2020 AIA Fellowship

Candidate Bartlett J. Baker, Jr.
Organization McGough Companies
Location St. Paul, Minnesota
Chapter AIA Minnesota; AIA St. Paul

Category of Nomination
Object 2 > Practice (Management)

Summary Statement
Focused on the dynamic interdependency of architecture and construction, Bake Baker has advanced new process leadership models for architects and owners using skillful inventive tools, shared among peers nationally, that define aspirations and design's value.

Education
Master of Architecture
University of Colorado
Denver, CO
1980

Bachelor of Arts, American History
University of Minnesota
Minneapolis, MN
1976

Licensed in: California (1984)
Minnesota (1985)
NCARB Certified (2003)

Employment
McGough Companies
St. Paul, MN
2004 to 2019 (15 years)
Executive Vice President / Director of Preconstruction Services / Board of Directors / Senior Leadership Team / Preconstruction Principal for McGough Development Group

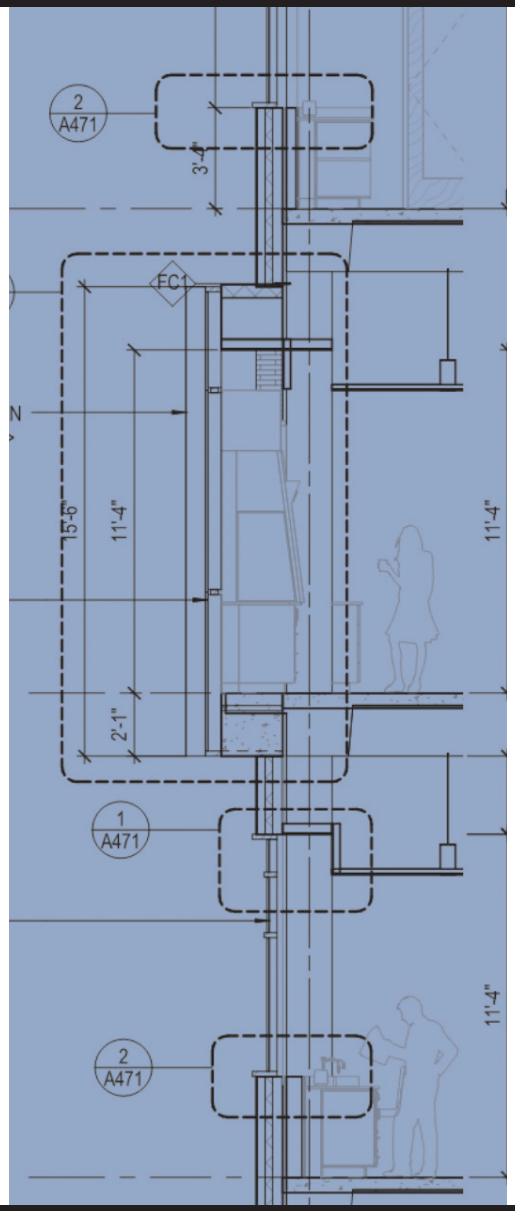
HGA, Inc.
Minneapolis, MN
1984 to 2004 (20 years)
Vice President / Principal in Charge / Project Principal / Architecture Department Director

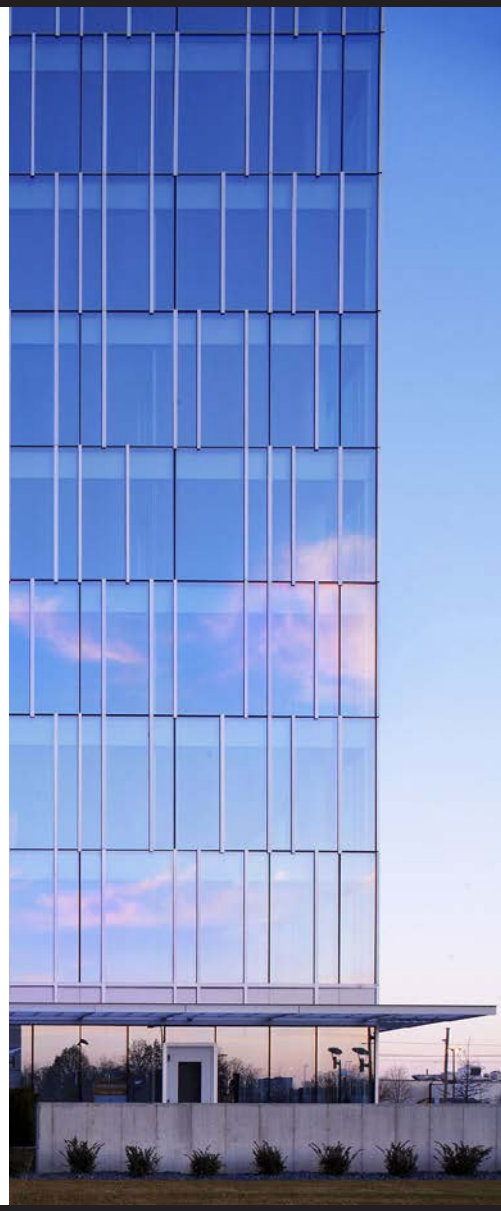
Skidmore, Owings and Merrill
San Francisco, CA
1980 to 1984 (4 years)
Licensed Architect / Architectural Intern

Skidmore, Owings and Merrill
Denver, CO
1978 to 1980 (3 years)
Architectural Student Intern

Bartlett “Bake” J. Baker, Jr. AIA, NCARB, LEED AP

AIA Honors Fellowship Submission for 2020





September 16, 2019

Mr. Paul Mankins, FAIA
Chair, Jury of Fellows
The American Institute of Architects
Washington, D.C. 20006

HGA
Hammel, Green and Abrahamson, Inc.
420 Fifth Street North, Suite 100
Minneapolis, Minnesota 55401

Re: Fellowship Nomination of Bartlett "Bake" J. Baker, Jr., AIA

Dear Mr. Mankins and Members of the Jury of Fellows:

Bartlett "Bake" Baker, Jr., AIA, stands out as a leader who has profoundly shaped the relationship between design and construction for the benefit of architects, owners, builders, and the public. His collaborative methods and innovative tools are emulated by successful architects across the country. It is indeed a pleasure to sponsor Bake for AIA Fellowship.

Bake's depth of experience in both architecture and construction formed his passion to create more meaningful architecture through a new paradigm of project delivery. During my tenure on the AIA National Board, project delivery and the leadership role of the architect was an area of policy focus. In fact, a formal AIA position statement was adopted that reinforced the architect's leadership role and advocated for early and consistent involvement of owners, constructors, and others. Bake Baker has long been a leading voice for this collaboration. His tools and methods empower the architect to have a stronger position of influence and leadership. An outcome is greater financial success accompanied by design excellence.

Passionate about sharing his inventive ideas and insights, Bake has generously presented his methods through many national forums. His tools create alignment among industry participants, including the owner, design team, builder, consultants, and governmental agencies. His work serves as a national reference, enabling countless architects to more effectively lead interdisciplinary teams on projects both large and small. Always eager to teach lay people about architecture, Bake's extensive interface with community groups and planning commissions has had far-reaching impact, enabling the public to understand the architect's role and inspiring people to become advocates for critical issues like sustainability and resilience.

Bake's extensive accomplishments as a design and construction leader demonstrate his significant impact that is shaping our changing profession in new and positive ways. His inventive processes have resulted in an architectural profession that is achieving higher levels of leadership, thus solidifying Bake as one of our country's most outstanding architects. It is with great enthusiasm that I recommend Bake Baker, AIA, for elevation to the American Institute of Architects College of Fellows.

Sincerely,

Stephen Fiskum, FAIA
Principal Emeritus

1 SUMMARY

Focused on the dynamic interdependency of architecture and construction, Bake Baker has advanced new process leadership models for architects and owners using skillful inventive tools, shared among peers nationally, that define aspirations and design value.

BRIDGING THE DISCIPLINES OF DESIGN AND CONSTRUCTION

With over twenty years of traditional practice, Bake Baker envisions greater integration and collaboration among those responsible for design and construction. He believes the architect's leadership role can unify disparate processes and eliminate industry inefficiencies. His tools support design excellence through enriched communication among designers, owners, contractors and consultants. Inspired by the AIA's position on architectural leadership in construction delivery, Bake reset his career to invent new processes empowering design professionals. Bake continues to share his project case studies throughout his region and the country.

CHANGING FOCUS IN AN EVOLVING INDUSTRY

Through his many years in design leadership on significant and complex projects, Bake developed a deep understanding of the process challenges architects often encounter. He recognized that most architects patiently navigate owner indecision, tighter schedules, faster delivery requirements, and misalignment of scope and budget. With this background, Bake decided to hone his holistic philosophy on the integration of design and construction delivery by focusing on his process leadership role as an architect. He worked with a large general contractor, dozens of architects, and numerous consultants, subcontractors, and owners to refine management tools and new processes.

NEW AND INNOVATIVE TOOLS

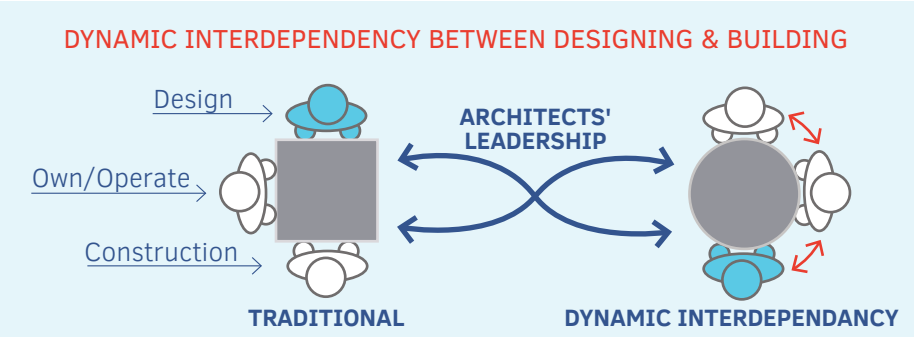
Recognizing the need for a common language and shared processes among all industry participants, Bake developed tools to enhance project team alignment, such as "First Time Right." Using language freed from professional silos, his management systems bring everyone to the table in early feasibility assessment, budget triangulation, 3D design and construction modeling, 4D logistical planning and the proven principles of Lean delivery. Bake has also branded several other tools that improve communication, reduce rework by architects, enhance design outcomes and improve client satisfaction.

ADVOCACY AND SHARING THE KNOWLEDGE

In an increasingly complex and evolving industry, architects, owners, contractors, and subcontractors acknowledge that Bake's processes and tools are leading to better design outcomes along with significant business benefits such as:

- Early alignment of project goals and budget that reduce wasteful redesign
- More time to focus on value-added design efforts
- Deeper integration of sustainability and resilience strategies
- Enlightened owners who know what to expect and the importance of timely decisions
- A greater public understanding of what architects do and the unique value they offer

Design professionals across the country who have worked with Bake become enthusiastic advocates for his tools and processes. With over 60 presentations and publications, Bake shares his methods with architects, builders, owners, planning and zoning administrators, and others. His process leadership models have sparked a new appreciation of architecture among clients, allied professionals and the public. Architects nationwide concur that Bake has significantly elevated the profession's role and value.



2 ACCOMPLISHMENTS

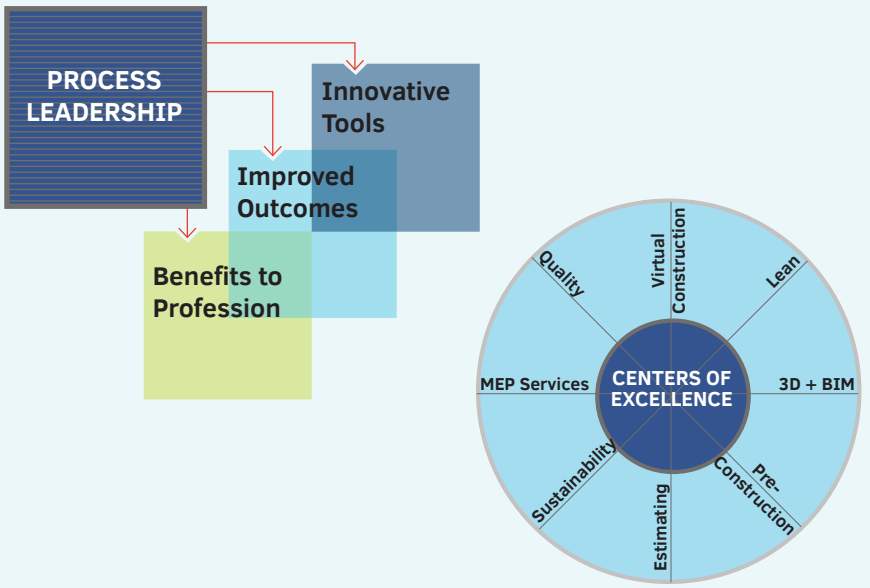
2.1 SIGNIFICANT WORK – *Prologue*

SETTING THE TABLE FOR SUCCESS

In the dynamic **evolution of design and construction**, with increasing project complexity, tighter schedules, faster delivery requirements, escalating project costs and constrained design fees, there is a "window" of vulnerability and risk in the design phase of each project for the architect, owner and builder. Their **interdependent roles** are not recognized, articulated, poorly understood or even ignored. Failing to understand what the other does and needs to be successful is the critical gap. In this "gap" lurk detrimental inefficiencies of misaligned scope, budget and schedule expectations, re-design costs, schedule delays and ultimately the compromised ability for the architect to **deliver maximum design value**.

In Bake's work over the last 15 years as Preconstruction Principal and Executive Vice President for a premier builder, he has overseen 4 million SF and one billion dollars of construction, **collaborated with and led nationally recognized design firms** and been responsible for assembling and leading the design teams. Applying 25 years of previous design experience with **holistic process leadership** and facilitation protocols, Bake has collaborated with those architects to develop and apply **innovative design process tools**, preconstruction delivery methodologies and **support services**. These services include Virtual Design and Construction, Sustainability, MEP services and Preconstruction Management, as well as **expanded interface** between estimating, scheduling, project management, and field operations to address that vulnerability. Design advocacy has given the architect more influence over critical project decisions. Streamlining work processes has enhanced design firm efficiency, profitability and supported the **focus on value-added design**. Bake has also capitalized on the opportunity to **teach non-professionals** about what architects do and the design process. **Design and industry awards** speak to the excellence of Bake's preconstruction contributions and benefits to the profession.

