and visitors each year. The project included urban planning, financial planning of potential revenue sources, programmatic planning, and trail, park/landscape planning of Boulder's City Park and was designed to support community assets such as the Farmer's Market, Public Library, and Museum of Modern Art, as well as local artists and community events.

Role: Boulder City Program Manager. Leef's leadership led to a successful bond program, approved by voters, for the redevelopment project. He championed sustainability, led the planning and landscape architect selection process, design and community meetings; advised City leadership, and led the project through City approvals. Working closely with the City's Director of Planning and Sustainability, Leef initiated a grant program that resulted in a manual for Eco-District planning that was shared nationally through the Urban Sustainability Directors Network (USDN), an organization which currently includes 2,500 participants in over 250 communities, with populations in excess of 100M people. *(Boulder, CO; Completed: 2017.)*



PAULIEN & ASSOCIATES | SMITHGROUP



Chapman University Space Needs Profile 🏆 🎓

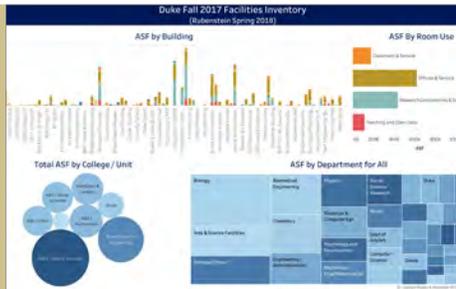
This project quantified space needs for the next 5 to 10 years. The Space Needs Profile considered what space the University had at the start of the study and how it was being used, while addressing anticipated enrollment scenarios and strategic plan priorities.

Role: Principal in charge, Lead Planner. Leef led the process and directed particular attention on teaching space, workplace (office) environment, and research and creative spaces. The impact of COVID-19 was also considered. *(Orange, CA; Completed: 2021.)*

“ Paul with his team produced a first-ever, comprehensive space profile for our campuses and has conducted multiple space studies for us here at Chapman University. This work and Paul’s recommendations have been instrumental in demonstrating the power of data analytics and effectuating a notable change in the planning culture here at our university. I have also seen the positive impact Paul has had nationally through webinars and conferences.

- Collette Creppell, AIA, Vice President Planning, Chapman University

EXHIBIT 3.9



Duke University Space Study 🏆 🎓

To optimize use of campus space assets, Duke University commissioned Paulien & Associates to conduct a space utilization study. The study identified opportunities for repurposing underutilized space, increasing research lab productivity, and best practices in space management and allocation based upon benchmarking with Ivy League and Ivy “Plus” peer institutions.

Role: Principal-in-Charge, Lead Planner, SmithGroup. Leef led the analysis, benchmarking of best practices, identification of opportunities and recommendations for improved space planning policies and procedures. *(Durham, NC; Completed: 2019.)*

EXHIBIT 3.10



California State University-Chico Campus Master Plan 🏆 🏆

The California State University System leads the country in student body diversity and promotion of upward economic mobility for its graduates. As part of a master planning process with SmithGroup and the Paulien & Associates collaboration (led by Leef), the team analyzed campus space needs in relation to the strategic plan and campus priorities. Space needs were modeled at different enrollment scenarios, altering both the strategic plan for growth and the campus’s physical planning. Data visualizations helped highlight opportunities for increased space efficiencies, which can be strategic during highly constrained resources and capital funding.

Role: Campus Strategy and Analytics Lead, Paulien & Associates. *(Chico, CA, Completed: 2020)*

Building Name	Category	Area	Volume	Weight	Energy
0100 AA	000 00%	100 00%	100 00%	100 00%	100 00%
0100 AB	100 00%	100 00%	100 00%	100 00%	100 00%
0100 AC	200 00%	200 00%	200 00%	200 00%	200 00%
0100 AD	300 00%	300 00%	300 00%	300 00%	300 00%
0100 AE	400 00%	400 00%	400 00%	400 00%	400 00%
0100 AF	500 00%	500 00%	500 00%	500 00%	500 00%
0100 AG	600 00%	600 00%	600 00%	600 00%	600 00%
0100 AH	700 00%	700 00%	700 00%	700 00%	700 00%
0100 AI	800 00%	800 00%	800 00%	800 00%	800 00%
0100 AJ	900 00%	900 00%	900 00%	900 00%	900 00%
0100 AK	1000 00%	1000 00%	1000 00%	1000 00%	1000 00%

The University of Texas at Austin Space Study 🏠 🎓

The University of Texas at Austin (UT Austin) realized that key real estate in the academic core of campus was occupied by administrative functions. Leef led the Paulien study (in collaboration with Jacobs) to identify over 200,000 ASF of back-of-house administrative functions, which could be moved to the perimeter of campus (or even off campus), to create more student-focused space in existing buildings without costly new construction. Leef’s work also modeled and proposed that alternative work environments be piloted. A second phase of work studied the utilization of 560 classrooms on campus and identified opportunities for capital improvements leading to enhanced learning environments and long-term funding of these investments. **Role: Master Planning Lead, Paulien & Associates.** (Austin, TX; Completed: 2019 & 2022.)

North Dakota University System

Leef authored a new six-year planning cycle for the North Dakota University System that integrated campus strategic planning, campus facilities planning, and capital improvement planning for the institutions in the state. By creating a more comprehensive and uniform approach to planning and project prioritization, credibility with the state legislature was greatly enhanced, leading to a productive partnership.

Role: Master Plan Author, Paulien & Associates. (Various cities, ND; Completed: 2015.)

United States Air Force Academy Sustainability Plan 🏠

Leef led the team that delivered the first sustainability plan for the entire installation of the U.S. Air Force Academy—18,455 acres total.

Role: Principal-in-Charge, Lead Planner (Colorado Springs, CO; Completed: 2022.)



EXHIBIT 3.1



University of North Carolina at Charlotte, Plan for Modern Learning 🏠 🎓

As one of the fastest growing institutions in the University North Carolina System, UNCC sought to evaluate its current instructional space, to quantify needs, and develop strategies to improve student outcomes and guide the institution for the next decade. The project is being presented at the SCUP Southern Regional Conference in October.

Role: Principal-in-Charge, Lead Planner. Leef led the comprehensive evaluation of existing instructional space, their utilization, and their condition; he developed a forward looking, campus-wide classroom improvement plan which is currently being implemented. (Charlotte, NC; Completed: 2023.)



Academy for Health, Cairo, Egypt 🎓

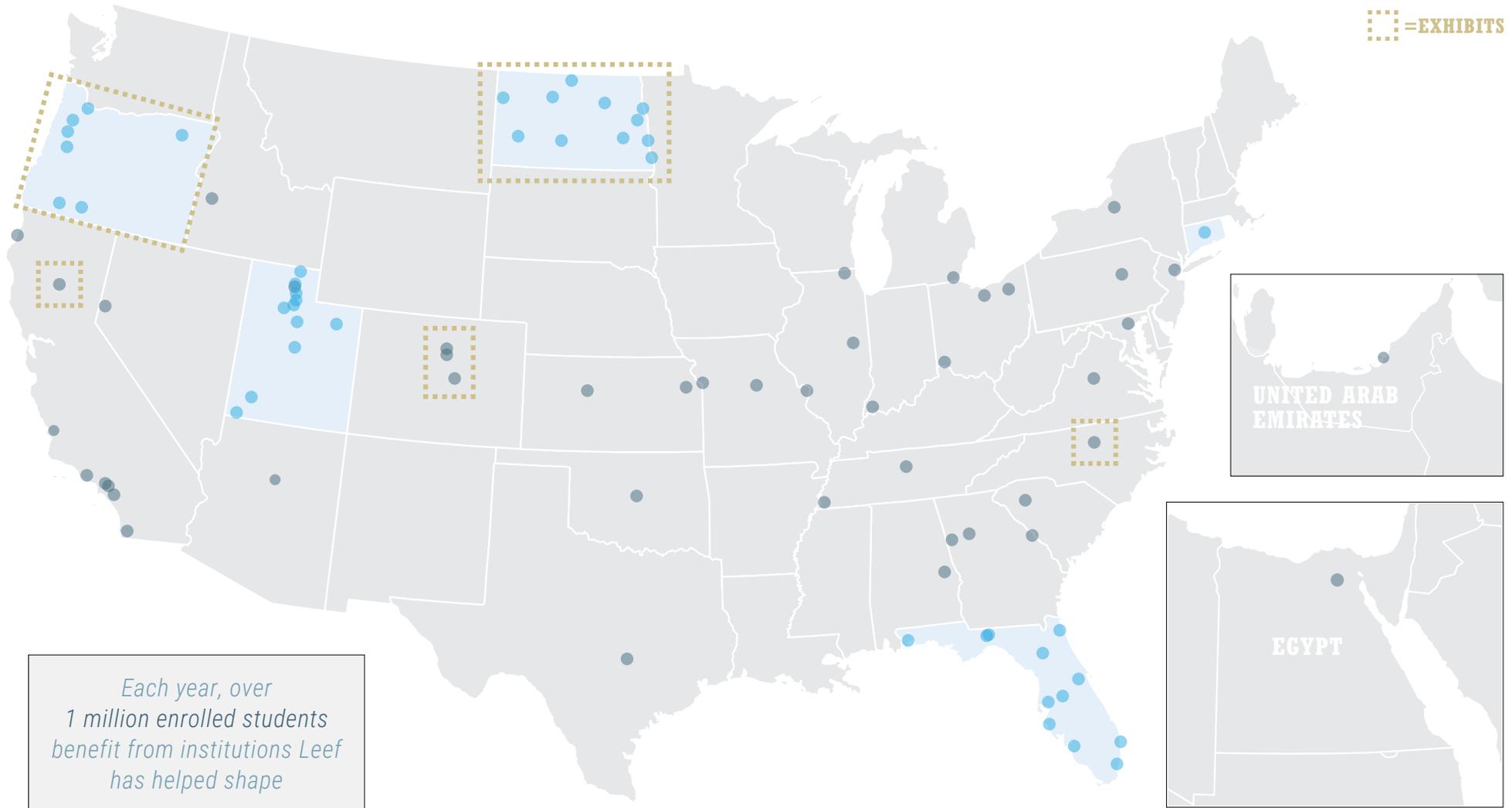
After constructing a children’s hospital to provide free pediatric care in an urban area of Cairo, the city recognized it had a skilled workforce shortage to meet the needs of the facility and country. Leef was hired as the lead programmer (subconsultant to RTKL) to create the space plan for this new, first-of-its-kind facility to train students in fields including radiological and surgical technicians; the program included specialized teaching facilities, offices, active learning classrooms, and a fitness center for healthcare staff.

