

333 TREMONT STREET

Boston, MA

A twenty-one story NetZero Energy and Net Zero Water (projected) mixed use tower is located in the Bay Village neighborhood adjacent to Boston's Theater District. The site abuts multiple neighborhoods and building scales that allow for a free standing building with full exposures for each facade. Extensive shadow studies were completed during the early design phase. Community pressure led the design to include a building opening or "mouth" that allows natural light to flood across the site in all seasons. Due to the limited building footprint, the envelope was beveled to create additional sloped surface areas for solar PV panels, awnings and glass . Almost 60% of energy is generated on site and the remainder is purchased through Green Certified off-site renewable energy sources in order to achieve Net Zero Energy (NZEB:D) as defined by the National Renewable Energy Laboratory. The project is a flagship mixed-use building and a new standard for sustainability, and work life balance with projected WELL Gold certification.

Touloukian Touloukian Inc.  
architect  
Studio NYL  
structural engineer  
Resilient Building Group  
LEED consultant



location & transportation 14 / 16	water efficiency 9 / 11	materials & resources 5 / 13	innovation 3 / 6
sustainable sites 8 / 10	energy & atmosphere 33 / 33	indoor quality 16 / 16	regional priority 4 / 4

LEED Platinum (LEED v4 for BD+C)  
93 / 110 projected points

6 of 7 petals projected;  
water, health and happiness, materials, equity, beauty, and place

Living Building Challenge

meets AIA 2030 Challenge:  
2017 DDX Report  
% Predicted EUI Reduction = 89 %

AIA 2030 Challenge

implementing measures to achieve greenhouse gas reduction, net zero carbon building performance, and preparation for extreme heat & precipitation events

Climate Ready Boston

total building water usage = 906,564 gallons/year  
collected rainwater / greywater = 983,845 gallons/year

Net Zero Water

building & site KWH used = 812,553 KWH/year  
KWH generated = 497,220 KWH/year

Net Zero Energy (NZEB: D)

- International WELL Building Institute V.2**

WELL Gold projected 81/100
- 1 Air**

ensure high levels of indoor air quality across a building's lifetime through diverse strategies that include passive design and human behavior interventions
- 2 Water**

focus on the quality, distribution and control of liquid water in a building; address the availability and contaminant thresholds of drinking water, as well as target the management of water to avoid damage to building materials and environmental conditions
- 3 Nourishment**

require the availability of fruits, vegetables and nutritional transparency to encourage the creation of food environments where the healthiest choice is the easiest choice
- 4 Light**

promote exposure to natural light and aim to create lighting environments that are optimal for visual, mental and biological health
- 5 Movement**

promote movement, physical activity and active living; discourage sedentary behaviors through environmental design strategies, programs and policies
- 6 Thermal Comfort**