BUILDING VALUE



PROFESSIONAL EXPERIENCE

McGough Companies
St. Paul, MN 2004-2019

Executive Vice President / Director of Preconstruction Services / Board of Directors / Senior Leadership Team / Architectural Design Manager for McGough Development

HGA
Minneapolis, MN 1984 - 2004

Vice President / Principal-in-Charge / Project Designer / Architecture Department Head

SKIDMORE OWINGS & MERRILL
San Francisco, CA 1981-1984

Licensed Architect / Architectural Intern

SKIDMORE, OWINGS & MERRILL
Denver, CO 1978-1980

Student Intern

PROFESSIONAL REGISTRATIONS

Registered Professional Architect:
California (1984), Minnesota (1985), Arizona (2004)

NCARB Certified (2003)

LEED Accredited Professional (2009)

EDUCATION

Master of Architecture with Honors
University of Colorado
Denver, CO 1980

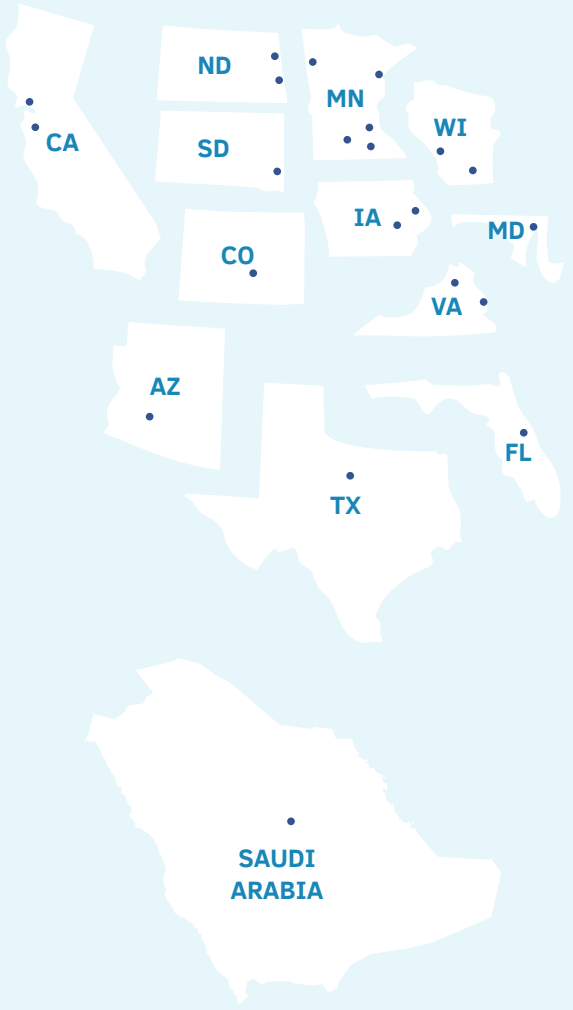
1980 AIA Gold Medal Award, Colorado Chapter
Outstanding Student Design and Leadership

1980 Outstanding Thesis Award
"Urban Housing Village and Transit Station"
Cathedral Hill, St. Paul, MN

Bachelor of Arts, American History
University of Minnesota
Minneapolis, MN 1976

Phi Beta Kappa Society
Senior Honors Thesis –
"Analysis of American Transit Industry 1920-1955"

BAKE'S PROJECT WORK



2.1 SIGNIFICANT WORK

The outline of work illustrates the depth, complexity and scale of Bake's experience and the built results as architect, process leader, facilitator and collaborator with national design firms. The project descriptions include his role and highlight Bake's key contributions and applied innovations.

MARRIOTT AUTOGRAPH HOTEL
Craig Ranch, McKinney, TX
Size: 300-room resort hotel, lazy river, conference center
Architect: MAA, Dallas
Role of Nominee: Preconstruction principal, design-build team leadership, McGough Development
Completion: Opening 2021

Table for Success – Bake led RFP and **design-build team selection**; established design communication protocol; **led design meetings** with architect, operator, brand, investor and builder.

- Created **high-functioning team** from scratch
- Utilized **pull planning** sessions to manage approval milestones and long-lead procurement

THEATER AND DANCE CENTER
Macalester College, St. Paul, MN
Size: 59,000 SF flexible theater and dance studio, scene shop, costume shop, offices, classrooms
Architect: HGA
Role of Nominee: Preconstruction principal, McGough
Completion: 2019

Concept Scope and Budget Alignment – Bake led preconstruction efforts; collaboration with designer to **evaluate program fit and cost-effectiveness** of multiple new vs renovation strategies; direction set at concept design.

- Early **integration of programmatic needs** and fundraising limits to establish clear alignment
- Re-directed team from inefficient renovation strategy to new **cost-neutral solution** that optimized program and design opportunities

INTEGRATED SCIENCE CENTER
Carleton College, Northfield, MN
Size: 243,000 SF expansion/renovation tying together existing science facilities with atrium, campus energy plant underground
Architect: EYP, Boston
Role of Nominee: Preconstruction principal, McGough
Completion: 2019

Bake led preconstruction efforts that required early budget and **constructability evaluation** of multiple **options to test the re-use of existing** science buildings and new construction.

- Early **conceptual budgeting** of multiple options
- Early **construction sequence evaluation** of demolition and new building system interface
- 3D model sharing throughout design
- Virtual construction planning

BCS 3 MULTI-FAMILY HOUSING
Bloomington Central Station, Bloomington, MN
Size: 400-unit market rate housing, "Texas wrap" with 600-car garage
Architect: ESG
Role of Nominee: Preconstruction principal, design-build team leader, McGough Development
Completion: 2020, in construction

Bake led master planning efforts to create **Transit Oriented Development** (TOD) on re-purposed 50-acre corporate site in 2004/2005. Current multi-family project is Phase 3 of **high-density housing** development in TOD.

- Assembled and **led design-build team**
- **Established communication protocols** between designer, owner and builder
- **Led pull planning to establish milestones** for regulatory approvals, long-lead procurement

HAGFORS CENTER FOR SCIENCE, BUSINESS AND RELIGION
Augsburg College, Minneapolis, MN
Size: 135,000 SF teaching and lab classroom building
Architect: HGA
Role of Nominee: Preconstruction principal, design-build team leadership, McGough
Completion: 2018

DBIA-UM Award
LEED Gold

Bake led RFP and design-build team selection; **provided continuous design process coaching** with inexperienced owner.

- **"First Time Right"** budget alignment
- Utilized **Pull Planning** tool for fast-track design management and long-lead system procurement milestones
- Virtual design and construction planning
- Last Planner® tool **shortened concrete pour cycle by 30%**
- Project completed **ahead of schedule and $3M under budget**

INTEGRATED SCIENCE COMPLEX
Concordia College, Moorhead, MN
Size: 145,000 SF renovation, biology, chemistry, physics, math, computer science labs and classrooms
Architect: EYP, Boston
Role of Nominee: Preconstruction principal, McGough
Completion: 2017

LEED Silver

Bake led preconstruction effort that required initial **re-definition of scope and budget** to match revised project **funding limitations**. Project shifted from new construction to gut and renovate approach.

- Initiated design with collaborative, **partner-centered protocols**
- Early **conceptual budgeting** of multiple re-configuration options
- Early **construction sequence evaluation** of interior demolition and new building system replacement
- Academic program and goals delivered at 73% of original budget

SCHILLING SCIENCE CENTER
St. Paul Academy and Summit School, St. Paul, MN
Size: 39,000 SF math/science addition, chemistry & biology labs, "maker" space, classrooms
Architect: HGA
Role of Nominee: Preconstruction principal, McGough
Completion: 2018

Designed to LEED Silver Standard (not certified)

Bake led preconstruction efforts and **evaluated cost-effectiveness of new construction, renovation strategies** for adjacent 1910 building and temporary classrooms during construction.

- Early cost **alignment with capital campaign** goals
- Detailed **constructability** reviews of exterior wall assemblies
- 3D clash detection

WEITZ CENTER - MUSIC & PERFORMANCE COMMONS
Carleton College, Northfield, MN
Size: 56,000 SF expansion, 400-seat hall, practice rooms, and faculty offices
Architect: HGA
Role of Nominee: Preconstruction principal, design-build team leadership, McGough
Completion: 2017

AIA MN Honor Award 2018
DBIA-UM Award
Designed to LEED Gold standard (not certified)

Music addition was final component of integrated arts center. **Bake led RFP and design-build team consultant selection**. Consolidation of existing music program into compact site.

- **Resolved constructability issues at interface** between existing and new construction
- **Virtual construction modeling** for system and acoustic coordination
- Specialty exterior details and assembly vetted with 3D modeling
- **Design-assist input** and mock-ups for key design features

GRADUATE HEALTH SCIENCES
College of St. Scholastica, Duluth, MN
Size: 45,000 SF OT/PT/PA instructional facility, simulation labs, on-site clinic
Architect: HGA
Role of Nominee: Preconstruction principal, design-build team leadership, McGough
Completion: 2016

DBIA-UM Award

Bake **led design-build team** in preconstruction phase to meet owner's extremely tight budget and delivery schedule.

- **Guided integration of design intent** with fabricator expertise to develop handsome, energy-efficient exterior wall system
- **Utilized 3D clash detection** with architect and design-build subcontractors
- Delivered project on time at very constrained owner budget

MINNESOTA PUBLIC MEDIA COMMONS (TPT)
Twin Cities Public Television, St. Paul, MN
Size: 81,000 SF renovation of public spaces and offices around existing broadcast studios
Architect: Cuningham Group
Role of Nominee: Preconstruction principal, McGough
Completion: 2015

B3 Sustainability Certification

Bake led **preconstruction planning, owner guidance and budgeting effort** for major renovation and reconfiguration of public television broadcast facilities including public event and office space.

- **Process coaching and bridging** between inexperienced owner and architect
- **Presentations to support public legislative funding**
- Renovation and **construction sequencing planning achieved continuous operation for daily broadcast production studios**

HUSS CENTER FOR PERFORMING ARTS
St. Paul Academy and Summit School, St. Paul, MN
Size: 36,400 SF performing arts facility, 650-seat hall, black box, scene shop
Architect: HGA
Role of Nominee: Preconstruction principal, McGough
Completion: 2015

AIA-MN Award
Top Project Award

Bake led the preconstruction team, supporting the architect in preliminary program and budget definition to align with **fluid capital campaign budget.**

- **Detailed Pull Planning** in design identified critical architectural and theater rigging components for early structural package that **accelerated construction** through winter
- **Resolved complex interface** between new and existing facilities
- Acoustic coordination
- **Achieved critical opening date** to meet academic calendar

HYATT REGENCY HOTEL
Bloomington, MN
Size: 210,000 SF 303-room luxury hotel, master planned transit-oriented development
Architect: ESG
Role of Nominee: Preconstruction principal, design-build team leadership, McGough Development
Completion: 2015

Bake assembled and led design-build team in collaboration with national brand architect and national hotel management architect to develop luxury hotel in master planned Transit Oriented Development.

- Integration into master planned site
- **Created collaborative management** structure with bi-weekly consultants' **immersion work sessions**
- Utilized Pull Planning tool for fast-track milestones
- Last Planner® tool **shortened concrete pour cycle** by 30%

LEED Gold

OPTUM CORPORATE CAMPUS
UnitedHealth Group, Eden Prairie, MN
Size: 1,100,000 SF corporate campus for 5,500 employees, three office buildings, two parking garages, commons work café, customer experience center, conference center
Architect: HGA
Role of Nominee: Preconstruction principal, McGough
Completion: 2015

The **large design and consultant team** relied on Bake's leadership to coordinate preconstruction efforts for this multi-phased project within a master planned campus for a large corporate office user.

- 3D modeling used continually on **a shared model platform**
- **4D logistics and sequence planning** for delivery & installation of major assemblies (steel erection, exterior wall, HVAC)
- Team **exceeded metrics-based incentives** established by owner

LEED Silver

CORPORATE HEADQUARTERS
Maurices, Duluth, MN
Size: 450,000 SF corporate headquarters office and 500-stall municipal parking garage
Architect: RSP
Role of Nominee: Preconstruction principal, McGough
Completion: 2015

The joint development project grew out of a **public/private partnership** between the city and major downtown employer looking to consolidate scattered offices. Bake led the preconstruction effort **coordinating design activities** between the **core/shell and interior architects**.

- Utilized conceptual estimating tools to **re-align budget with anticipated scope** following faulty public pricing exercise
- Detailed **4D logistics & construction sequence** planning to complete work on **tight urban site**
- **3D virtual construction modeling** of system assemblies

AIA-MN Award

JANET WALLACE FINE AND PERFORMING ARTS CENTER
Macalester College, St. Paul, MN
Size: 64,000 SF new construction and renovation, concert hall, commons, gallery
Architect: HGA
Role of Nominee: Preconstruction principal, McGough
Completion: 2014

Bake **directed the preconstruction effort for the gut and reconfiguration** of existing music building including concert hall and practice rooms with choral space and student commons addition.

- Detailed **3D modeling analysis** of new building systems and acoustic isolation strategies within **limited existing floor heights**
- **Fabricator design-assist** input and mock-ups for concert hall screen wall
- Successfully met **exterior design intent** for new cladding with detailed constructability direction
- Considered best recital hall in Twin Cities

ORANGE COUNTY CONSOLIDATION PROJECT
Medtronic Corporation, Santa Ana, CA
Size: 130,000 SF renovation and expansion of heart valve production facility, multiple production clean rooms
Design Architect: Snow Krelich
Architect of Record: PS3, Los Angeles
Role of Nominee: Preconstruction principal, McGough
Completion: 2013

Bake led the RFP process and design-build and **consultant team formation**. The project required **assessment** of adjacent existing building for office expansion and careful **coordination of existing production facility** reconfiguration and renovation work.

- Continued clean room production during renovation
- Owner user groups coordination
- FDA re-certification

Top Project Award,
Finance and Commerce

ANDERSON UNIVERSITY CENTER
Hamline University, St. Paul, MN
Size: 75,000 SF student center, campus dining, event space, student offices, visitor underground parking
Architect: Shepley Bulfinch, Boston
Role of Nominee: Preconstruction principal, McGough
Completion: 2012

Utilizing **"First Time Right" methodology,** Bake led the preconstruction efforts with the design firm to achieve scope and budget alignment with predetermined capital campaign tiers. **Created pricing "menu"** using:

- **1. Benchmarking** against comparable projects
- **2. Program estimate** options
- **3. Cost model** development
- Defined final parameters prior to Concept Design start
- Detailed **design-assist input and testing** on terra cotta rainscreen

LEED Platinum
Top Project Award,
Finance and Commerce

KOFI ANNAN INSTITUTE FOR GLOBAL CITIZENSHIP
Macalester College, St. Paul, MN
Size: 17,000 SF new office and convening space
Architect: Bruner/Cott, Boston
Role of Nominee: Preconstruction principal, McGough
Completion: 2009

With the institution's commitment to the **Green College Initiative** and international peace studies, the project created a signature building on campus for visiting scholars and lecturers. Bake led the preconstruction efforts.

