Newport Beach Lecture Hall Building Project Design

City of Newport Beach

Request for Proposal

Rob Wellington Quigley, FAIA
architecture & planning

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San Diego, CA 92101
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07.18.19

Rob Wellington Quigley, FAIA
Architecture/Planning

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July 16, 2019

Peter Tauscher, Senior Civil Engineer
Public Works Department
City of Newport Beach
100 Civic Center Drive
Newport Beach, CA 92660

Dear Mr. Tauscher and Selection Committee:

We are honored to have the opportunity to contribute to the Newport Beach Central Library. Together with the City Hall and Gardens, you have created an impressive public amenity and the new lecture hall will add to the synergy generated by the other uses on the site.

Over our decades of practice, the following attributes have been constant:

We are contextual architects.

Not that our buildings always blend in or are unremarkable. Our inspiration is the larger cultural context of your community as well as the micro context of buildings, climate and landscape on or adjacent to the site. We believe that this approach leads to a certain "truth" in the finished design. If architecturally successful, it should be difficult to imagine the Lecture Hall being located anywhere but on this particular site.

We are social architects.

Although we have a reputation for being strong designers, we are also socially collaborative team members. Our best and sometimes most compelling projects have been in collaboration with the community and the people who will use the building. All of our libraries and most of our civic buildings were designed this way.

We are structured for low-volume, principal-authored projects.

We choose to be small (10 to 12 people) on purpose. In a large office, a project the size of the lecture hall will likely be passed on to junior personnel. Our office is structured so that I personally am able to design and oversee the progress of your building. We believe that this explains the remarkable consistency of design recognition our projects have received over the years. Our team will consist of myself, a project manager, production architect and assistant designer.

Sustainable design is baked in.

We have been passionately involved in sustainable design since the early 80's. From our first solar powered houses and naturally day-lit libraries in the early 80's to the current near zero energy consumption of the Living Lab and our offices, we believe in

walking the walk - not just selling a service. West Valley Library, for instance, is still the most energy efficient library in San Jose's system.

Finally, we understand that fundraising will be integral to the success of this project. We participated intimately in the San Diego Central Library's and the Children's Museum's fundraising efforts, meeting both in groups and one-on-one with potential donors, and are well versed in how to contribute to this important component of project realization.

We know you have high expectations for this project and we want to apply the creative synergy, technical expertise, and design skills of our team to make those expectations a reality. We welcome the opportunity to introduce our team in person and discuss the special characteristics of this project.

Sincerely,

Rob Wellington Quigley, FAIA

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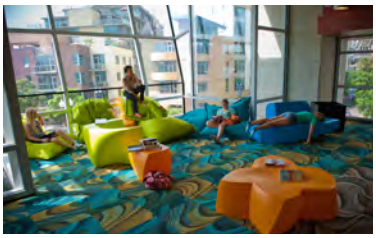
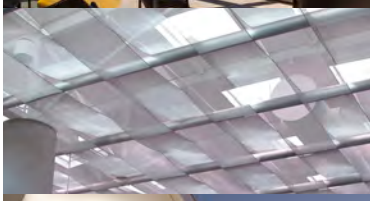
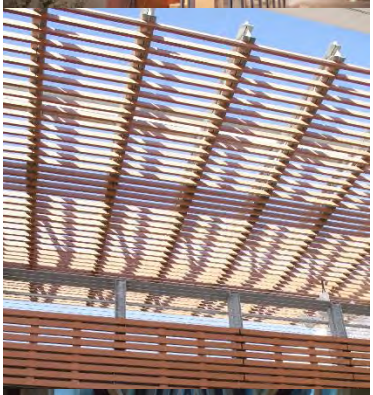
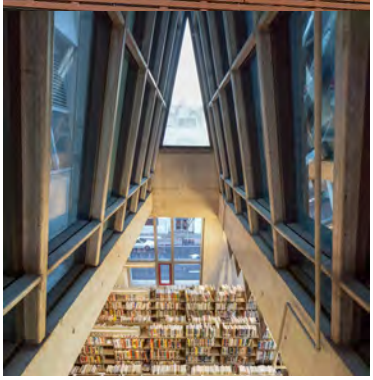


Firm Profile

Rob Wellington Quigley, FAIA
Architecture/Planning







Established in 1978, Rob Wellington Quigley, FAIA, is a full service architecture and planning firm with offices in San Diego and Palo Alto, California.

The firm's design portfolio includes civic, academic, cultural, residential, and mixed-use buildings, as well as community planning and urban design projects. Residential work includes affordable housing complexes, residential towers, and high-end custom homes. The Quigley studio has received more than 70 awards for design excellence from the American Institute of Architects (AIA).

Unusual among nationally known design architects, Rob Quigley is dedicated to an inclusive, participatory design process. Design workshops have included as many as 300 people. A hallmark of Rob's practice is his ability to build consensus; his methods have become models for the profession, while his designs are flash points of community pride.

Rob personally leads each project for its full duration, assisted by a project manager and a senior project architect. Design and production work are not segregated, ensuring design integrity and continuity of the team throughout the life of the project. The firm is noted for both creative solutions within limited budgets and designs that are sensitive to individual sites and circumstances. Sustainable architecture is a specialty.

In 2005, the AIA California Council presented Rob with the coveted Maybeck Award for "outstanding achievement in producing consistently distinguished design." In 1995, the AIA California Council presented Rob Wellington Quigley, FAIA, with the annual Firm Award, recognizing a practice "focused around the creative energy and leadership of a dynamic sole practitioner that produces consistently distinguished architecture."

Buildings designed by Rob Wellington Quigley, FAIA, are regularly featured in national and international publications. Monographs have been published by Rizzoli International and Casas Internacional.

Recent work includes the Ocean Discovery Institute's Living Lab, two joint-use libraries/community centers for the City of San Jose, San Diego New Central Library and The New Children's Museum.

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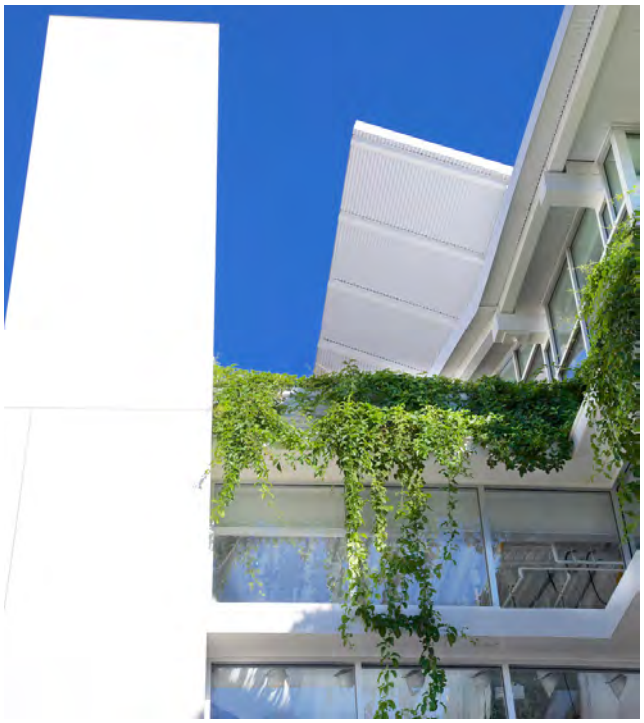
Project Understanding

Rob Wellington Quigley, FAIA



" Quigley strongly feels that in California the opportunity to create a more authentic built environment may lie in the struggle to weave an architecture of cultural diversity. The '….real Arcadian Dream,' he says, 'will not be a blending, but a colorful, distinct collage of dislocation.' He is interested in a celebration of local architecture as a form of localism, understood not as an end in itself but as a means of transcending provincialism and enriching his own cultural reality. Rather than subvert the conventional Californian ways of building and detailing, Quigley tries to embrace the co-opt the status quo in order to '….explore the utilitarian vernacular and its intriguing possibilities as a noble and even civic architecture.'

– Aaron Betsky, Architecture Critic

Approaches to the Design Process

There are two kinds of innovation in architecture - one creatively co-opts a minimal budget and the other depends on a large budget. Most of our achievements are in the former category. For instance, people are surprised to learn that the San Diego Central Library was built for almost 30% less than other West Coast central libraries such as Seattle or San Francisco.

We imagine pursuing at least four different conceptual design directions.
Each would address the same program but initiate from a different viewpoint.

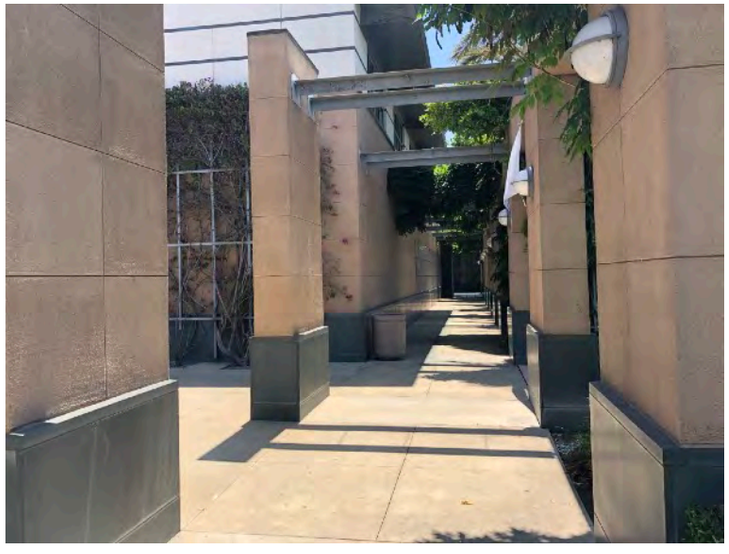
1. Of the existing Architecture
2. Of the Landscape
3. Of the User/Owner
4. Of the Community

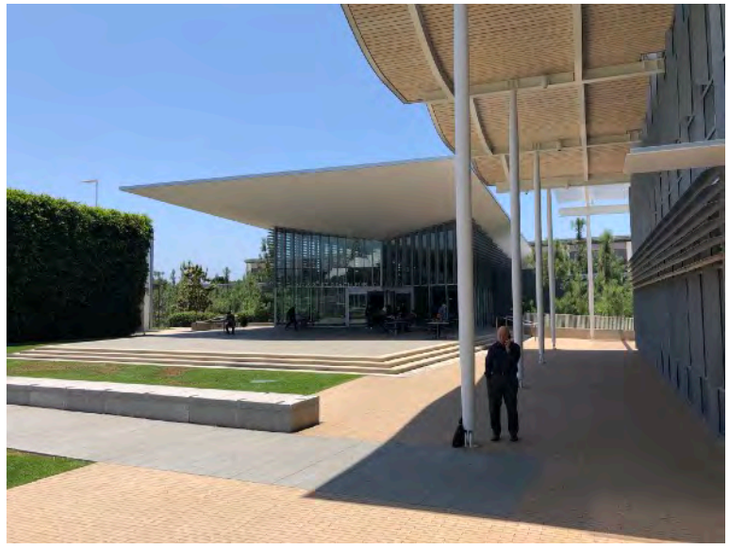
We have found that this is an effective way to gather a full spectrum of ideas in a short time. The final design may be an enhancement and refinement of one of the four directions or, more likely, a new fifth direction that integrates great ideas from all of the earlier schemes.

Offering "ideas" even as crude diagrams at this time is inappropriate for approaches three and four as they depend on a creative collaboration with all of you. On the other hand, it is almost impossible for an architect to visit this site and not leave with their brain humming. Below are some ideas or directions (not building designs) that derive from the first two points of departure:

Idea One:

Listening to the Architecture





Idea One:

Listening to the Architecture

The Library and City Hall are two very different styles of architecture. One is “heavy,” you feel the weight of the stucco walls, and not day lit particularly well. The other is buoyant, light filled and quietly joyful for a City Hall. We don’t think copying either architecture is appropriate but are intrigued with extending the context of the library a bit and embodying the spirit of the City Hall architecture in a new and unique building.

The existing library arcade could be extended to the south to help the shopping center-like parking lot to be more “civic” in nature. The arcade could be a continuation of the existing or a new design that uses materials and colors from the old building.

The arcade creates both a layer or very porous screen wall and a foil that allows a more delicate, buoyant and provocative Lecture Hall architecture to rise behind it. While we think it is important that the new building have its own design identity, it could be made of white steel and embody some the the best qualities of the City Hall.

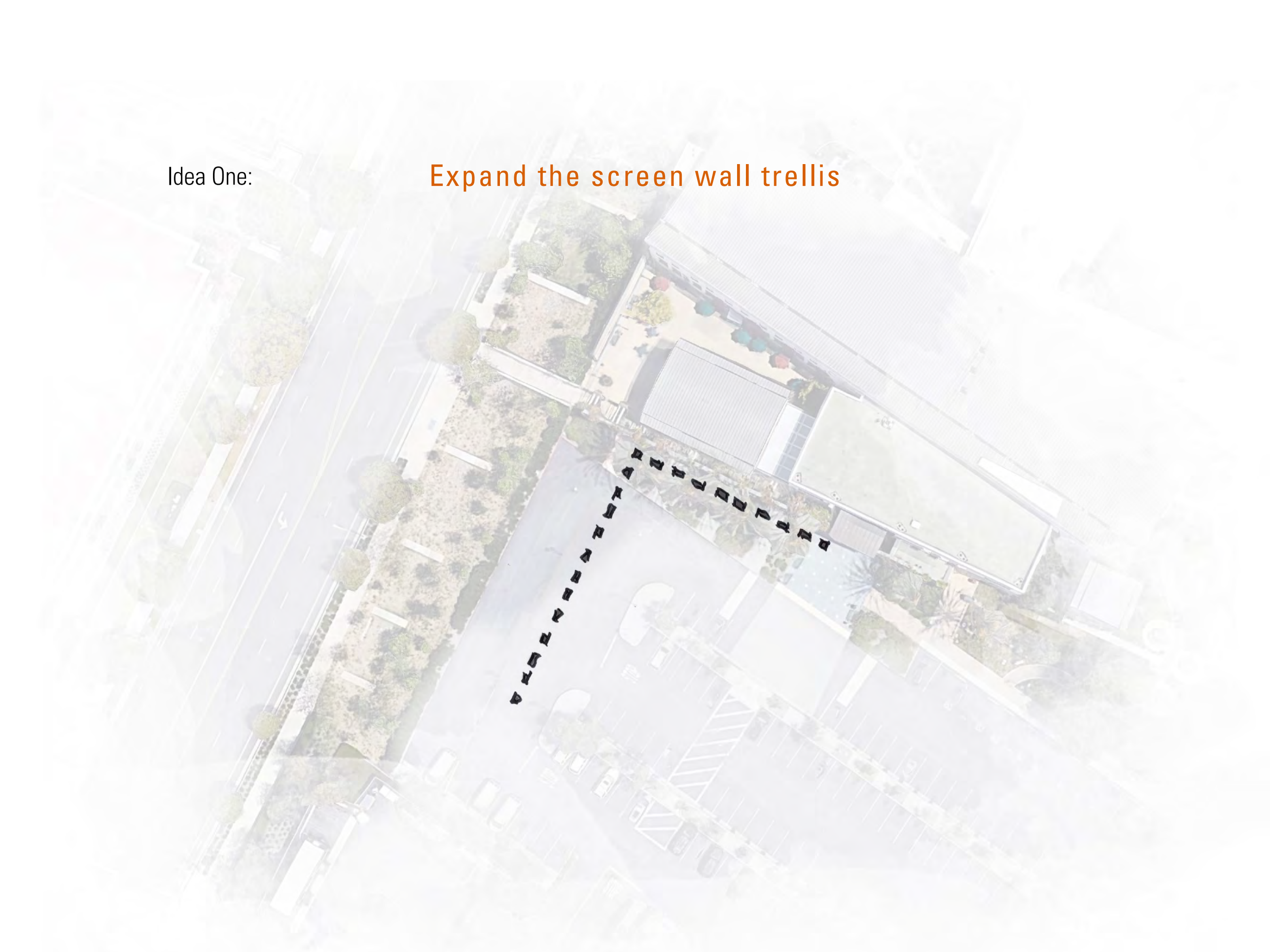
As in our San Diego Central Library lecture hall, the stage would be about the same level as the entry with the seating sloping down at 1:12. Moveable seating is important: removing them allows the hall to seem more intimate and “full” with small crowds. Glass side walls with side louvres and black out shades allow natural light and garden views when desired. A fan shape hall layout or a rectangular hall both work.

The Bamboo Court is not now a pleasant place for gathering. This direction proposes linking the Hall and the Court but opening up the existing outdoor space and improving the proportions. The bamboo is moved around the corner to mitigate the L-shape and large shade trees are planted. The bridge to Avocado Avenue remains.

Idea One: Exploring the existing Architectural Language

Idea One:

Expand the screen wall trellis

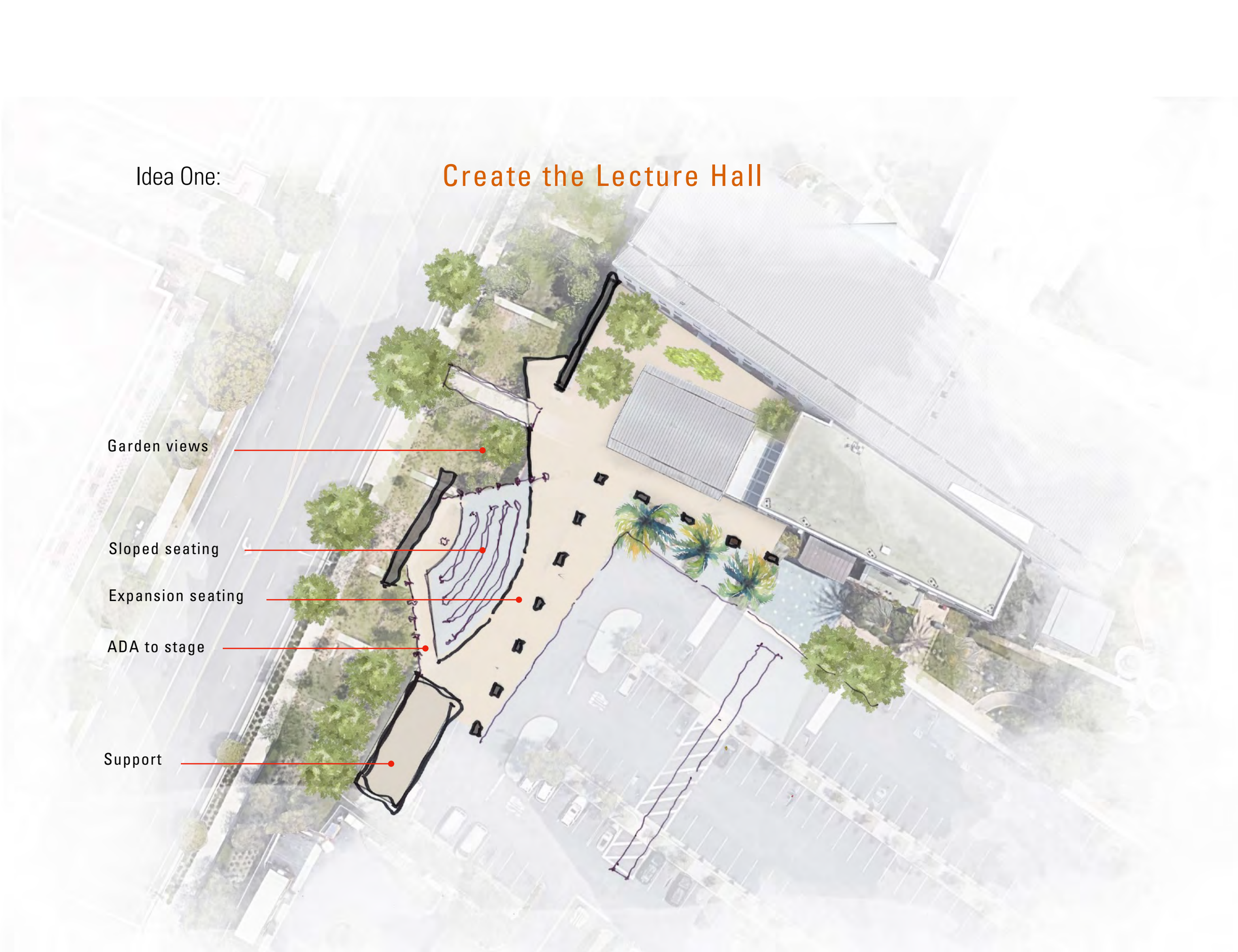


Idea One:

Embrace the Bamboo Court

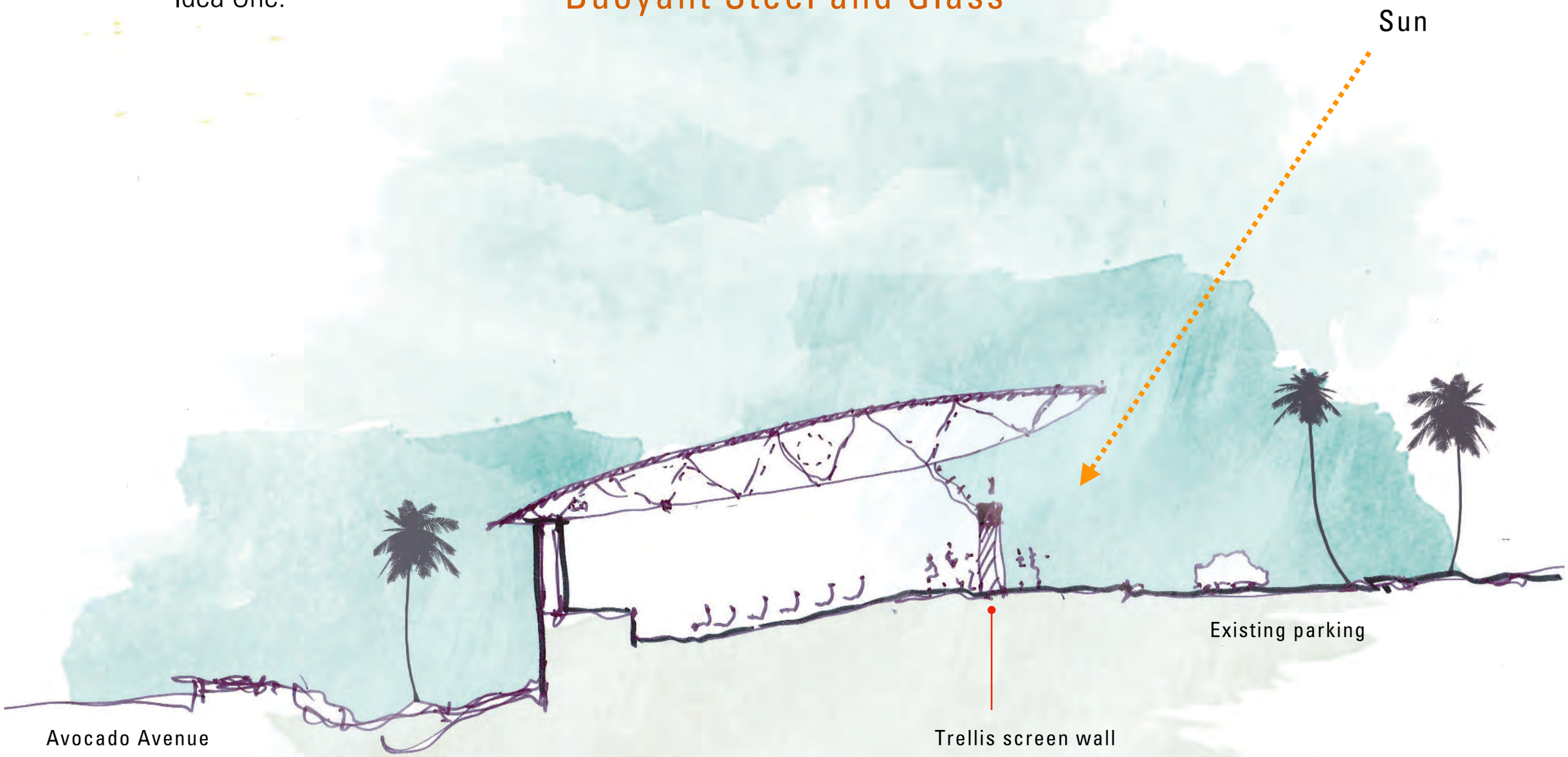
Idea One:

Create the Lecture Hall



Idea One:

Buoyant Steel and Glass



Idea One:

From Parking Lot

Lecture Hall Structure reaching over Trellis Wall

Idea Two:

Listening to the Landscape

Create a Southern Landscape Terminus

Idea Two:

Listening to the Landscape

One of the most unusual and wonderful qualities of the Newport Beach civic complex is the abundant public gardens to the north and west of the City Hall.

