



2011 design annual

TABLE OF CONTENTS

5 Churchill Place, Canary Wharf	6
Abaad Tower	14
Abu Dhabi National Oil Company Headquarters	20
Anaheim Regional Transportation Intermodal Center	28
Autodesk	38
Beijing Central Business District, Block Z8	48
Capital Market Authority Tower	56
Cedar Valley College, Science and Technology / Allied Health	66
Cedars-Sinai, Advanced Health Sciences Pavilion	74
Community Hospital of the Monterey Peninsula	86
District of Columbia Consolidated Forensic Lab	94
Fitzrovia Apartments / Royal National Orthopaedic Hospital	102
Florida International University, Frost Art Museum	110
Greenland Dalian East Harbor	118
Greenway Self Park	126
Gunderson	132
Haileybury Almaty	140
Indianapolis International Airport	150
Khed Special Economic Zone	164
Killbear Visitor Centre	176
King Abdullah University of Science and Technology	188
Mint Museum	202
NASA Building 20	212
National Center for Civil and Human Rights	220
New Songdo City, Block B36 Hotel	230
New Songdo City, Block D22 Residential Towers	240
NOAA National Center for Climate and Weather Prediction	248
Orange County Groundwater Replenishment System	258
Reliance Global Headquarters	264
Riyadh Municipal Complex	272
Salvador Dalí Museum	280
Samsung Research and Development Center	290
The Sir Percival David Collection in the Sir Joseph Hotung Centre for Ceramic Studies, British Museum	298
University of Florida, Lake Nona Research Center	304
University of Illinois at Chicago, James J. Stukel Towers and Forum	312



398,260 sq. ft. / 37,000 sq. m.

Completion: 2009

◀ water court



5 Churchill Place, Canary Wharf

London, United Kingdom

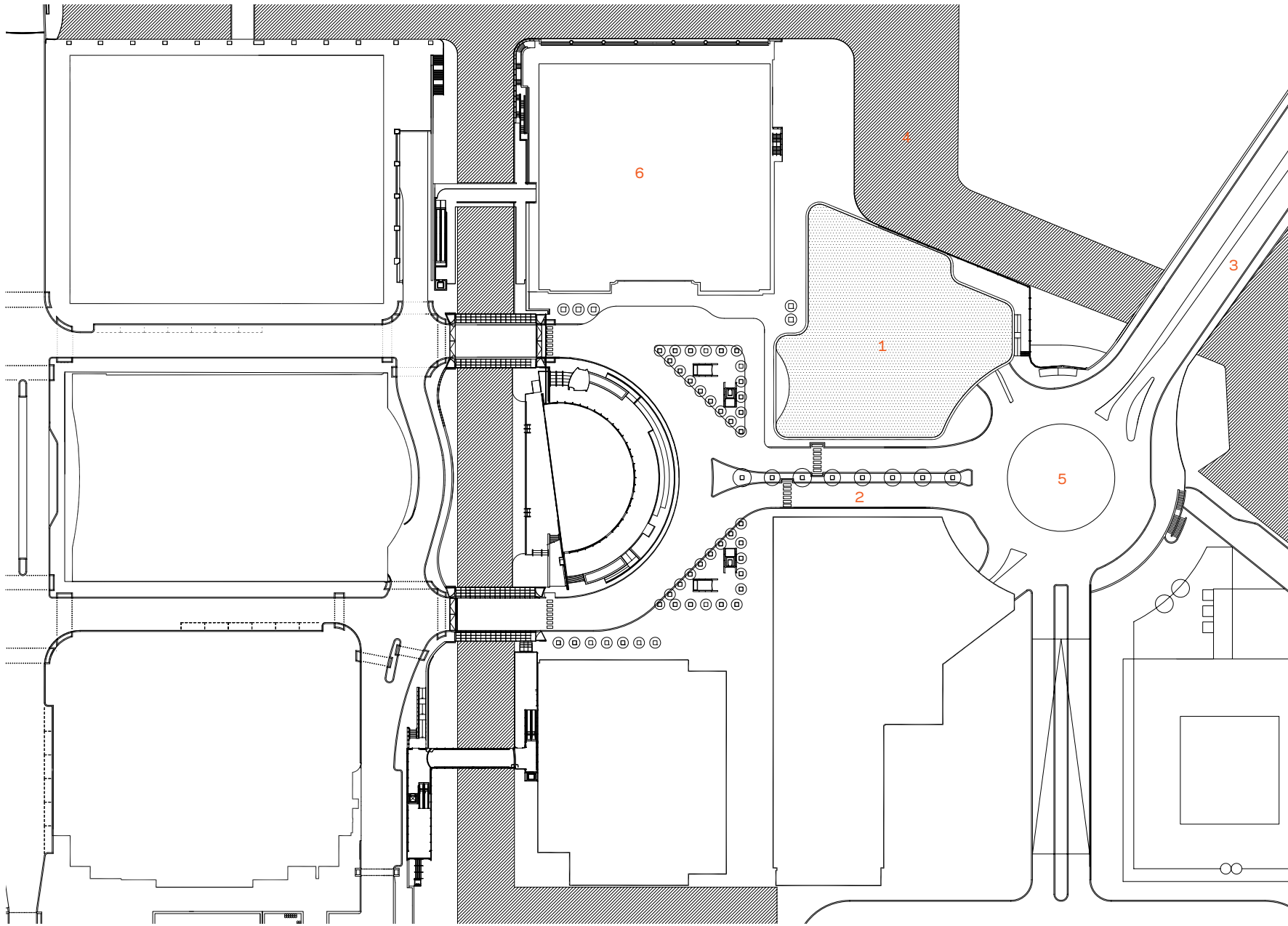
5 Churchill Place is a 15-story office tower in London's Docklands. Completed within an extremely tight schedule, the building rises as a sinuous extrusion from a complex, asymmetrical plot.

The elevations respect the context of Canary Wharf in their use of granite, stainless steel and glass. The curvilinear shape maximizes the site area and introduces variety into Canary Wharf's orthogonal grid.

The developer permitted HOK to push the elevations of the building out to the perimeter of the site to maximize the size of the floor plates,

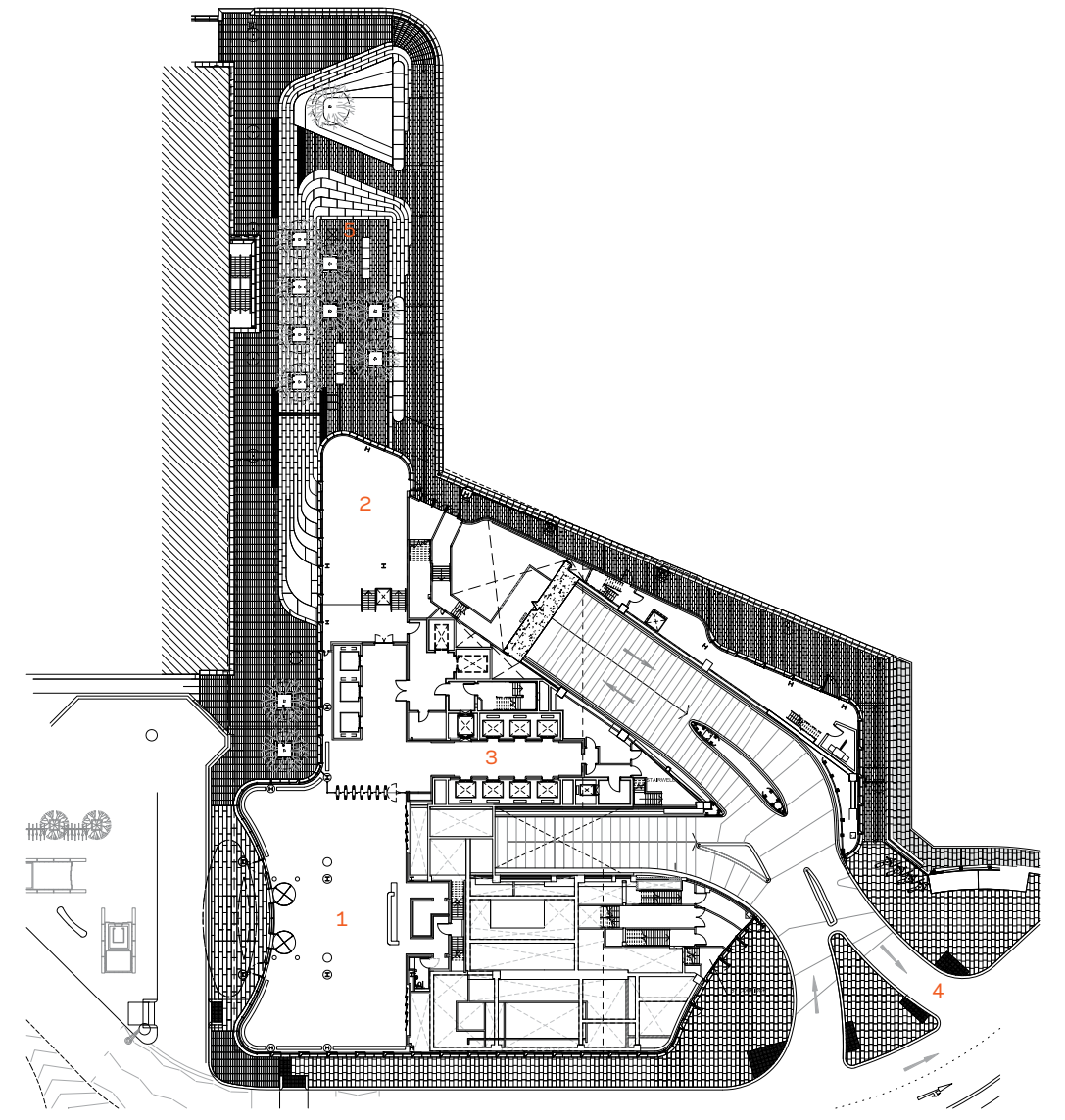
which includes six specialist trading floors. The offset core helps create a contemporary, versatile workplace for trading or dealing activities as well as typical office functions. The lower levels have an additional elevator bank to ensure convenient access to trading levels.

Elevations vary according to their solar orientation, helping achieve a BREEAM Excellent rating that, along with its adaptable floor areas, ensures the long-term sustainability of this bold yet refined structure.



▲ site plan

- 1 5 churchill place
- 2 churchill place
- 3 trafalgar way
- 4 west india dock
- 5 cartier circle
- 6 barclays bank hq



▲ ground level floor plan

- 1 main entrance
- 2 water court lobby
- 3 lift lobby
- 4 vehicular access
- 5 plaza



▲ view along churchill place



▲ facade detail



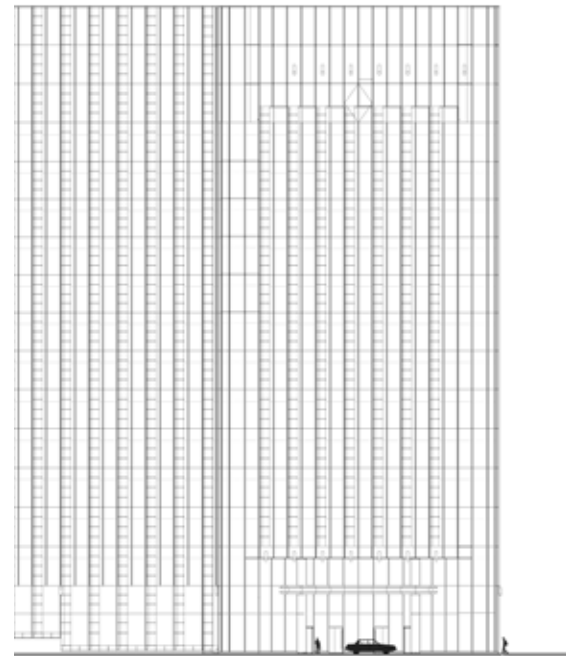
▲ lobby



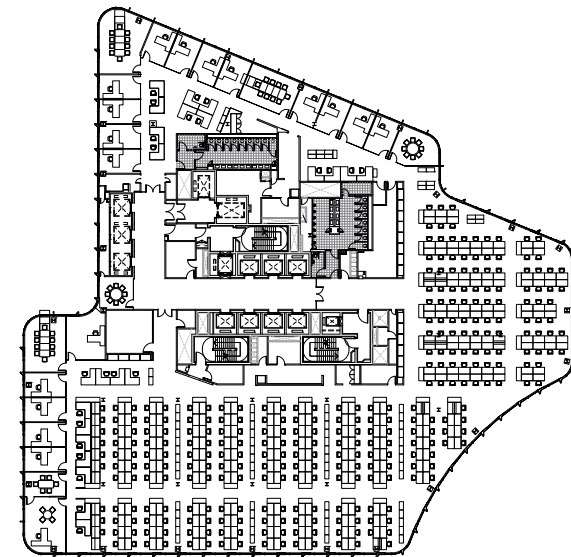
▲ plaza



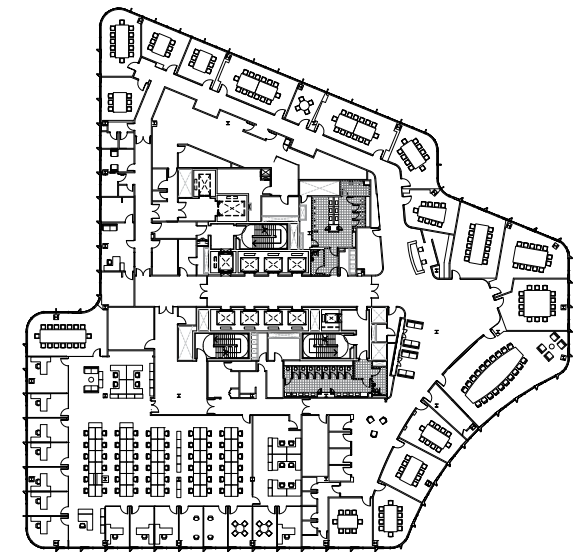
▲ section



▲ west elevation



▲ levels 1 - 7 floor plans



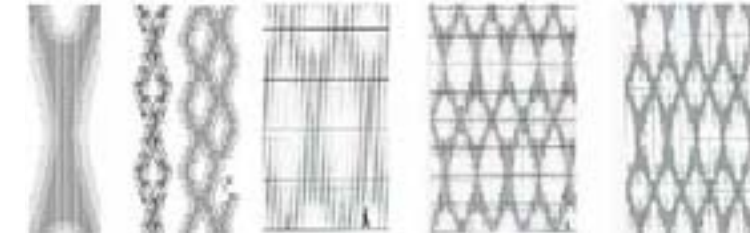
▲ levels 8 - 13 floor plans





465,000 sq. ft. / 43,200 sq. m.

Design completion: 2008



Abaad Tower

Dubai, United Arab Emirates

The Abaad Tower is a speculative office building designed for a site on Sheikh Zayed Road, Dubai's major highway. On a road lined with corporate and institutional towers, the Abaad Tower establishes its identity through subtlety and depth.

Simple and elegant, the Abaad Tower's silhouette, fabric, and details fuse to create an image that quietly asserts its refinement.

Aluminum and fritted glass are the major materials. These materials are used in a variety of combinations and applications: as a prefinished aluminum engineered wall system, aluminum facade louvre system, channel

glass facade system and the curtain wall. These exterior facade elements are detailed to suggest the complexities of different weave patterns, coming from the same loom.

The building has flexible floorplates, cost-effective construction and a strong identity coupled with amenities that appeal to corporate tenants.

◀ view from sheikh zayed road

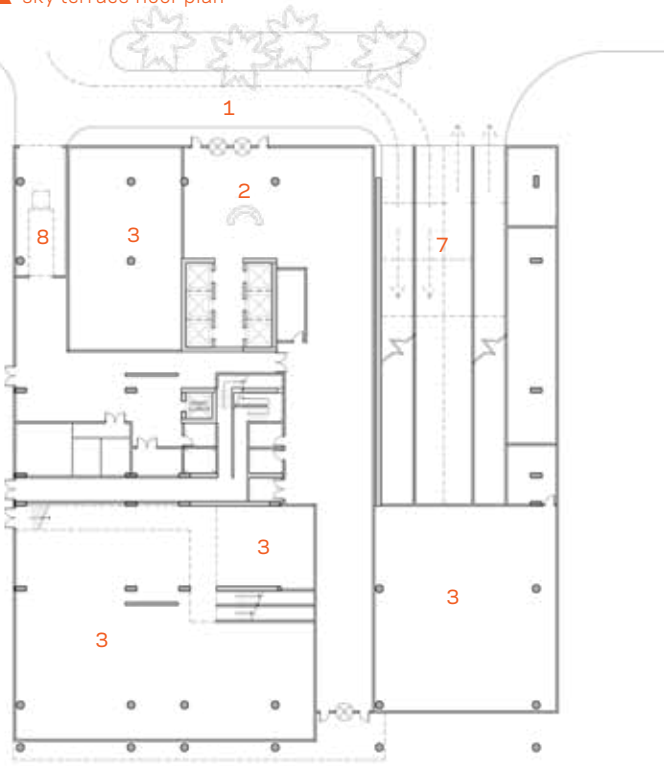


▲ sky terrace floor plan



▲ typical high rise floor plan

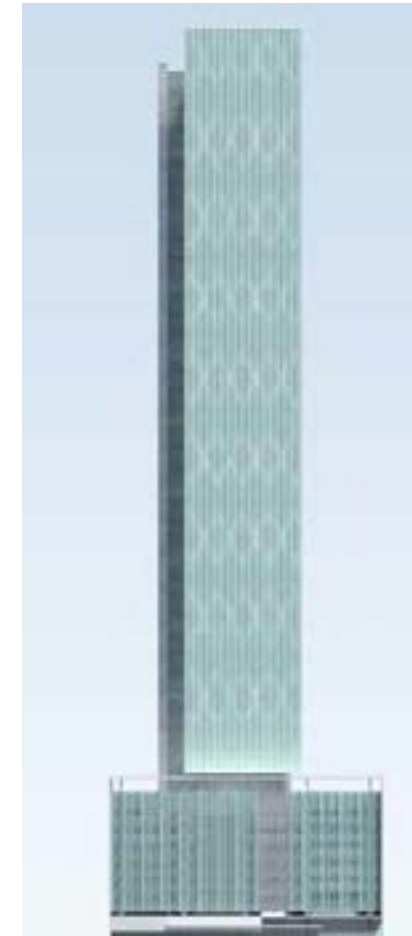
- 1 drop off
- 2 reception
- 3 retail / cafe
- 4 meeting rooms
- 5 office
- 6 service
- 7 vehicular access
- 8 loading



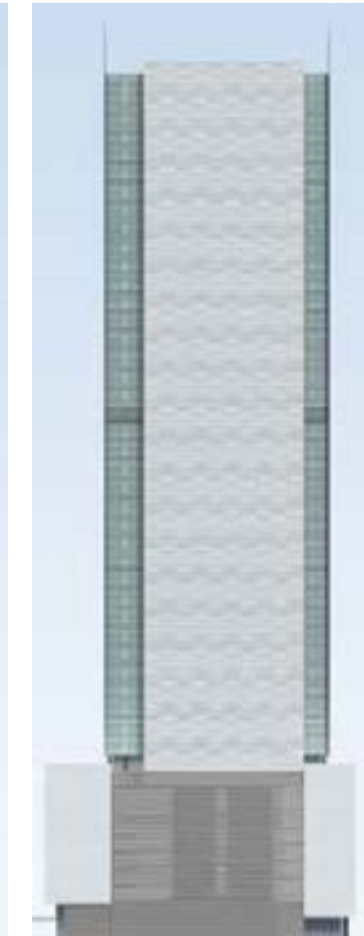
▲ ground floor plan



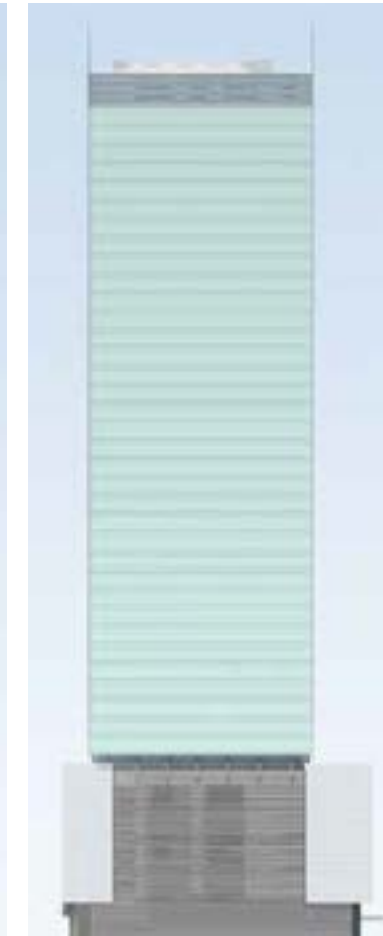
▲ typical low rise floor plan



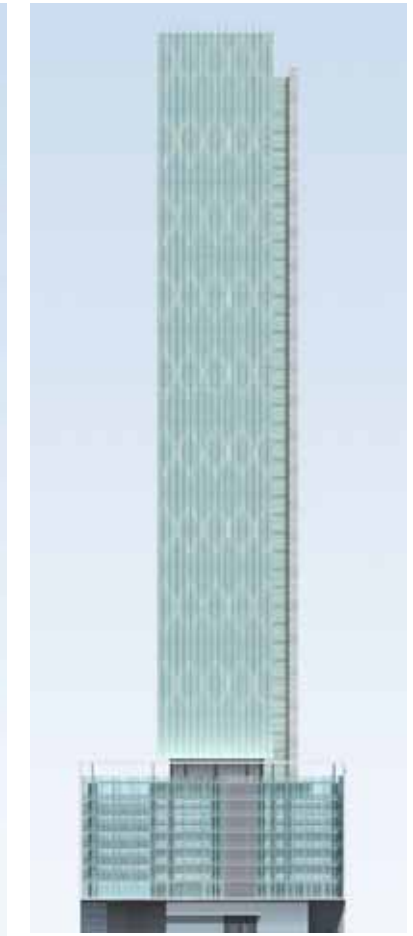
▲ south elevation



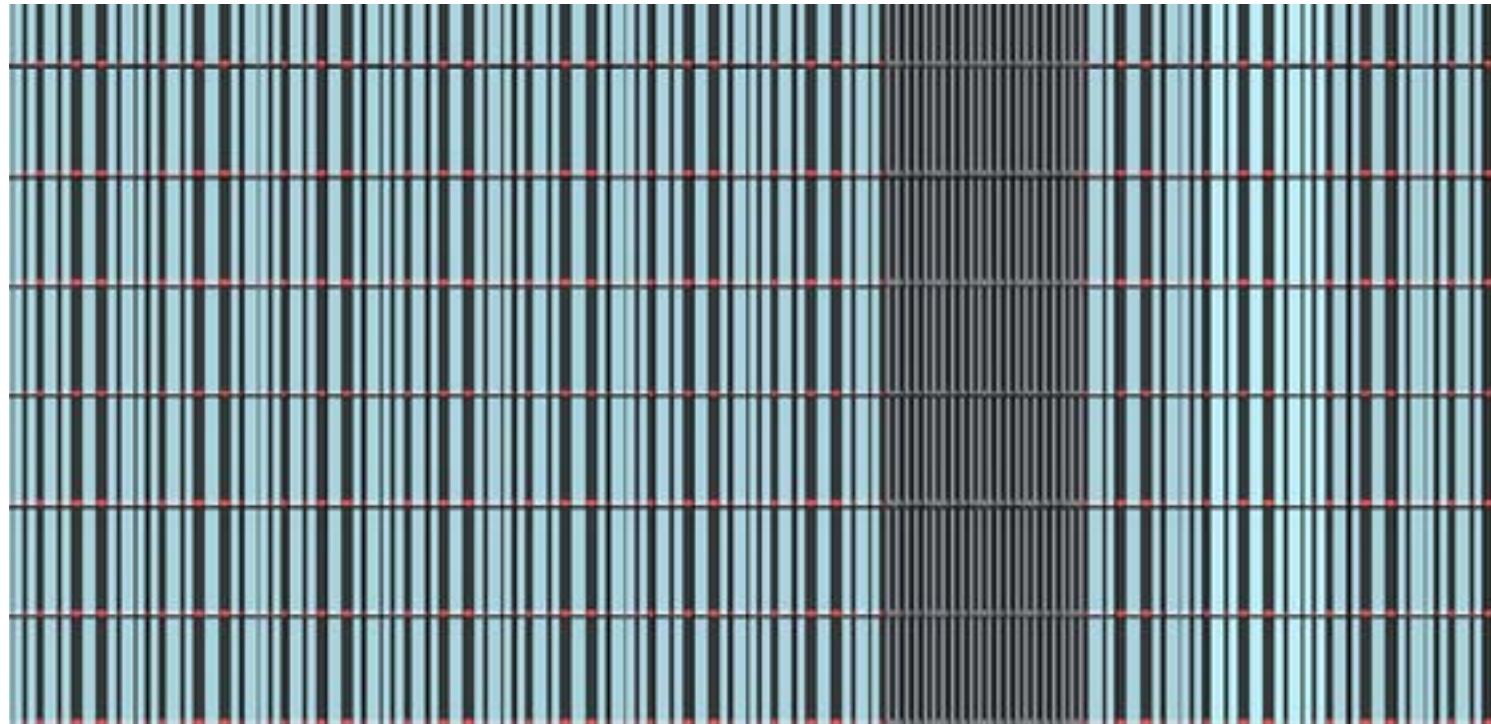
▲ west elevation



▲ east elevation



▲ north elevation



▲ channel glass study

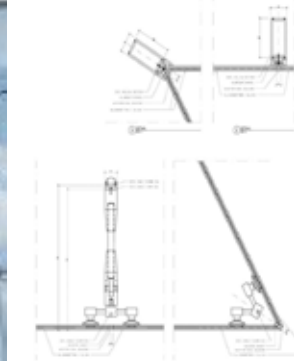


▲ sky terrace section



- 1 aluminum glass screen
- 2 double glazed curtain wall with ceramic frit
- 3 vertical aluminum mullion caps
- 4 prefinished aluminum facade system
- 5 doubled glazing with horizontal ceramic frit
- 6 spandrel glass panel
- 7 profilit channel glass facade system
- 8 aluminum facade louver system
- 9 prefinished aluminum facade system
- 10 sealed double glazing in aluminum frame
- 11 prefinished aluminum column cover

◀ material diagram



▲ lobby façade

1,887,00 sq. ft. / 175,300 sq. m.

Completion: 2013 (anticipated)

Abu Dhabi National Oil Company Headquarters

Abu Dhabi, United Arab Emirates

A new headquarters for Abu Dhabi National Oil Company (ADNOC) will be a symbol of its corporate role and position as one of the most influential and dynamic petroleum companies in the world. The project is intended to be a landmark feature of the landscape. The new headquarters complex will be the physical embodiment of ADNOC's importance in the rapid development of the United Arab Emirates as one of the most forward-looking, influential countries in the Middle East and the world.

The site is one of the most prominent sites in the urbanized area of Abu Dhabi. Its location on the Corniche at Bainuna Street provides maximum visibility for the headquarters complex. The proximity to the Emirates Palace Hotel complex adds to the exclusivity of the project site, and the new ADNOC's headquarters will be the primary view seen by VIPs and patrons at the Emirate Palace Complex.

The design maximizes views of the water and the corniche while utilizing the site location

through careful massing of the headquarters tower and sensitive design of the surrounding entry courts, plazas and landscape. The new headquarters will accommodate ADNOC's present requirements and embrace a strategy for future expansion of operations.

These ideas of looking to the future incorporate sustainable design principles into the schemes. The site plan is generated by the north-south orientation of the tower. The ground level footprint is minimized, leaving ample space for landscape. A rectilinear podium building extends from the base of the tower, while a curvilinear auditorium building housing the Corniche Club sits adjacent to the tower as a contrasting sculptural element.

A three-level rectangular podium structure extends to the south of the tower structure. The ground floor of the podium contains employee service retail space, the service loading area and a heritage museum, as well as the main lobby and circulating space for the complex.

The Crisis Management Center occupies the two upper levels and has access from the main lobby as well as its own internal circulation between the two floors. A new transit station will be located on the east side of the development along 18th Street. The roof of the rectangular podium element will extend south across the access road to envelope and connect a new mosque structure to the development.

The sculptural form of the building is made up of layers of walls that surround the main volumes and are intended to provide a formal contrast to the tower and podium structure. The layers of walls also respond to solar orientation by their use of materials. The south layers are solid walls clad in stone, while the north walls are primarily glazed, allowing for light and views.

◀ renderings

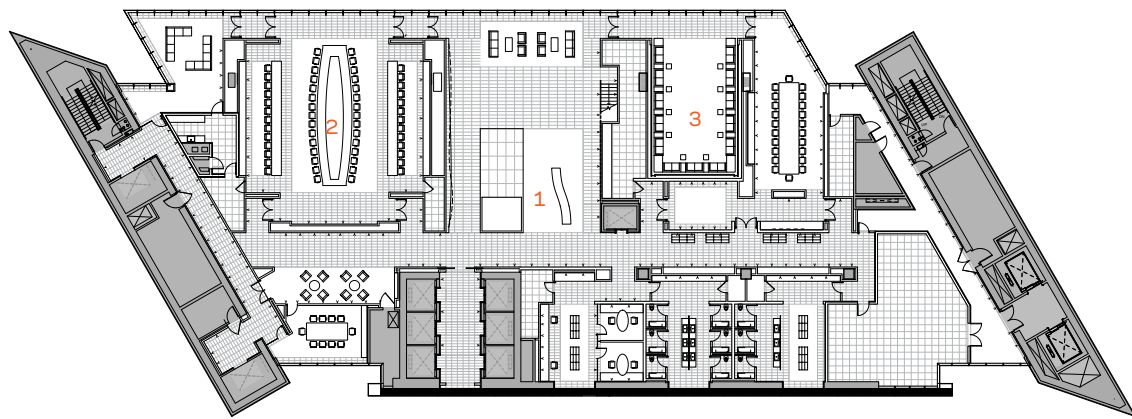


▲ site plan

- 1 podium
- 2 auditorium building
- 3 tower
- 4 mosque

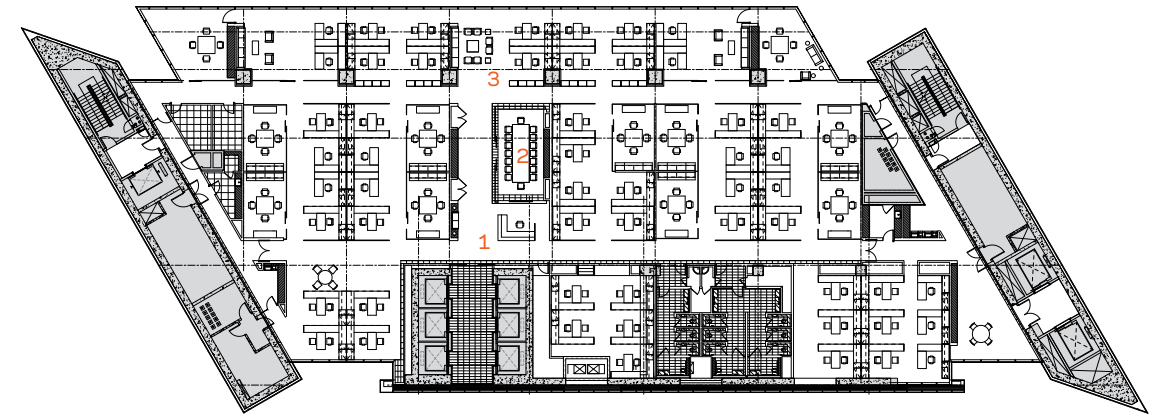
▶ level 61 executive floor plan

- 1 reception
- 2 board room
- 3 majlis



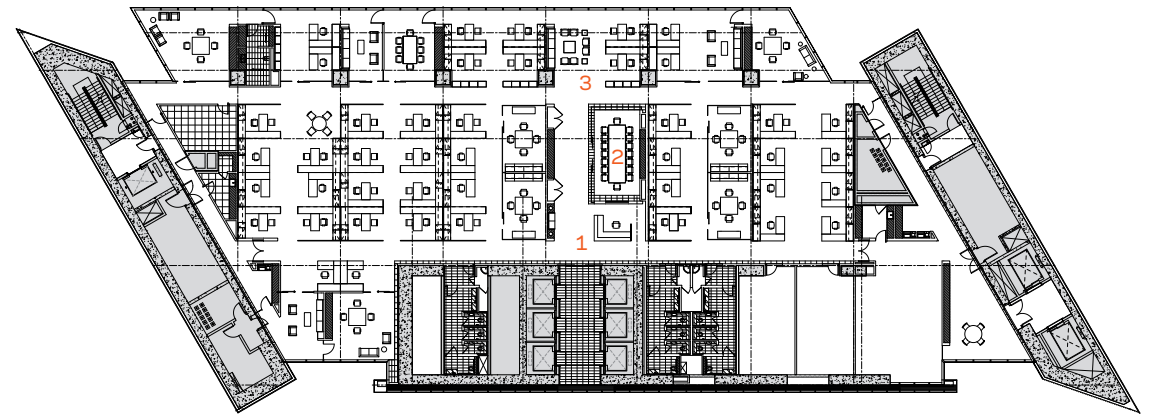
▶ high rise level floor plan

- 1 reception
- 2 meeting
- 3 waiting area



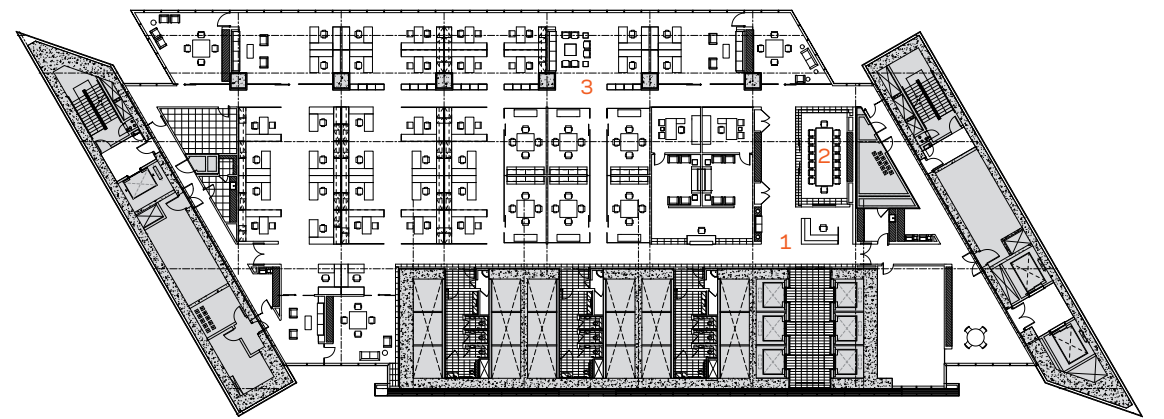
▶ mid rise level floor plan

- 1 reception
- 2 meeting
- 3 waiting area



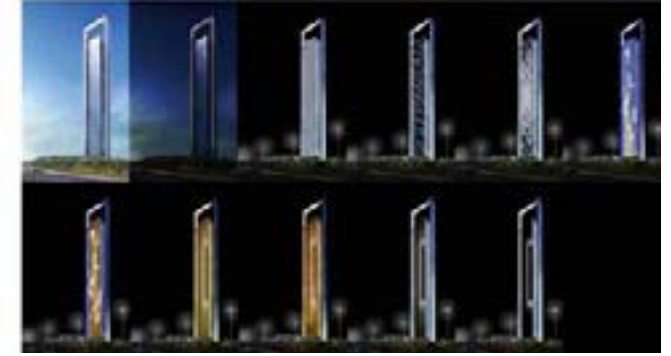
▶ low rise level floor plan

- 1 reception
- 2 meeting
- 3 waiting area

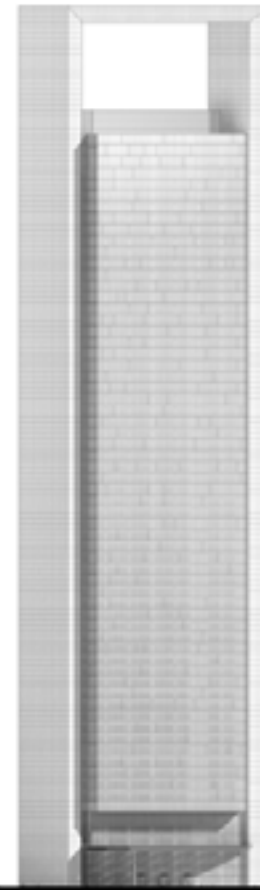




◀ façade detail



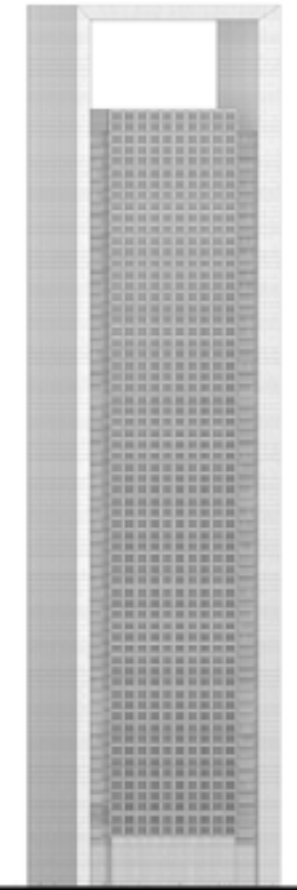
▲ south façade



▲ north elevation



▲ east elevation



▲ south elevation



▼ main entrance



▲ aerial view, phase two



Anaheim Regional Transportation Intermodal Center

Anaheim, California, USA

66,000 sq. ft./6,131 sq. m.

Completion: 2014 (anticipated)

Construction of this intermodal transit hub, located on a prominent 16-acre site owned by the OCTA and the City of Anaheim, is an important first step in transforming Anaheim and Orange County from a drivable suburb to a walkable, urban development model. It will serve as a connectivity gateway and mixed-use destination for Orange County and Southern California.

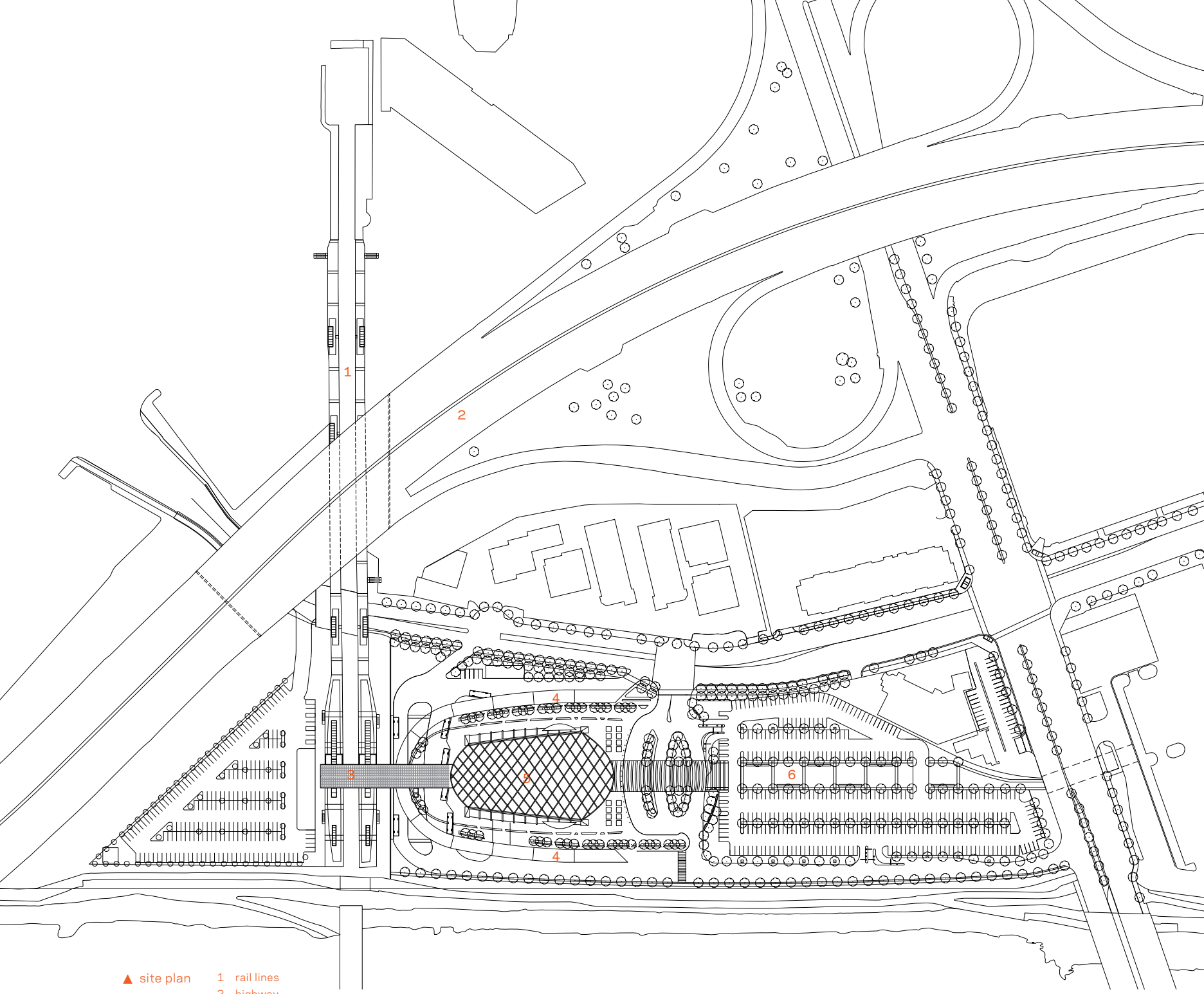
The design will accommodate passenger arrivals, departures and transfers, with supporting retail, restaurant and passenger services within the building. The design makes an iconic architectural statement that will stand as a landmark on the skyline and a gateway to the region. The open feeling of this world-class transportation facility anticipates future expansion of transportation services and adjacent commercial development.

This intermodal transit hub will link commuter and regional rail service throughout Orange County and beyond, as well as intercity bus, taxi, and local transit. Future phases will expand the facility to accommodate high-speed rail service to destinations such as San Francisco and Sacramento and serve as the terminus for the super-speed train between Las Vegas and Southern California.

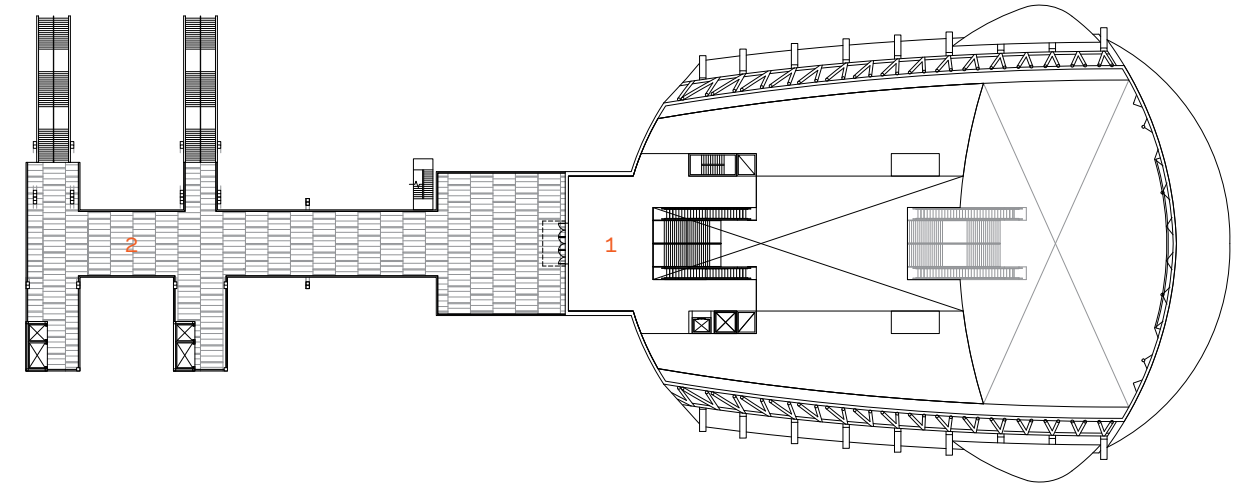
This is a multi-year, multi-phase project. Each phase will coincide with new and expanded transportation services and development. The first phase will consist of site work, the transportation center and supporting facilities, rail tracks and platforms, parking, public art and street improvements. The sustainable design measures required to achieve LEED Platinum certification will dramatically reduce energy use, water use, and solid waste production and carbon emissions for the City of Anaheim.

Based on the heritage and civic importance of the grand 19th-century rail stations, with the size, scale, and complexity of today's modern airport terminals, ARTIC, with its iconic Intermodal Terminal, is on par with other world class transportation hubs. The Intermodal Terminal not only presents a dramatic, signature identity but also serves to orient terminal patrons with clear, navigable thoroughfares resulting in easy connections between all transportation modes: rail, bus, car, bike, and pedestrian pathways. The design of the Intermodal Terminal expresses its building materials and structure while concurrently conveying lightness and transparency. The long-span, vaulting grid shell eliminates the need for roof-supporting columns, allowing for maximum planning flexibility.

◀ aerial rendering of terminal and plaza

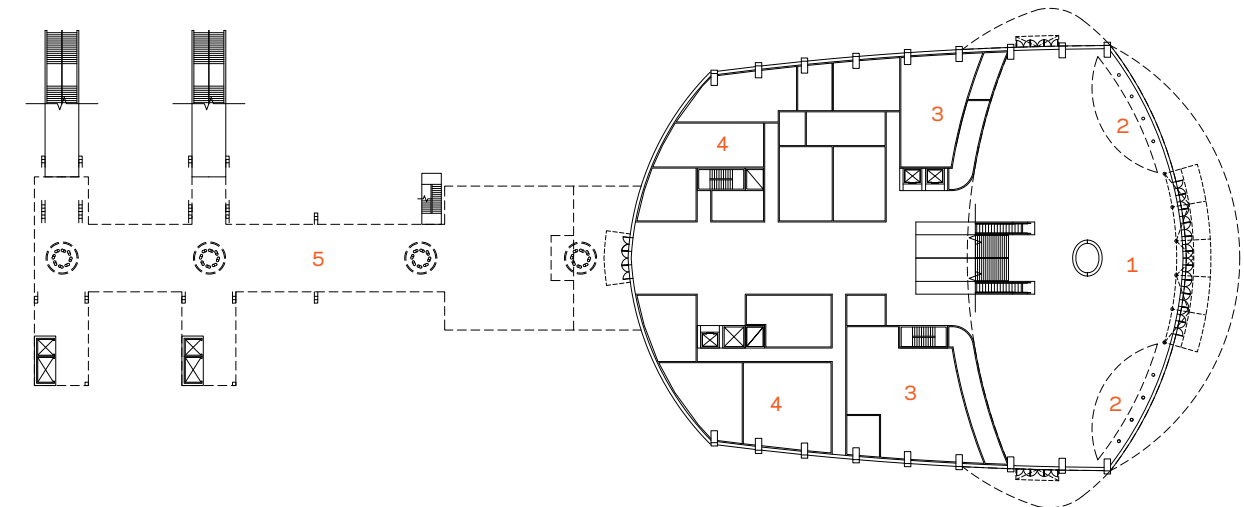


- ▲ site plan
- 1 rail lines
 - 2 highway
 - 3 concourse bridge
 - 4 bus drop off
 - 5 terminal
 - 6 promenade



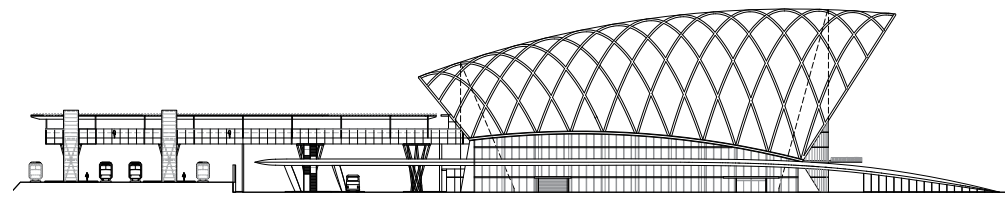
▲ level 3 floor plan

- 1 ticketing and information
- 2 bridge to train lines

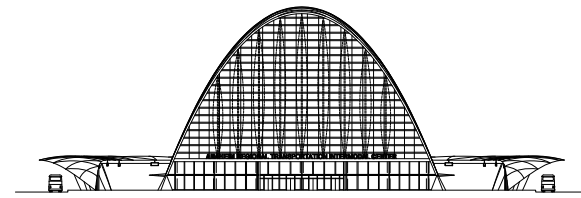


▲ level 1 floor plan

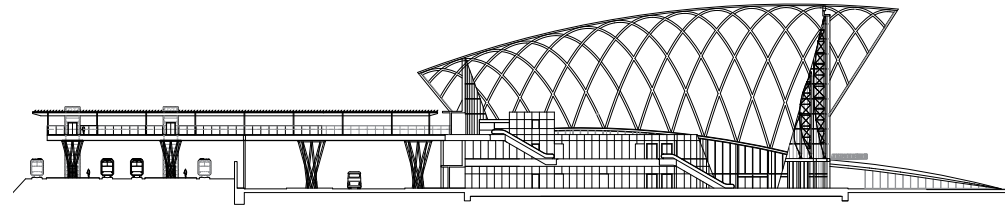
- 1 lobby
- 2 retail
- 3 office
- 4 support
- 5 bus drop-off



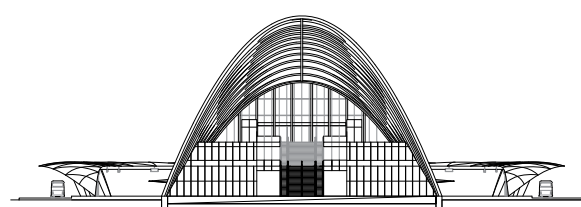
▲ east elevation



▲ north elevation



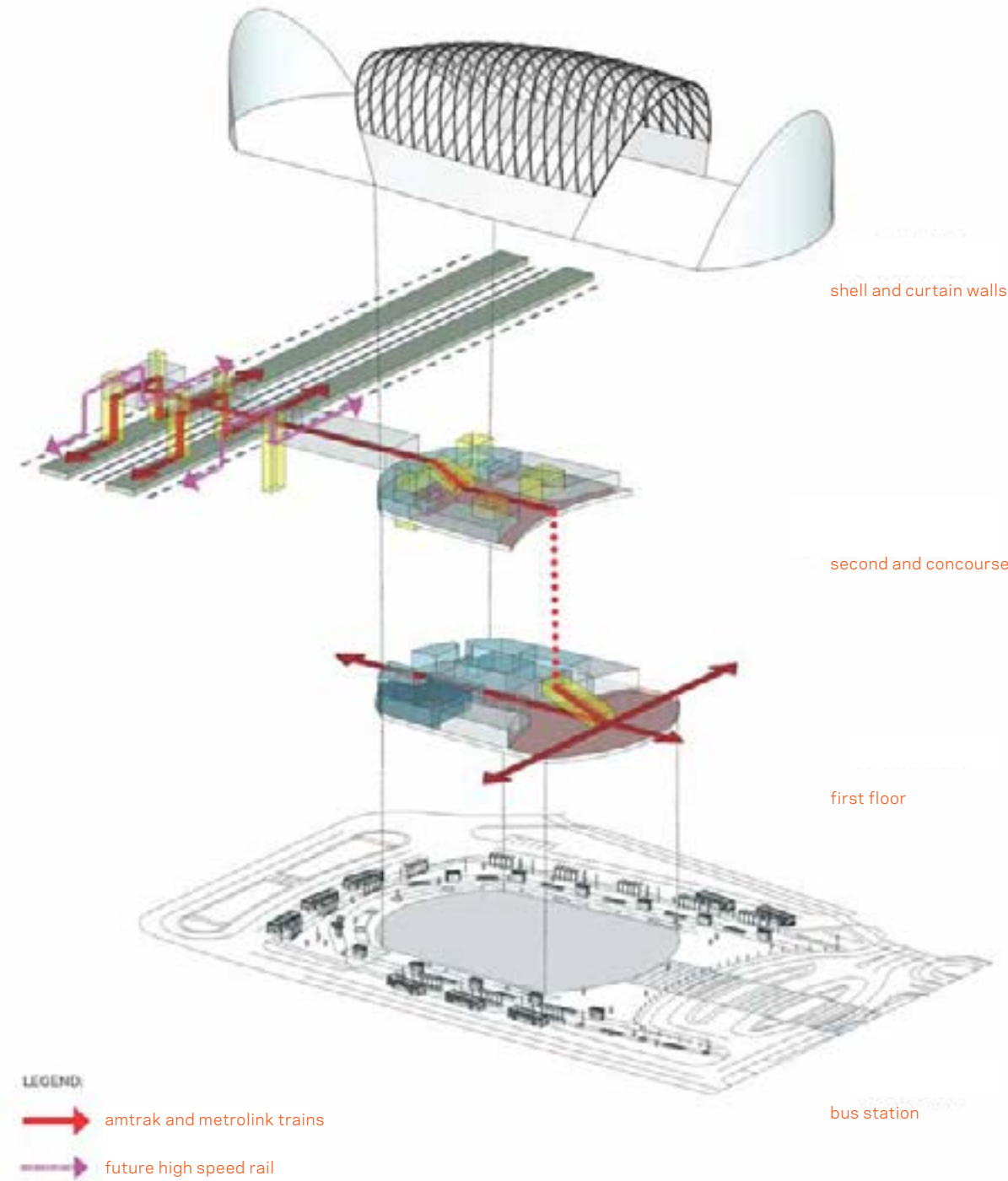
▲ section



▲ section



▲ study model



▲ stacking diagram



▲ pedestrian promenade

◀ plaza and bus transit center

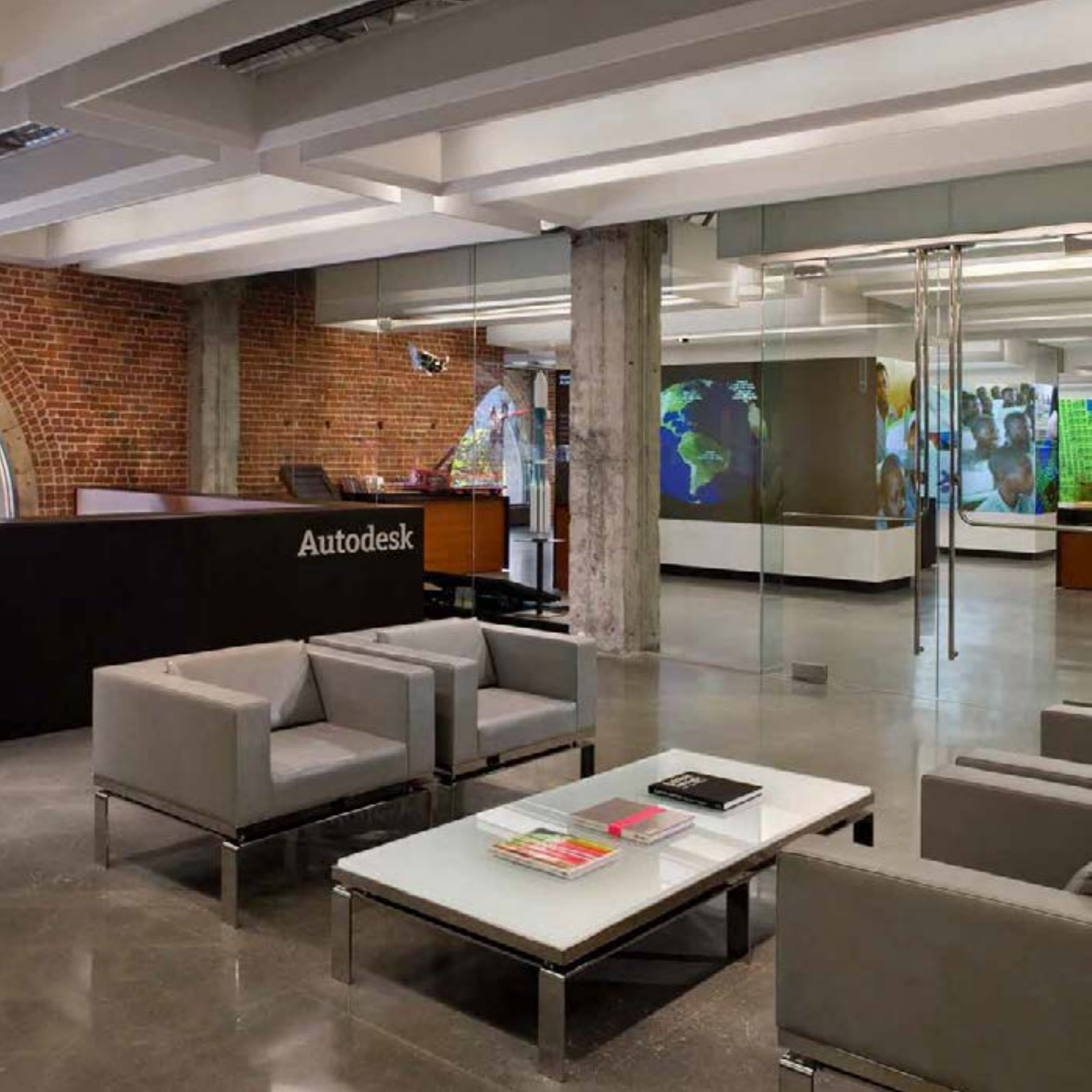


▲ phase one



▲ final master plan





45,000 sq. ft./4,180 sq. m.
 Completion: 2008

◀ reception



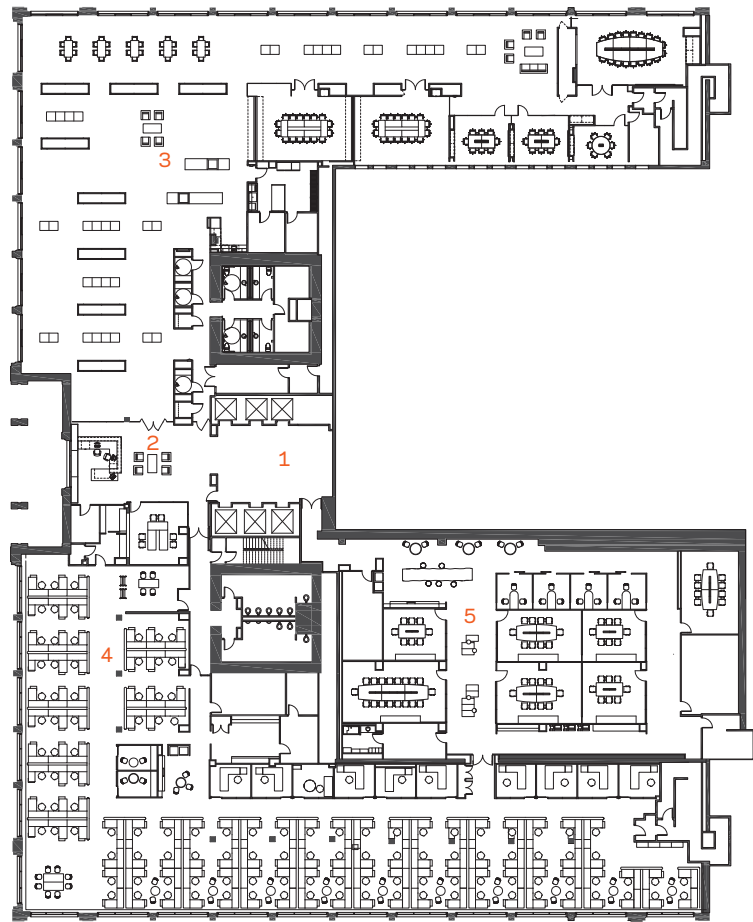
Autodesk
 San Francisco, California, USA

The design of Autodesk at One Market Street honors this landmark building by highlighting the loft ceilings, original columns, two-story windows and the inherently raw, industrial feel of the space. Exposing ceilings, vertical piping and using weathered columns as design elements, the team chose to enhance the building's natural features while reusing and repurposing elements.