- Guided owner and architect with **continuous budgeting** of innovative "green" features and assembly options
- Detailed **design-assist** input on **high-performance** wall and roof assemblies, as well as innovative MEP system options
- **Sustainability advocacy** with subcontractors and building trades

AIA-MN Award
LEED Gold

WEITZ CENTER FOR CREATIVITY
Carleton College, Northfield, MN
Size: 135,000 SF renovation and new expansion tying together 1910, 1934 & 1955 structures in an integrated arts facility including dance, theater, and 2D/3D studios
Architect: MSR
Role of Nominee: Preconstruction principal, McGough
Completion: 2010

Bake **led conceptual pre-design** efforts to re-program/re-configure project in response to dramatic post-Recession owner budget reduction. He **led preconstruction support services** with design architect.

- **Interface between 1910, 1934 & 1955** existing & new expansion connecting 13 existing floor levels
- **Re-purposing existing spaces** for theater, dance & studios
- Re-configured project delivered 80% of original program for 60% of original budget

LEED Silver
Best Overall Project
Real Estate Journal

REFLECTIONS CONDOMINIUMS
Bloomington Central Station, Bloomington, MN
Size: 308,000 SF high-rise condominium, 260 units, high performance acoustic curtainwall, master planned transit-oriented development
Design Architect: Architects Alliance
Architect of Record: ESG
Role of Nominee: Preconstruction principal, design-build team leadership, McGough Development
Completion: 2007

Bake managed **master planning** efforts to create **Transit Oriented Development** (TOD) on re-purposed 50-acre corporate site in 2004/2005. Bake led design-build team for Phase 1 of high-density multi-family project in TOD.

- Led research and testing of **high-performance acoustic curtainwall** adjacent to airport flight path for design team
- Multiple **presentations to regulatory and lay audiences** regarding acoustic mitigation surrounding airports
- First **LEED Certified multi-family project** in MN

701 WASHINGTON – HGA CORPORATE HEADQUARTERS
Minneapolis, MN
Size: 130,000 SF historic warehouse renovation, historic designation and tax credits
Architects: HGA
Role of Nominee: Principal-in-charge, HGA
Completion: 2003

AIA-MN Award

As **principal-in-charge,** Bake **led the design team** in the **renovation of an historic structure** for a nationally recognized design and engineering firm. The building systems and glazing were replaced. Historic **interior features** were retained. An existing loading dock was converted to an entry lobby, gathering space, research library and materials sample area. **Daylight harvesting** was used throughout. **Historic tax credits** assisted with the financing.

MINNEAPOLIS-ST. PAUL INTERNATIONAL AIRPORT
Metropolitan Airports Commission, Bloomington, MN
Size: $1B Lindbergh Terminal land-side expansion, master planning and pre-design, and campus design guidelines
Architects: BWBR/Alliance/Setter-Leach/ Miller Dunwiddie/HGA
Program management: HGA
Role of Nominee: Pre-design program leader, HGA
Completion: 1998-2002

Bake was responsible, as representative of the **program management team**, for **directing the predesign efforts** of multiple architectural and engineering firms. This included overall master planning; **campus-wide design guidelines** for site, exterior and interior architecture; coordination of **land-side with air-side** planning; and directing predesign studies for all scopes of work. Bake also served as **principal-in-charge for underground LRT station**.

FINE ARTS INTERDISCIPLINARY MIDDLE SCHOOL
Arts Middle School, West Metro Education District
Robbinsdale, MN
Size: 107,000 SF multi-district voluntary desegregation arts magnet middle school, 520 students
Architect: HGA
Role of Nominee: Principal-in-charge, HGA
Completion: 2001

AIA-MN Award
AIA Walter Taylor Award

Bake, as **principal-in-charge**, led the design team in the **programming and design** of the project. An **intense arts curriculum** focus was used to recruit students from five surrounding districts as part of a **voluntary metro-wide desegregation program**. The middle school includes a **dance** studio, 200-seat **theater**, 2D and 3D **art studios**, music and **choral practice** rooms as well as classrooms, cafeteria and offices. The school was recognized nationally for **innovative** program, planning and design.

MONTICELLO HIGH SCHOOL
Charlottesville School District, Charlottesville, VA
Size: 180,000 SF sustainable high school, 1000 students
Design Architect/Planner: HGA in association with Wm. McDonough, Charlottesville
Architect of Record: Rancorn Wilman, Newport News
Role of Nominee: Senior Designer/Planner, HGA
Completion: 1998

AIA-Virginia Award

As **senior designer and planner**, Bake led the **educational programming** and **conceptual design**, working in **conjunction with Wm. McDonough's firm** to integrate many **cutting-edge sustainable features**. DOE modeling was used for building orientation and **daylight harvesting. Displacement ventilation**, passive and active **daylight controls**, local material sourcing, native plantings and water conservation were incorporated.

KINGDOM ACADEMY SCHOOL
Kingdom Holding Company, Riyadh, Saudi Arabia
Size: 57,000 SM master plan for 3,500 student K-12 school, gender separated facilities
Architect/Planner: HGA in association with Omarania, Riyadh
Role of Nominee: Principal-in-charge/planner, HGA
Program/Planning Completion: 1997

Bake was the **principal-in-charge** and planner for the **master plan study**. He provided program leadership, **coordinated international consultants** and worked closely with Prince Al-Waleed's staff and advisors. The planning process included **benchmarking tours** of schools in Jeddah, Dharan and Riyadh. **Cultural sensitivities** and the required **gender separation** of the upper grade levels created space planning challenges.

RIVERCENTRE EXPANSION
St. Paul Civic Center Authority, St. Paul, MN
Size: 400,000 SF civic center renovation and expansion, convention center, ballroom and exhibit, lobby and prefunction spaces, underground truck dock
Architect: HGA in association with LMN, Seattle
Role of Nominee: Senior designer, HGA
Completion: 1997

Bake **led the design team** for a **major expansion** of a downtown convention center in collaboration with LMN. **Dramatic views of the Mississippi River Valley** are the focus of the lobby and prefunction spaces. The project included complex **long-span structure**, multiple **skyway connections** to adjacent public facilities, deep rock excavation for **underground parking** garage and a large **below-grade loading dock**. The adjacent sports arena and exhibit spaces **remained in operation** during construction.

BIOTECH AND GENETICS BUILDING
University of Wisconsin, Madison, WI
Size: 140,000 SF research laboratory facility located on campus mall
Architect: HGA
Role of Nominee: Designer, HGA
Completion: 1994

Leading the project design team, Bake worked with university officials and **faculty user groups** to develop the research facility that houses **laboratories, faculty offices and a lecture hall**. It is located on the original **land-grant college mall** on campus. A **sky lit atrium** wraps around the lab "machine" providing daylight to both research spaces & adjacent offices.

3M DIVISIONAL HEADQUARTERS
3M Corporation, Maplewood, MN
Size: 680,000 SF corporate offices, conference and training facilities, employee cafeteria, 2 parking garages
Architect: HGA
Role of Nominee: Project design team lead, HGA
Completion: 1991

Bake **led the project design team** and consultants for this consolidated **divisional headquarters**. The program placed **new office space** for marketing and administrative functions between **two existing research laboratories** to create an integrated facility. **A shared sky lit atrium, training center** and employee dining facility provide a **commons** for the research, sales and management **interaction**.

ONE MINNESOTA CENTER
Homart Corporation, Bloomington, MN
Size: Masterplan for 5 phase suburban campus, 300,000 SF speculative office building, and parking garage
Architect: HGA
Role of Nominee: Design team member, HGA
Completion: 1987

As a design team member, Bake contributed in developing the **phased masterplan** for the suburban corporate campus. The first phase included a 14-story Class A **spec office building** and 900-stall garage. The building form is expressed as **two interlocking forms** and provides optimum **flexibility** for single and multi-tenant leasing.

222 KEARNY
San Francisco, CA
Size: 150,000 SF in-fill office building, renovation of two adjacent historic structures, concept design studies with Downtown Plan for the San Francisco Planning Commission
Architect: SOM, San Francisco
Role of Nominee: Design team member, SOM
Completion: 1985

At SOM, Bake was a **design team member** on the **infill-office** building that included the incorporation of **two historic structures**. As one of the early "test" projects for the **Planning Commission's new Downtown Plan,** it went through **multiple iterations** of size, height & massing options over a one year period to arrive at a concept that met **prescriptive zoning** code requirements.

SAN ANTONIO PLAZA MASTER PLAN
City of San Jose, San Jose, CA
Size: Masterplan for 6-block downtown redevelopment district, 1.5 million SF of office space, 5,000 parking spaces, 3,000 housing units
Architect: SOM, San Francisco
Role of Nominee: Architectural intern, SOM
Completion: 1984 Master Plan

As **an architectural intern,** Bake supported the **master planning** efforts of the planning team, architects and landscape architects for a rapidly growing area as part of the early Silicon Valley boom.

- Early experience with **complex project planning** involving multiple design consultants, **economic development** advocates and regulatory agencies

BAKER CABIN
La Pointe, WI
Size: 300 SF log cabin designed and hand-built from materials on-site
Role of Nominee: Designer & Builder
Completion: 1976

Bake **designed and built** a one-room **log cabin by hand** using traditional building techniques while an undergraduate student. He **researched** building technologies with local Scandinavian **immigrant builders**.

- Demonstrated interest in **historic building technology**
- Early experience in **budget and schedule management**, as well as personal **labor efficiency** (his own)

Bake has been active in professional and industry organizations, as well as community volunteer activities and youth sports. This diverse participation has created a broad network that spans across the design, planning and construction industries.

ARCHITECTURE AND PLANNING

- Board Member, Minnesota Architectural Foundation, AIA Minnesota (2019 - current)
- Member, American Institute of Architects (1983-2019)
- Advisory Committee, ULI Minnesota (Urban Land Institute) (2007-2018)
- AIA Roundtable – GSA Design Excellence Review, Washington, DC (2012)
- Lake Superior Design Retreat, Planning Committee, AIA Minnesota (1991-1995)
- Board Member, Minneapolis Chapter, AIA Minnesota (1996-1997)
- Governor's Design Team, AIA Minnesota
  Team Leader, Aitkin, MN (1988)
  Rushford & Fosston, MN (1986, 1988)

DESIGN-BUILD INSTITUTE OF AMERICA

- President, Upper Midwest Chapter (2010)
- Steering Committee, Upper Midwest Chapter (2006-2013)
- National Conference, New Orleans, LA (2018)
- National Conference, Las Vegas, NV (2014)
- National Conference, Washington, DC (2012)

LEAN CONSTRUCTION INSTITUTE (LCI)

- LCI Congress, Chicago, IL (2016)
- P2SL/LCI/AIA Lean Design Forum, Lean Construction Institute, Berkeley, CA (2015)

SOCIETY OF COLLEGE AND UNIVERSITY PLANNERS (SCUP)

- Regional Conference, Overland Park, KS (2017)
- Regional Conference, Minneapolis, MN (2017)
- Regional Conference, Evanston, IL (2016)
- Regional Conference, Champaign-Urbana, IL (2012)
- National Conference, Chicago, IL (2012)

EDUCATION DESIGN SEMINAR

- GSA, Harvard University, Cambridge, MA (1997)

LEADERSHIP MINNEAPOLIS

- Year-long leadership program, Minneapolis Chamber of Commerce, Minneapolis, MN (1990)

COMMUNITY VOLUNTEER

- Natural Resources and Ground Water Committee, Afton, MN (2017-2019)
- St. John's United Church of Christ, LaPointe, WI (2010-2019)
- Board of Directors, Envision Minnesota (Formerly 1000 Friends of Minnesota), St. Paul, MN (2008-2013)
- Council Board, Memorial Lutheran Church, Afton, MN (2004-2008)
- Member, Open Space Committee, Town of Afton, MN (2000-2001)
- Foundation Board, Hennepin Avenue United Methodist Church, Minneapolis, MN (1992)

YOUTH SPORTS

- Volunteer, Flathead Valley Ski Education Foundation, Whitefish, MT (2014-2019)
- Certified Technical Delegate – Alpine Youth Race Official, United States Ski and Snowboard Association (2015-2019)
- President, Afton Alps Alpine Club, 501-c3 Youth Ski Club, Afton, MN (2008-2016)
- Alpine Training Coordinator, Central Division-Region One, United States Ski & Snowboard Association (2005-2019)
- Board Member, Central Division-Region One, United States Ski and Snowboard Association (2012-2019)

OTHER MEMBERSHIP ACTIVITIES

- Trust for Public Land
- Sierra Club
- International Ski Heritage Association
- Lewis and Clark Trail Foundation

Sharing information with the profession and teaching non-professionals about architects and the design process has been very rewarding for Bake. He has counseled inexperienced owners, taught young real estate developers, guided land-use committees, instructed GSA leadership and presented to government authorities. Bake has conveyed understandable information in a transparent, affable manner stressing the importance of design, sustainability and the contributions of the profession.

2018

Presenter **Effective Design-Build in Higher Education: A Tale of Two Projects** Design-Build Institute of America, National Convention New Orleans, LA

Presenter **Construction from an Architect's Perspective – Building a Foundation** Urban Land Institute-Minnesota Minneapolis, MN

2017

Tour Leader **Hagfors Center for Science, Business & Religion** NACUBO Annual Meeting Minneapolis, MN

Presenter **Construction from an Architect's Perspective – Building a Foundation** Urban Land Institute-Minnesota Minneapolis, MN

TRADELINE.