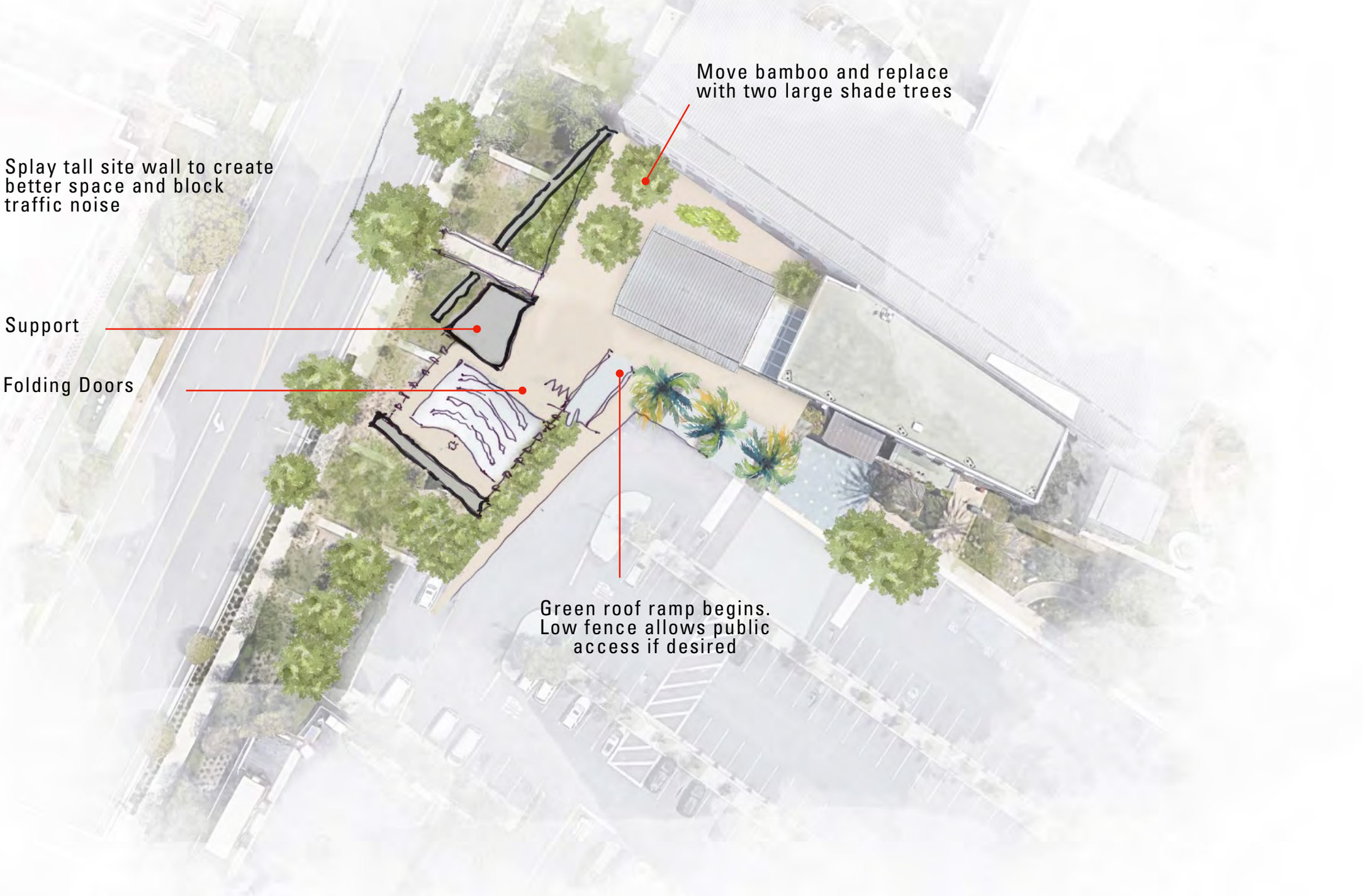
This “direction” proposes to complete the landscape idea with a southern public garden. If desired, it could be linked to the others and after hours access enhanced, with a new path or bridge along the Avocado edge. As in the first idea, the hall opens up to and creates a major gathering space with the Bamboo Court. The existing patio wall opens up more aggressively to create more space and landscape is extended to better mitigate traffic noise.

The landscape plane dramatically tilts upward from the courtyard level creating the roof for the lecture hall and a green edge to the parking lot. The plane also allows access, if desired, to the rooftop garden. It is also possible to locate an open air amphitheater on the roof, providing a second venue and capturing Catalina views.

The hall interior layout is similar to the first idea.

Idea Two:

Green on Three Sides and Roof will Place Lecture Hall in a Garden



Idea Two:

Roof Plan

Idea Two:

Elevation from Parking Lot

Idea Two:

Amphitheater with Shade Option

Idea Two:

Idea as Abstract

Experience: # San Diego Central Library

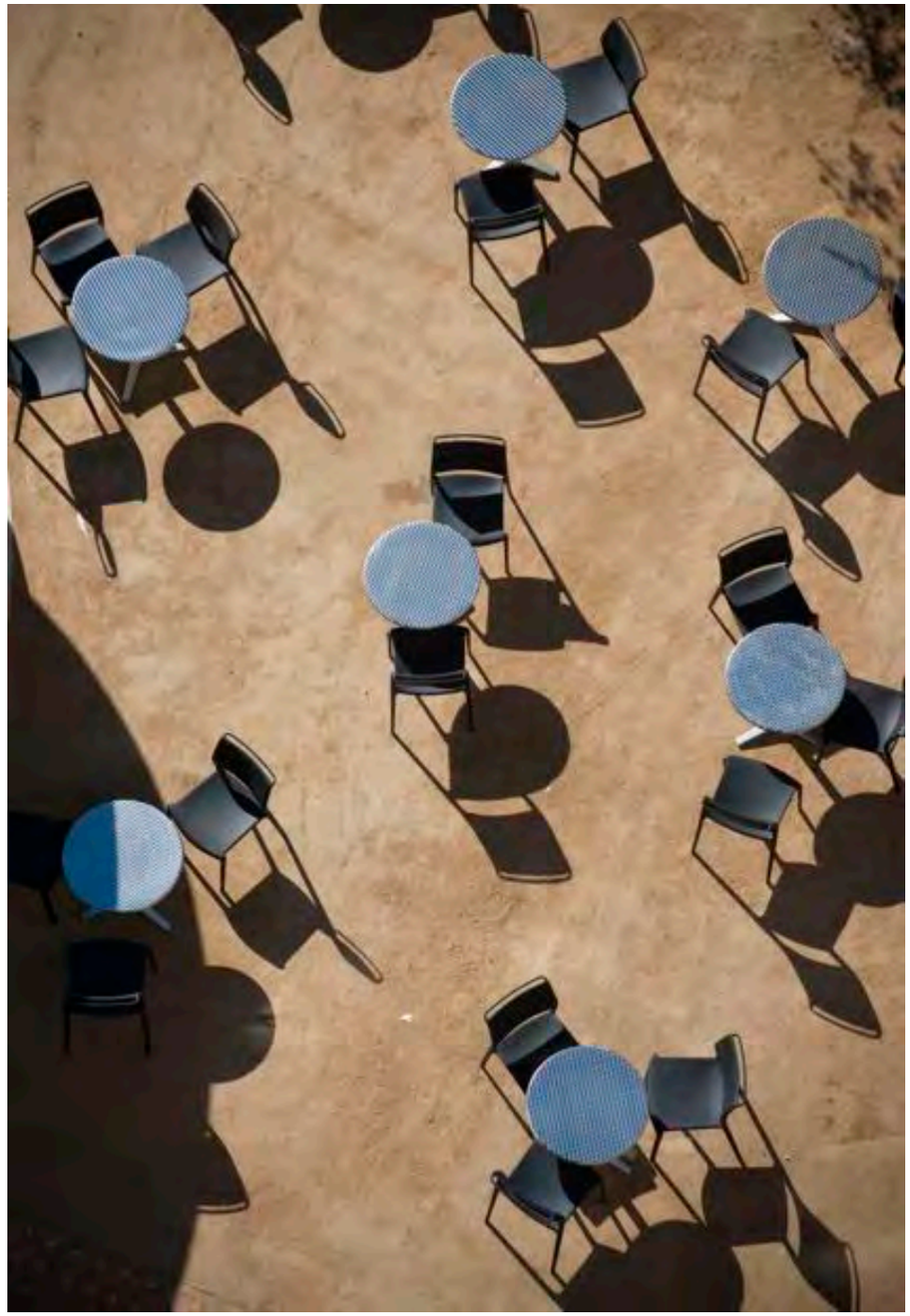
The majority of civic and academic buildings we have designed required some accommodation for the type of activities that you are anticipating in the new Library Lecture Hall.

The lecture hall at the San Diego Central Library is the most similar in terms of program: a stand alone building creating common public space with the library proper, sloped floor, acoustics for both speech and music, discrete natural lighting, seating expansion, etc. While the aesthetics are very different from what we imagine will be appropriate for Newport Beach, our solutions to the various issues are of interest.

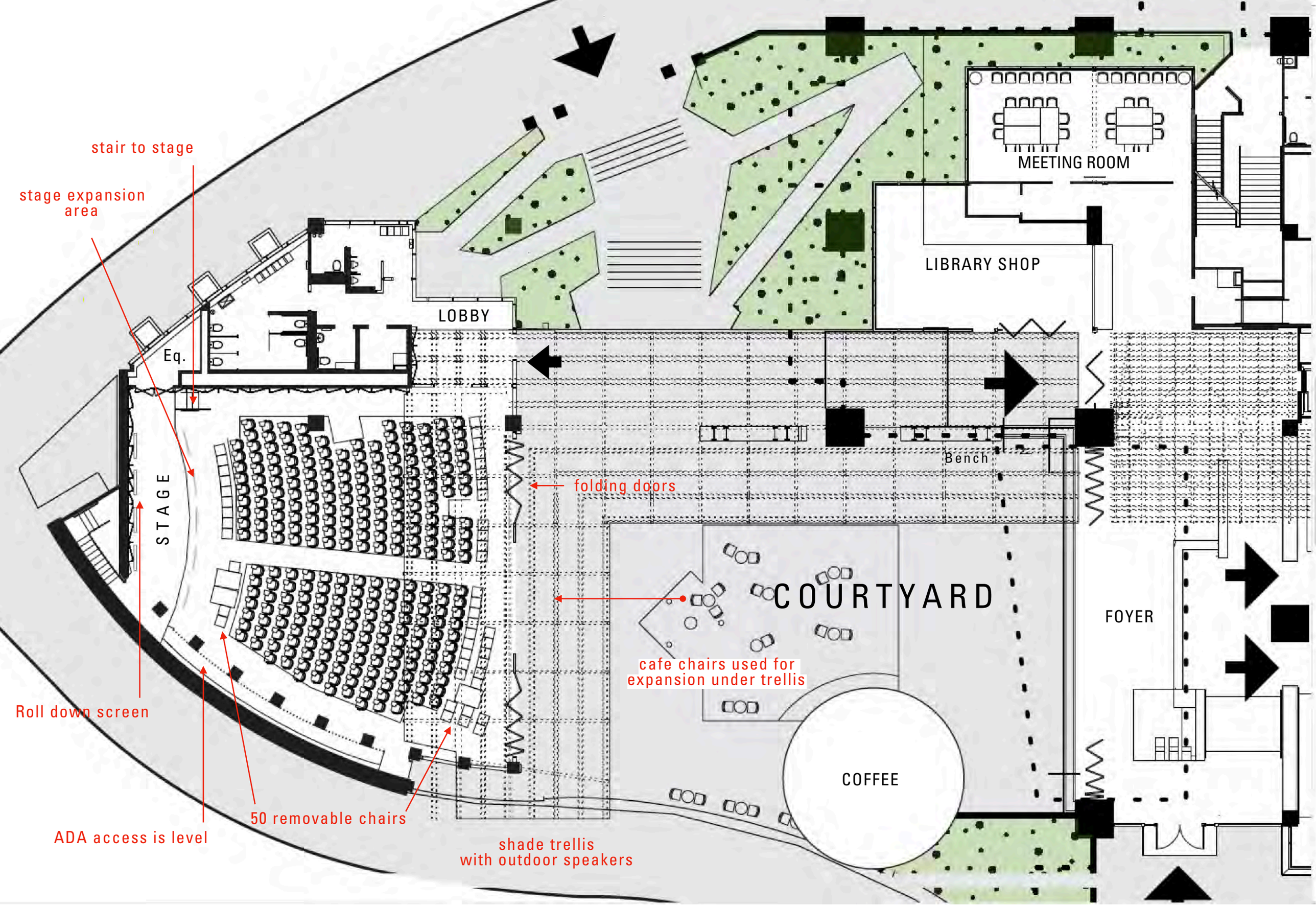
A Library Lecture Hall offers some interesting design paradoxes. For instance, it needs to feel full or at least well attended when the crowd is smaller than capacity. Speech must be clear from the podium but the hall also must have excellent musical acoustics, a competing requirement. The hall must be insulated from outside noise and inwardly focused but (in our opinion) be pleasantly day-lit and open to patios and gardens.

The resolution of these paradoxes will determine the success of the design.