Role: Lead Programmer. (Cairo, Egypt; Completed: 2016.)

2.1.4 PROFESSIONAL CONSULTING EXPERIENCE LED BY LEEF

This experience includes two-year community colleges, four-year dual mission universities, four-year regional comprehensives, and R1 flagship universities—both public and private.

 = EXHIBITS



Each year, over 1 million enrolled students benefit from institutions Leef has helped shape

5
STATEWIDES

85+
CAMPUSES

25
STATES

2
INTERNATIONAL
CAMPUSES

2.1.4 PROFESSIONAL CONSULTING EXPERIENCE LED BY LEEF (CONT.)

■ =EXHIBITS

U.S. Colleges and Universities

Auburn University
 Augusta University
 Bloomsburg University
 Boise State University
 Boston University
 California Polytechnic State University, San Luis Obispo
 California State Polytechnic University, Humboldt
 California State University, Channel Islands

■ **California State University, Chico**
 California State University, Los Angeles
 Case Western Reserve University, Cleveland
 Chapman University

■ **Colorado School of Mines**
 Clemson University

■ **Duke University**
 Fort Hays State University
 Georgia State University
 Johns Hopkins University
 Kent State University
 McHenry County College
 Michigan Technological University
 New Jersey Institute of Technology
 Northern Arizona University
 Northern Michigan University
 San Diego State University
 Syracuse University
 The University of Memphis
 The University of Texas at Austin
 The University of Toledo

United States Air Force Academy
 University of Cincinnati

■ **University of Colorado Boulder**
 University of Illinois Urbana-Champaign
 University of Kansas
 University of Missouri-Columbia
 University of Missouri System
 University of Missouri-Kansas City
 University of Missouri-St. Louis
 University of Nevada, Reno
 University of Oklahoma, Norman
 University of Southern California
 University of Southern Indiana
 University of Virginia
 University of West Georgia
 Vanderbilt University
 Weber State University

International Work

Academy for Health, Cairo, Egypt
 Petroleum Institute (now Khalifa University), Abu Dhabi, UAE

Statewide Studies**CONNECTICUT**

Connecticut State College and University System

FLORIDA

Florida Agricultural and Mechanical University
 Florida Atlantic University
 Florida Gulf Coast University
 Florida International University
 Florida Polytechnic University
 Florida State University

New College of Florida
 University of Central Florida
 University of Florida
 University of North Florida
 University of South Florida
 University of West Florida

■ **NORTH DAKOTA**

Bismarck State College
 Dickinson State University
 Minot State University
 Lake Region State College
 Valley City State University
 Dakota College at Bottineau
 Williston State College
 Mayville State University
 North Dakota State University
 University of North Dakota
 North Dakota State College of Science

■ **OREGON**

Eastern Oregon University
 Oregon Institute of Technology
 Oregon State University
 Portland State University
 Southern Oregon University
 University of Oregon
 Western Oregon University

UTAH

Bridgerland Technical College
 Davis Technical College
 Dixie Technical College
 Mountainland Technical College
 Ogden-Weber Technical College

Salt Lake Community College
 Snow College
 Southern Utah University
 Southwest Technical College
 Tooele Technical College
 Uintah Basin Technical College
 The University of Utah
 Utah State University
 Utah Tech University
 Utah Valley University
 Weber State University

PROFESSIONAL ORGANIZATIONS

Elected member, Association of University Architects (AUA)
American Institute of Architects (AIA)
Society of College and University Planners (SCUP)
National Council of Architectural Registration Boards (NCARB) certified
LEED Accredited Professional

VOLUNTEER ACTIVITIES

AIA Academy for Health—conference tour guide at University of Virginia
AIA National Convention—conference tour guide at University of Colorado
AIA New Mexico Design award committee
AUA (Association of University Architects) Sustainability Committee
AUA Professional Practice Committee
AUA Annual Conference Program Committee
Design-Build Institute of America, Founding member, Denver Chapter, Board of Directors
City of Golden Chamber of Commerce, Board of Directors
Mountain Shadows Montessori School, Board of Directors
CU Boulder Civil Engineering Advisory Board

OTHER AWARDS

Colorado School of Mines Employee of the Year

LEED BUILDINGS AT CU BOULDER LED BY PAUL LEEF

LEED Platinum

Baker Hall
Basketball/Volleyball Practice Facility
Center for Community (C4C)
Institute of Behavioral Science
Jennie Smoly Caruthers Biotechnology Building
Student Recreation Center
Williams Village North

LEED Gold

Andrews Hall
Arnett Hall
Buckingham Hall
Center for Academic Success and Engagement (CASE)
East District Energy Plant
JILA X-Wing addition
Ketchum Arts and Sciences (DD)
Kittredge Central
Kittredge West
Smith Hall
Sustainability, Energy and Environment Laboratory (SEEL)
Visual Arts Complex



Paul's work has been enormously influential in moving the architecture industry in Colorado to incorporate sustainability successfully. Under his leadership at the University of Colorado, deep energy and carbon savings became standardized, and Paul's creativity produced dramatic results. Paul has also inspired teams of designers who have continued to expand his impact on sustainable architecture.

- Victor Olgay, FAIA , Principal, Rocky Mountain Institute

SECTION 2.0 CURRICULUM VITAE - 2.2 AWARDS, HONORS, AND RECOGNITION

DESIGN AWARDS

Campus Master Plan, California State University-Chico

- 2021 Award of Merit, Society of College and University Planners
- 2020 Honor Award - Analysis & Planning, American Society of Landscape Architects (ASLA)

Jennie Smoly Caruthers Biotechnology Research Building, University of Colorado Boulder

- 2018 ENR Merit award for Higher Education/Research
- 2018 AGC Awards for Construction Excellence (ACE), Best Building Project – General Contractor (\$10 to \$40M)
- 2015 Robert & Judi Newman Award of Excellence in Classical & Traditional Design, ICAA Rocky Mountain Chapter

Recreation Center Addition & Renovation, University of Colorado Boulder

- 2016 NIRSA Outstanding Sports Facilities (OSF) Award
- 2015 American Council of Engineering Companies (ACEC) Engineering Excellence Awards Merit Award
- 2014 Association of General Contractors Colorado (AGC) Gold Award Meeting the Challenges of a Difficult Project
- 2014 ENR Mountain States Best Projects Colorado/Wyoming/Kansas Merit Award - Green Project

Kittridge West and Kittridge Central, University of Colorado Boulder

- 2014 ENR Mountain States Award for Best Project-Higher Education/Research

Marquez Hall, Colorado School of Mines

- 2013 AIA Merit Award, Citation for Built Architecture
- 2013 Featured in Architectural Record magazine

JILA “X-Wing” Addition, University of Colorado Boulder

- 2012 Special Judges Recognition by ENR Mountain States for “2012 Best Projects of the Year”

Williams Village North, University of Colorado Boulder

- 2011 Best Green Multi-Residential Building, 1st Annual Boulder Valley Green Buildings Award Program

Center For Community (“C4C”) Residential Dining Facility, University of Colorado Boulder

- 2011 IIDA Rocky Mountain People’s Choice Best Award

University of Colorado Boulder Campus Plan

- 2010 First campus to achieve Gold certification in AASHE Sustainability Tracking and Rating System (STARS)

Geology Museum/General Research Lab, Colorado School of Mines

- 2003 Merit Award, American Concrete Institute, Rocky Mountain Chapter

Center for Teaching and Learning Media, Colorado School of Mines

- 2002 Colorado Renewable Energy Society Award
- 2002 Honorable Mention Award, Education Design Showcase, School of Planning & Management

Integrated Teaching and Learning Lab, University of Colorado Boulder

- 2000 Inaugural Recognition Award, Corporate and Foundation Alliance
- 1997 AGC Award



Campus Master Plan, California State University-Chico



Jennie Smoly Caruthers Biotechnology Research Building, University of Colorado Boulder



Marquez Hall, Colorado School of Mines

PUBLICATIONS

PUBLICATIONS AUTHORED OR COAUTHORED BY THE NOMINEE

SmithGroup, “*Renewing the Social Contract of Public Higher Education*,” co-author, white paper.