2016

Presenter **Project Phasing Strategies** Tradeline College & University Facilities Conference Boston, MA

Presenter **Construction from an Architect's Perspective – Building a Foundation** Urban Land Institute-Minnesota Minneapolis, MN

2015

Presenter **Construction from an Architect's Perspective – Building a Foundation** Urban Land Institute-Minnesota Minneapolis, MN

2014

Presenter, **Lean Project Delivery** AIA Minnesota Convention, Minneapolis, MN

Presenter **Construction from an Architect's Perspective – Building a Foundation** Urban Land Institute-Minnesota Minneapolis, MN

2013

Presenter **Building Value with Consensus** APPA Annual Conference Minneapolis, MN

Presenter **Construction from an Architect's Perspective – Building a Foundation** Urban Land Institute-Minnesota Minneapolis, MN

2012

Presenter **Weitz Center Laboratory for Creativity** Society of College and University Planners, Grand Rapids, MI

Presenter **Construction from an Architect's Perspective – Building a Foundation** Urban Land Institute-Minnesota Minneapolis, MN

2011

Presenter **Design-Build Delivery Creating Collaborative Teams** AIA Minnesota Convention Minneapolis, MN

Presenter **Building Value With Consensus,** APPA Conference, Minneapolis, MN 2013

2002

Presenter **The Art and Science of Classroom** Design Language of Instruction in a Digital World Conference, Carleton College Northfield, MN

1999

Visiting Lecturer **Pre-design: Cost Control in Building Design** University of Wisconsin – Professional Development Program Madison, WI

Presenter **FAIR Arts School – Multi-District Arts Integration** National CEFPI Conference Baltimore, MD

1997

Visiting Lecturer **Pre-design: Cost Control in Building Design** University of Wisconsin – Professional Development Program, Madison, WI

Visiting Lecturer **Innovative School Planning** University of Wisconsin – Professional Development Program, Madison, WI

1996

Presenter **Pre-design: Cost Control in Building Design** GSA Training Program Philadelphia, PA

Visiting Lecturer **Innovative School Planning** University of Wisconsin – Professional Development Program Madison, WI

Visiting Lecturer **Pre-design: Cost Control in Building Design** University of Wisconsin – Professional Development Program, Madison, WI

1995

Urban Design Charette Team ULI Minnesota St. Paul, MN

1994

Visiting Lecturer College of Architecture NDSU, Fargo, ND

1988 - 1994

Visiting Critic College of Architecture, University of Minnesota, Minneapolis, MN

2.2 AWARDS, HONORS AND RECOGNITIONS

Design and industry awards are a testament to Bake's continued leadership, collaboration and interdisciplinary success in design, project delivery and construction partnering. (The award and project are listed followed by Bake's project role and the design architect.)

AIA – REGIONAL: Honor Award AIA Minnesota

- **2018** Weitz Center - Music & Performance Commons (Precon. Principal/HGA)
- **2017** St. Paul Academy Huss Center (Precon. Principal/HGA)
- **2016** Emerson Process Management Building (Precon. Principal/HGA)
- **2015** Ordway Concert Hall (Precon. Principal/HGA)
- **2015** Surly Brewing Company (Precon. Advisor/HGA)
- **2014** Unity Church Unitarian (Precon. Advisor/Miller Dunwiddie)
- **2013** Macalester Janet Wallace Fine Arts Center (Precon. Principal/HGA)
- **2013** Carleton College Weitz Center for Creativity (Precon. Principal/MSR)
- **2011** Ramsey County Roseville Library (Precon. Advisor/MSR)
- **2009** Great River Energy Headquarters (Precon. Advisor/Perkins Will)
- **2007** Ramsey County Maplewood Library (Precon. Advisor/HGA)
- **2003** 701 Washington, HGA Headquarters Building (Architect, Prin. in Charge/HGA)
- **2001** F.A.I.R. Arts Middle School (Architect, Prin. in Charge/HGA)

Award of Recognition, AIA Minnesota

- **2015** Alumni House, Macalester College (Precon. Advisor)

25-Year Project Award, AIA Minnesota

- **2013** Land O'Lakes Corporate Headquarters (Firm Award, Dir. of Precon. Services/Alliiance)

Merit Award, Excellence Beyond Design, AIA Minneapolis Chapter

- **2009** Great River Energy Headquarters (Precon. Advisor/Perkins Will)

Top Ten Green Project Award

- **2009 AIA Committee on the Environment** - Great River Energy Headquarters (Precon. Advisor/Perkins Will)

AIA Walter Taylor Award, American Association of School Administrators

- **2002** F.A.I.R. Arts Middle School, Crystal, MN (Architect, Prin. in Charge/HGA)

Honor Award AIA - Virginia Society of Architects

- **1998** Monticello High School, Charlottesville, VA (Architect, Senior Designer/Rancorn Wildman & HGA)

AASA / AIA / CEFPI Shirley Cooper Award

- **1997** Heritage and Woodside High Schools, Newport News, VA (Architect, Senior Designer/Rancorn Wildman & HGA)

ENVIRONMENTAL DESIGN

LEED Platinum

Kofi Annan Institute for Global Citizenship, Macalester College – USGBC 2009 (Precon. Principal/Bruner Cott)

Great River Energy – USGBC 2008 (Precon. Advisor/Perkins Will)

LEED Gold

Hagfors Center for Science, Business and Religion, Augsburg University – USGBC 2018 (Precon. Principal/HGA)

Optum Campus, UnitedHealth Group – USGBC 2016 (Precon. Principal/HGA)

Science Center Addition, St. Scholastica – USGBC 2012 (Precon. Principal/Ellerbe)

Weitz Center for Creativity, Carleton College – USGBC 2010 (Precon. Principal/MSR)

Ramsey County Roseville Library – USGBC 2010 (Precon. Advisor/MSR)

LEED Silver

Science Center, Concordia College – USGBC 2017 (Precon. Principal/EYP)

Upper School Addition, Breck School – USGBC 2013 (Precon. Principal/Holabird & Root)

Reflections at Bloomington Central Station – USGBC 2007 (Precon. Principal/Architects Alliance & ESG)

2015 Governor's Award for Pollution Prevention,
Great River Energy (Precon. Advisor/Perkins Will)

2011 Sustainable Concrete Award,
Minnesota Concrete Council – Weitz Center, Carleton College (Precon. Principal/MSR)

DESIGN-BUILD INSTITUTE OF AMERICA – REGIONAL

Design Excellence Award,
Design Build Institute of America – Upper Midwest

2017 Weitz Center - Music & Performance Commons, Carleton College, Northfield, MN (Precon. Principal/HGA)

2016 Graduate Health Sciences Building. St. Scholastica, Duluth, MN (Precon. Principal/HGA)

2013 Weitz Center, Carleton College, Northfield, MN (Precon. Principal/MSR)

Top Project Award,
Design Build Institute of America – Upper Midwest

2017 Hagfors Center, Augsburg University, Minneapolis, MN (Precon. Principal/HGA)

2009 Ramsey County Library, Roseville, MN (Precon. Advisor/MSR)

BUSINESS AWARDS – LOCAL

Outstanding Performance Award, Finance and Commerce

2017 Butler Square, Minneapolis, MN (Precon. Advisor)

Top Project Award, Finance and Commerce

2015 Midway YMCA, St. Paul, MN (Precon. Advisor/LSE)

2015 Huss Performing Arts Center, St. Paul, MN (Precon. Principal/HGA)

2014 Surly Brewery, Minneapolis, MN (Precon. Advisor/HGA)

2013 Unity Church Unitarian, St. Paul, MN (Precon. Advisor/Miller Dunwiddie)

2013 Twin Cities Habitat for Humanity, St. Paul, MN (Precon. Advisor/Perkins Will)

2011 Weitz Center, Carleton College, Northfield, MN (Precon. Principal/MSR)

2012 Anderson Center, Hamline University, St. Paul, MN (Precon. Principal/Shepley Bulfinch)

2010 Ramsey County Library, Roseville, MN (Precon. Advisor/MSR)

2010 K. Annan Institute for Global Citizenship, Macalester College, St. Paul, MN (Precon. Principal/Bruner Cott)

Best Overall in Real Estate, Minneapolis/St. Paul Journal

2005 Reflections at BCS, Bloomington, MN (Precon. Principal/Architects Alliance & ESG)

CONSTRUCTION INDUSTRY AWARDS – REGIONAL

2017 T.O.P.S. Award (Teamwork, Opportunities, and Partnering with Subcontractors), American Subcontractors Association of Minnesota (Firm Award, Dir. of Precon. Services)

2016 T.O.P.S. Award (Teamwork, Opportunities, and Partnering with Subcontractors), American Subcontractors Association of Minnesota (Firm Award, Dir. of Precon. Services)

2009 T.O.P.S. Award (Teamwork, Opportunities, and Partnering with Subcontractors), American Subcontractors Association of Minnesota (Firm Award, Dir. of Precon. Services)

Excellence Award, Minnesota Concrete and Masonry Contractors Association

2014 Anderson Center, Hamline University, St. Paul, MN (Precon. Principal/Shepley Bulfinch)

2013 Contractor of the Year, Minnesota Construction Partnering Program (Firm Award, Dir. of Precon. Services)

2012 Contractor of the Year, Minnesota Construction Partnering Program (Firm Award, Dir. of Precon. Services)

2011 Contractor of the Year, Minnesota Construction Partnering Program (Firm Award, Dir. of Precon. Services)

2010 Contractor of the Year, Minnesota Construction Partnering Program (Firm Award, Dir. of Precon. Services)

Sustainable Concrete Award, Minnesota Concrete Council

2010 Ramsey County Library, Roseville, MN (Precon. Advisor/MSR)

PRESERVATION AWARDS

Preservation Award, St. Paul Heritage Preservation Commission & AIA St. Paul Chapter

2017 Palace Theater, St. Paul, MN (Precon. Principal/Oertel Architects)

2012 Alumni House, Macalester College, St. Paul, MN (Precon. Advisor)

2013 Minnesota Preservation Award, Preservation Alliance of Minnesota, Weitz Center, Carleton College, Northfield, MN (Precon. Principal/MSR)

2011 Heritage Award, Minneapolis Heritage Preservation Commission, Our Lady of Lourdes Catholic Church, Minneapolis, MN (Precon. Advisor)

The abbreviated publications list outlines Bake's continuing recognition and contribution to the profession and community.

ABOUT BAKE BAKER'S PROJECTS

2018

"Augsburg's Business School Looks to Leverage New Digs" *Minneapolis Star Tribune* 4 Mar

"St. Paul Academy's Huss Center for the Performing Arts" Frank Martin, *Architecture Minnesota*, Mar–Apr

2017

"Another 400 Apartments Planned Next to Bloomington Central Station" *Minneapolis/St. Paul Business Journal* 14 Dec

"Maurices: Duluth-based Retailer Consolidates" *Architecture Minnesota*, July–Aug.

2016

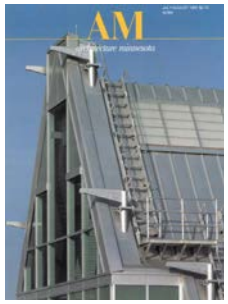
"New Full-Service Hyatt Regency Opens Near Mall of America" *Minneapolis/St. Paul Business Journal* 24 Feb

"Hagfors Center for Science, Business & Religion – Augsburg's New Building Brings Sciences and Liberal Arts Together" *Minneapolis Star Tribune* 11 Mar

"Employees' Well-Being Drives Design of Building" *Duluth News Tribune* 24 Apr

"Cool Office: tpt's Office Changes With the Broadcast Business" *Minneapolis/St. Paul Business Journal* 21 June

"Command Performance: St. Paul Academy Sets Stage for Creative Learning" *Architecture Minnesota*, May–June



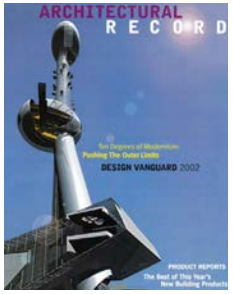
"2015 AIA Minnesota Honor Awards" – Ordway Center for the Performing Arts, Surley Brewery, *Architecture Minnesota,* Mar–Apr

2015

"Minneapolis Chamber Honors McGough, Two Others for Generosity" *Finance & Commerce*, Dec

"Augsburg Preps For $73M Multi-Discipline Center" *Finance & Commerce* 22 Oct

"2014 AIA Minnesota Honor Awards" – Janet Wallace Fine Arts Center, *Architecture Minnesota*, Mar–Apr



"Artistic License: A Minneapolis-based firm transforms a tired Brutalist structure" *Architectural Record*, Nov

2014

"Optum Campus" *Finance & Commerce* 28 Nov

2013

"Top Projects: Hamline University Anderson Center" *Finance & Commerce* 6 Aug

2012

"Sustainability at Macalester College" *Journal Of Chemical Health And Safety* July–Aug

"Top Projects Of 2011: Weitz Center for Creativity" *Finance & Commerce* 30 July

"The Greening of College Campus Roofs in Twin Cities" *Finance & Commerce* 18 Sep

2011

"Unitedhealth to Create 72-Acre Campus" *Minneapolis/St. Paul Business Journal* 2 Sep

2009

"Post-Secondary Citations – Institute for Global Citizenship, Macalester College, Bruner/Cott & Associates" *American School & University* Nov

"Macalester College Building First in Minnesota to Achieve Leed Platinum" *Finance & Commerce* Sep

"U, Macalester, Carleton Score High for Sustainability" *Minneapolis/St. Paul Business Journal* 7 Oct

2008

"Mount Rainer Artists Lofts Entices Creative People" *Architectural Record*, Oct

2007

"Green Condos Anchor Transit-Oriented, Master Planned Project" *Multi-Housing News* June

"Reflections of the Times" *Architectural Record*, Jan – Feb

2006

"Best in Real Estate Winners Unveiled" *Minneapolis/St. Paul Business Journal* 21 Apr

2005

"Tomorrow's Metro-Area Land Use Is Being Decided Today" *Minneapolis/St. Paul Business Journal* 21 Aug

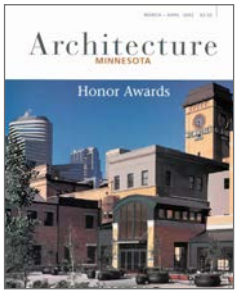
2003

"2003 AIA-MN Honor Awards - 701 Washington Avenue - HGA Headquarters" *Architecture Minnesota*

1992

"High-Tech Comfort, 3M Corporation, Divisional Headquarters" *Architecture Minnesota*

ABOUT BAKE BAKER - ARCHITECTURAL SPOTLIGHT



2013

"Madeline Island Summer Houses, an Intimate Journey" Linda and Kendra Mack, *I Was There Press*

2003

"Washington Avenue - HGA Headquarters" *Architecture Minnesota*

2002

"Offices for Hammel, Green and Abrahamson – Historic Loose Wiles Biscuit Factory" *Architectural Record*

"2001 AIA-MN Honor Awards – Art Forms, FAIR Arts Middle School" *Architecture Minnesota*

1998

"The House Concept – Anonymity Doesn't Live Here" Author, Bartlett Baker, *High School Magazine*

1997

"Architecture For The Whole Child" Author, Bartlett Baker, *Schools In The Middle*

3 EXHIBITS

Bake's exhibits focus on: first, sharing his unique, collaborative approach to project leadership and process facilitation; second, outlining the Lean tools and processes he has developed to support architects' design processes; and third, highlighting project examples that illustrate the successful application of his leadership, processes and tools. The project exhibits each include a simple matrix that lists the specific tools and processes applied. While all the exhibits utilized multiple facilitation processes and tools, each example features the application of just one or two.