Lecture Hall

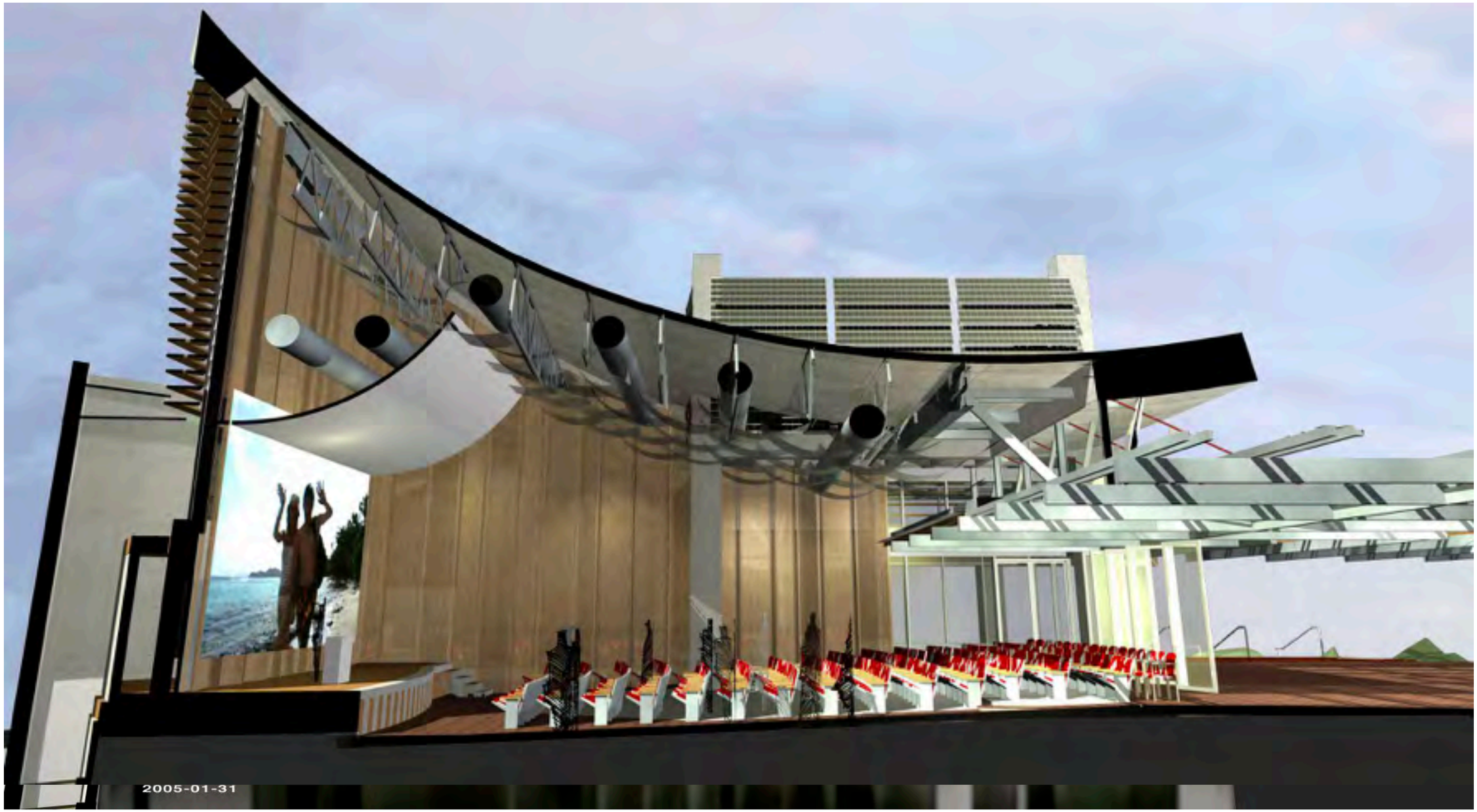


San Diego Central Library Lecture Hall

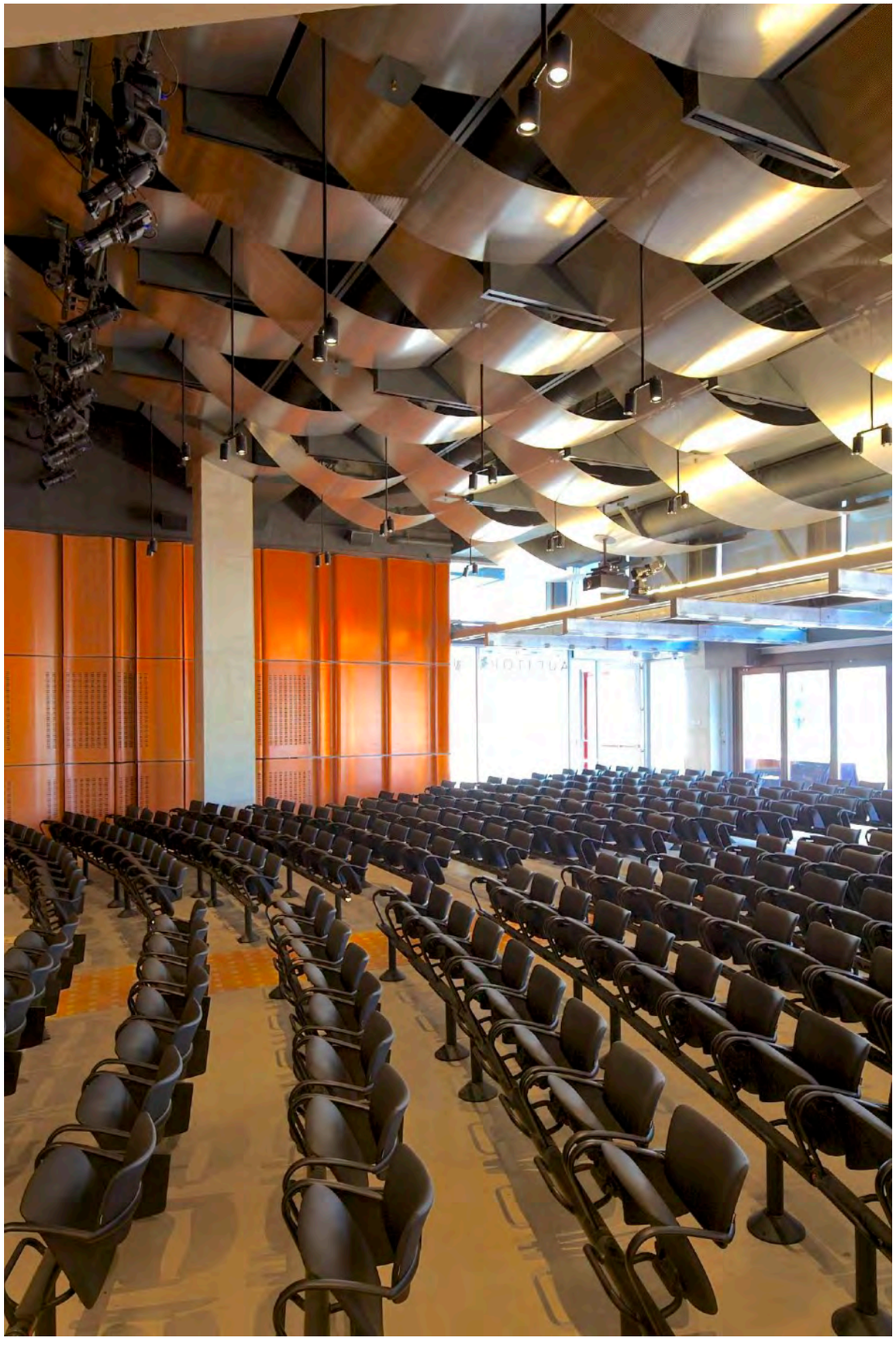


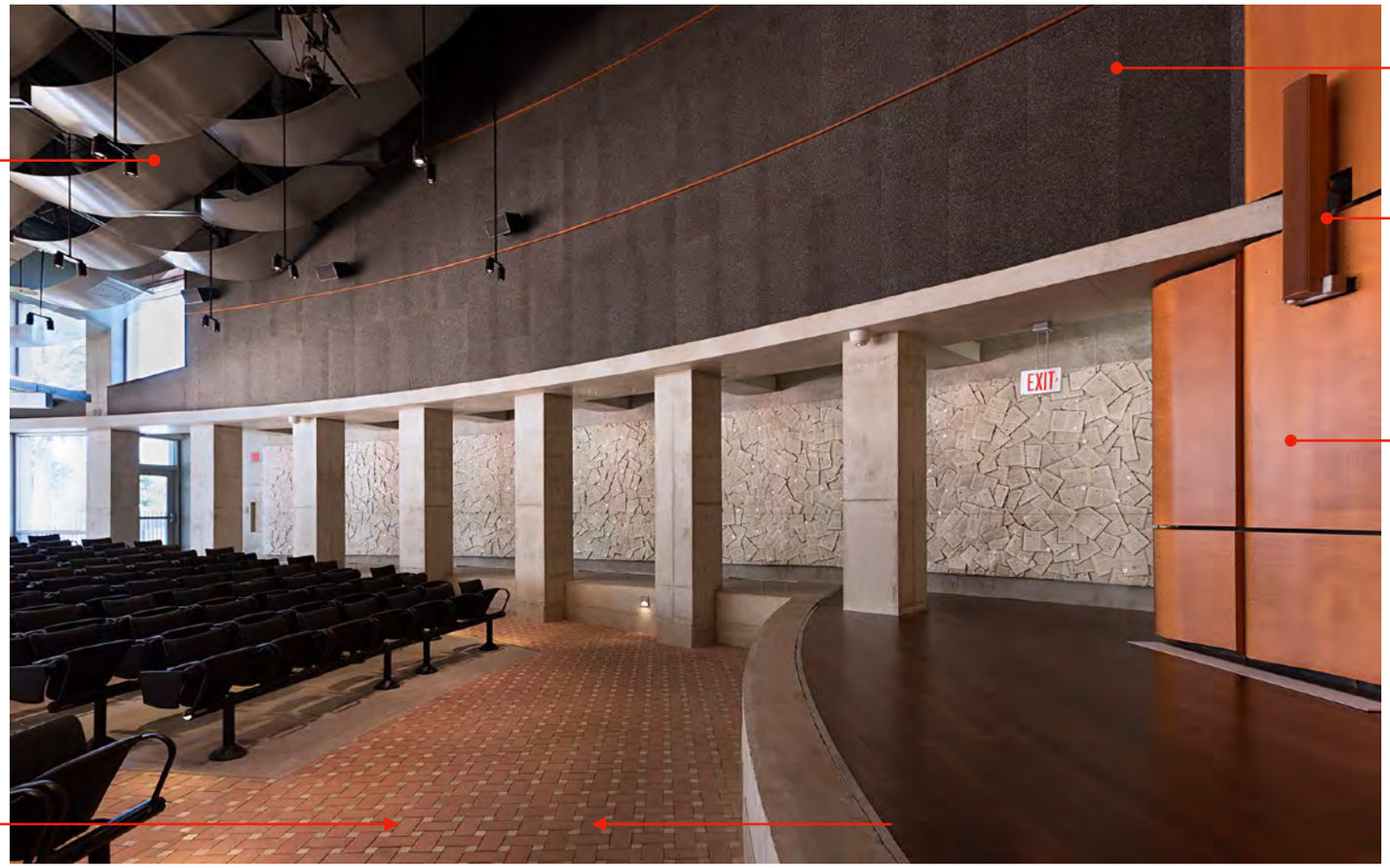
San Diego Central Library Lecture Hall

271 Fixed Seats + 53 Removable



Section Cut





Sound absorption "swoops" hides mechanical

Daylight

Flexible expansion

Sound absorption

Speaker

Quigley designed sound reflection and diffusion panels

Courtyard Paving into Interior

Artwork designed to acoustically mitigate curved architectural surface

ADA access

VIEW FROM LIBRARY

EXTENDING THE HALL TO THE OUTSIDE

Project Experience and References

Rob Wellington Quigley, FAIA

"In both the feasibility study and the project review, which involved a complicated zone change and design approval, Rob Quigley was extremely effective with the neighborhood. He gained tremendous credibility by being serious about his work and patient with objections. By the end of the approval process, the neighborhood was no longer a negative factor.

Rob Wellington Quigley and his staff were very responsive to our needs and very patient with our need to make decisions in a committee format. They were also very conscious of the need to control costs and were persuasive to the City council on that point. Rob's talents are a great addition to both the design community and the broader community."

– Marlene Prendergast, PAHC

San Diego Central and Branch Library, Auditorium, Theatre and Charter School

San Diego

Construction Cost: $185 million

Key Staff Involved: Rob Quigley, Bob Dickens, Wendell Shackelford

Services Provided: Community workshops, site planning, programming, design through construction, LEED Silver Rating

Project Reference: Deborah Barrow, Library Director (retired) 619.209-1165

Awards:
Library Journal 'New Landmark Library Winners'
APWA Project of the Year Sustainable/Green Bldgs
AIA Merit Award
AISC National Award
ASCE Outstanding Award
AGCA Best of the Best
ASCC Best in Show
AIA San Diego Design Awards - Honor Award

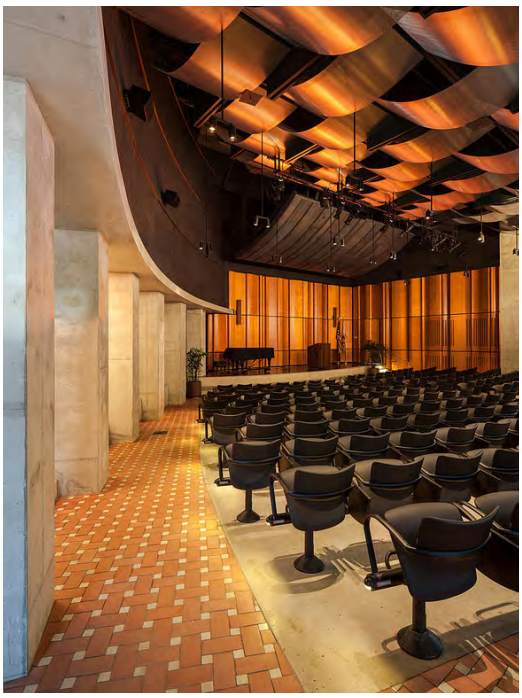
The New Central Library's main objective is to serve the community's need for information, literacy, and knowledge in the 21st century.

As such, the library was born in the creative camaraderie of a workshop on the bay attended by over 700 citizens. The design was initiated by hundreds of hands-on citizens working together with the architect.

The library was conceived as a simple 9-story archive of flexible space sandwiched at the top and ground floors with diverse and accessible public amenities. At the request of citizen participation groups, bay view terraces, roof gardens, and a public "reading room" were added to the base program. Other features include **a 350-seat flexible multipurpose room on the 8th floor, various terraces**, a cafe, book store, gardens, and a unique reading room under the lattice dome—creating a unique and extraordinary facility for use by both downtown residents and all San Diegans.

"The design of the San Diego New Central Library reflects what a library should be. The architecture welcomes you—it says, 'I'm a friendly, wonderful place. I will share my knowledge with you. All you have to do is come inside."

—Dr. Al Best, Former President,
San Diego Civil Service Commission



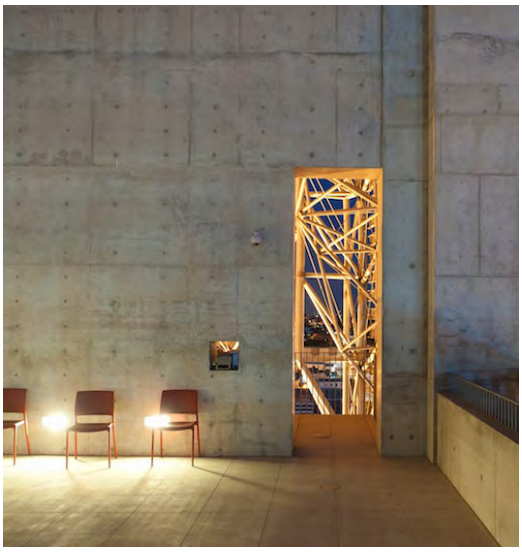
The library also houses the new downtown Branch Library and Charter High School. At the south **edge of the courtyard is a 333-seat, sloped floor theatre featuring a public art piece that also provides an acoustical soundboard.** During good weather, the entire facade between the auditorium and courtyard opens up to increase capacity and shared activities.

People enter the library through the 2-story arcade that runs the length of the Park Boulevard facade. Two-story transparent glass windows invite views into the library and attract visitors from the trolley and surrounding areas. A secure vestibule contains the parking elevator and library store/gift shop. From the vestibule, one enters a 3-story lobby containing both elevators and escalators to the lower three levels. The lobby also provides access to the circulation desk and to the popular library and children's library.

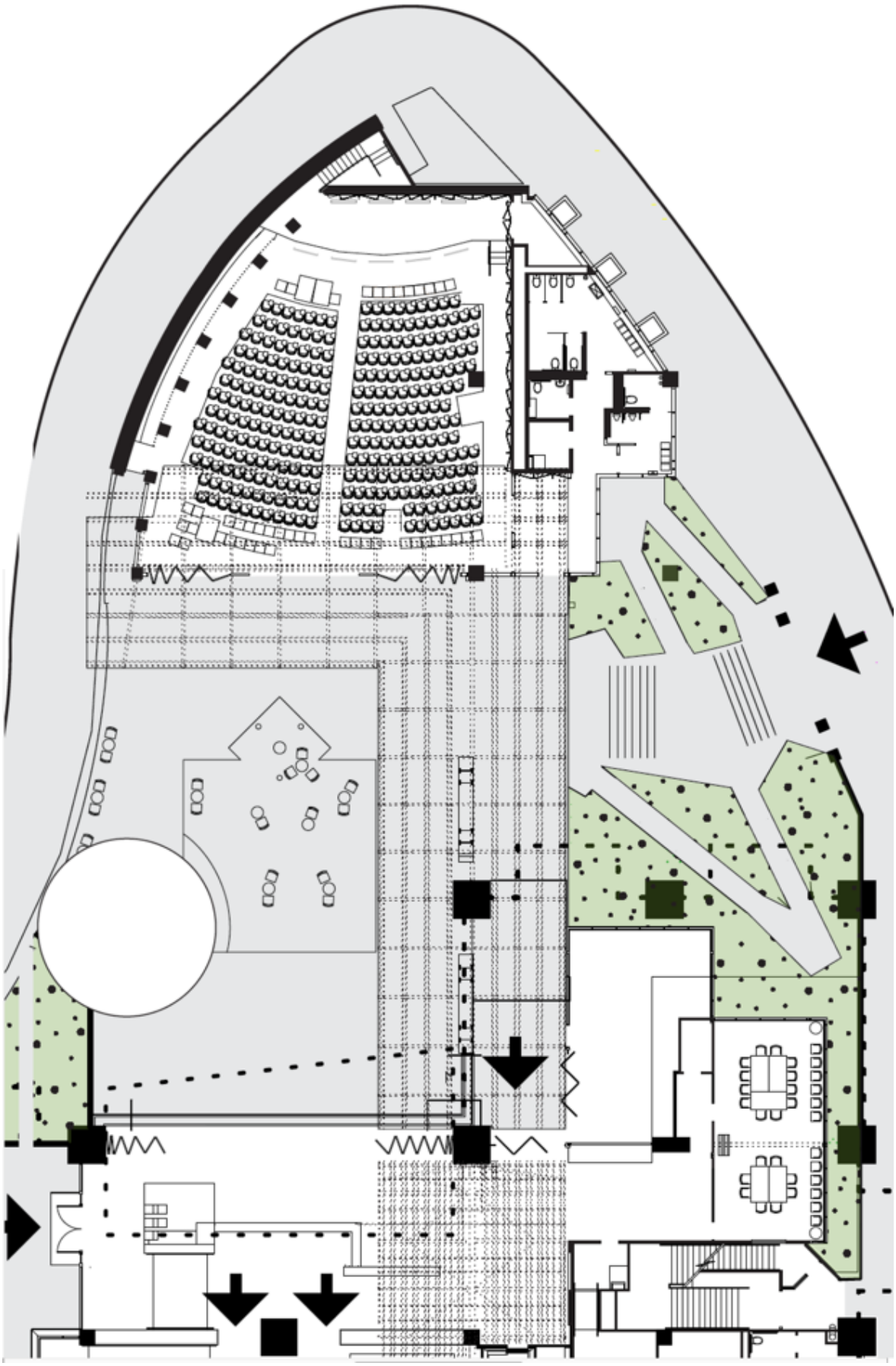
At the ground level, large folding glass doors open to the southern courtyard or "library garden." This outdoor room, shaded by large trees, is conceived as a principal public gathering space, secure but accessible from both 'K' Street and Park Boulevard. The garden is intended to be a celebration of San Diego's lifestyle and diverse values.

"San Diego has finally learned how to make a proper civic building."

Aaron Betsky, Curator of Architecture,
San Francisco Museum of Modern Art



Rob Wellington Quigley, FAIA



The New Children's Museum, Multi-Purpose Performance Space, and Charter School

San Diego

Construction Cost: $16.4 million

Key Staff Involved: Rob Quigley, Bob Dickens, Maryanne Welton

Services Provided: Programming, Design through Construction, Green Building

Reference: Kay Wagner 760.533.8725, kay@macmurrays.com

Awards:
Honor Award, AIA California Council, Savings by Design Energy Efficiency Integration Award, 2008

Committee on the Environment (COTE) Award, 2008

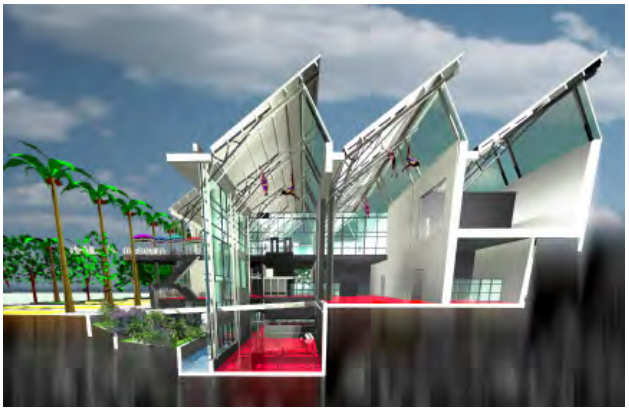
Excellence in Construction Award, 2008
Associated Builders & Contractors, Inc., San Diego

Smart Growth Award, 2008
Urban Land Institute, San Diego/Tijuana Chapter

Community Service Award, New Construction, 2009
Construction Communications

The New Children's Museum in downtown San Diego is a 2-story tilt-up concrete building composed of open, flexible spaces visible from - and interacting with - three city streets. The building is designed to include a Charter School for grades 3,4,5 and 6, a large multipurpose performance space, classrooms, administration offices, galleries, a public lobby, retail store, a café with exterior decks, and a 6,000-square-foot arts education center.

Sustainable design is a hallmark of the project. Scientists and engineers at UCSD collaborated with the architect to ensure the building sets a new standard for urban green architecture. A central glass chimney contains a transparent elevator and serves as a cooling tower, which exhausts hot air from the naturally cooled and heated gallery spaces. Mechanical HVAC is completely absent in the major public spaces. The majority of the gallery and staff spaces are naturally daylit, augmented by rooftop photovoltaic panels.



Student Services Center

University of California, San Diego

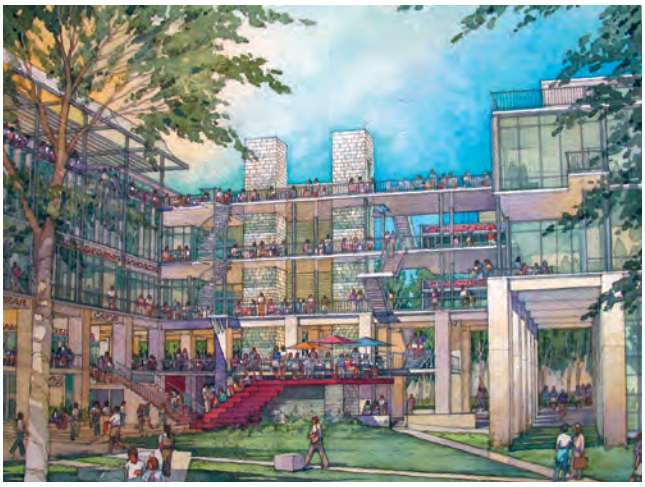
Construction Cost: $29,900,000

Key Staff Involved: Rob Quigley, Bob Dickens, Maryanne Welton

Services Provided: Stakeholder Workshops, Programming, Design Through Construction, DSA, LEED

Reference:
M. Boone Hellman, Campus Architect (retired) / Consultant 858.583.3900

Award:
AIA San Diego Design Awards, Honor Award



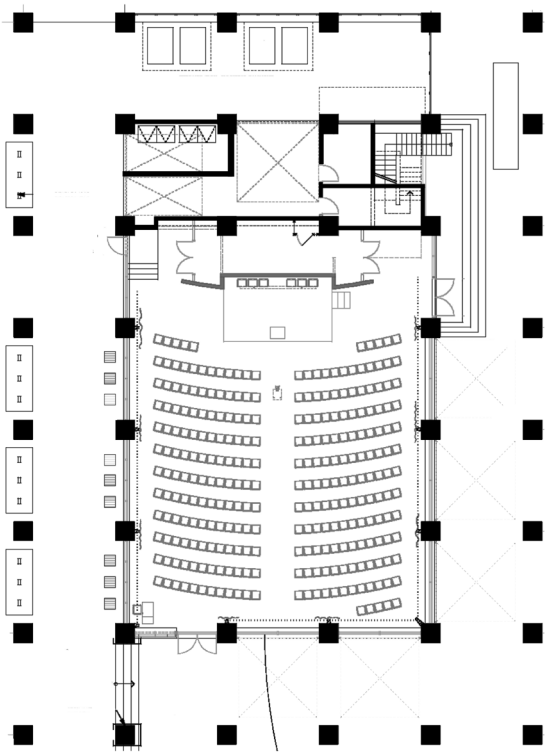
This 5-story facility consolidates campus-wide student resources in a single location at the heart of the campus. The building houses seven University departments including the Registrar, Cashier, Financial Aid, Graduate Studies, and Admissions. Various sized meeting rooms, classrooms, and a **large multi-purpose auditorium** are incorporated along with a second-level cafe and ground level retail spaces.

The new Student Services Center is a focus for campus life. The wide covered arcades provide shade from the sun and protected space for studying and group activities. Rooftop terraces offer interesting views of the campus. The main circulation space is an animated outdoor courtyard, eliminating the need for an interior lobby.

From an urban design point of view, the building occupies a particularly sensitive part of the central campus and faces three separate landscaped quads. Rather than let the building separate and isolate the quads, the concrete arcade structure is left open and transparent, physically shaping and defining the campus open space, yet encouraging movement and social interaction between them.

"The new Student Services Center is just wonderful. The tenants are just ecstatic. The students are in amazement, and it is one of the most photographed buildings that I have seen on campus."

–Mae Brown
Assistant Vice Chancellor for Admissions
University of California, San Diego



Seven Trees Community Center, Multi-Purpose Auditorium, Performing Arts Studio, and Branch Library

San Jose

Construction Cost: $30,000,000

Key Staff Involved: Rob Quigley, Bob Dickens, Maryanne Welton

Services Provided: Community Participation, Program Refinement, Master Plan, Design Through Construction, LEED Certification, Public Artist

Project was 15% under budget and met the projected schedule

Reference: Rodney Rapson, City of San Jose, 408.535.8410, rodney.rapson@sanjoseca.gov

Awards:
APWA, National Project of the Year
AIA Santa Clara Valley, Citation
APWA Silicon Valley, Project of the Year

This 60,000 sf, joint-use facility represents a new building type for the city of San José: a combination library-community center that not only centralizes educational, fitness, recreational, and social programs in one place, but also creates a venue for community activities, special events, and celebrations.

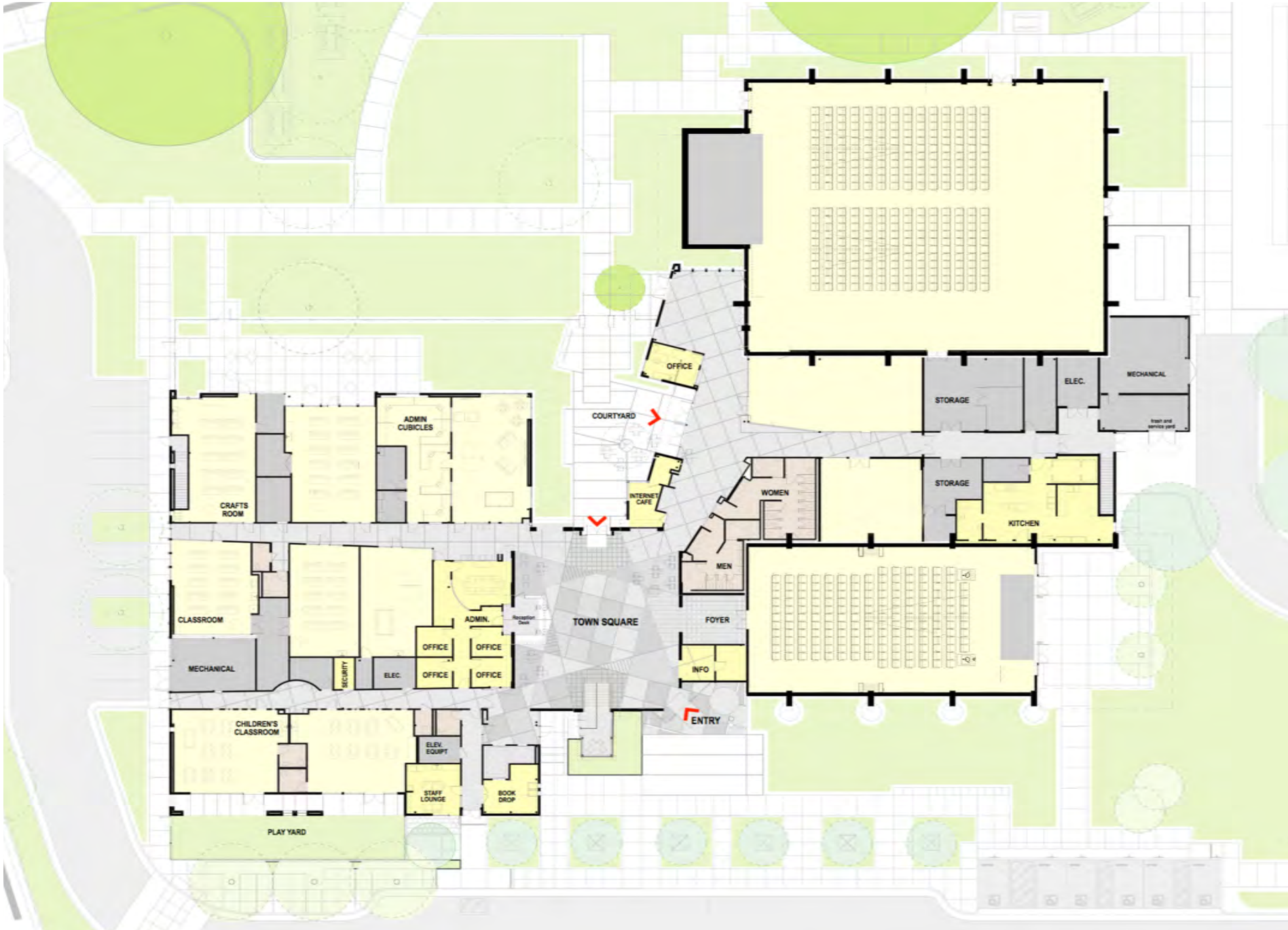
The new plan creates a unified civic complex by sealing off part of a street, making the joint-use building the focal point, and installing pedestrian walkways to connect to the park and a nearby elementary school.