SmithGroup, “Roadmap to the Resilient Campus, a Resource for Campus Leadership and Boards,” contributor, SmithGroup with Jones Lang LaSalle. Distributed nationally by both SmithGroup and JonesLangLaSalle, a global Fortune 500 Company with over 100,000 employees in 80 countries.
<https://www.smithgroup.com/perspectives/2020/roadmap-to-the-resilient-campus>

Campus Forward, Transformative Places for Learning, Research and Engagement, 2018

APPA Book of Knowledge (BOK), Co-author, Chapter on Space Management, APPA Book of Knowledge (currently in progress)

PUBLICATIONS WHERE THE NOMINEE WAS FEATURED, QUOTED OR REFERENCED

Building Design + Construction, “SmithGroup Helps Higher Ed Clients Analyze Their Space,” quoted;
<https://www.smithgroup.com/news/2020/smithgroup-helps-higher-ed-clients-analyze-their-space>
<https://www.bdcnetwork.com/smithgroup-helps-higher-ed-clients-analyze-their-space>

The Boulder Daily Camera, multiple mentions in 23 articles

“Public input sought as Boulder moves to redesign city’s ‘green living room’ Sept 21, 2014

“CU-Boulder’s biotech building earns LEED platinum rating for green construction” May 3, 2012

“CU-Boulder’s basketball, volleyball practice building gets top green rating” May 30, 2012

“CU’s Center for Community building gets top green rating” April 27, 2012

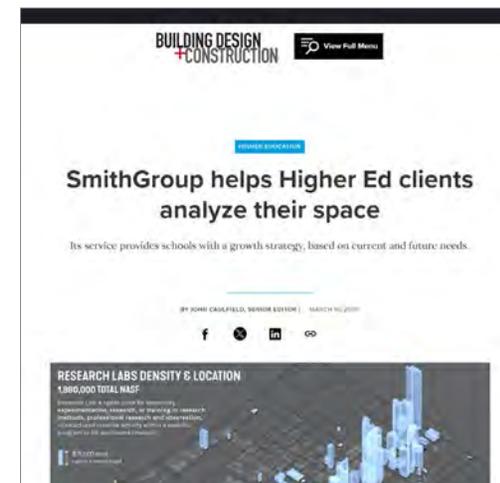
“CU wants public input on East Campus Development” April 15, 2009

“CU-Boulder leaders want more students living on campus” June 9, 2010

CU Boulder Today, “Paul Leef joins CU-Boulder as Director of Planning, Design and Construction,” November 6, 2007

CU Boulder Today, multiple mentions and quotes in over ten stories
“CU-Boulder to begin construction of carbon-conscious campus utility system”
“Eco-friendly Williams Village North earns platinum LEED rating”

CU Silver & Gold, multiple mentions



SECTION 2.0 CURRICULUM VITAE - 2.4 SIGNIFICANT PRESENTATIONS



The Society for College
and University Planning

SOCIETY FOR UNIVERSITY PLANNERS (SCUP)

SCUP is the preeminent association of campus planners and sponsors both regional and national conferences. These are attended by a wide range of institutional representatives as well as leaders in the planning and design industry. SCUP unites a wide cross-section of professionals who are looking to advance excellence in higher education planning. Their national conference is attended by over 1,400 planning and design professionals each year.

National Conference, Presenter

- Proactive Campus Planning Strategies for Turbulent Times, 2023
- Critical Conversations Around Space Management, 2022
- Pandemic Space Planning for Now and the Long Term, 2020 (Virtual)
- Assessing and Relocating Administrative Workspaces, On and Off Campus, 2019
- Using Data to Inform Space Planning Decisions, 2019
- Space Analytics & Best Practices for Meeting Strategic Institutional Needs, 2018
- Space Management Workshops, 2019

Pacific Regional Conference, Presenter

- Using Visualizations and Data to Inform Space Planning, 2019
- Place Making and Identity on a New Science Campus, 2013
- Improving Project Delivery in Colorado, 2013

Southern Regional Conference, Presenter

- Data-Informed Design Decisions: Budgeting Space and Dollars, 2020
- The Spectrum of Space and Capital Planning in Florida and Georgia, 2020
- Capturing Administrative Space to Support Academic Mission, 2018
- Less is More: Balancing Demands When Less Becomes the Constant, 2015



PRESENTATIONS



AMERICAN INSTITUTE OF ARCHITECTS (AIA)

Conference tour guide at University of Virginia
Conference tour guide at University of Colorado Boulder



ASSOCIATION OF UNIVERSITY ARCHITECTS (AUA), PRESENTER

Membership in the AUA is elected and over 150 national and international institutions are represented.

Multiple presentations on sustainability

Case Study on Colorado School of Mines Campus Plan

Professional practice committee: Space Management Best Practices

Professional practice committee: Data Analytics, 2022

Sustainability Committee with Rocky Mountain Institute and SmithGroup, 2021, 2023



NATIONAL ASSOCIATION OF COLLEGE AND BUSINESS OFFICERS (NACUBO)

NACUBO convenes leader (CFOs) who are influencing and advancing education and sponsors both regional and national conferences.

Analytics Forum, presenter: Making Space for Conversations about Space, 2021

OTHER SPEAKING ENGAGEMENTS TO INDUSTRY LEADERS



Chief Facility Officers Conference | California University System FCO Conference, presenter (23 campuses in CSU system)



International Town & Gown (ITGA) National Conference, presenter: CU Boulder and City of Boulder joint planning efforts



Labs 21 National Conference, presenter: Session on CU Biotechnology LEED Platinum Building Project



Florida Educational Facilities Planners' Association (FEFPA) Summer Conference 2022, presenter: Capital Planning and Space Needs in Florida and Post Pandemic Trends, 2022



Pennsylvania State System of Higher Education (PASSHE) Facilities Conference 2023, presenter: Using Data Analytics to Inform Planning



Research Analytics Summit, Presenter (125 institutions represented), presenter: Making the Most of What You Have: Data to Optimize Space and Achieve Research Goals



APPA

APPA (formerly the Association of Physical Plant Administrators) is the leading association of more than 23,000 facility management professionals from more than 1,000 institutions, offering professional certifications, training and professional development. **Leef teaches as a faculty member of the APPA Institute**, part of APPA University, to teach in the Planning, Design and Construction track on the topics of space management and campus planning.



LIST OF EXHIBITS

TRANSFORMING INSTITUTIONS: RAISING STANDARDS, PRACTICES, AND LEGISLATION

- 3.1** INNOVATING STATE OF COLORADO CONTRACTS AND PROCEDURES
- 3.2** CREATING STATEWIDE CAPITAL PLANNING IMPACT: OREGON AND NORTH DAKOTA
Oregon Higher Education Coordinating Commission, Strategic Capital Development Plan
North Dakota University System, Systemwide Master Plan

ENHANCING UNIVERSITY COMMUNITIES: DESIGN

- 3.3** INTEGRATED TEACHING AND LEARNING LABORATORY
University of Colorado Boulder
- 3.4** CENTER FOR TEACHING AND LEARNING MEDIA
Colorado School of Mines
- 3.5** JENNIE SMOLY CARUTHERS BIOTECHNOLOGY BUILDING
University of Colorado Boulder
- 3.6** MARQUEZ HALL
Colorado School of Mines

IMPACTING UNIVERSITY COMMUNITIES: PLANNING FOR THE FUTURE

- 3.7** COLORADO SCHOOL OF MINES CAMPUS PLAN
Colorado School of Mines
- 3.8** UNIVERSITY OF COLORADO BOULDER CAMPUS PLAN
University of Colorado Boulder
- 3.9** SPACE UTILIZATION AND BENCHMARKING STUDY
Duke University
- 3.10** CALIFORNIA STATE UNIVERSITY-CHICO CAMPUS PLAN
California State University-Chico

EXHIBIT 3.1 INNOVATING STATE OF COLORADO CONTRACTS AND PROCEDURES

TRANSFORMING INSTITUTIONS: RAISING STANDARDS, PRACTICES, AND LEGISLATION

ROLE

University Architect and Planner,
Colorado School of Mines

Leef wrote the design-build contract, created the selection process, and worked closely with the State Architect, AIA, AGC, and the DBIA on the documents, terms and conditions.

University Architect, CU Boulder

Leef adapted the Design-Build contract he wrote for Integrated Project Delivery, and worked with the AIA, AGC, and State Architect to modify and update the original document.

ORGANIZATION / DESIGN FIRM

NA

FIRM OF RECORD

NA

COMPLETION

1996, 2011

AWARDS / PUBLICATIONS

NA

CHALLENGE

Enrollment and research are primary drivers of higher education revenue, and the market has become increasingly competitive for recruitment and retention. Student campus housing has become a critical tool for improving student success, but economical, affordable student housing requires a speed to market that conventional project delivery methods cannot offer. Other university projects would also benefit from more efficient procurement processes. The University of Colorado, for example, typically has 300–400 or more active projects at one time, but the procurement of professional services was limited by outdated thresholds in state statute, adding time and cost to hundreds of projects.

ROLE AND APPROACH

As University architect at the Colorado School of Mines, Paul Leef recognized the need and initiated work with Colorado State Architect Larry Friedberg, FAIA, and Attorney General's Office (AGO) to develop the **first Design-Build contract for the State Buildings Program**, which oversees all design and construction for all state agencies, universities, and colleges.