The design abandons the cubicle, encouraging collaboration and creativity. The orientation of the planning reflects the choice to pursue the greatest amount of natural lighting. Loft-like space receives an abundance of natural light from the large, arched windows running along the perimeter. Furniture systems do not obstruct views to the outside for employees seated at their work stations. To connect the space to its region and add specificity to the

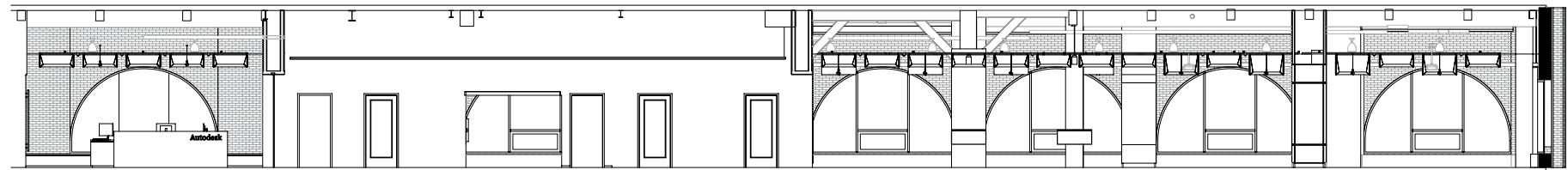
design, a three-inch slab of fallen redwood, a tree native to Northern California, is used as the community table for the office cafe. A cork accent wall, locally produced ceramic tiles and pendant light fixtures all provide texture and contrast to the loft-like feel of the space.

The customer briefing center is a high-tech experience with minimalist design elements that highlight the interactive nature of the space. Suspended translucent fabric boxes, exposed steel and polished concrete round out the general palette surrounding the gallery and meeting spaces. Along with white, flowing fabric reminiscent of San Francisco fog, these elements allow the space to be used in conjunction with projectors. Other briefing center spaces include a usability lab and classroom spaces.

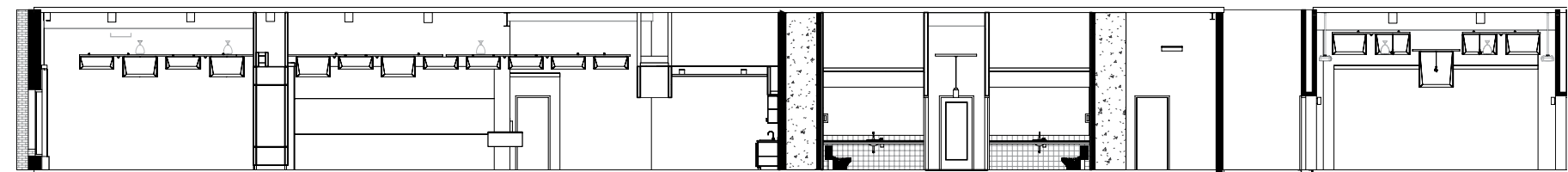


▲ level 2 floor plan

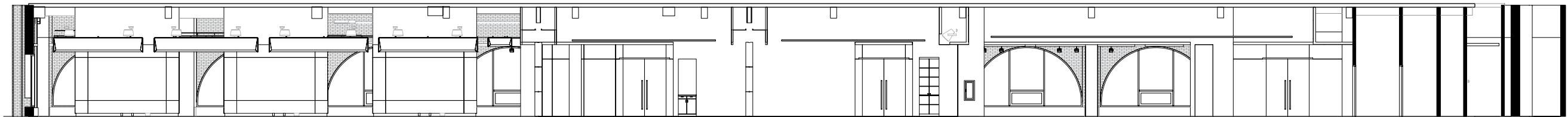
- 1 elevator lobby
- 2 lounge/reception
- 3 gallery
- 4 office
- 5 conference



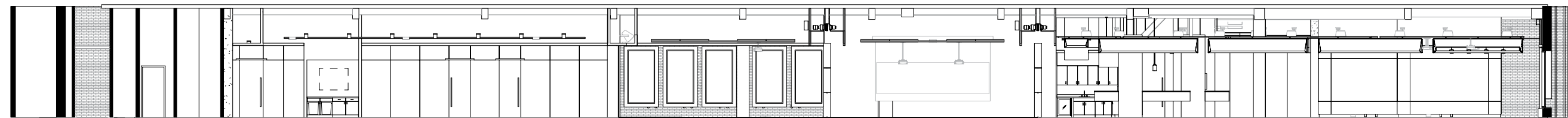
▲ lounge



▲ lobby



▲ conference hall



▲ gallery

▼ lounge



▲ conference

▼ gallery

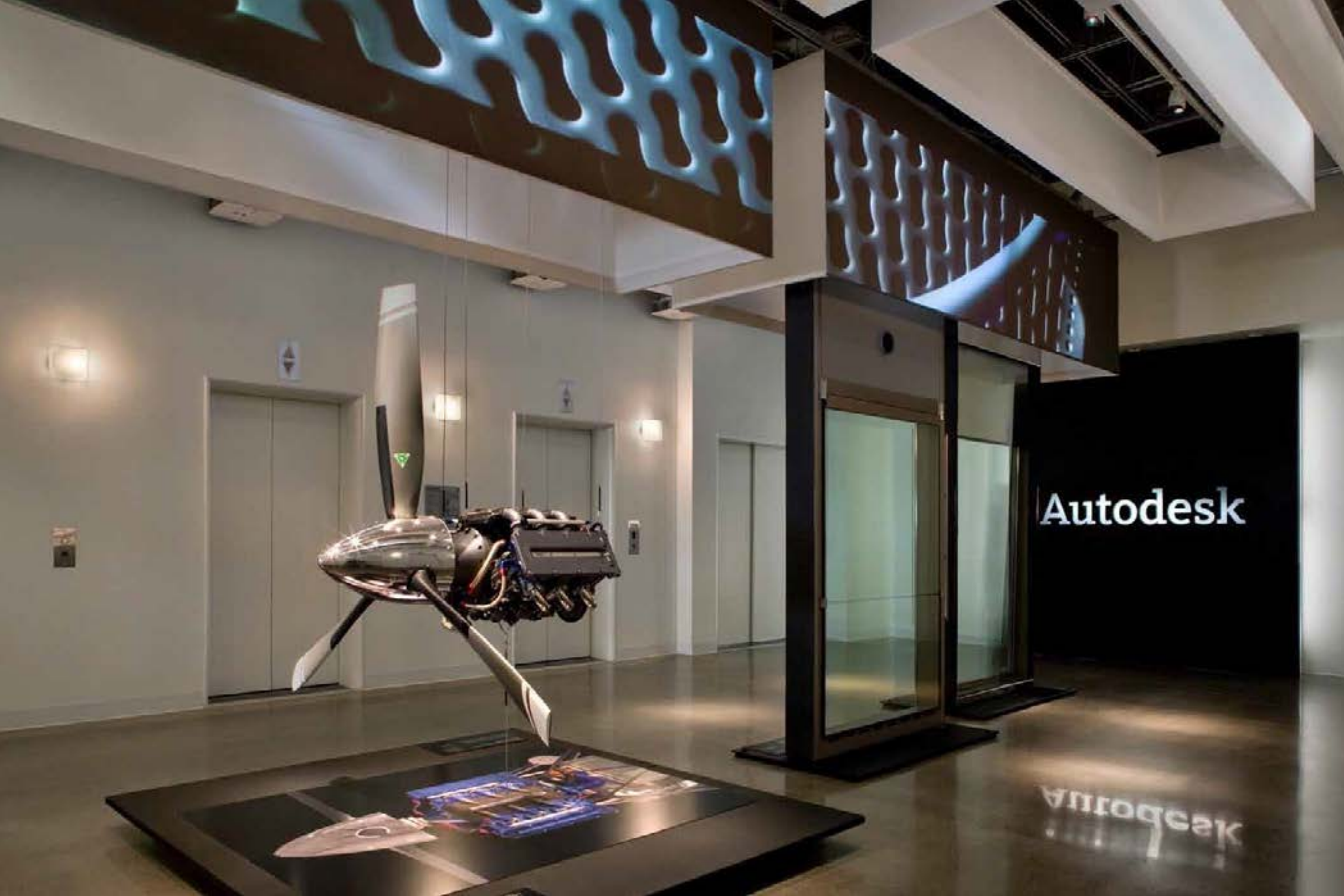


▲ office



▲ board room

◀ board room



▲ conference room

◀ gallery



1,800,000 sq. ft. / 167,225 sq. m.

Competition: 2010

Beijing Central Business District, Block Z8

Beijing, China

This project creates two slender vertical towers, one for office use and one for hotel use, linked through vertical gardens and functional spaces. The towers are connected by a series of small-scaled neighborhood parks throughout. Vertical parks are conceived as vertical "hutongs" - Beijing's traditional neighborhoods - using the small courtyards that have historically comprised the fabric of Beijing. The resulting green spaces replace the area of the site taken by the tower footprint.

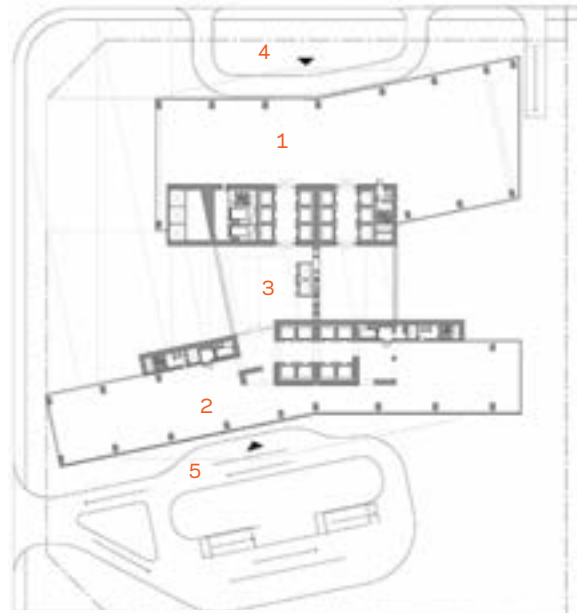
The tower includes three slender zones: an enclosed park, office building and a hotel. Structurally, the two towers are co-dependent and achieve their slenderness by using side loaded cores that allow for large open floor plates for the office function to the north and the hotel functions to the south.

The structural design is a hybrid of steel and concrete construction. The primary side-loaded cores are made up of concrete, steel braced frames around the atria for structural stiffness, concrete flat slab floor plates for the hotel and composite steel floor plates for the office function.

Located in the heart of Beijing near the 3rd Ring Road, the tower is envisioned to be an example of sustainable development with the goal of achieving LEED Platinum certification.

◀ aerial rendering

▼ ground level floor plan



- 1 office lobby
- 2 hotel lobby
- 3 amenity shared space
- 4 office drop off
- 5 hotel drop off

▼ typical upper level floor plan



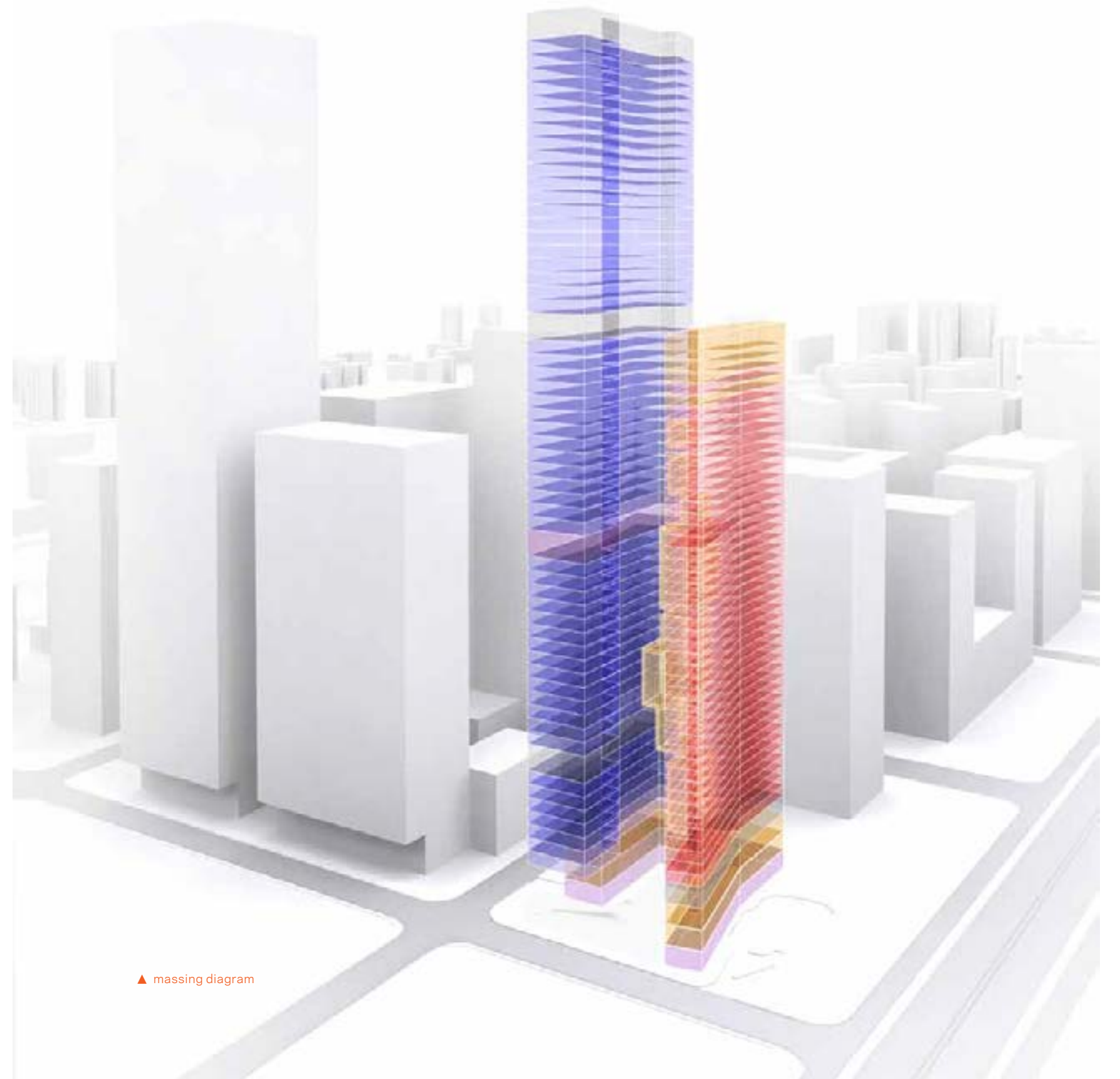
- 1 office
- 2 meeting
- 3 hotel
- 4 lift lobby



▲ west elevation



▲ south elevation



▲ massing diagram



▲ plaza view



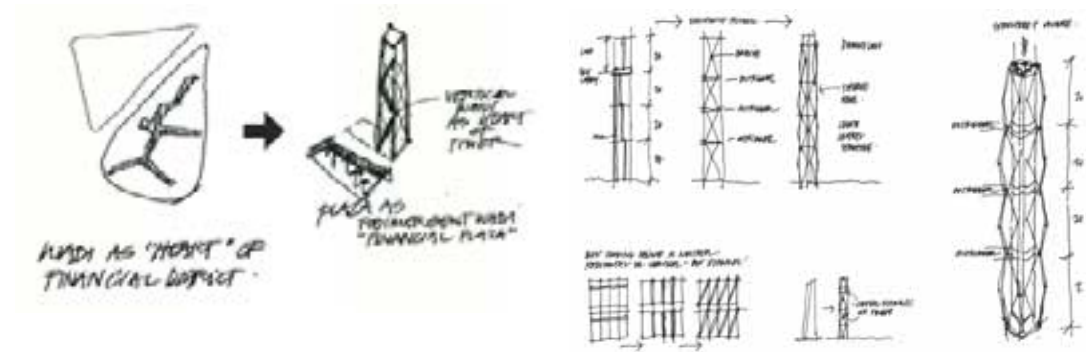
▲ vertical hutong



▲ rendering



▼ view along road



Capital Market Authority Tower

Riyadh, Saudi Arabia

1,980,000 sq. ft. / 184,000 sq. m.

Completion: 2012 (anticipated)

As part of a bid to become one of the top 10 world economies, Saudi Arabia is redirecting its wealth toward economic diversification and the provision of sustainable employment and housing for its populace. As a key element in this strategy, the King Abdullah Financial District (KAFD) provides a new economic platform for Saudi Arabia in the heart of the capital city. This new development will include nearly 54 million square feet of commercial, residential and mixed-use space.

The focal point of the KAFD is the financial plaza, which contains the five tallest towers in the scheme. Standing tallest in the Kingdom, the Capital Market Authority (CMA) tower soars 1,260 feet above the surrounding cityscape and provides an anchor for the entire district.

CMA will occupy 300,000 square feet of space in the top floors of the tower, which provides 76 stories of office space.

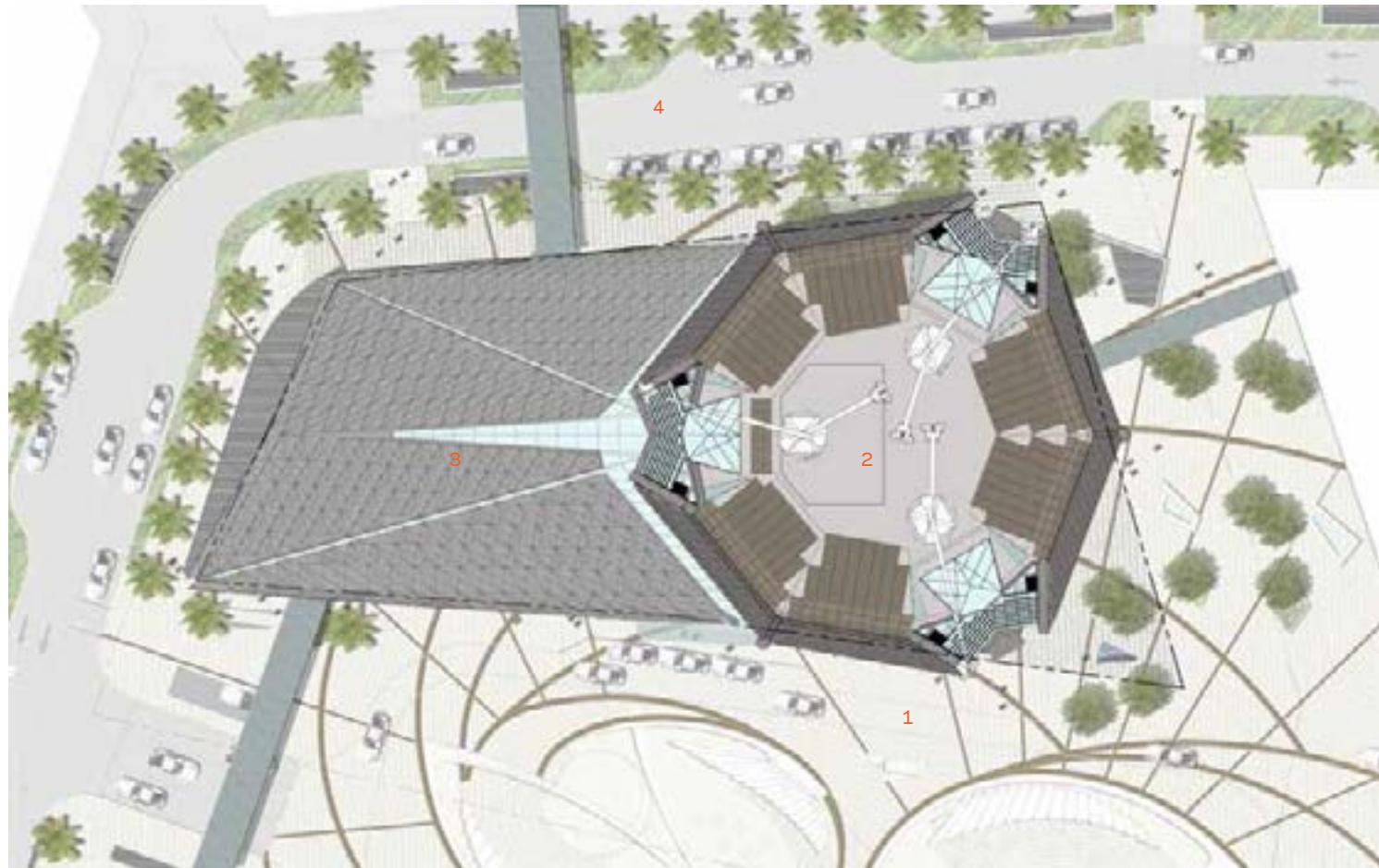
The podium structure at the base of the tower integrates public circulation via the district sky bridge system with private amenity spaces, including dining facilities and a two-story, state-of-the-art auditorium.

Transparency is the predominant architectural statement of the enclosure. This creates internal openness and access to daylight, as so sought after in today's corporate workplace. With transparency comes the need to moderate the intense Saudi Arabian light and heat with a high-performance solar control system. An external layer of fins, gantries and perforated panels provides shade, amplifying the thermal efficiency of the triple-pane, unitized glazing. Together, these shading devices minimize solar gain and internal cooling loads, thereby reducing HVAC requirements. Electrical energy will be reclaimed through the photovoltaic array installation on the tower's roof.

Internal heat gains are further reduced by eliminating copper wire-based distribution systems for data and security. The design uses the 'cool' technologies of wireless communication, air blown fiber optics and converged networks. The intelligent infrastructure will merge voice, data and video networks to reduce costs, centralize management and boost productivity. Redundant capacity is built into all systems to accommodate for future expansion and upgraded technology.

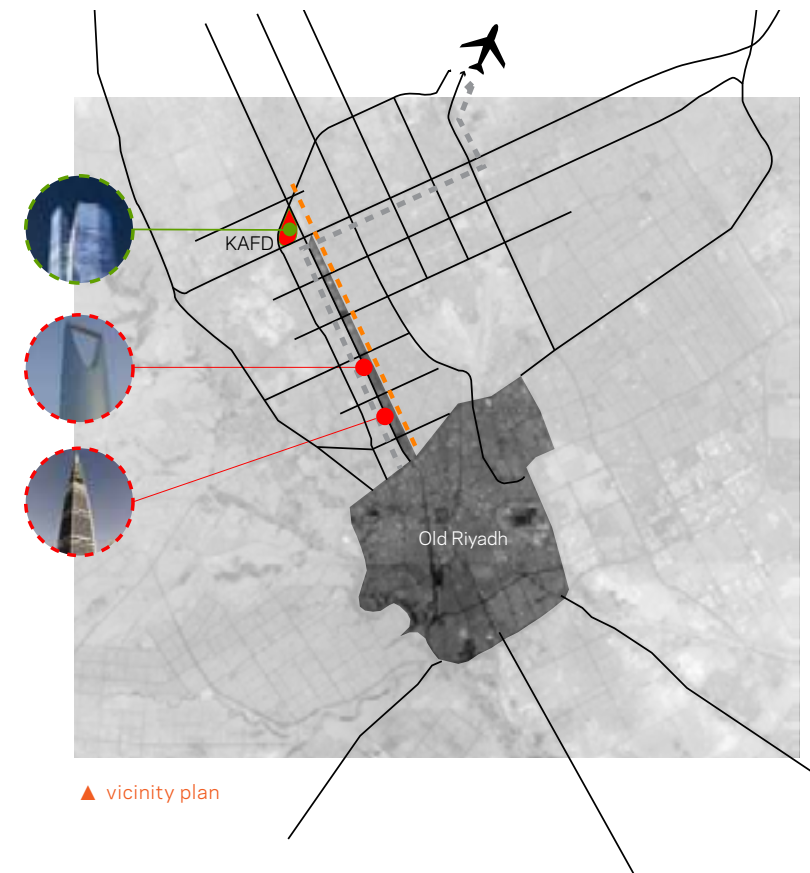
The design solution is a blend of conventional, well-understood technologies and elements combined in a unique manner. International best practices and cutting edge technologies merge with a knowledge derived from local expertise about construction in a harsh natural environment.

◀ view at night from king fahd road



▲ site plan

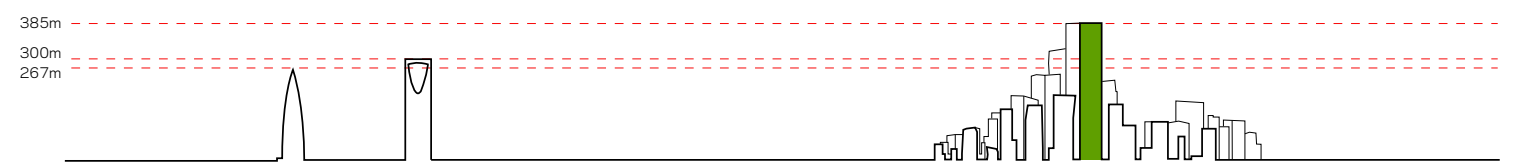
- 1 financial plaza
- 2 tower
- 3 podium
- 4 ring road



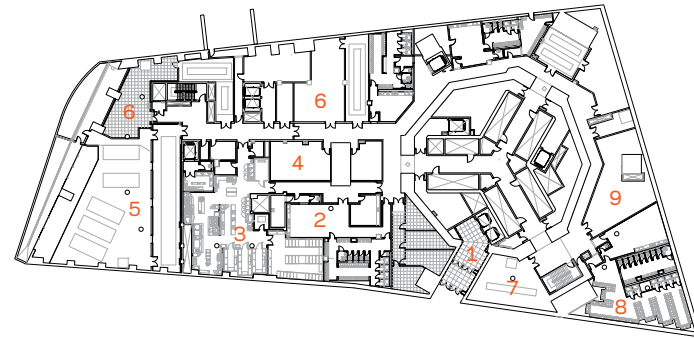
▲ vicinity plan



▲ study model

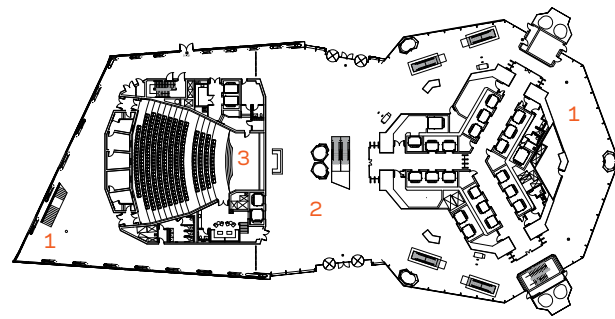


▲ urban context diagram



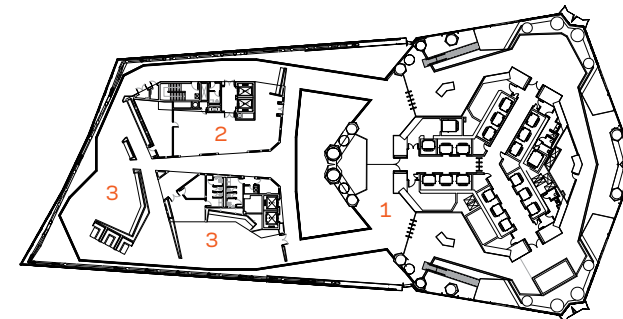
▲ level b2 floor plan

- 1 vip parking lobby
- 2 prayer
- 3 kitchen
- 4 security
- 5 generators
- 6 electric/telecom
- 7 building staff break room
- 8 building staff locker room
- 9 storage



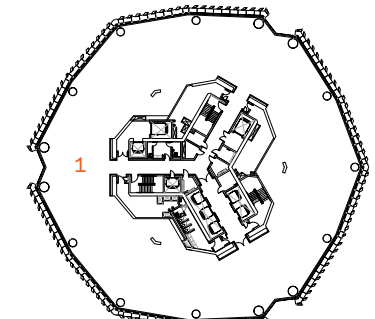
▲ level 1 floor plan

- 1 lobby
- 2 atrium lobby
- 3 auditorium



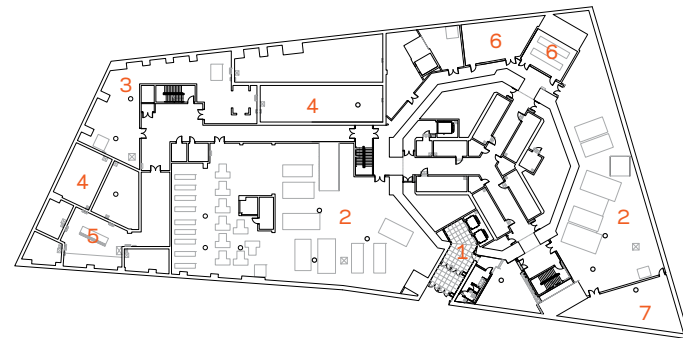
▲ level 3 floor plan

- 1 lobby
- 2 servery
- 3 dining



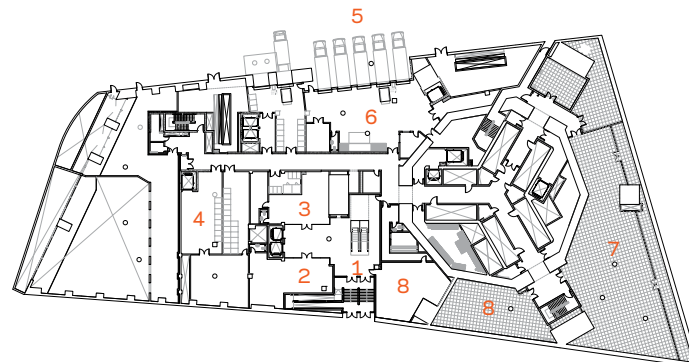
▲ typical high-rise floor plan

- 1 tenant space



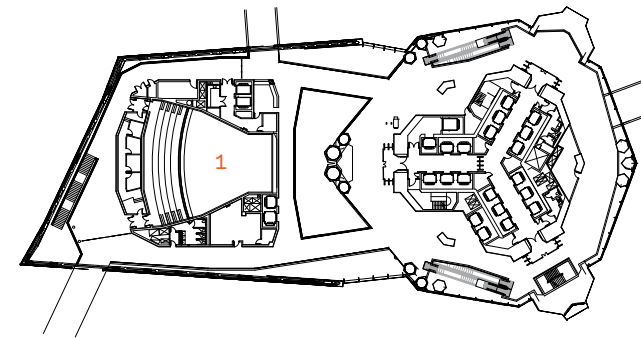
▲ level b4 floor plan

- 1 vip parking lobby
- 2 mechanical
- 3 pump room
- 4 water storage
- 5 water treatment
- 6 electric substation
- 7 storage



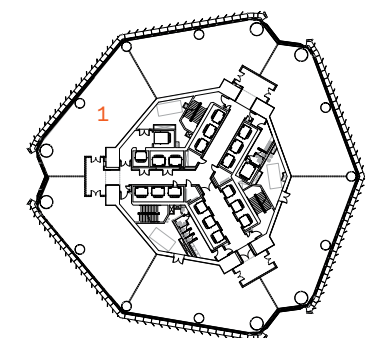
▲ level b1 floor plan

- 1 wadi-level lobby
- 2 bookstore
- 3 travel office
- 4 waste storage
- 5 loading dock
- 6 staging
- 7 data center
- 8 building management



▲ level 2 floor plan

- 1 auditorium

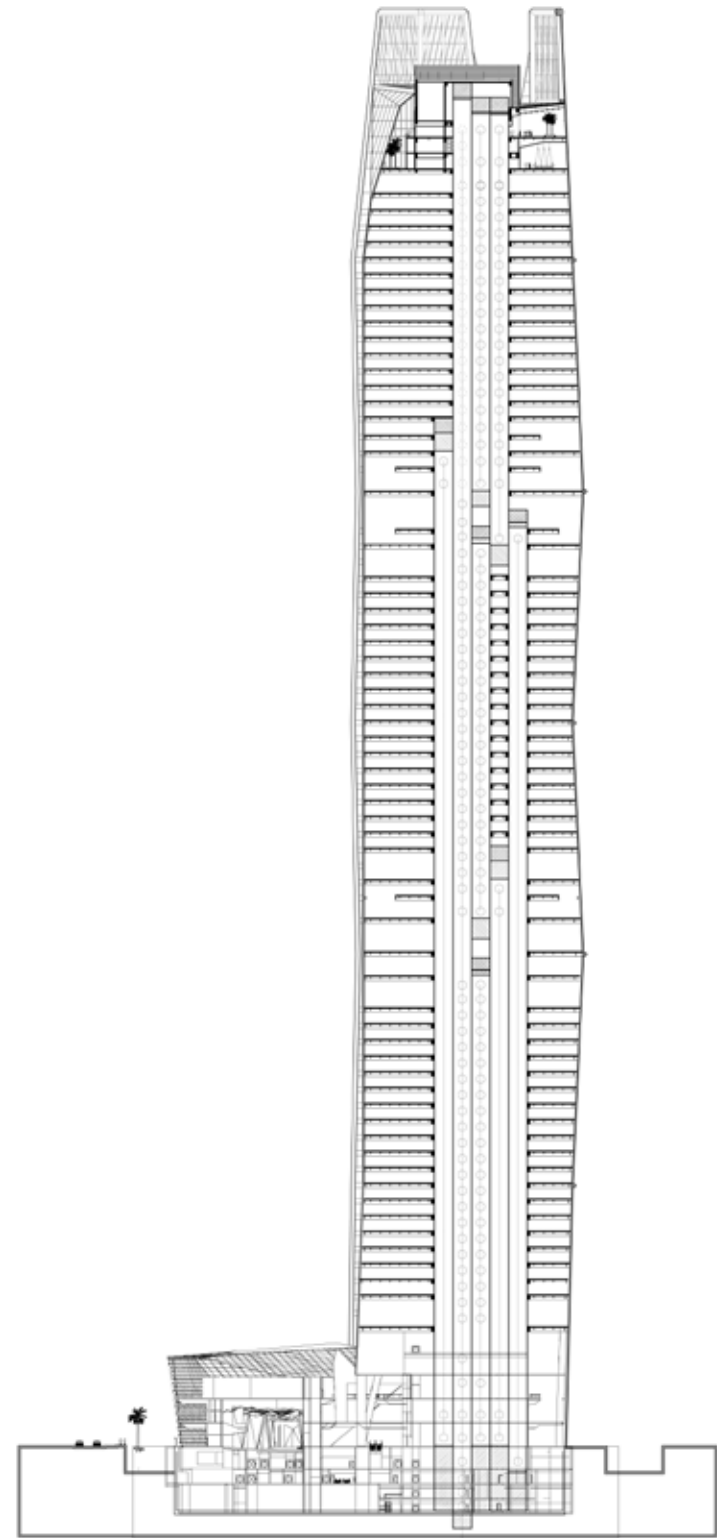


▲ typical low-rise floor plan

- 1 tenant space



▲ south elevation



▲ section



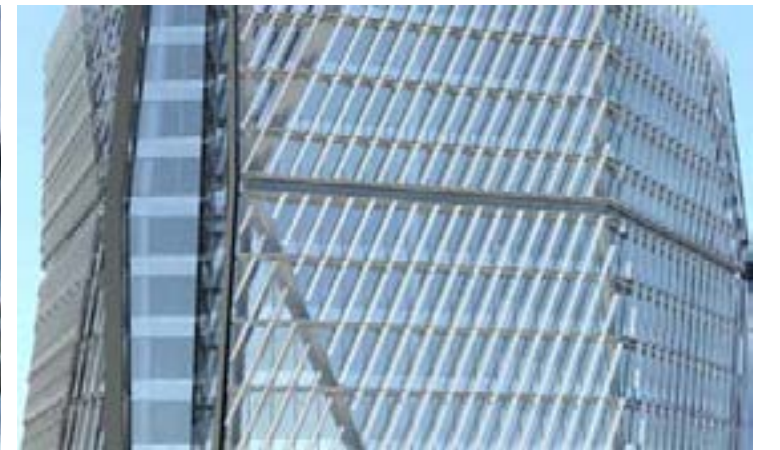
▲ podium dining



▲ podium atrium



▲ tower sun shading detail



▲ tower curtainwall detail





110,000 sq. ft. / 10,200 sq. m.

Completion: 2009

Cedar Valley College, Science and Technology / Allied Health

Dallas, Texas, USA

The Cedar Valley campus is distinguished by its rural setting of rolling grassland, streams, forest and a central lake around which the academic core is clustered.

The aspiration for this facility was to bring together diverse portions of the campus, while demonstrating a commitment to sustainable design and acting as a gateway to the existing campus core.

The program for the Science/Allied Health and Veterinary Technology Center identified science laboratories, lecture halls, health care training facilities and spaces necessary to support comprehensive Veterinary Technology training. It also included a major Outdoor Education Center (OEC) to support archeology, geology and environmental science programs. Three standard lab

modules of increasing size with flexible interior layouts were designed to support the facility's mission in several scientific disciplines. These standard spaces are separated by modular storage, equipment support or preparation space dedicated to each adjacent laboratory.

The sweeping length of the floor plan connects existing veterinary support buildings at one end with links to the campus core at the other. The design draws students from a common parking area into the central entry atrium, midway along its arc, while bringing students from the campus core through the OEC. Interaction spaces feature displays of the science taking place within. Student lounges benefit from the natural light and views provided in lofty connective circulation and gathering spaces.

The design segregates and consolidates Veterinary Technology functions on the ground floor at the end of the building nearest existing barns and pastures. Science and Allied Health labs, with their individual display areas, flank the common pedestrian street that defines the building's general circulation. This encourages student investigation of the science taking place in each department.

The exterior materials recall the brick and curtainwall vocabulary of the overall campus while promoting a lighter, more open envelope suited to the overall sustainable design aesthetic of ample daylight, shading, reduced infiltration and recycled content.

◀ view from campus drive



▲ campus plan

- 1 existing buildings
- 2 s + t / allied health building
- 3 future proposed buildings



▲ level 2 floor plan

- 1 library
- 2 classroom
- 3 lab
- 4 lecture
- 5 support
- 6 office
- 7 collaborative area



▲ ground floor plan

- 1 lobby
- 2 classroom
- 3 lab
- 4 lecture
- 5 surgery
- 6 support
- 7 collaborative area
- 8 office



▲ north elevation



▲ south elevation



▲ east elevation



▲ west elevation



▲ main entry



▲ section



▲ section





450,000 sq. ft. / 41,800 sq. m.

Completion: 2013 (anticipated)

Cedars-Sinai, Advanced Health Sciences Pavilion

Los Angeles, California, USA

The Advanced Health Sciences Pavilion (AHSP) at Cedars-Sinai is designed as a state-of-the-art building bringing together all the functions that make up a modern medical center. Housing Cedars-Sinai's Neurosciences and Heart Institutes, the AHSP will be one the West Coast's largest and most advanced diagnostic, translational research and treatment facilities. It will enable top researchers and physicians to work together in contiguous space to bring the most current knowledge and practices to the community.

The 11-story building is on a public edge of the Cedars-Sinai campus, next to its primary circulation spine. Based on this prominent location, the AHSP will become a new gateway to the medical center. A gentle, curving façade invites visitors and provides a welcoming public face to the community. This curve is accentuated with a glass "lantern" at the northern edge.

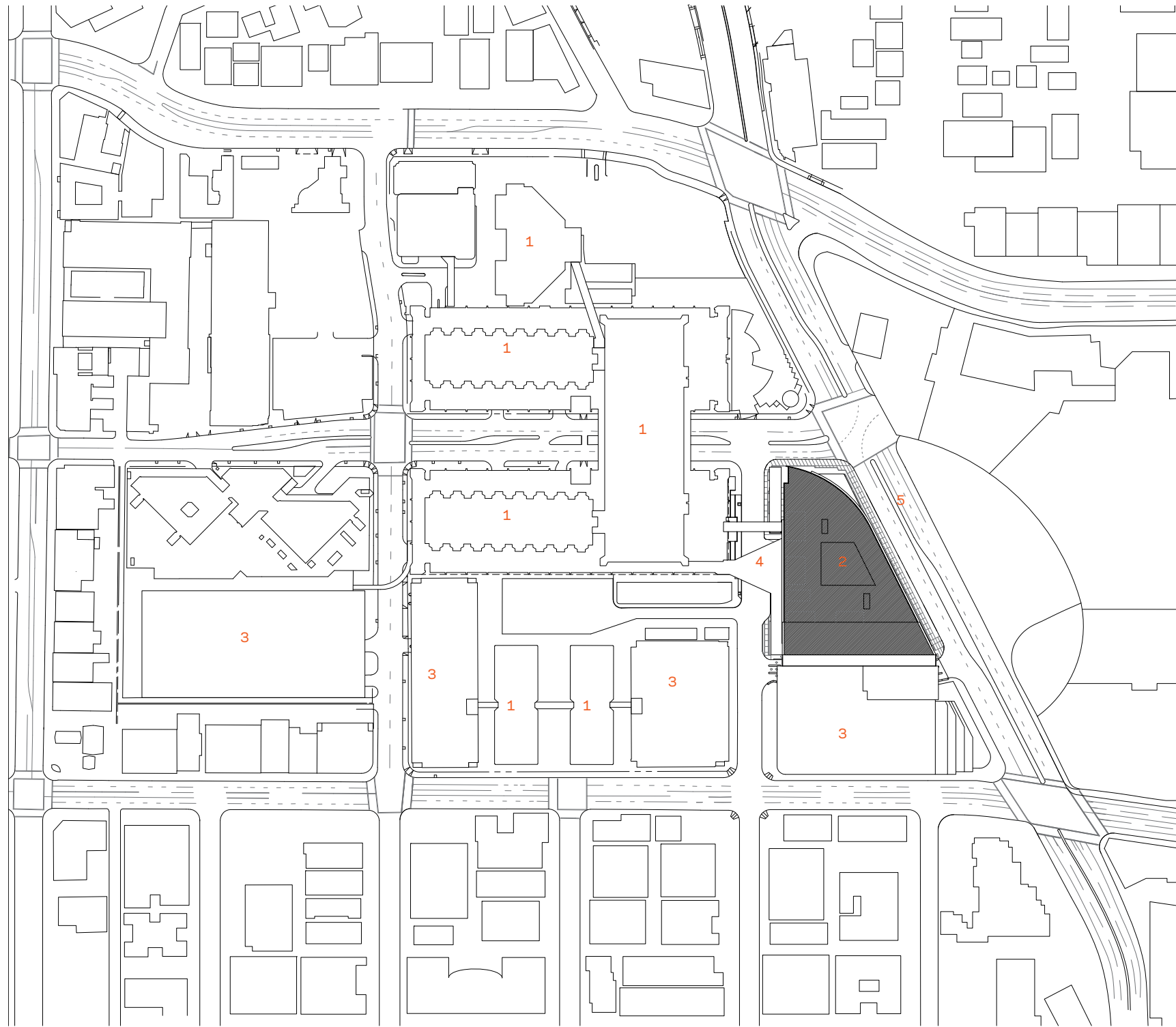
Transparent building materials will create a sense of openness while enabling the benign California light to reach deep into working spaces. A composition of layered high-performance skins envelop and enhance the highly functional interior. The restrained palette of transparent, semi-transparent and opaque materials will directly relate to the requirements of interior spaces as well as to the exterior environment.

The façades will incorporate current high-performance technology that mitigates the impact of the sun and weather while conserving energy and creating a comfortable interior environment. The east, south and west façades are composed of varying screen patterns within a well-defined lightweight structural frame system. The west elevation faces the Cedars-Sinai campus and opens at the transparent plaza level onto a place-making bridge leading to the main hospital.

The AHSP has been carefully designed to allow programs to grow and change over time with minimal disruption. It will include consistently sized treatment and procedure spaces and feature work areas that encourage collaboration. The building incorporates additional infrastructure that will accommodate future changes in medical technologies and research.

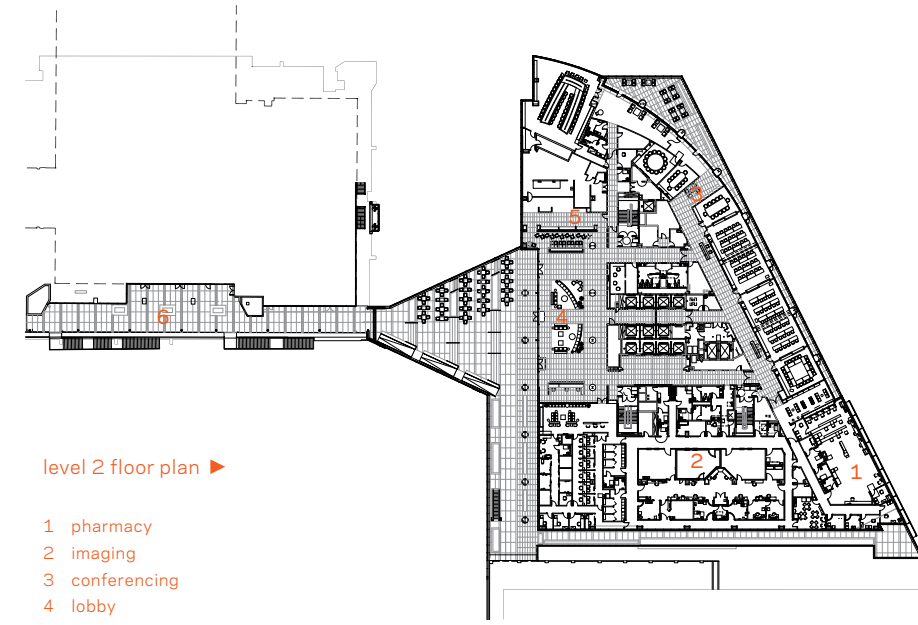
This project is expected to achieve LEED Gold certification.