Visitors to the building are drawn in through the "Town Square," an atrium-like lobby with canted walls, high ceilings, an information desk, and an Internet cafe. Designed to encourage public interaction, the Town Square becomes the symbolic heart of the community. As the hub for all circulation within the building, it is an ideal people-watching space; visual security is enhanced through the generous use of interior glazing and carefully aligned sight lines.

From the Town Square, visitors can enter the large banquet room or navigate to the other main floor attractions: gymnasium, fitness room, and weight room; spaces for classes, meetings, games, and crafts; a children's resource center; and a performing arts studio for music and dance.

A glass-enclosed staircase in the Town Square leads to the second-floor 20,000 sf library. Community spaces within the library include the teen room, group study rooms, Tech Center, Family Place, children's and adult collections, and the Family Learning Center. The Quiet Room and Living Room, complete with a fireplace and surrounded by the periodicals collection, are glass boxes that overlook the Town Square.

A commitment to sustainability helped guide the design process and resulted in a LEED Gold rating.


OFFICE
STORAGE
ELEC.
MECHANICAL
train and service yard
COURTYARD
ADMIN CUBICLES
CRAFTS ROOM
INTERNET CAFE
WOMEN
STORAGE
KITCHEN
MEN
CLASSROOM
ADMIN.
Reception Desk
TOWN SQUARE
FOYER
OFFICE
OFFICE
MECHANICAL
SECURITY
ELEC.
OFFICE
OFFICE
INFO
ENTRY
CHILDREN'S CLASSROOM
ELEV. EQUIPT
STAFF LOUNGE
BOOK DROP
PLAY YARD

Project Team, Organization Chart and Hourly Matrix

Rob Wellington Quigley, FAIA

"Rob, you continue to impress me with your level of dedication to this community library project. You have been extremely generous with your time and I appreciate the numerous meetings you have attended, which helped finalize several donor commitments. Your passion for serving the community and artful ability to articulate the vision for this project is inspiring both to our team and to donors across the region."

– Jay Hill, San Diego Library Foundation

Project Team

In 40 years of designing public buildings, Rob Wellington Quigley, FAIA has accumulated the type of experience that makes RWQ a valuable partner to cities and communities wishing to build a civic amenity. We are adept at working with staff, users and the community in a participatory process, both to gather input during programming and design, and to review the project as it progresses. Our interactive process has proven highly effective in creating "ownership" of projects.

Our team brings a unique set of qualifications to library lecture halls and multi-use auditoriums in public facilities. We have consistently received high acclaim for our designs, but we are also skilled problem solvers and rigorous analysts, successfully responding to complex programs on many types of projects. We are experienced working with and listening to the needs of client groups and crafting workable solutions that address unique issues and requirements. Effective outreach and communication are essential during the design and approval process when collaborating with communities and project planning committees. While our work is consistently celebrated for its design quality, our efforts are grounded in concern for budget and schedule.

To ensure a successful project that meets client needs, adheres to budgetary controls, and produces excellence in design, we have assembled a team with specific experience in the design of lecture halls, auditoriums, libraries and public buildings. Our team has a strong understanding of local codes, ordinances, regulations, policies, and permitting, and has committed their staff to this project for its duration.

The design team we have assembled for your project features established and long-term continuity with staff and consultants working together over many years. Rob Quigley would lead the design efforts and "future proof" the design by making certain that functional, operational, and technical requirements are evaluated and included in the final project. He will also be involved in reviewing each step of the design with an eye towards flexible service operations.

The roles of individual team members are described below. Please review resumes for our team's expertise relevant to your project.

Rob Quigley - Principal-In-Charge

Rob Quigley will be the principal-in-charge and involved in every phase of the project. He will be present at all team meetings, and will take a lead role in all community meetings and presentations to LLH Design Committee, staff and City Council. He will collaborate with the other members of the design team to develop the preliminary design concepts, using diagrams and sketches to explore a range of options. He will lead the community meeting process and have an active role throughout the design, construction document and construction administration process.

Maryanne Welton - Design Team Leader | Project Manager

Maryanne Welton will be the project manager and contact person for day-to-day communication with the design team. She will be responsible for preparing the overall program, and after the program for organizing and coordinating input from the consultants, and client group in team meetings, public presentations, and the community meetings. She will monitor the scope of work, schedule, and budget; provide the necessary documentation for the city review process; and manage design consultants.

Maryanne has been a project manager with Rob's firm for 40 years and opened the Palo Alto office in 1994. Her work has focused on civic buildings including libraries and community centers. She specializes in projects that involve consensus building participatory design workshops and as a LEED accredited professional, she ensures that projects meet LEED and/or CalGreen design criteria.

Bob Dickens - Project Architect | Designer

Bob Dickens will be the project architect and work closely with Rob during the conceptual design phases of the project. He will also oversee the coordination and production of preliminary and schematic design documents through working drawings and construction administration. His responsibilities include coordinating the technical interface between design team members and client group, quality control review process, and permitting the project with local agencies. Bob has been with the firm for 40 years and worked on several joint-use libraries and community centers.

Rob Wellington Quigley, FAIA

Relevant experience for Rob Quigley, Maryanne Welton and Bob Dickens:

- San Diego Central Library, Auditorium, Branch Library and Charter High School, San Diego, CA
- Student Services Center and Multi-Use Auditorium, UCSD
- The New Children's Museum, Multi-Purpose Performance Space and Charter School, San Diego, CA
- Seven Trees Community Center, Multi-Purpose Auditorium and Branch Library, San Jose, CA
- Bascom Branch Library and Community Center, San Jose, CA
- West Valley Branch Library, San Jose, CA
- Sherman Heights Community Center and Child Education Center, San Diego, CA

Our proposed consultant team consists of following:

LandLab - landscape design
Neil Hadley, Principal | Brian Garrett, Project Manager

DCI Engineers - structural engineering
Ryan Slaybaugh, PE, SE | Sandra Biddulph, PE, SE, LEED AP

BKF Engineers - civil engineering and surveying
Bruce Kirby, PE, QSD/QSP | David Thresh, PLS

Leighton Consulting Inc. - geotechnical engineering
Joe Roe, PG, CEG | John Haertle, PE, GE

MA Engineers - mechanical and plumbing engineering
Michael Akavan, PE, LEED AP | Roy C. Campbell, PE, LEED AP

Michael Wall Engineering - electrical engineering and lighting design
Mike Wall | Brian Hahnlen, LC, EIT

Veneklasen Associates - acoustical engineering, AV, IT, Security
John J. Loverde, Principal | Jack Shimizu, Associate Prinicpal

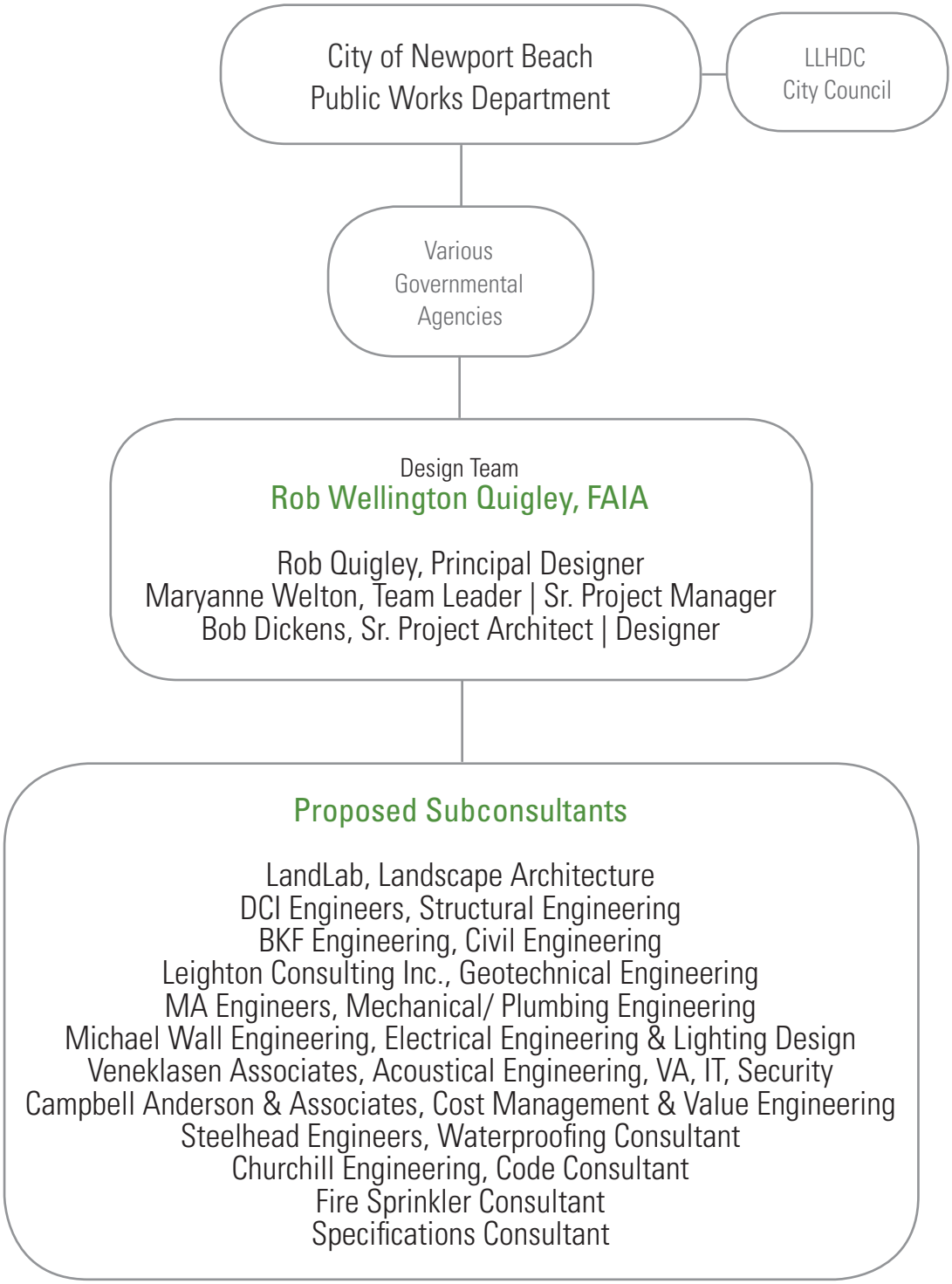
Campbell Anderson & Associates, Inc. - cost management and value engineering
Graham C. Anderson, MRICS

Steelhead Engineers - waterproofing consultant
Churchill Engineering - code consultant
Fire Sprinkler Consultant
Specifications Consultant

The design professionals are licensed by the State of California and have a familiarity and expertise with applicable codes and regulations. The consultant's anticpated effort, based on the understanding of the scope of work outlined in the RFP, is outlined in each of their fee proposals. Consultant resumes are included in the proposal outlining their relevant experience to this project.

The timing of this project fits well with our staff availability. We look forward to the opportunity to share with you our capacity to insure quality and timely performance, our track record meeting deadlines and working within budget, and our clear approach to providing the outlined scope of services.

Newport Beach Library Lecture Hall Building
Organization Chart



Rob Quigley

Rob Wellington Quigley, FAIA

Design Principal

License
Registered Architect - California, C-8691

Education
Bachelor of Architecture, University of Utah 1969

Design Review Boards
University of California, San Diego
University of California, Riverside

Rob Quigley, principal, with offices in San Diego and Palo Alto, has more than 40 years of experience producing award winning buildings throughout the western United States and Japan. A nationally recognized designer, Rob's portfolio includes a wide range of projects such as community centers, libraries, academic buildings, and cultural centers; high-rise towers, mixed-use residential, and custom homes; and master plans for cities, neighborhoods, campuses, parks, waterfronts, and transit corridors. Rob's vision has also been tapped for the development of Design Guidelines for urban, suburban, and university environments.

A hallmark of Rob's practice is his ability to build consensus, whether during a public participation process or with a multiple-client project. His consensus methods have become models for the profession as well as the community; his designs are flash points for community pride.

Upon earning his Bachelor's of Architecture in 1969, Rob entered the Peace Corps, where he developed his skills designing and building affordable housing in under served areas of Chile. After settling in San Diego and opening his own architecture and planning firm, Rob became a pioneer in the design of architecturally significant yet affordable housing for the working poor. He was also an early leader in the sustainable design movement, designing solar-powered homes in the 1970s—long before "green" became an industry standard.

Relevant projects include the San Diego New Central Library, Theatre and Auditorium; UCSD's Student Services Center and Multi-Purpose Auditorium; The New Children's Museum and Multi-Purpose Performance Space; and two joint-use library and community center projects with multi-purpose auditoriums for the City of San Jose.

Honors and Recognition
Over 70 Awards for Design Excellence from the AIA
Maybeck Award, AIA California Council, 2005
Firm Award, AIA California Council, 1995
The Irving Gill Award, AIA San Diego, 1997
Rizzoli monograph, 1996
Time Magazine, "The Best Designs of 1992," January 1993
Distinguished Alumni Award, UOU 1993
Presidential Commendation for Exemplary Community Service, 1988
Fellow, Institute for Urban Design, 1996
Headliner of the Year in Architecture, San Diego Press Club, 1995

Partial List of Project Awards
Bascom Library and Community Center, AIA Merit Award
Seven Trees Community Center and Branch Library, APWA Project of the Year Award
Seven Trees Community Center and Branch Library, AIA Santa Clara County Award
The New Children's Museum, AIA California Council Honor Award
The New Children's Museum, AIA Committee on the Environment Award
San Diego Central Library, Library Journal Landmark Library Winner
San Diego Central Library, AISC National Honor Award
San Diego Central Library, AIA Citation Award

Bob Dickens

Rob Wellington Quigley, FAIA
Project Architect

License
Registered Architect
California, C12568

Education
Bachelor of Architecture,
University of Cincinnati, Ohio

Bob Dickens has been with Rob Wellington Quigley since its founding. As senior architect and designer, he has coordinated the efforts for numerous large, complex, high-profile public projects. He brings to the team technical expertise in state-of-the-art design, electronic information systems, and environmentally sound buildings. Bob's long-term collaboration with Rob Quigley on civic, institutional, commercial and residential projects has been recognized with coverage in professional and architecture-related journals for their distinguished design and innovative ideas. Bob will be the project architect and oversee the coordination and production of design through construction documents and construction administration.

Relevant Projects
San Diego Central Library, Auditorium, Branch Library and Charter High School
Student Services Center and Multi-Use Auditorium, UCSD
The New Children's Museum, Multi-Purpose Performance Space and Charter School, San Diego, CA
Seven Trees Community Center, Multi-Prupose Auditorium and Branch Library, San Jose
Sherman Heights Community Center and Multi-Purpose Auditorium, San Diego
Bascom Branch Library and Community Center, San Jose
West Valley Branch Library, San Jose
Almaden Library and Community Center Master Plan, San Jose

Maryanne Welton, LEED AP, BD+C

Rob Wellington Quigley, FAIA
Project Manager

Education
Georgetown University

Maryanne Welton has been a project manager and programmer with Rob Wellington Quigley, FAIA for 40 years. Her experience in these roles has focused on civic, educational and multi-family projects, each with complex planning processes and a focus on sustainable design. As the leader of the design team and mainpoint of contact with the client group, she has the ability to facilitate the flow of information from various sources needed to develop complex needs assessments, building programs and community facilities with phased schedules and complicated review and entitlement processes.

Maryanne is currently managing a joint-use facility for San Diego Unified School District and Ocean Discovery Institute in San Diego, intended as a national role model for environmentally sensitive and sustainable design.

Maryanne Welton has been instrumental in leading design and consultant teams on multiple LEED projects during the last 12 years.

Relevant Projects
San Diego Central Library, Auditorium, Branch Library and Charter High School
Student Services Center and Multi-Use Auditorium, UCSD
The New Children's Museum, Multi-Purpose Performance Space and Charter School, San Diego, CA
Seven Trees Community Center, Multi-Prupose Auditorium and Branch Library, San Jose
Sherman Heights Community Center and Multi-Purpose Auditorium, San Diego
Bascom Branch Library and Community Center, San Jose
West Valley Branch Library, San Jose
Almaden Library and Community Center Master Plan, San Jose

Neil C Hadley California LLA 4654, ASLA

Principal / Landscape Architect / Urban Designer

Education

Bachelor of Landscape Architecture,
University of Guelph,
Guelph, Ontario, 1994

Student Awards

ASLA Award of Honor BLA, 1994

Professional Awards With landLAB

UCLA South Campus Student Center
SD ASLA Merit Award 2012

CSU San Marcos Student Union
SD ASLA Merit Award 2014

Las Colinas Detention & Reentry Facility
SD ASLA Merit Award 2014

Qualcomm Pacific Center
SD ASLA Honor Award 2016

UCSD Revelle Neighborhood Renovation
SD ASLA Merit Award 2016

Qualcomm Pacific Center
SD Orchid for Landscape Architecture 2016

Professional Affiliations

State of California Licensed Landscape Architect 4654

UCSD Open Space Committee

American Society of Landscape Architects

USGBC

Career

landLAB, San Diego: 2007- Current

Spurlock Poirier (SPLA) San Diego: 8.5 years

Van Dyke Partnership, San Diego: 1 year

Burton & Associates, San Diego: 1 year

HWND Toronto, Ontario, Canada 2.5 years

Sno Engineering, Whistler, BC 1.5 years

As principal of the landscape architecture and environmental design office landLAB, Neil Hadley has over 25 years' experience in landscape architecture, campus planning, urban design, and environmental planning. Hadley's projects consistently demonstrate an attention to detail while creating landscapes that connect the built form to its surrounding environmental context, and he strives passionately for a strong collaboration between the consultant team and the client.

landLAB has had the opportunity to collaborate with Rob Quigley Architects on the UCSD Fire Station competition and on the East Blok Senior Housing project in San Diego. LandLAB has worked on Lincoln Acres Library and Community Center and the Lakeside Library as well, landLAB for has worked at numerous campuses in the Cal State System, including CSU Long Beach, CSU Fullerton, CSU San Marcos, San Diego State University, CSU Northridge, as well as UC system, UCSD and UCLA collaborating with Architects, as well as taking the role of Prime Consultant on associated open space environments and courtyards.

Selected project experience includes (+ **LEED**/ **DB** design build):

East Blok Seniors Housing, San Diego, CA (in progress)
Lakeside Library, Lakeside, CA (in progress) **(DB)** (+)
CSUN G6 Parking Structure, Northridge, CA (In progress)**(DB)**
CSUN P3 Hotel, Northridge, CA (In progress) **(DB) (+)**
Ford Road Residential, Newport Beach CA (in progress)
Mira Costa College San Elijo Student Services Building, Encinitas, CA (in progress)
CSU Long Beach Student Housing, Long Beach CA (in progress) **(DB) (+)**
Loyola Marymount Student Housing, Los Angeles, CA (in progress) **(DB) (+)**
Harvey Mudd College Academic Building One, Pomona, CA (in progress) (DB) (+)
UCSD Canyon View Cafe, San Diego, CA (in progress)
Riverside City College Masterplan, Riverside, **CA** (2018)
Southwestern College Masterplan, Chula Vista, CA (2018)
CSU Dominguez Hills Student Housing, San Diego, CA (in progress)**(DB)(+)**
University of La Verne Student Housing, La Verne, CA (2018)**(DB)**(+)
UCSD Center for Novel Therapeutics, San Diego, CA (2019)**(DB)**(+)
SDSU Tula Tenochca Conference Center, Amenity Building, San Diego, CA (2018)**(DB)** (+)
CSU Fullerton SHCC, Fullerton, CA (2018) **(DB)**
University of San Diego Masterplan Update, San Diego, CA (2016)
CSU Fullerton Student Union, Fullerton CA (2016) **(DB)(+)**
UCSD Athena Parking Structure, San Diego, CA (2016)**(DB)**(+)
CSU San Marcos Clark Field House Expansion, San Marcos, CA (2016)**(DB)(+)**
SDSU Zura Hall Remodel, San Diego, CA (2015)**(DB)**(+)
UCSD Argo Hall Residence Renovation, San Diego, CA (2015)
CSU San Marcos Student Union, San Marcos, CA (2014) **(DB)(+)**
San Diego County Women's Detention Facility, Santee, CA (2014) (DB)(+)
UCSD Revelle Dining Facility, San Diego CA (2014)
UCSD Rady School of Management PH II, San Diego, CA (2012)**(+)**
UCLA South Campus Student Center, Los Angeles, CA (2012)(+)
Lincoln Acres Branch Library, National City, CA (2012)

References:

Robert Schulz, SDSU Assoc. Vice Pres. of Real Estate, Planning & Development
Ph. 619-594-6017. rschulz@sdsu.edu

Todd Pitman, Assistant Director Physical Planning / Campus Landscape Architect
Ph. 858.822.3791. tdpitamn@ucsd.edu

Eric T Heggen, Sr. Project Manager, UCLA
Ph 310.267.4823. eheggen@capnet.ucla.edu

landLAB
environmental design

Brian W Garrett California LLA 5807

Project Manager / Landscape Architect

Brian is project manager/landscape architect in the landscape architecture and environmental design office of landLAB, and has over 16 years' experience in landscape construction, design and construction administration. He excels in multidisciplinary coordination and design problem solving. He has been involved on a has a wide range projects from large scale Urban Revitalization, Hospitals, Residential Towers, Parks, Schools and Residential Projects.

Brian's approach to design combines the cultural and environmental, with a keen sense for constructability. He is always striving to understand social interactions and experiences that will be part of the design, while paying close attention to the cultural history and the natural processes on the site.