As a founding board member of the Denver chapter of the

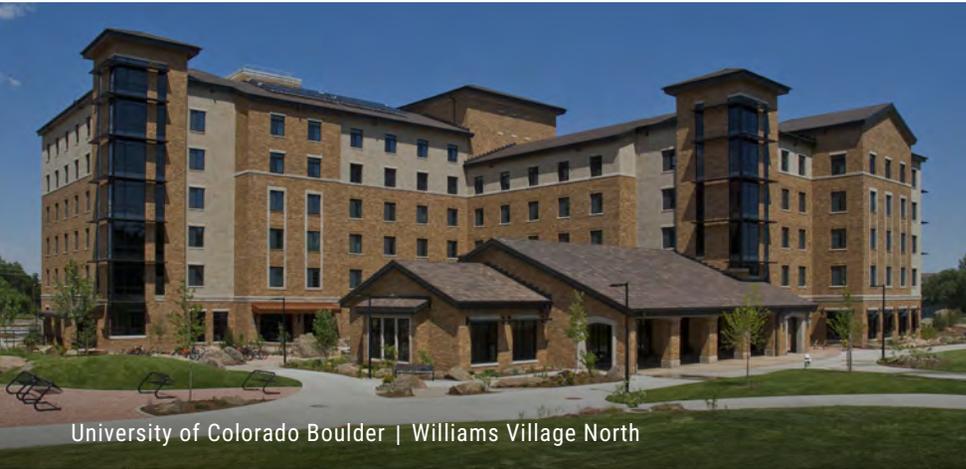
DBIA, Leef worked with Friedberg and AGO to write new provisions and incorporate design-build procurement into standard state contracts. Later, as University Architect at CU Boulder, he initiated an updated version of the design building contract, taking advantage of newly passed legislation sponsored by the State Architect, enabling Integrated Project Delivery (IPD). Again, working closely with Friedberg, Leef authored a new contract that used a weighted team-based selection instead of technical proposals with low bids. This improvement allowed owners to select the team best suited to deliver innovative projects on fast-tracked schedules.

Additionally, Leef worked with Friedberg to change legislation that raised the thresholds for procurement of professional services. Together, they met with Denver AIA and AGC communities and were ultimately successful in raising the limits for all agencies and universities. Leef also implemented a standing order contract for the five-campus University of Colorado System, which **made it easier and faster to procure professional services and resulted in thousands of contracts with local architects.**



EXHIBIT 3.1 INNOVATING STATE OF COLORADO CONTRACTS AND PROCEDURES

TRANSFORMING INSTITUTIONS: RAISING STANDARDS, PRACTICES, AND LEGISLATION



University of Colorado Boulder | Williams Village North



Colorado State University | Health and Medical Center

ASPECTS

Economy: Balancing cost with long term value for owners; *Equitable Communities:* Provision of economical university housing within walking distance of campus; *Integration:* Promotion of Integrated Project Delivery (IPD); *Resources:* LEED Buildings; *Discovery:* Fostering relationship between designers, operators and contractors.

OUTCOMES

The design-build contracts Paul Leef created have had a tremendous impact throughout the state. At Colorado School of Mines, over 550 beds were brought on line using the delivery.

» At Colorado School of Mines, over 550 beds were brought on line
At CU Boulder, over \$300M (uninflated dollars) and over **1M GSF of housing** projects have been completed using Design-Build, including renovating nearly 2,000 beds and completing 1,200 new ones. Many of these projects achieved LEED Platinum. Williams Village North implemented a novel gray-water system, the first of its kind on campus. Many also provided living-learning communities, including faculty apartments and classrooms, to improve student engagement and retention.

- » At Colorado State University, they have completed almost **\$1.64B in new construction** with design-build as the primary delivery method over 8 years, completing 24 projects using design-build delivery for projects ranging from residence halls to academic buildings.
- » At UCCS, projects delivered by design-build include a 35,000 GSF academic building (\$9.2M), a parking structure of 1,200 stalls with an artificial turf field top level (\$20M), and a 210,000 GSF Housing project of 200 beds (\$74M).
- » These projects have improved student life and provided **tens of thousands of students with affordable housing** over the years.

Along with leading and establishing the design-build and IPD contracts, Leef implemented a new, fair and equitable design and construction procurement process with guaranteed access and allowed the selection of talented and diverse architectural firms statewide and nationally in collaboration with the State Architect's office. In addition, more lenient procurement thresholds enacted in legislation and creating a standing order contract for professional services have accelerated project delivery and made work in the CU system more available to design professionals. The current standing order list has **over 180 firms**.

DECLARATION OF RESPONSIBILITY

I have personal knowledge of the nominee's responsibility for this exhibit. That responsibility included: work of nominee creating the design-build contract and design-build IPD contract and changing statutory thresholds for procurement of professional services.

Larry Friedberg, FAIA

Colorado State Architect, retired

EXHIBIT 3.2 WORK CREATING STATEWIDE CAPITAL PLANNING IMPACT: OREGON AND NORTH DAKOTA

TRANSFORMING INSTITUTIONS: RAISING STANDARDS, PRACTICES, AND LEGISLATION

ROLE

Oregon: Principal-in-Charge/
Project Director, SmithGroup

Leef authored the proposal, met with the Higher Education Coordinating Commission and the leadership on all seven campuses, authored the report and presented it to the Commission and legislature.

North Dakota: Author,
Chapter on Capital Planning,
Paulien & Associates

Leef visited campuses, met with campus and university system leaders, and authored the chapter recommending a reform of the capital planning process for the North Dakota University System.

ORGANIZATION / DESIGN FIRM

Oregon: Paulien/SmithGroup

North Dakota: Paulien

FIRM OF RECORD

NA

COMPLETION

Oregon: September 2019

North Dakota: March 2015

AWARDS / PUBLICATIONS

NA

OREGON HIGHER EDUCATION COORDINATING COMMISSION, STRATEGIC CAPITAL DEVELOPMENT PLAN

NORTH DAKOTA UNIVERSITY SYSTEM, SYSTEMWIDE MASTER PLAN

CHALLENGE

As national funding for university operations and capital improvement has decreased, state legislatures and university systems have sought more rational approaches to resource allocation and more effective alignment of capital planning with statewide and systemwide strategic goals. After going through university governance reorganization in Oregon, the Higher Education Coordinating Commission (HECC) was created in 2013 with funding and policy responsibilities for higher education and workforce statewide. As a state agency bridging between universities and the legislature, with oversight over Oregon's seven public universities, HECC sought a strategic capital development plan. Similarly, the North Dakota University System (NDUS), comprised of two research universities, four regional universities, and five community colleges, also sought improvements to their capital planning processes.

SYNOPSIS

For the **NDUS study**, Paul Leef wrote the chapter on reforming the systemwide capital planning process. The new process he outlined aligned campus strategic planning with facilities and capital planning and created a process for project prioritization, which addressed a growing deferred maintenance backlog while prioritizing new capital projects. This process, which was adopted and implemented, is credited with creating a new level of trust with the legislature and restoring credibility to the university system.

As principal-in-charge and project director, Paul Leef led the team that produced the **Oregon HECC Strategic Capital Development Plan**. The team worked collaboratively with the National Center for Higher Education Management Systems (NCHEMS) to help envision capital planning solutions and improve strategic decision-making for the statewide Oregon higher education system. Leef provided utilization and space needs analyses for each of the seven institutions.

One of Leef's key findings was that existing facility assets have serious age, quality and suitability issues. He also highlighted that statewide institutional capital planning practices were not fully aligned with national best practices. Consequently, he recommended improvements to the statewide planning process and guided the development of a prioritization rubric which emphasized investment in capital improvement and replacement of existing facilities.

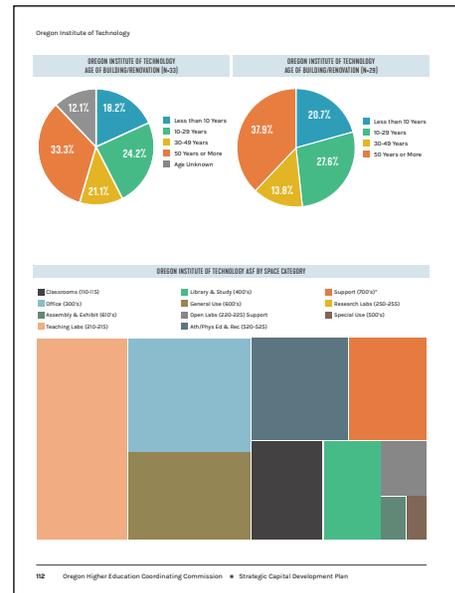
These existing facilities represent more than 17M GSF with a current replacement value in excess of \$10B. This rubric guided legislative investment during the 2021-2023 biennium of over \$700M.

These plans are still used by both the legislature and governor's office for funding hundreds of millions of dollars in capital appropriations over the legislative funding cycles for state higher education with tremendous impact.

The NDUS consists of 11 institutions and educates more than 60,000 students each year; The Oregon Higher Education System consists of 7 institutions and educates over 120,000 students each year.

EXHIBIT 3.1 WORK CREATING STATEWIDE CAPITAL PLANNING IMPACT: OREGON AND NORTH DAKOTA

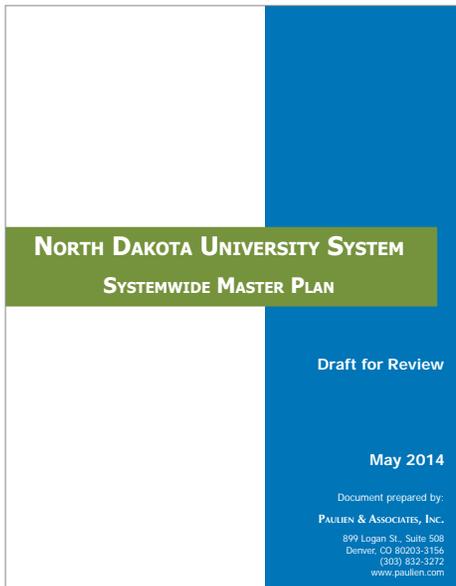
TRANSFORMING INSTITUTIONS: RAISING STANDARDS, PRACTICES, AND LEGISLATION



DECLARATION OF RESPONSIBILITY

I have personal knowledge of the nominee's responsibility for the Oregon statewide project. The project for Oregon HECC was completed under the direction and leadership of the nominee as described.