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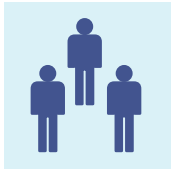


EXHIBIT 1
PROCESS LEADERSHIP
Dynamic Interdependency of the Architecture and Construction Industry
Graphics: McGough

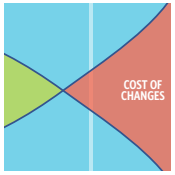


EXHIBIT 2
TOOLS
Creative Collaboration with Design Partners
Graphics: McGough

EXHIBIT 3
ORANGE COUNTY CONSOLIDATION PROJECT
Medtronic Corporation, Santa Ana, CA
Remote Design Team Assembly
Photographer: RMA Architectural Photography Inc.

EXHIBIT 4
A NEW DOWNTOWN: THE BLOOMINGTON TRANSIT-ORIENTED DEVELOPMENT PLAN
Bloomington, MN
Team Facilitation and Design Advocacy
Photographer: Gallop Studios
Drawings: EDAW & Pickard Chilton

EXHIBIT 5
ANDERSON UNIVERSITY CENTER
Hamline University, St. Paul, MN
Shepley Bulfinch
First Time Right = Early Alignment
Photographer: Gallop Studios and Shepley Bulfinch

EXHIBIT 6
REFLECTIONS CONDOMINIUMS
Bloomington, MN
Interdisciplinary Coordination and Fabricator Design-Assist
Photographer: Heinrich Photography and Gallop Studio

EXHIBIT 7
INTEGRATED SCIENCE CENTERS
Concordia College, Moorhead, MN and Carleton College, Northfield, MN, USA
Complex Phasing and Curriculum Continuity
Photographer: Kirk Monpas
Drawings: EYP

EXHIBIT 8
HUSS CENTER, ST. PAUL ACADEMY
St. Paul, MN
HGA
Lean Tools: Early Pull Planning
Photographer: Richard Brine Photography
Drawings: HGA

EXHIBIT 9
HAGFORS CENTER FOR SCIENCE, BUSINESS AND RELIGION
Augsburg University, Minneapolis, MN
HGA
Lean Tools: Last Planner® and Community Engagement
Photographer: Gaffer Photography and Augsburg University

EXHIBIT 1

Design Architect: Processes developed & implemented with multiple architectural firms
Design Architect for Process: Bake Baker, AIA
Completion: Implemented on multiple projects between 2009 and 2019
Role: Preconstruction Principal, McGough
Declaration of Responsibility: I have personal knowledge of the nominee's responsibility for the exhibit listed. That responsibility included: *Development of the process, creation of explanatory diagrams, education of the client, design team members, public, and others about the process and leadership of process implementation.*

Thomas McGough, Jr., President
McGough Companies

LEADERSHIP

With Bake's **interdisciplinary** approach to architecture and the integration of design and construction delivery and diplomatic leadership style, he has served as a **strong bridge** between designer, engineer, owner, and builder. His role has been that of **design process advocate, facilitator, go-between and trusted guide**. Outcomes have been improved by defining attainable aspirations early, streamlining processes, and focusing time and talent on **value-added design efforts**.

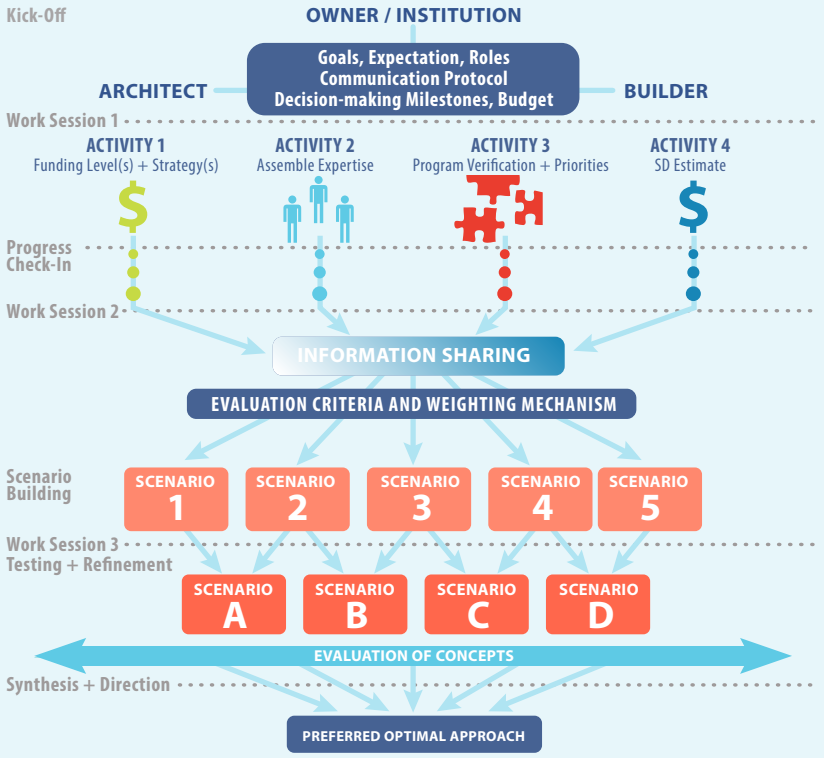
INTERDEPENDENCY GAP IDENTIFIED

Bake recognized the challenges to **improved integration of design and construction** delivery for the profession. Those challenges included:

- **"Us/Them" divide** between designer, owner and builder
  - Failure to understand what the other does and needs to be successful
  - Lack of "holistic" understanding of design, construction and occupation of building
  - Poor communication and incomplete information flow
  - Lack of trust between parties
  - Owner information held back - leading to surprises (program additions, soft cost increases, funding delays, slow decision making)
- **Compromised ability of architect to maximize design value** delivered to project by "wasted" efforts and time
  - Re-design/re-draw to meet budget
  - Re-detailing or altered design to address constructability issues
  - Inefficient/redundant documentation
  - Designing "outside of budget" boundaries
  - Limited access to fabricator/subcontractor input creating "unbuildable" assemblies
  - Slow and conflicting owner input
- Inefficient, wasted design effort & re-draw fee expenditure due to misalignment of scope, budget & schedule
- Project **schedule delays** due to ill-defined and poorly coordinated early procurement needs
- **Ineffective builder support** of energy efficient design strategies

PROCESS LEADERSHIP DIAGRAM TO GUIDE INEXPERIENCED OWNER

Working with an inexperienced client, Bake led the owner through the process steps outlined in the diagram below to validate their program, assemble faculty and staff expertise, create project budget aligned with fundraising parameters and evaluate design concept options.



BRIDGING THE DISCIPLINES

In Bake's unique leadership role he has driven the creation of expanded **project support services to serve design** teams through all project phases. Bake's corporate leadership and strategic planning focused on elevating preconstruction services in the industry.

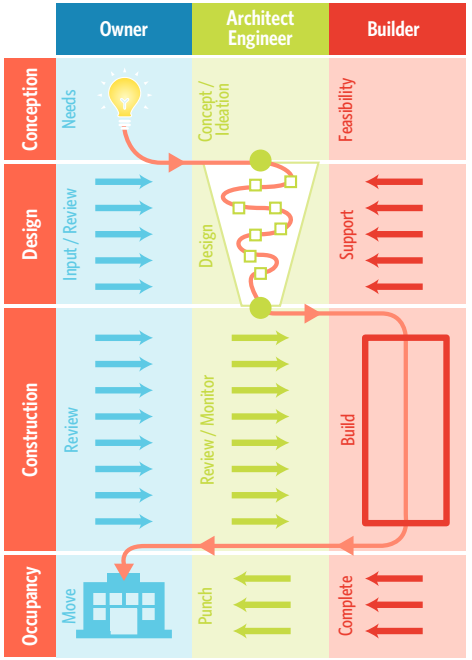
- Preconstruction management
- Virtual design and construction
- Sustainability
- MEP coordination services
- Preconstruction Lean Tool development
- Estimating
- Scheduling

BENEFITS TO ARCHITECTS

Bake's strong facilitation skills, **holistic process leadership**, development of **innovative tools**, commitment to sustainable design, and engagement with architects and the community have significantly **benefited the profession**.

- **Early alignment** of project vision through collaboration
- **Guide owners** through the design and construction process
- Informed design decisions to focus **where design brings greatest value**
- **Enhanced builder** input through assembly expertise
- Utilization of **virtual construction technology** for coordination and constructability
- **Increased efficiency** with streamlined documentation and Lean Tools
- Support a vision of **sustainable and resilience** principles
- **Mentor and coach** young professionals across many projects
- Help the public better understand and **value what architects do**

BRIDGING THE DISCIPLINES



BAKE'S PROCESS AND DESIGN COLLABORATORS

Leading the pre-construction process with architectural partners

AECOM (Minneapolis)
Alliance (Minneapolis)
Architects Alliance (Toronto)
Bruner/Cott (Cambridge)
BWBR (St. Paul)
CannonDesign (Chicago)
Cuningham Group (Minneapolis)
EDAW (Denver)
ESG (Minneapolis)
EYP (Boston)
Hastings Chivetta (St. Louis)
HDR (Omaha)
HGA (Minneapolis)
Holabird & Root (Chicago)
Jerde Partnership (Los Angeles)
LMN (Seattle)
Wm McDonough (Charlottesville)
MAA (Dallas)
Miller Dunwiddie (Minneapolis)
Moncur Design (Toronto)
MS & R (Minneapolis)
Omrania (Riyadh)
Perkins Will (Minneapolis)
Pickard Chilton (New Haven)
PS3 Architects (Los Angeles)
Rancon Wildman (Newport News)
RSP (Minneapolis)
Shepley Bulfinch (Cambridge)
Snow Kreilich (Minneapolis)

MAPPING PARTNERSHIPS

EXHIBIT 2

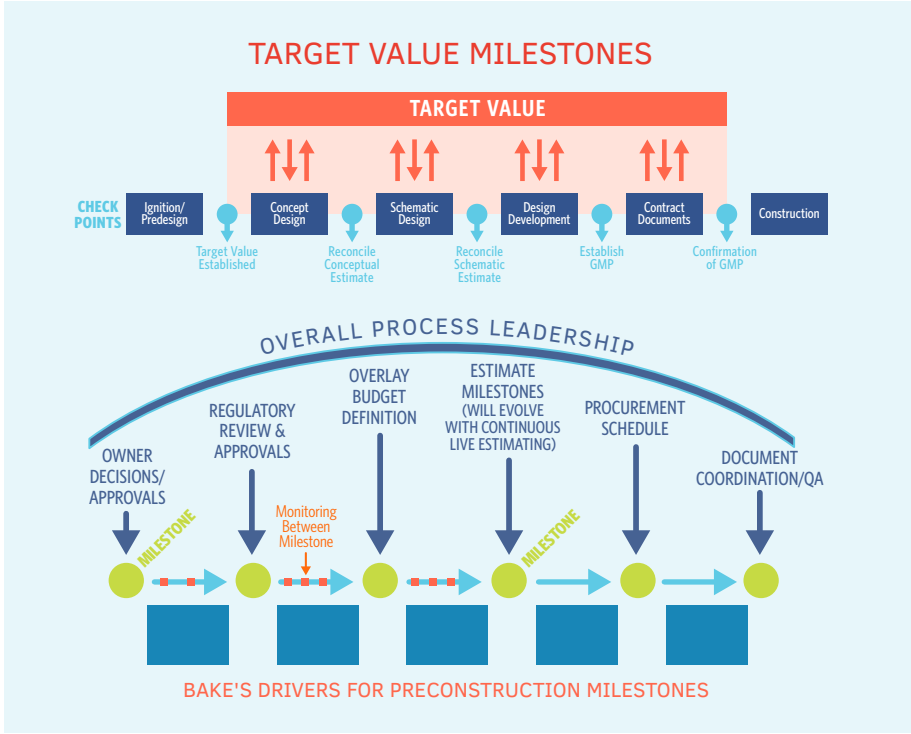
Design Architect: Processes developed & implemented with multiple architectural firms
Design Architect for Process: Bake Baker, AIA
Completion: Implemented on multiple projects between 2009 and 2019
Role: Preconstruction Principal, McGough
Declaration of Responsibility: I have personal knowledge of the nominee's responsibility for the exhibit listed. That responsibility included: *Development of the process, creation of explanatory diagrams, education of the client, design team members, public, and others about the process and leadership of process implementation.*

Thomas McGough, Jr., President
McGough Companies

In Bake's leadership role with a premier builder and developer, typically selected concurrently with the architect in some form of negotiated delivery, the **preconstruction efforts run parallel** with project design partners through all design phases. This has provided **partnering opportunities** to develop innovative tools to enhance the design and delivery process. Bake has sponsored and led **Lean work sessions with design partners** utilizing Value Stream Analysis and Rapid Improvement Events to develop tools and protocols to **streamline** work efforts, eliminate wasteful and redundant documentation and improve builder understanding and **support of architects and the design process**. These tools and protocols have been broadly shared with design partners and implemented on all projects.