Education

Bachelor of Arts in Anthropology,
University of Washington,
Seattle, Washington, 1998

Master of Landscape Architecture,
University of Arizona,
Tucson, Arizona, 2003

Professional Affiliations

State of California Licensed Landscape Architect 5807

Student Awards

ASLA Merit Award, 2003

Dobras Outstanding Service Award, 2003

Governor's Achievement Award, 2002

Professional Awards

ASLA Merit Award, Desert Botanical Garden Entry

ASLA Merit Award, Montevalle Park

Mercado Design Competition

Urban Revitalization Competition

ASLA Merit Ward UCLA SCSC

UCSD Revelle Neighborhood Renovation
SD ASLA Merit Award 2016

Career

landLAB: 2009-current

Spurlock Poirier (SPLA)

San Diego, CA: 5 years

Garrett Landscape Construction

New York, NY: 2 years

Selected project experience includes (+ - LEED) (DB - Design Build):

East Blok Senior + Low Income Housing, San Diego, CA (in progress)
Los Laureles Canyon Masterplan, Tijuana, BC, Mexico (in progress)
Legacy International Center, San Diego, CA (In progress) (**DB**)(**+**)
Mira Costa College, San Elijo Campus Student Services Building and Quad (In progress) (+)
UCSD Price Center West, San Diego, CA (In progress)
UCSD Scripps Trails and Restoration, San Diego CA (In progress)
Hilltop+ Euclid Affordable Housing, San Diego, CA (in progress)
The Guild Hotel, 500 W. Broadway, San Diego, CA (In progress)
University of La Verne Interfaith Center, La Verne, CA (in progress) (**+**)
UCSD Center for Novel Therapeutics, San Diego, CA (2019)(**DB**)(**+**)
Congregation Beth AM Preschool and Gardens, San Diego, CA (2018)
Alexan Residential Suites, San Diego, CA (2018)
Hugo Sanchez Foundation Stadium Planning Study (2016)
Imperial County Soccer Park Master Plan (2016)
San Marcos Unified K-8, San Marcos, CA **DB** (2015)
UCSD Argo Hall Residence Renovation, San Diego, CA (2015)
Howard Hughes Corporate Campus, Los Angeles, CA **DB** (2015)
UCSD Douglas Hall Bridge Replacement, San Diego, CA (2015)
SEMPRA Energy Headquarters, San Diego, CA (2015)
UCSD Career Services Exterior Refresh, San Diego, CA (2015)
UCSD Revelle Café, San Diego, CA (2014)
UCSD Blake Hall Residence, San Diego CA (2013)
Kaiser Hospital Carmel Valley M.O.B, San Diego, CA (2013)
UCLA South Campus Student Center, Los Angeles, CA (2012) (**+**)
UCSD Rady School of Management PH II, San Diego, CA (2012)
Lincoln Acres Branch Library, National City, CA (2012)
UCSD Social Sciences Courtyards, San Diego, CA (2010)
UCSD Revelle Student Apartments, San Diego, California (2008, with SPLA)
Desert Botanical Garden Entry Garden and 20 Year Master Plan, Phoenix, Arizona (2008, with SPLA)
Palomar Hospital, San Diego, California (2007, with SPLA)
Montevalle Community Park, Chula Vista, California (2006 with SPLA)

702 wrelton drive . san diego . california . 92109 . 858.483.9817

bgarrett@land-lab.com . www.land-lab.com

RYAN SLAYBAUGH, PE, SE

SAN DIEGO, CALIFORNIA

Ryan Slaybaugh provides innovative structural design solutions for a variety of projects. Ryan's leadership within the firm ensures DCI's technical staff operate within the highest design standards and current building codes. His project dedication is demonstrated through his availability to the design team and project team, as a whole; and with attention to design flexibility, Ryan provides structural solutions that benefit construction budget and scheduling.

PROFESSIONAL TITLE:
Principal

EDUCATION:
B.S., Civil Engineering, Structural Concentration, Gonzaga University, 1998

REGISTRATION:
Structural: California, Washington

PROFESSIONAL SOCIETIES:
Structural Engineers Association of San Diego (SEAOSD)
San Diego Architectural Foundation (SDAF)
Urban Land Institute (ULI)

THE ROCK ACADEMY & CHURCH, San Diego, CA, Gensler;
The Rock Academy and Church is an integral piece of the redevelopment project at Liberty Station, in the Point Loma area of San Diego. The Rock project includes a new 4,500 seat sanctuary, with cantilevered balcony seating and administrative space. In addition, the project also consists of the renovation and expansion of an existing Navy training building into a new 3-story, 2,000 student school.

CHINESE THEATRE, San Diego, CA, ACRM

OMC CATHOLIC CHURCH, La Jolla, CA, M.W. Steele

OCEAN AVENUE SOUTH, Santa Monica, CA, The Related Companies

UC IRVINE | MESA COURT, Irvine, CA, Mithun, Hensel Phelps

UC SAN DIEGO | MESA NUEVA CAMPUS HOUSING, La Jolla, CA, Mithun

UC SAN DIEGO | NUEVO WEST HOUSING, La Jolla, CA, Mithun

UC SAN DIEGO | NUEVO EAST HOUSING, La Jolla, CA, Mithun

KETTNER & HAWTHORNE, San Diego, CA, Gensler

ALEXAN, San Diego, CA, JDWA, Trammel Crow Residential

ATMOSPHERE, San Diego, CA, JWDA Associates, Wakeland

15TH & ISLAND MIXED-USE, San Diego, CA, Carrier Johnson + Culture

LUMA | 520 W. ASH, San Diego, CA, Carrier Johnson + Culture

KI 330 13TH STREET MIXED-USE, San Diego, CA, LARGE Architecture

THE Q, San Diego, CA, Jonathan Segal Architects, FAIA

PARK PLACE APARTMENTS, Irvine, CA, The Irvine Company, MVE & Partners

PACIFIC RIDGE APARTMENTS, San Diego, CA, Carrier Johnson + Culture

PASEO DE MISSION HILLS, San Diego, CA, M.W. Steele

CARABELLA AT WARNER CENTER, Woodland Hills, CA, Fairview Residential, LLC

SANDRA BIDDULPH, PE, SE, LEED ® AP

IRVINE, CALIFORNIA

PROFESSIONAL TITLE:
Principal

EDUCATION:
B.S. Architectural Engineering; California Polytechnic State University, San Luis Obispo, 1989

REGISTRATION:
Structural: CA, WA, HI

PROFESSIONAL SOCIETIES:
Structural Engineers Association of Southern California (SEAOSC), Board of Directors

Structural Engineers Association of California (SEAOC), Past Board of Directors

Structural Engineers Association of San Diego (SEAOSD), Past President

Commercial Real Estate Women (CREW)

Sandra Biddulph leverages her more than 25 years of experience in structural design, materials, building types, and building codes and regulations to deliver superior project solutions. Whether it's seismic and structural design of steel, concrete, masonry, and wood building structures, Sandra works to achieve budget and schedule goals while communicating imperative information relative to all members of the project team throughout project development.

Her work has included lateral system development for significant high-rise and mid-rise steel and concrete structures, both locally and overseas, continuously championing the application of the latest technologies, teamwork, and proactive design solutions.

Sandra approaches each project with a commitment to excellence.

UC IRVINE | ANTEATER LEARNING PAVILION, Irvine, CA, LMN Atchitects; UC Irvine's new Anteater Learning Pavilion and connected three-story classroom building will address the influx of students, faculty, and research opportunities on campus for the next 10 years. The pavilion will house two lecture halls: a 400-seat hall at ground level and a 250-seat hall on the second floor.

MULTI-USE OPERATIONAL FITNESS AREA, Marine Corps Air Ground Combat Center- Palms, CA

BACHELOR ENLISTED QUARTERS PACKAGE 4, Marine Corps Base - Camp Pendleton, CA

BACHELOR ENLISTED QUARTERS PACKAGE 7, Marine Corps Base - Camp Pendleton, CA

CO-GENERATION FACILITY, Marine Corps Air Force Ground Combat Center - Palms, CA

NEWPORT HARBOR YACHT CLUB CLUBHOUSE, Newport Beach, CA, MVE & Partners

OXNARD STREET MIXED-USE, Los Angeles, CA, Architects Orange

RANCHO CORRALES APARTMENTS CLUBHOUSE, Simi Valley, CA, Sares Regis Group

VISTA POINTE APARTMENTS CLUBHOUSE, Covina, CA, Sares-Regis Group

CATALINA TRAILHEAD VISITOR CENTER, Avalon, CA, MVE & Partners

SPECTRUM GROUP STUDENT HOUSING/MIXED-USE, Los Angeles, CA, SVA Architects

ALBRIGHT CAMPUS, Los Gatos, CA, Form4 Architecture

ANAHEIM CENTER, Anaheim, CA, DNA Design and Architecture

THEATER & PERFORMING ARTS EXPERIENCE

ANTEATER PAVILION

THE ROCK CHURCH

MOSCONE CENTER

THE ROCK ACADEMY AND CHURCH, San Diego, CA, The Rock Church

UC IRVINE | ANTEATER PAVILION, Irvine, CA, LMN Architects

UCSD | GALBRAITH HALL, San Diego, CA, Mortenson Construction

CAROLINA THEATRE EXPANSION | IC HOTEL, Charlotte, NC, DLR Group & Stonehill Taylor Architects

CARNEGIE SCIENCE THEATER CENTER | OMNI THEATER, Pittsburgh, PN, Indovine Associates Architects

YERBA CENTER FOR THE ARTS, San Francisco, CA, Fumiko Maki, James Stewart Polshek and Todd Schliemann

THEATER AT NETFLIX CAMPUS, Los Gatos, CA, Form4 Architecture

MOSCONE CENTER WEST, San Francisco, CA, Gensler, City & County of San Francisco

FERRY BUILDING, San Francisco, CA, Perkins + Will

ST. ANDREWS PERFORMING ARTS CENTER, Austin, TX, STG Design

MONO WIND CASINO, Auberry, CA, Group West Associates, Inc Industrial

ONTARIO IMAX PLATFORM, Ontario, CA, E. Kent Halvorson, Inc.

NATIONAL GEOGRAPHIC IMAX THEATRE, Victoria, BC, Fraley / Stricker Architects

ARIZONA MILLS IMAX, Phoenix, AZ, E. Kent Halvorson, Inc.

SALT LAKE CITY IMAX, Salt Lake City, UT, Fraley / Stricker Architects, P.S.

DESERT IMAX, Cathedral City, CA, Stricker Cato Murphy Architects

NAPA IMAX, Yountville, CA, Stricker Cato Murphy Architects

PERFORMANCE HALL AT SOMA TOWERS, Bellevue, CA, Su Development

KIRKLAND PERFORMANCE CENTER, Kirkland, WA, City of Kirkland Administrative Services

GONZAGA THEATRE ARTS BUILDING, Spokane, WA, ALSC Architects

GONZAGA PERFORMING ARTS, Spokane, WA, Pfeiffer Partners Architects, Inc.

WOODINVILLE CINEPLEX ODEON, Woodinville, WA, Fuller Sears and Smith

THREE RIVERS CONVENTION CENTER, Kennewick, WA, Kennewick Public Facilities District

NORTHERN QUEST CASINO OUTDOOR CONCERT VENUE, Airway Heights, WA, Kalispel Tribe

NATIONAL OR TRAIL INTERPRETIVE CENTER, Baker City, OR, The Portico Group

HERMISTON THEATER, Hermiston, OR, Mountain States Construction Co.

EVERETT THEATER REMODEL, Everett, WA, Steadfast Companies

PORTLAND BALLET, Portland, OR, Connect Architecture

THEATER AT LLOYD CENTER, Portland, OR, LDA Design Group LLC

MARSHFIELDS AUDITORIUM, Medford, OR, Medford School District

MAJESTIC THEATER RENOVATION, Corvallis, OR, City of Corvallis

BEAVERTON SCHOOL DISTRICT SCHOOL THEATRE UPGRADE, Beaverton, OR, Opsis Architecture

BRUCE KIRBY, PE, QSD/QSP

CIVIL PROJECT MANAGER

Bruce Kirby has directed site engineering land developments for many civic centers, educational campuses, institutional, retail, commercial, industrial, and residential projects throughout southern California. As a professional engineer, Bruce has provided civil engineering services including preliminary engineering and backbone engineering design for the grading, roadway, storm drain, sewer and water infrastructure.

EDUCATION

B.S., Civil Engineering, California Polytechnic University, Pomona

REGISTRATION

Professional Civil Engineer CA No. 42393

QUALIFICATIONS

Qualified SWPPP Developer (QSD) & Practitioner (QSP) CA, No. 20900

Envision Sustainability Professional (ENV SP)

TOTAL YEARS EXPERIENCE

36 years, 2 yr with BKF

SELECT PROJECT EXPERIENCE

Newport Beach Junior Lifeguard Building, Newport Beach, CA

- Project Manager for the proposed project to construct a new Junior Lifeguard Building.
- New building will be located in the same general area as the current junior lifeguard building, on the sand 275 feet southeast of the Balboa Pier near the A Street public parking lot.
- Existing building is within Zone VE with a base flood elevation of 21 feet above mean sea level and the new building location will be outside the Zone VE.
- Intent is to replace the parking that is being removed from the A Street Parking Lot, and to match or increase the number of parking stalls in the Main Parking Lot.
- Concept is to redesign the Main Street Parking Lot by removing the pay kiosk area and restripe the lot, to get more parking and add 25 to 35 parking spaces, and to be able to show that if the Main Street Parking Lot is reconfigured, the new building will not leave a parking deficit.

Vanguard University, Student Center, Costa Mesa, CA

- Project Manager responsible for preliminary and final design engineering for the proposed project
- Demolition of existing buildings near the center of campus and replacement with a new 50,000 sf Student Union Building
- Limits of work consist of a new building and the associated new plaza/gathering spaces will be created for outdoor activities.
- Water Quality basins are designed offsite to address current and proposed stormwater runoff.

Central Park, TownCenter Village, Rancho Santa Margarita, CA

- Project Manager responsible for providing engineering and design services
- Project included a (10) acre central park, with the adjacent civic center with library site
- The project included the preparation of mass grading and rough grading plans, and site drainage reports; preparing the backbone street and arterial highway design
- Backbone utilities included sewer, water and storm drain improvement plans; performing hydrology and hydraulic studies; and coordinating final mapping

El Toro High School Modernization, Lake Forest, CA

- Project Manager responsible for providing civil engineering design services for this campus project
- Building expansion, Library remodel, administration building entrance upgrade on a portion of the existing high school
- Civil Engineering design included design all grading, pavement/hardscape (including sloped walks & ramps, if needed) & related drainage elements for the project, including necessary vertical & horizontal controls for compliance to Path-of-Travel (POT), to the ADA Parking, Drop-off/Pick-Up Lanes and to the affected Fire Lane portions

Rancho Santa Margarita Intermediate School Modernization, RSM, CA

- Project Manager responsible for providing civil engineering design services for this campus project that includes a Building B remodel of the administration building to replace a library with updated computer labs
- Civil Engineering design included design all grading, pavement/hardscape (including sloped walks & ramps, if needed) & related drainage elements for the project, including necessary vertical & horizontal controls for compliance to Path-of-Travel (POT), to the ADA Parking, Drop-off/Pick-Up Lanes and to the affected Fire Lane portions

EDUCATION
Surveying, Diablo Valley College, Pleasant Hill, CA

REGISTRATION
Professional Land Surveyor, CA No. 6868

TOTAL YEARS EXPERIENCE
36 years, 29 yrs with BKF

DAVIS THRESH, PLS

SURVEY PROJECT MANAGER

Davis Thresh is a Survey Principal, overseeing BKF's survey group. His survey experience spans over 35 years. Throughout his tenure with BKF, he has played a key role in many projects in both the public and private sectors. His responsibility involves project management of all survey projects including scheduling, budget tracking, dispatching, supervision of crews, and coordination of the office and field surveyors. Davis has directly overseen the topographic surveys, construction staking survey and right of way acquisition and mapping for many of the firm's roadway and highway projects.

SELECT PROJECT EXPERIENCE

Long Beach Civic Center, Long Beach, CA
- Project features a new library, civic plaza, central utility plant, subterranean parking spaces for 469 vehicles, 4.9 acre city park and mixed use retail, residential and hotel
- Public-Private-Partnership (P3) located in the downtown core of the City of Long Beach
- Site control, shoring layout, settlement monitoring, topographic survey, grid line control, MEP control
- Developer led design build project

Redevelopment Agency of the City of San Jose, San Jose CA
- Monterey corridor boundary and topographic survey
- Endenvale topographic survey
- Confluence point boundary and topographic survey
- Veterans Memorial site
- Fountain Alley Mall
- Guadalupe River Park enhancement
- The California Theatre

Fresno Sisk Courthouse Renovation, Fresno, CA
- Survey Manager responsible for providing surveying services for the $40,000,000 renovation of the existing courthouse facility
- Surveying services included a complete topographic survey and mapping of the existing site
- Aspects including the building footprint, entry plaza details and parking facilities
- Existing utilities were also mapped for evaluation

OTHER RELEVANT PROJECTS

- Alum Rock Branch Library
- Solari Community Center & Library
- Evergreen Valley College, Library & Tech Center

JOE ROE, PG, CEG

Principal Geologist

Education

BS, Geology, California State University, Fullerton, 2000
Desert Storm Veteran United States Navy

Registration

California Certified Engineering Geologist – 2456
California Professional Geologist - 7921

Mr. Roe has extensive experience managing and conducting field geotechnical investigations for various projects including slope stabilization, Alquist-Priolo fault investigations, mass grading, piles, caissons, asphalt paving, footings, utility backfills, drill logging, rock coring, test trenching, micro-tunneling, monitoring and pump well installations including forensic geotechnical and geologic investigations for litigation support. He has participated in many aspects of project development from project planning, investigation, construction services, and project management and business development.

His experience includes planning and directing subsurface investigations, earth and rock material characterization, sampling and laboratory soil testing; interpreting and analyzing data and test results, performing geotechnical analyses pertaining to foundation, slope stability, seepage, groundwater, instrumentation and construction monitoring, preparing cost estimates and technical reports. He has worked extensively with local and State agencies to develop geotechnical recommendations for deep and shallow fill sites, remedial grading and mitigation of active faults, shear zones, landslides and debris flows.

- **Newport Beach City Hall, Newport Beach, CA.** Project Geologist for the new city hall buildings, parking structure and park site. Heavy grading which included over 30 feet of cut into bedrock adjacent to MacArthur Boulevard was performed during construction for the new city hall and parking structure. Shoring was required to withstand geologic surcharge from bedrock as well as traffic loading on the roadways.
- **Big Canyon Sewer Replacement City of Newport Beach, CA.** Project Geologist for geotechnical investigation intended to aid in the design and construction of a new 15-inch sewer line within the Big Canyon Country Club from Jamboree Road to MacArthur Boulevard. Investigation consisted of planning and implementing a geotechnical investigation along the planned alignment to evaluate the geotechnical constraints, hazards and opportunities inorder to provide geotechnical recommendations to aid in the design and construction of the proposed project.
- **Beverly Hills Unified School District, Beverly Hills, CA.** Project Manager and Lead Engineering Geologist for extensive and scrutinized fault study on Beverly Hills High School campus in response to the West Side Subway Tunnel study. After review of available data, developed a workplan that included 800 lf of 15-20 depth trenches along a Methane Buffer Zone, continuous east west core boring and cone penetrometer (CPT) transects, geophysical survey, and multifarious laboratory testing. During the site investigation he logged core borings and trenches to evaluate type and nature of subsurface stratigraphy fault activity, and accompanied CGS and USGS geologists observers. The report presented a contradictory opinion, and was highly scrutinized by CGS and others. His presentation of data and conclusions were found to be “adequately addressed” by CGS. This resulted in the project design to move forward as originally planned with no fault related setbacks.

- **Horace Mann School, Beverly Hills, CA.** Senior Project Geologist for comprehensive geotechnical and seismic exploration programs at the site for major upgrades to the campus, which included construction of an elevator inside the auditorium, new classroom building and an at-grade playground underlain by one-level subterranean parking. Other improvements included and a canopy structure near the subject classroom building and enhancement of the existing building diaphragms, walls, and foundations, a new footbridge structure connecting the existing building to a new elevator, and non-structural improvements to the buildings.
- **Wellness Center Mount Saint Mary's, Los Angeles, CA.** Engineering Geologist for determination and implementation of approach to subsurface investigation. He employed bucket and hollow stem drilling, CPT and geophysical surveys for seismic refraction to obtain a profile of the hillside conditions relative to the proposed building. The site is atop a ridge crest on the southern flank of the Santa Monica Mountains. The surrounding hillside descends very steeply along heavily incised slopes to canyon bottoms located approximately 250 to 275 feet lower in elevation from the modified current ridge top.
- **Whispering Hills, San Juan Capistrano, CA.** Senior Staff Geologist during massive hillside grading in a well-documented landslide complex adjacent to the Forester fault. Drilled 40 bucket augers, downhole logged and sampled bucket augers to depths of 120-200 feet for purposes of classifying numerous landslides, geological field mapping of canyon clean outs and backcuts to determine suitable and unsuitable material left in place or to be removed during the grading operations. Installed multiple instrumentation arrays to provide daily monitoring of slope movement and groundwater levels during grading to protect electrical transmission towers and Forrester road. Communicated daily with engineers and superintendent to convey in field recommendations regarding removal and stabilization of constructed hillsides.
- **Mountain Park, Anaheim Hills, CA.** Senior Staff Geologist for field investigation of residential development. Multiple bucket augers to 85 feet for purposes of determining feasibility of hilltop development. Major issues were multiple south facing landslides, Whittier fault zone and ridgetop shatter of bedrock materials. Downhole logged and sampled 13 bucket augers, prepare report based on field data and laboratory data, sensitive biological issues concerning native scrub and wildlife.
- **Nohl Canyon New Tank Reservoir, Anaheim, CA.** Project Geologist involved in planning and instituting investigations to evaluate subsurface conditions for planned addition of a 10-million-gallon tank. Project involved installation of an array of inclinometers as well as monitoring well installation and design to establish baseline conditions prior to construction. Project involved monthly monitoring of existing piezometers as well as newly installed instrumentation, data analysis and report preparation. Responsibilities during construction included extensive field mapping of bedrock exposures during grading in order to collect geotechnical data used in slope stability analysis. Daily communication with engineers, client, and multiple superintendents on the job. Evaluated and approved stability excavations, oversaw installation of extensive sub and backdrain systems during grading operations.
- **Rawlings Reservoir, City of Tustin, CA.** Project Manager/Project Geologist. Project consists of replacing existing 4.2 million-gallon (MG) water reservoir with two 3-MG concrete circular water tanks. The concrete tanks will be founded on a relatively uniform thickness of properly compacted gravel on compacted fill over bedrock. Temporary shoring wall was required to protect the north and east sides of the site prior to demolition of the existing tank. Project consisted of multiple styles of drilling using hollow stem augers, limited access rigs due to restricted access and bucket auger and downhole logging to better define the subsurface conditions prior to construction.

JOHN HAERTLE, PE, GE

Associate Engineer

Education

MS, Civil Engineering, University of Wisconsin-Madison, Wisconsin, 1986
BS, Mining Engineering, University of Wisconsin-Madison, Wisconsin, 1984

Registration

California Registered Geotechnical Engineer - 2532
California Registered Civil Engineer - 48039

Mr. Haertle's experience includes public works to commercial sites, such as roads, trails, and office buildings. his primary responsibilities include the preparation of geotechnical engineering reports, client communications, and oversight of the project's scope, schedule, and budget. He also performs classification and interpretation of subsurface materials found at each site, determines the appropriate laboratory testing program tailored to the specific nature of the project, and conducts the relevant engineering analysis to formulate recommendations for design and construction.