◀ view along san vicente boulevard



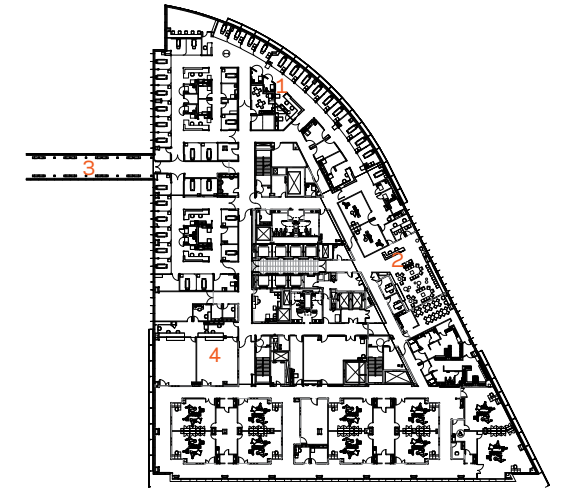
▲ site plan

- 1 existing medical towers
- 2 advanced health sciences building
- 3 parking
- 4 bridge
- 5 san vicente boulevard



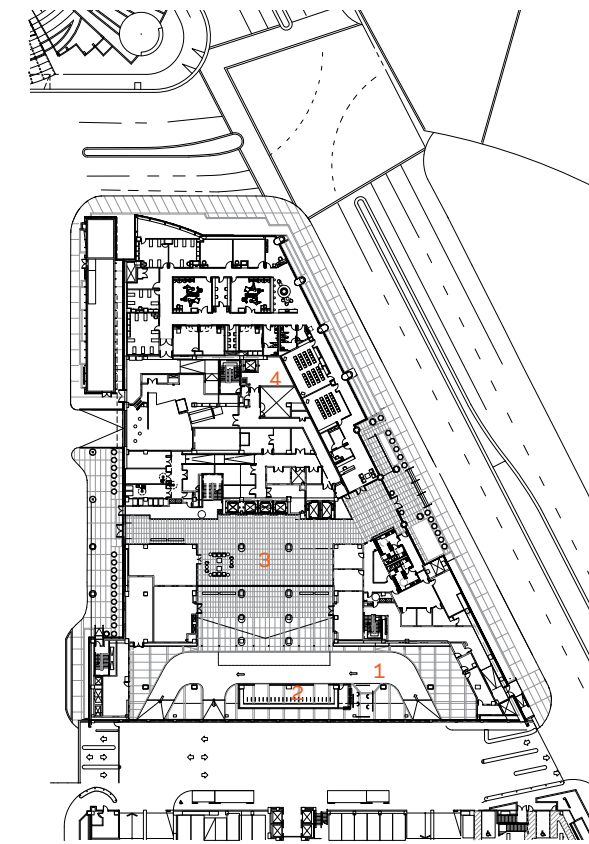
level 2 floor plan ▶

- 1 pharmacy
- 2 imaging
- 3 conferencing
- 4 lobby
- 5 cafe
- 6 bridge to existing tower



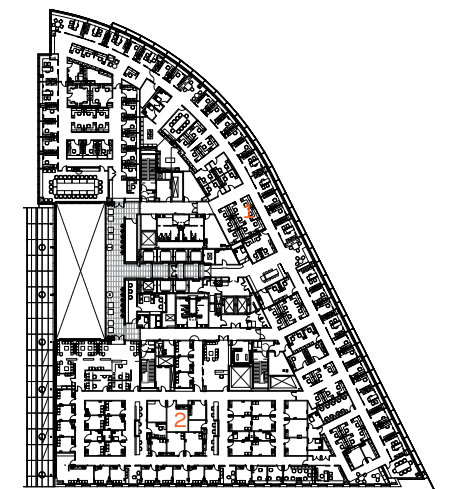
▲ level 5 floor plan

- 1 post anesthesia care unit
- 2 waiting
- 3 bridge
- 4 procedure suite



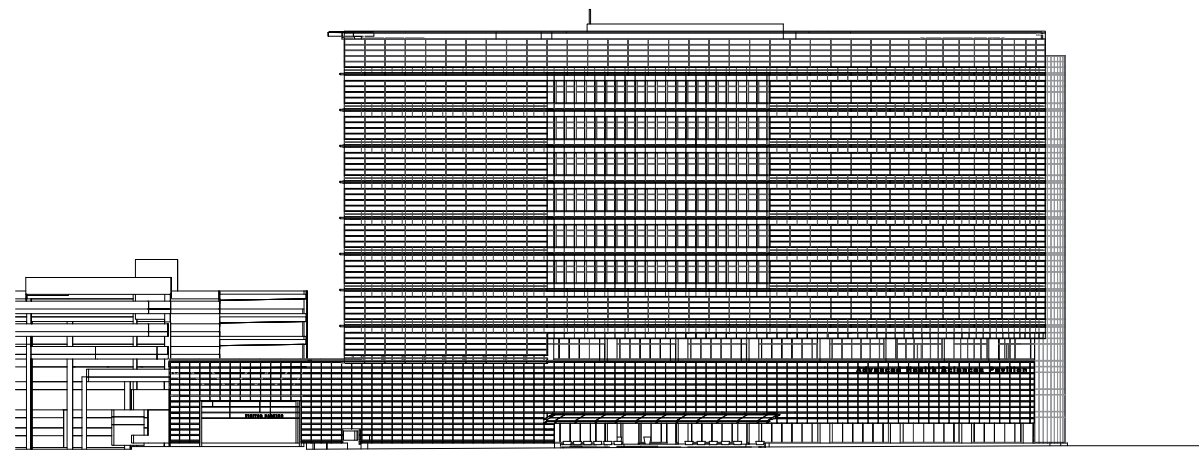
ground level floor plan ▶

- 1 drop off
- 2 bike storage
- 3 lobby / reception
- 4 simulation lab / training center

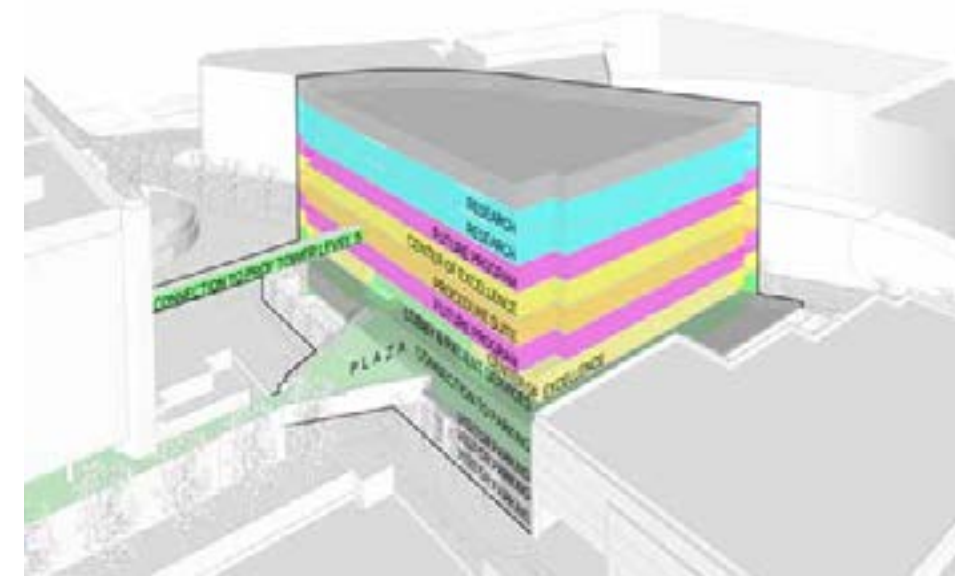


▲ level 3 floor plan

- 1 heart institute administration
- 2 heart institute clinic

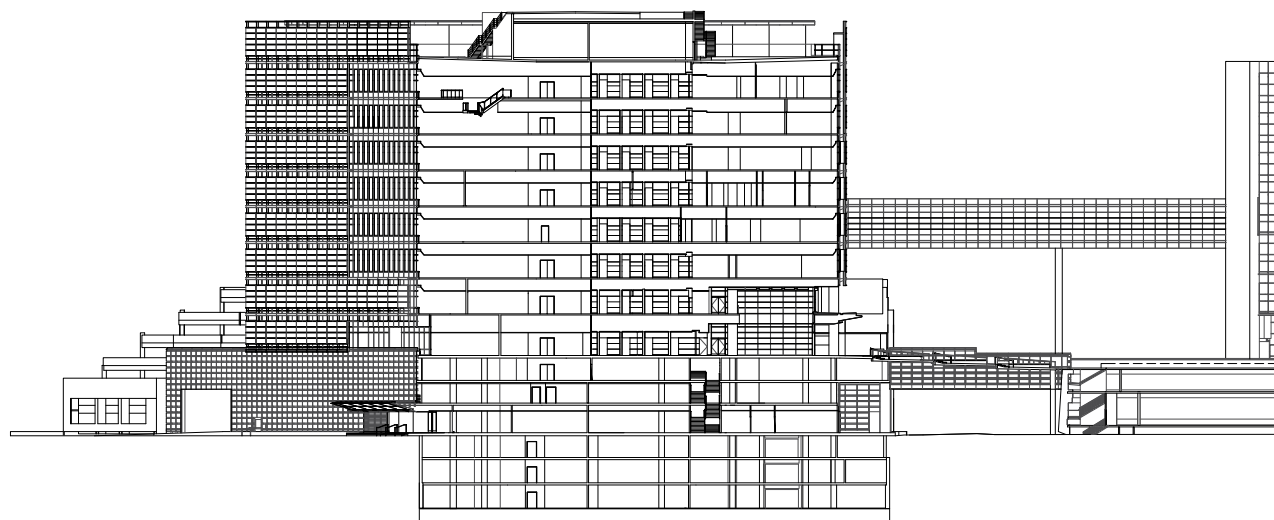


▲ east elevation

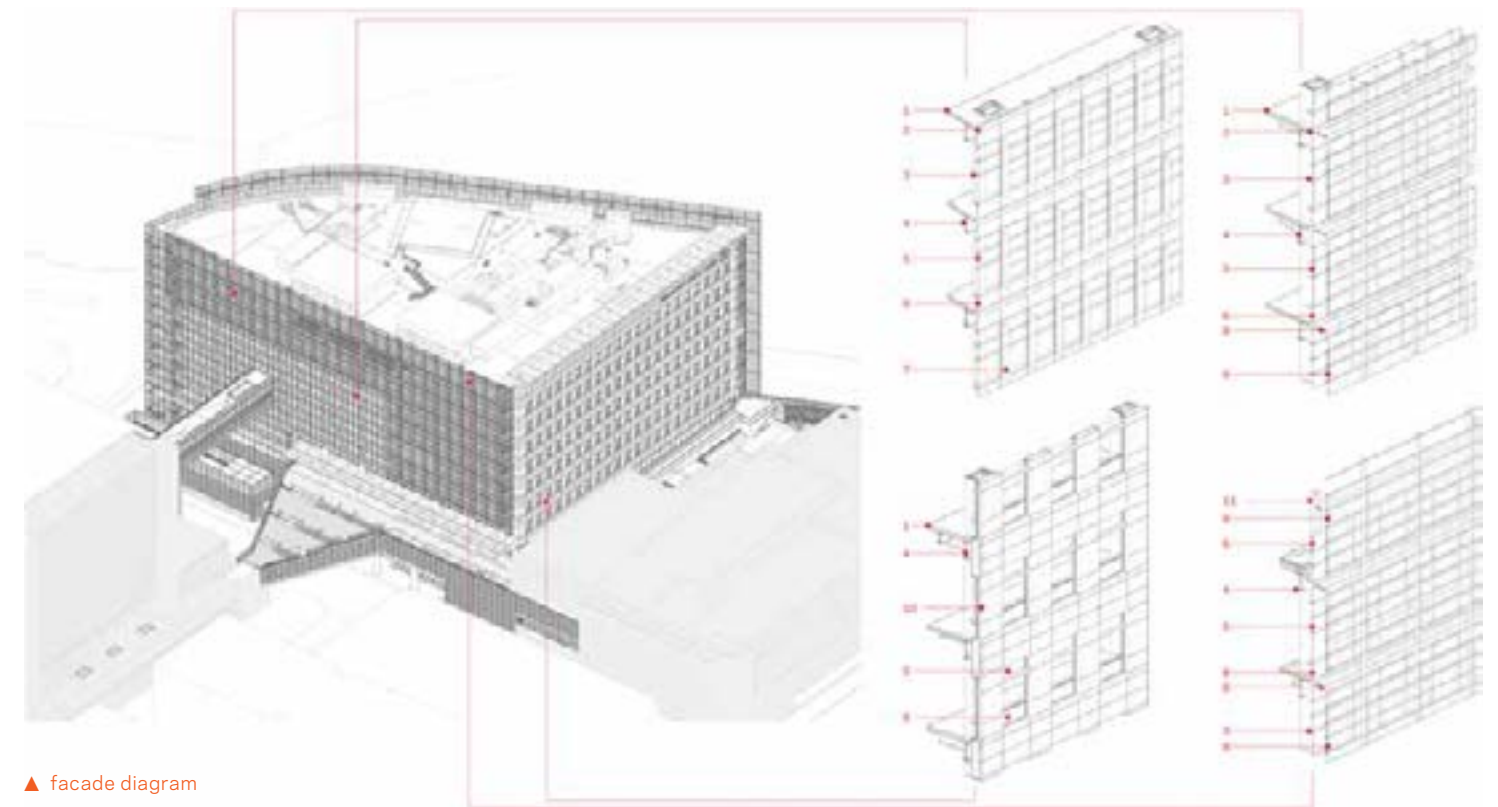


- 1 concrete structural slab on metal decking
- 2 aluminum band
- 3 glazed aluminum curtain wall
- 4 steel beam with spray-on fireproofing
- 5 insulated vision glass
- 6 insulated vision glass shadowbox
- 7 vertical glass fin
- 8 catwalk
- 9 laminated glass
- 10 aluminum panel

▲ stacking diagram



▲ section



▲ facade diagram



▲ connection to existing hospital

◀ aerial rendering

▼ lobby



▲ diagnostic suite



▲ cafe



▲ prep and recovery



▲ research collaboration area



▼ aerial rendering from northeast



Community Hospital of the Monterey Peninsula, Addition and Renovation

Monterey, California, USA

290,000 sq. ft. / 26,940 sq. m.

Completion: 2009

Located in an environmentally protected area, the Community Hospital of the Monterey Peninsula (CHOMP) offers sweeping views of the Pacific Ocean and Monterey Pines. The project involved an addition and renovation, incorporating new hospital facilities designed to maintain the character and integrity of the original buildings designed by Edward Durrell Stone in 1960 and 1968. The space consists of approximately 200,000 square feet of new and 90,000 square feet of renovated construction, including a patient tower with 120 private rooms, emergency department, intensive care/coronary unit, eight operating rooms, employee cafeteria, advanced imaging and cardiac diagnostic/treatment center and a 400-car underground parking garage.

Sleek, simple and minimalistic with low, striking roof lines, an outdoor healing garden with flowing water provides a reflective setting for patients and visitors. Daylighting is incorporated throughout the space through large pane windows that provide views of the forest and garden in alcoves, day rooms

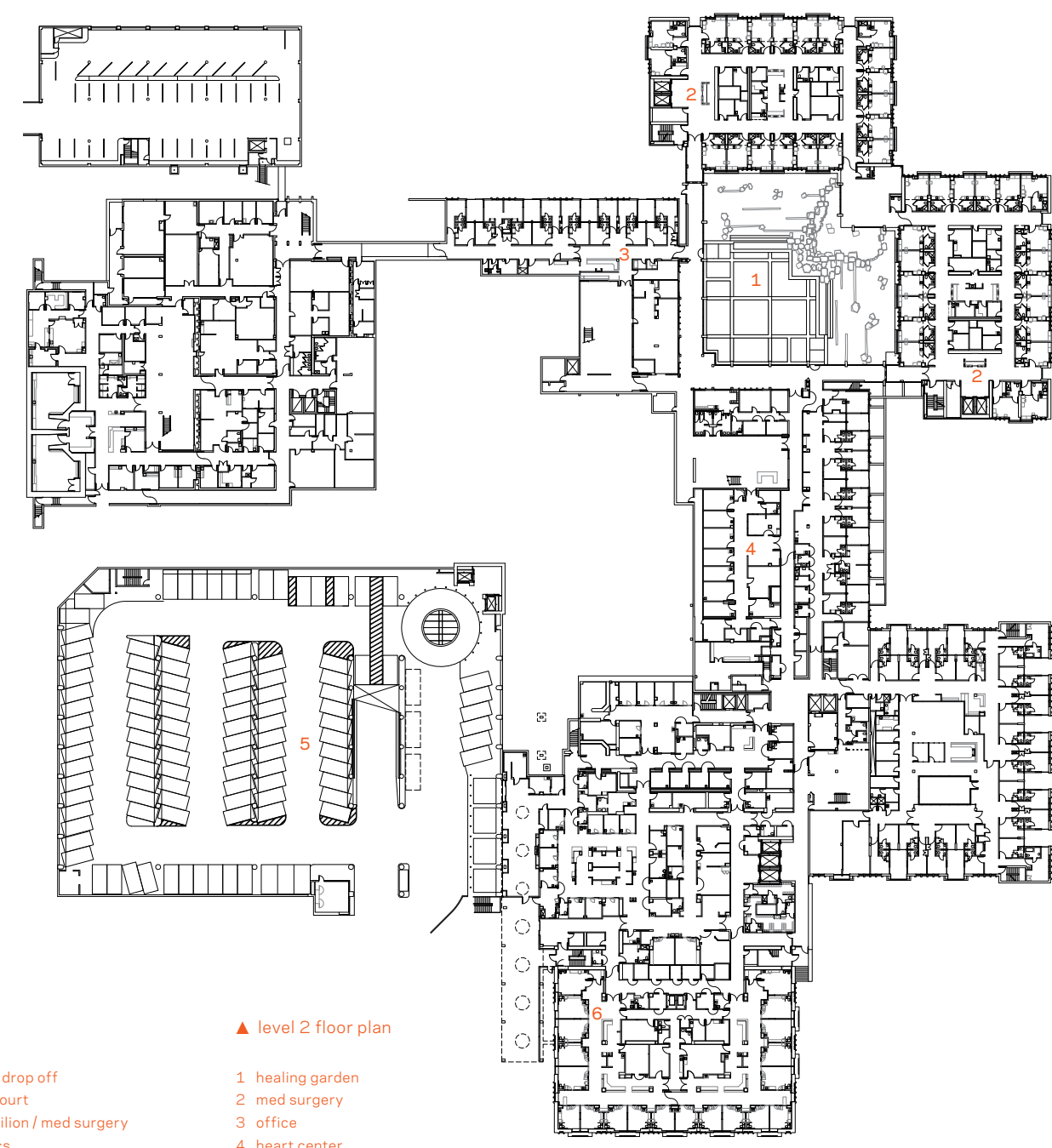
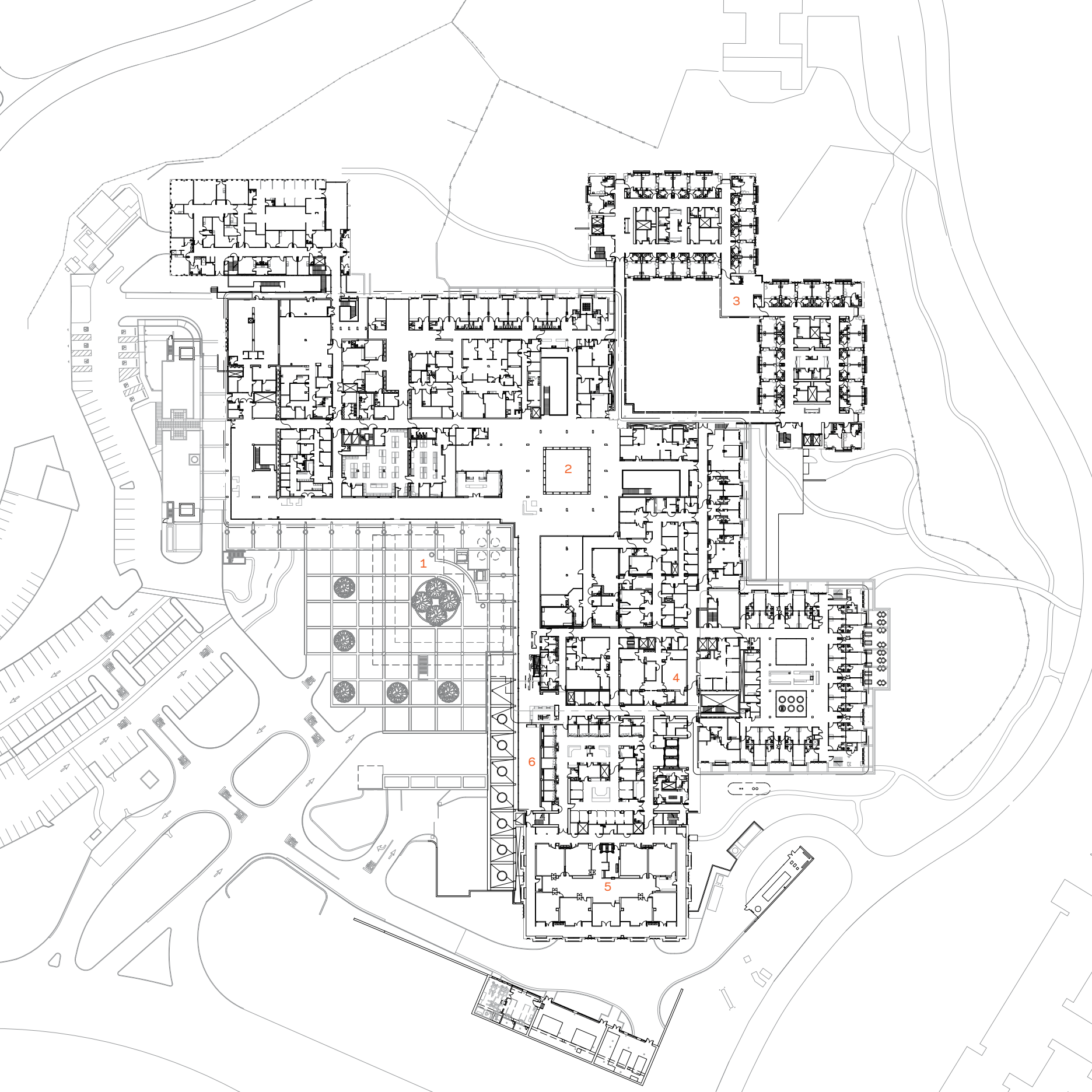
and at the ends of corridors. The colors of the landscape (blues, greens and creams) are used to give patients a sense that the beauty of the outdoors has been carried into the interior of the building. CHOMP is the first community hospital in the U.S. to provide all private patient rooms. New private patient rooms feature flat panel televisions, private bathrooms, comfortable day beds for overnight guests and large inset bay windows with views. The project was phased to allow the hospital to remain open during construction. The new design consolidated all procedure and preparatory functions into a single environment with a cross-trained staff, predicted to reduce operational costs by 12 percent.

The expansion project also includes two nutrition services areas, a public fountain court, a cafe and an employee dining area. The public food court is the centerpiece of the facility, surrounding a public fountain. Both areas implement a non-institutional, residential design using natural materials with high-performance finishes for longevity.

The major design challenge was maintaining the Zen-like peacefulness and iconic design of a complex that has become a fixture in the community while carrying out an extensive enlargement and modernization.

The new complex is most notable for how it complements its environment. While updated with the latest technologies, the plan, massing and scale of the new buildings are almost identical to those of the original buildings. To add space without altering the horizontal nature of the complex, one to two levels were excavated on both ends of the hospital, aligning the new buildings with the old. Maintaining low ceiling heights while fitting new HVAC and electrical systems also required innovative rerouting. Main ducts skip the building's middle level, which is instead fed via smaller branch ducts from adjoining floors.

◀ water feature in forest pavilion healing garden



◀ site plan

- 1 main level drop off
- 2 fountain court
- 3 forest pavilion / med surgery
- 4 diagnostics
- 5 surgery
- 6 waiting

▲ level 2 floor plan

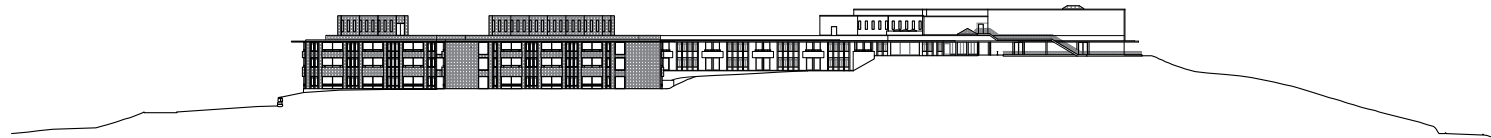
- 1 healing garden
- 2 med surgery
- 3 office
- 4 heart center
- 5 underground parking
- 6 intensive care unit



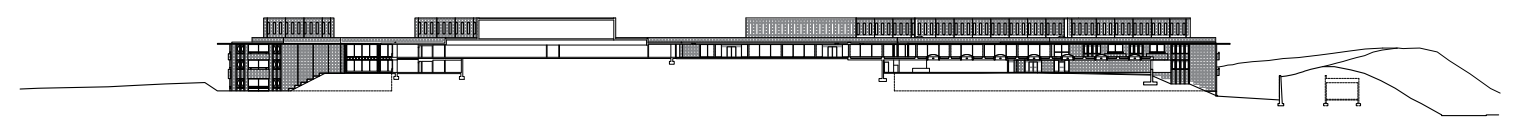
▲ forest pavilion day room



▲ covered entry



▲ north elevation



▲ section



▼ view from forest



District of Columbia Consolidated Forensic Lab

Washington, DC, USA

351,000 sq.ft. / 32,600 sq. m.

Completion: 2011

The Consolidated Forensic Laboratory will house the Metropolitan Police Department Forensic Laboratory, the Public Health Lab and the Office of the Chief Medical Examiner for the Government of the District of Columbia. The building will provide modern facilities and expanded functions for these departments, improving public safety for citizens of the district.

The site, bounded by E Street SW, 4th Street SW, and School Street SW, is currently occupied by the Metropolitan Police Department 1st District Station and the existing Fire Department Engine 13 Company. The 1st District Station will be relocated off-site and the existing building will be demolished in its entirety. The existing Engine 13 Company building at the west end of the site will remain and the property will be subdivided.

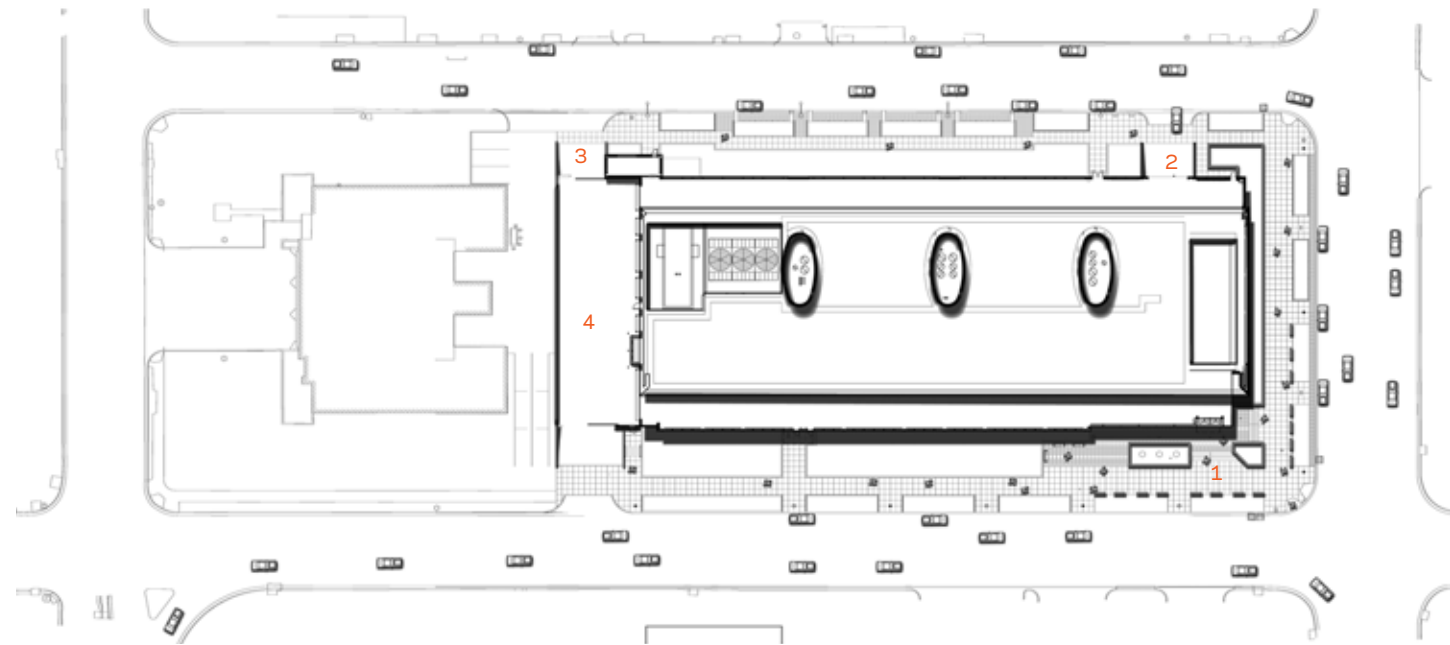
The building consists of two levels below grade and six levels above grade. The below grade structure includes employee and police fleet parking, electrical and mechanical spaces and an examination bay for vehicles taken in as evidence. The ground floor consists of loading bays, evidence intake, and shared spaces such as conference rooms, a lunch room, administrative office, and training rooms. Upper floors house laboratories and related office spaces for each department. Mechanical equipment is located in the rooftop structure and the exhaust pipes are consolidated into three chimneys above the mechanical penthouse.

The program organization and façade treatment are a response to the site and solar orientation. Laboratories are located along the north side, allowing for natural light without significant heat gain in these

mechanically sensitive spaces. Building core and laboratory support spaces are located in the center of the building. Office spaces are located on the south side with full-height curtain wall to take advantage of the natural light, while exterior fritted-glass louvers provide solar control for the offices.

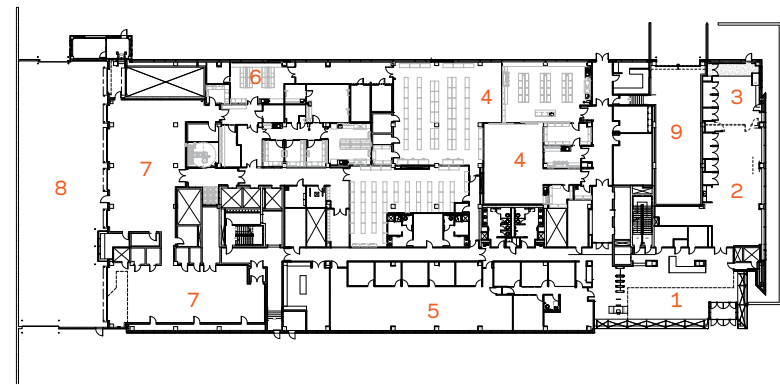
A six-story edge atrium at the corner of 4th and E Streets serves as the main entry lobby and an intercommunicating space for the upper floors. The atrium becomes a beacon and reveals the stairs and structure within. Shared conference rooms are organized around the atrium. The east and west facades are limestone with smaller punched windows in response to the specific solar orientation. The limestone façade wraps up to the mechanical penthouse roof to become a masonry frame for the whole building, anchoring the southern glass and the northern metal panel skin.

◀ corner of e street sw and 4th street sw



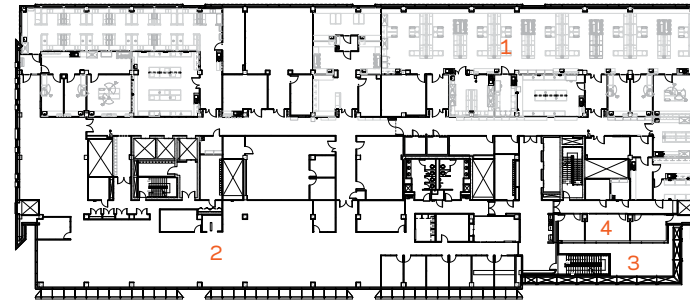
▲ site plan

- 1 main entry
- 2 parking entry
- 3 delivery entry
- 4 loading area



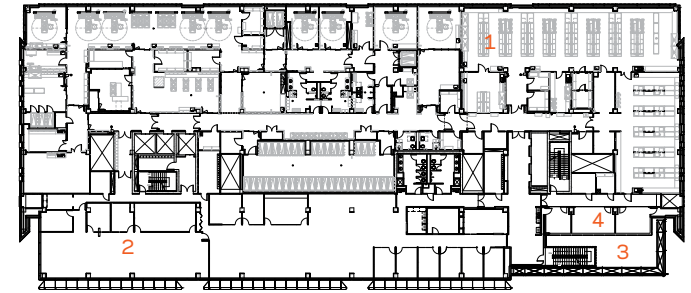
▲ ground level floor plan

- 1 lobby
- 2 break room
- 3 press room
- 4 training
- 5 administration offices
- 6 intake
- 7 loading docks
- 8 loading yard
- 9 parking ramp



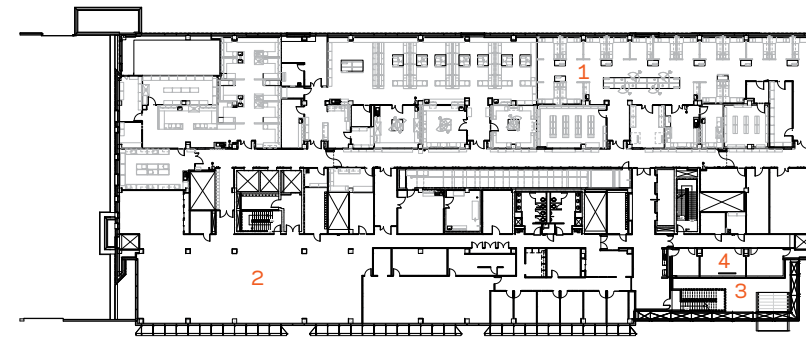
▲ level 3 floor plan

- 1 laboratories
- 2 offices
- 3 atrium
- 4 conference rooms



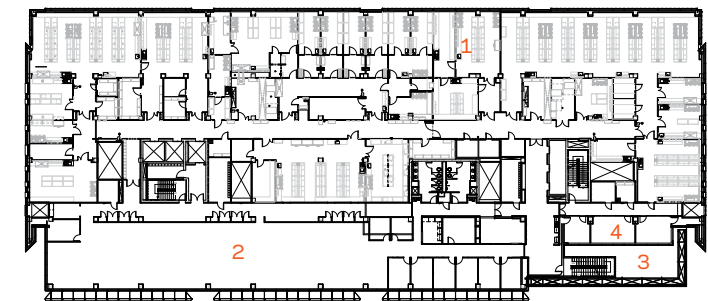
▲ level 5 floor plan

- 1 laboratories
- 2 offices
- 3 atrium
- 4 conference rooms



▲ level 2 floor plan

- 1 laboratories
- 2 offices
- 3 atrium
- 4 conference rooms

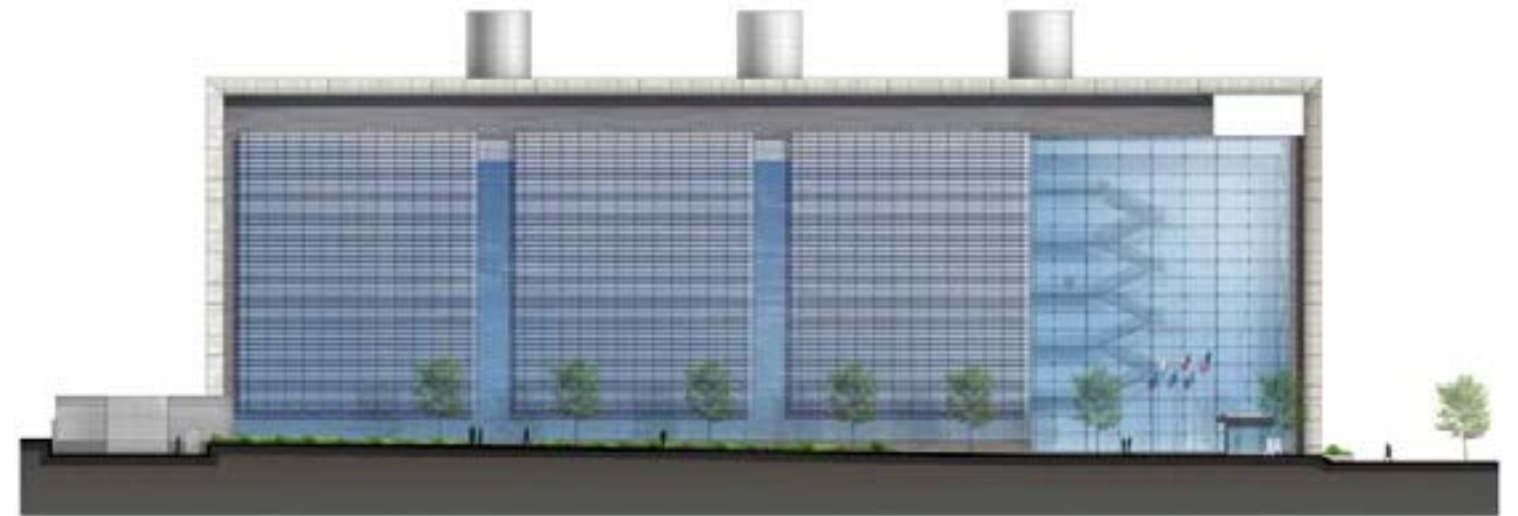


▲ level 4 floor plan

- 1 laboratories
- 2 offices
- 3 atrium
- 4 conference rooms



▲ north elevation



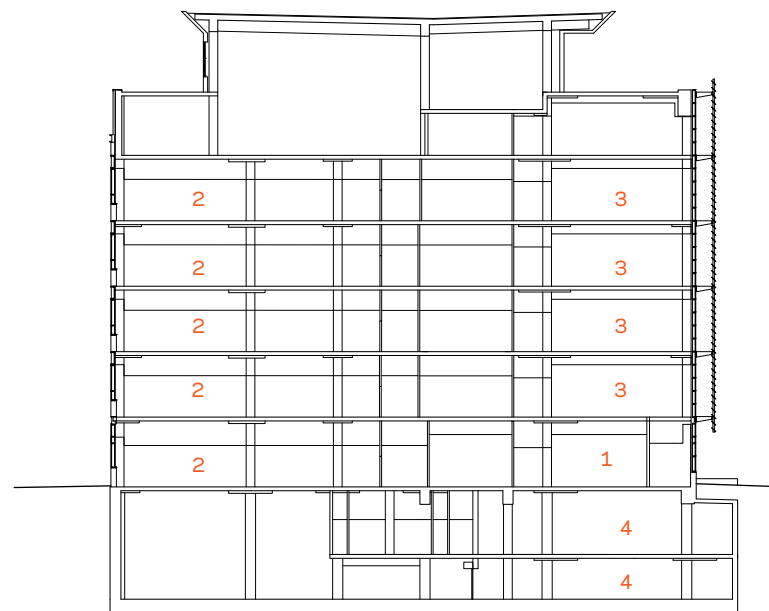
▲ south elevation



▲ east elevation



▲ west elevation



▲ section

- 1 entry level
- 2 laboratories
- 3 offices
- 4 parking





129,167 sq. ft. / 12,000 sq. m.
 Completion: 2010

◀ penthouse



Fitzrovia Apartments/ Royal National Orthopaedic Hospital
 London, United Kingdom

This project was won through a competition to redevelop the former Royal National Orthopaedic Hospital (RNOH) site in central London into a mixed-use, high-density urban development.

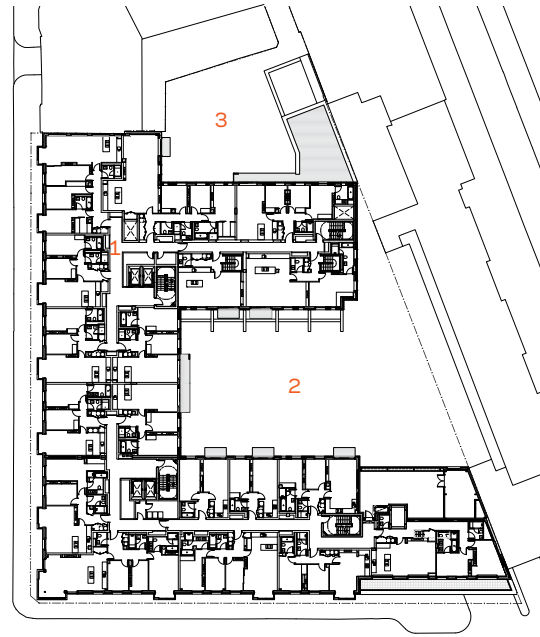
The project celebrates the rich variety of city living by integrating a healthcare facility, market-rate and social/public housing, offices (in a retained historic structure), basement parking and landscaped gardens on a compact urban site. It includes a new outpatient department for the RNOH, luxury and affordable housing, and the adaptation of the formerly listed Waiting Hall of the hospital into office space.

The primary facades are made from Spanish limestone that enhances the streetscape. The limestone incorporates public art in the form of colored glass fins depicting abstract images of MRI scans, done in conjunction with James Carpenter.

The building is arranged around two landscaped courtyards and incorporates sustainable features such as ground source heat pumps, biofuel boilers and green walls and roofs.

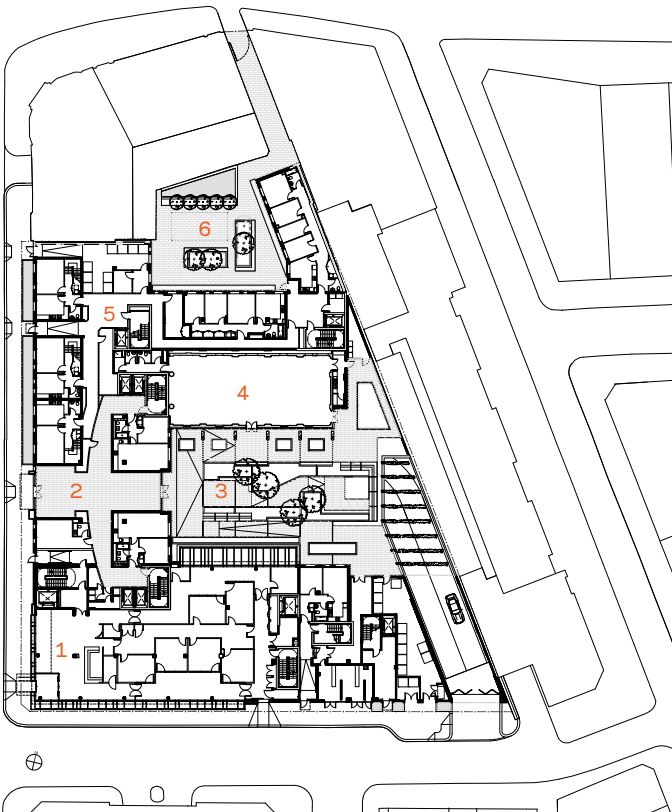
Full medical planning and interior design services were provided for the orthopaedic clinic, delivering a seamless, welcoming series of spaces enriched by extensive use of natural light. Each program element of the composition is expressed on the elevations, giving a lively, varied and articulate expression that matches, in a contemporary way, the ornate character of neighboring Edwardian buildings.

The residential design creates increased value by providing a series of duplex penthouses with extensive panoramic roof gardens.



◀ upper level floor plan

- 1 residential
- 2 south courtyard
- 3 north courtyard



◀ ground level floor plan

- 1 outpatient department
- 2 residential lobby
- 3 south courtyard
- 4 office
- 5 residential
- 6 north courtyard



▲ south elevation



▲ west elevation



- 1 clinic
- 2 courtyard
- 3 original lobby
- 4 apartments

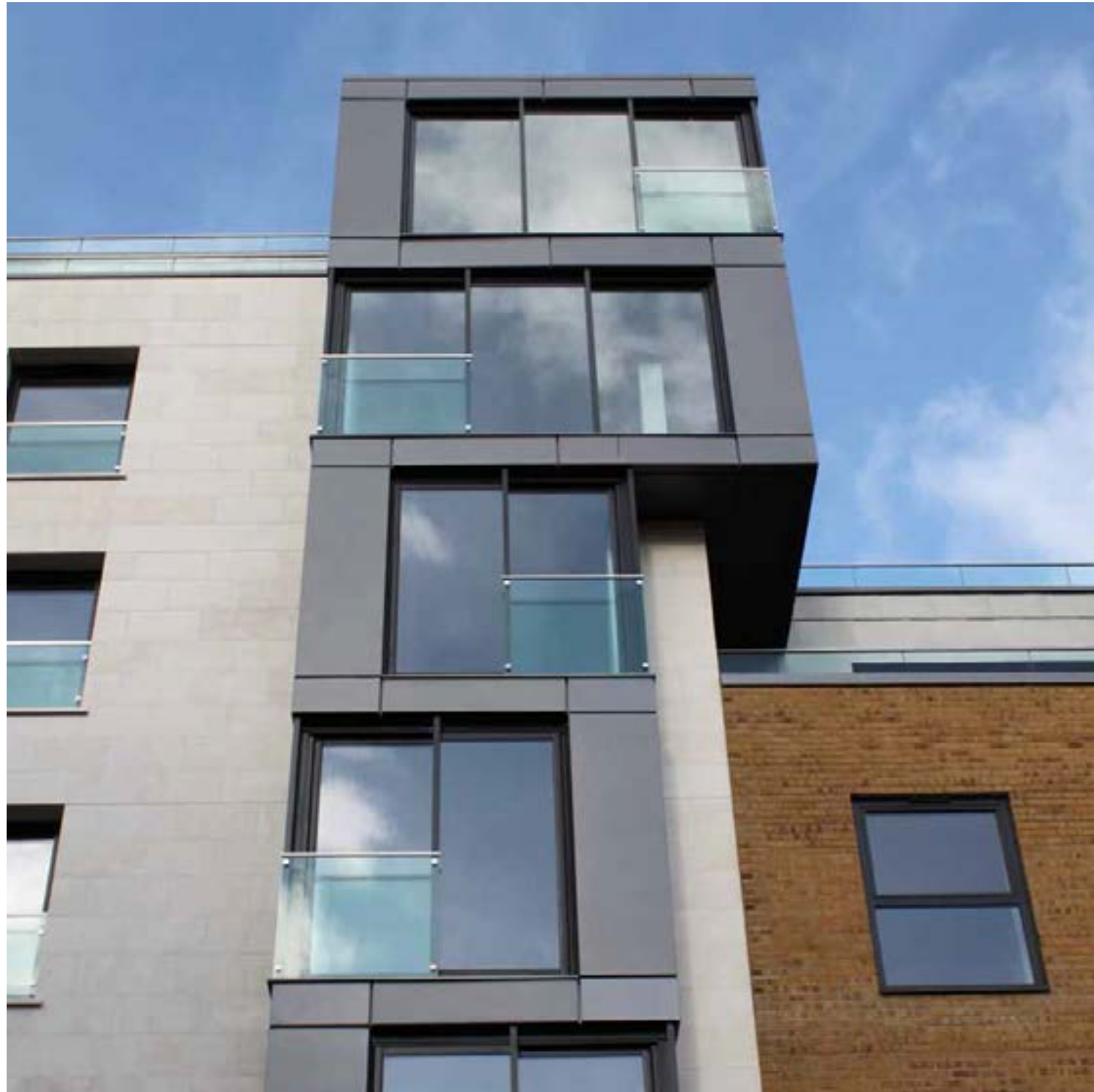
▲ section



▲ night view



▲ façade detail, outpatient department



▲ façade detail



▲ street view



46,000 sq. ft. / 4,275 sq. m

Completion: 2007

◀ view along campus path



Florida International University, Frost Art Museum

Miami, Florida, USA

This museum is the new cultural heart of Florida International University's Modesto A. Maidique, housing artwork from the university's permanent collection, hosting temporary exhibits and presenting educational programs and symposia.

The new museum anchors the Avenue of the Arts on campus and includes nine individual exhibition galleries, a three-story public entry hall, museum shop, café, offices, art vaults, workshop and back-of-house facilities.

The building functions as a treasure box to exhibit and shelter the collection. To create the desired iconic campus centerpiece and respond to the adjacent lake, the team shaped the box to welcome and intrigue the visitor. A soaring three-story glass atrium pierces the building at its center, forming a transparent gate between the campus and the lake. The glass element encourages visual interaction among students, visitors and the museum.

A dramatic, exposed steel staircase rises through the atrium. Meanwhile, the public entry bisects the volume into two wings joined by the atrium, bridge and staircase. For flood protection, only public entry spaces, service docks and a café are on grade, with galleries, art storage and archives on levels two and three.

It is unusual for museums in Florida to have galleries in which work of art can be viewed as they were created - in natural light. Considerable effort and research enabled the team to accomplish this goal with skylights, vaulted ceilings and silvery "petals" that optically scatter light onto the display walls, all the while filtering ultraviolet and photon loads to standard acceptable curatorial levels. The petals that perform here in an optical role are fabricated in much the same manner as surfboards, suspended with yacht-rigging cable and fittings - appropriate technologies for a Florida museum.



46,000 sq. ft. / 4,275 sq. m

Completion: 2007

◀ view along campus path



Florida International University, Frost Art Museum

Miami, Florida, USA

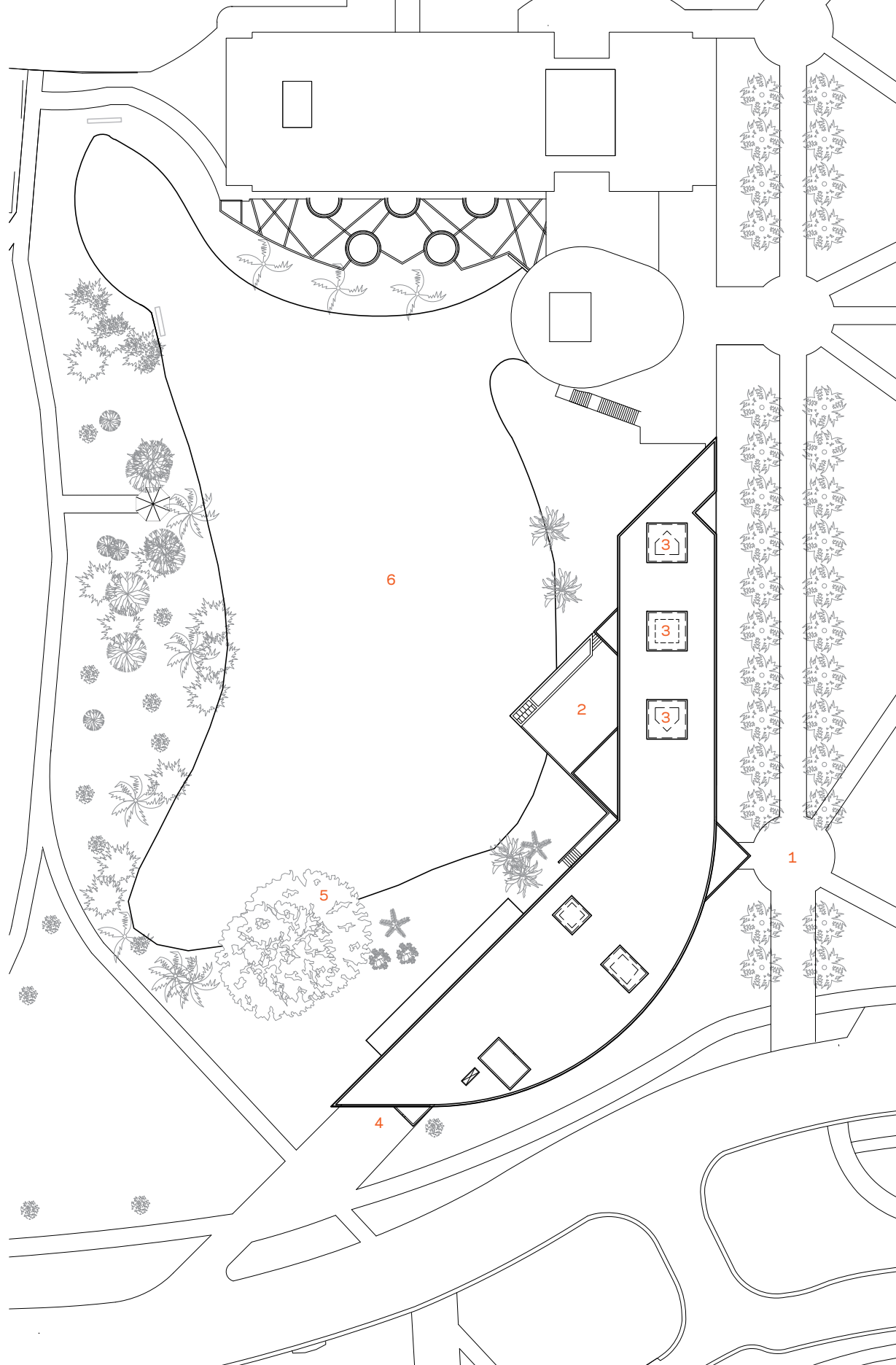
This museum is the new cultural heart of Florida International University's Modesto A. Maidique, housing artwork from the university's permanent collection, hosting temporary exhibits and presenting educational programs and symposia.

The new museum anchors the Avenue of the Arts on campus and includes nine individual exhibition galleries, a three-story public entry hall, museum shop, café, offices, art vaults, workshop and back-of-house facilities.

The building functions as a treasure box to exhibit and shelter the collection. To create the desired iconic campus centerpiece and respond to the adjacent lake, the team shaped the box to welcome and intrigue the visitor. A soaring three-story glass atrium pierces the building at its center, forming a transparent gate between the campus and the lake. The glass element encourages visual interaction among students, visitors and the museum.

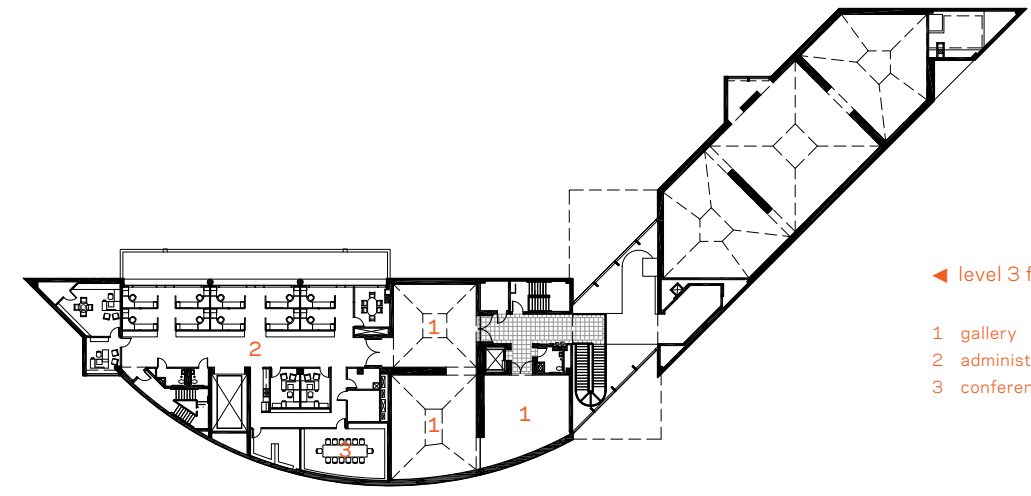
A dramatic, exposed steel staircase rises through the atrium. Meanwhile, the public entry bisects the volume into two wings joined by the atrium, bridge and staircase. For flood protection, only public entry spaces, service docks and a café are on grade, with galleries, art storage and archives on levels two and three.

It is unusual for museums in Florida to have galleries in which work of art can be viewed as they were created - in natural light. Considerable effort and research enabled the team to accomplish this goal with skylights, vaulted ceilings and silvery "petals" that optically scatter light onto the display walls, all the while filtering ultraviolet and photon loads to standard acceptable curatorial levels. The petals that perform here in an optical role are fabricated in much the same manner as surfboards, suspended with yacht-rigging cable and fittings - appropriate technologies for a Florida museum.



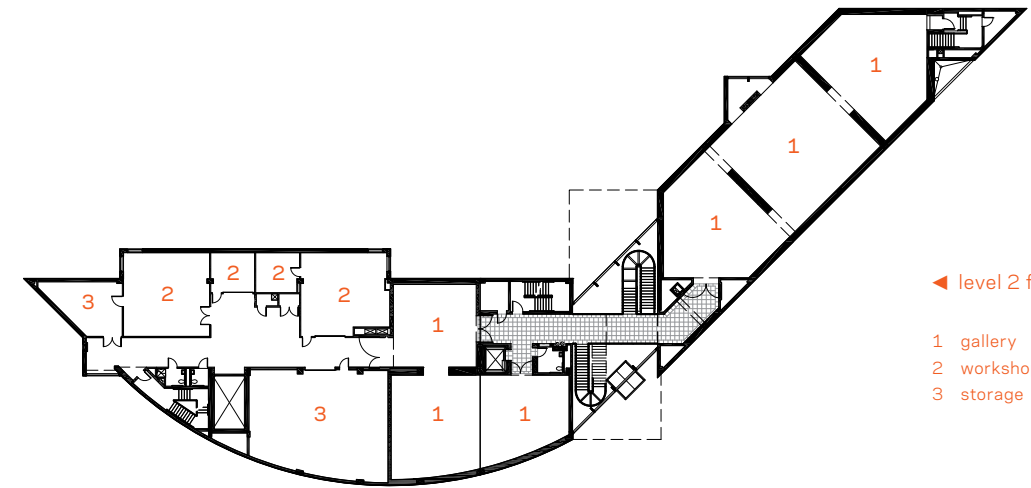
site plan ▶

- 1 entrance
- 2 sculpture deck
- 3 gallery skylights
- 4 service entrance
- 5 existing multi-trunk ficus
- 6 existing lake



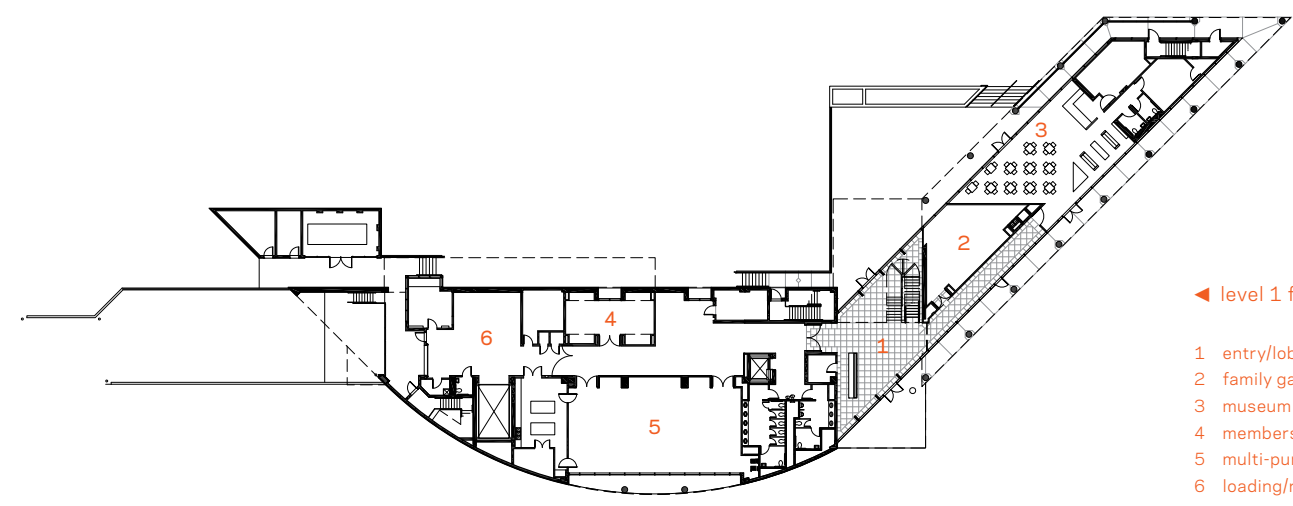
◀ level 3 floor plan

- 1 gallery
- 2 administration office
- 3 conference room



◀ level 2 floor plan

- 1 gallery
- 2 workshop/prep areas
- 3 storage



◀ level 1 floor plan

- 1 entry/lobby
- 2 family gallery
- 3 museum store/cafe
- 4 members room
- 5 multi-purpose room
- 6 loading/receiving



▲ skylight detail



▲ gallery





3,089,000 sq. ft. / 287,000 sq. m.

Completion: 2015 (anticipated)

Greenland Dalian East Harbor

Dalian, China

The Greenland Dalian East Harbor project, a mixed-use development situated at the terminal point of the main city axis, will create a beacon for Dalian to the world. The triangular form of the East Harbor Tower reflects the boldness and symmetry of a lighthouse while conveying a symbol of strength and grace. The curved form of the tower relates to the gently curved forms of the adjacent convention center. This approach allows each function within the tower to have its own unique entry and identity.

From afar, the single, triangular form of the main tower translates into a beacon with organically shaped openings, recognizable from any direction in the city, allowing for the expression of each use within the tower. The components of this mixed use building have a

shared identity, with three sheaths of high-performance glass extending the full height of the building. At the office levels, this glass is continuous. Moving to the hotel and residential components of the tower, the edges of the blue glass separate, revealing gardens, residences, and terraces. These areas are clad in low-iron clear glass with horizontal sunshades that maximize daylight and allow an opportunity to incorporate natural ventilation into the residences. The sheathes extend to the top of the tower where they reveal the public observation deck above organically shaped openings that reduce wind pressure.

The dramatic opening at the top of the iconic tower relates to the main character of the overall landscape design, as does the curvilinear pattern of the retail podium

building. The dynamic landscape design and the shape of the retail podium building harmonize with the curvilinear movements and flows of the convention center located just north of the site.

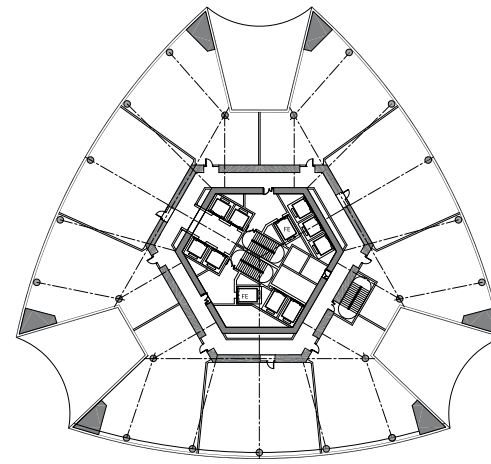
The plots south of the main tower have four apartment buildings on the site. Each has its own address and identity to the internal road. These buildings are connected through a two-story retail podium, while the spacious landscape area to the south of the buildings will be dedicated to residents. The site also contains two retail buildings adjacent to, yet separate from, the residential towers.