Jim Pinkard
 Director of Capital and Finance,
 Oregon Higher Education
 Coordinating Commission



DECLARATION OF RESPONSIBILITY

I have personal knowledge of the nominee's responsibility for this portion of the exhibit as described and authorship of the planning chapter.

Dan Paulien
 Former President,
 Paulien & Associates

EXHIBIT 3.3 INTEGRATED TEACHING AND LEARNING LABORATORY, UNIVERSITY OF COLORADO BOULDER

ENHANCING UNIVERSITY COMMUNITIES: DESIGN

ROLE

Design and Construction
Coordinator

Leef liaised between faculty, graduate students, directors and the design team, leading the development and implementation of the Building as a Learning Tool concept and integration of public art and design.

ORGANIZATION / DESIGN FIRM

CannonDesign (formerly Klipp/KCJD)

FIRM OF RECORD

CannonDesign (formerly Klipp/KCJD)

COMPLETION

January 1997

AWARDS / PUBLICATIONS

2000 Inaugural Recognition Award,
Corporate and Foundation Alliance

1997 AGC Award

UNIVERSITY OF COLORADO BOULDER

CHALLENGE

In the College of Engineering and Applied Science at CU Boulder in 1992, a college-wide reform initiative sought to “pioneer a multidisciplinary learning environment that integrates engineering theory with practice and promotes creative, team- oriented problem-solving skills.” This initiative included curricular reform across six engineering departments and proposed introduction of design classes to first-year engineering students. However, the college lacked the type of space needed to support this vision for hands-on product design and development. It realized constructing space offered unique opportunities to create new learning environments and pilot advanced cross- disciplinary teaching modalities.

SYNOPSIS

The Integrated Teaching and Learning Laboratory includes program elements such as an open, visually rich data acquisition and analysis laboratory, an open studio for hands-on product design and development, group study rooms, maker spaces, group-based active learning classrooms, and capstone project design spaces. As part of his role, Leef represented program directors, Drs. Jacquelyn Sullivan and Lawrence Carlson, bridging between the design team and

university facilities group as he led the building design and development of the concept of the nationally unique Building-as-Learning-Tool.

The building was designed as an open, interactive teaching tool, exposing the usually invisible building systems (such as reinforcing bars on concrete columns, multiple structural long- and short-span structural systems and glazing, and conveying systems, mechanical systems and wall construction). Over 200 sensors were embedded in building components throughout the facility, allowing hundreds of real-time measurements to monitor the status of building systems—such as structural loading, thermal environment and electrical loading—becoming a living laboratory for students.

“

Paul was uniquely qualified with degrees in engineering and architecture, and a thirst to try new approaches, to lead the design and construction of the groundbreaking and nationally-unique ITL Laboratory—which became a model in experiential, design-focused engineering education. His vision, leadership and collaboration were crucial to our success.

- Dr. Jacquelyn Sullivan, Founding ITLL Co-director and Associate Dean of Engineering



EXHIBIT 3.3 INTEGRATED TEACHING AND LEARNING LABORATORY, UNIVERSITY OF COLORADO BOULDER

ENHANCING UNIVERSITY COMMUNITIES THROUGH DESIGN



The building also features public art and exhibits, which Leef curated with leading designers at the Science Exploratorium in San Francisco.

The building program and design that Leef led enabled a new kind of engineering curriculum, featuring learning by doing using the studio format to facilitate hands-on learning. This approach broke new ground in STEM education ahead of the maker movement of the early 2000s. It forecasted a need for STEM education reform and was cited in a National Academies report, “Rising Above the Gathering Storm,” in 2007. In 2008, 11 years after completion, Sullivan and Carlson were recognized with the **Bernard M. Gordon Prize for Innovation in Engineering and Technology Education, awarded by the National Academy of Engineering**, joining MIT, Dartmouth, Georgia Tech, Stanford, Harvey Mudd College, and other leading engineering universities. In the Gordon Prize award literature, the National Academy of Engineering proclaimed:

*...the Integrated Teaching (ITL) Program at the University of Colorado at Boulder continues to **set the standard for engineering education at schools and universities across the nation.** By stimulating students’ interest in and excitement about engineering and science ...the ITL program has made enormous strides in educating leaders for the future.*

The ITL Program was one of three finalists for Boeing’s Outstanding Educator award in 1996 and 1997. In 2000, it was awarded the Inaugural Recognition Award from the Corporate and Foundation Alliance, a group of 35 engineering and technology corporations and foundations working with the National Science Foundation (NSF) to support the top undergraduate science, math engineering and technology education programs in the United States. It was also selected as a Program of Excellence by the Colorado Commission of Higher Education.

ASPECTS

Integration: One of first project on CU Boulder campus to use sustainability framework for integrated design; *Energy:* Use of north facing daylight monitors and solar shading devices; *Economy:* Used materials with long life cycles; *Equitable Communities:* Every worker on the project was honored with a memorial brick in the entry plaza; *Resources:* One of first projects to use AIA Colorado Sustainability Guidelines; *Discovery:* Building pioneered use of sensors to monitor building performance as learning experience.

DECLARATION OF RESPONSIBILITY

I have personal knowledge of Paul Leef’s responsibility for this project. His direct, daily contributions to the vision and creation of the ITL Laboratory. We worked together almost daily throughout the design and development phases with the project architects and the university facilities management team.

Jacquelyn Sullivan, Ph.D.

Founding Co-director, ITL Laboratory

EXHIBIT 3.4 CENTER FOR TEACHING AND LEARNING MEDIA, COLORADO SCHOOL OF MINES

ENHANCING UNIVERSITY COMMUNITIES: DESIGN

ROLE

University Architect

Leef wrote the program plan, led visioning and goal setting, including the first use of LEED for the campus, wrote the RFQ which articulated these goals, led architect selection and guided the project through daylighting and design studies, and construction.

ORGANIZATION / DESIGN FIRM

Anderson Mason Dale

FIRM OF RECORD

Anderson Mason Dale

COMPLETION

2000

AWARDS / PUBLICATIONS

2002 Colorado Renewable Energy Society Award

2002 Honorable Mention Award, Education Design Showcase, School of Planning & Management

COLORADO SCHOOL OF MINES

CHALLENGE

When the state legislator representing the Colorado School of Mines (CSM) indicated the potential for funding a campus capital project, Paul Leef and the Provost created a program for a new building that would be technology-rich, promote active learning, and exemplify the principles of Project Kaleidoscope, the catalyst of STEM higher education reform sponsored by the American Association of Colleges and Universities. Furthermore, as the first new building to be built on campus in 25 years, this building set the design standard for all buildings to follow.

SYNOPSIS

The Center for Teaching and Learning Media became the first new building constructed at the Colorado School of Mines in a quarter of a decade and transformed teaching and learning

at CSM. It introduced hands-on active learning environments and was conceived to house both formal and informal student learning spaces, while providing a home to an NSF funded center of excellence for engineering education. Leef's vision was to create transparency and introduce daylighting as a primary source of illumination and employ a design vocabulary to speak to 21st Century engineering education. The building uses a unique flooring system of raceways for flexible utilities placement and daylight modeling to fine tune daylight monitors for lighting second floor classrooms. The studio physics classroom model was piloted, adopted, and propagated. **Leef's leadership made this a model of engineering education for the campus due to improved learning outcomes for thousands of students annually and set high standards of award-winning, sustainable design.**



EXHIBIT 3.4 CENTER FOR TEACHING AND LEARNING MEDIA, COLORADO SCHOOL OF MINES

ENHANCING UNIVERSITY COMMUNITIES: DESIGN



“

*Paul's leadership and vision helped make the CTLM a center for active-engagement teaching. The studio classroom is a well-designed flexible space with multiple partnership stations, each of which is well equipped with physics-specific hardware as well as computer and electronics technology. This (studio physics) teaching system has revolutionized introductory physics at Mines. Student learning is more effective, and the students are more engaged. Introductory biology is now also taught in a learning studio environment. **Thousands of students** have benefited from these programs over the last two decades.*

- **Dr. Thomas Furtak**, University Professor Emeritus, Department of Physics

ASPECTS

Integration: Integration of art, social, and outdoor spaces helped enhance user experience; *Equitable Communities:* Non-traditional, active learning environments addresses diversity of learning needs; *Water:* Water efficient fixtures; *Energy:* First use of daylight modelling on campus to reduce energy consumption; *Well-Being:* Included exterior landscaped regenerative courtyard space; *Resources:* First building on campus designed to LEED (2.0); *Change:* Floors house utility infrastructure to support moving walls and reconfiguring space; *Discovery:* Learning spaces are focused on hands-on discovery.

DECLARATION OF RESPONSIBILITY

I have personal knowledge of the nominee's responsibilities, including writing the program plan, leading goal setting, architect selection, site planning, design and construction.

Dr. Nigel Middleton

former Provost, Emeritus Professor of Electrical Engineering,
Colorado School of Mines

ROLE

University Architect

Leef led visioning and goal setting, revised the program plan to include needed administrative and operational components, led architect selection, initiated the east campus planning effort as a predecessor to design, (re-orienting the building from north-south to east-west), championed sustainability, worked closely with the client and their Nobel Laureate in Chemistry, led design team to create a new design vocabulary derived from main campus traditions, guided the project through public meetings, town halls, and construction.