- **Newport Beach City Hall, Newport Beach, CA.** Project for the new city hall buildings, parking structure and park site. Heavy grading which included over 30 feet of cut into bedrock adjacent to MacArthur Boulevard was performed during construction for the new city hall and parking structure. Shoring was required to withstand geologic surcharge from bedrock as well as traffic loading on the roadways.
- **Sunset Ridge Park, Newport Beach, CA.** Project Engineer for the geotechnical investigation and recommendations for the proposed 12-acre open space park. Located at the intersection of Superior and PCH, the project also included grading and drainage improvements recommendations, foundation recommendations, and a seismic hazard assessment.
- **Liquefaction Mitigation at Seawall, Newport Beach, CA.** Geotechnical Engineer in charge of providing liquefaction mitigation to Bayside Village Marina.
- **Soil-Cement Bench Scale Testing, Newport Beach, CA.** Geotechnical Engineer in charge of providing soil-cement bench scale testing to the City of Newport Beach.
- **Sage Hill Science Classroom Building and Parking Lot Rehabilitation, Newport Beach, CA.** Geotechnical Engineer for a geotechnical exploration, infiltration and percolation testing and soil observation and testing to the new 13,000 sf science focused building. The building includes labs, classrooms, prep rooms, and special projects lab, which will be used to host research projects.
- **Gerald Desmond Bridge Replacement Project, Long Beach, CA.** Project Engineer for a new grade separation along the Orangethorpe rail corridor to alleviate traffic impacts and hazards at the BNSF rail crossing. Leighton performed a conceptual geotechnical investigation and subsequent geotechnical exploration to evaluate the geologic, soils, and seismic conditions that could affect the project, and provide design recommendations. The project includes construction of a railroad bridge structure; a 6,000-foot railroad shoofly; roadway improvements; drainage modifications; a 78-inch-diameter storm drain and sewer relocation; a pump station; and retaining walls.
- **Nohl Canyon New Tank Reservoir, Anaheim, CA.** Project Manager/Geotechnical Engineer responsible for the preparation of geotechnical recommendations for the design and construction of new 10-million-gallon municipal concrete potable water storage tank to replace a decommissioned open-air reservoir. The project encountered

significant challenges in design due to the adjacent ascending slopes and the geologic structure; the presence of single-family homes along the top of the slopes; and the variability of the subsurface conditions below the proposed tank foundation. Mr. Haertle's responsibilities have extended beyond the geotechnical studies to provide design and construction recommendations and planning and implementation of a field instrumentation program to monitor slope distortions and groundwater fluctuations. He has also assisted the City with community relations with the surrounding local residents to understand and allay their concerns regarding a catastrophic slope instability event and the loss of property as occurred in one neighborhood that bounds the reservoir property through explanation of the project and the precautions and redundancy implemented for safety.

- **Lenain Water Treatment Plant Slope Repair, City of Anaheim, Public Utility Department, Anaheim, CA.** Geotechnical Engineer responsible for the geotechnical response to the slope failure that occurred during heavy winter rains. Remedial recommendations were presented to the City followed by observation and testing during slope repair at this water treatment plant for the City of Anaheim.
- **Dominguez Gap Wetlands, Long Beach, CA.** Project Manager/Engineer for geotechnical investigation as a task order of on-call contract. The proposed modifications to the existing Dominguez Gap retarding basin allow the creation of a wetland habitat. The modifications include grading within the basin bottom to establish dikes for water collection and level areas elevated above the free water surface to allow growth of marsh vegetation. The Geotechnical report is subject to review and approval by the Los Angeles County Department of Public Works, Geotechnical and Materials Engineering Division (GMED).
- **Landslide Stabilization, Orange County CA.** Slope movement during periods of abnormally high precipitation resulted in field exploration and subsequent slope displacement monitoring to develop a model to characterize the observed distress. Intermediate remedial grading was employed to better define geologic conditions and refine the remedial model. Remedial grading recommendations were developed and implemented. During remedial grading, previously unknown geologic conditions were encountered that required extensive review of the remedial plan, additional field exploration and analysis of the as-graded conditions to demonstrate sufficient remediation had been accomplished.
- **3rd Street Overcrossing, Metro Gold Line East Side Extension, Los Angeles, CA.** Senior Project Engineer for the design-build replacement and retrofit of the 3rd Street Bridge over I-710 in East Los Angeles. The proposed construction consisted of the installation of trackwork along the centerline of the bridge for the light rail transit line. Due to the location of the bridge over an interstate freeway, the report was subject to the preparation requirements and review of Caltrans. The static and seismic loading imposed by the bridge required the use of a drilled pier (CIDH pile) deep foundation system for the bents and abutments. Foundation design was further challenged by the presence of large (9- by 14-foot) Portland cement concrete storm drain culvert along the centerline of the freeway which imposed lateral deflection and surcharge requirements on the foundation system. Analysis required derailed calculation of axial compressive and tensile capacity as well as lateral load capacity considering both the gross and reduced cross-sectional moment of inertia.

JEFF PFLUEGER, PG, CEG

ENGINEERING GEOLOGIST

Education

BS, Geology, University of California, Los Angeles, 2002

Registration

California Certified Engineering Geologist – 2499
California Professional Geologist - 8388

Mr. Pflueger's work with Leighton has been on a wide variety of projects. Experience includes planning and directing subsurface geotechnical investigations, earth and rock material characterization, hollow-stem and bucket auger drill logging, downhole logging, sampling, rock core drill logging, monitoring and pump well installations, mapping and observing grading operations during hillside residential developments, interpreting and analyzing data and test results, preparing cost estimates and technical reports. During field investigations, he has also logged fault trenches for an investigation along the Newport-Inglewood Fault zone, and provided site reconnaissance mapping, as well as detailed field mapping for other projects.

- **Newport Beach City Hall, Newport Beach, CA.** Project Geologist / Project Manager for the new city hall buildings, parking structure and park site. Conducted geologic field mapping during the grading activities, which included over 30 feet of cut into bedrock adjacent to MacArthur Boulevard with several slopes stabilized with fill keyways and buttresses. A permanent shoring wall was also constructed to withstand geologic surcharge from bedrock as well as traffic loading on the adjacent MacArthur Boulevard.
- **Beverly Hills High School, Beverly Hills, CA.** Project Geologist involved in assessment of postulated faults across the Beverly Hills High School campus in response to the Century City Metrolink Tunnel study. Conducted several continuous east west core boring and cone penetrometer (CPT) transects to depths of 160 feet below ground surface to evaluate type and nature of subsurface stratigraphy along the West Beverly Hills Lineament (WBHL). Excavated overlapping fault trenches to depths of 15-20 feet in the dense urban environment along a Methane Buffer Zone. Logged core borings, provided detailed fault trench logging to investigate fault traces should they exist in order to evaluate their activity. The project included the integration of pedochronolgic soil age dating techniques and optically stimulated luminescence (OSL) along with carbon analysis to provide ages of soils below the High School site.
- **Foothill Transportation Corridor, Orange and San Diego County, CA.** Geologist involved in correlating data from previous field investigations for three alignment alternatives for the future southern extension of the Foothill Transportation Corridor in south Orange County and northern San Diego County totaling a distance of over 28 miles. Integrated previous field data and presented interpretations in geologic maps and 110 cross-sections. The SOCTIIP (South Orange County Transportation Infrastructure Improvement Project) was a collaborative effort by select agencies evaluating alternative ways of extending the Foothill Transportation Corridor southward from Oso Parkway to Interstate 5 in northern San Diego County. The different alternatives cover a wide diversity of geologic formations and encounter complex geologic conditions; including large landslides, fault zones, and major creeks including the San Juan and San Mateo Creeks.
- **Foothill Transportation Corridor – South, Orange and San Diego County, CA.** Geologist that worked with a team on the geotechnical investigation for a selected alignment alternative for the Foothill Corridor 241-Extension. Geotechnical team duties

included field investigation planning, coordination with cultural and biological agencies, construction of temporary access roads and drill pads, field management of drill teams, logging and sampling of over 300 investigational borings (hollow stem, bucket auger, rotary wash, CPT, and core borings), habitat restoration in sensitive natural environment, researching area previous studies, and assisted team in the preparation of several geotechnical design reports.

- **Eastern Transportation Corridor, Orange County, CA.** Geologist involved during the investigation phase of a landslide along the portion of the corridor crossing Loma Ridge in the Santa Ana Mountains. The surface area of the landslide covers approximately 6 acres, of which the headscarp is located approximately 200 feet vertically above the active highway at the toe of the landslide. Mapped the outer extents of the landslide as well as the locations of the interior cracking within the main body of the slide. Drilled four bucket-auger borings up to 90 feet deep; drilled and installed five slope inclinometers up to 85 feet deep; and drilled and installed three time domain reflectometers up to 85 feet deep within the landslide. Acquired the data from the instrumentation that was installed in the field. Performed analyses on the acquired data with respect to the extents of the landslide, its depth, rate of movement and the affects that groundwater and rainfall had on the landslide. Also developed geotechnical cross-sections and supported the geotechnical engineer with information necessary to performed analysis and design mitigation measures for the landslide.
- **Santa Ana River Interceptor (SARI) Replacement Project, Orange County, CA.** Geologist involved in coordinating and conducting the subsurface field investigation for the proposed SARI Replacement Project, which will relocate approximately four miles of the existing major sanitary sewer trunk line within the Santa Ana River bed/floodplain to the area south of the river and north of State Route 91. The investigation included the drilling, logging, and sampling of over 62 geotechnical borings. Upon completion of the drilling operations, 16 borings were converted to 2-inch diameter monitoring wells for long-term groundwater monitoring, and three borings were converted to 8-inch diameter pumping wells. Aquifer tests were conducted in the pumping wells to assess the hydraulic conductivity and groundwater drawdown at the site.
- **Java Lanes Fault Investigation, Long Beach, CA.** Field geologist involved in fault investigation for a proposed multi-family residential development. The investigation included the excavation and logging of 5 trenches across a splay of the Northeast Flank fault of the Newport-Inglewood Fault Zone. The site is located within a State delineated Earthquake Hazard Zone and an abandoned oil field. Fossils of a 220,000 year-old camel were discovered in one of the fault trenches allowing Leighton to demonstrate that this splay of the Northeast Flank fault was not active and no structural setback from the fault was necessary. Leighton also provided geotechnical recommendations for grading of the site and design of the proposed structures.
- **South Orange County Transportation Infrastructure Improvement Project (SOCTIIP), Orange and San Diego County, CA.** Geologist involved in correlating data from previous field investigations for three alignment alternatives for the future southern extension of the Foothill Transportation Corridor in south Orange County and northern San Diego County totaling a distance of over 28 miles. Integrated previous field data and presented interpretations in geologic maps and 110 cross-sections. The SOCTIIP was a collaborative effort by select agencies evaluating alternative ways of extending the Foothill Transportation Corridor southward from Oso Parkway to Interstate 5 in northern San Diego County. The different alternatives cover a wide diversity of geologic formations and encounter complex geologic conditions; including large landslides, fault zones, and major creeks including the San Juan and San Mateo Creeks.

Michael Akavan, PE, LEED AP

Principal In Charge

Mr. Akavan has 34 years of experience designing mechanical systems for a variety of facilities in the public and private sectors. His experience includes project management, energy conservation, load calculations, HVAC, plumbing and fire protection design, installation and operating cost reduction analysis, energy and feasibility studies, central cooling and heating plant optimization, thermal storage systems and construction observation.

EDUCATION and LICENSING

BS Mechanical Engineering, San Diego State University, 1985

MS Mechanical Engineering, CSU Northridge, 1989

Professional Engineer California, 1990

Certified in Plumbing Design, CPD, 1994

LEED®AP

YEARS OF EXPERIENCE

34 years

AFFILIATIONS

American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE)

United States Green Building Council (USGBC)

Society of American Military Engineers (SAME)

American Society of Plumbing Engineers (ASPE)

California Society for Healthcare Engineers (CSHE)

Design-Build Institute of America (DBIA)

Board Member: California Center for Sustainable Energy (CCSE)

PROJECT EXPERIENCE

Project: San Ysidro Library
Value: $13,327,000
Role: Principal In Charge
Description: The new single-story library is approximately 16,500 SF and located only a few blocks from the existing historic San Ysidro Library. Incorporating a design that achieves a LEED Silver certification, this project serves the growing San Ysidro community. The new library is a resource for all residents containing multiple modern library amenities that include children and teen study areas, computer lab and multi-purpose area. This project supports the City of San Diego in their sustainability goals while providing a space to encourage interaction and activity.

Project: Borrego Springs Library and Sheriff's Department
Value: $13,000,000
Role: Principal In Charge
Description: Mechanical and plumbing design for the new 14,000 SF library and 2,000 SF sheriff's station complex and park located at the southwest corner of Country Club Road and Sunset Street in Borrego Springs, CA. The new library is three times larger than the previous one and includes a large community meeting room, a 1,600 SF children's area, a 600 SF teen space and study space, a homework center, a technology center featuring computer labs, high-tech conference rooms where English as a second language and citizenship classes are taught, a Vet Connect station providing services for Veterans, lounge seating areas throughout the building, and a conversation cafe. The new sheriff's department substation replaced an older and smaller office. It includes lobby space, workstations, support area, storage rooms, holding cells, and restrooms. Across the new library is a new community park with a large playground.

Project: Santana High School Event Center & Physical Education Building
Value: $13,900,000
Role: Principal In Charge
Description: Mechanical and plumbing design for the 21,200 SF new event center and physical education building for the Santana High School. The new state-of-the-art facility provides a space for campus events, performances, conferences, and physical education activities. The building features a unique Hall of Fame feature and also includes shower/locker rooms, an equipment room, and a trainer's room.

Other Relevant Experience

- USD Kroc Center for Peace and Justice Performing Arts Theater
- Palomar College Howard Brubeck Theater
- Monte Vista High School Event Center
- El Capitan High School Event Center
- Pacific Ridge High School Performing Arts Building
- City of Murrieta, Murrieta Public Library
- City of San Diego, Pacific Highlands Ranch Library
- City of San Diego, Mission Valley Library
- City of San Diego, Carmel Valley Library
- City of San Diego, College Rolando Library
- City of San Diego, Point Loma Branch Library

EDUCATION and LICENSING

BS Mechanical Engineering, Cal Poly San Luis Obispo, 1981

Professional Engineer California, 1988

Professional Engineer Arizona, 1996

LEED®AP

YEARS OF EXPERIENCE

36 years

AFFILIATIONS

American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE)

United States Green Building Council (USGBC)

Roy C. Campbell, PE, LEED AP

Principal Mechanical Engineer

Roy C. Campbell is a registered Mechanical Engineer in the states of California and Arizona. He is a mechanical engineering graduate of Cal Poly, San Luis Obispo and is an active member in the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), San Diego. He served as an ASHRAE San Diego Chapter President, Board of Governor member and as chair of the Technical, Energy and Government Affairs Committee.

PROJECT EXPERIENCE

Project: Murrieta Public Library
Value: $10,000,000
Role: Principal Mechanical Engineer
Description: Complete HVAC system design for the new 24,000 SF library for the city of Murrieta, with provisions for a 15,000 square foot expansion in the future. The mechanical design consists of a four-pipe system with high efficiency chillers and boilers with a variable volume hydronic system for both chilled and hot water. The air handling units are equipped with a variable air volume system with reheat boxes. The entire mechanical system contains a state-of-the-art energy management system (DDC).

Project: City of San Diego Point Loma Library
Value: $7,000,000
Role: Principal Mechanical Engineer
Description: Design services for mechanical systems for this public library. The library includes 15,000 square feet of study rooms, meeting areas and administrative offices. The entire mechanical system is designed for very low velocity ductwork to accommodate the acoustical requirements of the project.

Project: City of San Diego Mission Valley Library
Value: $3,400,000
Role: Principal Mechanical Engineer
Description: Mechanical design for this public library. The facility includes 19,000 SF of study rooms, a technology center, community multi-purpose area, meeting areas, and administrative offices. The mechanical system is designed for low-velocity ductwork to accommodate the acoustical requirements of the project.

Project: Palomar College Howard Brubeck Theater
Value: $24,000,000
Role: Principal Mechanical Engineer
Description: Mechanical and plumbing design for the renovation of the existing campus theater, and to design the new system for the building addition at Palomar College. The new 39,311 SF complex includes a revamped Brubeck theater, new black box and dance studios, classrooms and offices. The new theater includes moving lights, computerized show controls and digital audio mixers. There's also a new box office, lobby and refreshment windows. Just behind the Brubeck is a new 12,081SF, two-story building that houses the black box theater, the dance studios, costume and makeup labs, an acting studio, scene shops and storage, classrooms and offices.

Project: El Capitan High School Event Center
Value: $11,000,000
Role: Principal Mechanical Engineer
Description: Mechanical and plumbing systems design for the 16,000 SF event center located at El Capitan High School, which is funded by Proposition U and Measure BB. The facility consists of various dance, band and drama spaces including a 4,000 SF multi-purpose room with adjoining lobby, ticket booth and concessions area.

MICHAEL WALL ENGINEERING

SHAHAB SALEHI, P.E., LEED AP

Principal

Shahab has over 12 years of experience working as an electrical engineer. He earned his Bachelor of Science and Master of Science in Electrical Engineering from Purdue University. His experience includes civic/government, education, high-rise multifamily residential, hospitality, military, and commercial building. Shahab has extensive experience with design-build projects, and a vast knowledge of emergency power generation, UPS, lighting design, and short circuit coordination. He is a registered engineer in California and a LEED Accredited Professional. Shahab is skilled at sustainable design, and his portfolio includes work on LEED Platinum projects.

EDUCATION

M.S., Electrical Engineering
Purdue University

B.S., Electrical Engineering
Purdue University

YEARS OF EXPERIENCE

12 years

LICENSES

California #18803

CERTIFICATIONS

LEED AP

AFFILIATIONS

Institute of Electrical and Electronics Engineers

U.S. Green Building Council

SELECTED PROJECT EXPERIENCE

High Tech High Mesa
San Diego, CA
159,093SF Construction and Renovations of former School Campus Buildings for New Public Charter Campus on 20 Acres to Serve 1,636 Students, including an Auditorium with Fixed Seating for 700

SDSU Storm & Nasatir Hall Renovations
San Diego, CA
138,000GSF New 250 Seat Lecture Hall, 430-Seat Auditorium

UCLA Anderson School of Management Addition
Westwood, CA
63,000SF New 4-Story Addition on top of Existing P5 Parking Garage including Limited Renovated Areas of Existing Parking Structure and Building including Academic Building with a Tiered 200-Person Lecture Hall, Classrooms, Group Study Rooms, Administration and Faculty Offices, Career Center, and Grand Event Space with Catering Pantry, Exterior Terraces, and Plaza

USD Learning Commons Building
San Diego, CA
30,000SF, New 2-Story Building including 150-Seat Classroom and Student Study Space

USD Copley Library Renovation
San Diego, CA
59,800SF, 2-Story Renovation including Complete Reimaging of Library Interior and Consolidation of Library Collection

USD Camino and Founders Hall Renovation
San Diego, CA
241,753SF of Renovations in Camino Hall, Founders Hall, and Sacred Heart Buildings including Renovations of Shiley Theatre, Black Box Theatre, and Studio Theatre

City of San Diego -Pacific Highlands Ranch Library
San Diego, CA
18,000SF Branch Library Facility. including Children and Teen Areas, Study Rooms, Computer Area, Community Meeting Room with Catering Kitchen, Friends of the Library Room, Patios, 1.5-Acre Site Improvements

County of San Diego -Borrego Springs Branch Library, Park & Sheriff Office
Borrego Springs, CA
13,500SF Library, 1,700SF Sheriff Office, 16-Acre Park

Pacific Ridge School
Carlsbad, CA
14,120SF, New 2-Story Library and Innovation Center

City of San Diego - Mission Hills Library Bridging Documents
San Diego, CA
Electrical Basis of Design for 15,000SF, Single Story Library, over a 30,000SF 2-Story Underground Parking Garage

San Marcos Unified School District Woodland Park Middle School Improvements
San Marcos, CA
Improvements to Existing Administration Building and Library

MICHAEL WALL ENGINEERING

BRIAN HAHNLEN, LC, EIT

Senior Lighting Designer

As a Senior Lighting Designer and Project Manager, Brian has over 20 years of award winning lighting design and leadership experience. He's taught lighting at the graduate level and is skilled in educating and collaborating with architectural teams and owners. Brian's experience developing aesthetically appropriate, energy-efficient illumination systems span a variety of project types ranging from commercial, cultural, entertainment, theatrical, retail, academic, sport venue, and healthcare to luminare manufacturing and controls integration. He is an expert at daylight design as a tool for manipulating light to complement the architectural vision for any space. Brian has won several IIDA Awards, IES Awards and holds a patent for his work with lighting controls.

EDUCATION

B.S., Architectural Engineering
Pennsylvania State University

M.S., Architectural Engineering
Pennsylvania State University

YEARS OF EXPERIENCE

20 years

CERTIFICATIONS

NCQLP Lighting Certified

EIT

SELECTED PROJECT EXPERIENCE

City of San Diego -Pacific Highlands Ranch Library
San Diego, CA
18,000SF Branch Library Facility. including Children and Teen Areas, Study Rooms, Computer Area, Community Meeting Room with Catering Kitchen, Friends of the Library Room, Patios, 1.5-Acre Site Improvements
Integrated Lighting Systems

County of San Diego -Borrego Springs Branch Library, Park & Sheriff Office
Borrego Springs, CA
13,500SF Library, 1,700SF Sheriff Office, 16-Acre Park
Integrated Lighting Systems

UCLA Anderson School of Management Addition
Westwood, CA
63,000SF New 4-Story Addition on top of Existing P5 Parking Garage including an Academic Building with a Tiered 200 Person Lecture Hall, Classrooms, Group Study Rooms, Administration and Faculty Offices, Career Center, and Grand Event Space with Catering Pantry, Exterior Terraces, and Plaza Lighting System Upgrades

USD Camino & Founders Hall Renovation
San Diego, CA
241,753SF of Renovations in Camino Hall, Founders Hall, and Sacred Heart Buildings including Renovations of Shiley Theatre, Black Box Theatre, and Studio Theatre

High Tech High Mesa
San Diego, CA
159,093SF Construction and Renovations of former School Campus Buildings for New Public Charter Campus on 20 Acres to Serve 1,636 Students, including an Auditorium with Fixed Seating for 700 Lighting and Convenience Power

USD Learning Commons Building
San Diego, CA
30,000SF, New 2-Story Building including 150-Seat Classroom and Student Study Space

USD Copley Library Renovation
San Diego, CA
59,800SF, 2-Story Renovation including Complete Reimaging of Library Interior and Consolidation of Library Collection

CSU Bakersfield University Office Center Tenant Improvements
Bakersfield, CA
48,000SF of Improvements and Lighting Design for Existing University Office Center Building including Computer Labs, Administration Offices, Break Room, Classrooms

CSU Bakersfield University Office Center Phase 1
Bakersfield, CA
New Office Development Located on CSU Bakersfield Campus for Development of up to 4 Office Buildings of 2 to 6 Stories Each, Totaling 283,500SF on 12.5 (Net) Acre Site.
Phase 1 – 60,000SF, Warm-Shell, 3-Story Building, and Related Site Work
Lighting Updates

MICHAEL WALL ENGINEERING

Theaters / Auditoriums / Museums

ARE Torreyana Common Areas T.I.
San Diego, CA
Auditorium and Green Room

Academy of Our Lady of Peace
San Diego, CA
New 2-Story, 20,545SF Performing Arts Center with Media Center

Balboa Park Hall of Champions – Sailing Museum
San Diego, CA
4,500SF at the Hall of Champions

Borrego Springs Branch Library & Park
Borrego Springs, CA
Amphitheater

CSU San Marcos
San Marcos, CA
Social & Behavioral Sciences Building (SBSB) & Arts Building Emergency Generator System

Discovery Cube Orange County
Santa Ana, CA
Renovation and Expansion to Existing 59,205SF 2-Story Building and 3-Story, 43,340SF Addition including Black Box Theater with Specialty Lighting

Francis Parker Performing Arts Plaza
San Diego, CA
Architectural Lighting Design for Existing Performing Arts Center

Gaslamp Reading Theater
San Diego, CA
Conceptual Design/Existing Conditions for Renovation of Former Gaslamp Reading Theater

High Tech High Mesa
San Diego, CA
20-Acre Campus Renovation and New Construction including an Auditorium with Seating for 700

Laguna Beach Unified School District - Laguna Beach High School Artists Theater
Laguna Beach, CA
Existing Conditions Assessment

Miramar College
San Diego, CA
Arts & Humanities Building

MiraCosta College
Oceanside, CA
New Art & Music Storage Buildings 2,000SF
New Dance & Theatre Studio Building 6,400SF

Pacific Ridge School
Carlsbad, CA
Theatrical Lighting Coordination for Theater Arts Studio and Community Hall

Pine Avenue Community Park
Carlsbad, CA
New 18,000SF 2-Story Community Center

Perris Theater
Perris, CA
Conceptual Design for 13,700SF Theater

Ronald Reagan Community Center Renovation
El Cajon, CA
Community Center Auditorium

Salvation Army Ray and Joan Kroc Community Center, San Diego, CA
Performing Arts Center with Theatrical Lighting and Sound

SDSU Storm & Nasatir Hall
San Diego, CA
Storm & Nasatir Hall, New, 275-Seat Lecture Hall and 475-Seat Auditorium

SDSU Imperial Valley Auditorium
San Diego, CA
Imperial Valley Auditorium Upgrades

SDSU Open Air Theater
San Diego, CA
Concession Stands Improvements
Concourse Renovation
Stage Lighting & Sound Power Upgrade

SDSU International Cultural Center - Confucius Institute, San Diego, CA
3,050SF International Cultural Center Featuring Exhibit Hall, Lobby Space, Meeting Room, Offices, etc.