◀ aerial rendering

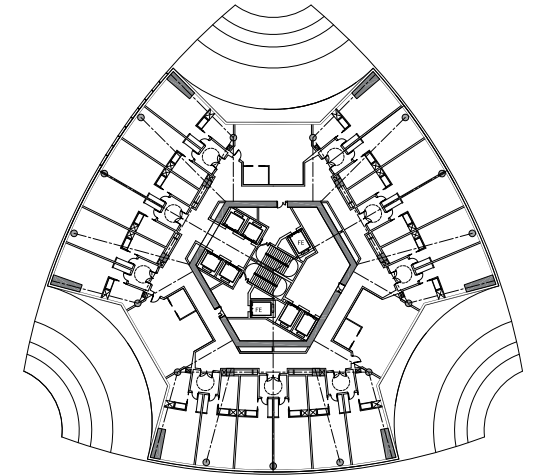


site plan ▶

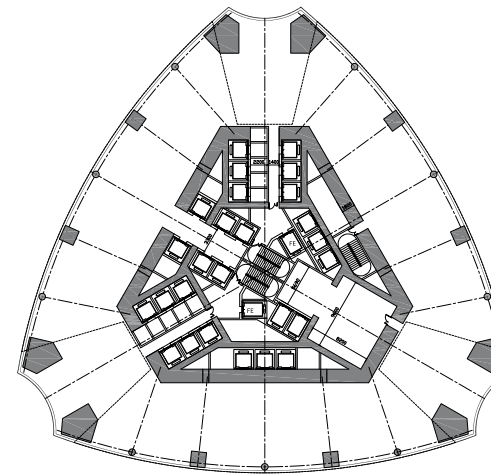
- 1 residential drop off
- 2 hotel drop off
- 3 office drop off



▲ residential level floor plan



▲ hotel level floor plan



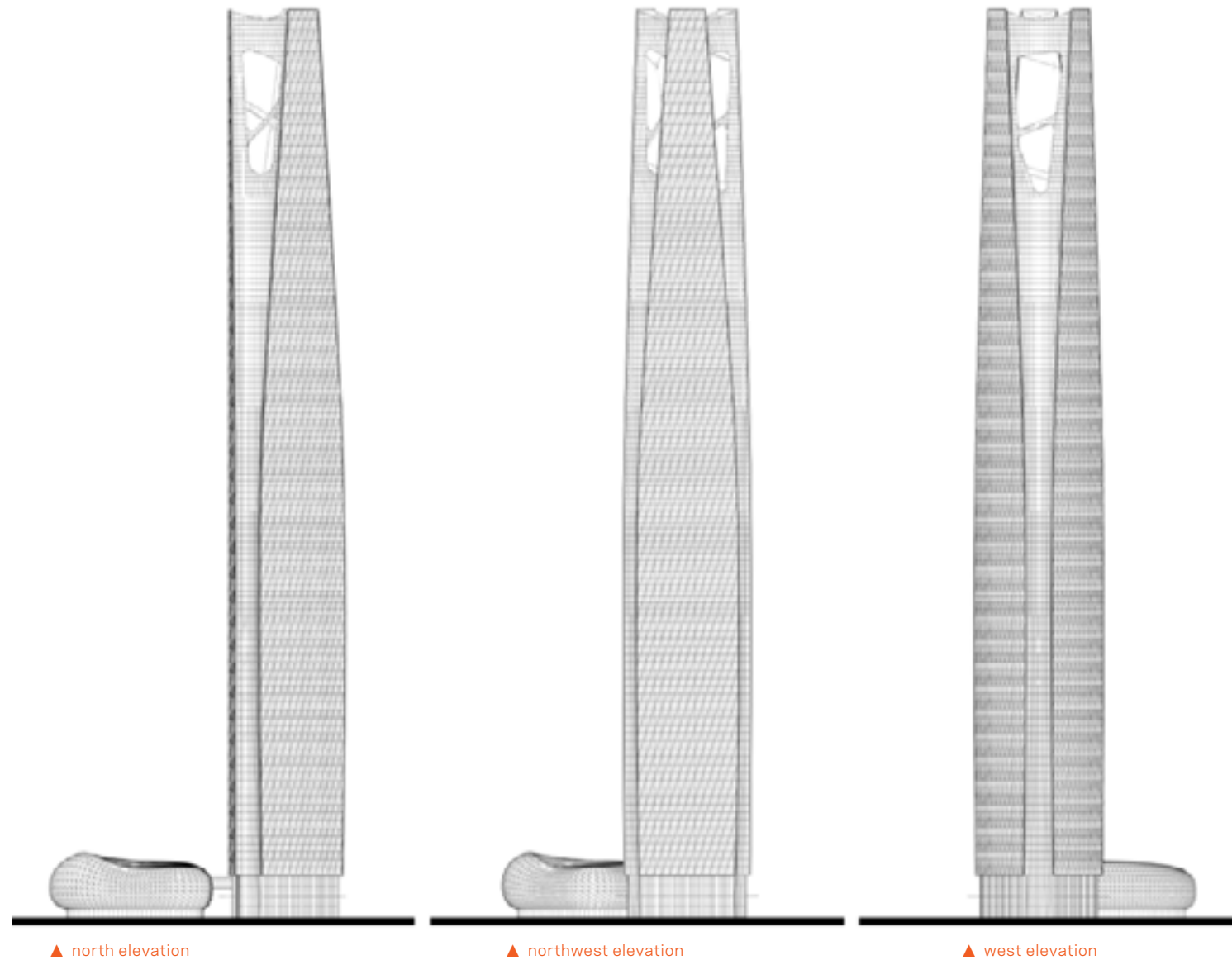
▲ office level floor plan

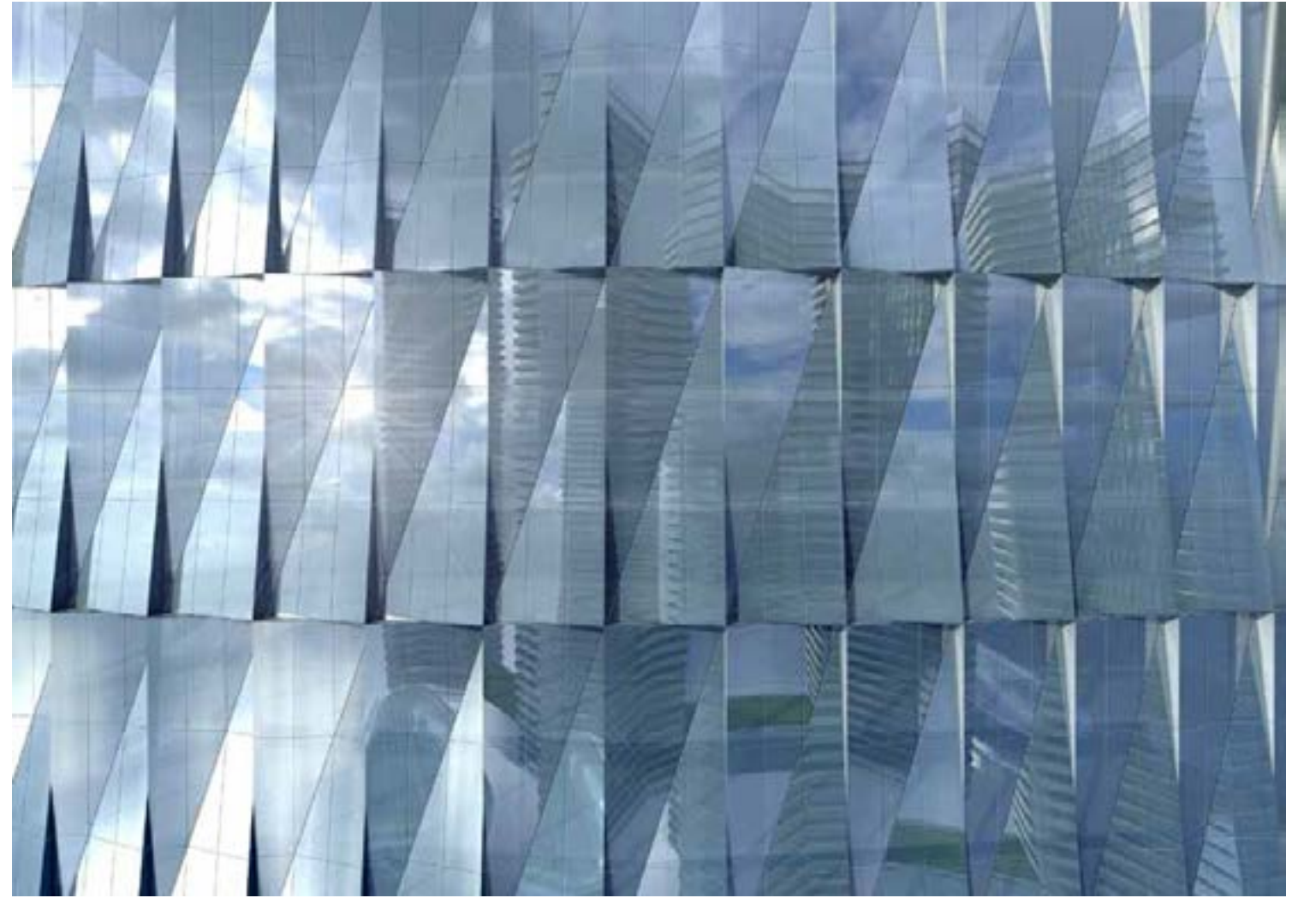


▲ waterfront view

0 5 10 20m



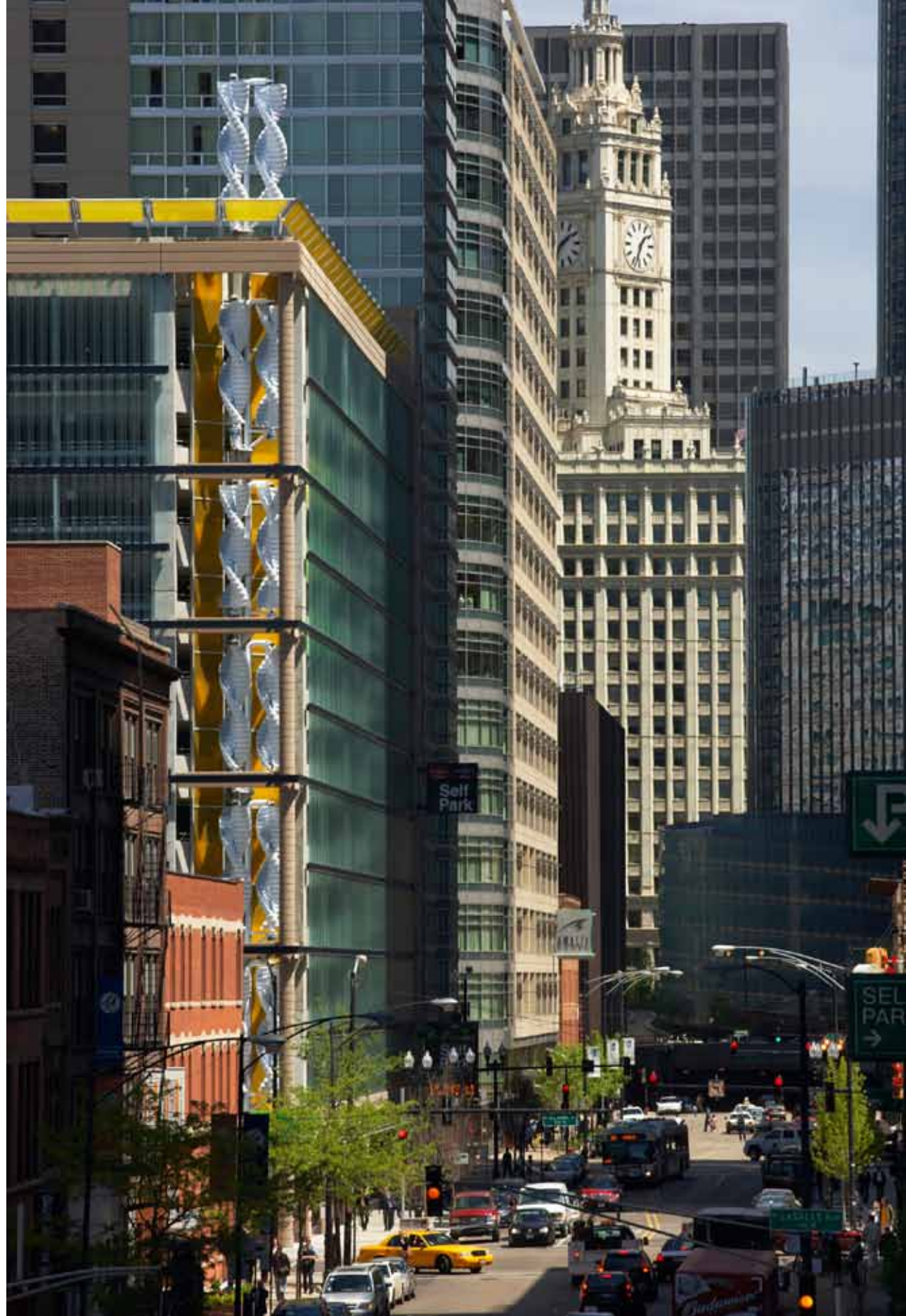




▲ facade detail



◀ facade detail



300,000 sq. ft. / 33,445 sq. m.

Completion: 2009

Greenway Self Park

Chicago, Illinois

The Greenway Self-Park is Chicago's first "green" parking garage. It is a free-standing 11-story, 900 parking stall complex currently pursuing LEED certification. Located at Clark Street and Kinzie Street, the exterior design features a naturally-ventilated, glazed screen façade that allows for a visual celebration of the basic concrete super-structure through a layer of breathable, green-tinted channel glass. A six-paired array of vertical turbines rises on the southwest corner of the garage and is designed to harvest available wind to power the exterior wall lighting of the facility.

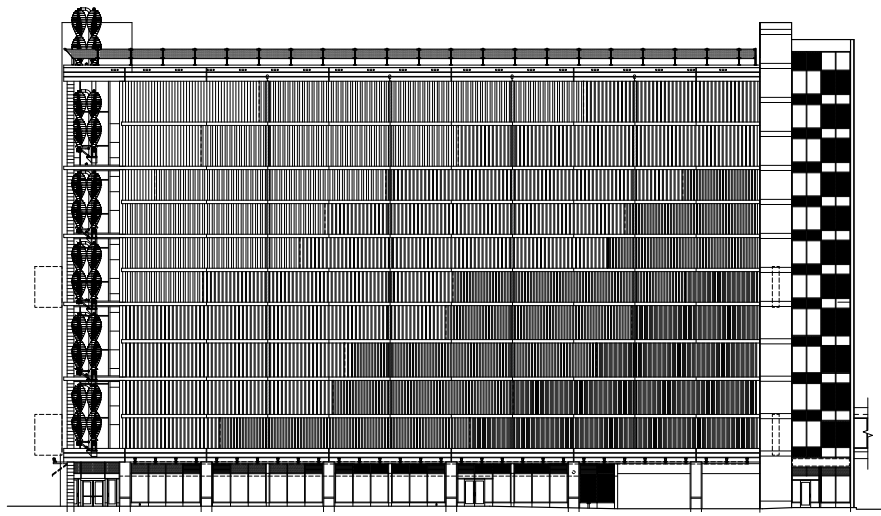
A reversible meter measures and returns power to the city's grid throughout the year. Other sustainable design features include a cistern rainwater collection system and a wayfinding system that educates Chicagoans on environmental responsibility.

A planted "green roof" and electric car plug-in stations are also planned as part of future construction phases.

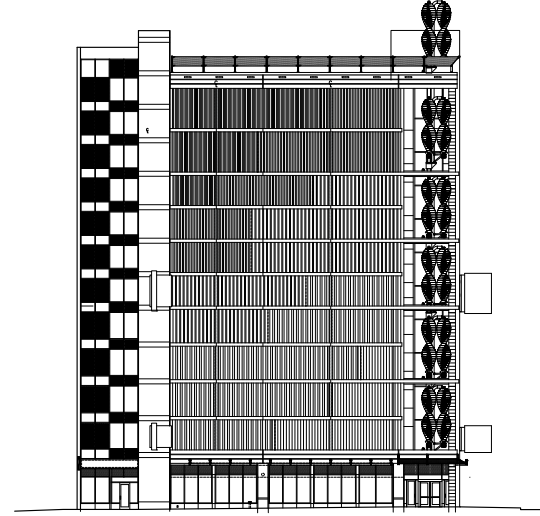
The client, Friedman Properties, sought to achieve the goal of developing a sustainable, energy-efficient garage that would add a respectful, yet distinctive architectural addition to the River North neighborhood.

The new facility provides much-needed parking to a busy shopping and entertainment district within a sustainable and architecturally distinctive structure.

◀ view along kinzie street



▲ south elevation



▲ west elevation



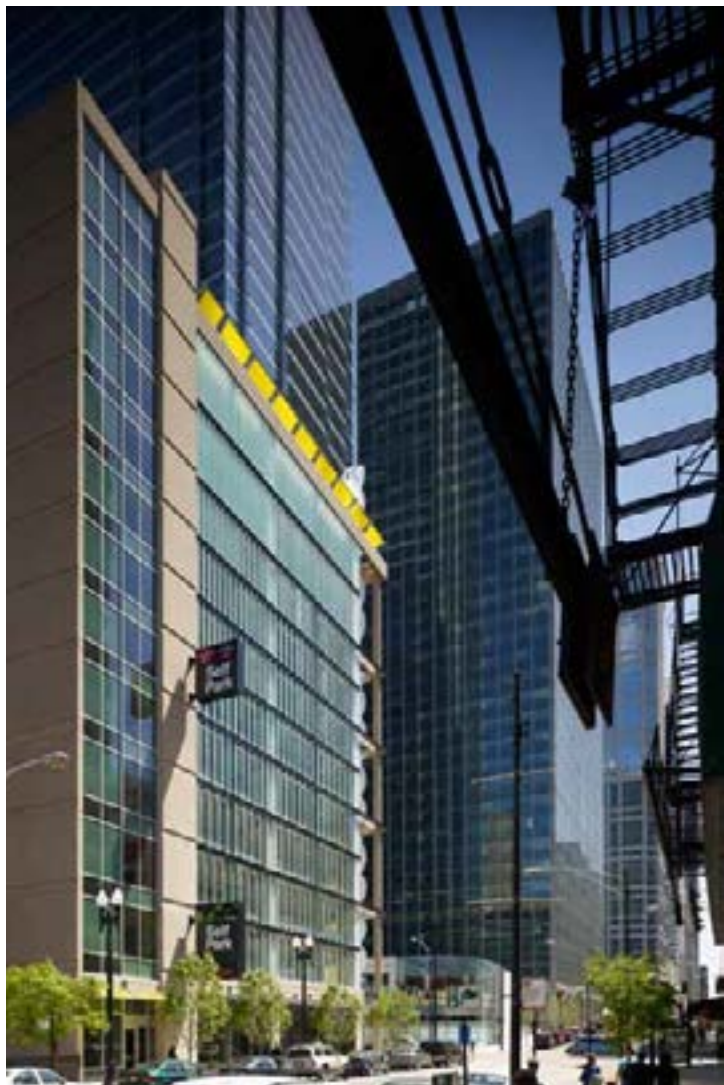
▲ wind turbine detail



▲ view along clark street



◀ corner of clark and kinzie



▲ view along clark street



▲ facade detail



100,000 sq. ft./9,290 sq. m.

Completion: 2010

Gunderson Dettmer

Menlo Park, California, USA

The Gunderson Dettmer law firm leased a 100,000-sq.ft., three-story building because of its bay-front location and campus setting. Salt marshes, the bay, a concrete plant and the campus landscape were to be the visual backdrop for the office. The interior space reinforces the connection between the staff, firm and clients while reflecting an emphasis on high-value service.

Public access is stratified to facilitate client hosting and accommodate risk management. The public areas of the first floor are for business development and new clients. The second floor is for existing clients and those more familiar with the firm, while the third floor is for staff and VIP events.

The interior is designed to reflect the surroundings and provide cultural transparency. Private, 140-sq.-ft. offices house 250 of the 275 employees.

The location of the open space between private offices is driven by five large, existing light monitors on the third floor. Offices on this floor are organized around these skylights and face communal living rooms. This pattern is repeated on the second and first floors, extending the diagram vertically through the existing building. A mezzanine level was constructed within the monitors to create private offices below and alternate workspaces above. These lofts are accessed by the alternate tread stair and provide panoramic views of the site.

Site-specific interior architecture features materials chosen to bring light and colors of the marsh into the building. To promote daylighting and transparency, 45 percent of the interior partitions are glass. Blue tinted mirror glass encloses high-density file areas and separates open and private office areas. Where desired, phenolic resin panels replace glass to provide opacity.

Lightweight, mobile furniture reinforces transparency and allows users to customize their workspaces.

◀ third floor passage

level 3 ▶

- 1 conference lobby
- 2 living room
- 3 continuous collaboration
- 4 file room
- 5 work rooms



level 1 ▶

- 1 reception
- 2 conference lobby
- 3 work room and office
- 4 living room
- 5 office services
- 6 file room
- 7 work room





▲ third floor file room



▲ third floor living room



▲ conference room



▲ library

▼ irregular existing building perimeter



▼ living rooms



▲ new organizing masses & existing core

▲ client area

▼ circulation zones



▲ planning module



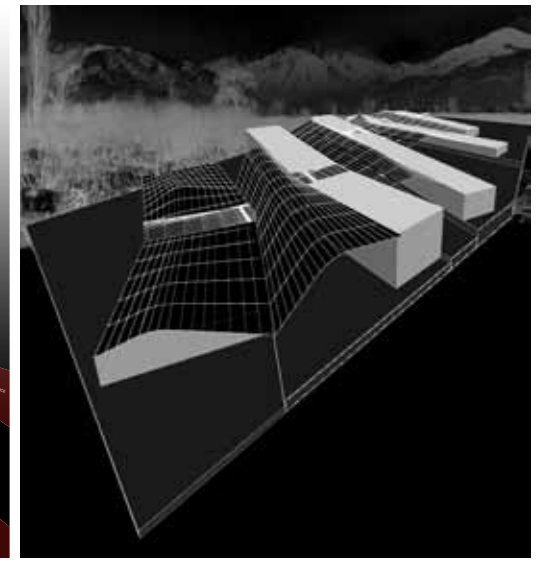
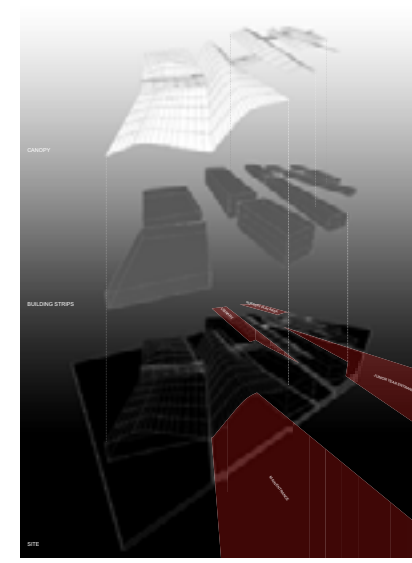
▲ first floor work room and office

◀ lunch room



215,280 sq. ft. / 20,000 sq. m.
 Completion: 2008

◀ entrance atrium



Haileybury Almaty

Almaty, Kazakhstan

Haileybury Almaty is the product of collaboration between Serzhan Zhumashov, Chairman of Capital Partners and Haileybury School, a 200-year-old, British independent school. It was designed and built in 18 months.

The design responds to major challenges: a site in the foothills of the highly seismically active Tien Shan mountains; a climate that swings from -17°C to 35°C; and a 3,900-kilometer supply chain across Turkey, the Caspian Sea and Kazakh desert.

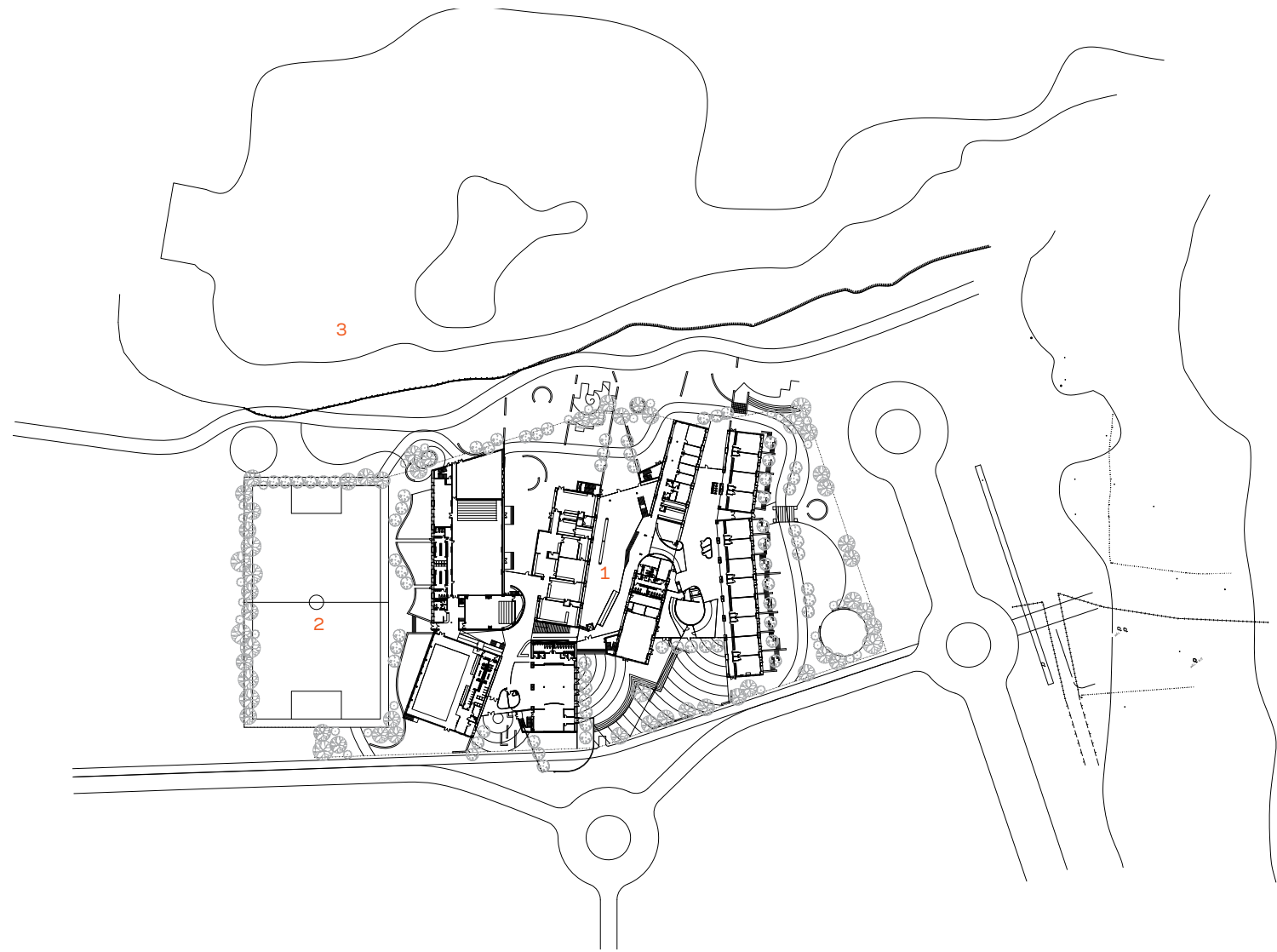
As an "all-through school," Haileybury Almaty provides a British education and Western curriculum in Kazakhstan's largest city. The architectural brief was to design a school that would celebrate the reverse of the Soviet approach to education: a progressive, vividly inspiring and open-minded educational environment firmly rooted in the bedrock of Kazakhstan's own multicultural richness.

The buildings are arranged in four wings of different educational, administrative and sporting functions, set out asymmetrically. The wings meet at communal agora spaces, where translucent ETFE canopies maximize natural internal light and bring a sense of the outside into these large linking volumes.

Deeply recessed south windows mediate the low angle of sun at the beginning and end of the day, but the insulating ETFE canopies of the atria - the first time ETFE has been used in Central Asia - allow ultraviolet light to reach the classrooms, giving a daylight experience even when it is too cold for the children to go outside. This design strategy dramatically reduced the external wall surface area and consequent energy losses, creating a building flooded with natural light despite its deep plan.

The team designed the circulation systems in a deliberately non-didactic way. A serpentine

movement path through the ground and first floors accentuates subtle shifts in the ground plane. Despite its eventually crowded urban surroundings, the school will remain an island of physical openness. This is a place where students, teachers and staff can mix freely, convivially, and productively as they usher in a new age of education in Almaty that may also set fresh agendas in other ex-Soviet states in Asia.



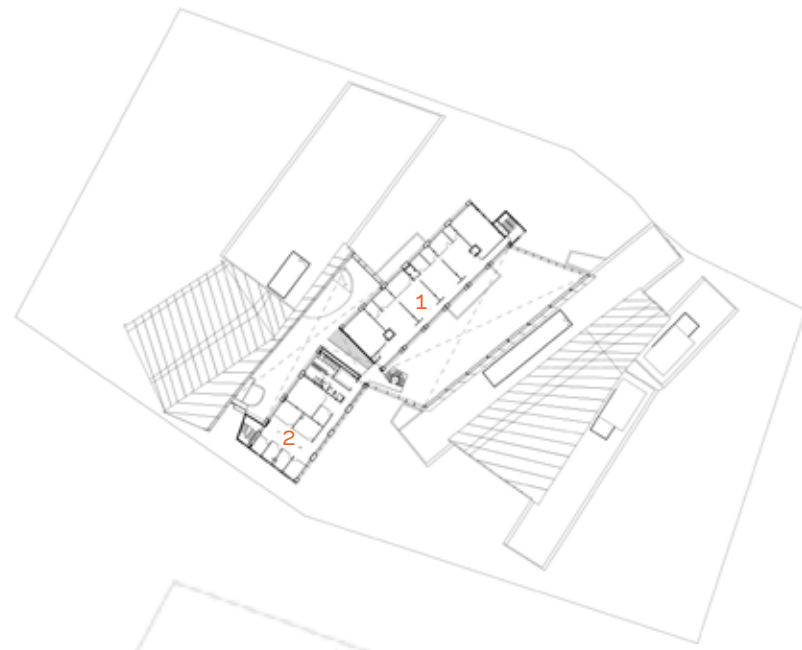
- ▲ site plan
- 1 school
- 2 sports court
- 3 river flood plain



▲ aerial rendering to south



▲ learning resource centre



◀ level 3 floor plan

- 1 diploma year study base
- 2 learning support



◀ level 2 floor plan

- 1 upper school classrooms
- 2 science
- 3 faculty base
- 4 music



◀ level 1 floor plan

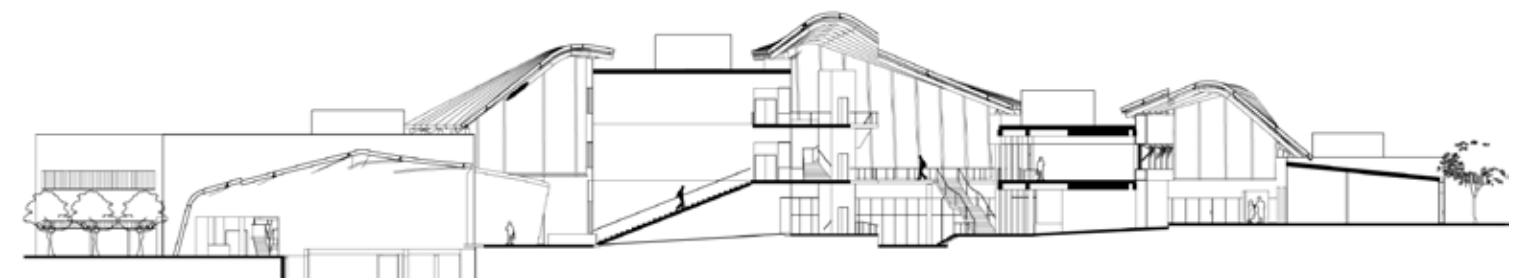
- 1 lower school classrooms
- 2 music room
- 3 administration
- 4 learning resource center
- 5 junior hall
- 6 refectory
- 7 art & technology
- 8 sports hall
- 9 drama / lecture hall
- 10 swimming pool
- 11 agora



▲ section, learning resource center



▲ section, lower school



▲ cross section



▲ lower school



▲ main stair to learning spaces





1.2 million sq. ft. / 111,480 sq. m.

Completion: 2008

Indianapolis International Airport, Colonel H. Weir Cook Terminal

Indianapolis, Indiana, USA

The design for this airport terminal aspires to create a spectacular gateway for visitors, a valuable civic asset for the region and a redefinition of what a 21st-century airport can be.

The design acknowledges that international airports are often the traveler's first and last impression of a metropolitan area. A dynamic spatial and sculptural form manifests three primary objectives. First, the terminal acts as a monumental gateway, with an arch in the transverse section creating a threshold. Second, the terminal celebrates the event of flight, as the longitudinal section elevates at the landside, descends at security and rises again to airside. Finally, the terminal is a high-performance building, bearing a refined and tailored roof with apertures sized to create natural light, reflect heat, channel water and harness airflows that draw clean air through the terminal.

Befitting the Indianapolis "Circle City" nickname, the heart of this terminal is the grand Civic Plaza, marked with a hyperbolic skylight 200 feet in diameter. This space is the circulation nexus of the airport, and its grandeur celebrates the intense social interaction that occurs here. A nod to Monument Circle, the center of downtown Indianapolis, the skylight offers natural light to the main gathering space, bringing the landscape of the sky inside.

The front ticketing hall rises to 82 feet in height while Civic Plaza is 60 feet tall. The corresponding two curtainwall assemblies connect the traveler to Indianapolis via panoramic views of the environs, sky and view of downtown five miles away. The natural light entering through the glazed facades enhances the impression of an outdoor city square and creates a relaxed, social atmosphere.

The entire facility was designed with an intuitive layout that facilitates a seamless transition from ground to air and vice-versa. With 40 gates on two 110-foot wide concourses, passengers are always in touch with their destination via the sloped roof line reminiscent of an airplane wing.

In addition to providing a terminal that establishes new paradigms for security, the design creates a terminal that reaffirms the importance of vital public space, robust human interaction and the marvelous event of flight. This new terminal turns "process into procession."

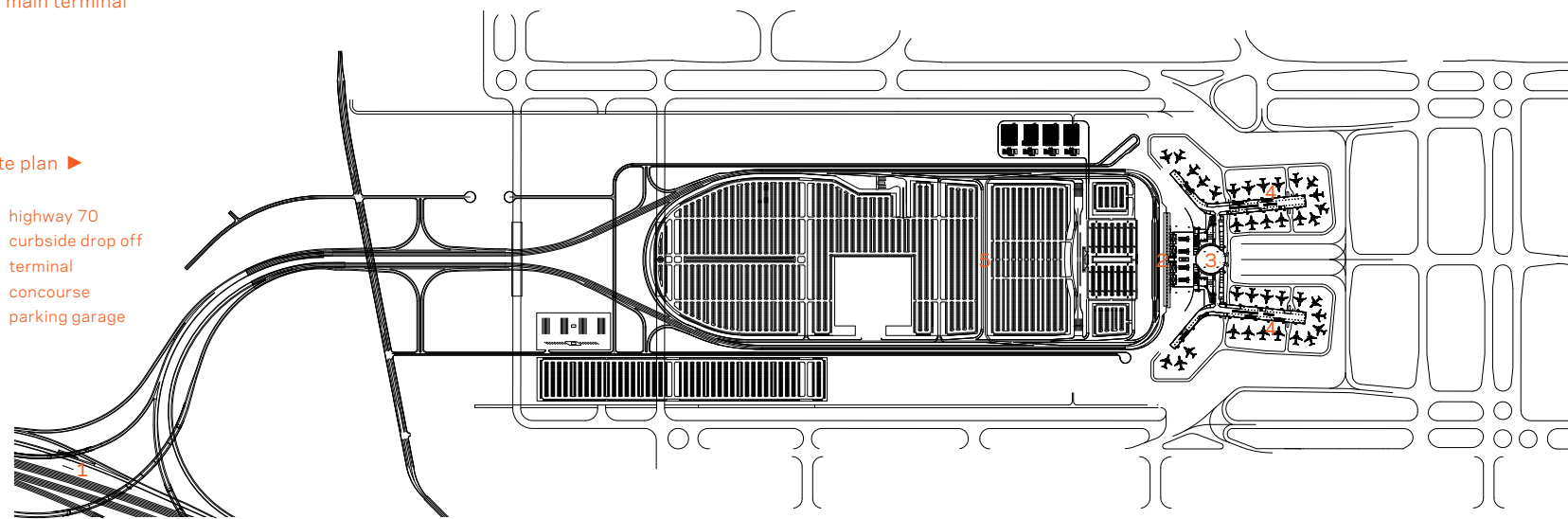
◀ main terminal

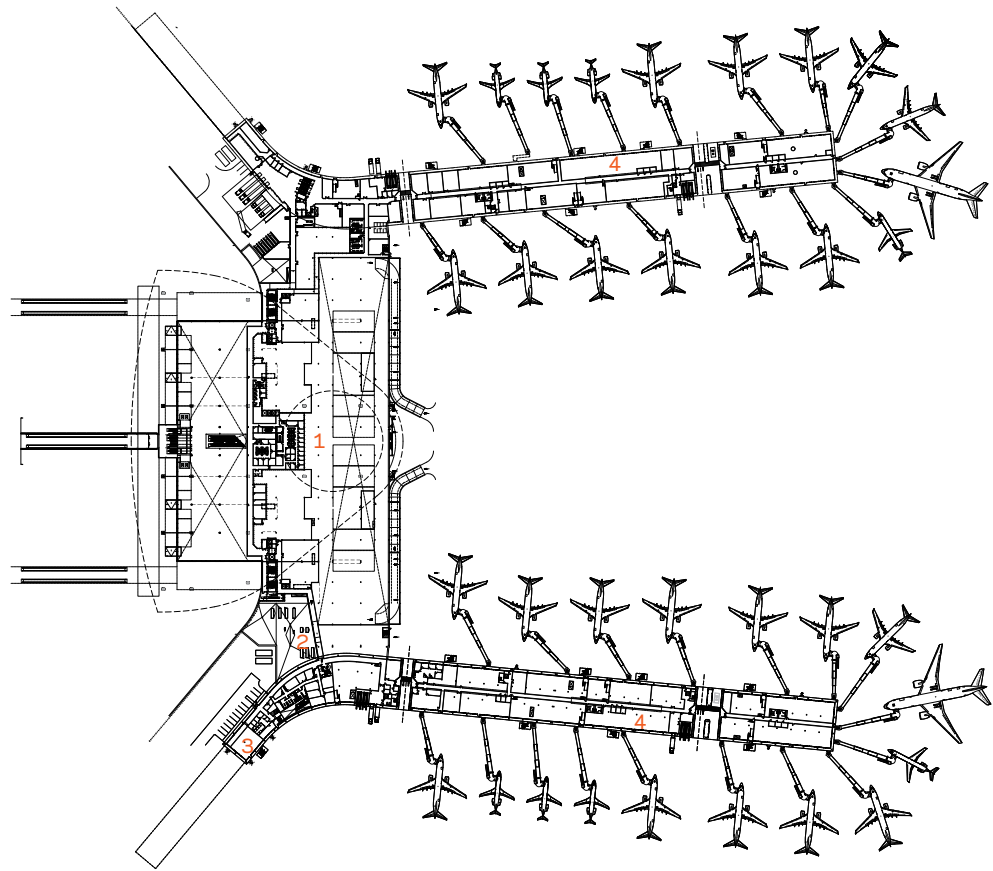


▲ main terminal

site plan ▶

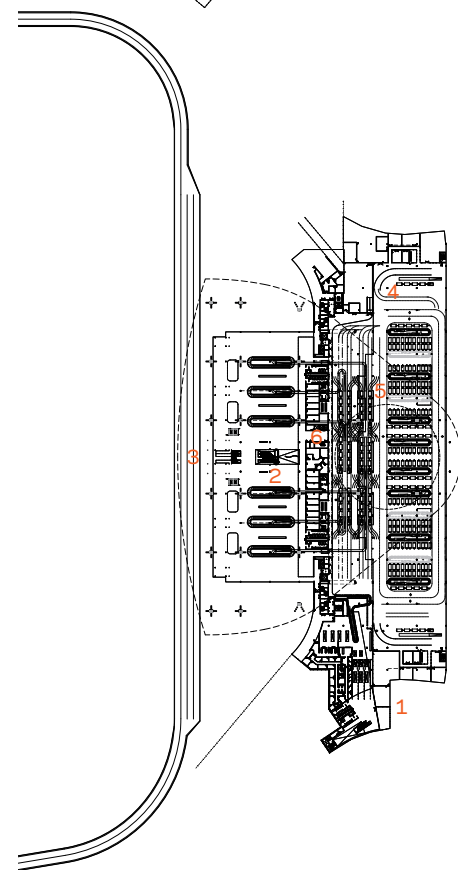
- 1 highway 70
- 2 curbside drop off
- 3 terminal
- 4 concourse
- 5 parking garage





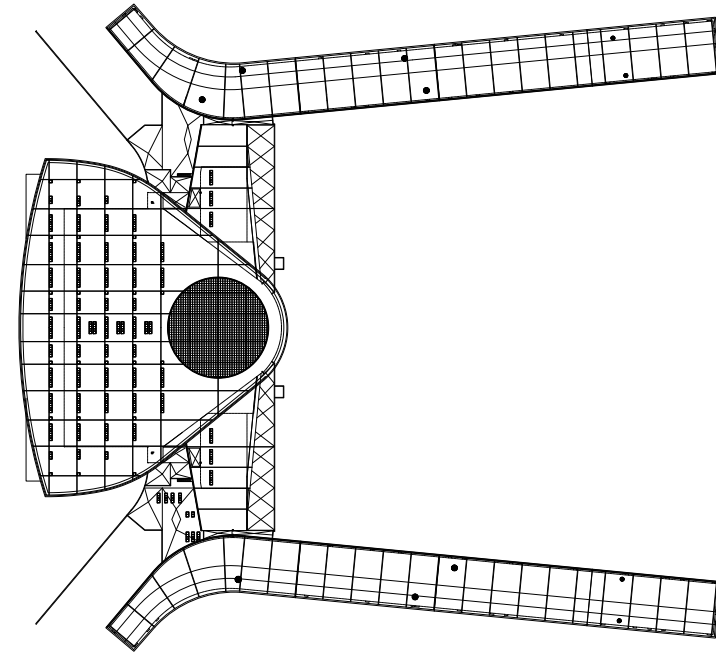
◀ level 2 floor plan

- 1 operations
- 2 police
- 3 international arrivals
- 4 mechanical

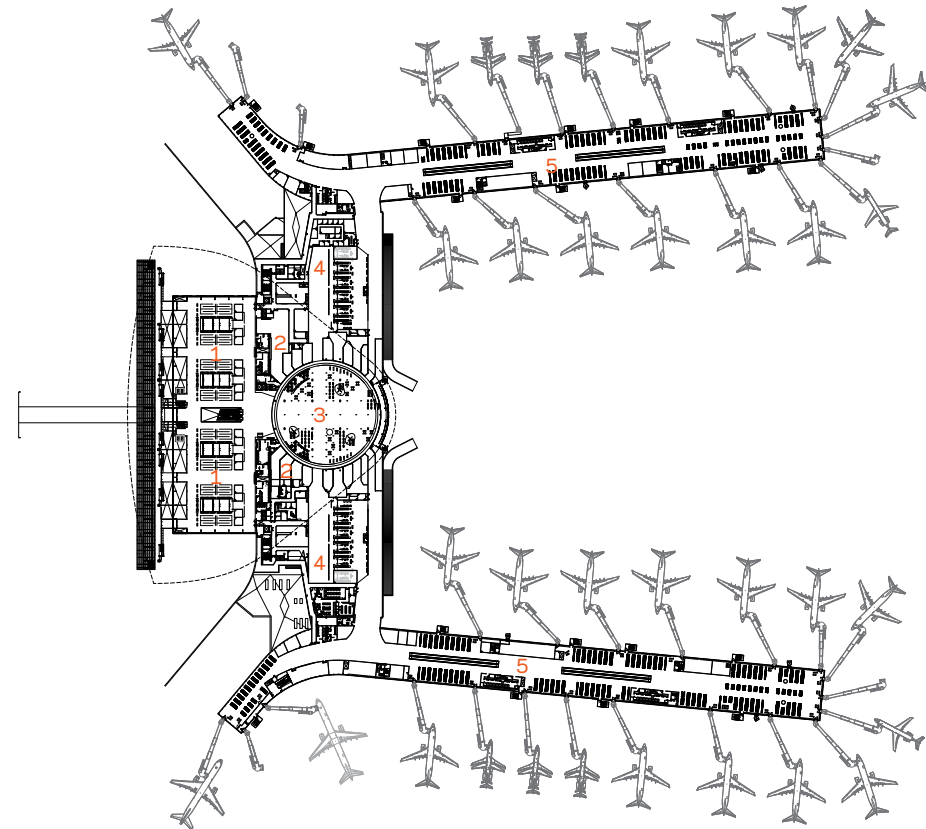


◀ level 1 floor plan

- 1 international arrivals
- 2 bag claim
- 3 arrivals road
- 4 outbound bags
- 5 inbound bags
- 6 airline offices



◀ roof plan



◀ level 3 floor plan

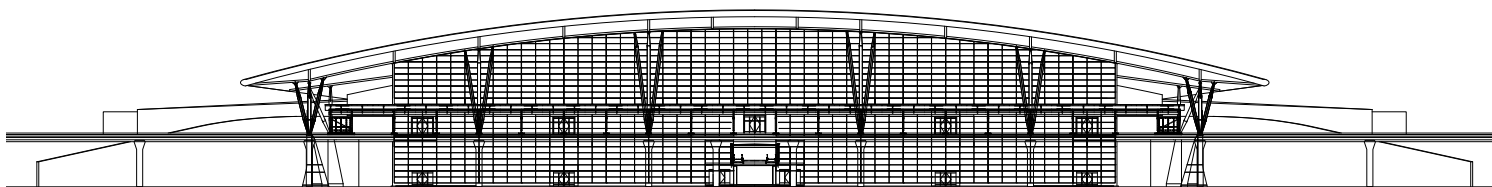
- 1 ticketing/check-in
- 2 retail
- 3 civic plaza
- 4 security check point
- 5 concourse / gate lounges



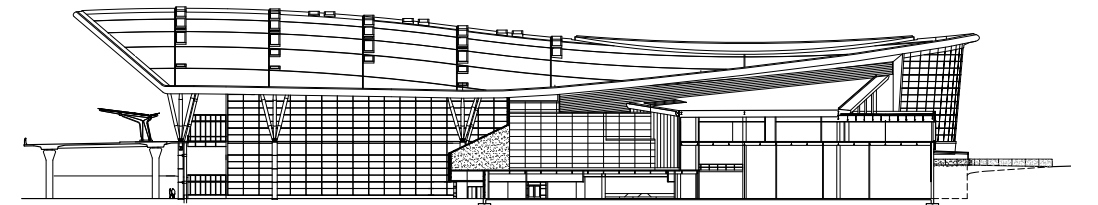
▲ study model



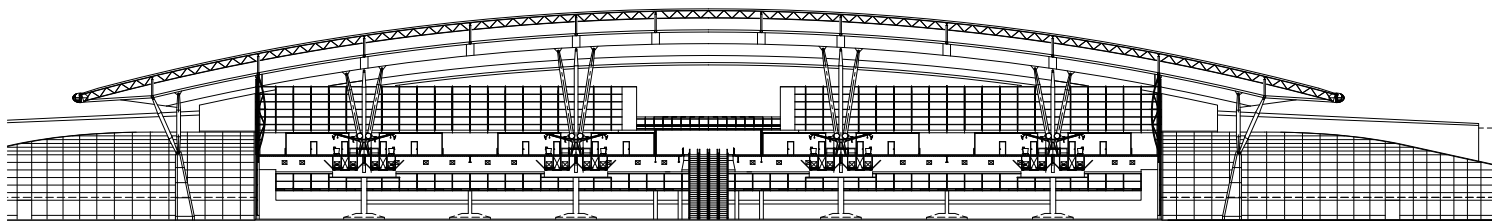
▲ sectional model



▲ west elevation

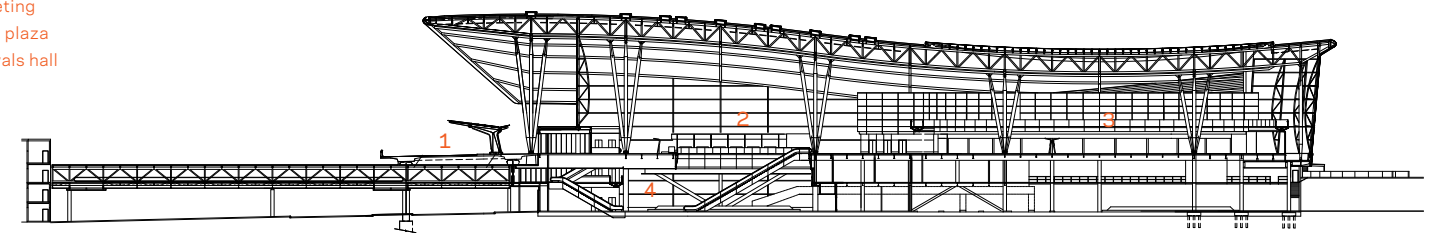


▲ south elevation



▲ section

- 1 drop off
- 2 ticketing
- 3 civic plaza
- 4 arrivals hall



▲ section



▼ civic plaza



▼ detail



▲ detail



▲ concourse



▲ courtyard along arrival road

◀ civic plaza





11,200 acres / 4,500 ha.

Completion:
 Stage One - 2009
 Stage Two - 2010
 Phase Three - pending

◀ rendering, town center



Khed Special Economic Zone

Maharashtra, India

As a new special economic zone outside of Pune, India, Khed SEZ was envisioned to be a world-class community for scientific innovation and sustainability. The client, Bharat Forge Ltd., is India's largest manufacturer and exporter of automotive components.

The planning and development is founded on the Fully Integrated Thinking (FIT™) framework to create an urban context that functions equally well from ecological, social and economic perspectives, increasing the quality of life for all its inhabitants and creating standards for continuous improvement and monitoring over time.

The intent is to use nature's principles to build a brand new industrial city housing two million people in an area approximately the size of Manhattan. Khed synthesizes human need, environmental stewardship and economic viability, resulting in a global model of urbanism where residents will live, grow and prosper in harmony with nature.

Based on the SEZ guidelines, two components constitute Khed: the processing zone and the non-processing zone. The processing zone provides the base of employment focused on export-oriented light and heavy industries and research and development facilities. The non-processing zone includes mixed-use neighborhoods located near employment areas.

Inside processing zones, the vision calls for state-of-the-art infrastructure, equipped with the latest technology – the fundamental elements of success in today's competitive global marketplace. Careful consideration is given to the location of industries and their arrangements based on their symbiotic relationships. Taking advantage of a picturesque location on the Deccan plateau and interconnecting industrial clusters with their natural setting, the aspiration was to foster inspiration and change on a global scale.

Non-processing zones are essentially the urban centers of the Khed SEZ. These urban centers cater to the creative class of the world – people who, in addition to a great place to work, are looking for a complete environment where personal life and family needs are met. This is a vibrant, supportive urban community complete with a range of amenities and lifestyle choices.

The historically based form of public squares, plazas and bazaars characterize the organization of the urban centers. Contemporary form yields an urbanism that is both dynamic and familiar. Adjacent urban centers connect to residential neighborhoods, offering a wide range of housing options with community support facilities and amenities. This vital combination is complemented by the physical location of the community, which sits upon a high plateau – a picturesque, inspiring location.



ENVIRONMENTAL	1	ECOSYSTEM
	2	WATER
	3	ATMOSPHERE
	4	MATERIALS
	5	ENERGY
	6	FOOD
SOCIAL	7	COMMUNITY
	8	CULTURE
	9	HEALTH
	10	EDUCATION
	11	GOVERNANCE
	12	TRANSPORT
ECONOMIC	13	SHELTER
	14	COMMERCE
	15	VALUE

FIT™ is an acronym for **"fully integrated thinking."** - FIT is an approach to planning and design developed with the Biomimicry Group that brings together our human and natural worlds to achieve *social, environmental and economic sustainability.*

The design team used this FIT framework to set goals and create feedback loops that enabled them to measure and improve a project's performance over time. The FIT framework is flexible and it was designed to integrate nature and the built environment through bio-inspired, living systems thinking.



LOCALLY ATTUNED AND RESPONSIVE
A systemic approach or design that is consistently adapted to its surroundings. Having a sense of, and harmony with, one's immediate surroundings or environment and being responsive to them. Includes having feedback loops and being resourceful and opportunistic.

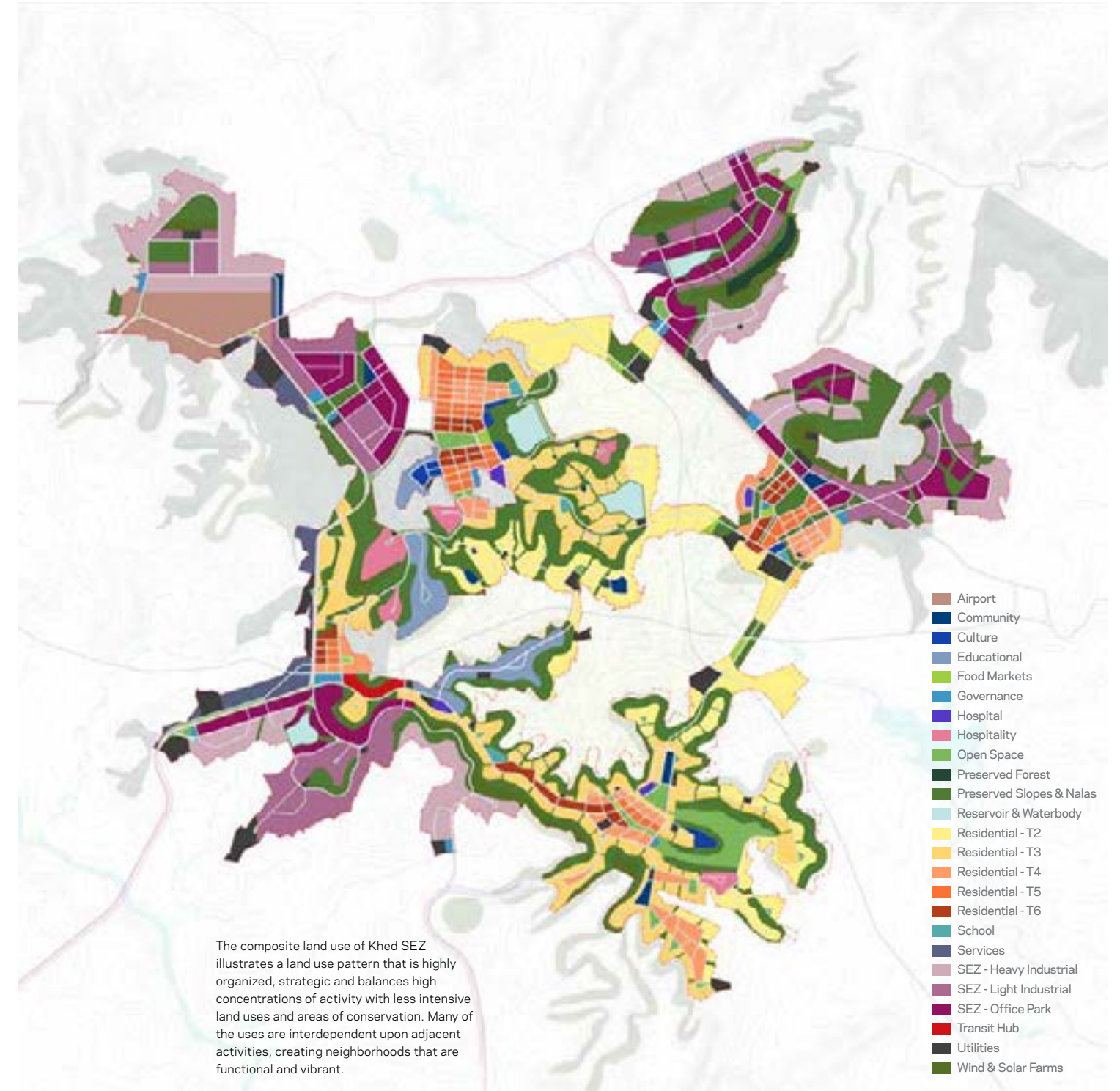
INTEGRATES CYCLIC PROCESSES
A systemic approach or design whose processes follow a cyclic path. Taking part in and/or using a cyclic chain of information, energy, or materials.