ORGANIZATION / DESIGN FIRM

Robert AM Stern Architects

FIRM OF RECORD

HDR Inc.

COMPLETION

2011

AWARDS / PUBLICATIONS

2018 ENR Merit award for Higher Education/Research; AGC Awards for Construction Excellence (ACE), Best Building Project—General Contractor (\$10 to \$40M)

2015 Robert & Judi Newman Award of Excellence in Classical & Traditional Design, ICAA Rocky Mountain Chapter I2SL Facilities Conference Presentation

UNIVERSITY OF COLORADO BOULDER

CHALLENGE

When Leef joined CU Boulder as university architect, a program plan had been approved for a new biotechnology research building at the CU Research Park. After conducting a visioning session with the project champion, Nobel Laureate Tom Cech, Leef initiated a program revision to accomplish two gaps in the previous work.

As the first non-departmental, interdisciplinary building on campus, a completely new administrative structure and governance had to be created for managing building operations and overseeing space assignment. The facility also lacked food service, and as the first new building on the newly reimagined east campus, suggesting need for mixed-used space and amenities.

The vision for the CU Research Park as a Science and Engineering Research campus also lacked a development plan. Through Leef’s leadership, the scope was increased to include campus master planning before designing this first new building. That process helped inform the building’s siting, pedestrian connections to main campus, and framing future research buildings. The development plan subsequently informed the 2011 campus plan and was transformative in creating a development pattern based on thematic research clusters.

The images on the right show evolution of the design that Leef led transforming the main campus’s “Tuscan vernacular” to a more modern interpretation.



“ Paul was instrumental in re-evaluating how the new 350,000 SF building could both reflect science, research, technology, and sustainability while reflecting the history and tradition of the “Tuscan” vernacular on the Main Campus. For well over 14 months and throughout the planning, design, and stringent University Design Review Board (DRB) review and approval process—Paul assumed a leadership and advocacy role in directing how the Systems Biotechnology Building could be both architecturally “remarkable” and technologically “highly efficient”. Based on Paul’s advocacy the Systems Biotechnology Building serves as an award-winning example for the entire East Campus. - Donald H. Brandes, Jr., ASLA, Member and Chair of the University of Colorado Design Review Board (2012–2023)

EXHIBIT 3.5 JENNIE SMOLY CARUTHERS BIOTECHNOLOGY BUILDING, UNIVERSITY OF COLORADO BOULDER

ENHANCING UNIVERSITY COMMUNITIES: DESIGN

SYNOPSIS

Paul Leef led the reprogramming effort and provided the vision for the building to exemplify sustainability. Working closely with Robert AM Stern Architects, the siting and massing of the building was modified to orient east-west with public courtyards for building occupants. Leef also led the effort to evolve the uniform, architectural vocabulary of the main campus “Tuscan vernacular” to a new expression that recalled the main campus, while establishing a new standard expression of 21st century science and research. He led multiple charettes, helping direct the siting, massing, and design. **The resulting building set a new standard and architectural palette for east campus.**

ASPECTS

Integration: Building is place making and balances function with context; *Economy:* Materials chosen for life cycle performance; *Energy:* Building uses solar power and innovative approach to reducing exhaust air to reduce beyond ASHRAE 30.1; *Resources:* LEED Platinum; *Discovery:* Best practices shared at International Institute for Sustainable Laboratories *Well-Being:* Courtyards and outdoor spaces designed for quiet repose and renewal.

DECLARATION OF RESPONSIBILITY

I have personal knowledge of the nominee’s responsibilities as described in this exhibit. That responsibility included: project under the direction of the nominee.

Frank W. Bruno

Former Vice Chancellor for Administration (currently CEO of Via Mobility)

As CU Boulder is landlocked, an important consideration was increasing density by exceeding city height limitations. To achieve this, Leef led open town halls with local residents and public officials and successfully obtained community buy-in.

The project also provided a **new paradigm for research and learning for the university**; working with Nobel Laureate Tom Cech, the project established a new model of interdisciplinary research and created a center for national and international colloquia. This building was fundamental in the development of the biotech industry in Colorado and in advancing related knowledge.

“

Paul is an exceptional problem solver, a talented designer, and an intuitive public relations professional. [He] skillfully built enduring relationships with faculty, students, and the highly political dean’s council. Presentations to the elected Board of Regents were well-prepared and we would work closely together in addressing areas of complexity and concern. I was also impressed with the way that Paul guided the robust campus planning process that resulted in all participants having a voice in setting its infrastructure objectives. A great example was the Systems Biotechnology Building, which changed both the planning and architectural style of east campus. Paul exudes a serene and confident sense that served well during challenging times.

- **Frank W. Bruno**, Former Vice Chancellor for Administration and current CEO of Via Mobility Services



ROLE

Campus Architect

Leef led space programming, established project goals for design, wrote the RFQ, led architect selection and guided the project through site planning and design development.

ORGANIZATION / DESIGN FIRM

Bohlin Cywinski Jackson

FIRM OF RECORD

Anderson Mason Dale

COMPLETION

2012

(DD through 2007, placed on hold)

AWARDS / PUBLICATIONS

2013 AIA Merit Award, Citation for Built Architecture

2013 Architectural Record

COLORADO SCHOOL OF MINES

CHALLENGE

The Colorado School of Mines (CSM) suffered enrollment declines in the 1980s related to its close ties with the oil and gas industry. In response, CSM diversified its academic offerings. By the early 2000s, it had become Colorado's premier engineering university.

Under Paul Leef's leadership, the Center for Technology and Learning Media (CTLM) became the first new academic building to be constructed on campus in a quarter-century.

As part of a 2006 strategic goal and campus plan to double both enrollment and research revenue, CMS needed to invest in new facilities, which had to reflect the forward-looking future of engineering education embodied in the School's aspirations.

The second new free-standing academic building to be designed for the campus, Marquez Hall, was sited adjacent to CTLM and along a new pedestrian spine articulated in the 2006 campus master plan. The previous architecture of masonry with punched openings did not represent the exciting engineering education taking place on campus.

SYNOPSIS (ROLE, APPROACH, OUTCOME)

As university architect, Paul Leef set the vision for the project to elevate campus design and create innovative learning and research environments to attract the best and brightest students and faculty to campus.

Building on the success of hands-on, active learning classrooms and teaching labs in the adjacent CTLM, Leef led the programming through completion of design development for Marquez Hall.

The building includes the largest active learning classrooms on campus, a 4D visualization classroom, and a drilling simulation room, while providing desperately needed informal study and collaboration space for students to enhance engagement and a sense of belonging. The building's siting created positive outdoor space—an interior courtyard—to represent a new campus planning paradigm primarily composed of buildings facing the city streets. This created a connection with the landscape and the outdoors, provided usable exterior space for student study, and reinforced the new pedestrian-friendly corridor that connected with the main campus quadrangle. The building introduced a dramatic sense of transparency and welcoming that now energizes the ground floors of most new buildings on campus and puts engineering on display. Under Leef's leadership, this project intentionally established a focus on award-winning design and set a new standard of design excellence for the campus, which has continued to this day.

ASPECTS

Integration: Delivers beauty and function; *Equitable Communities:* Democratizes daylighting and provides areas for social interactions, diverse learning environments; *Ecosystems:* LEED rating; *Energy:* Energy efficient and effectively solar shaded; *Well Being:* Interior connected with exterior spaces, placemaking on campus; *Resources:* Designed with life cycle cost in mind, e.g., use of terra cotta rain screen; *Change:* Flexible, active learning classrooms, informal study spaces and exhibit spaces.

EXHIBIT 3.6 MARQUEZ HALL, COLORADO SCHOOL OF MINES

ENHANCING UNIVERSITY COMMUNITIES: DESIGN



The entry canopy projects a sense of engineering technology while creating a forecourt along a new pedestrian spine. The transparent entry showcases the program and puts engineering on display.

“*The project is a dazzling light-filled building with spectacular views of Golden and South Table Mountain to the east and the Rocky Mountain Front Range foothills to the west.*

- **David Hill**, Architectural Record

DECLARATION OF RESPONSIBILITY

I have personal knowledge of the nominee's responsibilities, including project under direction of nominee working with building users, developing the space program, developing campus infrastructure, site planning, massing and design.

Kirsten Volpi

CPA, Executive Vice President and CFO, Colorado School of Mines



View through student space in Marquez Hall, looking toward the new courtyard, creating additional student space with CTLM in the left background.



A typical, light-infused, active learning space with views of South Table Mountain.

EXHIBIT 3.7 COLORADO SCHOOL OF MINES CAMPUS PLAN

IMPACTING UNIVERSITY COMMUNITIES: PLANNING FOR THE FUTURE

ROLE

Campus Architect, Director of Planning Design & Development

Leef authored the RFQ, selected the consultants, led the planning process, guided the campus leadership, led community engagement, obtained CCE approvals, and led implementation of the facilities plan.

ORGANIZATION / DESIGN FIRM

JBA Inc., 5 Design

FIRM OF RECORD

JBA Inc., 5 Design

COMPLETION

2006

AWARDS / PUBLICATIONS

AUA Annual Conference Presentation

ASPECTS

Equitable Communities: Plan transformed campus to be pedestrian and walkable, while enhancing sense of place; *Well-Being:* Emphasis on quality of student life and connection with outdoor environment; *Energy:* Plan incorporated centralized heating and cooling loops for efficiency; *Economy:* Plan was catalyst for revenue growth by increasing enrollment and research capacity.