SDSU Little Theater
San Diego, CA
Little Theater Renovation at Hardy Hall

MICHAEL WALL ENGINEERING

Theaters / Auditoriums / Museums

San Diego County Operations Center
San Diego, CA
Art Collection Lighting Design

San Diego County Operations Center
San Diego, CA
Artifact Display Project

Sony Corporate Headquarters
San Diego, CA
Large Auditorium with 700 Seats and Theatrical Lighting

Southwestern Community College
Chula Vista, CA
Music Center 16,000SF

St. Augustine High School Performing Arts Center
San Diego, CA
Performing Arts Center 15,400SF

The Monarch School
San Diego, CA
New Design-Build 2-Story, 50,000SF Interior Improvement including Auditorium

Theatre Box (TCL Chinese Theatre) San Diego
San Diego, CA
22,540SF Restaurant/Retail Space, Sugar Factory Restaurant and Sugar Buster Video Center
Theater Renovations, 600 Seats
Rooftop Deck Lounge and Bar Addition

UCLA Anderson School of Management
Los Angeles, CA
Auditorium and Lecture Halls

UCSD Mandeville Theater
La Jolla, CA
Mandeville Theater Power Upgrade

UCSD Medical Education & Telemedicine Building
La Jolla, CA
2-Story Auditorium with Specialty Lighting

UCSD School of Pharmacy Auditorium
La Jolla, CA
School of Pharmacy Auditorium

USD Shiley Theater Renovation
San Diego, CA
Shiley Theatre Renovation
Black Box Theatre and Studio Theatre Renovation

USD School of Leadership & Education
San Diego, CA
200-Seat Auditorium

USD Joan B. Kroc Center for Peace and Justice
San Diego, CA
Large Scale Conference Facility included Highly Specialized Lighting and Controls to Support Art Gallery, Conference Rooms, Seminar Areas

USS Midway Museum
San Diego, CA
100 Seat Theater and Battle of Midway Experience
7,700SF Little Skipper Berthing Improvements

UCSD Price Center
San Diego, CA
Price Center Expansion
Price Center Night Club

Project Leadership

JOHN J. LOVERDE | PRINCIPAL, DIRECTOR OF ARCHITECTURAL ACOUSTICS
ANSI ISO TEAM, VICE CHAIRMAN OF US DELEGATION TO TC43 SC2

John LoVerde is recognized throughout the country for his expertise as an acoustical consultant, as well as his leadership in the field regarding testing, research, and reporting methodology. As Veneklasen Associates' Director of Architectural Acoustics, he has designed all manners of building types including multifamily residential properties, office buildings and corporate interiors, educational facilities, performance venues, hotels and resorts, and hospitals. John's expertise is often called upon to provide expert testimony, and he has developed specialized acoustical risk management programs for many owners and developers, which they employ portfolio-wide.

After obtaining a Bachelor of Science degree in Mechanical Engineering from California State Polytechnic University, Pomona (1989), John went on to earn a Master's Degree in Acoustics from the University of California, Los Angeles. At UCLA he worked on the link between acoustical energy and listener reaction to sound within auditoria. Since his consultant career began at Veneklasen Associates in 1989, John has published over 80 technical papers. He teaches and lectures internationally, presenting at the last nine meetings of the Acoustical Society of America (ASA). In November 2009 he was appointed to ASA's Technical Committee on Architectural Acoustics, and in 2013 John was further recognized in the field as a full Member of the ASA. Most recently in 2017, John was elected to Fellow status within the ASA.

As a researcher John's recent focus is on the acoustical performance reliability of construction assemblies and products such as windows and doors. To this end, John has developed a comprehensive database populated with firm data acquired over decades that describe the range of performance variables associated with IIC and STC test results. This tool aids clients and others to gauge the ability of a given assembly to meet code compliance thresholds, as well as compare acoustical performance as a function of cost.

Representative Auditoriums & Performance Centers	Irvine Valley Community College, Irvine, CA – Performing Arts Theater/Building KSPN at LA Live!, Los Angeles, CA Los Angeles Mission College, Sylmar, CA – Media Arts Center Mt. San Antonio College, Walnut, CA – Design Center Taft High School, Woodland Hills, CA – Auditorium Evaluation – LAUSD Reseda High School, Reseda, CA – Auditorium Evaluation – LAUSD St. Margaret's Episcopal School, San Juan Capistrano, CA – Performing Arts Center University High School, LAUSD – Music Academy; West Los Angeles, CA Ventura College, Ventura, CA – Auditorium Portland Civic Auditorium Pacific Terrace Auditorium Des Moines Civic Center Auditorium Kroc Corps Salvation Army Community Center
Representative Library Experience	Digital Media Labs, Central Library, Los Angeles, CA Digital Media Labs, Pio Pico Library, Los Angeles, CA Skyline Hills Library, San Diego, CA City of Alhambra Library, Alhambra, CA Biola University Library, La Mirada, CA Quartz Hill Public Library, Quartz Hill, CA San Ysidro Library, San Diego, CA California State University – Fresno, CA – Madden Library Addition & Renovation City of Commerce, Commerce, CA – Rosewood Park Library Chula Vista High School, Chula Vista, CA Museum of Tolerance, Los Angeles, CA Pico Branch Library at Virginia Park, Santa Monica, CA Skyline Hills Branch Library, San Diego, CA LAUSD, other Public USD's, Private Schools and Public Libraries
Other Project Experience	Ace Hotel (UA Theater & Tower); Los Angeles, CA A-Loft Hotel; Phoenix, AZ Beverly Hills Hotel (Renovation); Beverly Hills, CA Bloomington Central Station Mixed-Use Hotel & Residences; Bloomington, MN Cosmopolitan Resort & Casino (Testing); Las Vegas, NV El Garces; Needles, CA

Encinitas Beach Resort; Encinitas, CA
Fantasy Springs Resort and Casino; Palm Desert, CA
Hilton Center City; Charlotte, NC
Horseshoe Hammond Casino; Hammond, IN
Marriott Hotel; Bellevue, WA
Maryland Hotel (Historic Renovation); San Diego, CA
Mondrian Hotel Fitness Center/Spa; West Hollywood, CA
Montage Resort & Spa; Laguna, CA
Montelucia Resort; Paradise Valley, AZ
Oakland Marriott City Center (Renovation); Oakland, CA
Peninsula Hotel Spa Addition; Beverly Hills, CA
California State University, San Marcos - 600-bed Student Housing Complex
University of La Verne - 378-bed Student Housing Complex with Retail

Education

M.S. Acoustics, University of California Los Angeles
B.S. Mechanical Engineering, California State Polytechnic University, Pomona

Professional Affiliations

Acoustical Society of America (ASA)
American Society of Mechanical Engineering (ASME)
American Society of Heating, Refrigerating & Air Conditioning Engineers (ASHRAE)
ASA Technical Committee on Architectural Acoustics
ASHRAE Southern California Technical Committee (CTC-7) - Sound, Vibration & Seismic
ISO TC160 Committee on Airborne Sound Insulation
ISO TC 43/SC 2/WG 29 Committee on Building Acoustics

Publications Representative; a complete listing is available upon request.

John has authored over 100 articles in his career, including 30 in JASA (Journal of the Acoustical Society of America); in the past three years alone his findings have been published:

1. John LoVerde and Wayland Dong. **Building acoustics classification schemes in multifamily residential projects in USA**. INTER-NOISE 2016, *45th International Congress and Exposition on Noise Control Engineering Proceedings*. Paper 652. P. , 2016.
2. John LoVerde and Wayland Dong and Erin Dugan. **Analysis of the effects on transmission loss of number of layers and properties of gypsum panels in stud walls**. INTER-NOISE 2016, *45th International Congress and Exposition on Noise Control Engineering Proceedings*. Paper 1027. P. , 2016.
3. John J. LoVerde and Wayland Dong. **Optimizing floor-ceiling assemblies in wood-framed multifamily buildings using a two-rating method of evaluating impact isolation**. International Congress on Acoustics. ICA 2016, *22nd International Congress on Acoustics*. Proceedings of Meetings on Acoustics, Paper ICA2016-765 (http://www.ica2016.org.ar/ica2016proceedings/ica2016/ICA2016-0765.pdf), Page 1-10, 2016.
4. John LoVerde and Wayland Dong. **Measurements of a wave barrier trench for isolation of rail vibration**. *J. Acoust. Soc. Am.* Vol. 140, No. 4, Pt. 2, p.3281-3281, 2016. http://dx.doi.org/10.1121/1.4970426.
5. John LoVerde and Wayland Dong. **Isolation of residential buildings from ground vibration from railroad**. *J. Acoust. Soc. Am.* Vol. 140, No. 4, Pt. 2, p.3281-3281, 2016. http://dx.doi.org/10.1121/1.4970427.
6. John LoVerde and Wayland Dong. **Lateral impact noise isolation: motivation, methods, and mitigation**. *J. Acoust. Soc. Am.* Vol. 140, No. 4, Pt. 2, p.3384-3384, 2016. http://dx.doi.org/10.1121/1.4970828.
7. John Loverde and Wayland Dong, **A dual-rating method for evaluating impact noise isolation of floor-ceiling assemblies**. *J. Acoust. Soc. Am.*, **141**, 428-440 (2017). http://dx.doi.org/10.1121/1.4973868
8. Eoin Anthony King, Robert Celmer, Elizabeth Caltagirone, Johanna Owens, John LoVerde, Wayland Dong and Samantha Rawlings. **Evaluation of the influence of seasonal variation on road traffic noise using a statistical analysis methodology**. Noise-Con. Noise-Con 2017 (Grand Rapids). *Noise-Con Proceedings*. Paper nc17_, 2017.

Presentations Representative; a complete listing is available upon request.

John is a regular presenter at scientific and trade conferences; his recent talks include:

1. John LoVerde and Wayland Dong. **AIA Albuquerque.** *Goals, Practice and Applications of Acoustical Design in Architecture.* Albuquerque, New Mexico, August 2013.
2. John LoVerde. **Les Fenetres et Murs-Rideaux 6th Colloque Annuel sur L'envelope du Batiment.** Strategies for achieving the desired acoustical performance in curtain-wall construction. Palais des Congres, Montreal, Canada. April 22-23, 2015.
3. John LoVerde. **EWP Associates**. *2017 and Beyond Trends and Innovations*. Wyndham, Irvine, California, November 3, 2016.
4. John LoVerde. **Building Industry Association**. *Building Industry Show – Floors, Ceilings and Walls…Oh My! Silence Doesn't have to be Costly*. BIS, Riverside, California, November 9, 2016
5. John LoVerde. **National Association of Real Estate Investment Managers (NAREIM).** *NAREIM Architecture and Engineering Meeting. Dare to be Naïve. Understanding and Optimizing Acoustical Performance in Buildings.* The ART Hotel, Denver, Colorado, October 24, 2017.
6. John LoVerde. **Discover Atlantis.** *A Two-Rating System for Design and Evaluation of Impact Noise.* The Bahamas, December 2017.

JACK SHIMIZU | ASSOCIATE PRINCIPAL | DIRECTOR OF LOW-VOLTAGE

Jack Shimizu has been working in the Audio-Visual industry for over 25 years. He has designed Audio-Visual, paging and specialty AV systems for airports, courthouses, municipal buildings, convention centers, auditoriums, theme parks, live performance theaters, classrooms, and sports facilities. As Director of Veneklasen Associates' Audio-Visual Control and Systems Design group, Jack's extensive knowledge of equipment resources, trends and technical application sets a high standard for his team. He is respected in the industry for his ability to work effectively with both end-users and project designers, providing leadership in representing both sides of the AV development process. As a result, Veneklasen Associates is known for systems that exceed project requirements and that are reliable, intuitive to operate, and adaptable to accommodate future technologies.

Auditorium and Performance Venue Experience

UCI Little Theater feasibility study, Irvine, CA
California State University – Long Beach, CA – Peterson Hall 3 Replacement Building
Hawthorne High School, Rancho Cucamonga, CA – Theater Modernization
Jordan High School, Long Beach, CA – Theater Renovation (LBUSD)
California State University – Fullerton, CA – Recreation Center
Los Angeles Southwest College, Los Angeles CA – Performing Arts Complex (VCTPAC)
Hogan High School, Vallejo, CA – Vallejo City Unified School District
Los Angeles Harbor College, Wilmington, CA – Student Union & Astronomy Building,
Los Angeles Harbor College, Wilmington, CA – Infrastructure, Landscape & Security (SAILS)
Los Angeles Southwest College, Los Angeles CA – Visual, Communications & Training
Ramona High School, Ramona, CA – Theater Renovation (Riverside Unified School District)
Leimert Park, Los Angeles, CA – Vision Theater
Nate Holden Performing Arts Center, Los Angeles, CA
Pepsi Center Denver City Lights, Denver, CO

Representative Library Experience

Beverly Hills Library & Auditorium, Beverly Hills, CA
Chapman University Leatherby Libraries, Orange, CA
Pico Branch Library, Virginia Park, Santa Monica, CA
University of Southern California, Los Angeles, CA – Tutor Campus Center
San Diego State University, San Diego, CA – Aztec Student Center

Other Project Experience

Boeing Company, Long Beach, CA – Public Address System
MGM, Beverly Hills, CA – Corporate Offices
California State University – Fullerton, CA – Recreation Center
California State University – Long Beach, CA – Peterson Hall 3 Replacement Building
Hogan High School, Vallejo, CA – Vallejo City Unified School District
Ocean Discovery Institute, San Diego, CA – Living Lab
South Lake Tahoe High, South Lake Tahoe, UT – School Expansion
University of California – Riverside, CA – Heckmann Center & Surge Building
Xavier University, Cincinnati OH – Sports Arena
Los Angeles Unified School District – *multiple campuses*
Los Angeles Unified School District, Los Angeles, CA – Board Room

Selected Project Experience

Boeing Company, Long Beach, CA – Public Address System
W.M. Keck Foundation Board Room, Los Angeles, CA
Pepsi Center Denver City Lights, Denver, CO
Ace Hotel, Chicago, IL
Ace Hotel, Los Angeles, CA
Anaheim Convention Center, Anaheim, CA – Expansion *(through CDs)*
Banning Justice Center & Superior Courthouse, Banning, CA

Education

United States Navy Electrical and Electronics School; C-10 Electrical License, California (currently inactive)

Specialty Training & Seminars

Synergetic Audio Concepts Sound Engineering Seminar. Live Sound Workshop. EASE Design Seminar. Advanced EASE Design Seminar. Synergetic Audio Concepts Test and Measurement Seminar. TEF Training Seminar. MediaMatrix Training Seminar.

Professional Experience

July 1999 - Present	Associate Principal, Veneklasen Associates
1998 to June 1999	Senior Associate, Smith Fause Associates
1995 - 1997	Senior AV Designer, Thomas Gregor Associates

Representative Projects
Auditoriums, Performance Venues

Music Center – Dorothy Chandler Pavilion

Services: Acoustics

(Los Angeles, CA) The Music Center is one of the three largest performing arts centers in the nation. Located in downtown Los Angeles, the Dorothy Chandler Pavilion has a capacity of 3,250 and is the largest of the three Music Center theatres, which also include the Mark Taper Forum and the Ahmanson Theatre. A flexible, multi-purpose auditorium, the Pavilion hosts music and dance performances as well as the internationally renowned Los Angeles Opera.

Veneklasen Associates provided complete acoustical design services. Unique features of the Dorothy Chandler Pavilion include a moveable canopy with three positions for the orchestra; a flexible orchestra enclosure; original five channel stereophonic sound system; sculpted side walls to aid envelopment; and sculptured balcony soffits to maximize sound to seats located the balcony.

Redondo Beach Performing Arts Center

Services: Acoustics & Audio-Visual

(Redondo Beach, CA) The Redondo Beach Performing Arts Center is a 1,457-seat theatre that is home to three diverse companies - the Civic Light Opera of South Bay Cities, Distinguished Speaker Series and the Los Angeles Ballet. The project consisted of a new building and improvements to an existing structure, originally a high school auditorium. Features included a new entrance lobby with office box and concessions, offices, an outdoor patio and an interior water feature.

VA designed the main audio and television broadcast distribution systems, with an all-digital audio path from microphone to amplifier. According to Stage and Rental magazine "The Redondo Beach Performing Arts Center should become a study in all digital audio systems".

Paley Center for Media (Museum of Radio & Television)

Services: Acoustics, Audio Visual

(Beverly Hills, CA) The Paley Center for Media houses collections of television and radio programming that are open to the public and creative communities, with locations in New York City and Los Angeles (Beverly Hills).

Veneklasen Associates provided acoustical consulting services for the entire Beverly Hills facility with a program that includes multiple screening theaters including the 200-seat Bennack Theater, Library / Listening Center, galleries, boardroom, radio studio and roof terrace. Nestled in the Museum's listening center with two glass walls to accommodate an audience, the working radio studio allows Museum visitors to view the technical aspects of a typical radio station.

San Diego State University - Aztec Student Center

Services: Acoustics, Noise & Vibration, Audio Visual

(San Diego, CA) Slated to be the first LEED Platinum student union in the country, this 206,000 GSF complex serves a population of 34,000 students and supports 350 organizations. The Student Center also has a multi-purpose 300 seat theater, quiet and group study spaces with Wi-Fi access, a large courtyard, and outdoor gathering spaces for as many as 3,000 standing students for an outside concert. Veneklasen Associates provided both Architectural Acoustics and Audio-Visual System Design services for this project.

Ventura College - Performing Arts Center & Theater Renovation

Services: Acoustics, Noise & Vibration; Audio-Visual

(Ventura, CA) Originally built in the 1960s, the Ventura College Theater renovation provides students with state-of-the-art equipment to use, as well as serve the community by attracting higher caliber productions. The effort included improvements to the sound system, as well as the acoustics of the 400-seat venue as well as a new studio/black box theater, piano lab and music studios, a recording studio and a small number of classrooms.

Chapman University - Dodge College of Film and Media Arts

Services: Acoustics, Noise & Vibration, Audio-Visual

(Orange, CA) The 76,000 SF Dodge College and Marion Knott Studios feature multiple sound stages and three-story broadcast studios for television and journalism, facilities for Dolby Digital surround sound mixing, and a motion capture stage. The production facilities are vast with 36 digital editing suites; voice recording and ADR/foley studios; and production design and set construction facilities. The 500-seat Folino Family Theater accommodates both digital cinema and 35mm projection.

Additional Auditorium Experience

Portland Civic Auditorium	3,000-seat Auditorium
Pacific Terrace Auditorium	3,200 seat Auditorium
Des Moines Civic Center Auditorium	2,700 seat Auditorium
Kroc Corps Salvation Army Community Center	800-Seat Auditorium
Metro Toronto Convention Centre	1,350-seat Auditorium
Museum of Tolerance - Simon Wiesenthal Center	300-seat Auditorium
Skirball Cultural Center	300-seat Auditorium
California State University, Long Beach - Carpenter Center	1,074-seat Auditorium
Canada College Auditorium	600-seat Auditorium
Chapman University - Dodge College of Film & Television	500-Seat Theater/Lecture Hall
Coronado High School	600-seat Auditorium
Cypress College	600-seat Auditorium; 100-seat Workshop Theater
Garfield High School, LAUSD	1,300-Seat Auditorium
Hogan High School (Palm Desert, CA)	400-seat Lecture Hall
Iowa State University - C.Y. Stephens Auditorium	2,700-seat Auditorium
Kennedy High School Auditorium (Anaheim, CA)	600-Seat Auditorium
LAUSD – Multiple High School Campuses *	
Lutheran High School of Orange County (Orange, CA) *	700-Seat Auditorium
Los Angeles Mission College - Media Arts Center	450-Seat Auditorium
King Saud University	2,500-seat Auditorium; 700-seat Auditorium
Los Angeles Southwest College - Cox Theater Renovation (AV)	330-Seat Auditorium
Mt. San Antonio College - Design Technology Center	700-Seat Auditorium
Poway High School	400-Seat Auditorium
Second Rocklin High School	400-Seat Auditorium
St. Francis High School (La Cañada-Flintridge, CA)	400-Seat Auditorium
University of California, Riverside - Heckman Center II	400-Seat Lecture Hall
University of California, Riverside - Surge Building	600-Seat Lecture Hall
University of Iowa Music School - Hancher Auditorium	2600-seat Auditorium; 600-seat Clapp Recital Hall
University of Rochester - Eastman Theater Renovation	3,350-Seat Auditorium
University of Washington - Meany Hall	1,200-seat Auditorium
University of California at Davis - Freeborn Hall	1,200-seat Auditorium
Umpqua Community College Auditorium	1,000-seat Auditorium
Ventura College - Auditorium Modernization (Historic Restoration)	375-Seat Auditorium

CAMPBELL-ANDERSON & ASSOCIATES, INC.
Cost Management ■ Project Management

RESUME

GRAHAM C. ANDERSON, MRICS

ROLE	Cost Management and Value Engineering
EDUCATION	H.N.D. Building Construction, Dundee, Scotland, 1980. Qualified as Chartered Quantity Surveyor, Reading, England, 1986.
REGISTRATION	M.R.I.C.S., Professional Member, The Royal Institution of Chartered Surveyors, 1986.
PROFESSIONAL AFFILIATIONS	The Royal Institution of Chartered Surveyors.