RESILIENT
A systemic approach or design that maintains function following disturbance. Has the ability to recover after disturbance by incorporating redundancy and diversity, and being decentralized and distributed.

OPTIMIZES RATHER THAN MAXIMIZES
A systemic approach or design that systemically resolves all factors in context. Increasing one's efficiency to improve output rather than increasing one's theoretical girth, use of raw materials, or use of energy. Includes using multi-functional design and fitting form to function.

LEVERAGES INTERDEPENDENCE
A systemic approach or design that finds value through interactions. Species and individuals can increase survival by working together. When leveraging interdependence, the result is something greater than each part is separately. Includes recycling all materials and self-organizing.

USES BENIGN MANUFACTURING
A systemic approach or design that causes no harm in its creation. Uses mild, neutral, or favorable manufacturing practices, generally accepted as sustainable, such as self-assembly and using life-friendly materials and water-based chemistry.



The composite land use of Khed SEZ illustrates a land use pattern that is highly organized, strategic and balances high concentrations of activity with less intensive land uses and areas of conservation. Many of the uses are interdependent upon adjacent activities, creating neighborhoods that are functional and vibrant.

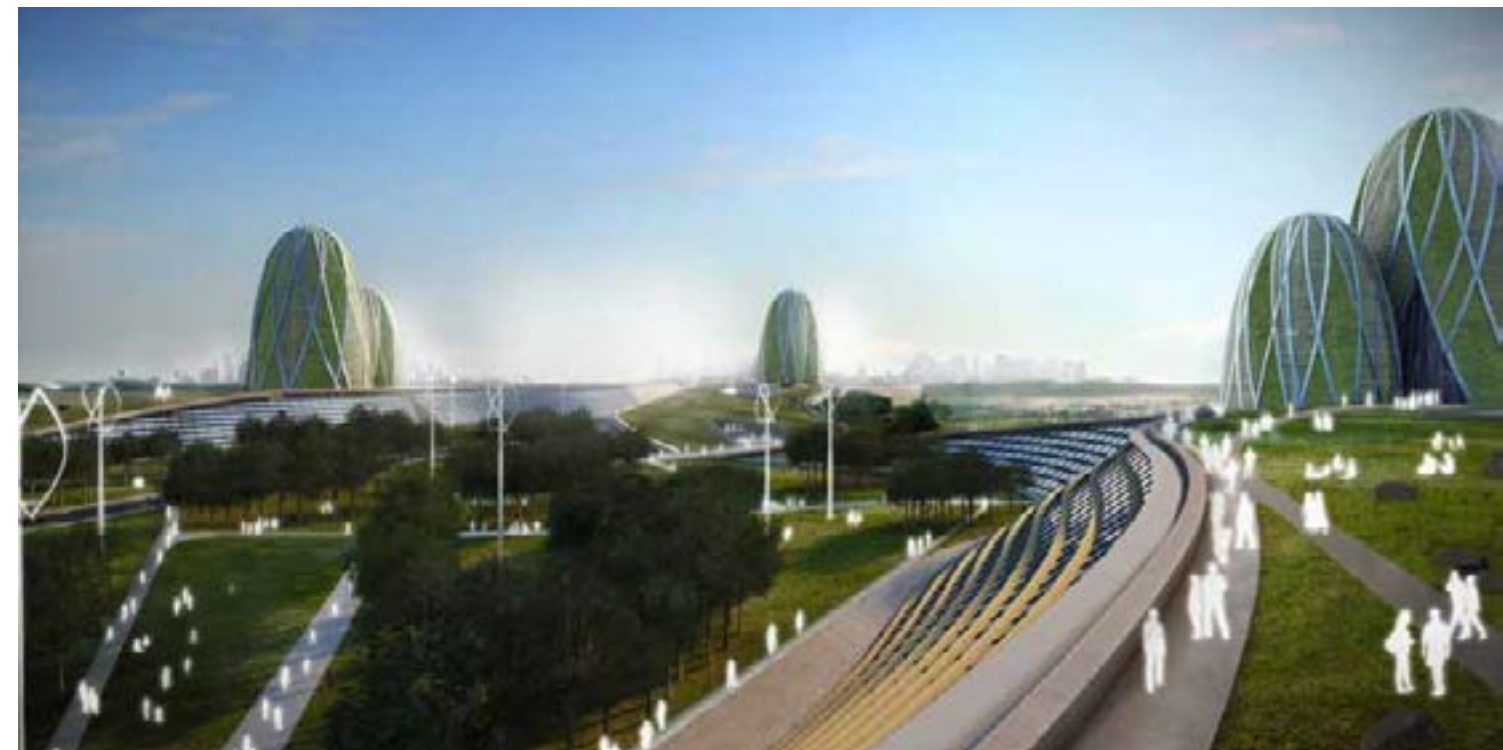
▲ biomimicry & life's principles

▲ land use plan

▼ aerial rendering



▼ residential terrace



▲ university quad

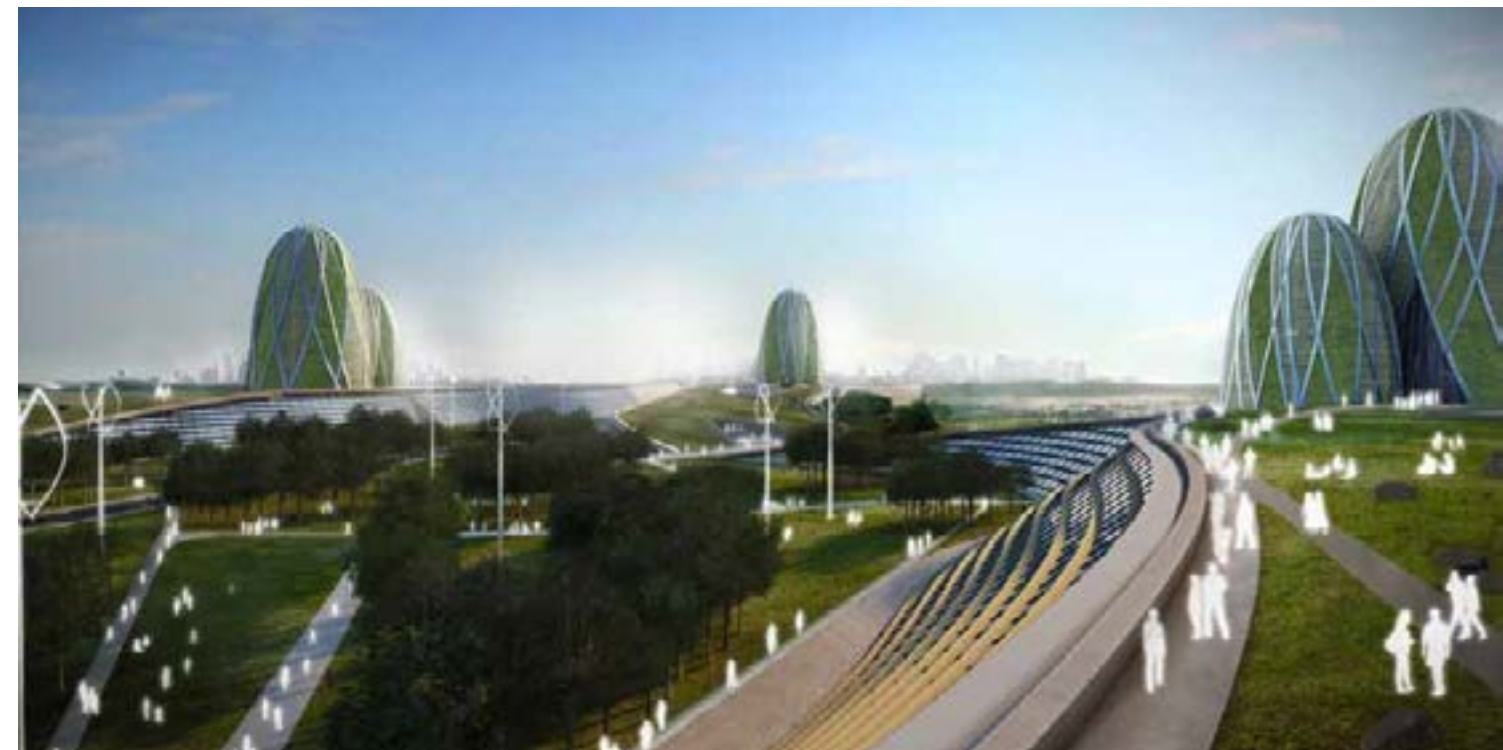


▲ retail plaza

▼ aerial rendering



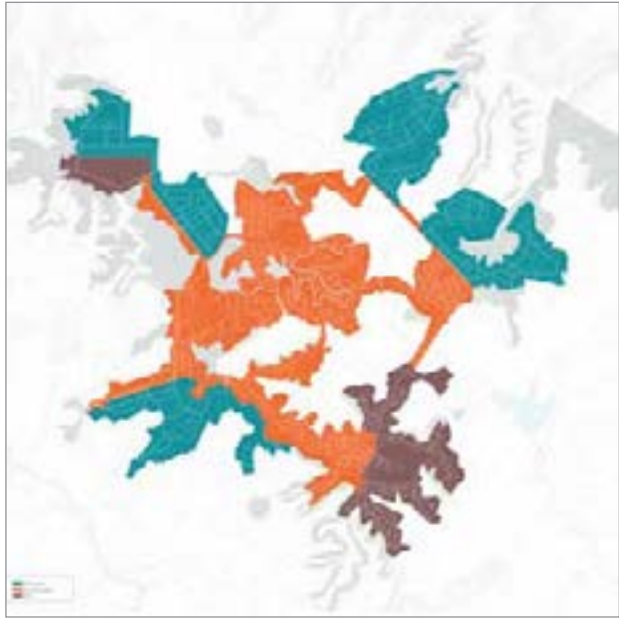
▼ residential terrace



▲ university quad



▲ retail plaza



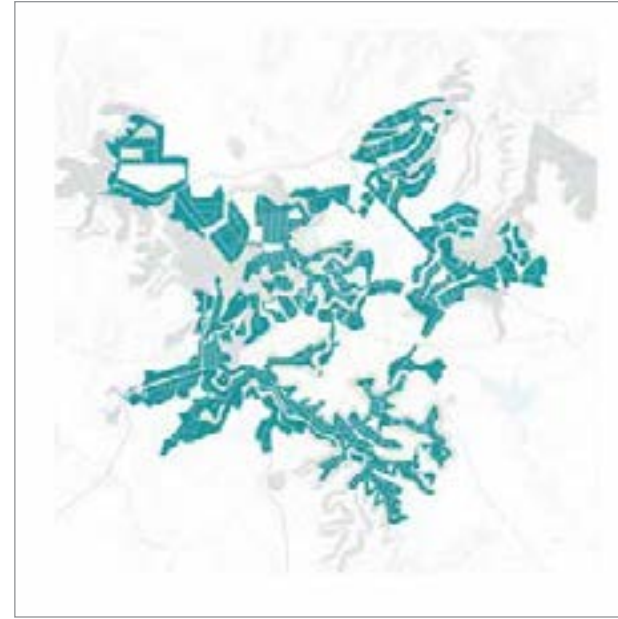
▲ **sez boundaries**

The SEZ boundaries plan is the broad level land use plan that illustrates the relationship between the processing areas, the non-processing areas and the Domestic Tariff Area (DTA). This arrangement also confirms the requirement of each SEZ being a minimum of 1000 hectares with each SEZ comprising processing and non-processing areas.



▲ **development density**

The development density diagram is a tool to visualize development density by using a range of colors. Here, the darker represents higher density and lighter color represents less density. Each color in the spectrum is given a FSI (Floor Space Index) value that eventually yields to the total built-up area as well as total population density.



▲ **block structure**

The intent of the diagram is to show how the streetscape, parks and plazas are defined and linked by a series of strong building edges. All major open spaces are meant to be civic in nature and the strong built edges provide eyes on the space keeping them safe. Looking closely, one can also see the hierarchical differences in the open space system that varies from neighborhood scale to regional scale.



▲ **regulating plan**

The regulating plan highlights each of the transect zones - from nature to dense urban. Industrial uses are highlighted under the special district category. This plan serves as the determining plan for appropriate levels of development intensity, shows the proper transitions in scale from place to place and illustrates the connections from preserved spaces to growth areas.



▲ **landscape & open space plan**

A complex system of active and passive open space that has emerged from the master plan includes preserved forest and slopes, nala corridors and water bodies, formal and informal urban parks and preserved farmland outside the master plan area. A wide variety of activities will take place within this network of open spaces.



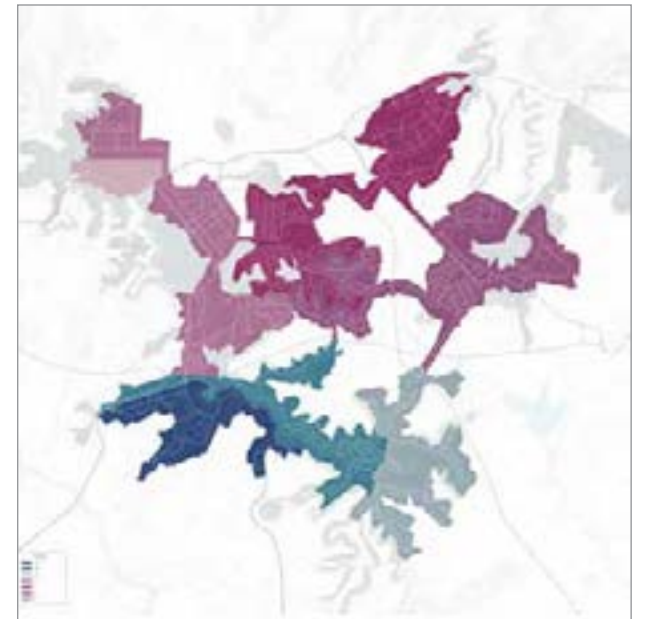
▲ **walking distance**

The walking distance diagram highlights the areas defined as activity centers such as town centers, major transportation hubs, or civic, commercial and retail destinations. In the diagram here, these centers are defined by circles and the radius of the circle is marked at five- and 10-minute walking distance from the center. Typically, the linear dimension of 400 meters or 1350 feet is used to define a five-minute walking distance.



▲ **circulation hierarchy**

Eight levels of roadway make up the hierarchy of streets planned to service Khed SEZ. This illustrates the street types and sizes, from primary to secondary to tertiary. In addition to width, speed and capacity, the hierarchy is related to character of the public realm, indicating the appropriate design character of neighborhood, retail, commercial streets or highways.



▲ **development phasing**

Due to the large size of the site and extended time frame of the development, a strategy for phasing was considered essential. This strategy had to respond to the sequence of SEZ regulation, land acquisition, proximity to existing adjacent infrastructure, and other market-driven factors. Phasing for Khed SEZ corresponds to four primary zones or SEZs of approximately 1000 ha.





12,000 sq. ft. / 1,115 sq. m.

Completion: 2006

Killbear Visitor Centre

Nobel, Ontario, Canada

With dramatic views of the Georgian Bay along the Great Lakes Heritage Coast in northern Ontario, this visitor center fits within the rugged landscape in a way that celebrates and respects the natural environment and its ecosystems.

The design creates a facility that is strongly connected to its site in form and organization, enhancing the visitor experience through the introduction of natural light and the careful orchestration of views. Glazing along the east and west facades is minimal, with windows strategically placed to create view connections between the exhibits and the natural landscape.

Overall, the design approach is one of abstraction, drawing from the essential character of the landscape. Formal abstraction begins with the interpretation of site geology, climate, and vegetation, representing them in built form. Like the landscape below, the building evokes a sense of movement. Twisting

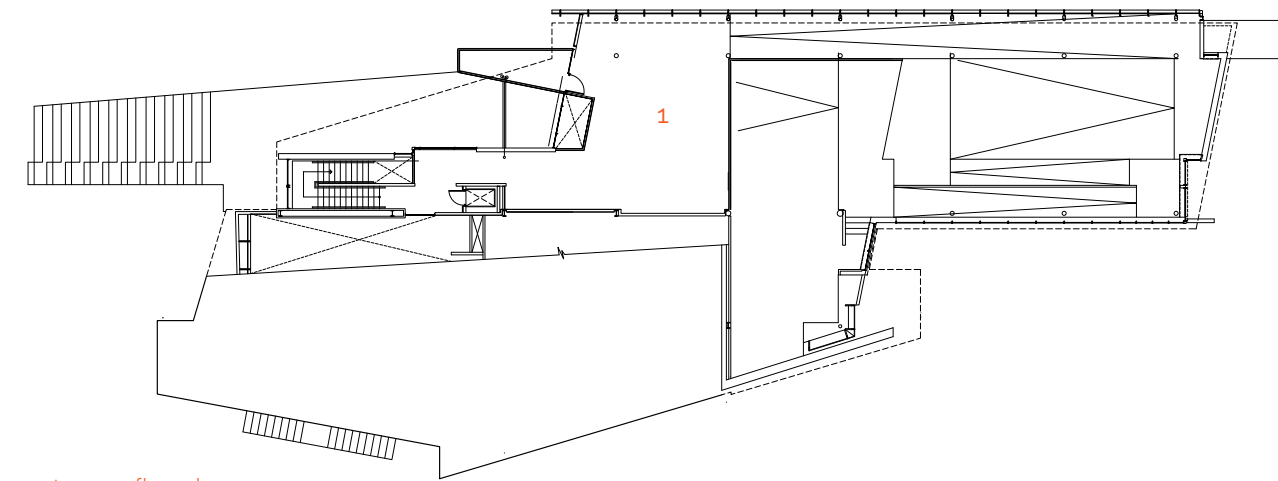
volumes characterize the overall massing shaped by forces within the landscape. For example, a large vertical shift inside the building mirrors characteristics found in the site's geomorphology. As if pushed by the Georgian Bay winds, the east and west elevations lean away from the water's edge. The building stretches parallel to a series of rock folds that cascade toward the water's edge. Idiosyncratic, overlapping volumes combine with bands of concrete, glass and zinc.

Sustainable design strategies include using the nearby Georgian Bay waters as a heating and cooling source, using storm water runoff to maintain wetlands of indigenous plant species and specifying recycled and recyclable building materials. Designers strategically placed access roadways, parking and landscape in a way to preserve existing trees and vegetation.

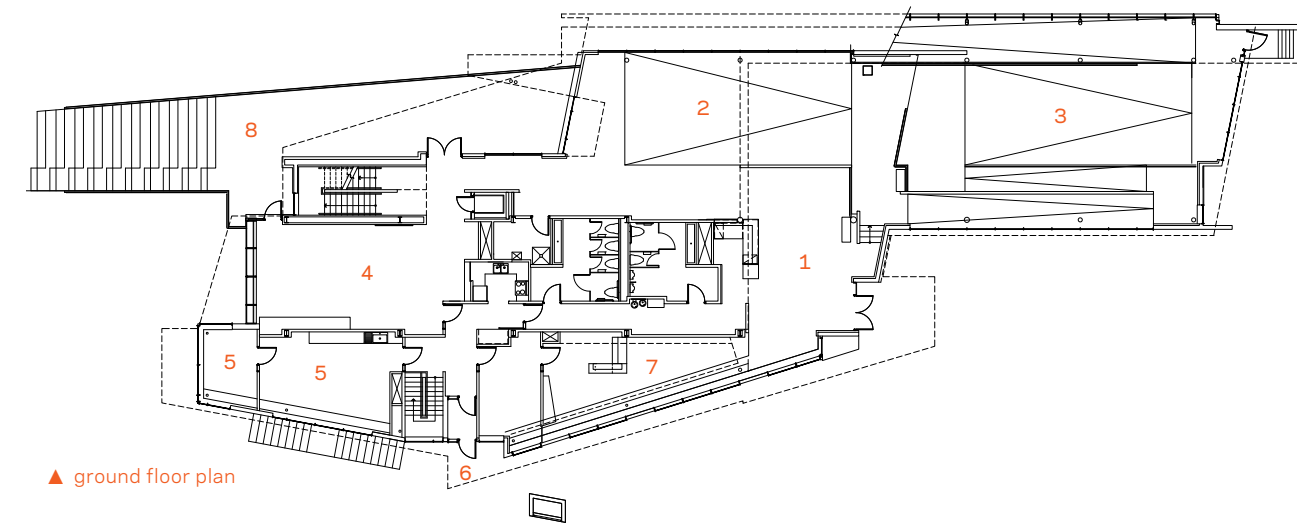
◀ front entry



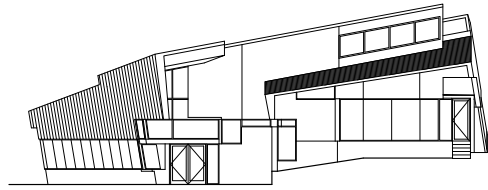
- ▲ site plan
- 1 park road
 - 2 bus parking
 - 3 staff parking
 - 4 arrival court
 - 5 public entrance
 - 6 staff entrance
 - 7 outdoor deck
 - 8 barrier free pathway
 - 9 wetlands
 - 10 bicycle path
 - 11 georgian bay
 - 12 visitor centre



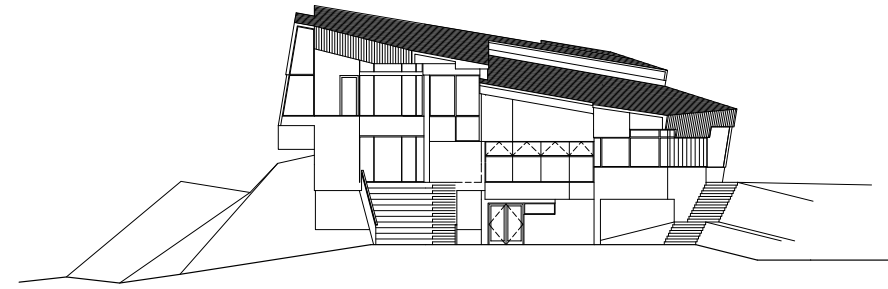
- ▲ upper floor plan
- 1 upper exhibit space



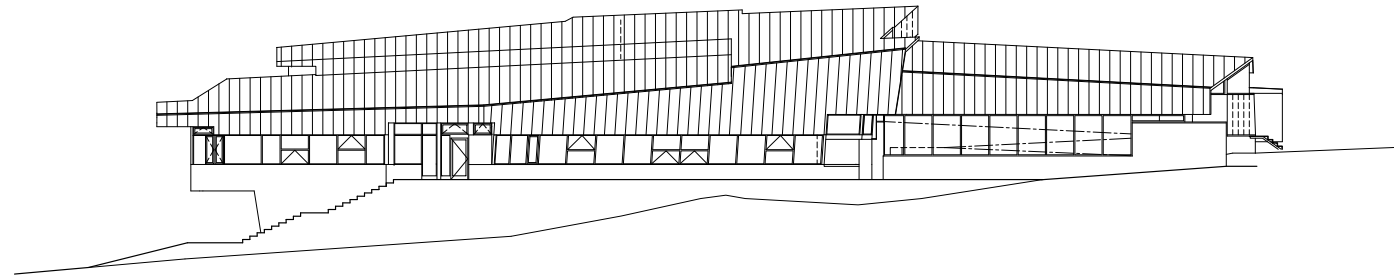
- ▲ ground floor plan
- 1 public lobby
 - 2 lower exhibit space
 - 3 mid exhibit space
 - 4 activity room
 - 5 staff offices
 - 6 staff entrance
 - 7 retail
 - 8 outdoor deck



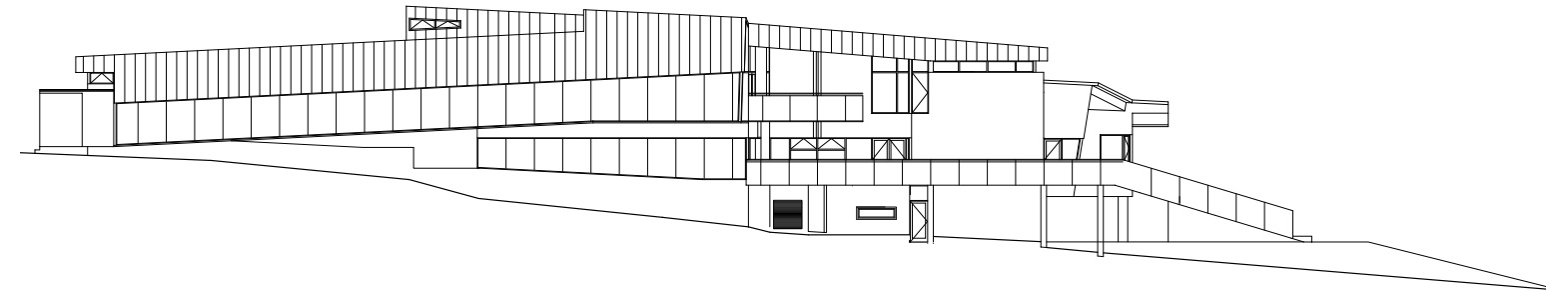
▲ north elevation



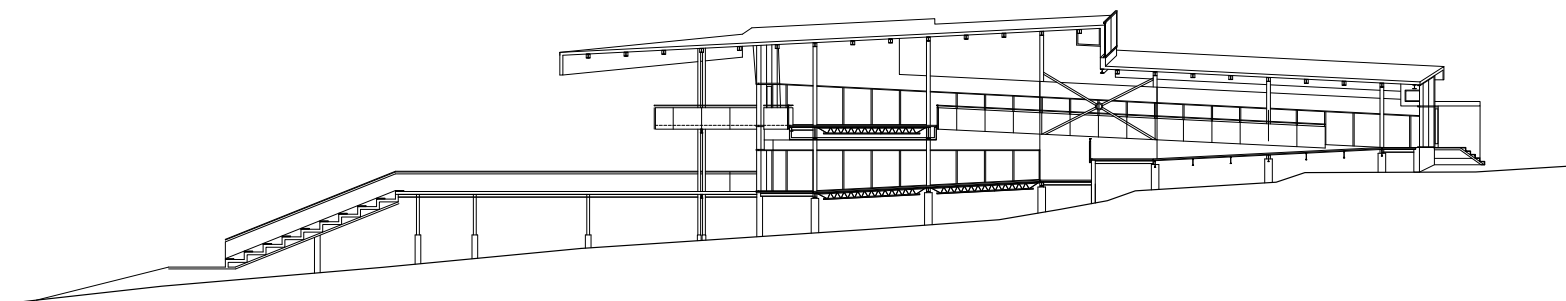
▲ south elevation



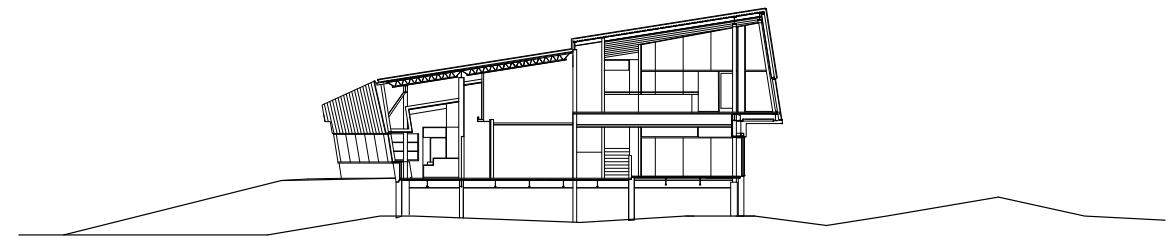
▲ east elevation



▲ west elevation



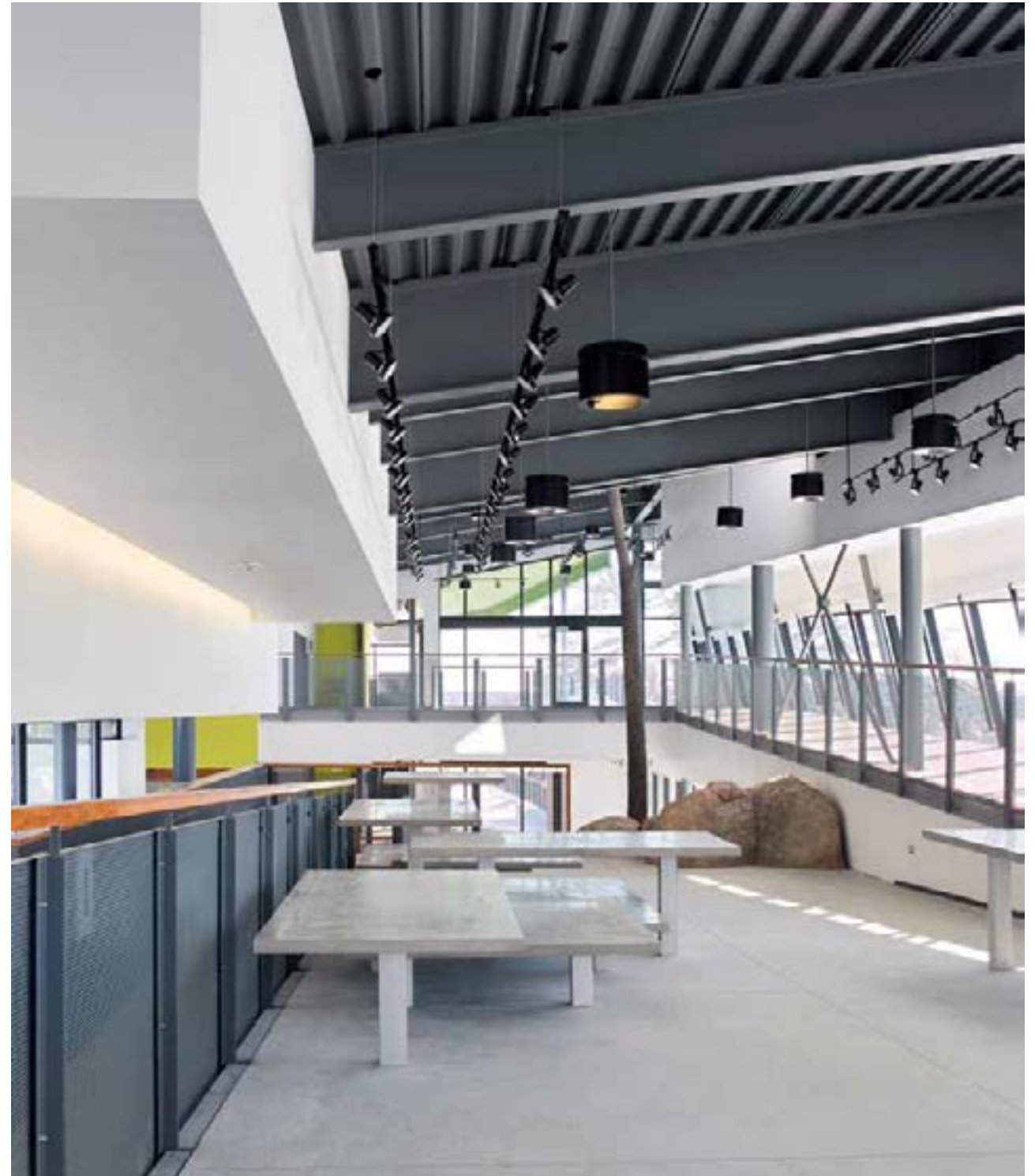
▲ section



▲ section



▲ entry



▲ exhibit space







5.5 million sq. ft. / 510,950 sq. m.

Completion: 2009

King Abdullah University of Science and Technology

Thuwal, Saudi Arabia

King Abdullah University of Science and Technology (KAUST) is a new international, graduate-level research university located north of Jeddah on the coast of the Red Sea. It was conceived of by King Abdullah as a part of a national effort to quickly expand Saudi Arabia's economy beyond fossil fuels. With the King committed to personally overseeing the launch of this university, KAUST was organized, designed and constructed at extraordinary speed. It went from conception to completion in less than 30 months. Open to men and women, the university is pursuing groundbreaking sustainable technologies including alternative energy and water desalinization.

The design is a response to an extraordinary set of circumstances. In the context of a formidably hot, humid marine climate, the charge was to create a highly sustainable place, aligning the physical campus with the research mission of the university. A contemporary work of architecture was envisioned to resonate with a global audience,

attracting top minds to the campus, while being firmly rooted in local Saudi culture. Research facilities were to be planned and built concurrent with the process of identifying research agendas and user groups. Finally, the institution was to be delivered with the highest quality at a historically unprecedented speed.

KAUST was designed as a singular meta-building rather than a collection of individual buildings, minimizing the sun's impact while bringing researchers and students closely together. With a compact arrangement, traditional boundaries between buildings begin to dissolve, a feeling heightened by the events of conference rooms, gardens and other programmed spaces bridging between buildings.

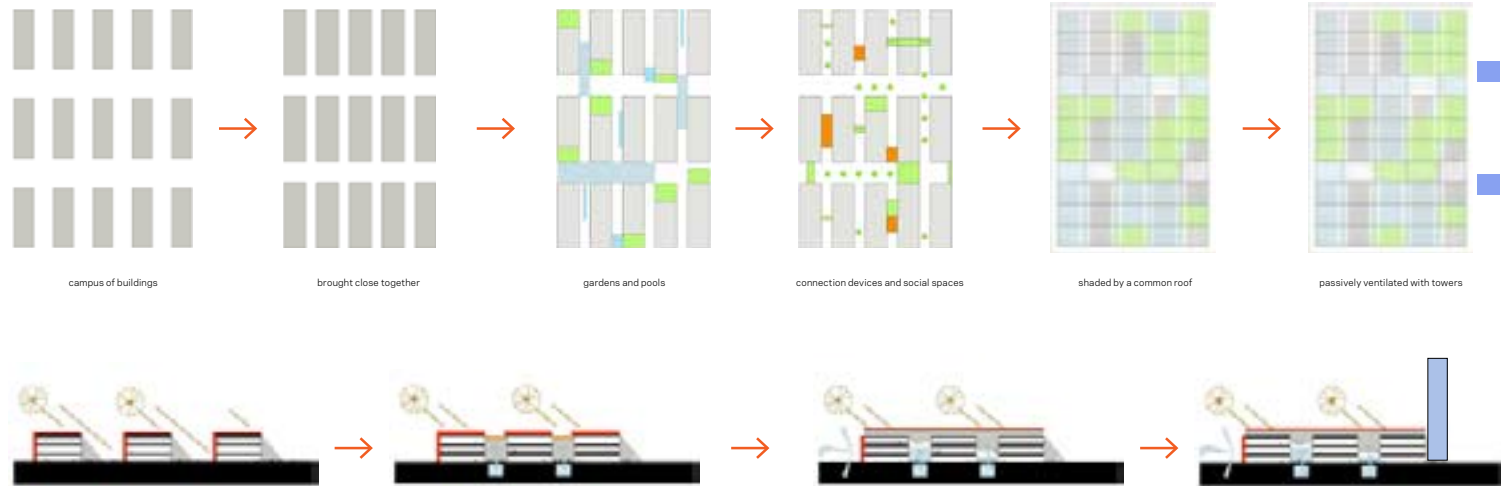
The singularity of the campus architecture is reinforced by a common approach to the landscape, building envelope and roof. The plinth is rendered in a regional limestone, linking buildings and connecting structures to

the earth. Terra cotta, the primary building enclosure, defines the middle zone. A monumental roof with solar thermal and photovoltaic panels spans building masses, blocking and harnessing the sun.

A pedestrian spine bisects the campus, linking labs with the main quad, town center and industry park. Passively cooled via solar towers, the micro-climate created on the spine contains retail, meeting and office spaces. Careful delivery of sunlight creates comfort and visual drama in primary social spaces. Advancing the idea of light as a primary architectural medium, the campus transforms at dusk as outdoor spaces become more hospitable.

Currently certified as the largest LEED Platinum project in the world, KAUST is initiating the Saudi Arabian chapter of the World Green Building Council, using the knowledge gained from the design and construction of its own campus to develop regionally specific, environmentally progressive strategies for the Middle East.

◀ library facade detail



▲ diagrams



◀ site plan

- 1 university campus
- 2 town center
- 3 single family residential
- 4 multi-family residential
- 5 conference center / hotel
- 6 research park
- 7 golf course

campus plan ▶

- 1 applied mathematics
- 2 research laboratory
- 3 high bay laboratory
- 4 future high bay laboratory
- 5 engineering sciences building
- 6 administration
- 7 conference centre / museum
- 8 auditorium
- 9 library
- 10 mosque
- 11 commons
- 12 student center
- 13 data center
- 14 parking
- 15 pedestrian spine
- 16 solar tower
- 17 arrival court
- 18 main quad
- 19 sea court





▲ sea court



▲ commons

▼ section





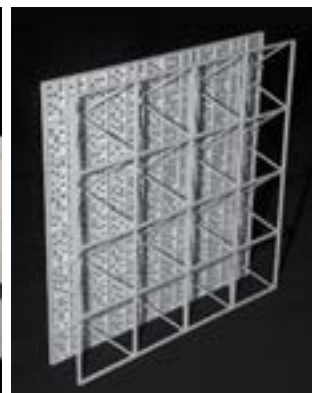
▲ pedestrian spine and solar tower



▲ canopy



▲ baguette study model



▲ roof study model



▲ courtyard study model



▲ solar tower study model



▲ solar tower skin study model



▲ integral shading



▲ high performance roof



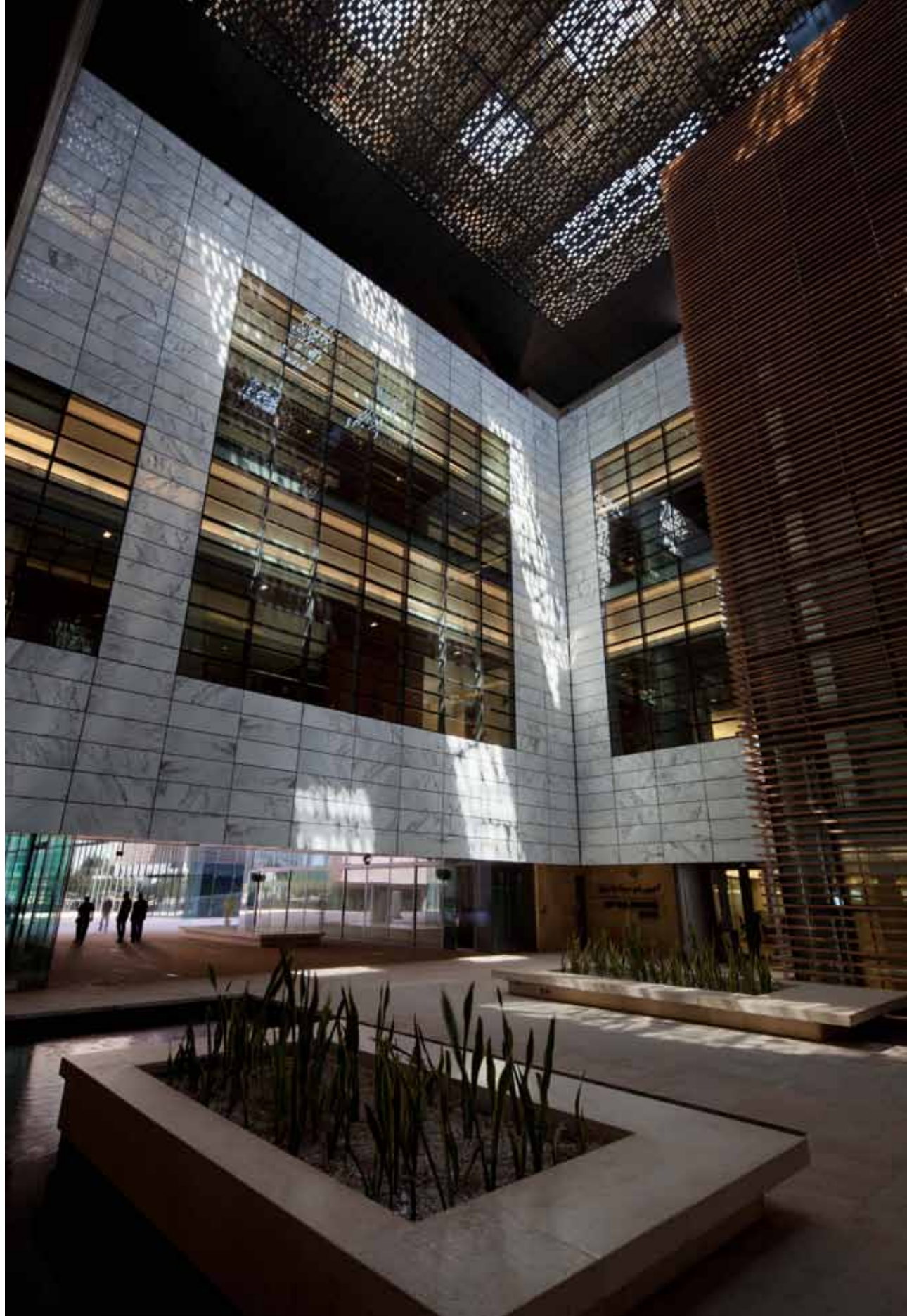
▲ passively cooled courtyards



▲ filtered daylight



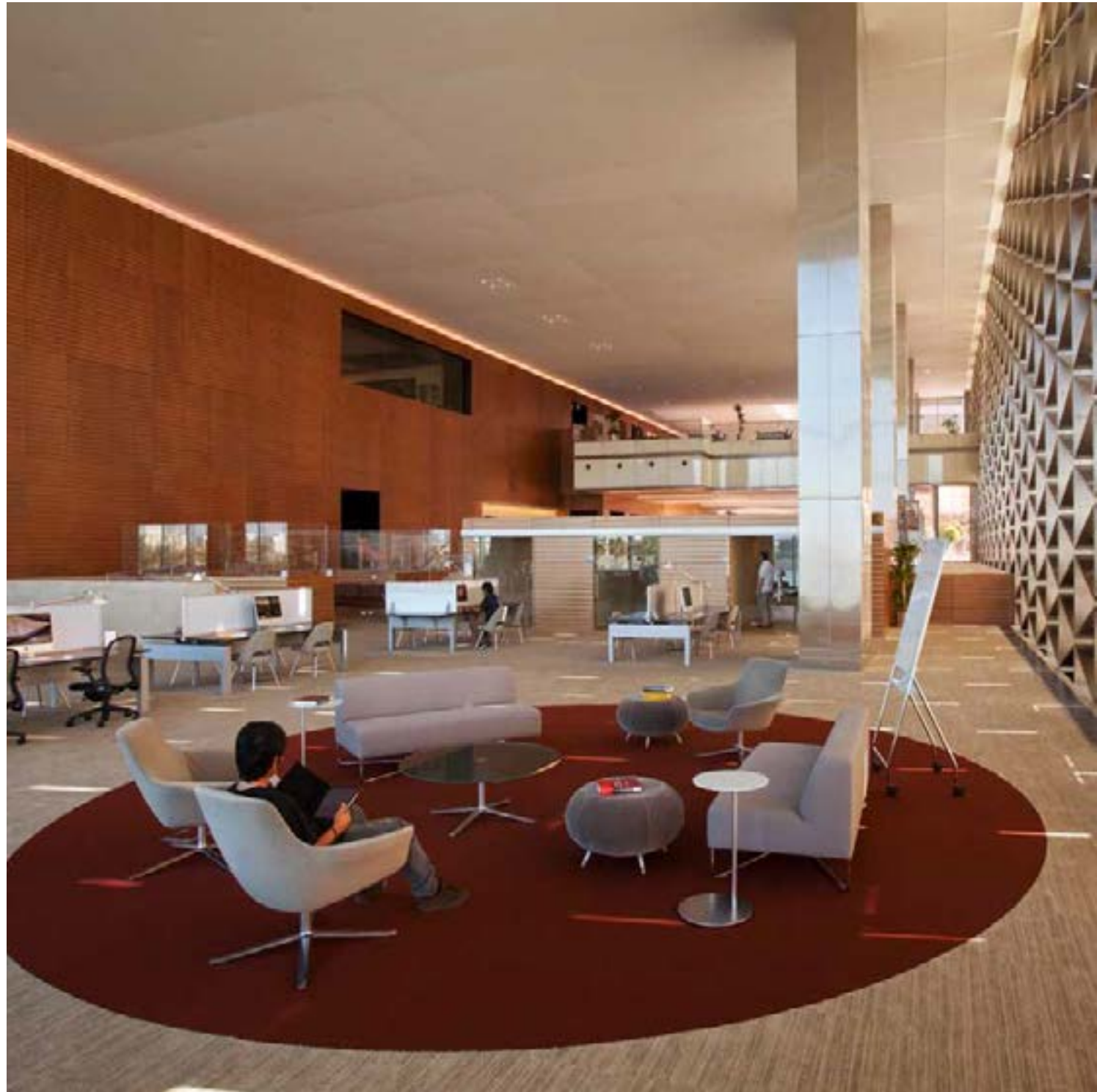
▲ solar tower



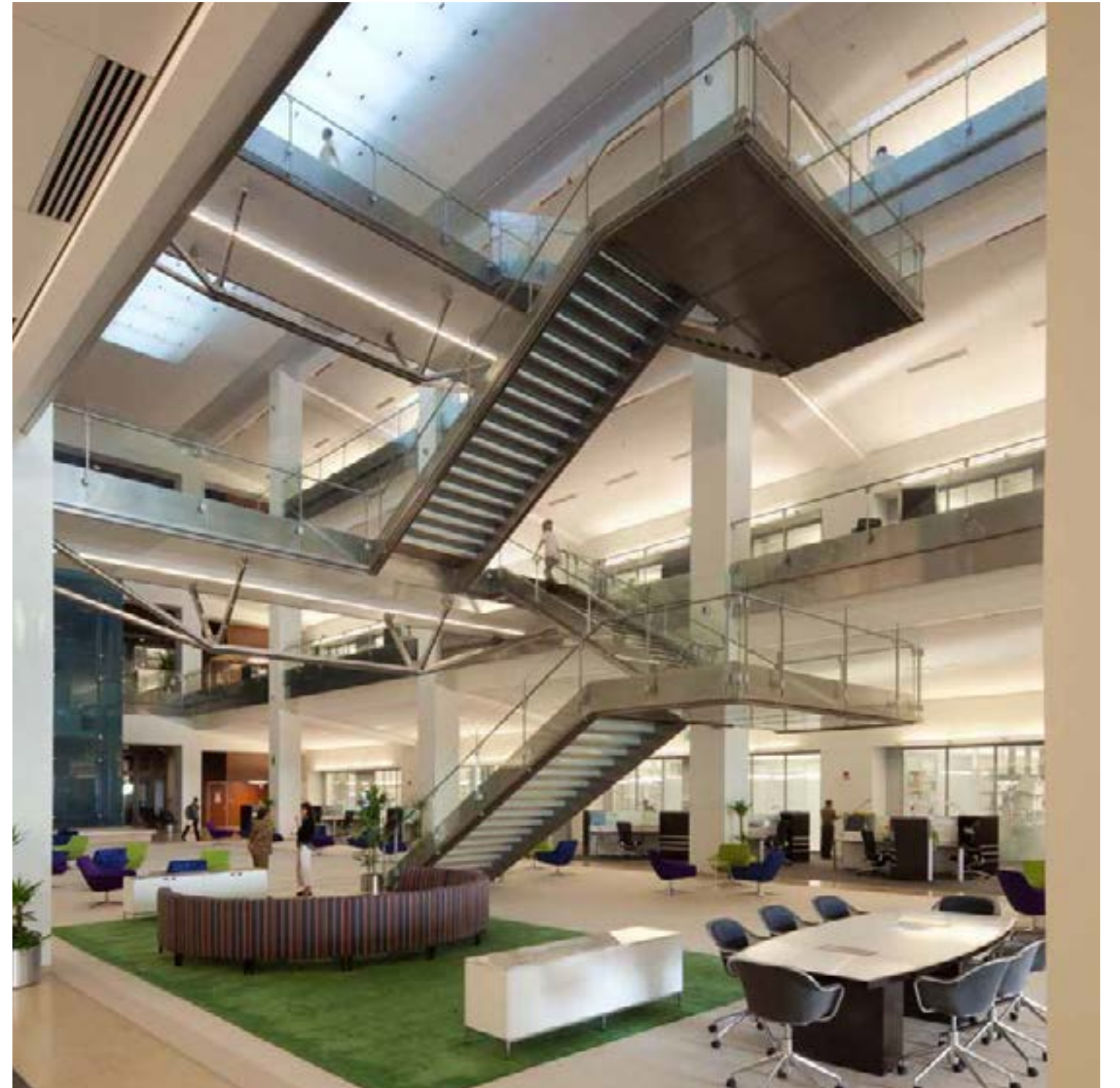
▼ courtyard, pedestrian spine



▲ administration building



▲ library reading room



▲ research laboratory atrium



▲ detail

◀ main quad



80,000 sq. ft. / 7,432 sq. m.

Completion: 2016 (anticipated)

Mint Museum

San Francisco, California, USA

The San Francisco Mint is a national historic landmark designed by Alfred Mullett and built in 1874. It survived the great earthquake and fire of 1906, earning a central place in San Francisco's history. In the 1930s, the building was closed to the public.

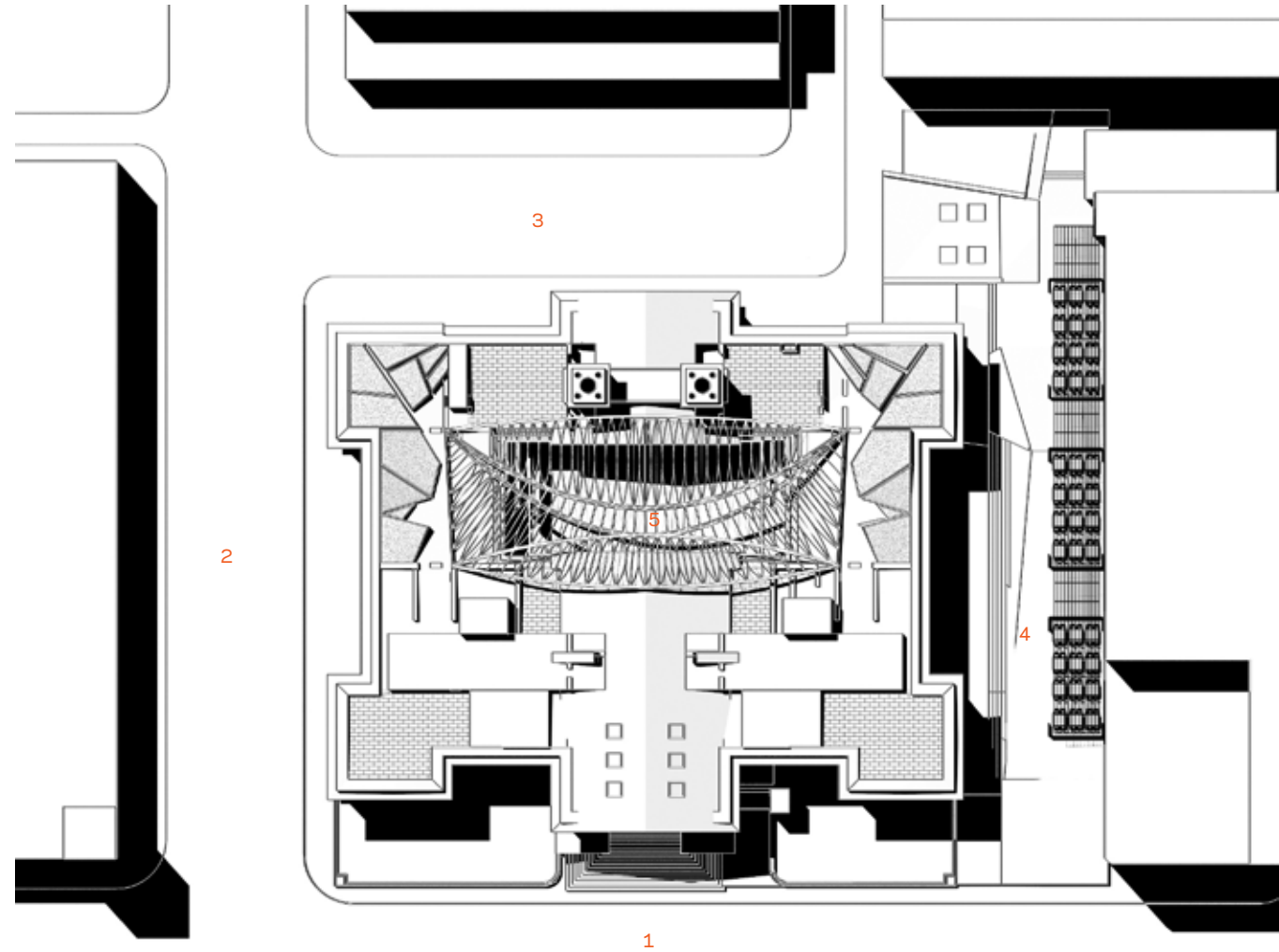
Now, through a series of carefully designed interventions into the historic building fabric, the Mint is being given new life as a carbon neutral home to the city's museum and visitor center. Situated at the nexus of cultural and commercial activity within the city, it will become a new gateway to San Francisco and create an important civic space.

The original architecture features thick limestone walls that provided thermal mass. Narrow floor plates and a large, central courtyard allowed natural light into the work spaces and operable windows provided natural ventilation.

Taking cues from the original architect, the design team used the historic architecture to the project's advantage. The interior program works with existing horizontal and vertical circulation patterns, opening new public spaces throughout the building, including the gold and silver counting rooms of the Mint's production era. The interiors were conceived to perform as "furniture" within the historical shell and to stand in clear counterpoint to the original architecture.

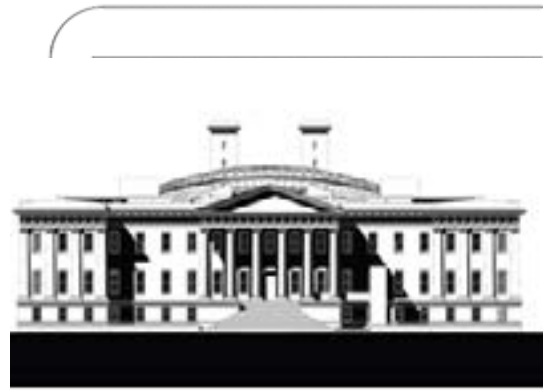
A glass canopy will cover the historic courtyard, protecting the limestone walls and creating a new, year-round public space below. This primary component in a passive ventilation system will bring daylight into the building's interior and warm the air, which will be drawn through the historic windows and surrounding galleries into the central courtyard and finally released up through the canopy. Water and fog collected by the canopy will irrigate new rooftop gardens, which are being added to better insulate the building by providing thermal mass to the roof. The rooftop gardens also create a new public green space where visitors can learn about the site's upland and wetland ecology prior to the formation of the city.