ADOPTION OF STREAMLINED LEAN PRECONSTRUCTION METHODOLOGY

- Document Quality Review and Streamlined Deliverable Definition
- Pull Planning in the Design Process
- Last Planner® methodology bridging between design and construction
- Design-assist methodology with favored subcontractors
- Integrated Project Delivery
- Best Value Selection
- Target Value Design
- 2P and 3P Project Planning



"FIRST TIME RIGHT" (Early Scope/Budget/Quality/Schedule Alignment)

- Project Feasibility Assessment
- Early Budget "Triangulation" (Benchmarking, Program Estimate, Cost Model)
- Dynamic Cost Estimating – ongoing cost management utilizing 3D design models
- ICAT (proprietary Interactive Cost Assessment Tool)

VIRTUAL DESIGN AND CONSTRUCTION

- 3D Model Sharing
- System coordination and clash detection
- 3D constructability modeling
- 4D logistics, construction sequence planning and trade coordination
- Virtual construction of major building systems

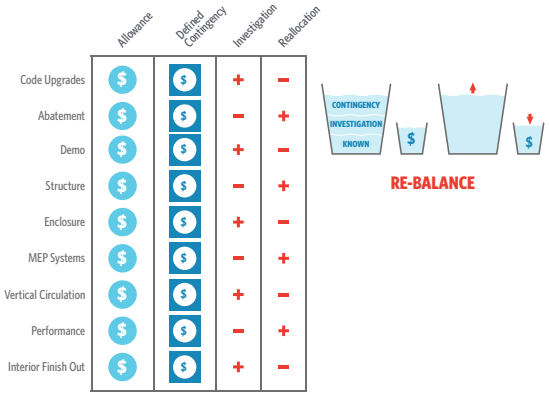
SUSTAINABILITY

- In-house sustainability group and employee training
- LEED credit scoring
- Preliminary cost evaluation tool for sustainable strategies

IMPROVED OUTCOMES / BENEFITS TO PROFESSION

- Initiate design with collaborative, **partner-centered protocols**, relationships and communication
- **Earlier alignment** of project goals, scope, budget and schedule reduce re-sets and re-design costs
- Proactive **architect advocate** on builder's side
- **Guide owner** through design process – what to expect, when and how to make decisions
- Improved integration of design intent with **fabricator expertise**
- Improved architect productivity and **fee retention** with streamlined documentation and processes
- More time available for **value-added design** efforts (design exploration, improved documentation, adequate CD time)
- **Better informed owner** design decision-making throughout design process
- **Enhanced support** for sustainable and resilient principles
- Implementation of **sustainability** "firsts" in Midwest
- Utilization of **3D visualization** improved coordination and reduced costly field changes

SCOPE PRIORITIZATION FOR OWNERS



EXAMPLE: BEST VALUE SELECTION

BEST VALUE EVALUATION Site Selection - Hypothetical		Site A		Site B		Site C		Site D		Site E	
		Existing Building		Existing Building		New Build		New Build		Existing Building	
	Weighting	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score
Building SF (Phase 1 Program, A Priorities)	25%	160,000 SF		120,000 SF		130,000 New Build		130,000 New Build		100,000 SF Exist	
		90	22.5	60	15	90	22.5	90	22.5	30	7.5
Building Costs (First Cost + Fit Up Costs) Land Value excluded	30%	$20M+$5M=$25M		$18M+$2M=$20M		$24M		$22.5M		$16M+$5M = $21M	
		30	9	90	27	30	9	60	18	60	18
Energy Efficiency/Daylighting/Sustainable Features	20%										
		60	12	30	6	90	18	90	18	30	6
Expansion Ability (for Phase II program)	25%	Interior Expansion Only		No Expansion		Yes		No, Limited Site		Yes, only 40,000 SF	
		90	22.5	0	0	90	22.5	0	0	60	15
Parking Capcity (50 Fleet + Auto)	15%	30 Fleet Max		50 Fleet		50 Fleet		50 Fleet		40 Fleet	
		30	4.5	90	13.5	90	13.5	90	13.5	60	9
Distance to Communities in Need	10%										
		90	9	60	6	90	9	30	3	90	9
Other	0%										
		0	0	0	0	0	0	0	0	0	0
TOTAL	100%	390	79.5	330	67.5	480	94.5	360	75	330	64.5

INTEGRATION OF DESIGN PHASES & PRECONSTRUCTION SUPPORT SERVICES

	Preparing	Planning	Interactive Design	Support
Project Initiation Work Plan	• Team Roles, Responsibilities & Decision-Making Protocol • Owner Budget • Milestone Schedule • Scope • Owner's Project Goals	• Co-Location Plan • Constraints • Develop Partnering Approach • Establish Performance Metrics • Building Information Modeling Execution Plan	• Quality Assurance and Quality Control Page-Turns • Virtual Design Construction • Identify Sustainability Plan	• Communication Plan • Information Management • Digital Documentation Strategy
Interactive Cost Estimating	• Estimating Targets • Benchmarking • Concept Estimates	• Weekly Updates • Explore Options and Opportunities	• Building System Efficiency • Target Value Design • Life Cycle Cost	• Partnering • Design Direction
Last Planner System (LPS)	• Milestone Schedule	• Pull Plans • Off-Site Prefabrication Execution Plan • Constraints Identification	• Identify Long-Lead Items • Off-Site Prefabrication Coordination • Constraint Management	• Level Work Loads • Comprehensive Schedule • Commitment to Tasks • 6-Week Look-Ahead • Weekly Work Plans • Daily Huddles
Innovative Process Improvement	• Comprehensive Schedule	• Identify and Eliminate Risks and Gaps • Hazard Avoidance • Innovation Strategies • Set For Flow	• Problem Solving • Voice of Customer • Innovation • Set for Plan • Problem Solving	• Schedule Tailored to Milestones • Reduced Durations • Strategy for Complex Areas • Simulations • Mock-Ups • Kata Coaching

EXHIBIT 3

Design Architect: Snow Kreilich, Minneapolis
Architect of Record: PS3 Architects, Los Angeles, CA
Completion: 2013
Role: Preconstruction Principal, McGough
Declaration of Responsibility: I have personal knowledge of the nominee's responsibility for the exhibit listed. That responsibility included: *Design team assembly, design-build team management, owner liaison, architect/builder coordination.*

Julie Snow, FAIA, Principal
Snow Kreilich, Architects

HIGH FUNCTIONING TEAM FORMATION

1. Define Project Needs
2. Develop Team Expertise Criteria
3. Research & Prequalify Firms
4. Prepare RFP & Finalize with Owner
5. Short List Qualified Firms
6. Interview: Work Session Format
7. Evaluate Based Upon Criteria & "Fit"
8. Notify & Award
9. Team Kick-off Orientation (2-Days)
10. **High Functioning Multi-Disciplinary Team**

New Entry Façade of Re-purposed Warehouse

SYNOPSIS/KEY CHALLENGES: Medtronic, a major medical device company, consolidated three office, sales and production facilities scattered throughout Orange County. They chose one of their existing heart valve production facilities with an adjacent warehouse for the combined space. The program called for new lobby, office spaces, updated production areas, and a large employee commons space—all very different from the two buildings' original purposes.

Bake assembled the design and engineering team, managed the design-build team, and acted as process leader for the owner and user groups. Bake knew that Medtronic's Orange County project demanded creative **architectural design talent coupled with architects who brought deep industrial building experience**.

He developed a **rigorous team selection and interview process** including mock work sessions with the owner in order to test candidates' cultural "fit" with client and users. Ultimately, Bake and the owner **chose two exceptional firms**—Snow Kreilich, the 2018 AIA Firm of the Year, and PS3 Architects, a firm with superb technical, industrial, and clean room expertise.

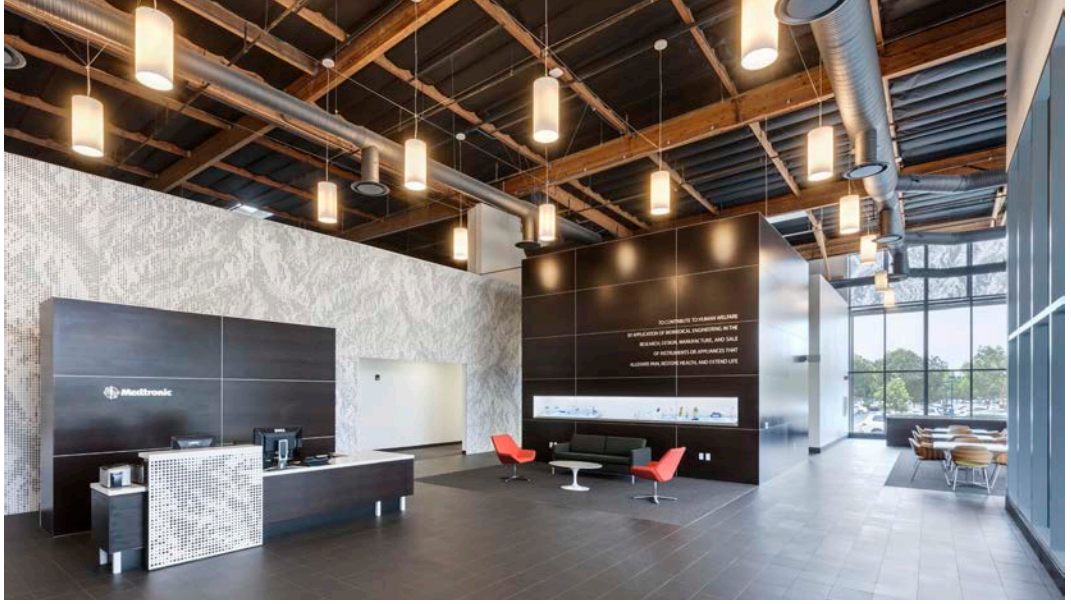
EXHIBIT 3
ORANGE COUNTY CONSOLIDATION PROJECT
(Continued)

RESOLUTION

- Create qualified short list with thorough **research and vetting** of design and technical firms
- Careful RFP preparation in collaboration with owner
- Informal interview, rigorous evaluation, unbiased selection and honest feedback
- **Foster synergy and collaboration** between creative design talent and highly technical production and clean room expertise
- Compilation of owner's project information, including project background, preliminary program, schedule and budget into **predesign document** to jump start design team
- Assessment of existing facility at consolidation site and adjacent unused warehouse targeted for expansion
- Facilitate detailed programming effort with multiple user groups – research, production, management and sales

BENEFITS

- **Collaborative**, high-functioning design team
- **Leveraged the talents** of both architectural firms
- Elevated what would otherwise be an ordinary project to something much more
- Excellent project result for a demanding client – highly functional and elegant design



Entry Lobby in Re-purposed Warehouse

PROCESS TOOLS FOR PARTNERING TOOLS USED:	Pre-design	Design	Construction /Occupancy
Team Assembly			
Design Team Formation Process	■		
First Time Right			
Project Feasibility Assessment	■		
Early Budget Triangulation			
Soft Cost Definition	■	■	
Interactive Cost Assessment			
Dynamic Cost Estimating		■	
Virtual Design & Construction			
3D Model Sharing		■	
3D Constructability		■	
3D Logistics/Trade Coordination		■	
Virtual Construction		■	
Pull Planning		■	
Target Value Design			
Best Value Selection			
Last Planner®			
2P & 3P Planning			
Sustainability			
LEED Credit Scoring			
Energy Strategy Cost Evaluation		■	
Community Engagement			
Entitlement Management		■	
Disruption Avoidance		■	
Lay Educ./Presentations			
Neighborhood Outreach			
WBE/MBE/SBE Outreach			

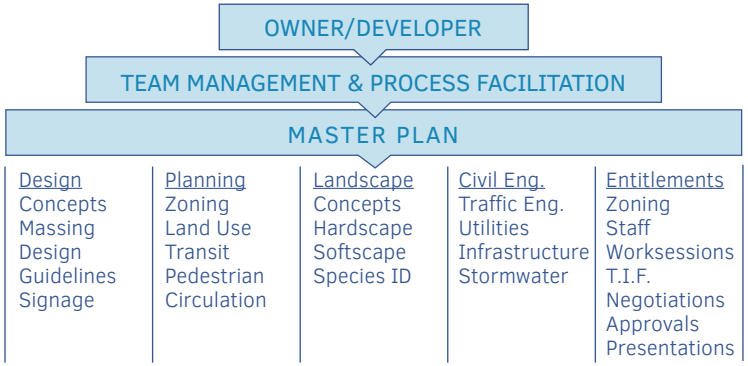
Daylit Employee Break Area

Reconfigured & Repurposed Production

Design Architects & Planners: Pickard Chilton, New Haven; EDAW, Denver; ESG Architects, Minneapolis; Oslund & Associates, Minneapolis; URS, Minneapolis; Kimley Horn, Minneapolis
Completion Date: 2004-2005 Initial Master Plan
Role: Preconstruction Principal, Design-Build Team Leader, McGough
Declaration of Responsibility: I have personal knowledge of the nominee's responsibility for the exhibit listed. That responsibility included: *Design team assembly, design-build team management, preconstruction, owner liaison and architect/builder coordination.*

Bill Chilton, FAIA, Principal
Pickard Chilton

COMPLEX TEAM MANAGEMENT



Fully Entitled T.O.D. Master Plan

SYNOPSIS/KEY CHALLENGES: Once a large computer company campus, the 50-acre site lies atop the bluffs of the Minnesota River near its juncture with the Mississippi. Acquired in 2002, McGough Development saw the potential for a "downtown" core in suburban Bloomington. In 2006, the Twin Cities region's first light-rail line opened **a station stop** at the heart of the site—now bookended by the Minneapolis-St. Paul Airport and the immense Mall of America.

One of the nation's **largest urban wildlife refuges** lies next door, just below the bluffs. Graced with these transit opportunities and fragile ecological amenities, Bloomington asked McGough and Bake to assemble, coordinate, and manage a planning and design team to create a multi-scaled **Transit Oriented Development** (TOD) master plan.

Surrounded by freeways and underutilized land, Bake's challenge was to reposition the site toward a **pedestrian-scaled urban form**, to create **high-density land uses** supporting transit, public life, and retail—all to be realized within a development window of 15 to 20 years.

RESOLUTION

- Assembled a team of **nationally recognized planners, architects, landscape architects and civil engineers** to develop **long-term TOD plan** for site that leverages surrounding amenities, infrastructure and uses
- Created campus and building **design guidelines**
- Designed and constructed 1.5-acre publicly financed **central park**
- Negotiated TIF financing with city to fund **conversion of surface parking** to structured parking to free land area for higher and best uses
- Researched and resolved **aircraft noise mitigation** concerns
- Completed **stormwater management** and utility infrastructure for campus
- Commenced first phase master plan with multi-family, high-rise housing

SELECT PUBLICATIONS

"Tomorrow's Metro-Area Land Use Is Being Decided Today" *Minneapolis/St. Paul Business Journal* 08/2005

PROCESS TOOLS FOR PARTNERING TOOLS USED:	Pre-design	Design	Construction /Occupancy
Team Assembly			
Design Team Formation Process	■	■	■
First Time Right			
Project Feasibility Assessment	■	■	■
Early Budget Triangulation	■	■	■
Soft Cost Definition	■	■	■
Interactive Cost Assessment	■	■	■
Dynamic Cost Estimating	■	■	■
Virtual Design & Construction			
3D Model Sharing	■	■	■
3D Constructability	■	■	■
3D Logistics/Trade Coordination	■	■	■
Virtual Construction	■	■	■
Pull Planning	■	■	■
Target Value Design	■	■	■
Best Value Selection	■	■	■
Last Planner®	■	■	■
2P & 3P Planning	■	■	■
Sustainability			
LEED Credit Scoring	■	■	■
Energy Strategy Cost Evaluation	■	■	■
Community Engagement			
Entitlement Management	■	■	■
Disruption Avoidance	■	■	■
Lay Educ./Presentations	■	■	■
Neighborhood Outreach	■	■	■
WBE/MBE/SBE Outreach	■	■	■

BENEFITS

- TOD campus master plan has **guided development** and construction for 14 years
- **Entitlement** for 1,100 high-density housing units, hotel, service retail, 2 million SF of office space
- **Increased transit use** with Travel Demand Management Plan (TDMP) to leverage on-site LRT station and reduce vehicular use

Central Park Sculpture

Central Park Water Feature

Concept Design for Office Buildings

EXHIBIT 5

Design Architect & Architect of Record:
Shepley Bulfinch, Boston, MA
Completion Date: 2012
Role of Nominee:
Preconstruction Principal, McGough
Declaration of Responsibility: I have personal knowledge of the nominee's responsibility for the exhibit listed. That responsibility included: *preconstruction management, conceptual project budgeting, owner liaison & architect/builder coordination.*

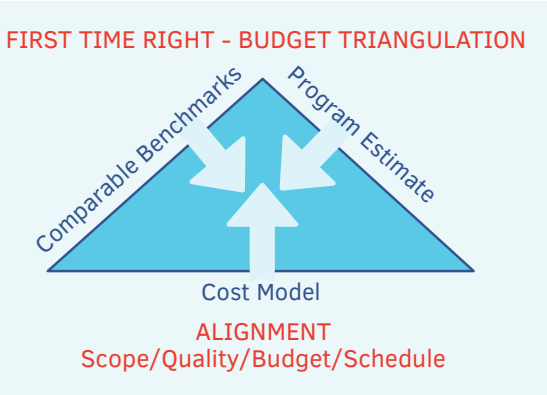
Angela Watson, FAIA, Principal
Shepley Bulfinch

AWARDS
Top Project Award, Finance and Commerce
Excellence Award, 2014 Minnesota Concrete and Masonry Contractors Association

SELECT PUBLICATIONS
"Top Projects: Hamline University Anderson Center" *Finance & Commerce* 08/2013

"The Greening of College Campus Roofs in Twin Cities" *Finance & Commerce* 09/2012

Campus Mall Entry



SYNOPSIS/KEY CHALLENGES: The challenge for this private midwestern university, like many, was to address the very competitive campus **facilities "arms race"** for attracting prospective students, meet design aspirations for a signature building on campus, achieve the operational program needs and align costs with a **predetermined fundraising** cap. Early and accurate alignment of scope and budget at concept phase was critical for the capital campaign target and funding credibility.