Mr. Anderson is a Chartered Quantity Surveyor experienced in all aspects of Quantity Surveying as known in the United Kingdom. Originally from Scotland, he graduated from Dundee College of Technology in 1980 and became a Professional Member of The Royal Institution of Chartered Surveyors in 1986.

Mr. Anderson has been in the United States since 1987 where he has been actively involved in the development and promotion of the Quantity Surveying profession throughout the Southwest. This has resulted in his involvement in a series of projects on which he has worked closely as a team member with owners and architects during the Design Phase of a project culminating in successfully bid projects.

Campbell-Anderson & Associates, Inc. (CAA) and Mr. Anderson have provided Cost Management and Value Engineering Services for clients on the following relevant projects:

- Performing Arts Center, Crawford High School, Phase 3
  San Diego Unified School District, San Diego, California
- Performing Arts Center, Herbert Hoover High School
  San Diego Unified School District, San Diego, California
- Event Center, Grossmont High School
  Grossmont Union High School District, El Cajon, California
- Student Success Center, University of California, Riverside
- Math & Science Center, Southwestern College, Chula Vista, California
- Kroc Institute for Peace and Justice, University of San Diego
- School of Leadership and Education Sciences, University of San Diego
- New Main Library, City of San Diego
- Manchester Library Learning Center, The Bishop's School, La Jolla, Calif.
- Law Library, California Western School of Law, San Diego, California

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NEWPORT BEACH LIBRARY LECTURE HALL HOURLY MATRIX		Hours
TASK:	**Concept and Schematic Design**	
1	Rob Wellington Quigley, FAIA	400.0
2	LandLab | Landscape Architecture	130.0
3	DCI Engineers | Structural Engineering	126.0
4a	BKF Engineers | Civil Engineering	54.0
4b	BKF Engineers | Survey-Topo	76.0
5	MA Engineers | Mechanical and Plumbing Engineering	43.0
6	Michael Wall Engineering | Electrical Engineering and Lighting Design	95.0
7a	Veneklasen Associates | Acoustical Engineering	40.0
7b	Veneklasen Associates | AV	21.0
7c	Veneklasen Associates | IT	14.0
7d	Veneklasen Associates | Security	13.0
8	Campbell Anderson & Associates | Cost Consultant	81.0
	TOTAL TASK HOURS & COST	**1093.0**
TASK:	**Design Development**	
1	Rob Wellington Quigley, FAIA	470.0
2	LandLab | Landscape Architecture	145.0
3	DCI Engineers | Structural Engineering	169.0
4	BKF Engineers | Civil Engineering	75.0
5	MA Engineers | Mechanical and Plumbing Engineering	75.0
6	Michael Wall Engineering | Electrical Engineering and Lighting Design	186.0
7a	Veneklasen Associates | Acoustical Engineering	29.0
7b	Veneklasen Associates | AV	19.0
7c	Veneklasen Associates | IT	11.0
7d	Veneklasen Associates | Security	12.0
8	Campbell Anderson & Associates | Cost Consultant	45.0
	TOTAL TASK HOURS & COST	**1236.0**
TASK:	**Construction Documents**	
1	Rob Wellington Quigley, FAIA	980.0
2	LandLab | Landscape Architecture	330.0
3	DCI Engineers | Structural Engineering	120.0
4	BKF Engineers | Civil Engineering	73.0
5	MA Engineers | Mechanical and Plumbing Engineering	138.0
6	Michael Wall Engineering | Electrical Engineering and Lighting Design	170.0
7a	Veneklasen Associates | Acoustical Engineering	21.0
7b	Veneklasen Associates | AV	71.0
7c	Veneklasen Associates | IT	41.0
7d	Veneklasen Associates | Security	43.0
8	Campbell Anderson & Associates | Cost Consultant	62.0
	TOTAL TASK HOURS & COST	**2049.0**
TASK:	**Bidding**	
1	Rob Wellington Quigley, FAIA	60.0
2	LandLab | Landscape Architecture	5.0
3	DCI Engineers | Structural Engineering	27.0
4	MA Engineers | Mechanical and Plumbing Engineering	9.0
5	Michael Wall Engineering | Electrical Engineering and Lighting Design	7.0
	TOTAL TASK HOURS & COST	**108.0**
TASK:	**Construction Administration**	
1	Rob Wellington Quigley, FAIA	545.0
2	LandLab | Landscape Architecture	81.0
3	DCI Engineers | Structural Engineering	120.0
4	BKF Engineers | Civil Engineering	36.0
5	MA Engineers | Mechanical and Plumbing Engineering	43.0
6	Michael Wall Engineering | Electrical Engineering and Lighting Design	48.0
7a	Veneklasen Associates | Acoustical Engineering	13.0
7b	Veneklasen Associates | AV	29.0
7c	Veneklasen Associates | IT	18.0
7d	Veneklasen Associates | Security	15.0
	TOTAL TASK HOURS & COST	**948.0**
	GRAND TOTAL	**5434.0**
	Specialized Consultants	
1	Leighton Consulting Inc. | Geotechnical Engineering	125.0
2	Steelhead Engineers | Waterproofing Consultant - Allowance	
3	Churchill Engineering | Code Consultant - Allowance	
4	Specifications Consultant - Allowance	
5	Fire Sprinkler Consultant if the scope is not design build - TBD	

Project Approach, Scope of Work and Schedule

Rob Wellington Quigley, FAIA

"Seven Trees Community Center and Branch Library is the third sucessful project for us that can be attributed to the quality of your team.

You have had the ability to listen carefully to include stakeholder fundamental needs while still creating a unique user experience in each project's final solution.

When working with the community your presentation style shows you are well organized, professional, while still being personal and creative. You have had great success creating strong civic buildings that are also sensitive and reflective of the context of the surrounding community."

– Rodney Rapson, Senior Architect, City of San Jose

Project Approach, Scope of Work and Schedule

The design of your library lecture hall requires the architect's ability to listen, understand, and help shape a vision for the site and the community. We believe good architecture only develops from a collaborative process that includes everyone involved. We use a very interactive design process based on the involvement of all team members. Working as a diplomatic yet effective liaison between the client and public and private entities, including potential donors, is a familiar role for us.

We understand the importance of developing a creative, flexible design that generates enthusiasm and support to gain approvals and raise funds. The majority of our projects involve working with the local community in facilitating input during participatory design workshops. The goal is to create consensus among the participants that results in the community's support of the project's implementation. Over the years, we have developed a carefully managed process to draw out the community's concerns and desires and turn them into workable plans that guide design and development while meeting the client's objectives. The use of sketches, images, and "role model" buildings helps participants articulate their ideas. Tailoring the process to include a range of participants and methods for outreach, possibly including social media and on-line surveys, facilitates residents' project understanding and allows input on the key issues.

Our methodology is simple - work collaboratively to develop consensus. We are comfortable working with community groups and multiple regulatory and approval groups on this type of project. Our primary objective is to coordinate the input from various sources and reviews to develop consensus and address the underlying desires of all participants. Our clients often comment on the ease with which we obtain approvals from governmental agencies on sometimes controversial projects. At the same time, we coordinate a design team and process that brings out the best of both creativity and technical expertise to meet your project goals.

During the design process, we place a balanced emphasis on the natural, physical, social, and economic factors of the site and community. Each project begins with a comprehensive analysis of the client's requirements and the characteristics of a site, and follows through with recommendations that emphasize project feasibility and designs appropriate for that particular community. Taking cues from the natural and built environment, the design grows from the culture, the climate, the people, and the history of the community. We do not enter this process with preconceived notions; we understand that communities evolve and that it is essential to maintain an open mind and to listen.

It is imperative that we approach this project with sound ideas that build from a detailed program and through an active engagement process with the community. It is equally important that design and presentations are developed that can be used for funding the project. The design team will work closely with City staff, City Council, LLHDC, and residents. Engaging the community and providing a meaningful voice in establishing the goals of this project will create momentum and support for the project moving forward. It is also imperative the new project fits into the existing civic center context. It should provide a strong civic presence that enhances its location.

The majority of the firm's work exemplifies a high level of commitment to integrated sustainability. Most projects in our portfolio have been recognized on a local and national level for both design and resource conservation. We understand the necessity of using less, without sacrificing safety, comfort, durability or aesthetics. The "greenest" materials and systems are the ones that require little or no maintenance; therefore, longevity and lifecycle costs are also very much a part of our thinking and approach.

Our firm has been personally committed to energy efficiency for over 40 years, not only to save clients money but to improve the indoor environmental quality for those who occupy our buildings. While increased energy savings can be largely impacted by more efficient mechanical and lighting systems, we find that focused attention on natural daylighting and ventilation are significant contributors to energy savings. For example, the New Children's Museum utilizes an innovative, environmentally sustainable passive air handling system, photovoltaic panels, water-saving devices, natural daylighting and convection cooling.

Value engineering is a consistent exercise during the design process. We evaluate construction methods and systems from the conceptual design phase, determining approaches to reduce construction costs. The involvement of a construction manager during every phase can enhance this process. On two joint use community centers and libraries for the City of San

Jose, we worked with the engineers and cost estimator to analyze cost differences between alternative structural systems. The costs of both structure and finishes were reduced and contributed to lower long-term maintenance costs.

Our diligent review process results in project bids coming in under budget. We finalized construction documents and prepared the bid sets for two joint-use library/community centers for the City of San Jose (lump sum, competitive bid). The winning bid on the first project, Seven Trees Community Center and Branch Library, was 16.6% under budget. On the second project, Bascom Branch Library and Community Center, the low bid came in 12.5% under budget.

We feel that this strategy to address the design process and project issues – combined with our team's previous civic and municipal experience – will be beneficial in meeting your project's particular requirements.

Scope of Work

Phase I – Preliminary Design

Project Kick-Off and Building Program

- Determine team members and decision-making process.
- Establish project goals and define project requirements.
- Tour project site and existing facilities and infrastructure.
- Research/visit other library lecture halls.
- Review City zoning/land use requirements and approval process.
- Conduct a series of detailed discovery sessions with City staff and LLHDC focusing on user needs, site issues, operations, staffing and program requirements.
- Determine community involvement process and conduct a community meeting to gather input before design begins.
- Develop and define space, technical and functional requirements including building and site criteria, space allocation, and spatial relationships for both indoor and outdoor facilities into a draft and final Building Program.
- Define sustainable design and energy efficiency goals.
- Prepare site analysis to determine climate, noise, traffic, access and other environmental factors that may impact design.
- Define and evaluate site opportunities and constraints.

Conceptual Designs

After gathering input from staff and stakeholders we will develop conceptual design options for review. Each option will consider operations, functional efficiency, solar orientation, energy efficiency, site ingress and egress, interior and exterior activities and spaces, relationship to adjacent uses, and preliminary construction estimates.

- Prepare four conceptual plan options.
- Based on input from staff review, refine options for presentation to LLHDC and community.
- Present options at community meeting for input.
- Refine preferred conceptual plans, including massing diagrams, square footages, and draft conceptual costs.
- Meet with Planning, Fire and Building Departments to review concepts.
- Present conceptual design options to City Council
- Prepare report with executive summary including conceptual designs, cost estimates, and summaries of community and public hearing reviews.

Schematic Design

Selecting and refining one of the conceptual designs into a schematic design involves more detailed coordination with City staff and design team consultants. Periodic team meetings with staff from Public Works, Library and Maintenance Departments will ensure that operational, long-term maintenance and staffing issues are addressed.

- Prepare Schematic Design package, including site plan, floor plans, sections, elevations, preliminary landscape plan and renderings.
- Present plans to community, LLHDC, City staff, City Council and appointment officials and gather input for finalizing Schematic Design.
- Coordinate with consultant team to address acoustics, structural/mechanical/electrical/plumbing design, and code issues.
- Meet with City Planning, Building and Fire Departments.

- Coordinate Savings by Design package with local utility.
- Prepare cost estimate.

Public Outreach and Community Engagement for All Phases

Understanding how to craft agreement with the various stakeholders – who can sometimes have conflicting desires and needs – will be especially important. We have developed consensus-building methods that begin by defining the project needs and determining key players in order to avoid conflict later in the design process. This has proven beneficial on projects that involved multiple client groups and passionate community members in highly politicized environments. Our design process complements and enriches the strengths and desires of each group.

We have found that utilizing a variety of methods to gather input is most effective. Several methods include:

- Community meetings
- Pop-up events (such as a barbecue on the site, inclusion of a table or representative at library and school events or Sunday farmers' market, etc.)
- Online surveys
- Social media communication through the City's website.

Phase II – Entitlement Process and Permits

The approved Schematic Design package will be used to obtain all necessary entitlements.

- Prepare package for review and approval by all necessary agencies.
- Prepare WQMP plan
- Respond to review comments and finalize package for approval.
- Coordinate review process for required and conditional approvals.

Phase III – Design Development through Construction Administration

Design Development

The approved Schematic Design plan will be further developed to include exterior and interior finishes and materials, equipment, and more detailed engineering.

- Refine design and finalize decisions on finishes, materials, equipment, and furniture layouts.
- Continue public outreach and gather input from community, elected and appointed officials, and LLHDC to finalize design.
- Coordinate engineering and design consultants.
- Prepare 50% and 100% Design Development packages, including a rendering, plans, building and wall sections, finish schedule, landscape plan, outline specifications, engineering plans and schedules, and updated LEED scorecard.
- Prepare100% Design Development cost estimate

Construction Documents, Bidding and Construction Administration

Construction Documents will be developed to include information necessary for permitting and bidding. Plans will be submitted for building and other permits as required. Updated cost estimates for each phase of construction documents will be provided. Bid documents will include a project manual and coordinated plans for all disciplines and preparation of Addenda as required.

Construction Observation services ensure that the project is built according to permitted and approved plans. Our goal is to develop a collaborative working relationship with the contractor and City staff during construction to address issues as they arise.

- Prepare 75%, 95% and 100% construction documents packages including all architectural and consultant plans, s pecifications, LEED scorecard and cost estimates.
- Respond to city review comments at each phase.

- Submit plans to Building Department for permit and respond to plan check comments.
- Prepare Bid Package and coordinate project manual. Respond to bidders' questions and review bids.
- Attend pre-construction visit, conduct site visits, respond to RFIs and review submittals, prepare Architectural Supplementary Instructions as necessary.
- Prepare as-built drawings.

Schedule

Once design contract is awarded, a detailed schedule will be developed that incorporates start and stop dates for each phase, including tasks, milestones and meetings for each phase.

Phase I – Preliminary Design

Project Kick-Off and Building Program – 4 weeks
Conceptual Design – 4 weeks
Schematic Design – 8 weeks

Phase II – Entitlement Process and Permits

Schedule is dependent on review agencies process and review times.

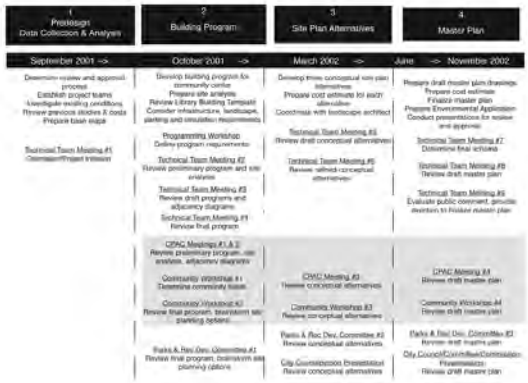
Phase III – Design Development through Construction Administration

Design Development – 12 weeks
Construction Documents – 18 weeks
Building Department Plan Check Process – 2 to 6 months
Bidding and Contract Award – 10 weeks
Construction Administration – 12 months

Techncial and Management Approach

Scheduling

Our project managers are responsible for monitoring the schedule and meeting project deadlines. In addition to regularly scheduled project team and consultant meetings, activities to be performed and major milestones are tracked for programming, design and construction phases. The schedule is updated regularly to take into account unforeseen events and any changes to the scope and approval process. During construction, we work with the general contractor to develop and monitor construction activities, materials procurement, and submittal and shop drawing reviews.



We use the schedule as a tool to monitor the scope of work for all members of the design and construction team. Our firm has proven its ability to support aggressive project schedules with both fixed and fluctuating programs.

In general, flexibility and responsiveness combined with a close monitoring of the work of each member of the design and construction team are the keys to the successful management of schedules. When unexpected changes to the program occur, this approach is not always possible. We find that by working closely with the client and design team, changes in scope can, in most cases, be clearly defined and accommodated while other portions of the work move ahead as scheduled.

Communication

We believe one of the keys to a successful project is clear, frequent and well-documented communication, whether with city staff, design team members, community, or regulatory officials. We document all meetings and conference calls, as well as pertinent individual telephone conversations. To ensure that the information is communicated to all parties, written conference reports, field reports, and project updates are distributed to team members for review and approval, typically via email. Decisions and agreements are clearly stated with action items and responsibilities noted. This formalized communication documentation is used both during design and construction, so that city staff is kept informed of issues and decisions that need to be made in a timely manner.

The Importance of Collaboration

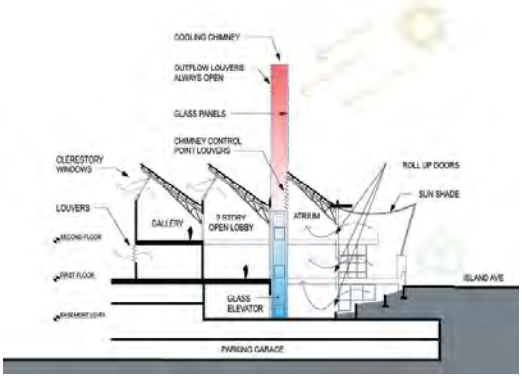
We have found that working in a collaborative process during the design phase results in the most successful projects for our clients. We are experienced facilitating the involvement of project planning committees that include city staff, firefighters, police staff and program and construction managers. During the program phase their input ensures that design criteria are established to define the systems, materials, and construction methods that will best meet client needs. In addition to the user groups, it is important to involve maintenance, operations, IT, landscape and construction management staff to ensure that their requirements are defined. Focus groups and team meetings are used to solicit input. Only by asking the right questions and then listening to and recording the responses can a truly effective program document be prepared. Balancing the needs of the different groups' priorities is a process we are familiar with on numerous public, municipal and institutional projects, such as the Seven Trees Community Center and Branch Library, Bascom Branch Library and Community Center, San Diego New Central Library and Charter School, and UCSD Student Services Center.

Proven Technical, Quality Control and Cost Management Capabilities

As a rule, we work closely with the client, the client's staff, users, consultants, and cost estimator or construction manager throughout the design process to ensure that a project stays within budget. A preliminary budget is prepared during the programming phase based on current construction costs and industry standards. Cost estimates are updated during each phase of design and reviewed by all members of the project team. We also work with the estimators or construction managers on an ongoing basis to review alternative systems for both initial and long-term costs. When necessary, we use value engineering to bring design and budget into alignment.

Shop Drawings, Submittals and Substitutions

We work with the contractor or construction manager to develop a schedule for submission and review of shop drawings and submittals. We also prepare a binder that includes product information and samples on all materials to use as a reference when reviewing submittals. While some can be returned within a few days, more complicated submittals, such as shop drawings for steel or fire sprinklers, require coordination between disciplines and a more detailed and focused review. As long as adequate time is allocated in the submittal schedule for timely receipt and return of shop drawings, we have a high success rate of maintaining that schedule and keeping construction on track.



Specifications address the substitution process desired by the client and construction manager. A format can be developed for submitting substitution review requests to ensure that the design intent is met and the client receives a finished project that meets program, maintenance and sustainability requirements.

Energy Savings

Our firm has been personally committed to energy efficiency for over 40 years, not only to save clients money but to improve the indoor environmental quality for those who occupy our buildings. While increased energy savings can be largely impacted by more efficient mechanical and lighting systems, we find that focused attention on natural daylighting and ventilation are even bigger contributors to energy savings. For example, the New Children's Museum and Charter School utilizes an innovative, environmentally sustainable passive air handling system, photovoltaic panels, water-saving devices, natural daylighting and convection cooling.

Life Cycle Costing and Maintenance Durability Analysis

Life cycle cost analysis is used to assess the total cost of facility ownership and can focus on particular building systems. We find it is especially useful when evaluating project alternatives that fulfill the same performance requirements, but differ with respect to initial costs and operating costs. For example, on the New Children's Museum and Charter School we determined that the specification and detailing of a high-performance glazing system increased initial cost but resulted in dramatically reduced energy costs. On Casa Feliz, in San Jose, life cycle cost analysis showed that the incorporation of a living roof not only reduced energy costs, it also decreased the amount of storm water run-off. This allowed us to maintain the existing storm water connection, rather than building a new 500'-long storm drain line.

Maintenance costs over the life of a building are impacted by the selection of systems, such as lighting and mechanical, as well as durable materials and water-proofing detailing. We work directly with facilities staff to evaluate the choice of these systems to determine which will reduce maintenance and replacement costs due to their durability over the life of the building.

Change Order Policy

Change orders most often occur because of inadequate communications either between the client and the user, between the design team and the client representative, between design team members, and/or between the general contractor and trade contractors. Change orders can be minimized through proactive and organized project data and detail management. Developing a cooperative and trusting relationship between the members of the design and construction team begins to eliminate change orders. From the coordination of construction documents to construction submittals and change order review, the expertise of other design team members, particularly the cost estimator, engineers, and construction managers, are leveraged to analyze the validity and responsibility of each change order. For projects of this size, our change order history has ranged from 1% to 3%.

Computerization & Presentation Materials

We use a fully integrated modeling system with BIM capabilities, compatible with AutoCAD.dwg and .dxf formats. BIM's ability to store project information in its database helps us keep track of building component properties, such as manufacturer's details. We can provide a dedicated ftp site for your project for transfer of large files between the owner, contractor and the design team.

Various communication tools are used to present our designs to clients, governmental review agencies, and the public. Colored plans, scanned sketches, computer renderings, models, sun studies, and computer walkthroughs are customized for the intended recipients. We have highly skilled designers with extensive computer experience who can fine-tune 3D views and create "fly-through" animations that effectively communicate design intent.

Working with Regulatory Agencies

Our team has facilitated meetings with and obtained approvals from state agencies for reviews and approvals. This starts with a working knowledge of applicable laws, codes and regulations for City facilities. It involves monitoring and evaluating state submittal documents, overseeing and coordinating all required drawing and specification submittals, including plan check negotiations, construction change orders, final project closeout and certification approvals.

Post-Construction Follow-Up

We enter every project with the intent of establishing a long-term relationship with the client. From the initial programming phase to post-construction follow-up, we prepare construction documentation that is used to ensure that the final product meets the client's needs. After construction, we and the design team members walk the project to prepare a punch list. This involves testing systems and fixtures to ensure that they function as designed. Some clients prefer to involve a commissioning agent for another level of oversight. We review the contractor's guarantees and warranties and work with the school, contractor and subcontractors to address any items that require additional work or replacement.