◀ view from 5th street

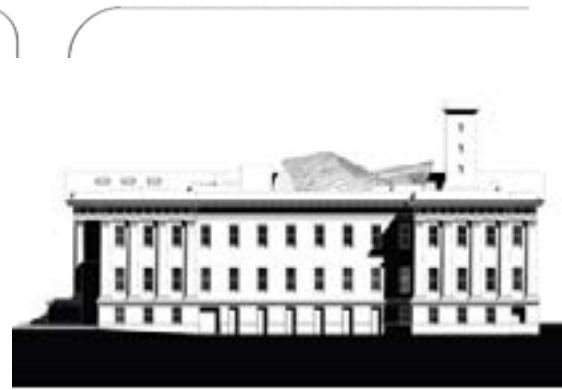


▲ site plan

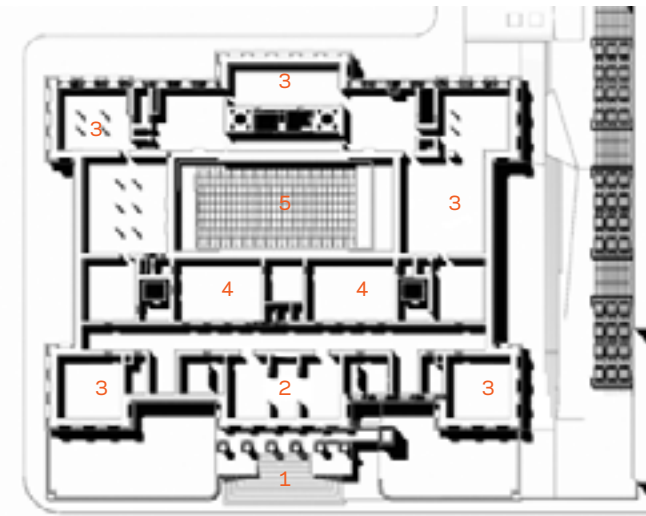
- 1 5th street
- 2 mission street
- 3 mint street
- 4 mint plaza
- 5 courtyard



▲ west elevation

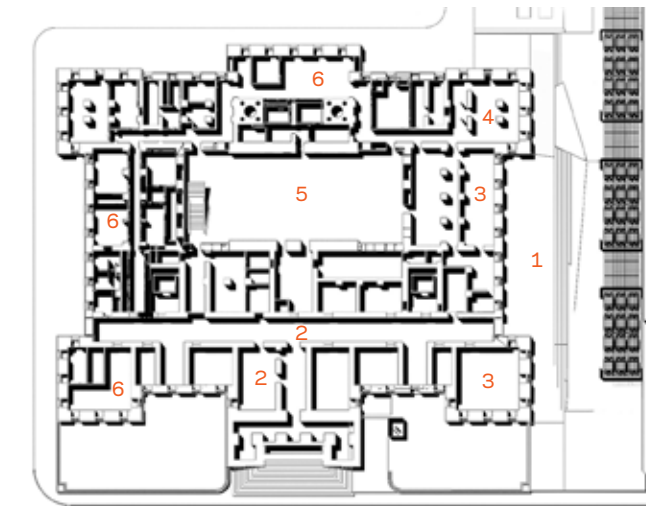


▲ north elevation



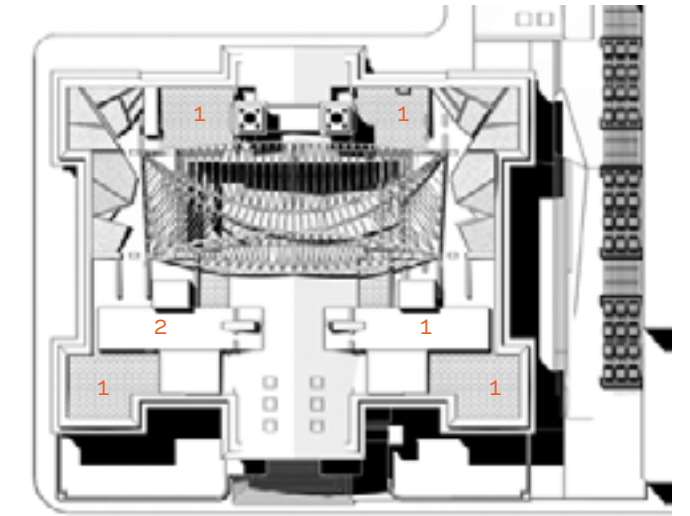
▲ level 1 floor plan

- 1 5th street entry
- 2 reception
- 3 exhibit
- 4 orientation
- 5 courtyard



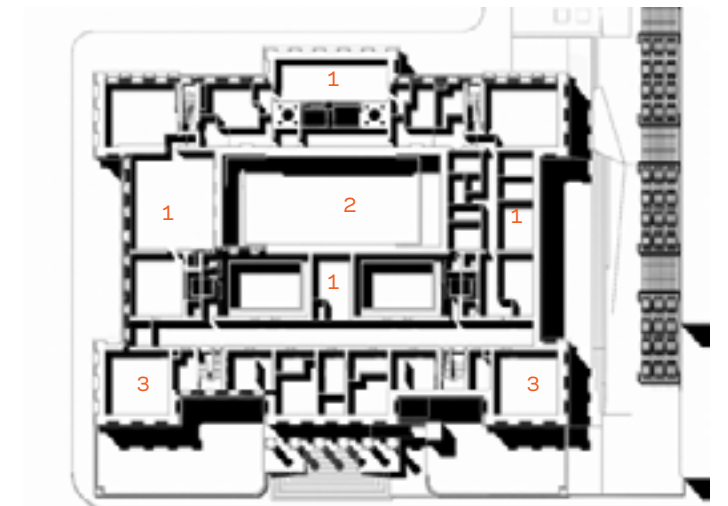
▲ ground level floor plan

- 1 mint plaza access
- 2 exhibit
- 3 retail
- 4 cafe
- 5 courtyard
- 6 service



▲ roof plan

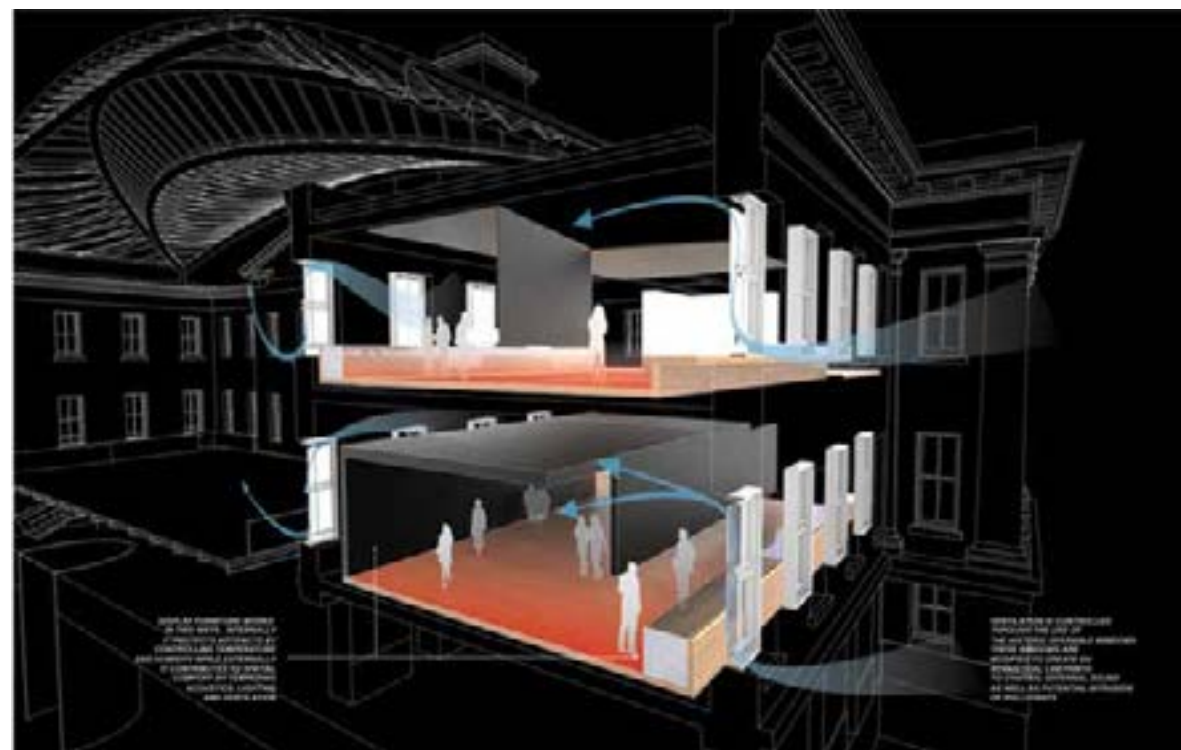
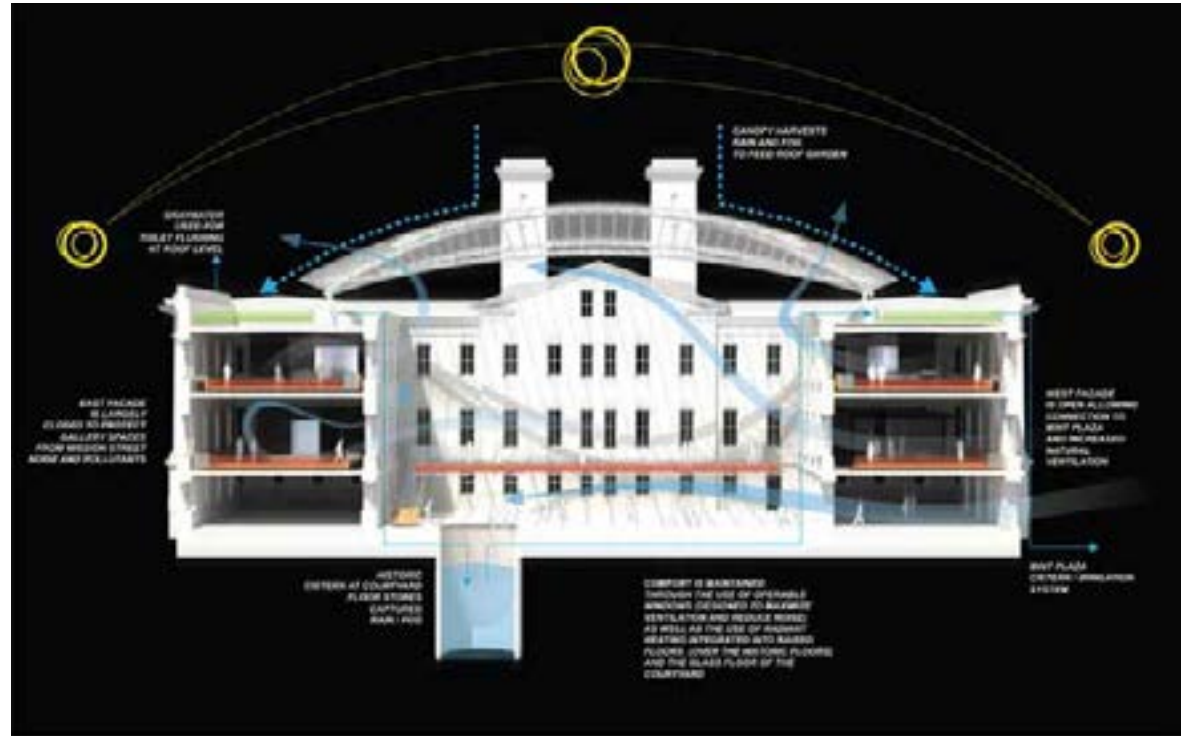
- 1 terrace
- 2 event space
- 3 garden



▲ level 2 floor plan

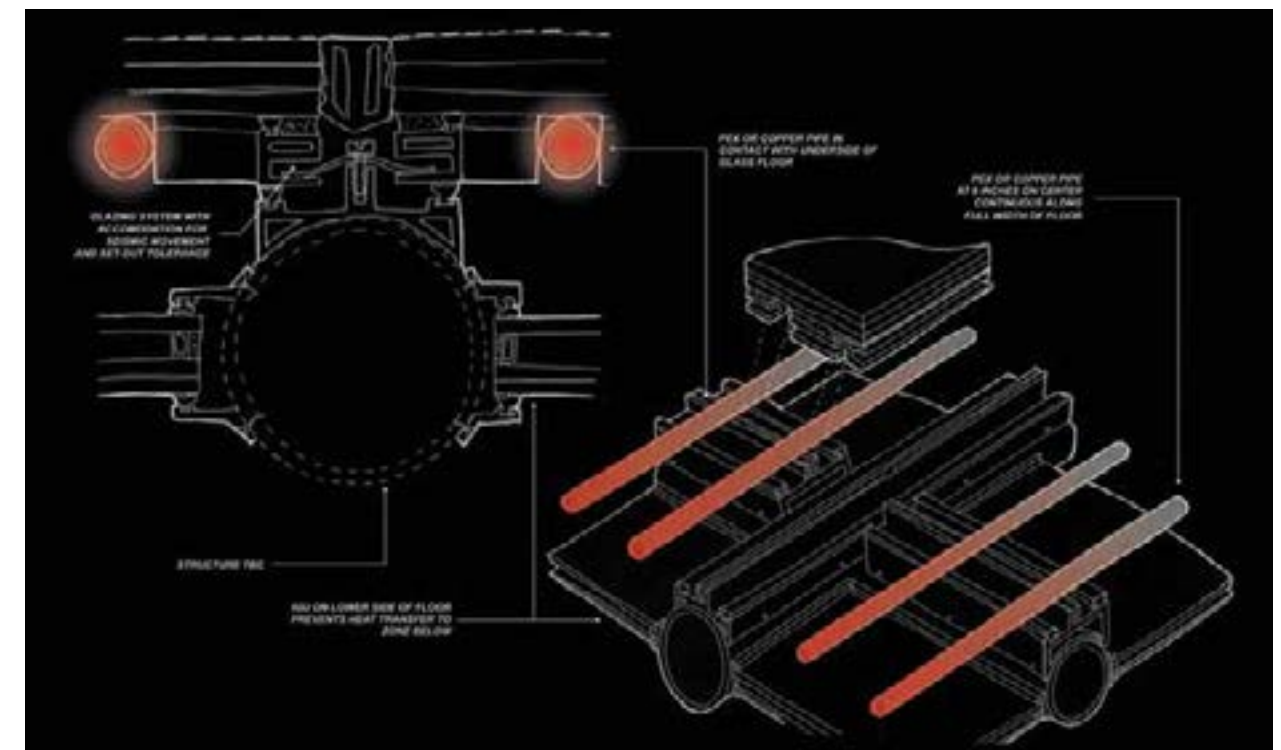
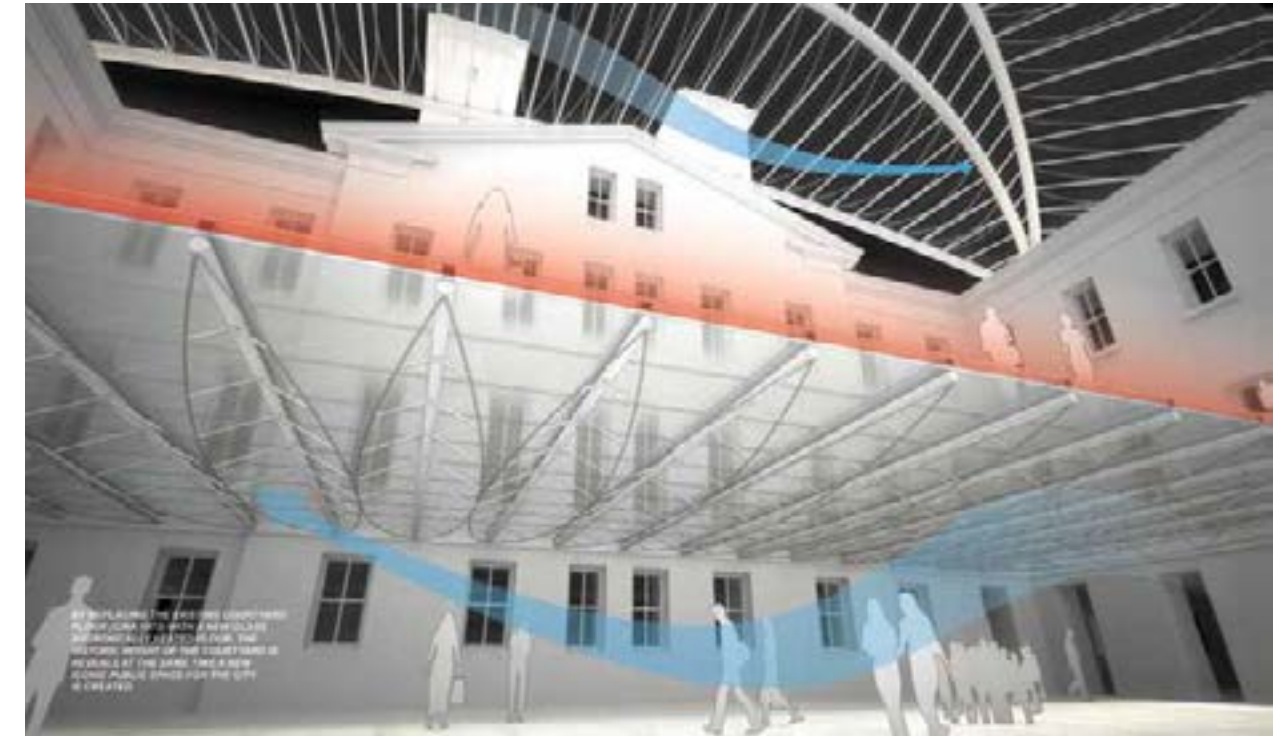
- 1 museum display
- 2 open to below
- 3 service

▼ courtyard environmental diagram



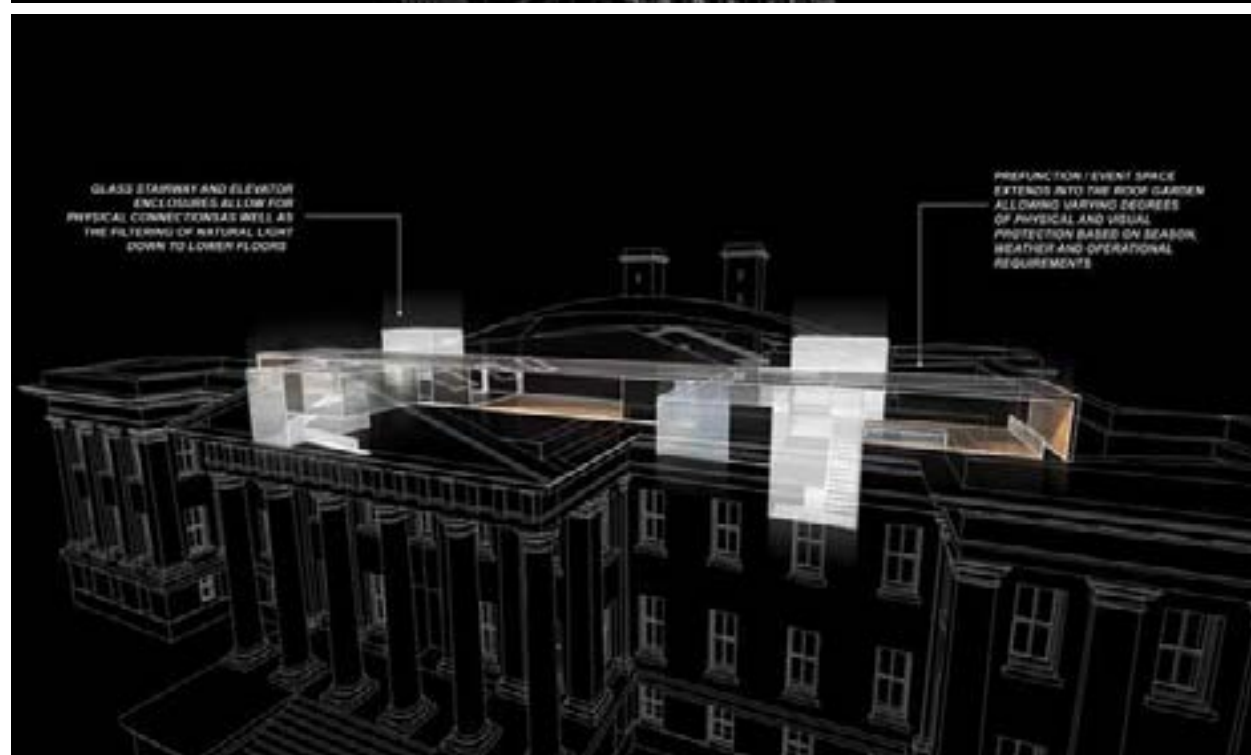
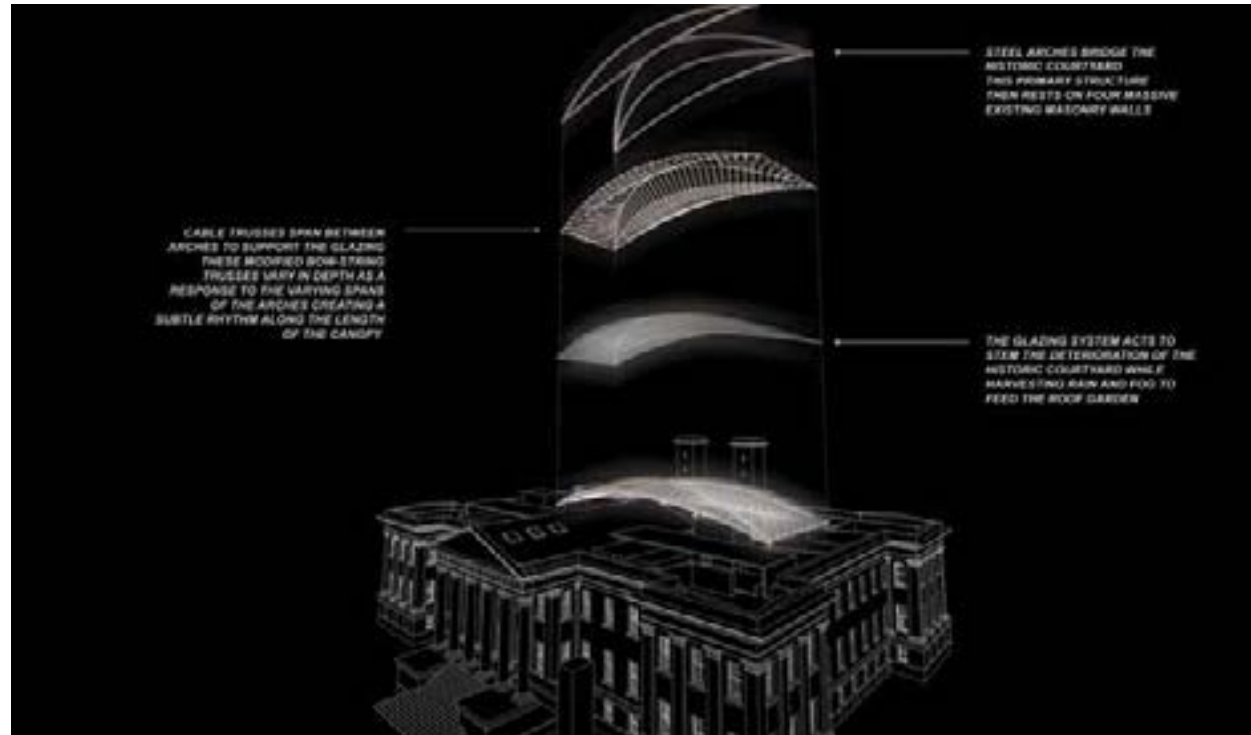
▲ gallery section

▼ proposed courtyard section



▲ radiant floor detail at courtyard

▼ courtyard canopy diagram



▲ rooftop event space



▲ rooftop garden



▲ existing rooftop

▼ rooftop interventions



▲ existing rooftop



▲ existing courtyard



▼ courtyard



83,205 sq. ft. / 7,710 sq. m.

Completion: 2010

◀ south facade



NASA Building 20

Houston, Texas, USA

A new office building for the National Aeronautics and Space Administration (NASA), located at the Johnson Space Center, was tasked with several critical objectives. Primary among them was to act as a transitional workplace for groups displaced during an ongoing facility improvement plan for the 1,580-acre campus where NASA monitors all human space flight activities for the United States.

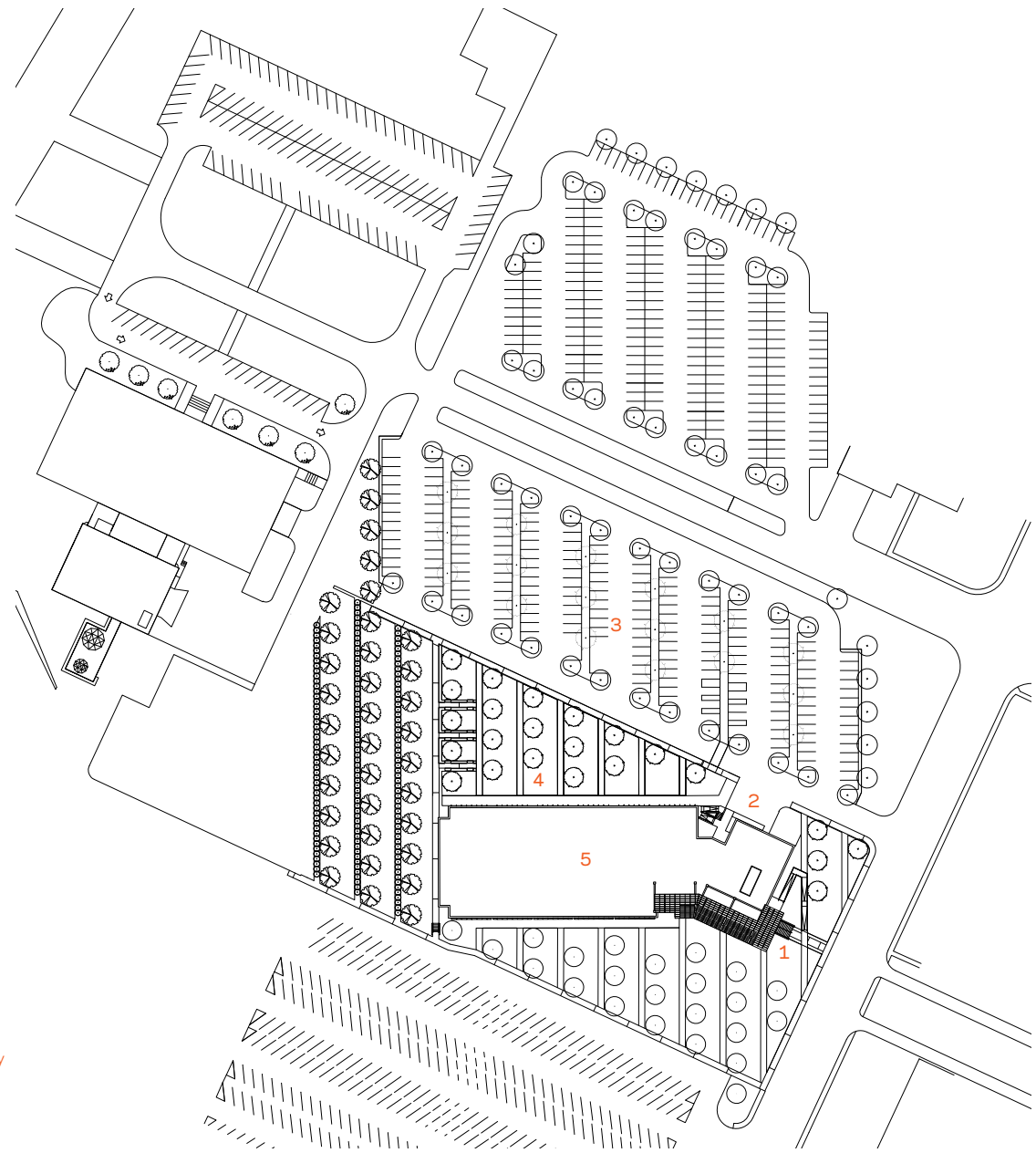
Building 20 accommodates 520 employees in a three-story, 83,205-sq.ft. open office environment with access to daylight and views. Significantly, it establishes a new, more collaborative workplace standard for NASA.

The "less is more" ethos that permeated the design and delivery of the project reflects NASA's commitment to executing design

and construction sustainability, reducing facility life cycle costs.

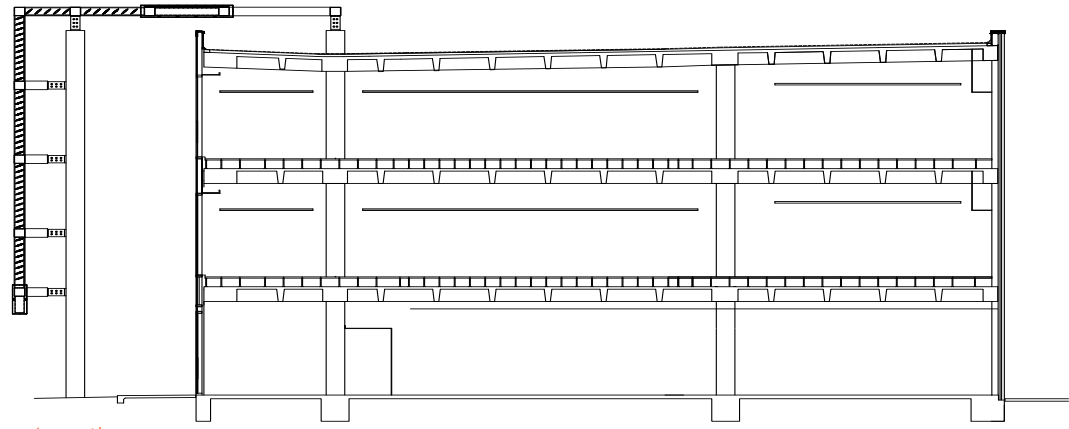
Integrated design methodologies are clearly expressed in the new building. Measures include a highly efficient building envelope, underfloor air distribution, a total energy recovery wheel and solar hot water harvesting supplying 18 percent of the building's domestic hot water consumption. The net gain yields a project 57 percent more energy efficient than a typical office building with gross square footage six percent below program.

Building 20 achieved LEED Platinum certification, establishing a new paradigm for Johnson Space Center campus architecture, workplace design and environmental stewardship.

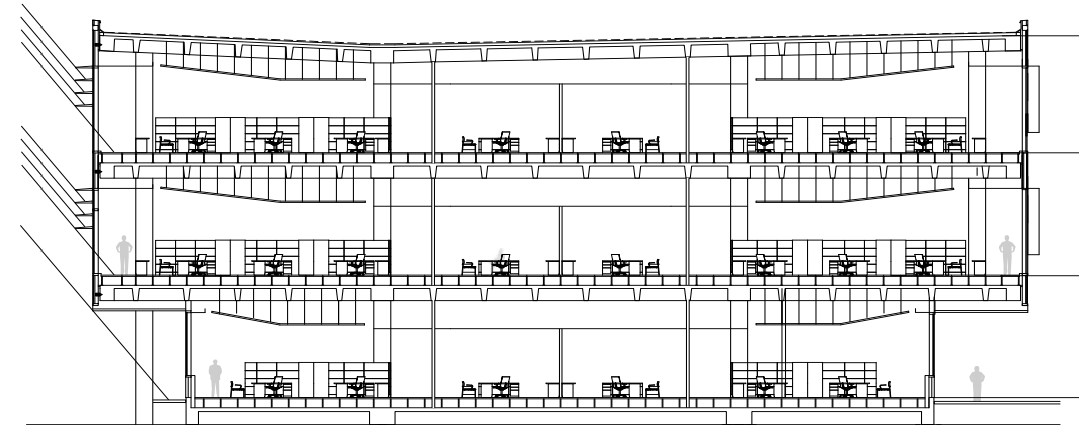


site plan ▶

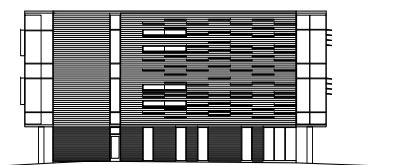
- 1 main entry
- 2 service entry
- 3 parking
- 4 garden
- 5 building 20



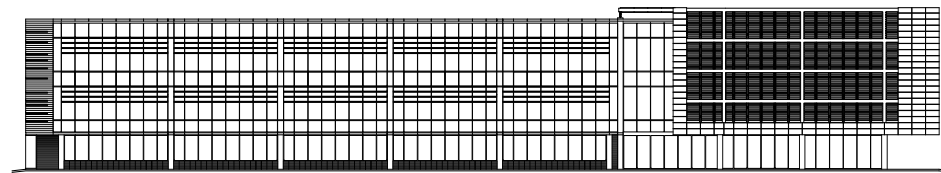
▲ section



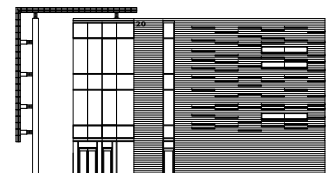
▲ section



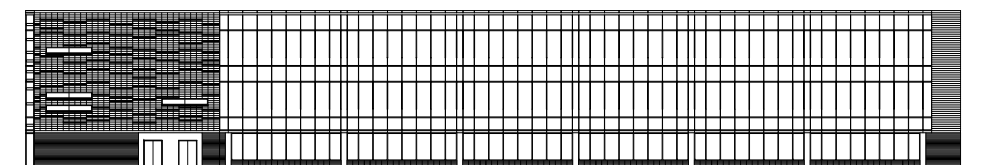
▲ west elevation



▲ south elevation



▲ east elevation



▲ north elevation





▲ screen wall



▲ open office





93,000 sq. ft. / 8,640 sq. m.
Completion: 2013 (anticipated)

National Center for Civil and Human Rights Atlanta, Georgia, USA

The concept of unity drove the design of Atlanta's National Center for Civil and Human Rights (NCCHR). As a joint venture with the Freelon Group, this downtown museum is being designed as a place where visitors will learn about and reflect on local and global human rights.

Arm in arm, men and women of diverse cultures and backgrounds join in solidarity. Linked together, the human chain cannot easily be broken.

A simple, yet powerful, image of interlocking arms invokes the spirit of exploration and collaboration that is central to the NCCHR's mission - signifying the links that empower individuals and groups of seemingly divergent interests to find common ground. Through this iconic form, discernible from ground level and above, the structure of the building embodies the goals and ideals of the institution.

Rising from the earth to embrace visitors at both ends of the site, the building surrounds an exterior courtyard that serves as an amphitheater and exhibit space.

As visitors move between exhibits, views of the courtyard offer respite and pause. The peace of the courtyard area contrasts with the exhibit content, which is somber or disturbing in some cases. Though the path through the building is clear, visitors have the opportunity to explore the building, discovering additional content and unexpected views.

The building's terra cotta rain screen alludes to the long history of brick architecture in the south while providing a state-of-the-art exterior envelope that is environmentally sustainable and well-suited to the site. Stormwater is managed through green roofs, bioswales and reflecting pools.

Atlanta is a hub, the capital of the "New South" and a crossroads where individuals historically coalesced in the spirit of mutual respect and cooperation. So too will the center be a crossroads for discussion, drawing visitors from around the world. As a place where all voices are heard, the center's content, programs and architecture will redefine Atlanta as a global epicenter of scholarship and discourse for matters relating to civil and human rights.

◀ aerial rendering



- 1 lobby
- 2 open to below
- 3 bookstore
- 4 ticketing
- 5 exhibit space
- 6 special event lobby
- 7 offices



▲ ground floor plan

- 1 amphitheater
- 2 auditorium
- 3 cafe
- 4 exhibit space
- 5 bus drop-off



▲ lower level floor plan



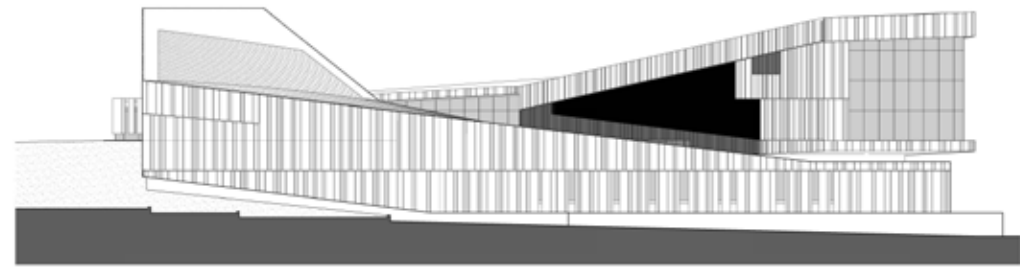
▲ section



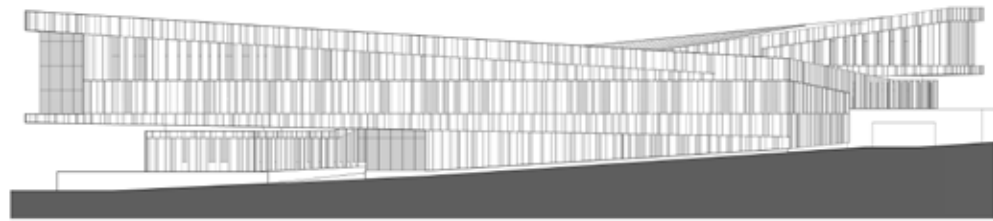
▲ section



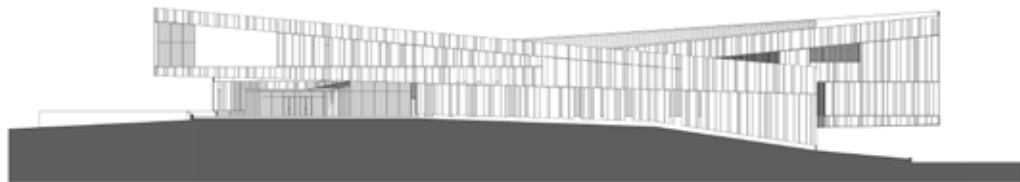
▲ section



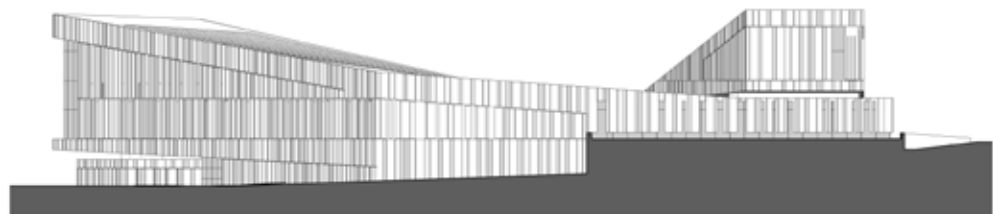
▲ north elevation



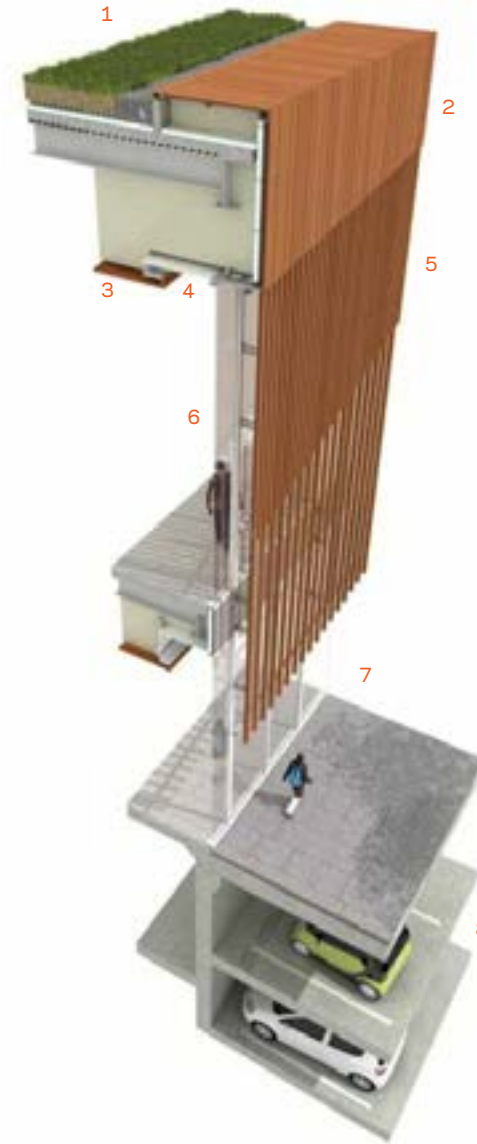
▲ south elevation



▲ east elevation

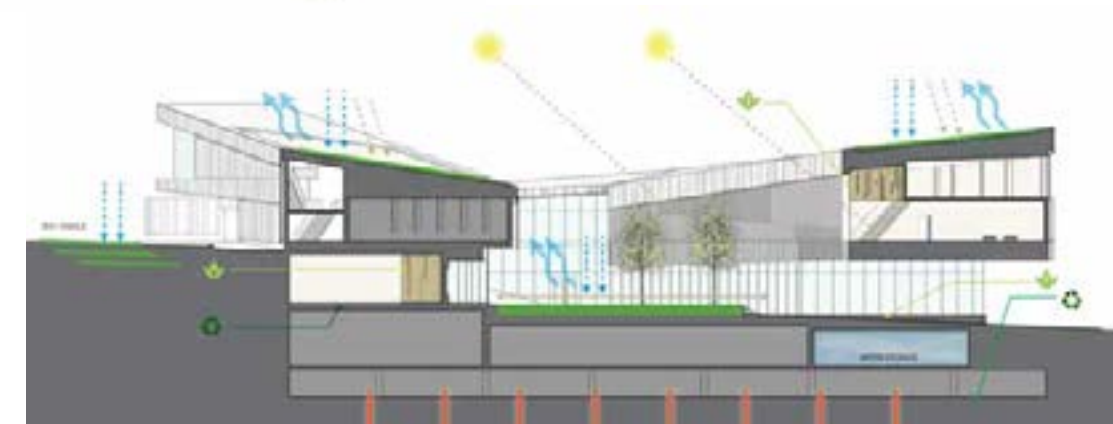


▲ west elevation



◀ wall section diagrams

- 1 green roof
- 2 terra cotta rain screen
- 3 sustainably harvested wood
- 4 perimeter supply grill
- 5 terra cotta bris soleil
- 6 high performance glazing
- 7 granite pavers and flooring
- 8 parking



▲ sustainability diagram



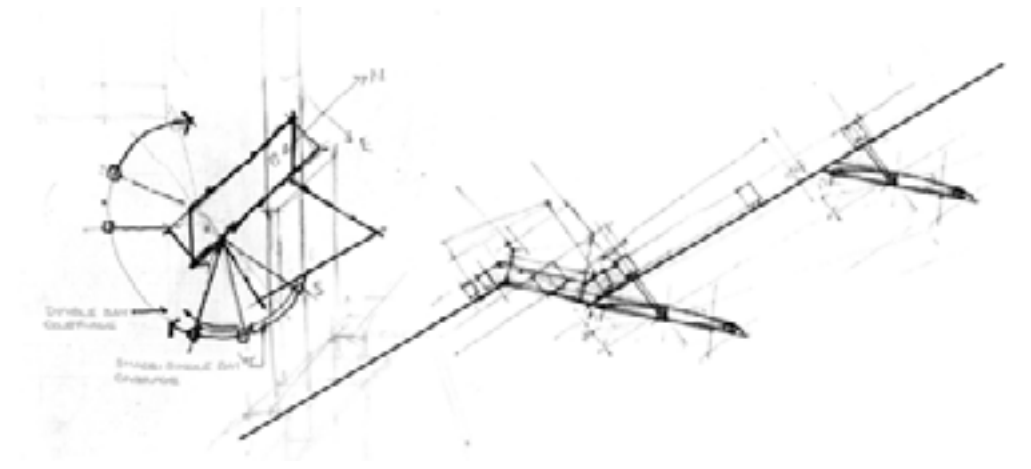
▲ entry



▲ courtyard



▶ view along Ivan Allen Jr. Boulevard



New Songdo City, Block B36 Hotel

Incheon, South Korea

500,000 sq. ft. / 46,450 sq. m.

Completion: 2009

New Songdo City is a planned international business center being developed on 1,500 acres of reclaimed land along Incheon's waterfront, 40 miles west of Seoul.

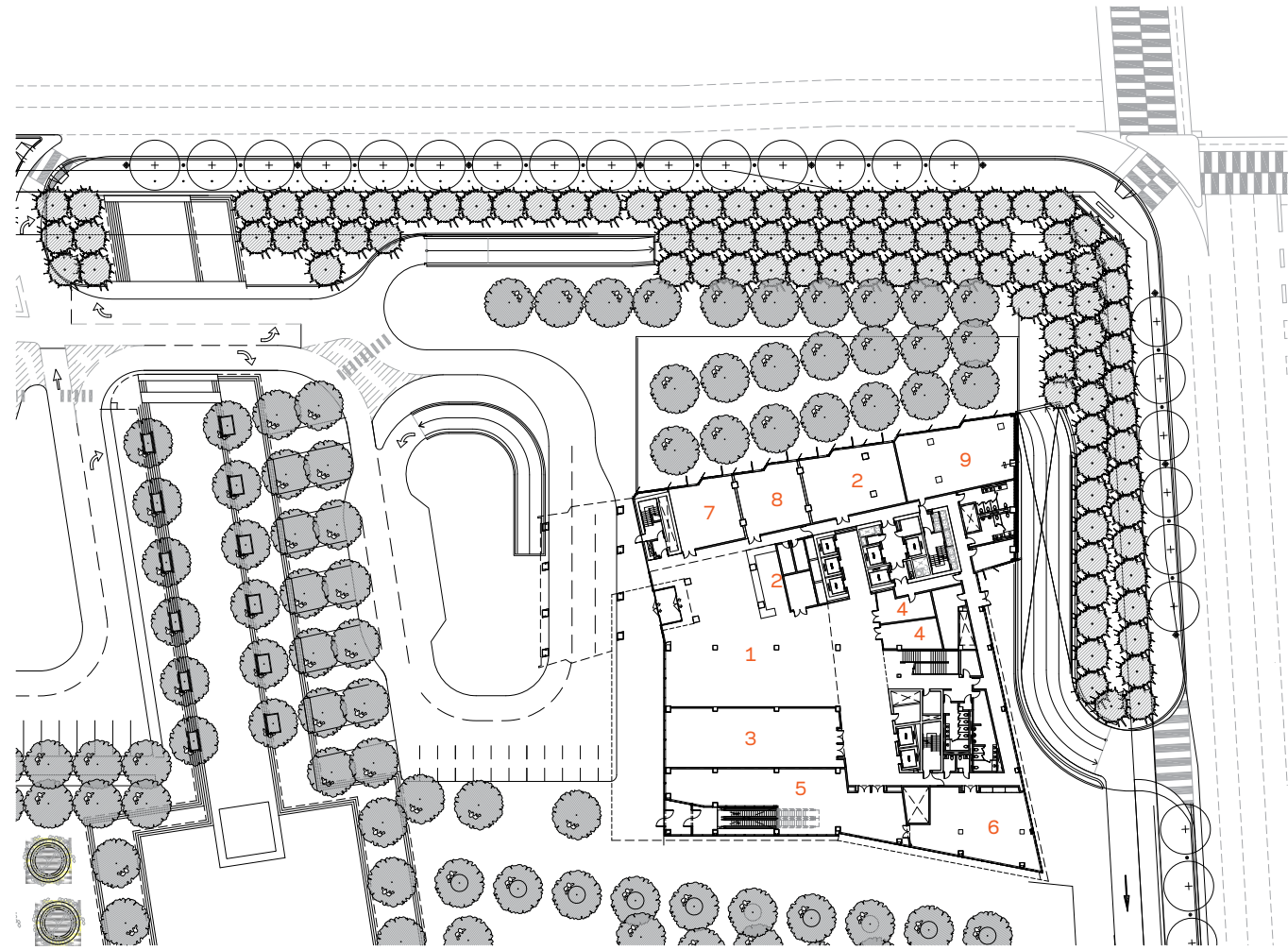
This multi-use development is phased construction to include a convention center, international school, museum, ecotarium, cultural center, retail mall, Northeast Asia Trade Tower (NEATT), extensive parks and a large component of residential and mixed-use projects.

Located at the heart of the New Songdo business node, the hotel is designed to play a vital role in characterizing the urban landscape of this emerging metropolis.

With the distinction of being the first LEED certified hotel in South Korea, the Block B36 Sheraton Incheon Hotel is located on the south side of Central Park. The 25-story hotel tower has a total of 23 occupied floors, offering 319 premium guest rooms. Hotel amenities, including two ballrooms, a spa, gym facilities, covered swimming pool, two restaurants and a lounge bar, are located on the lower levels.

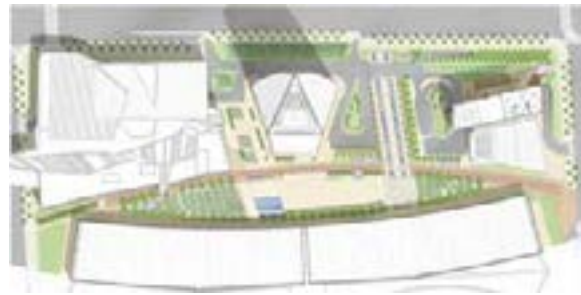
The Sheraton Incheon is connected through a series of plazas and open landscape areas to a group of buildings that includes the Convention Center, the NEATT tower and a retail mall.