COLORADO SCHOOL OF MINES

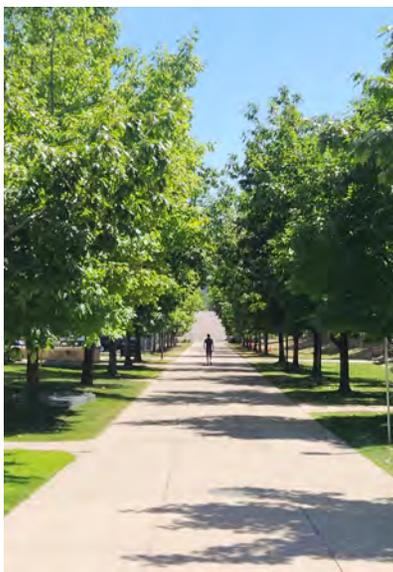
CHALLENGE

For the Colorado School of Mines, Paul Leef recognized that a strategic vision was needed before planning the campus's physical development. He sought and selected a strategic planning consultant to help the campus chart a new direction for the future. The new strategic goals adopted by the Board of Trustees involved a monumental doubling of both enrollment and research in recognition that the 21st century would require more engineers to solve increasingly complex problems. Growing the campus from 3,000 to 6,000 students and from \$30M in research expenditures to \$60M would require significant capital investment that would be transformational for the campus. Leef partnered with Joe Bilotta & Associates (JBA Inc.) and 5 Design to assess space needed for growth and to plan the necessary physical improvements.



EXHIBIT 3.7 COLORADO SCHOOL OF MINES CAMPUS PLAN

IMPACTING UNIVERSITY COMMUNITIES: PLANNING FOR THE FUTURE



SYNOPSIS

To accommodate the growth outlined in the strategic plan, Leef led the process of identifying critical areas for growth and new buildings. The plan also envisioned the campus would become more residential and pedestrian with additional housing and closure of city streets. Deeply embedded in the city of Golden, steps away from a bustling downtown commercial zone and a historic neighborhood, growth became a contentious issue. Leef's leadership in partnering with neighborhood associations, the city planning office, the planning board, mayor's office and local Chamber of Commerce leaders, the campus successfully implemented the campus plan.

Leef personally brokered an agreement with an adjacent historic neighborhood, facilitated the purchase of key land parcels, partnered with the mayor's office to salvage older houses and shepherded the first closure of city streets. He also initiated early conversations about a city circulator shuttle to provide connectivity to a new light rail stop which was subsequently implemented. These planning efforts have allowed the campus to grow strategically to 6,000 students and over \$60M in research expenditures.

The plan provided a roadmap that has physically and culturally transformed the campus.



*Through Paul's leadership and vision, Mines was positioned to become the university of today. His ability to think strategic and work with the necessary partners to achieve [our] goals while respecting and acknowledging the needs to the surrounding community and the City of Golden was critical for Mines success during Paul's time at Mines and today. **His vision included enrollment and research of the future, facility needs for students and faculty, transportation, partnerships and other strategic elements of a campus master plan. Through Paul's work, Mines has built off of his strategic framework and advanced the university to meet the needs of over 7,500 students and over \$80 million in research in a thoughtful, forward looking, vibrant campus.***

- **Kirsten Volpi**, CFO, CPA, Executive Vice President and CFO, Colorado School of Mines

DECLARATION OF RESPONSIBILITY

I have personal knowledge of the nominee's responsibilities as described in this exhibit, including leading the strategic and campus master planning efforts, outreach and approvals.

Kirsten Volpi

CPA, Executive Vice President and CFO, Colorado School of Mines

ROLE

University Architect, Director of Planning, Design and Construction

Leef led the in-house planning team that produced the campus plans, concepts, goals, and guiding documents, led internal and external community engagements, guided the chancellor and campus leadership, liaised with the City of Boulder, and presented the plan to the Board of Trustees, Planning Board and City Council.

ORGANIZATION / DESIGN FIRM

CU Planning Office, PD&C
Paul Leef, Director

FIRM OF RECORD

Subconsultants: Paulien & Associates,
Nelson Nygaard Consulting Associates

COMPLETION

2011

AWARDS / PUBLICATIONS

Session Presentation, International
Town & Gown National Conference)

ASPECTS

Integration: Plan connects people to place and integrates systems thinking; *Equitable Communities:* Emphasis of the quality of student life, walkability, resilience; *Ecosystems:* Plan valued riparian habitat along Boulder Creek and accounted for flood zones; *Energy:* Established building standards for achieving LEED; *Water:* Promoted use of non-potable water for irrigation; *Resources:* First campus plan to include chapter on sustainability; included alt modes of transit; *Well-Being:* Set goal to make campus more welcoming, walkable, and accessible; *Change:* Addressed future risks for flooding.

UNIVERSITY OF COLORADO BOULDER

CHALLENGE

When Paul Leef joined as UC Boulder after CU Chancellor G.P. “Bud” Peterson had completed a new Strategic Plan for the campus, “Flagship 2030”, which set sights on becoming a “leading model of the new flagship university of the 21st century by redefining learning and discovery.” Leef served on a majority of the Flagship 2030 implementation task forces. His work helped lay the foundation for the campus facilities plan, which provided a roadmap for capital investment. However, the previous campus plan had been mired in controversy, with local citizens and politicians lobbying against it with Colorado’s congressional delegation, state legislators and Colorado Commission on Higher Education.

SYNOPSIS

Working with CU’s VP for Administration, Boulder’s Executive Director of Planning, and in-house planning staff, Leef formed a campus plan task forces of key internal and external community members, as well as coordination with the city’s planning board, city council, and CU’s Board of Trustees. Under his leadership, the plan focused on several key issues not addressed by previous plans:

- » It highlighted a growing deferred maintenance backlog representing a significant liability for campus assets. **This resulted in the formation of a deferred maintenance program funded by the campus.**

- » **It was the first campus planning document to include a chapter dedicated to sustainability, making this a focus of future building projects.** During Leef’s tenure, over a dozen buildings earned LEED Platinum designation. He held a regional sustainability summit that brought together regional planning entities for the first time.
- » Finally, to support Flagship 2030 goals, the plan envisioned evolution of the campus research park into an extension of the main academic campus and its transformation into a science and engineering research campus.

This work involved reimagining office park development patterns of object buildings in parking lots into a mixed- use, collegiate campus with transit options and buildings that create positive exterior community space. In addition to establishing a new physical development pattern, the reimagined east campus was organized according to thematic research clusters, such as life sciences, aerospace and energy/environment, breaking the mold of siloed, departmental academic buildings.

The plan was praised by the City Planning Board and City Council, approved by the Board of Trustees, cited as “Exemplary” by the Colorado Commission on Higher Education, and provided a reliable, decades-long and impactful development roadmap. **Over the next 10 years, this plan guided the development of over \$1.2B in capital construction, over 460k GSF of renovation, and over 1.6M GSF of new construction, while positively impacting 30,000 students each year.** Leef presented his planning process at the International Town & Gown annual conference.

As a testament to his work building bridges, Leef took a position with the City Planning office subsequent to his CU Boulder tenure and helped lead a joint planning effort with CU to study creation of a new conference center in the city on a site identified in the campus plan. This project is currently under construction.

EXHIBIT 3.9 SPACE UTILIZATION AND BENCHMARKING STUDY, DUKE UNIVERSITY

Impacting University Communities: Planning for the Future

ROLE

Principal-in-Charge

Leef wrote the proposal, led client meetings, prepared presentations, guided data analysis, led benchmarking efforts with personal outreach, and authored and presented the study's recommendations to campus leadership.

ORGANIZATION / DESIGN FIRM

SmithGroup

FIRM OF RECORD

N/A

COMPLETION

March 2019

AWARDS / PUBLICATIONS

SCUP National Conference Presentation

NACUBO Data Analytics

Conference Presentation

AUA Webinar presentation

DUKE UNIVERSITY

CHALLENGE

When Duke's 10th university president took office, he embraced the newly developed "Together Duke" Strategic plan, which called attention to the need to bolster research in the natural sciences. Due to a time lag for constructing new facilities, campus leadership wanted to optimize use of existing research space. This required an in-depth analysis of all lab-intensive space used for both instruction and research within the College of Arts & Sciences, Pratt School of Engineering and the various university institutes and centers. Leef and his team were selected to conduct a space utilization and benchmarking study with the goal of creating long-lasting, positive effects.

SYNOPSIS

Leef led the space needs and utilization analysis process on **1.3 million square feet** of classrooms, laboratories, offices, and informal learning spaces, with a concentration on science and engineering space to support institutional strategic goals to increase research. He met with academic leaders from the provost's office, deans, department chairs, and research center and directors and composed an electronic survey about existing conditions. An analysis of research productivity was conducted at the departmental level, with assessments of individual principal investigator performance metrics. Under Leef's leadership, this was one of the first projects to display data analytics via interactive data visualization dashboards for a client.

Additionally, Leef conducted a benchmarking study to determine where Duke's space utilization and research productivity ranked compared to Ivy and Ivy Plus peer institutions. He also collaborated with stakeholders to identify issues and opportunities for increased efficiencies, including identifying faculty with multiple offices, low-performing classrooms that could be repurposed for building academic learning communities, and converting underutilized or unused teaching labs to research for hiring new faculty. Thousands of square feet with replacement value in millions of dollars of underperforming instructional space and research labs were identified. His analytics were well received by deans and department chairs. The data was deemed so vital to university operations and decision-making that the files were turned over to university staff for continued upkeep.