The result was a 75,000 SF student center with campus dining and food service, event space, student offices, and visitor underground parking. Bake led the early alignment exercise utilizing the **First Time Right Methodology**, which grew out of internal initiatives to discover and refine a process that ensured scope, budget and schedule **alignment at the concept phase** of projects with continuous tracking following through design. The **methodology minimizes costly re-draw, painful value engineering exercises and lost design time.**

RESOLUTION

- Collaboration with design team and owner to define goals, major program variables and project funding limitations
- Rigorous testing of multiple concept options to "fit" college funding scenarios
- First Time Right process utilized to create **menu of program variables** and costs for owner consideration
- **Budget Triangulation**, with three sources of preliminary cost input, used to create accurate decision-making tool for team at concept stage
- Final program size, preliminary concept and budget finalized prior to the start of schematic design

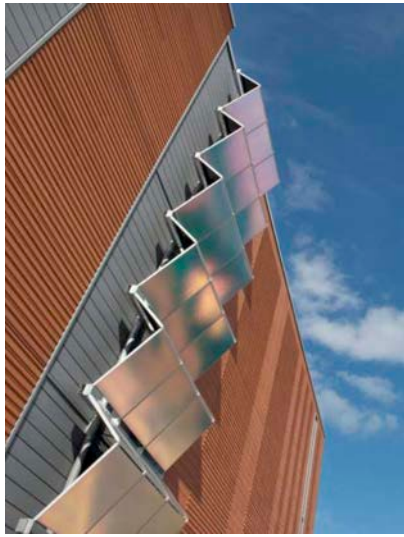
BENEFITS

- **Early alignment** of vision, scope and funding through intense team collaboration
- **High owner confidence** in scope and budget alignment prior to fundraising campaign
- **No design re-draw** during the design phase to stay on budget
- Design efforts focused on **value added design** features, high quality documents and responsive CA services
- Project on time, under initial concept budget target
- **Signature project** for campus

PROCESS TOOLS FOR PARTNERING TOOLS USED:	Pre-design	Design	Construction /Occupancy
Team Assembly			
Design Team Formation Process	■	■	■
First Time Right			
Project Feasibility Assessment	■	■	■
Early Budget Triangulation	■	■	■
Soft Cost Definition	■	■	■
Interactive Cost Assessment	■	■	■
Dynamic Cost Estimating	■	■	■
Virtual Design & Construction			
3D Model Sharing	■	■	■
3D Constructability	■	■	■
3D Logistics/Trade Coordination	■	■	■
Virtual Construction	■	■	■
Pull Planning	■	■	■
Target Value Design	■	■	■
Best Value Selection	■	■	■
Last Planner®	■	■	■
2P & 3P Planning	■	■	■
Sustainability			
LEED Credit Scoring	■	■	■
Energy Strategy Cost Evaluation	■	■	■
Community Engagement			
Entitlement Management	■	■	■
Disruption Avoidance	■	■	■
Lay Educ./Presentations	■	■	■
Neighborhood Outreach	■	■	■
WBE/MBE/SBE Outreach	■	■	■

Public Street Entrance

Green Roof



Solar Panels

EXHIBIT 6

Design Architect: Architects Alliance, Toronto
Architect of Record: ESG Architects, Minneapolis
Completion Date: 2007
Role of Nominee: Preconstruction Principal, Design-Build Team Leader, McGough
Declaration of Responsibility: I have personal knowledge of the nominee's responsibility for the exhibit listed. That responsibility included: *Design team assembly, design-build team management, owner liaison, architect/builder coordination, fabricator design-assist.*

David Graham, FAIA, Principal
ESG

AWARDS

2006 Best in Real Estate,
Minneapolis/St. Paul Journal
First LEED Certified Multi-family in Minnesota

SELECT PUBLICATIONS

"Green Condos Anchor Transit-Oriented, Master Planned Project" *Multi-Housing News* 06/2007

"Reflections of the Times" *Architectural Record*, 01/2007

"Best in Real Estate Winners Unveiled" *Minneapolis/St. Paul Business Journal* 04/2006

Residential Towers with Floor to Ceiling Glass Open Up Views to the Wildlife Refuge & River

SYNOPSIS/KEY CHALLENGES: The Reflections Condominiums is the first high-rise housing project within Bake's master plan for the new TOD-based "downtown" in Bloomington. Adjacent to the MSP airport with 420,000 takeoffs and landings annually, there were numerous aviation safety-based regulations and challenges.

The Metropolitan Airports Commission (MAC) was eager to support residential development at this under-used site, but had concerns about the **aircraft noise impact** on the proposed residential units. MAC had already been sued by residents from other nearby neighborhoods over noise and air traffic.

Bake's team faced the challenge to develop landmark, all-glass high-rise towers that optimized dramatic river vistas and the wildlife refuge while also meeting **regulatory and resident comfort** concerns. Representing the developer, owner and builder, Bake managed the design-build team and also led the interdisciplinary design effort to develop a cost-effective, **high-performance curtain wall** to meet acoustic, thermal, and design expectations.

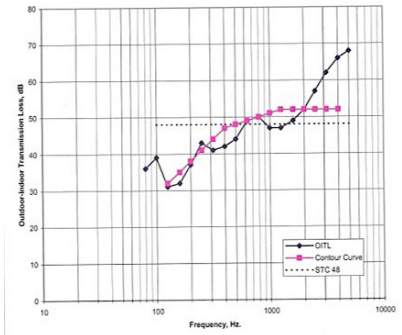
RESOLUTION

With the consultant team and design-assist fabricator, the process steps included:

- **Research noise mitigation** and threshold standards (federal, state, local), local flight path patterns, mitigation strategies in similar locations, existing assemblies on market, aircraft noise characteristics, overall acoustic recommendations for human sleep comfort
- Define performance **criteria** (acoustic, thermal, maintenance, cost)
- Develop **concept options** for curtainwall assembly to meet design intent and performance criteria
- Perform mock-up **testing** on glass and frame assemblies
- Perform full **2-story mock-up** in materials testing lab (aesthetics, acoustics, air and water infiltration, ease of installation)
- Refine assembly design based on test results
- Shop drawing review and fabrication
- On-going **installation inspection**
- Final field testing (acoustic, water and air infiltration) to verify results

BENEFITS

- **Floor to ceiling triple-glazed curtainwall** for maximum views to adjacent wildlife refuge and river valley that meets design intent
- **50 STC rating** for resident sleep comfort (no resident aircraft noise complaints over 10-year period)
- **High thermal performance** in northern climate
- Cost-effective design utilizing off-the-shelf assemblies and components



Acoustic Test Results

PROCESS TOOLS FOR PARTNERING TOOLS USED:	Pre-design	Design	Construction /Occupancy
Team Assembly			
Design Team Formation Process	■		
First Time Right			
Project Feasibility Assessment	■		
Early Budget Triangulation	■		
Soft Cost Definition	■	■	
Interactive Cost Assessment			
Dynamic Cost Estimating		■	■
Virtual Design & Construction			
3D Model Sharing			
3D Constructability		■	
3D Logistics/Trade Coordination		■	■
Virtual Construction		■	■
Pull Planning		■	
Target Value Design		■	
Best Value Selection			
Last Planner®			
2P & 3P Planning			
Sustainability			
LEED Credit Scoring		■	■
Energy Strategy Cost Evaluation		■	
Community Engagement			
Entitlement Management	■	■	■
Disruption Avoidance		■	■
Lay Educ./Presentations		■	■
Neighborhood Outreach		■	■
WBE/MBE/SBE Outreach			■

TOD Campus & LRT

Condominium Interior

Design Architect & Architect of Record:
EYP Architects
Completion Date: Concordia Integrated Science Complex 2017 & Carleton Science Center 2019
Role of Nominee: Preconstruction Principal
Declaration of Responsibility: I have personal knowledge of the nominee's responsibility for the exhibit listed. That responsibility included: *Preconstruction management, conceptual project budgeting, owner liaison & architect/builder coordination.*

Jeremy Oberc, AIA, Principal
EYP Architects

AWARDS
LEED Silver Concordia Integrated Science Center
LEED Gold standards (designed to, not certified) Carleton Science Center

Integrated Science Center – Concordia College

SYNOPSIS/KEY CHALLENGES: Two mid-western private colleges, Concordia College and Carleton College, faced **similar challenges**. They needed to **upgrade and expand aging science facilities** that served core health science academic programs including biology, chemistry, physics, math and computer science. Some buildings dated back to the early 1960's. Project goals and issues closely paralleled one another.

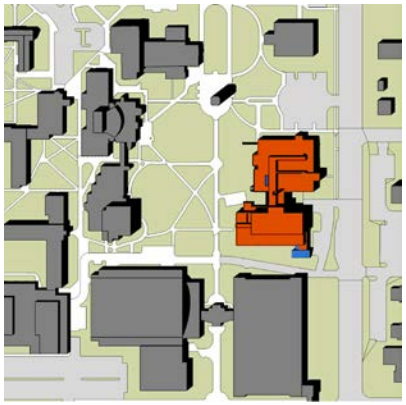
- Pressing need to create a new interdisciplinary science teaching facility
- **Leverage existing** science facilities as much as possible to reduce cost
- Located in a **central campus** location that made construction access difficult and campus disruption likely
- **Central plant** upgrades and expanded infrastructure triggered by existing building renovations
- Constrained project budget
- Deliver **sequential science curriculum** without interruption throughout design and construction

Science Center – Carleton College

RESOLUTION

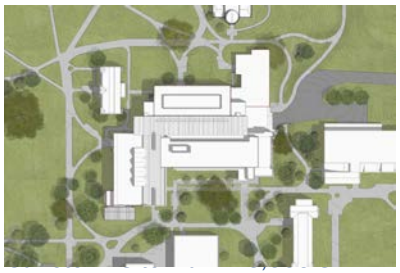
Quickly it became clear to Bake and the design team that each project would require **extensive demolition, new building systems,** and significant reconfiguration. In Carleton's case, it would also require a new addition and trigger complicated interface connections between two existing structures needed for instruction during construction. Bake led **work sessions** with campus leadership and faculty in the development of project **phasing scenarios**, temporary lab and classroom strategies and Pull Planning with the owner, architect, and builder.

- **Disruption avoidance** analysis to identify critical campus concerns (noise, dust, student safety and campus circulation)
- Intense collaboration between faculty, architect and builder to develop schedule that maintained science **curriculum continuity**
- Multiple **phasing and construction** sequence scenarios that examined detailed work durations, system cut-overs, demolition and abatement impacts to limit down-time and utilize student breaks for critical work
- Creation of **temporary lab and classroom** swing spaces
- Detailed pull planning with owner/faculty/trades to coordinate critical work activities and moves
- Development of **campus-wide communication** plan for faculty and student body



Concordia – Site Plan 145,000 SF

Concordia – Reconfigured Plan



Carleton – Site Plan

Carleton – Reconfigured Plan

COMPLEXITY FACTORS FOR COLLEGIATE PROJECT PHASING

- ✅ Programming (Faculty/User Availability)
- ✅ Fundraising Timeline (Quiet and Public Campaign)
- ✅ Academic Calendar
- ✅ Curriculum Continuity
- ✅ Temporary Teaching Facilities
- ✅ Campus Infrastructure Continuity and Upgrades
- ✅ Logistics and Disruption Avoidance
- ✅ Construction Phasing and Student Break "Windows"
- ✅ Completion Promises – Donors/Trustees/Faculty

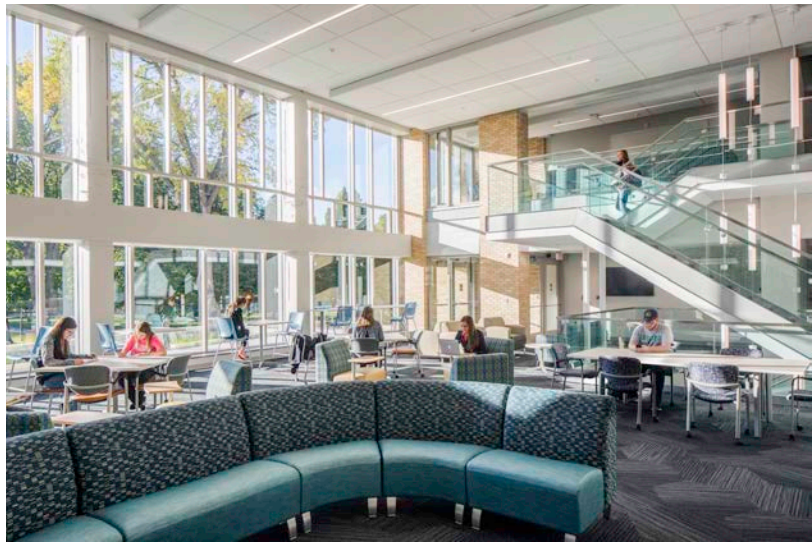
BENEFITS

- Integrated science curriculum and campus **design aspirations** met within constrained budget
- Science **curriculum continuity** maintained with a combination of temporary labs and phased renovation
- Campus central plant **infrastructure upgraded** providing improved energy efficiencies
- **Well-coordinated** and phased departmental and faculty **moves**
- Disruption of campus environment minimized and student/staff safety maintained