◀ main entry

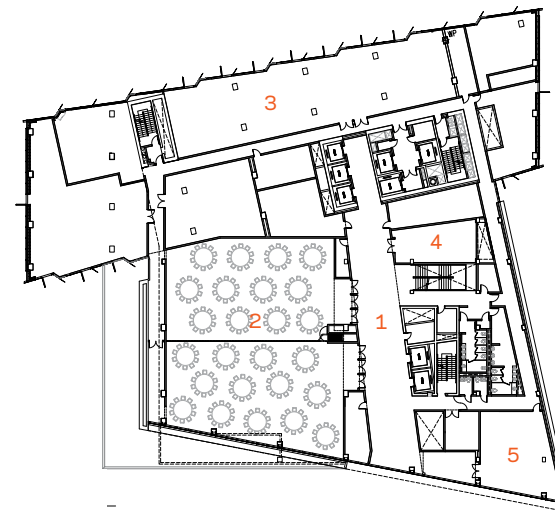


▲ site plan

- 1 main lobby
- 2 front office
- 3 bar/lounge
- 4 retail
- 5 dining
- 6 kitchen
- 7 lounge
- 8 business center
- 9 accounting & executive offices



▲ context plan



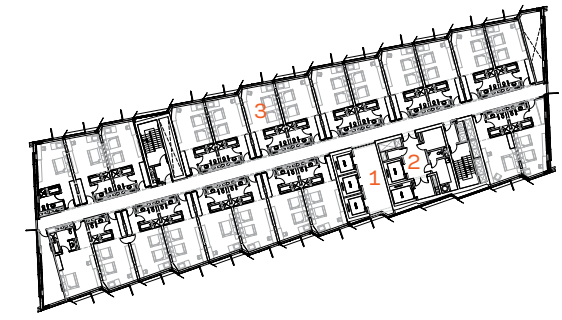
▲ level 3 floor plan

- 1 prefunction
- 2 ballroom
- 3 banquet kitchen
- 4 bridal shop
- 5 meeting room



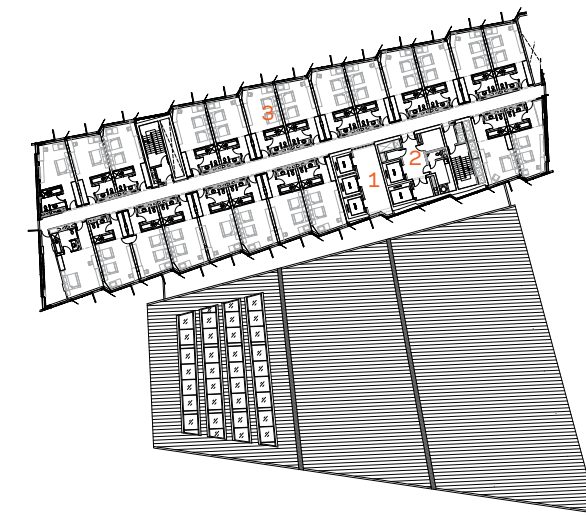
▲ level 2 floor plan

- 1 foyer
- 2 restaurant
- 3 room service and bakery
- 4 executive offices
- 5 food and beverage support



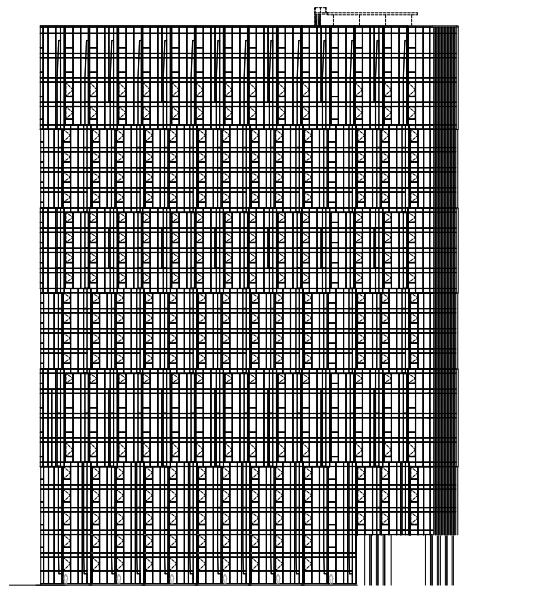
▲ level 13-16 floor plan

- 1 lift lobby
- 2 staff support
- 3 guest rooms

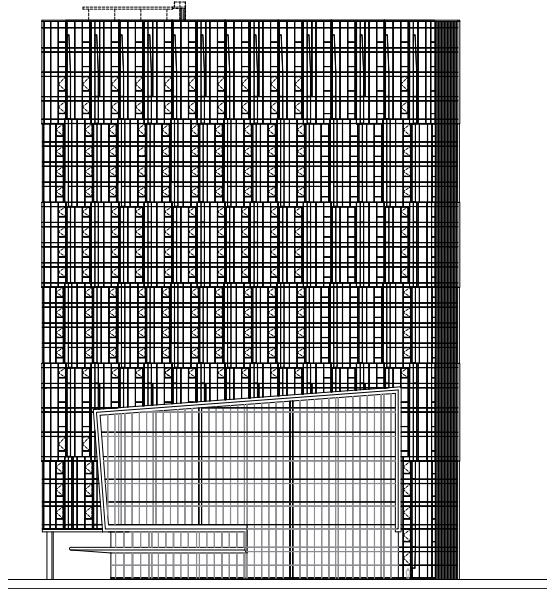


▲ level 8 floor plan

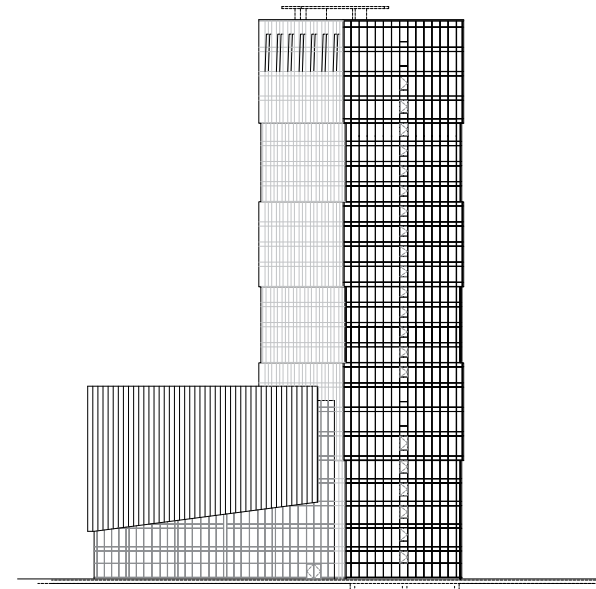
- 1 lift lobby
- 2 staff support
- 3 guest rooms



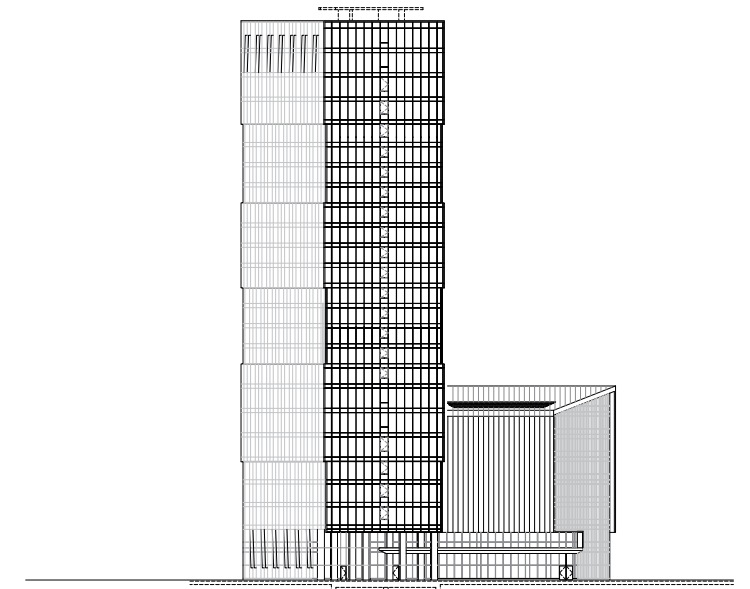
▲ north elevation



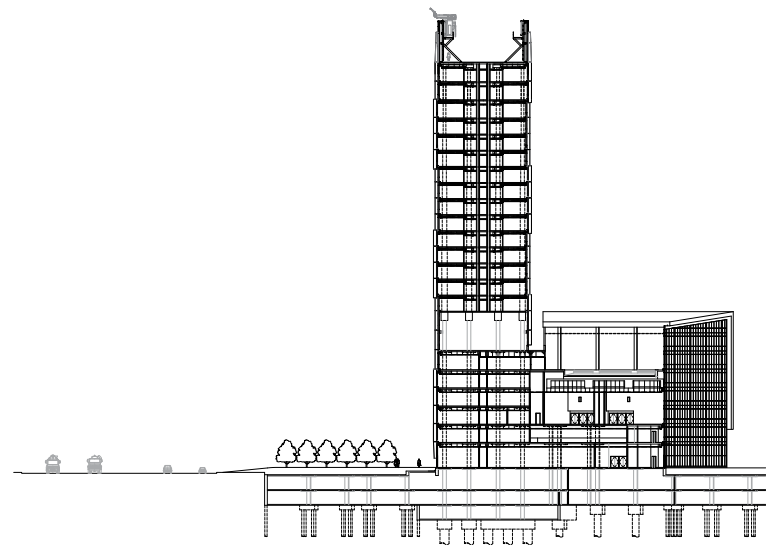
▲ south elevation



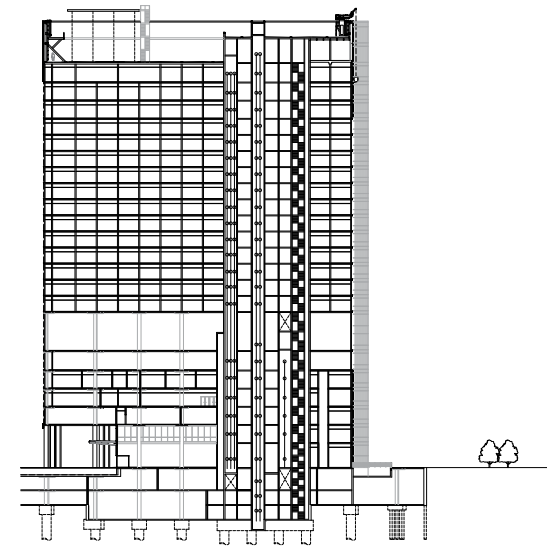
▲ east elevation



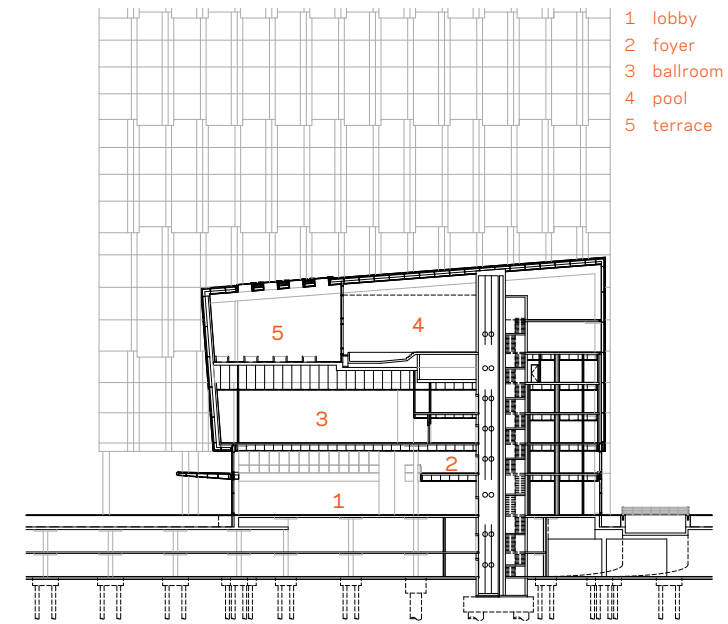
▲ west elevation



▲ section



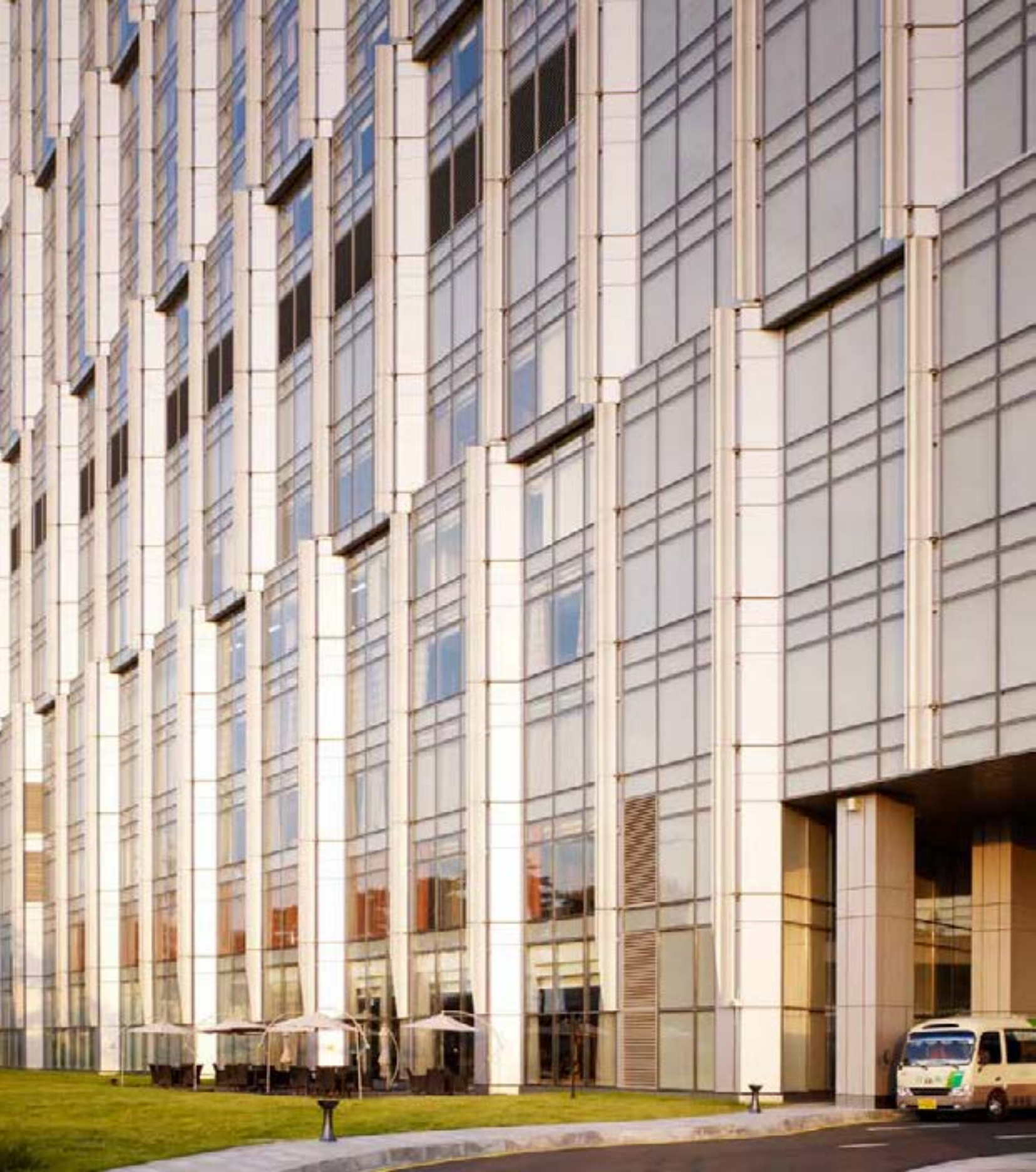
▲ section



▲ enlarged section



▲ study model



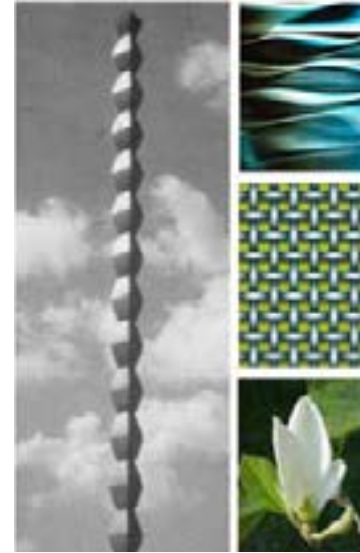
▼ entry drive



▲ view from road



▼ north facade detail



New Songdo City, Block D22 Residential Towers

Incheon, South Korea

165,000 sq. ft. / 15,338 sq. m.

Completion: 2010

New Songdo City is a master planned, international business district being built on approximately 1,500 acres of reclaimed land on the west coast of Incheon, South Korea. It will include residential, commercial, cultural/leisure, educational, healthcare and government facilities, all surrounding the city's Central Park.

Located on the northern edge of the park, Block D22 forms a gateway to neighborhoods in the city's northern district. It is intended to set an international high quality standard of living and design prototype. Taking advantage of its southern exposure, it will become one of the prime residential addresses in the city.

Three 50-story residential towers rise above an urban street edge of three-story commercial and retail space. The woven, lattice-like facades of glass and aluminum provide unique interior spaces and views of the park and beyond for each unit.

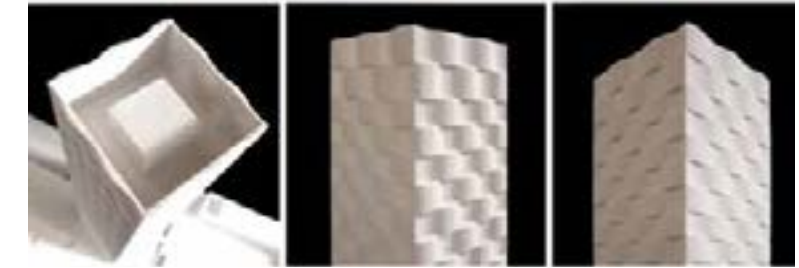
The towers incorporate several sustainable design features, including an energy-efficient, high-performance facade. More than 95 percent of the interior spaces have access to natural light.

The design of the block features landscaped courts and minimizes footprints of the retail area and towers. On each of the low-rise buildings, tower residents can access landscaped roof gardens and enjoy nature in the city.

◀ tower facade



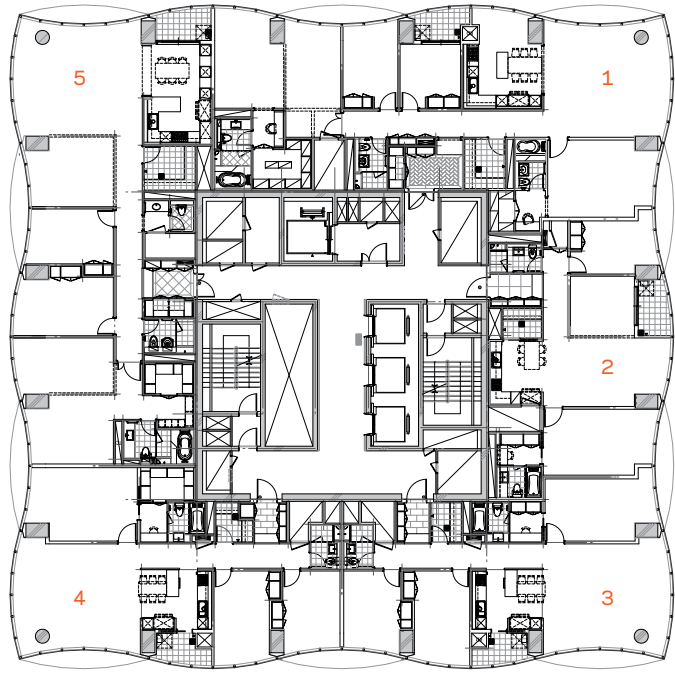
▲ rendering



▲ study model

◀ site plan

- 1 residential tower
- 2 retail
- 3 canal/boardwalk
- 4 public open space
- 5 private auto court



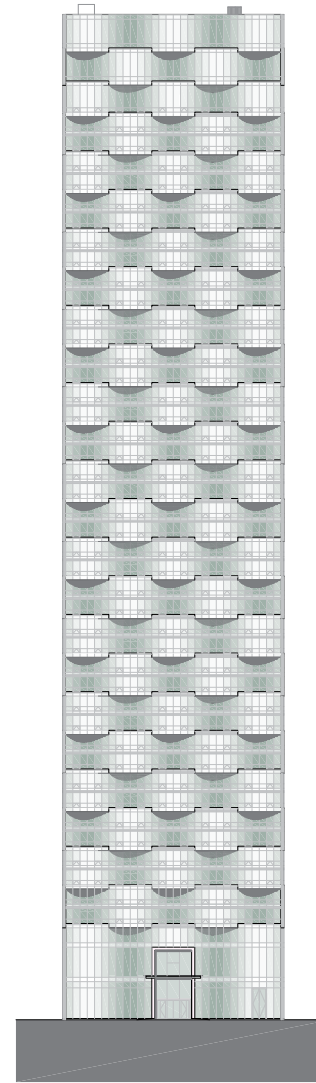
◀ typical floor plan A

- 1 unit 1 (2,562 sq.ft.)
- 2 unit 2 (1,388 sq.ft.)
- 3 unit 3 (1,530 sq.ft.)
- 4 unit 4 (1,637 sq.ft.)
- 5 unit 5 (2,455 sq.ft.)

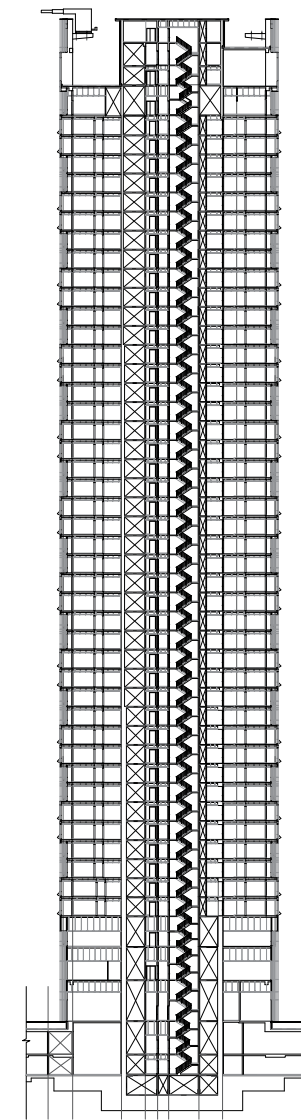


◀ typical floor plan B

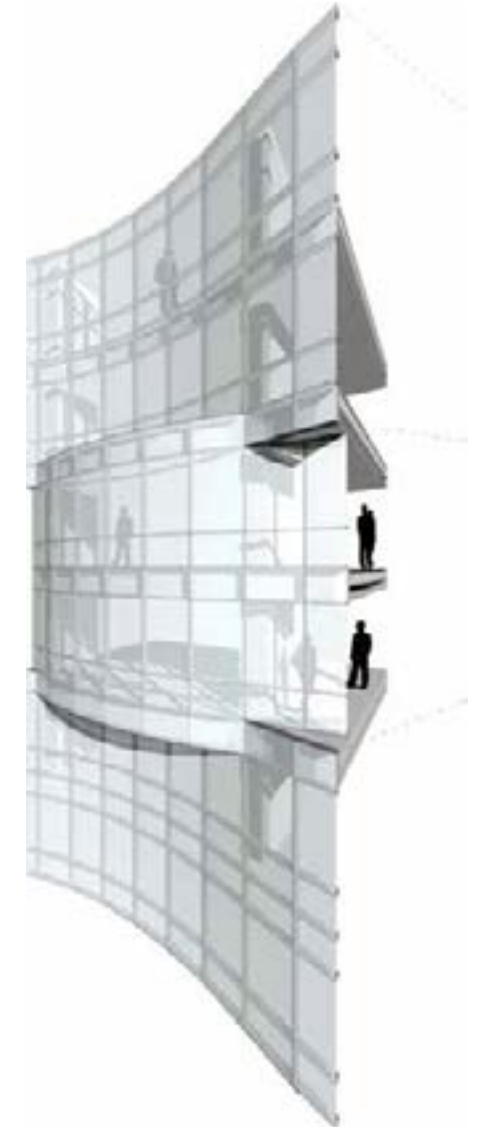
- 1 unit 1 (2,562 sq.ft.)
- 2 unit 2 (1,388 sq.ft.)
- 3 unit 3 (1,530 sq.ft.)
- 4 unit 4 (1,637 sq.ft.)
- 5 unit 5 (2,455 sq.ft.)



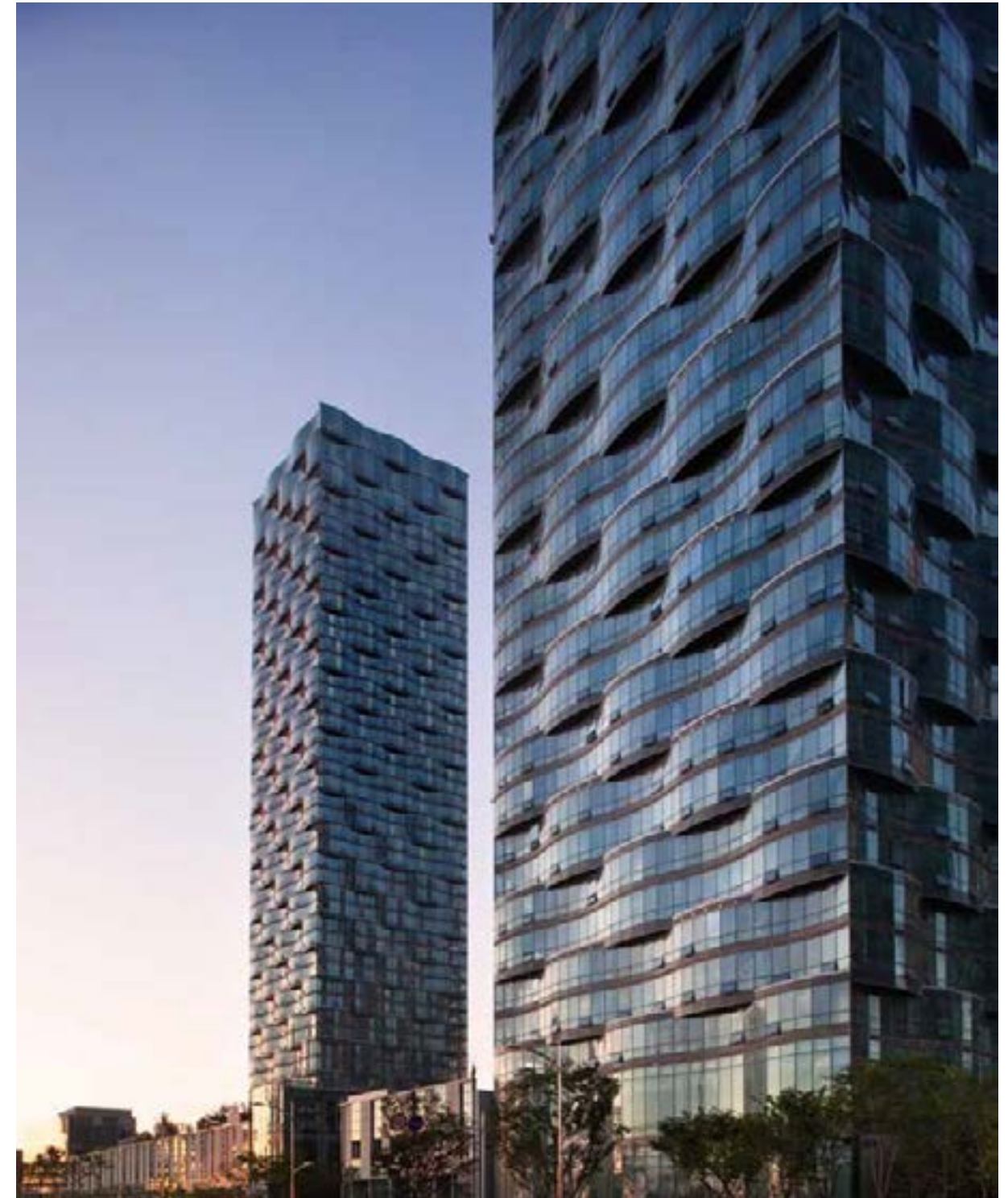
▲ west elevation



▲ section



▲ curtain wall study



▲ view from road



283,000 sq. ft. / 26,291 sq. m.

Completion: 2012

◀ overall view



NOAA National Center for Climate and Weather Prediction

Riverdale Park, Maryland, USA

This new office and research complex is the centerpiece of the largest planned research park in the national capital region. Nearly all meteorological data collected globally arrives here for analysis by the National Oceanic and Atmospheric Administration's (NOAA) environmental scientists.

The design reflects NOAA's mission by aspiring toward environmental sensitivity and a close relationship to nature. It also supports a scientific mission by symbolically reflecting its function in the form of the building. Just as natural systems do not operate in straight lines, the building is configured in a series of curving wings that intersect in a central atrium. The overall form of the building is organic in its character, creating "waves" of interior and exterior space across the site.

The north-facing elevation features continuous horizontal bands of windows that allow sweeping views into the woodland preserve and avoid direct sunlight.

On the south-facing elevation, a curtain wall with a system of sunscreens reduces solar heat gain on the inside of the building. These horizontal blades also act as light shelves that bounce daylight deeper into the interior spaces. This highly articulated façade is both sloped and faceted around a long arc to catch and reflect light throughout the day. The sun animates the building as a constantly changing interplay of light and shadow.

The lower façade facing south and southwest has vertical and angled slit windows within a surface of pigmented and patterned precast

concrete panels. This window pattern adds visual interest and complexity to the exterior appearance while limiting solar gain.

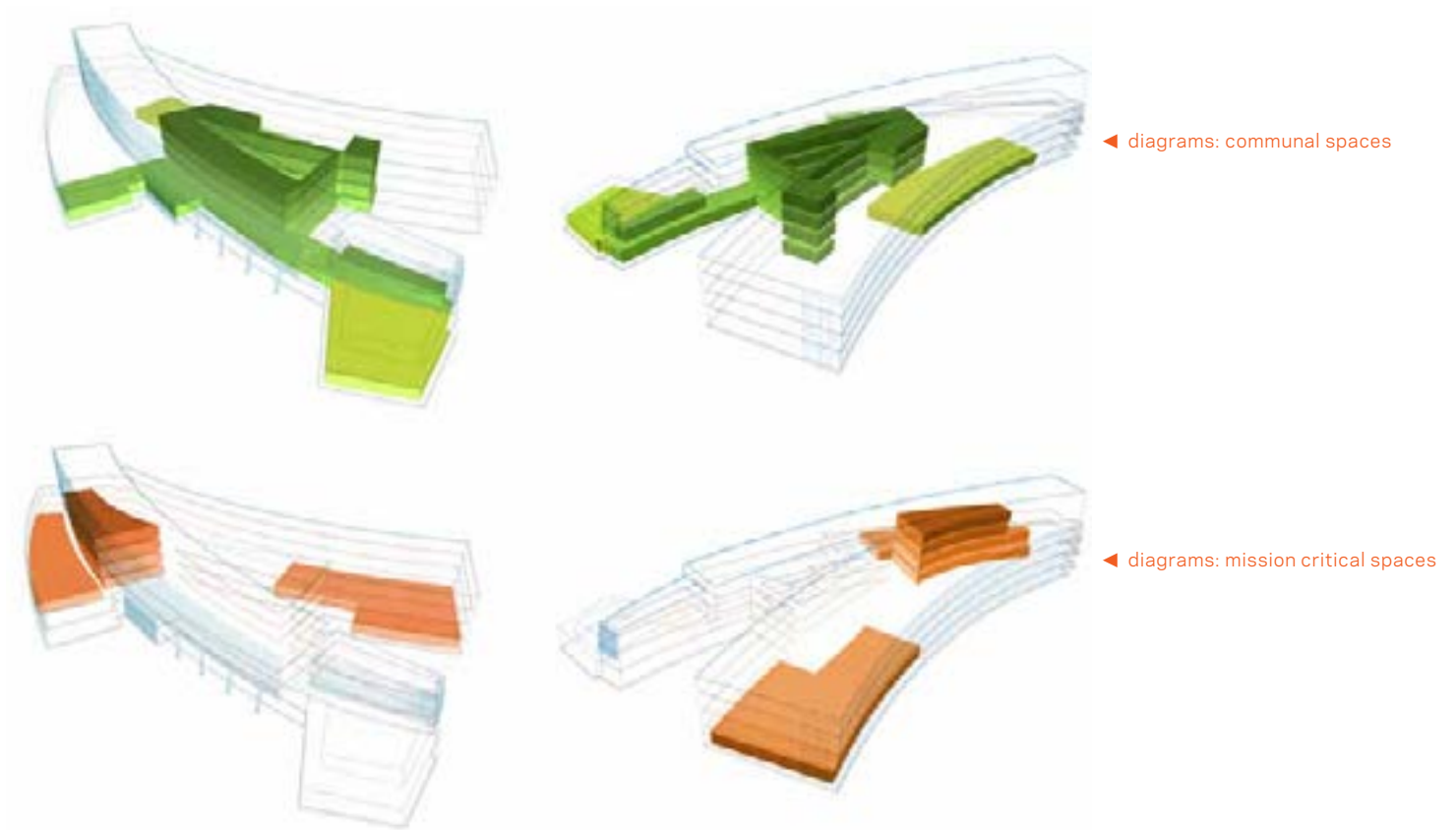
A cupola, the highest occupied space in the facility, is where researchers collect atmospheric data. Located at the top of the central curved wing of the building, it offers the best distant views from the site.

The desire to integrate the design of the building and its site extends from the landscape through the interior spaces to the top of the structure. The lower roof surfaces, visible from the interior, are planes of vegetative green roof. These surfaces intersect with a sweeping, inclined roof plane that rises from the building entry to an apex at the cupola.



▲ site plan

- 1 guard station
- 2 main entrance
- 3 green roof
- 4 surface parking
- 5 parking structure
- 6 service road
- 7 loading area
- 8 rain garden



◀ diagrams: communal spaces

◀ diagrams: mission critical spaces



▲ study model



◀ level 2 floor plan

- 1 offices
- 2 atrium
- 3 conference center



◀ level 3 floor plan

- 1 offices
- 2 atrium
- 3 conference center
- 4 green roof



◀ ground level floor plan

- 1 lobby
- 2 auditorium
- 3 conference center
- 4 library
- 5 atrium
- 6 data center
- 7 offices
- 8 fitness center
- 9 cafeteria
- 10 loading dock



▲ north elevation



▲ south elevation



▼ atrium rendering



▲ aerial rendering

◀ entry



◀ sun shade detail

▼ green roof



▲ facade detail



239,000 sq. ft. / 22,200 sq. m.

Completion: 2008

◀ west elevation



Orange County Groundwater Replenishment System

Fountain Valley, California, USA

Charged with developing a campus of diverse industrial and administrative functions, it was quickly realized that there was an important and compelling story to be told about the purpose and process of the Groundwater Replenishment System (GWR). Rather than simply upgrade the architectural image beyond the conventional utilitarian character typical of industrial processes, the architecture could play a pivotal role in telling this story by providing critical public relations, educating the public of the GWR process and quality of the product. The campus could also promote global objectives of recycling, conservation and sustainability. The existing water treatment facilities already accommodated a wide range of audiences, from school tours, plant managers and engineers to dignitaries from foreign countries where water supply is essential.

Architectural elements were organized around an indoor/outdoor exhibit path, a linear spine which followed the treatment process from effluent to purified water and injection back

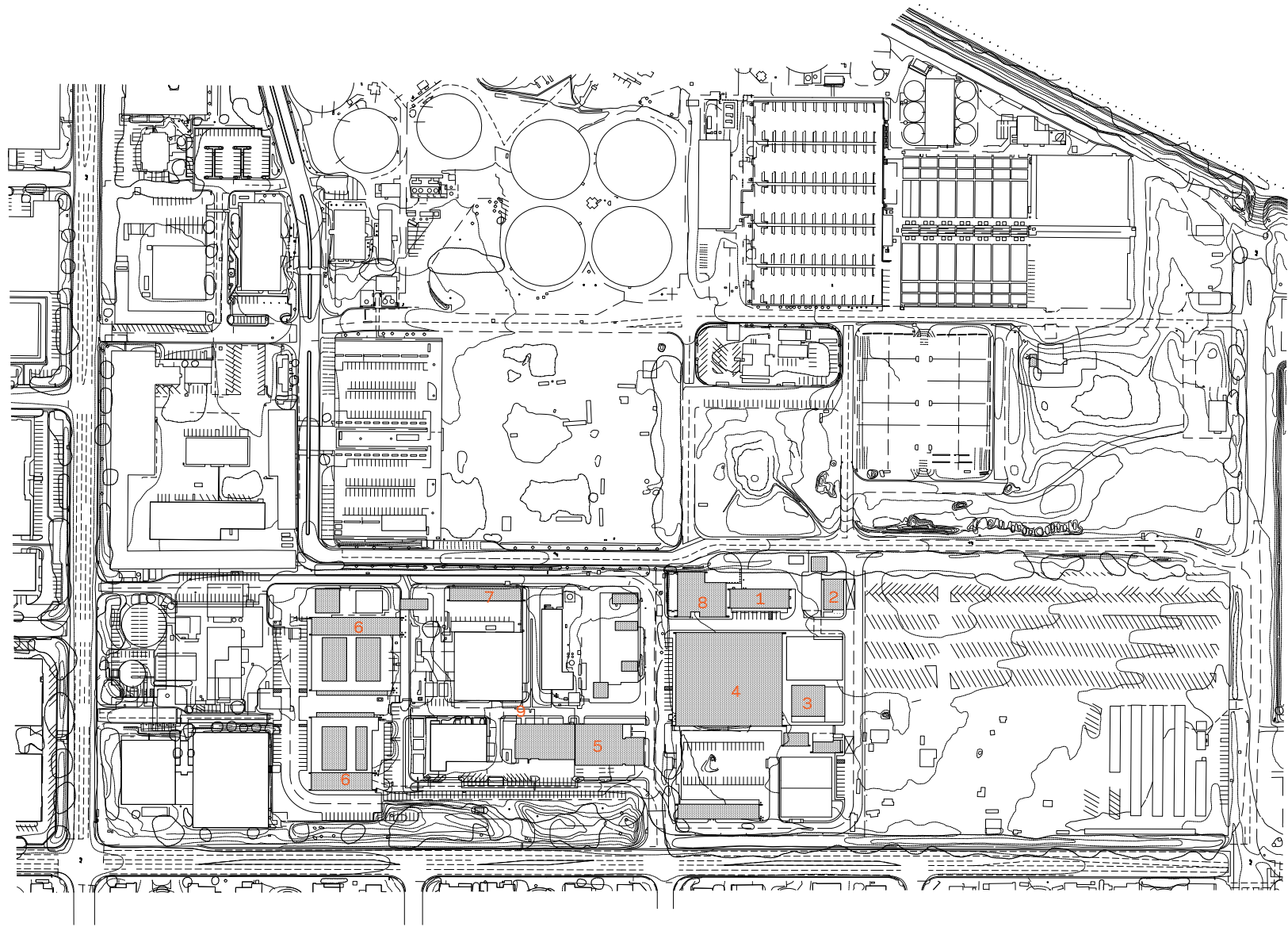
into the aquifer. This concept allowed the achievement of several objectives, endowing the overall campus an organizational clarity and character directly related to the story being told, while serving to unify the vast campus of different building types.

State-of-the-art technology and progressive vision is expressed through an integration of technical systems and architecture. The role of architecture would make the process more explicit and understandable rather than to simply hide or dress up the system. Developing the architecture of the spine and the story, rather than all four sides of every building on the campus, became a strategy to ensure efficient and cost-effective design.

The strategy also allowed the project to be implemented in multiple phases while maintaining organizational clarity. The story would therefore be "whole" during any phase, growing richer over time as subsequent phases come online.

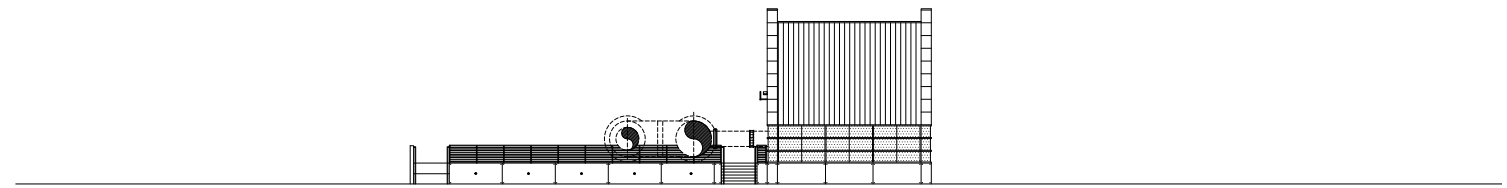
The Orange County GWR is a water supply project jointly sponsored by the Orange County Water District and the Orange County Sanitation District. The GWR System supplements existing water supplies by providing a new, reliable, high-quality source of water to recharge the Orange County Groundwater Basin and protects the basin from further degradation due to seawater intrusion.

The GWR system utilizes advanced water treatment facilities, including micro-filtration, reverse osmosis and ultra violet disinfection, to purify for reuse treated wastewater that is now discharged to the ocean. This water is purified to levels that far exceed drinking water standards. By recycling water, it also provides peak wastewater flow disposal relief and postpones the need for the Orange County Sanitation District to construct a new ocean outfall by diverting treated wastewater flows that would otherwise be discharged to the Pacific Ocean.

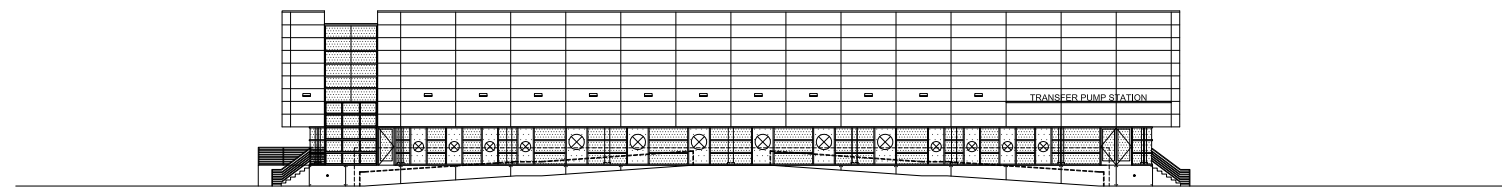


▲ site plan

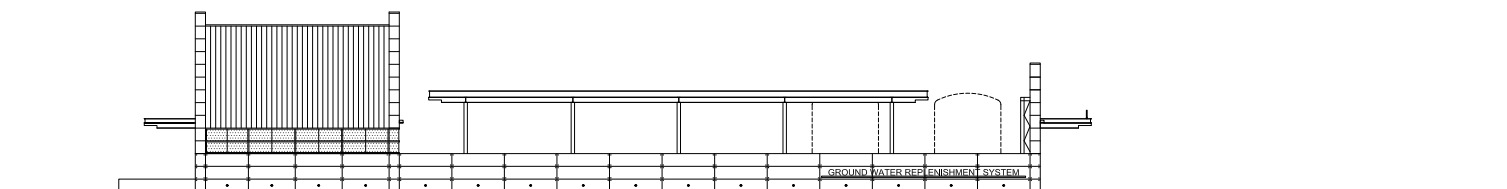
- 1 transfer pump station
- 2 lime storage
- 3 ultra violet light
- 4 reverse osmosis
- 5 warehouse
- 6 microfiltration
- 7 r.o. transfer pump station
- 8 r.o. electrical
- 9 spine



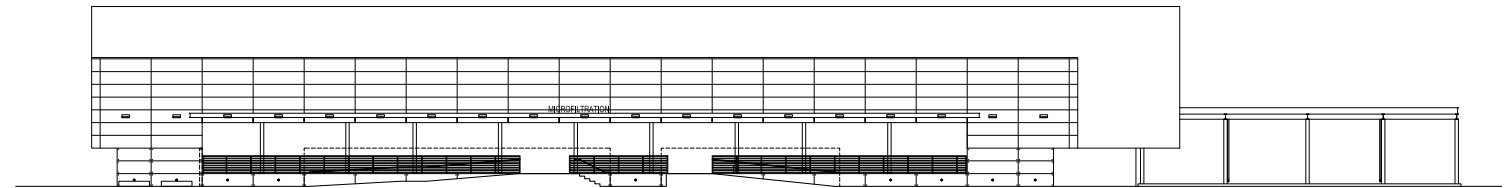
▲ transfer pump station, south elevation



▲ transfer pump station, west elevation



▲ microfiltration, north elevation



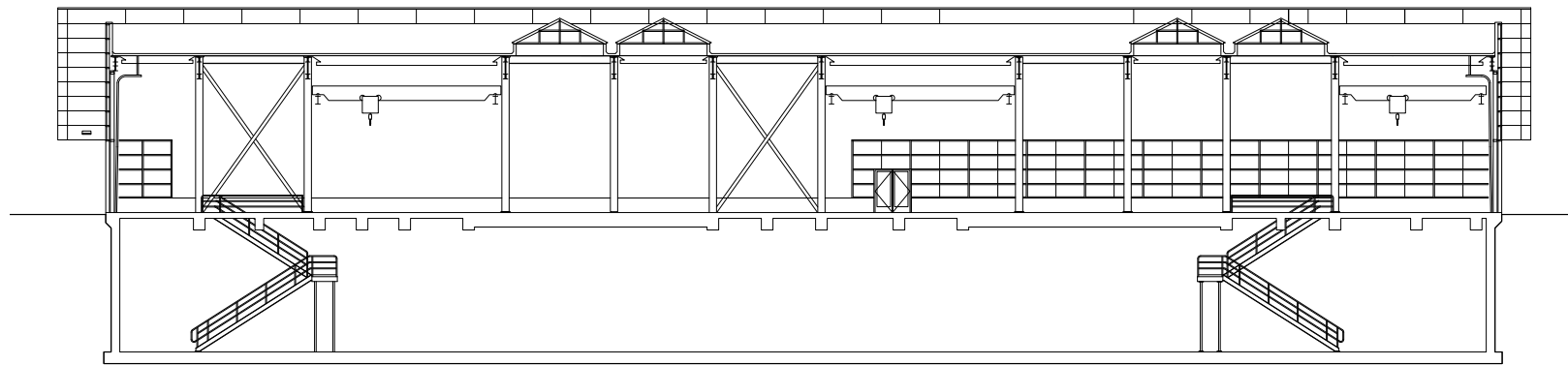
▲ microfiltration, west elevation



▲ facade detail



▲ pump station, west elevation



▲ section



592,000 sq. ft. / 55,000 sq. m.

Completion: 2014 (anticipated)

Reliance Global Headquarters

Mumbai, India

Construction of this building anticipating LEED Platinum certification will consolidate the offices of Reliance into one global headquarters building.

As energy generation and distribution make up Reliance's main business unit, it became important that the defining design concept project be grounded in energy conservation and innovation. The overarching goal was to express and enable a high-performance building set within the demanding Mumbai climate.

A number of strategies were used to achieve this goal, the most apparent being an expansive cantilevered roof structure

hovering over the majority of the site. Integrated within this structure is a vast array of photovoltaic collectors capable of providing more than five percent of the building's overall energy demands.

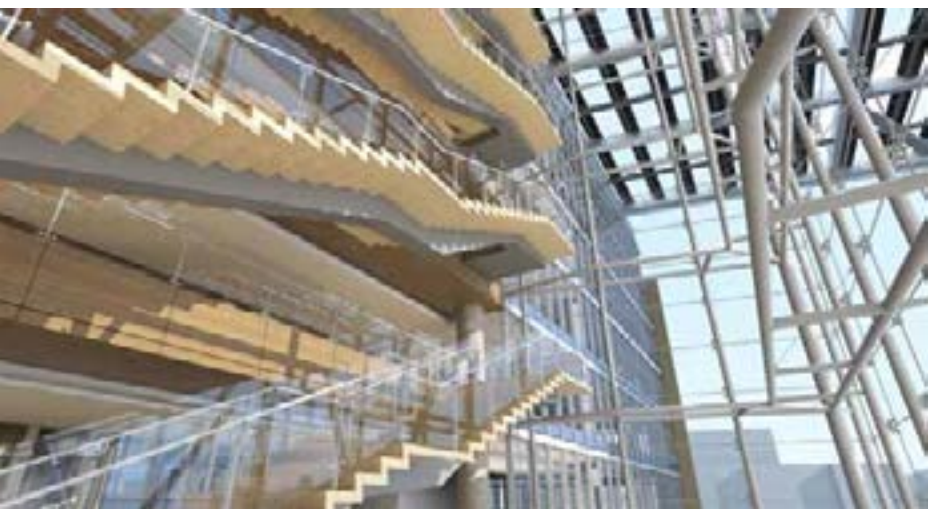
To combat the harsh solar climate of Mumbai, a secondary double screen wall made up of stone panels and ceramic baguettes shields the building on the necessary façades.

The building's distinctive massing is best described as a residual form - the result of carving out the required program areas for the recreational garden on the southeast and service yard to the northwest. When viewed

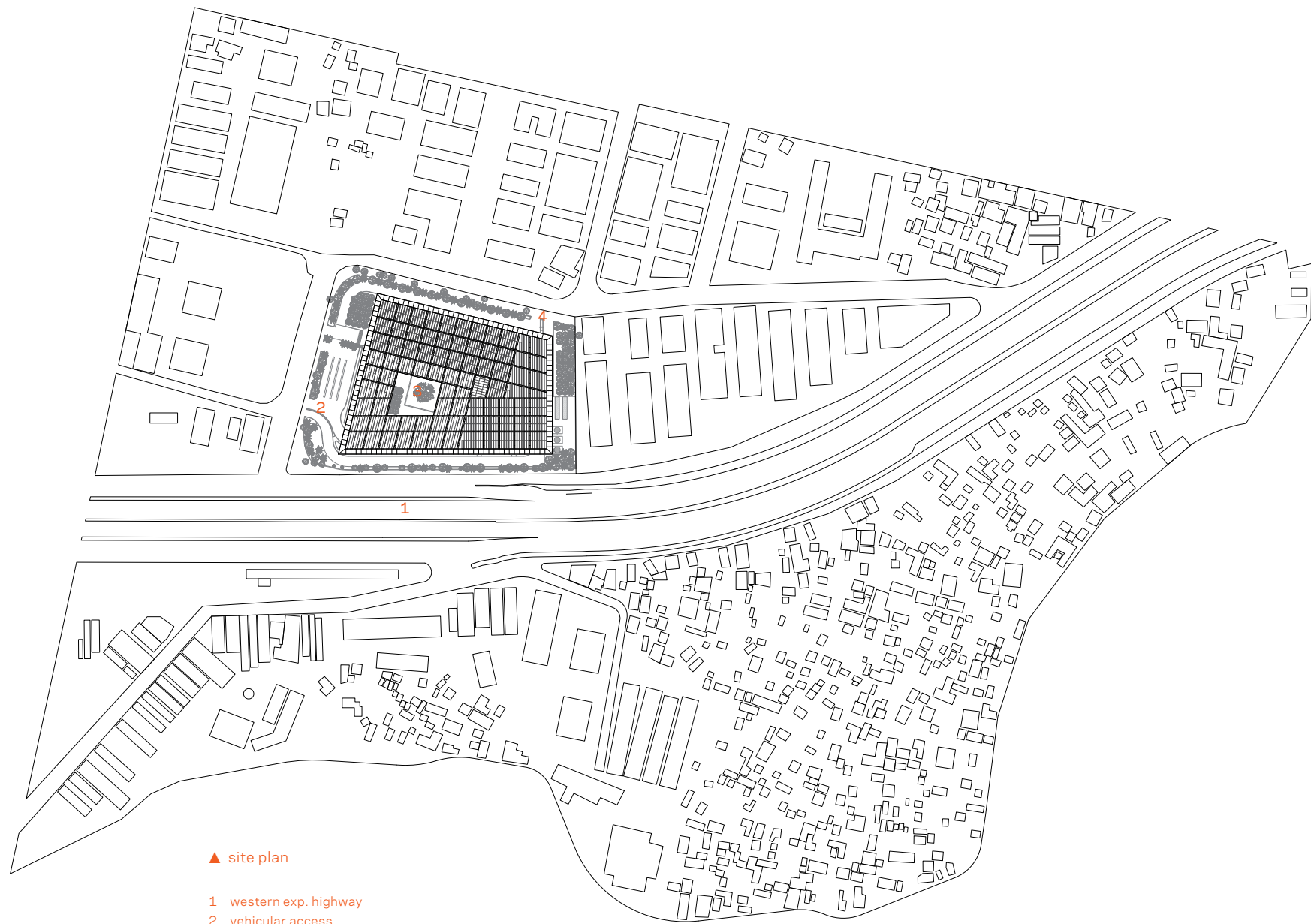
in plan, the 'Z' diagram is organized as two conventional bars joined by a common atrium and core.

The recreational garden includes a corporate clubhouse designed to utilize the adjacent green space. Acting as a centerpiece to this garden is an existing sacred tree. Used by migratory birds, its preservation was a requirement for this development.

Below grade, a two-level, 400-car parking garage serves both staff and corporate executives.



◀ renderings

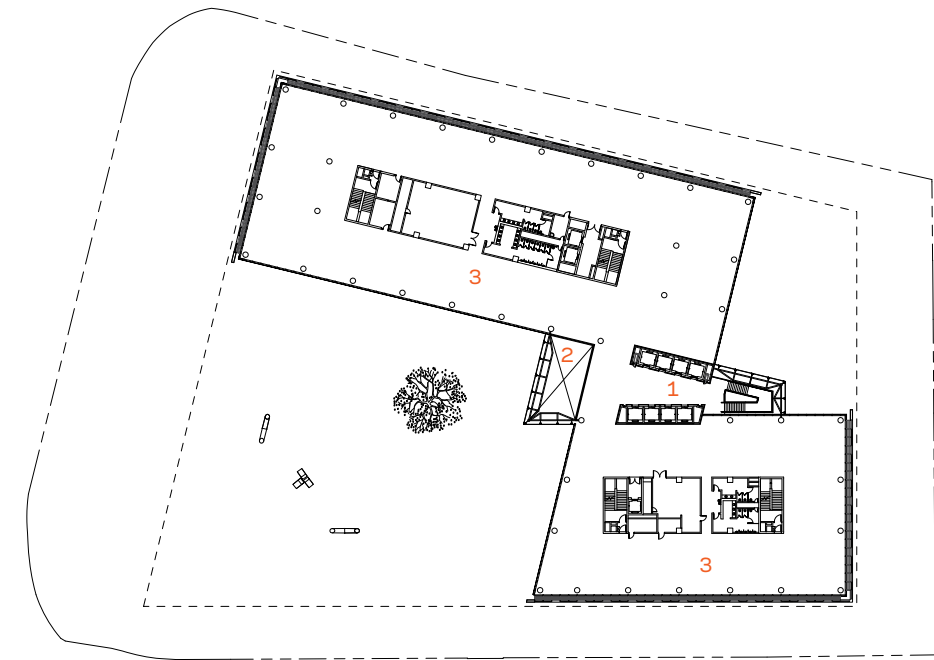


▲ site plan

- 1 western exp. highway
- 2 vehicular access
- 3 recreational garden
- 4 security booth

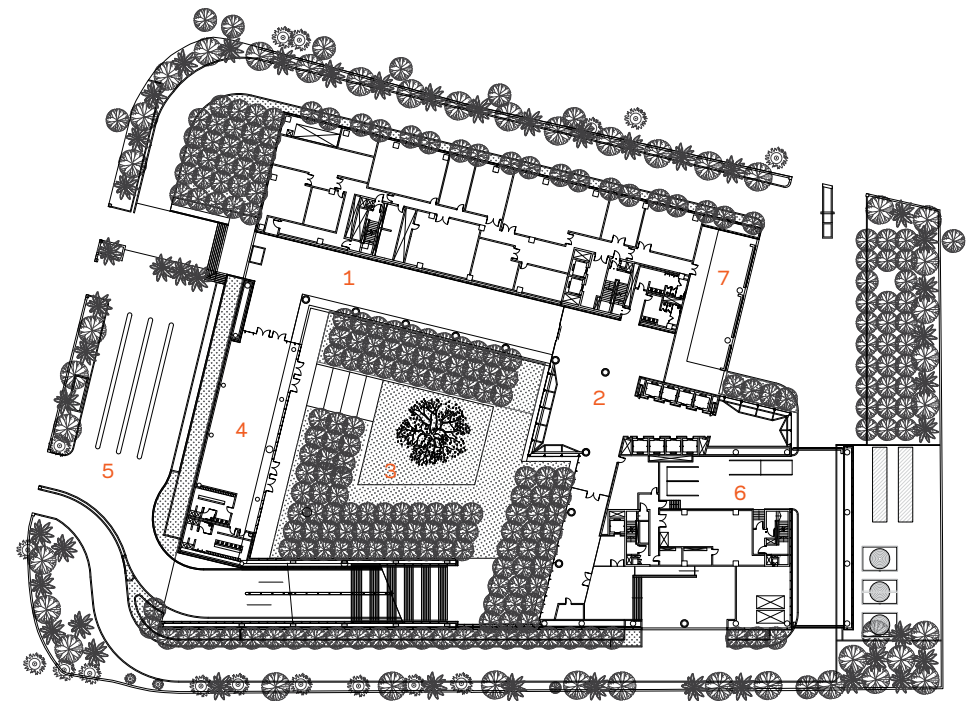
level 2 floor plan ▶

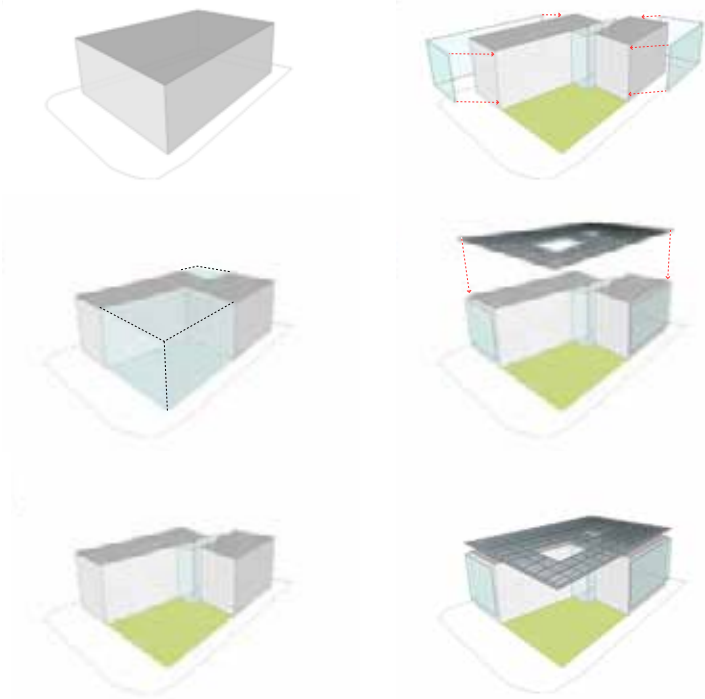
- 1 lift lobby
- 2 atrium
- 3 office



ground level floor plan ▶

- 1 entry colonnade
- 2 lobby
- 3 recreational garden
- 4 club house
- 5 vehicular access
- 6 executive parking
- 7 loading

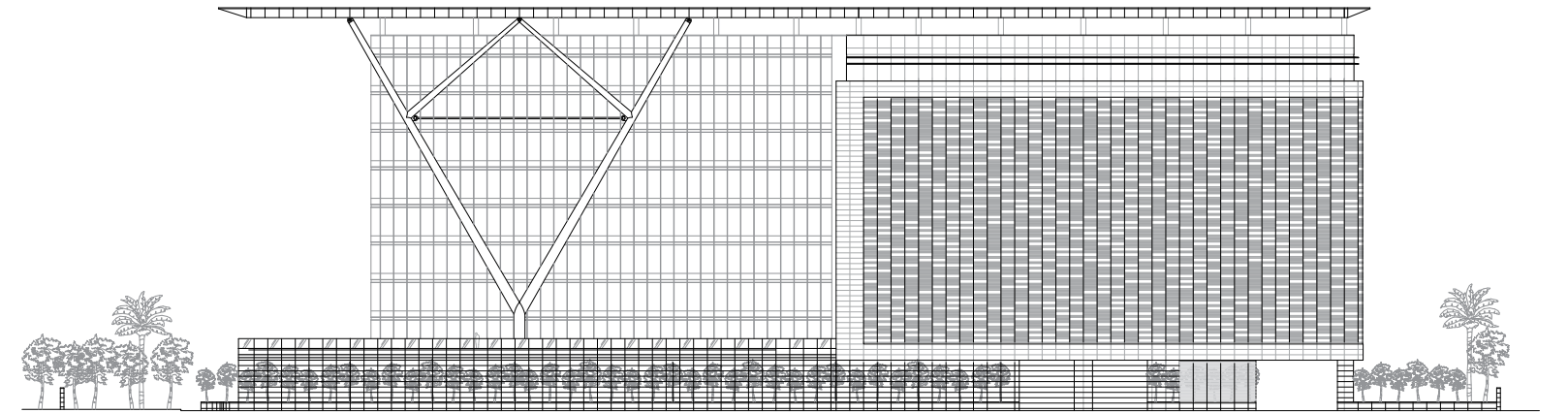




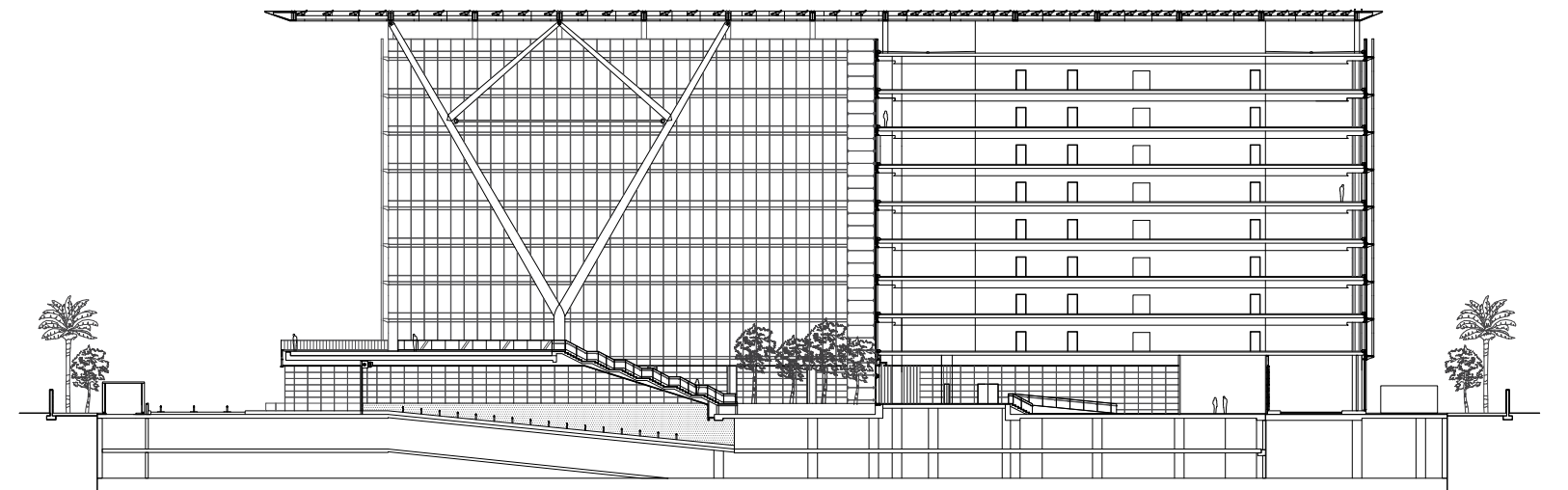
▲ diagrams



▲ recreational garden rendering



▲ west elevation



▲ section



▶ view from western highway



1.2 million sq. ft. / 108,295 sq. m.