Leef also recommended best practices for space management, since space at Duke University represented a billion-dollar asset. As a result, Duke instituted a new space planning process. They created a campus space committee, which made the space allocation process more rational, transparent and focused on strategic needs for all projects and space assignments going forward. **This project was presented with the client at a national conference of the Society of College and University Planners (SCUP) and the Analytics Forum of the National Association of College and University Business Officers (NACUBO) as an exemplary case study of using data to inform planning in higher education.**

ROLE

Principal-in-Charge, Campus Strategy & Analytics Studio, Smith Group

Leef led analysis of academic program needs, interviewed campus leaders, led data analysis and space needs assessment, advised the president on facility needs of proposed growth, and used data to help inform both campus strategic planning and campus physical planning decisions.

ORGANIZATION / DESIGN FIRM

SmithGroup

FIRM OF RECORD

SmithGroup

COMPLETION

2020

AWARDS / PUBLICATIONS

2021 Award of Merit, Society of College and University Planners

2020 Honor Award - Analysis & Planning, American Society of Landscape Architects (ASLA)

SCUP Pacific Regional Conference

Chief Facilities Officers Annual Conference, California State)

3.10 CALIFORNIA STATE UNIVERSITY-CHICO CAMPUS PLAN

CALIFORNIA STATE UNIVERSITY-CHICO

CHALLENGE

“Today Decides Tomorrow” is not just Chico State’s motto, it is their renewed commitment to making higher education accessible in California. Chico State is a proud Hispanic Serving Institution with an undergraduate population of 50% first-generation, 56% people of color, and 35% from a low socio-economic background. These demographics challenged campus leadership to abandon existing cultural perceptions to shape a campus reflective and supportive of a diverse student body, now and in the future. Furthermore, the new campus leadership had aspirations to aggressively grow enrollment.

SYNOPSIS

The first step in the project was to analyze where students came from, assess campus space types, and how that space was being used, for which Leef pioneered the use of demographic data. Leef led the analysis to assess space needs for different growth scenarios using 1960s CSU system space metrics but Leef also developed updated metrics using national practices. His analysis indicated that significant enrollment growth would require unattainably large amounts of capital investment. When this key finding was presented to the president and her cabinet, it caused their strategic plan goals to be dramatically modified for more modest enrollment growth.

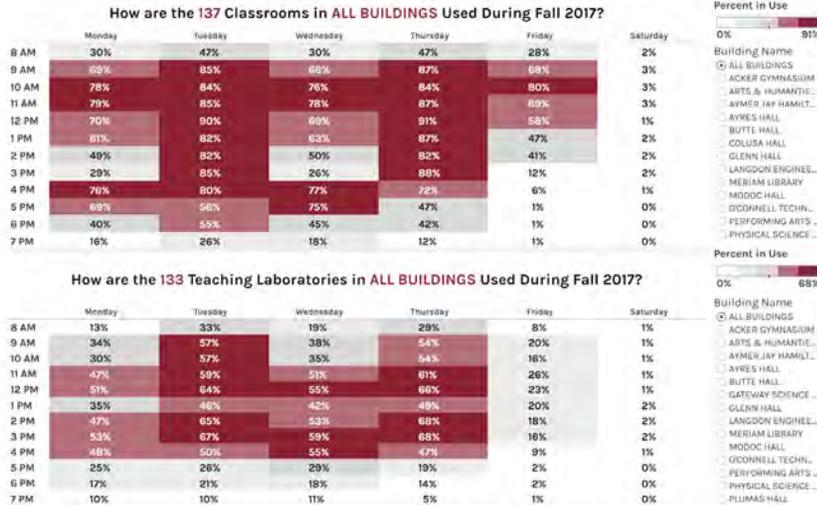
Once Leef and his team developed space planning guidelines, the analytics was linked to interactive data visualization dashboards, the first created by the firm. University leadership used the dashboards to work to start conversations about space use and classroom scheduling on campus. Leef’s analysis also highlighted areas of disconnect between strategic plan goals and physical space. For example, the university’s strategic vision included intimate learning environments, but the analysis showed that their existing inventory of classrooms was highly inflexible and traditional and lacked active learning capabilities. Additionally, the analysis identified back-of-house functions occupying prime real estate at the core of campus and underutilized areas that could be redeveloped.

OUTCOMES

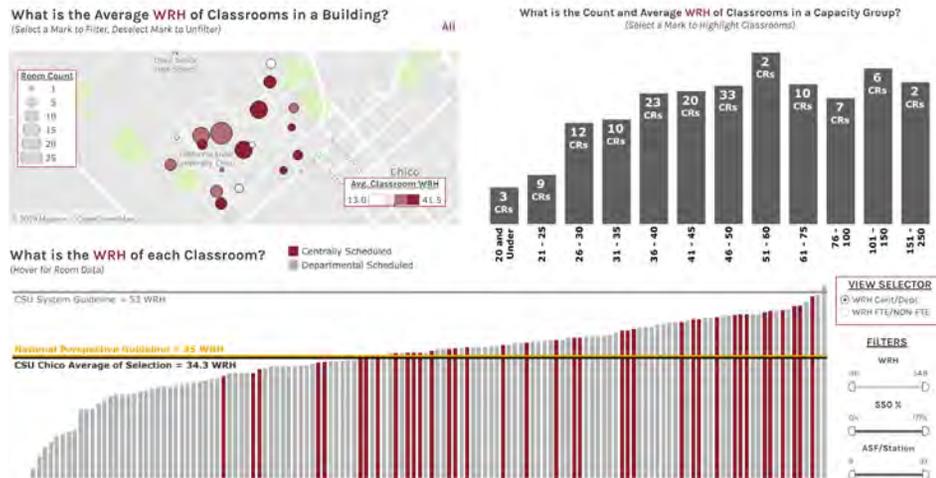
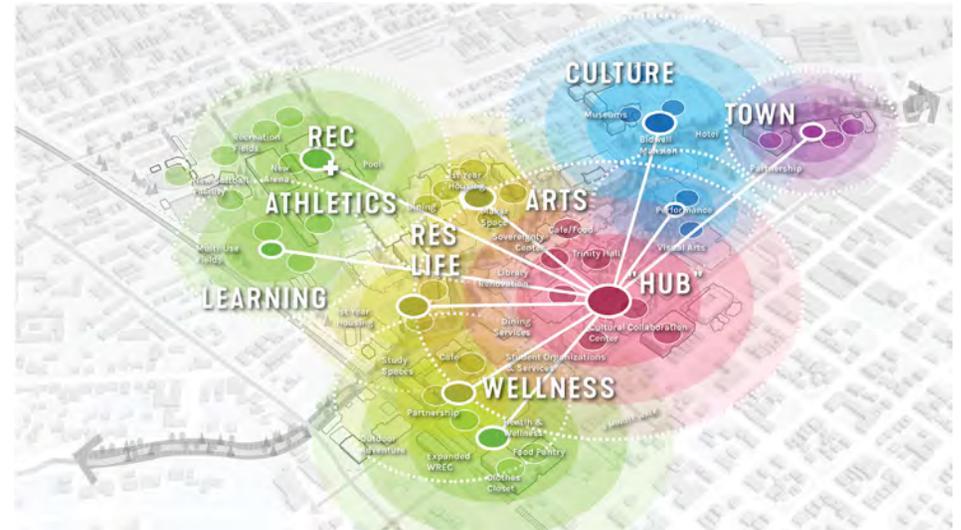
The analysis performed by Leef resulted in a 2030 Campus Plan that presents a unifying vision for Chico State, which was developed in parallel with a new Strategic Plan. Both planning processes were designed to build shared consensus and to inform each other.

This robust campus engagement model, tailored to Chico State thanks to Leef’s leadership, represented the most inclusive outreach effort in the university’s history. The data-informed Campus Plan promotes an inclusive environment for student-focused hubs on the central campus and includes capital plans for new, innovative, active learning environments to improve student success. **The analysis and recommendations provided by Leef and his team were instrumental in driving key aspects of the plan and led directly to funding the capital renewal of a major classroom building. The Chico Master Plan garnered awards from SCUP and ASLA; Leef and the client presented the analytics at a SCUP Pacific Regional Conference and also the Annual Meeting of the Chief Facilities Officers of the California State University System.**

EXHIBIT 3.10 CALIFORNIA STATE UNIVERSITY-CHICO CAMPUS PLAN
IMPACTING UNIVERSITY COMMUNITIES: PLANNING FOR THE FUTURE



The red/grey shaded “heat map” illustrates how utilization is distributed throughout the days and times of the academic week.



The dashboard above maps classrooms on campus and charts weekly room hour use by classroom size and which ones are centrally (red bars) and departmentally scheduled (grey bars).

ASPECTS

Integration: A systems planning approach integrated analytics and multiple disciplines to optimize results; *Equitable Communities:* Planning process was highly inclusive and focused on creating an inclusive, welcoming environment that provided multicultural resources; *Water/Energy/Resources:* A sustainability plan was included as well as strategies to optimize existing underutilized space; *Change:* Focus on reuse of existing buildings; *Well-Being:* Plan was student focused and space strategy put students at the center of the campus; *Ecosystems:* Enhanced connection to the Creek and riparian habitat; *Discovery:* Best practices shared through conference presentations.

DECLARATION OF RESPONSIBILITY

I have personal knowledge of the nominee’s responsibilities, including work as described in this exhibit. This included: project under the direction of the nominee.

Doug Kozma

Vice President, Campus Planning Director, SmithGroup