PROCESS TOOLS FOR PARTNERING TOOLS USED:	Pre-design	Design	Construction /Occupancy
Team Assembly			
Design Team Formation Process	■	■	■
First Time Right			
Project Feasibility Assessment	■	■	■
Early Budget Triangulation	■	■	■
Soft Cost Definition	■	■	■
Interactive Cost Assessment	■	■	■
Dynamic Cost Estimating	■	■	■
Virtual Design & Construction			
3D Model Sharing	■	■	■
3D Constructability	■	■	■
3D Logistics/Trade Coordination	■	■	■
Virtual Construction	■	■	■
Pull Planning	■	■	■
Target Value Design	■	■	■
Best Value Selection	■	■	■
Last Planner®	■	■	■
2P & 3P Planning	■	■	■
Sustainability			
LEED Credit Scoring	■	■	■
Energy Strategy Cost Evaluation	■	■	■
Community Engagement			
Entitlement Management	■	■	■
Disruption Avoidance	■	■	■
Lay Educ./Presentations	■	■	■
Neighborhood Outreach	■	■	■
WBE/MBE/SBE Outreach	■	■	■

Carleton New Atrium Connection

Carleton New Atrium Connection to New Science Center



Concordia Student Commons

Design Architect & Architect of Record:
HGA Architects and Engineers
Completion Date: 2016
Role of Nominee: Preconstruction Principal, McGough
Declaration of Responsibility: I have personal knowledge of the nominee's responsibility for the exhibit listed. That responsibility included: *Preconstruction management, conceptual project budgeting, owner liaison & architect/ builder coordination.*

E. Timothy Carl, FAIA, Principal
HGA

AWARDS

2017 Honor Award, AIA Minnesota,
Top Project, Finance & Commerce, Designed to LEED Silver standards (not certified)

SELECT PUBLICATIONS

"St. Paul Academy's Huss Center for the Performing Arts" *Architecture Minnesota*, 03/2018

"Command Performance: St. Paul Academy Sets Stage for Creative Learning" *Architecture Minnesota*, 05/2016

Huss Center Drop-off and Entry

SYNOPSIS/KEY CHALLENGES: St. Paul Academy (SPA), a venerable independent school, recognized that its aging performing arts facilities could no longer support its traditional level of excellence in drama, dance, and music. A new 21st century performing arts center became a top funding priority. Successful fundraising accelerated the project start by one academic year.

Given the need, SPA compressed the construction **schedule to 13 months** – from the end of classes in early summer to the resumption of classes in August the following year. Adding to the challenge, the construction period required a 45-day window during the second summer to complete demolition and construction of a new 2-story connection and major MEP infrastructure upgrades.

Bake identified two **critical path** items requiring **early architectural and engineering focus**:

- Designing a precast enclosure system for the performance hall because of its acoustic isolation and speed of construction
- Building the 2-story connection and infrastructure upgrades at the end of the project

These front and back-end requirements demanded detailed team-wide **Pull-Planning collaboration** with the architect, engineer, theater designer, and builder.

Working with nationally-acclaimed architects for the arts, **HGA**, Bake was able to achieve remarkable results on time and budget. The **award-winning** 36,000 SF professional level performing arts facility includes a 650-seat hall, black box scene shop, lobby, and performance space. The project has become a popular city landmark offering both school and professional performing arts events.

RESOLUTION

Detailed **Pull Planning** for two critical path activities:

Accelerated definition and coordination of systems with the architect, theater designer, structural engineer, performance hall acoustician and MEP engineer for early precast panel design

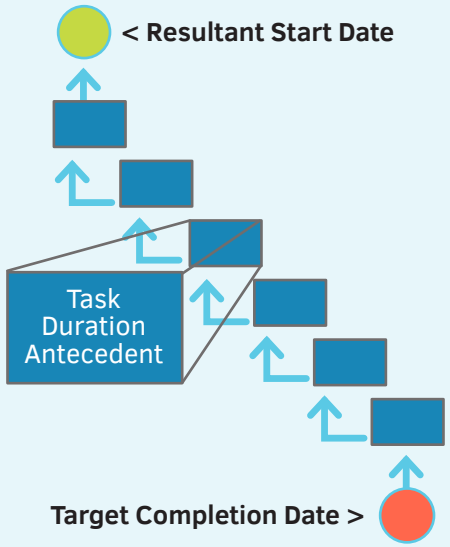
- Hall configuration and volume
- Acoustic isolation joints and details
- Theater rigging locations and connections for embeds
- HVAC and plumbing penetrations

Detailed design and construction sequencing for 2-story link

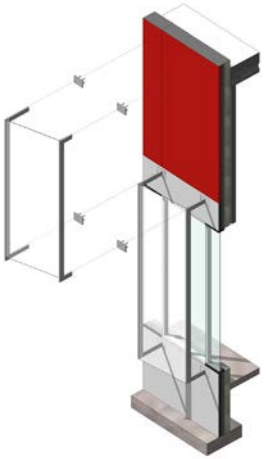
- Partial demo at project start and remaining demo at end
- Material procurement and staging on site
- Crawler crane sizing for very limited site access
- Prefabricated structural steel components to speed erection
- Detailed planning of overlapping trade activities in confined work space

PROCESS TOOLS FOR PARTNERING TOOLS USED:	Pre-design	Design	Construction /Occupancy
Team Assembly			
Design Team Formation Process	■		
First Time Right			
Project Feasibility Assessment	■		
Early Budget Triangulation	■		
Soft Cost Definition	■	■	
Interactive Cost Assessment		■	
Dynamic Cost Estimating		■	
Virtual Design & Construction			
3D Model Sharing		■	
3D Constructability		■	■
3D Logistics/Trade Coordination		■	■
Virtual Construction		■	
Pull Planning		■	■
Target Value Design			
Best Value Selection		■	
Last Planner®		■	■
2P & 3P Planning		■	
Sustainability			
LEED Credit Scoring	■		
Energy Strategy Cost Evaluation		■	
Community Engagement			
Entitlement Management		■	■
Disruption Avoidance		■	■
Lay Educ./Presentations		■	
Neighborhood Outreach			■
WBE/MBE/SBE Outreach			■

PULL PLANNING = WORK BACKWARDS FROM COMPLETION DATE



Performance Hall



Exterior Wall Assembly

Entry With Shading Fins

BENEFITS

- **Early erection of precast panels** and completion of enclosure allowing interior system installation and rigging through winter months
- **Accelerated C of O** for acoustic and AV system testing and hall tuning
- Completion of 2-story link in 45-day window; entire facility opened on time prior to start of academic year
- **Excellent acoustic characteristics** for St. Paul Chamber Orchestra and student performances

Design Architect & Architect of Record:
HGA Architects and Engineers
Completion Date: 2018
Role of Nominee: Preconstruction Principal, Design-Build Team Leader, McGough
Declaration of Responsibility: I have personal knowledge of the nominee's responsibility for the exhibit listed. That responsibility included: design team assembly, design-build team management, preconstruction, owner liaison & architect/builder coordination.

William Blanski, FAIA, Design Principal
HGA

AWARDS

2017 Top Project Award, Design Build Institute of America-Upper Midwest, **LEED Gold**

SELECTED PUBLICATIONS

"Augsburg's Business School Looks to Leverage New Digs" ***MPLS Star Tribune*** 04/2018

"Hagfors Center for Science, Business & Religion – Augsburg's New Building Brings Sciences and Liberal Arts Together" ***MPLS Star Tribune*** 03/2016

"Augsburg Preps For $73M Multi-Discipline Center" ***Finance & Commerce*** 10/2015

Exterior facade from campus mall

SYNOPSIS/KEY CHALLENGES: Augsburg is an historic Lutheran university with a compact campus in one of Minneapolis' oldest neighborhoods. Given this history and location, the school stands out today in serving many **first-generation college** students, recent Somali immigrants, and Native Americans.

Originally conceived in 2005, Augsburg's vision called for a pivotal building at the heart of the campus to serve the integrated study of science, business and religion. The project languished in the Great Recession and in the following years. A major **unanticipated gift** sparked a fundraising "burst" that **accelerated the design and construction schedule**. The inexperienced owner mandated that the project be delivered using design-build—while also desiring to be an active participant in the designer selection and design process.

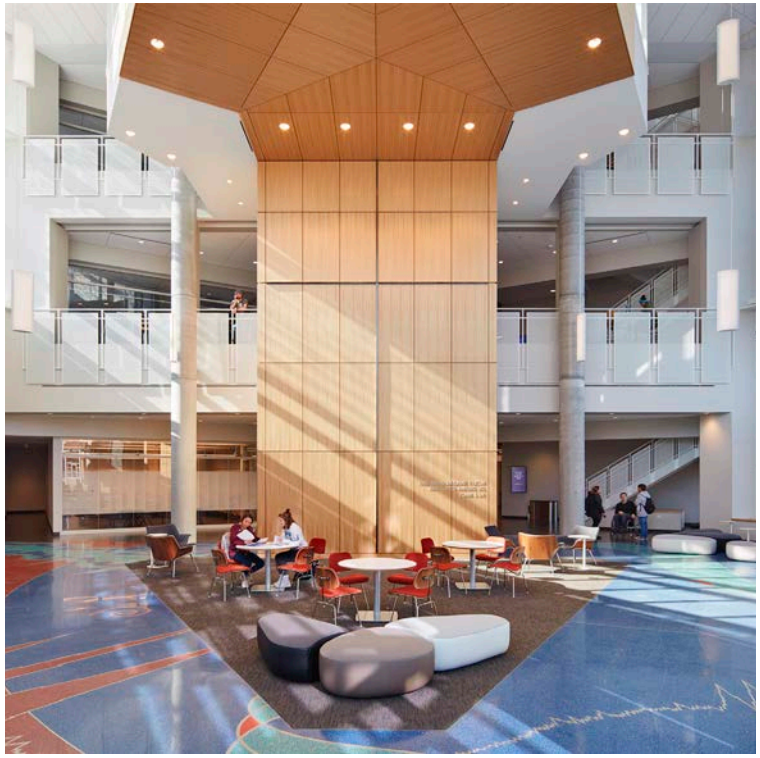
Augsburg is surrounded by **institutional and residential neighbors** who were concerned about construction noise, dust, traffic, parking and the potential loss of community gardens adjacent to the building site. Neighborhood activists also pressed for employment of local small businesses and job training during construction. Working with **HGA**, Bake met these diverse challenges, constructing a 135,000 SF multi-use building supporting students and Augsburg's future.

RESOLUTION

- **Rapid assembly** of **highly qualified design-build team**
- **Accelerated re-programming** and concept design
- Early scope/feasibility and soft cost budgeting
- **Pull planning in design** to define long-lead procurement
- **3D virtual construction modeling** for structural system
- Neighborhood outreach plan – community garden, parking, noise disruption
- Local small business outreach and sub hiring
- **Last Planner® shortened construction schedule** and dramatically improved trade coordination

BENEFITS

- Confidence in early alignment of scope and budget for funding sources, Trustees and architects
- **Shortened design** and **construction schedule** for **mid-year move-in**
- Project delivered **below budget**
- **Enhanced community** relationships
- Improved **architect productivity**
- Virtual construction of complex details
- Higher design impact through on-going value selection



Student Commons Lobby

LAST PLANNER® DIAGRAM

1	**Master Planning** EXPECTATIONS	Big picture planning
2	**Pull Planning** COLLABORATION	Collaboratively built phase plan
3	**Make-Ready Planning** COMMITMENTS	Identifying and removing constraints
4	**Weekly Work Planning** PROMISES	Heartbeat of the Last Planner® System
5	**Learning** CONTINUOUS IMPROVEMENT	Daily huddles to figure out how to improve tomorrow

Collaborative Classroom

Chapel

COMMUNITY ENGAGEMENT

Project dictated a high level of successful **public engagement** that included regulatory presentations and entitlement negotiations, neighborhood and campus communication strategies, project and operational **disruption avoidance planning**. Active community and trade outreach to **maximize participation of MBE, WBE, and small businesses.**

- Entitlement management
- Communication strategies
- Operational disruption avoidance
- Community and trade outreach
- Campus/Neighborhood Communication – Open houses, newsletters, website
- Subcontractor Outreach – WBE/MBE/SBE

Hagfors Center in Minneapolis Landscape

PROCESS TOOLS FOR PARTNERING TOOLS USED:	Pre-design	Design	Construction /Occupancy
Team Assembly			
Design Team Formation Process	■	■	■
First Time Right			
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Early Budget Triangulation	■	■	■
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Interactive Cost Assessment	■	■	■
Dynamic Cost Estimating	■	■	■
Virtual Design & Construction			
3D Model Sharing	■	■	■
3D Constructability	■	■	■
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Virtual Construction	■	■	■
Pull Planning	■	■	■
Target Value Design	■	■	■
Best Value Selection	■	■	■
Last Planner®	■	■	■
2P & 3P Planning	■	■	■
Sustainability			
LEED Credit Scoring	■	■	■
Energy Strategy Cost Evaluation	■	■	■
Community Engagement			
Entitlement Management	■	■	■
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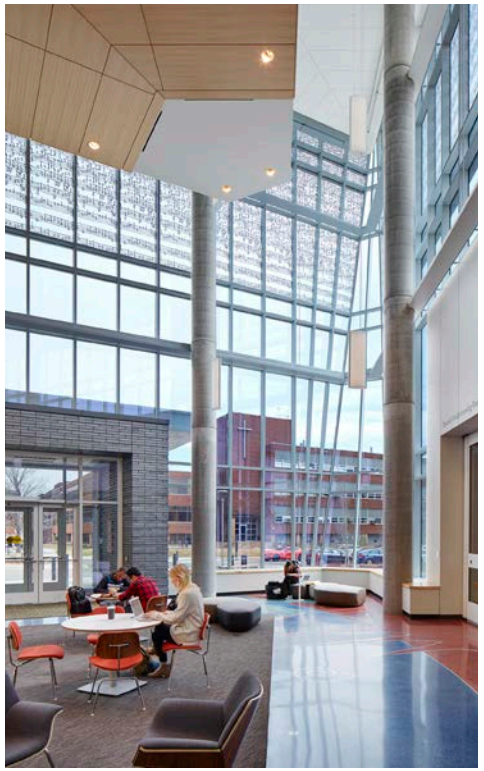
Neighborhood Outreach	■	■	■
WBE/MBE/SBE Outreach	■	■	■



Daylighting