Competition: 2009

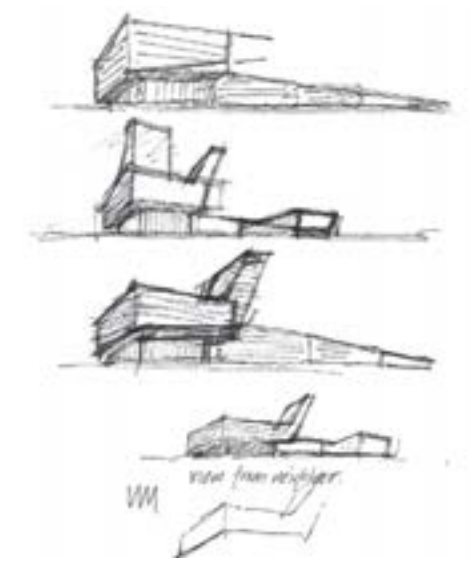
Riyadh Municipal Complex

Riyadh, Saudi Arabia

The Riyadh Municipal Complex is located next to the historic town of Riyadh and faces Al Salam, one of the city's most prominent parks. Its program required the organization of diverse departments, a reception hall, auditorium and exhibition space. With a variety of private and public functions, the facility needed an efficient, easily understood circulation system.

The building consists of a set of office blocks connected physically, spatially and visually by a hierarchical set of interior atria and public spines. The upper levels of each block host executive functions and have the least public interaction. Departments that experience the most public interaction operate on the lower levels of each office block.

The building is a wrapping form that changes in response to orientation, scale and access. It folds in on itself to shelter a large public plaza of shaded pathways and micro climatic

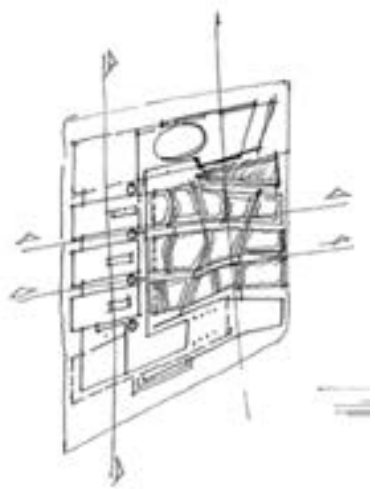
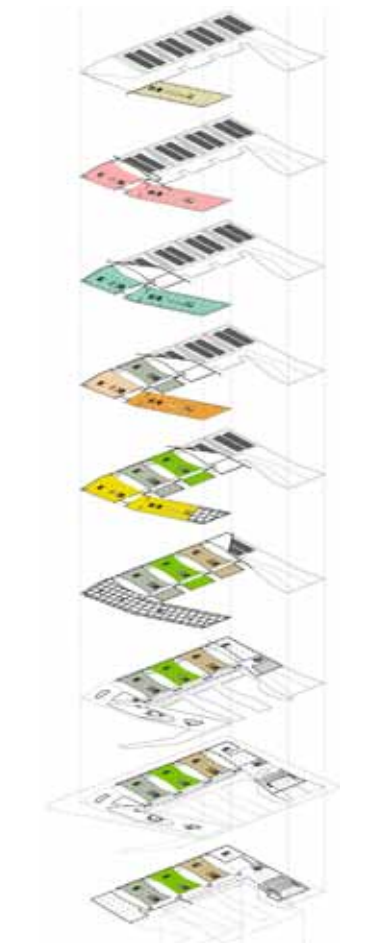
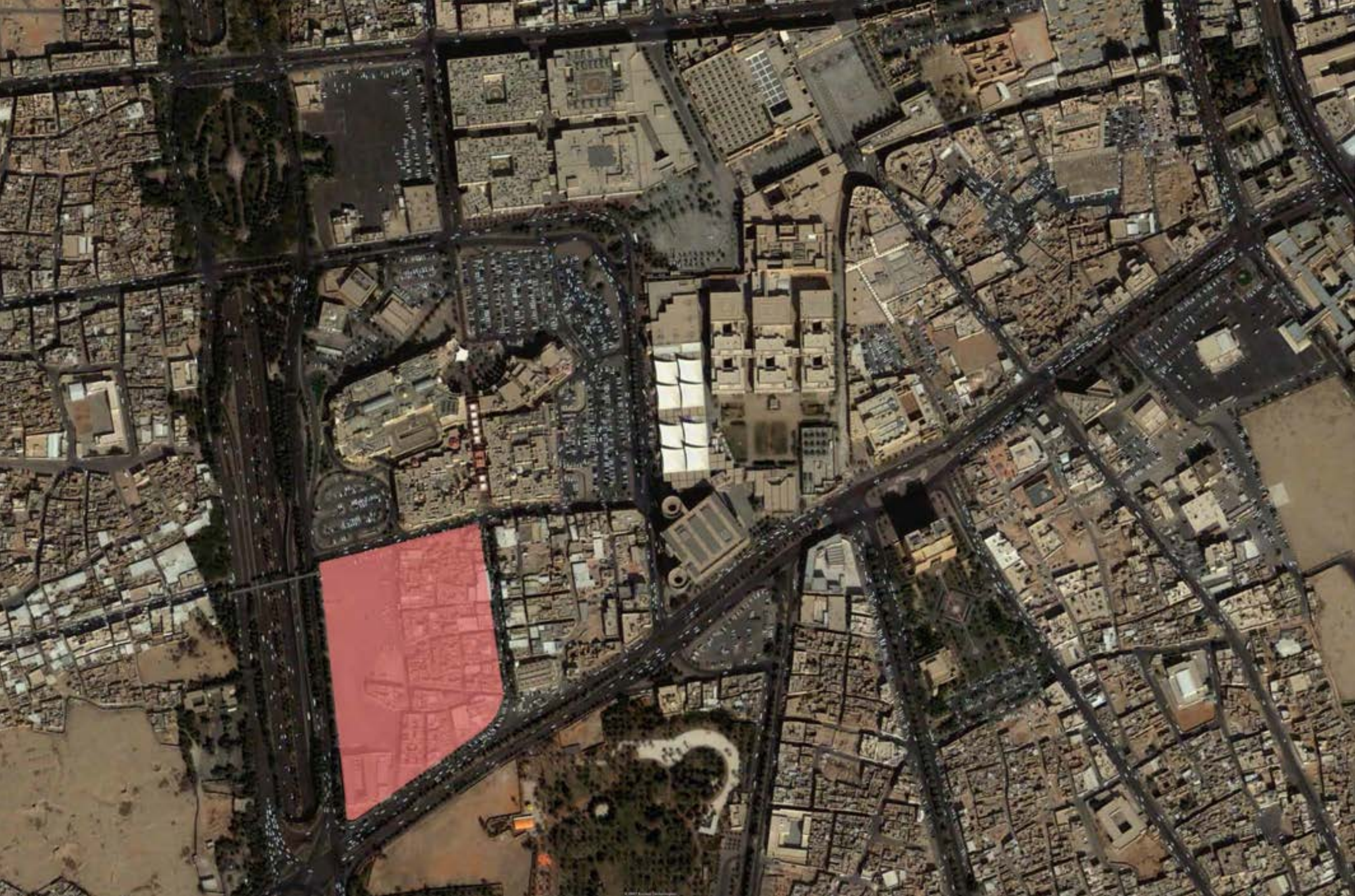


grottos, the old street grid carved from its stone terrain. A sloping green roof serves as an insulator from the intense Saudi sun while roof-mounted photovoltaics make use of abundant solar energy.

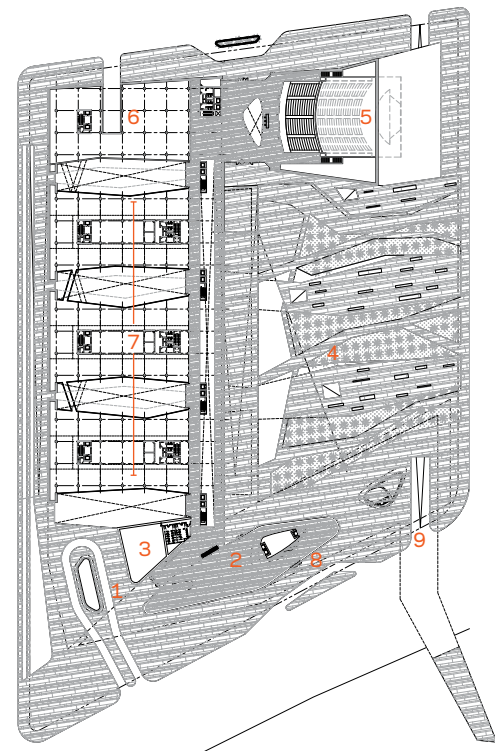
The façades respond to solar orientation. Narrow slots at the west-facing stone wall protect windows from the sun's glare while filtering light. Vertical atrium spaces separate the office blocks and offer natural light to occupants. In contrast, the southern and northern façades offer a lace-like diffused transparency, optimizing daylighting through a self-shaded curtain wall that varies in projection and density.

As the building ascends to the south, its mass projects monumentally, addressing itself as city portal, connecting the plaza with Al Salam Park and reinforcing its role as the city's central green oasis.

◀ aerial view from al salam park

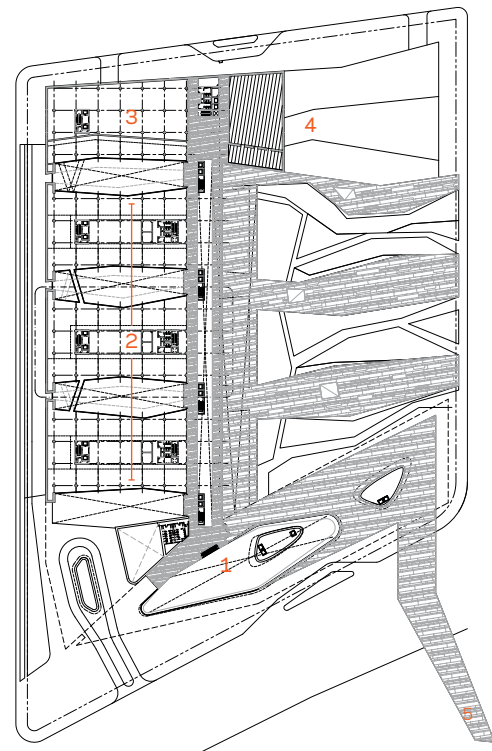


▲ diagrams
◀ context plan



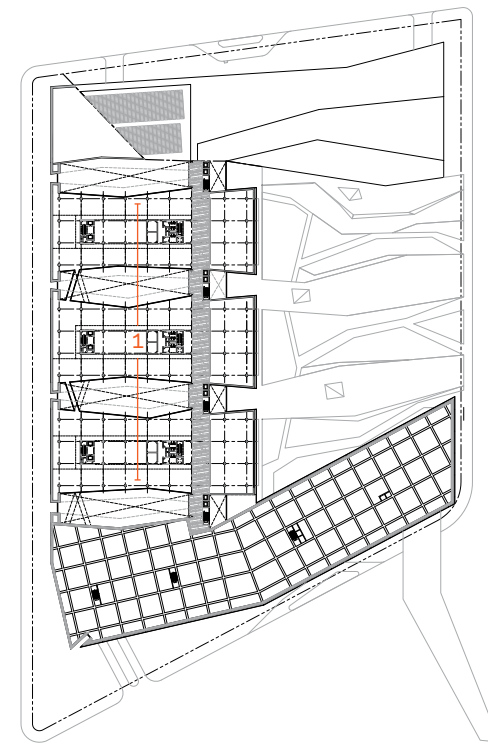
▲ level 0 floor plan

- 1 main entrance
- 2 lobby
- 3 service
- 4 main plaza
- 5 auditorium
- 6 loading dock/central plant
- 7 offices
- 8 vip drop-off
- 9 ramp to below-grade parking



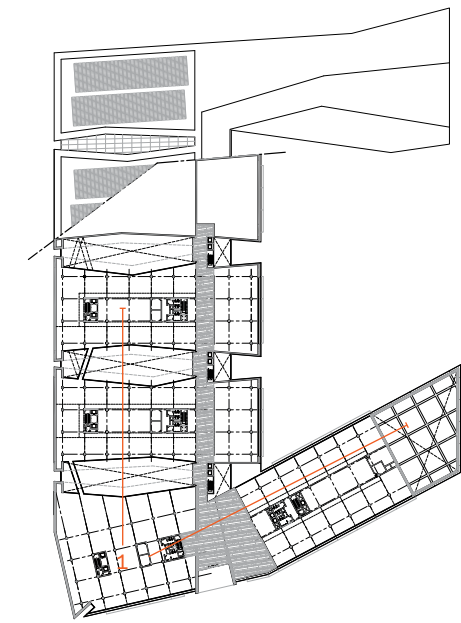
▲ level 1 floor plan

- 1 lobby
- 2 offices
- 3 loading dock/central plant
- 4 prayer hall
- 5 bridge to al salam park



▲ level 2 floor plan

- 1 offices

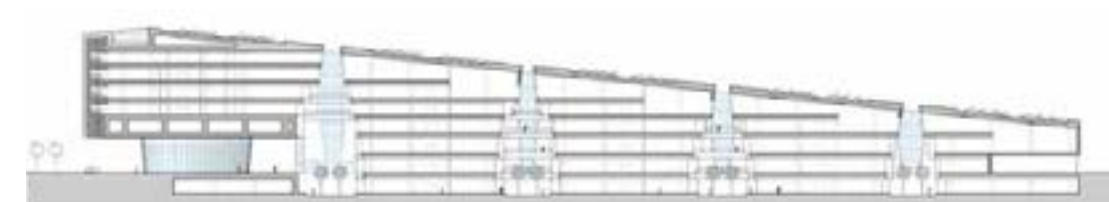


▲ level 3 floor plan

- 1 offices



▲ section



▲ section



▲ digital study model



▲ digital study model



▲ study model



▲ study model



68,000 sq. ft. / 6,317 sq. m.

Completion: 2010

Salvador Dalí Museum

St. Petersburg, Florida, USA

The Dalí Museum is the most visited museum in the southeastern United States and is the permanent home of the world's most comprehensive collection of the renowned Spanish artist's work. The new museum was designed, first and foremost, to exhibit and protect the priceless collection.

Contained on three floors and fronting Tampa Bay, the museum includes the permanent collection, temporary exhibitions, offices, the public entrance, museum shop, art vaults, library and all necessary back-of-house functions.

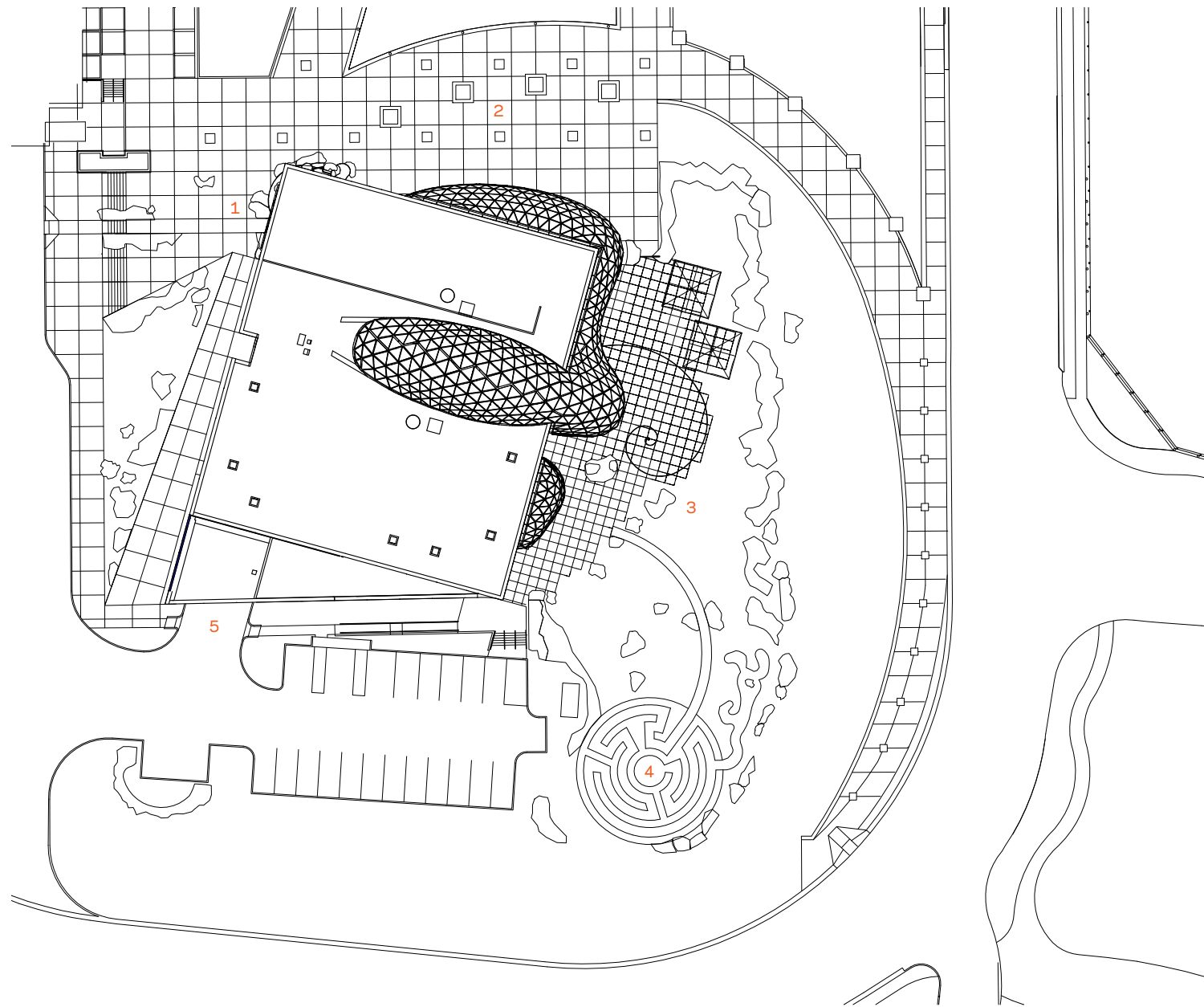
A particular challenge of the site was the need to protect the priceless collection from the high winds and storm surges strong hurricanes can bring to the Florida coast. To mitigate this risk, the collection is sheltered well above the Category 5 hurricane flood level and protected behind 18-inch-thick waterproof, heavily reinforced concrete walls. The only facilities on grade are the public

entry, museum retail store, service docks, carpentry shops, a multipurpose room and an auditorium.

Beyond protecting the collection, the team was tasked with designing a symbol of surrealism - particularly of Dalí's work - that serves as an iconic signal of the importance of the collection within. Thus, while the museum design is a treasure box to shelter the collection from hurricanes, several design moves opened the box to welcome and intrigue the visitor. The museum's exterior is characterized by the triangulated, geodesic, free-form "enigma" that features the first U.S. use of faceted glass. Other unique features are the helical reinforced concrete visitor stair, which invites the visitor to climb up to the art galleries of the third level, or the innovative use of daylight, funneled through light cannons to bathe seven large, oil-painted "masterworks" in soft, carefully controlled natural daylight.

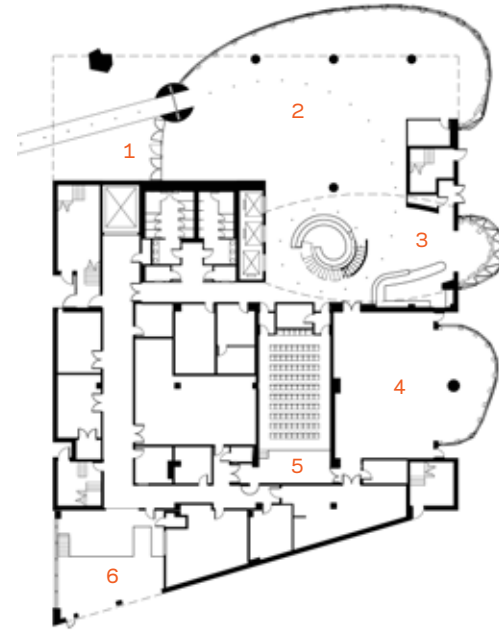
◀ approach





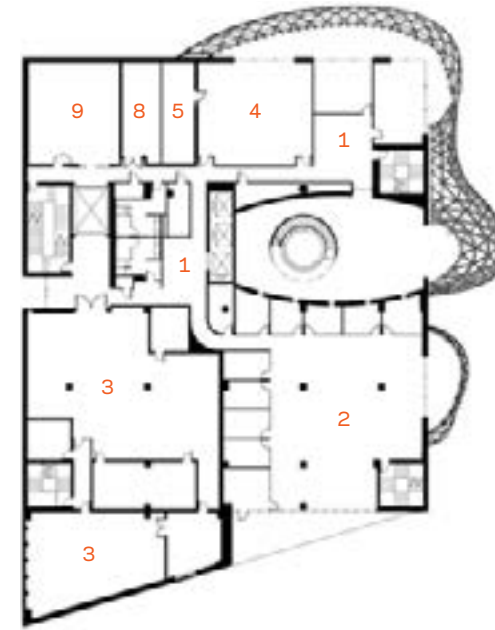
▲ site plan

- 1 entrance
- 2 plaza
- 3 east garden
- 4 maze
- 5 loading/receiving



▲ level 1 floor plan

- 1 entrance
- 2 museum store
- 3 atrium/cafe
- 4 multi-purpose room
- 5 theater
- 6 loading / receiving



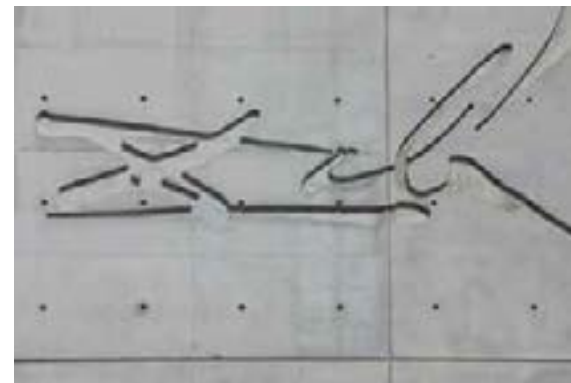
▲ level 2 floor plan

- 1 reception
- 2 staff offices
- 3 mechanical room
- 4 library
- 5 rare books
- 6 director's office
- 7 board room
- 8 preparator
- 9 art vault



▲ level 3 floor plan

- 1 enigma hall
- 2 permanent collection
- 3 temporary exhibitions
- 4 cooling towers
- 5 emergency power





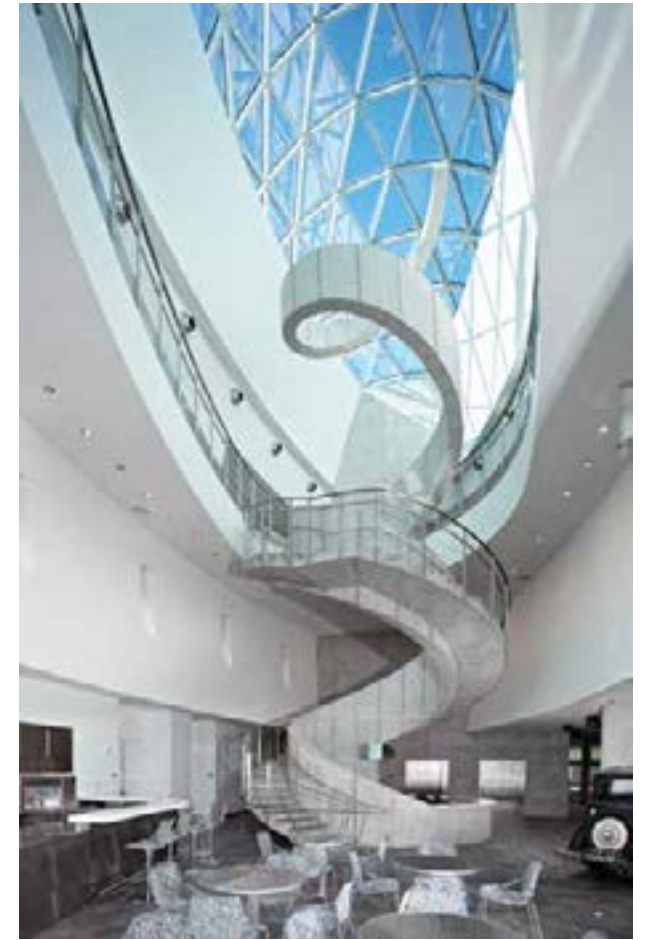
▲ cafe



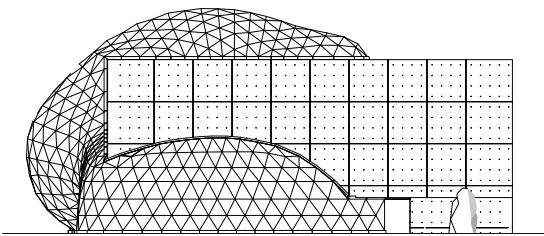
▲ second floor lobby



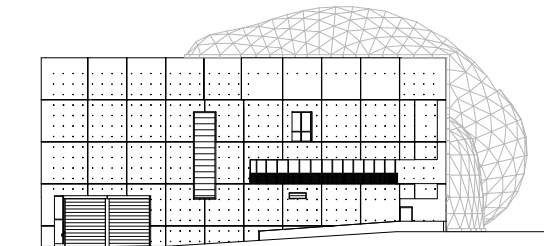
▲ helical staircase detail



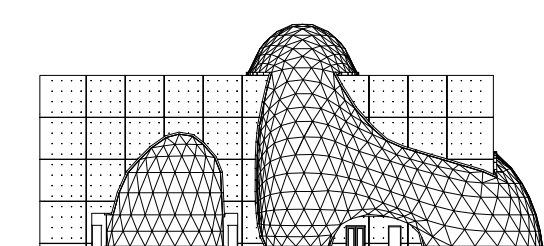
▲ atrium



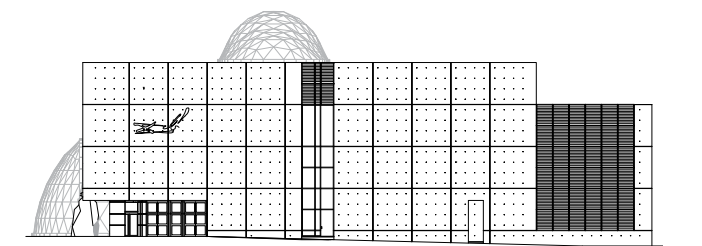
▲ north elevation



▲ south elevation



▲ east elevation



▲ west elevation



▲ enigma room



▲ dome ceiling



▲ helical staircase



▲ gallery



▲ view from east garden



70,000 sq. ft. / 6,500 sq. m.

Completion: 2012 (anticipated)

Samsung Research and Development Center

Seoul, South Korea

Samsung's Research and Development Center is a multidisciplinary, high-technology building located within a large campus. The design concept centers around an idea of a seed and its progression through the germination process, paralleling the creation and maturation of ideas.

Meeting the ground with a large open air public space for "conception," the building emerges vertically to a lab "stem" for testing and is capped by a conferencing "first leaf" space for the sharing and gathering of refined ideas. The facility houses general, industrial, and environmental technology labs, as well as associated office, study, utility and meeting spaces.

The building is designed as a series of enclosing shells acting as shading and diffusing devices for sun and wind. These structures enhance the use of natural daylight and reduce dependency on electromechanical systems.

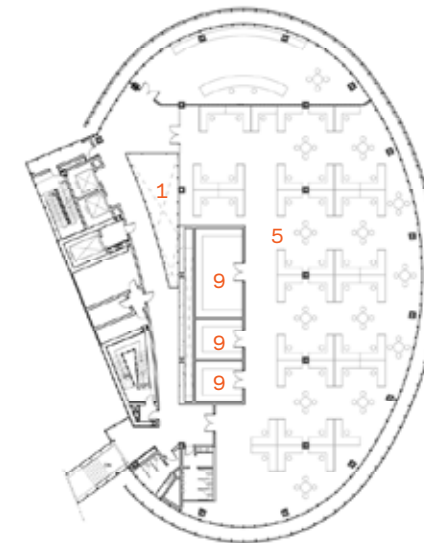
External sustainable strategies include roof and sky gardens that replace the natural vegetation displaced by the building, resulting in a minimal loss of oxygen-producing plants. All building systems are controlled by an automated digital system that monitors outdoor and indoor environmental conditions to maximize building efficiency.

◀ main entry

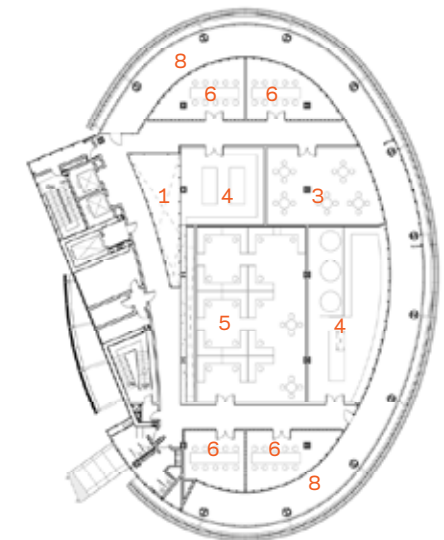


▲ site plan

- 1 r + d center
- 2 entrance plaza
- 3 hardscape
- 4 sunken garden
- 5 children's playground
- 6 water retention
- 7 multi-purpose plaza
- 8 podium garden
- 9 roof garden
- 10 ceo garden
- 11 offices
- 12 multi-purpose hall



▲ level 2 floor plan



▲ level 3 floor plan



▲ level 1 floor plan

- 1 atrium
- 2 circulation
- 3 lounge
- 4 lab
- 5 office
- 6 meeting
- 7 library
- 8 terrace
- 9 service

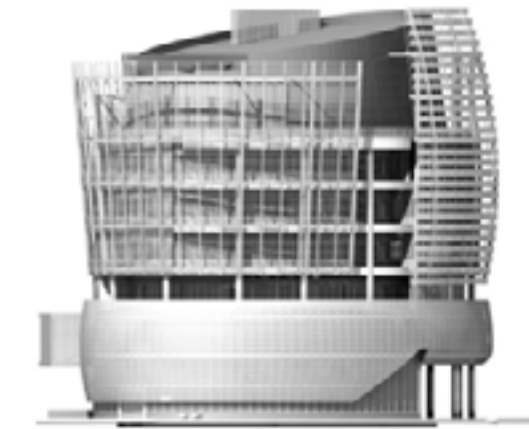




▲ north elevation



▲ east elevation



▲ south elevation



▲ west elevation



▲ section



▲ north view



▲ south view



The Sir Percival David Collection in the Sir Joseph Hotung Centre for Ceramic Studies, British Museum

London, United Kingdom

700 sq. ft. / 65 sq. m.

Completion: 2009

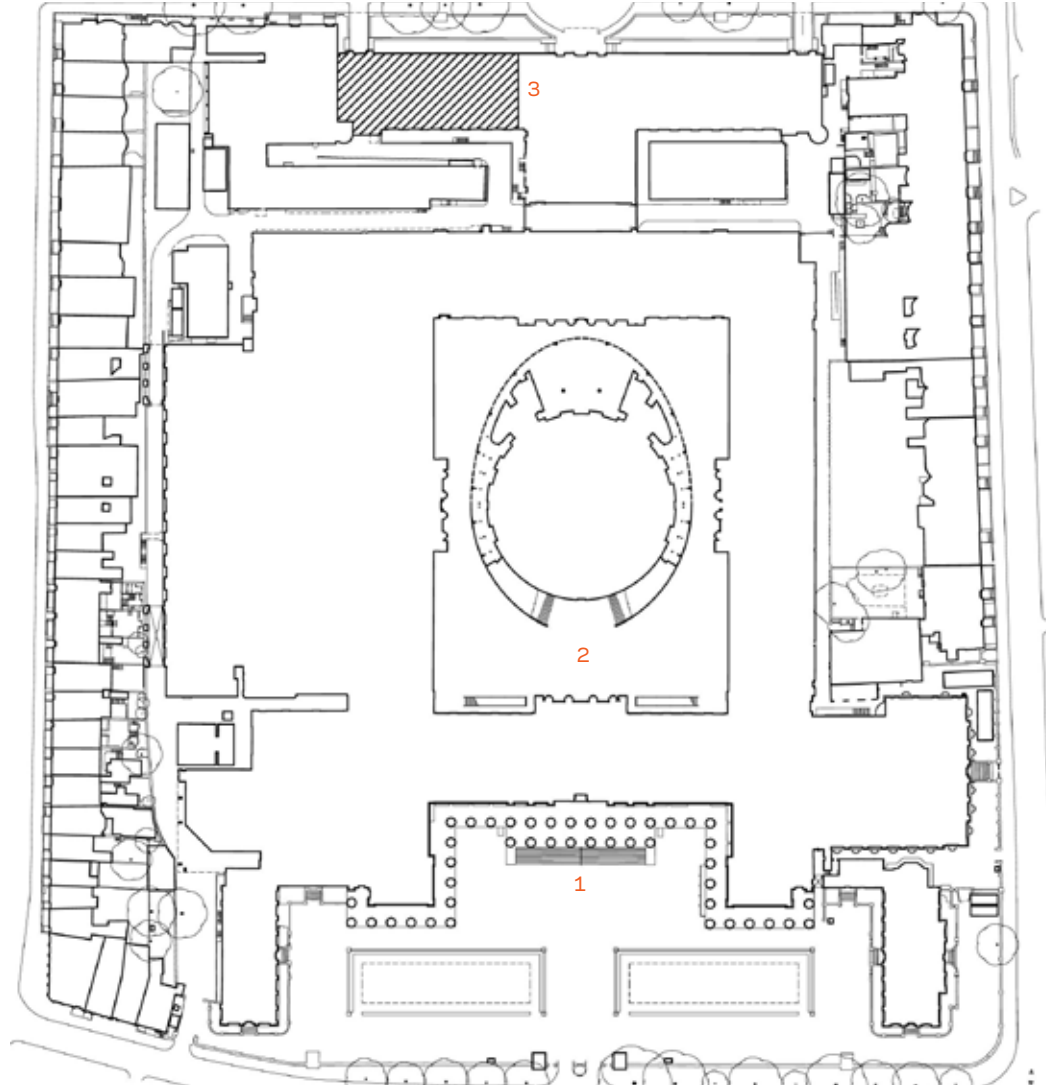
After successfully delivering the Prints and Drawings Gallery, HOK was appointed to provide architectural design for the creation of a new gallery in the British Museum to house the Sir Percival David Collection of Chinese ceramics. Previously displayed at the University of London in Gordon Square, this collection is widely regarded as one of the most important collections of Chinese ceramics outside of mainland China.

Working with the museum's exhibition designers to develop the brief, the design team transformed a disused storage space into the gallery, provided a new library for post-graduate students and added a new temporary external fire escape stair.

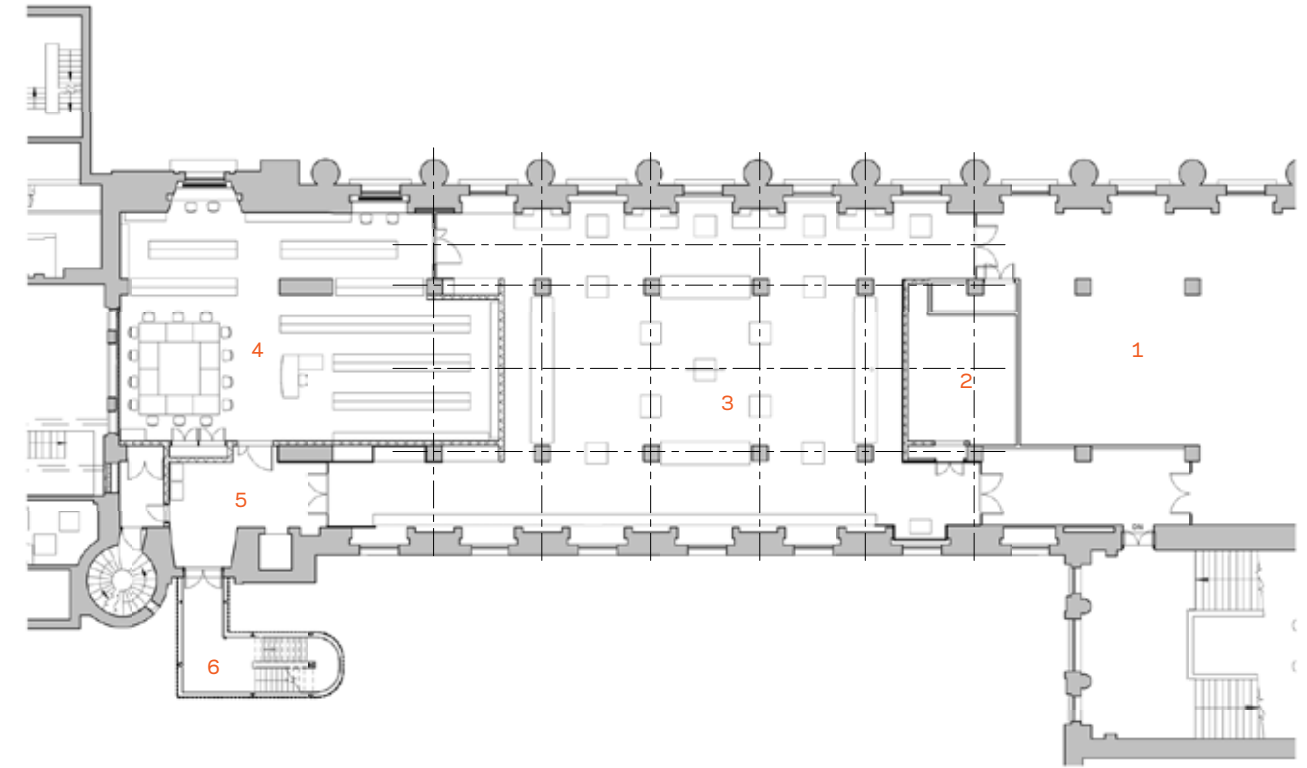
The scheme was taken forward with the exhibition design team and the mechanical, electrical and structural engineers to prepare construction documentation and to obtain all relevant statutory approvals.

The design of the gallery was conceived to be subservient to the 1,700 exhibits. The restrained palette of materials comprises oak strip boarding, relief walls of black Chinese granite and gypsum ceilings with integrated service troughs. Both the layout of the gallery and the lighting strategy reflect the desire for an intimate, uncluttered, welcoming space that enhances visitors' ability to easily navigate the space and focus on the exhibits.

◀ gallery



- ◀ site plan
- 1 main entrance
 - 2 great court
 - 3 sir percival david collection



- ▲ floor plan
- 1 existing gallery
 - 2 plant room
 - 3 sir percival david collection
 - 4 library / study room
 - 5 lobby
 - 6 new external stairway



▲ existing elevation



▲ new external stairway



▲ interior elevation, gallery



▲ gallery



▲ display detail

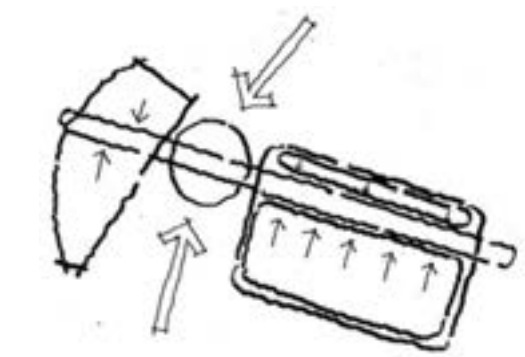


▲ library / study room



100,000 sq. ft. / 9,290 sq. m.

Completion: 2012 (anticipated)



University of Florida, Lake Nona Research Center Orlando, Florida, USA

The design intent for this medical research center was to create a building culture that encourages curiosity, collaboration and excellence in both education and research, linking students, faculty and members of private industry.

Through the interplay of materials and use of developing technologies, materials and applications, the design creates a building reflective of pushing the boundaries of science in the 21st century. The geometry and building enclosure present dynamism and architectural self-assertion, acting as a catalyst for innovation, creative thinking and environmental stewardship.

The building presents a contemporary and exciting image as viewed from all directions, with contrasting color, shapes and forms.

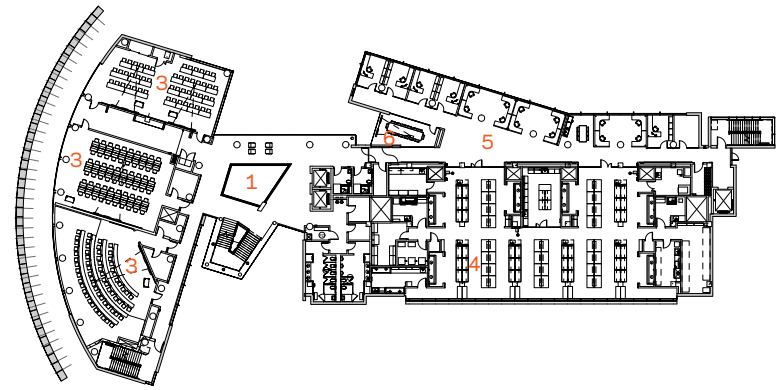
Entry portals from both the north and south, along with a "through lobby," promote an equal sense of entry whether a person is arriving by car, foot, bike or public transit. A reflecting pool and plaza offer opportunities for outdoor conversation and learning, while imparting an immediate sense of arrival and place.

The research building is modern and functional, with a clear response to program requirements and an honest expression of materials. Transparency creates light-filled spaces rising into the atrium. The atrium becomes a central hub, supporting interaction and community between the research and education components while offering the opportunity to showcase research achievements and the College of Pharmacy. At each level, a direct linear east-west axis connects the research block to the academic wing via the central atrium and community space.

The building massing reflects the internal program while providing a balanced range of elements and spaces that are comfortable and proportional to a human scale. The horizontal form of the laboratories is balanced with both the vertical expression of the core elements and central community space. The massing responds directly to the adjacent Burnham Institute and builds upon that expression with the curved academic wing to the west.

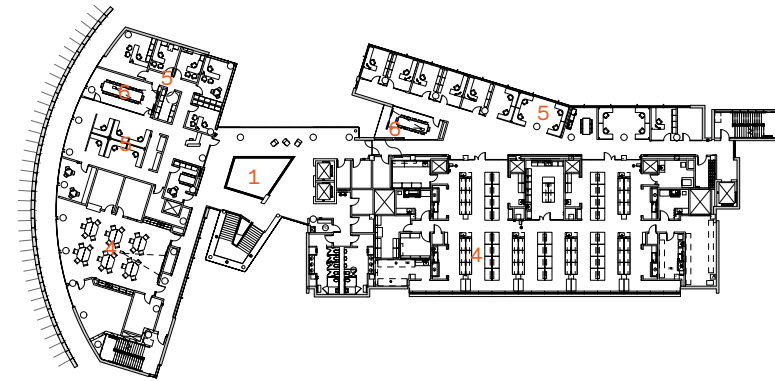
Material selection is based on a holistic approach integrating aesthetic values, quality and sustainability for a high-performance, contemporary architectural design. Assembled together, the materials create a distinguished structure reflecting the dignity, enterprise, vigor and ambition of the University of Florida.

◀ aerial rendering



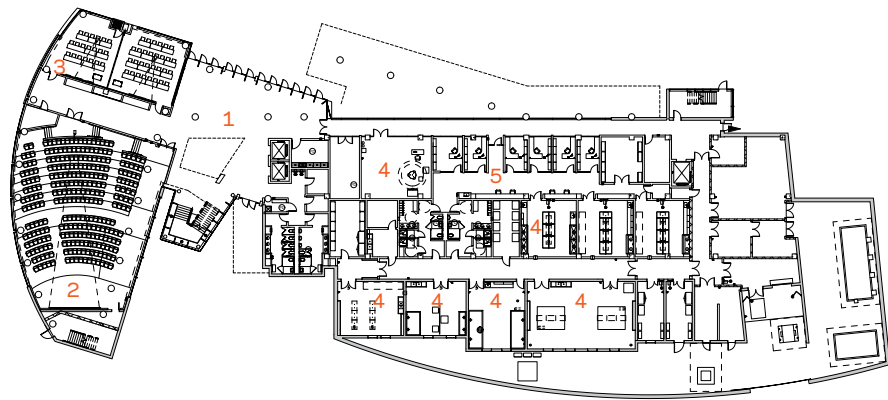
▲ level 2 floor plan

- 1 atrium/open to below
- 2 auditorium
- 3 classroom
- 4 lab
- 5 office
- 6 conference

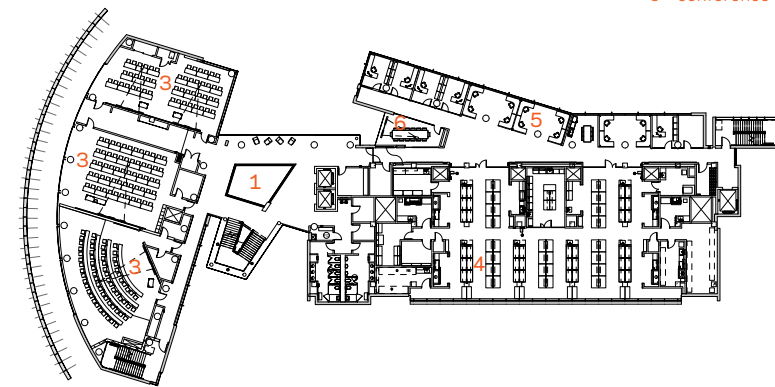


▲ level 4 floor plan

- 1 atrium/open to below
- 2 auditorium
- 3 classroom
- 4 lab
- 5 office
- 6 conference



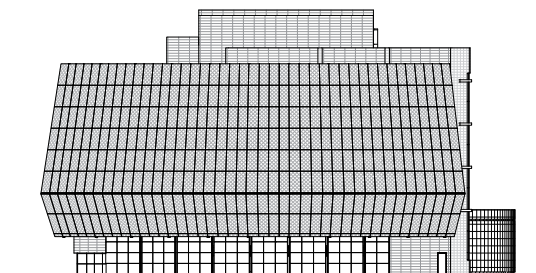
▲ ground floor plan



▲ level 3 floor plan



▲ north elevation



▲ east elevation



▲ section



▲ section



▲ entry



▲ atrium



▼ rendering, view from lake nona boulevard



500,000 sq. ft. / 46,450 sq. m.

Completion: 2008

University of Illinois at Chicago, James J. Stukel Towers and Forum

Chicago, Illinois, USA

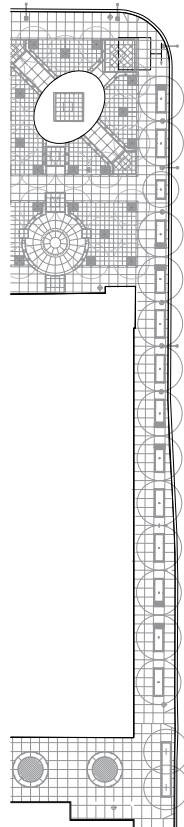
This new complex accommodates a dynamic mix of housing, meeting, dining and retail, bringing new life to the surrounding community. The design incorporates a combination of contemporary masonry architecture, an articulated glass curtain wall on the residence towers and, at the Forum, a steel trellis roof and light column.

Throughout the complex, exterior architectural expressions reflect interior uses, embodying the relationship between student life, academic enrichment and convocation requirements in an urban campus setting. Through innovative program stacking, building orientation, linkages, use of daylight, multi-level gardens and careful massing, the design of this complex integrates uses to satisfy multiple constituents.

The project includes a 3,000-seat convocation center known as "The Forum," a residence hall for 750 students, a dining facility, a 150-seat event center, student study spaces and retail. The primary program elements are linked to each other at levels one and two via shared public, front-of-house pre-function spaces and back-of-house service and support functions. A series of social spaces provide venues for interaction to guide visitors and residents to their destinations.

The complex is designed to encourage students to spend more time on campus and provide venues that attract the local community. The program and site also offer a valuable opportunity to establish an identity for the South Campus. The pedestrian-scaled development includes landscape design features such as planting areas, trees, benches and plaza paving and lighting. The prominent location provides monumental views both to and from the new campus.

◀ forum entry plaza

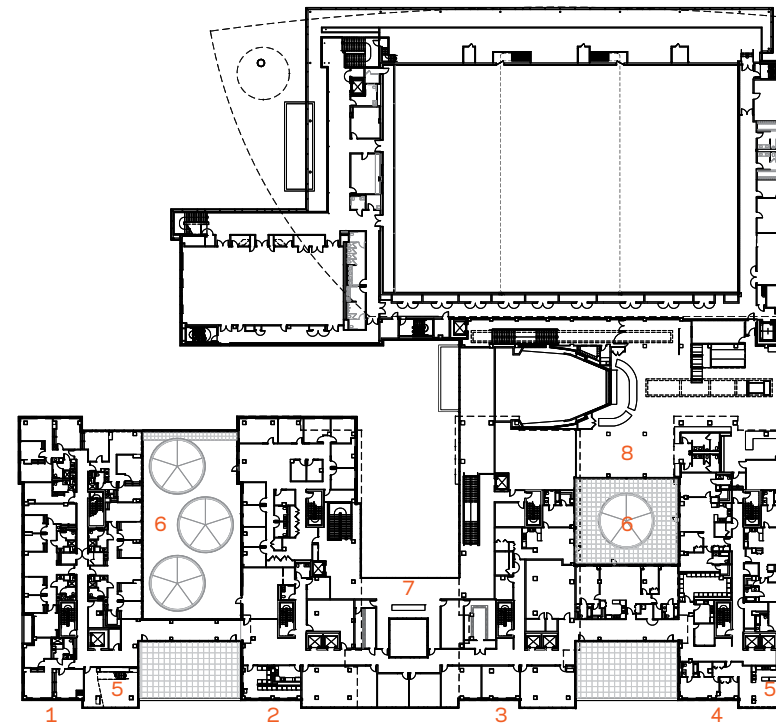


▲ site plan

- 1 forum entry plaza
- 2 auditorium
- 3 rehearsal space
- 4 retail
- 5 residence entry plaza
- 6 courtyard
- 7 theater
- 8 service
- 9 residence lobby

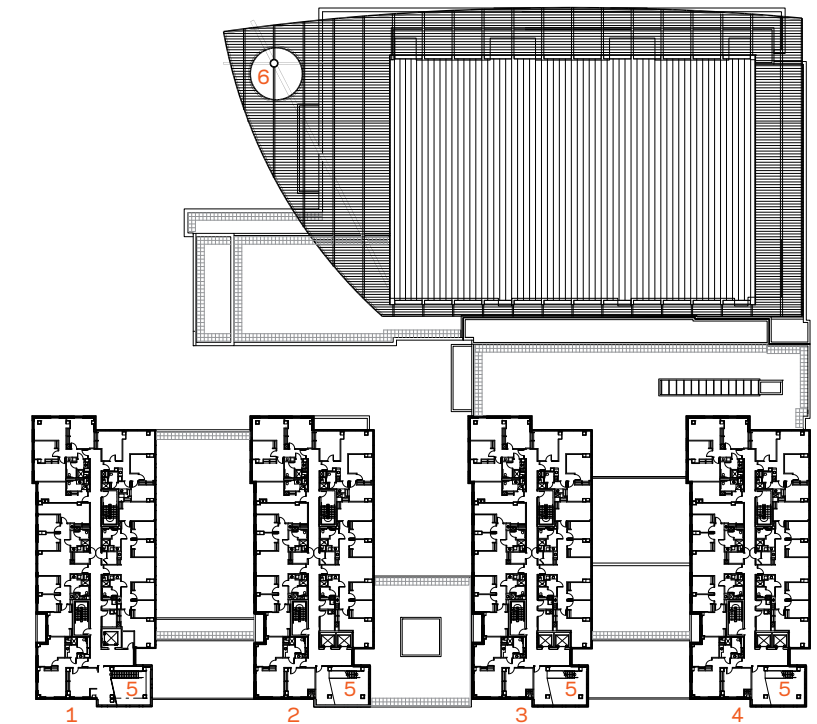


▲ east elevation



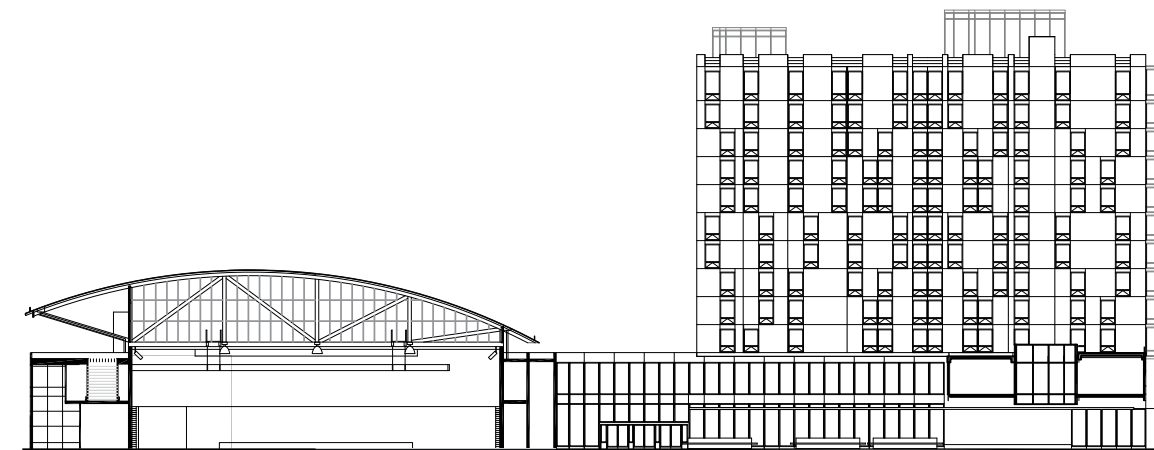
▲ level 2 floor plan

- 1 residence tower one
- 2 residence tower two
- 3 residence tower three
- 4 residence tower four
- 5 two story lounge
- 6 planted terrace
- 7 residence lobby
- 8 cafeteria



▲ residential tower floor plan

- 1 residence tower one
- 2 residence tower two
- 3 residence tower three
- 4 residence tower four
- 5 two story lounge
- 6 light cannon



▲ section



▲ residences from southwest corner



▲ student residences from southeast corner



Image Credits

5 Churchill Place, Canary Wharf.....	Chris Ansell, Alberto Dominguez, Timothy Soar
Abaad Tower.....	HOK
Abu Dhabi National Oil Company Headquarters.....	HOK, Hypertecture, Werner Sobek
Anaheim Regional Transportation Intermodal Center.....	Crystal CG
Autodesk.....	David Wakely
Beijing Central Business District, Block Z8.....	Crystal CG
Capital Market Authority Tower.....	Bezier, Crystal CG, Encore
Cedar Valley College, Science and Technology / Allied Health.....	Aker/Zvonkovic Photo, Chad M. Davis
Cedars-Sinai, Advanced Health Sciences Pavillion.....	Shimahara Illustration
Community Hospital of Monterey Peninsula.....	Lawrence Anderson
District of Columbia Consolidated Forensic Lab.....	HOK
Fitzrovia Apartments / Royal National Orthopaedic Hospital.....	Paul Grundy, HOK
Florida International University, Frost Art Museum.....	Moris Moreno
Greenland Dalian East Harbor.....	HOK
Greenway Self Park.....	Steve Hall/Hedrich Blessing
Gunderson Dettmer.....	David Wakely
Haileybury Almaty.....	Timothy Soar
Indianapolis International Airport.....	Chuck Choi, Timothy Hursley, Sam Fentress
Khed Special Economic Zone.....	HOK, iStockphoto
Killbear Visitor Centre.....	Tom Arban
King Abdullah University of Science and Technology.....	Sam Fentress, Jean Picoulet, Roger Soto
Mint Museum.....	HOK
NASA Building 20.....	Aker/Zvonovic Photo
National Center for Civil and Human Rights.....	Crystal CG, The Freelon Group, HOK
New Cairo Competition.....	HOK
New Songdo City, Block B36 Hotel.....	Joonhwan Yoon
New Songdo City, Block D22 Residential Towers.....	3dwin, Joonhwan Yoon
NOAA National Center for Climate and Weather Prediction.....	HOK
Orange County Groundwater Replenishment System.....	Lawrence Anderson
Reliance Global Headquarters.....	HOK
Riyadh Municipal Complex.....	HOK, Omrania
Salvador Dalí Museum.....	Moris Moreno, Michael Rixon
Samsung Research and Development Center.....	HOK
The Sir Percival David Collection in the Sir Joseph Hotung Centre for Ceramic Studies, British Museum.....	Photography Courtesy of the Trustees of the British Museum
University of Florida, Lake Nona Research Center.....	Crystal CG
University of Illinois at Chicago, James J. Stukel Towers and Forum....	James Steinkamp



2011 design annual