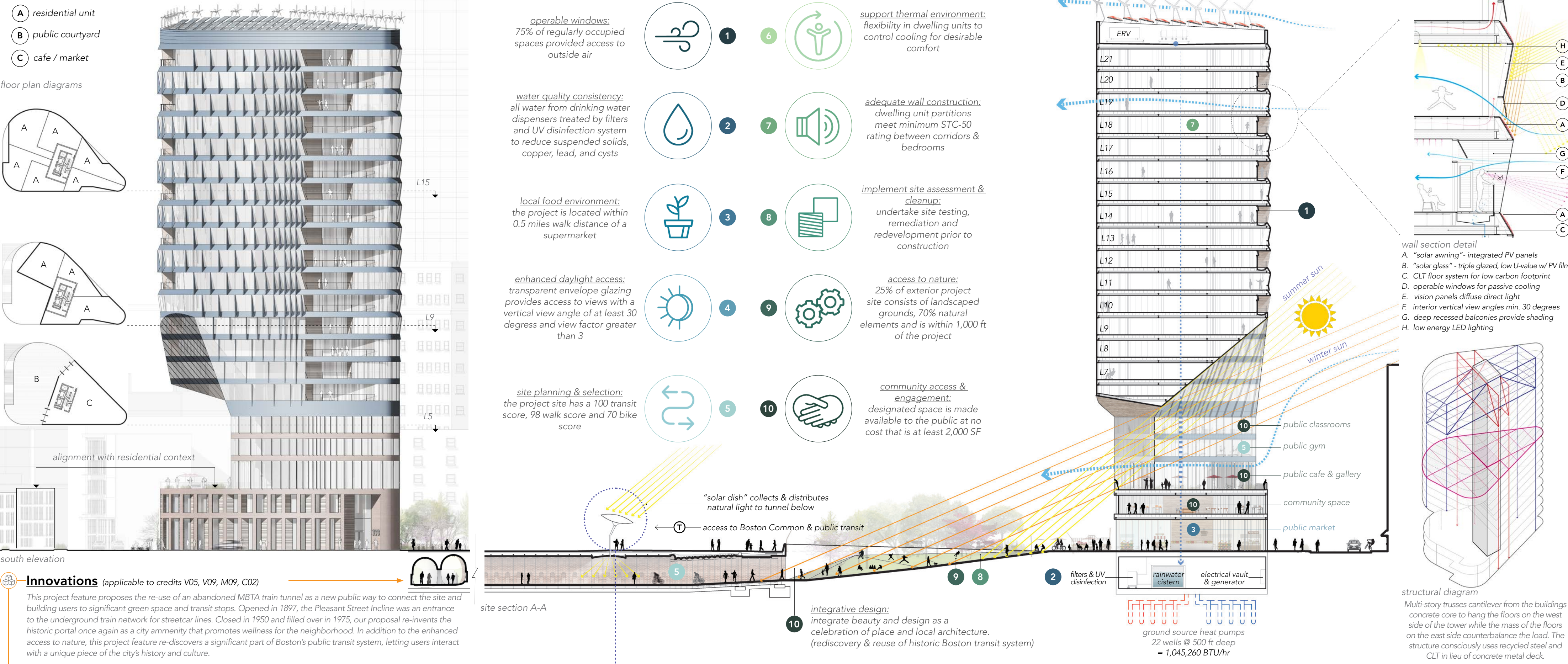
promote human productivity and ensure a maximum level of thermal comfort among all building users through improved HVAC system design and control, and by meeting individual thermal preferences
- 7 Sound**

bolster occupant health and well-being through the identification and mitigation of acoustical comfort parameters that shape occupant experiences in the built environment
- 8 Materials**

reduce human exposure to hazardous building material ingredients through the restriction or elimination of compounds or products known to be toxic
- 9 Mind**

promotes mental health through policy, program and design strategies that seek to address the diverse factors that influence cognitive and emotional well-being
- 10 Community**

aims to support access to essential healthcare, workplace health promotion and accommodations for new parents while establishing an inclusive, integrated community through social equity, civic engagement and accessible design







# Community Living Center

DCAMM Chelsea Soldiers' Home | Chelsea, MA

Located atop Chelsea's iconic Powder Horn Hill, the Community Living Center is a long-term care facility for Massachusetts' veterans that creates a dramatic new urban landmark capped by its solar canopy and reaching outward to frame the horizon. Designed to harness panoramic views of downtown Boston and the harbor, the transformative new facility will have 154 private rooms organized around shared community spaces and surrounded by generous courtyards.

The net zero hospital uses a performance-based approach to the building and systems design resulting in a building that is designed to use 63% less energy than a typical facility utilizing geothermal heating and cooling, extensive natural ventilation and a 0.7 megawatt rooftop-mounted solar array to meet state and federal fossil fuel reduction targets.



Net Zero

46 kBtu/SF

0 fossil fuel usage

73%

REDUCTION IN ENERGY USE  
compared to the 2030 baseline

100%

OF THE HEATING LOAD IS PROVIDED  
by the geothermal system

90%

OF THE BUILDING IS DAYLIT

75%

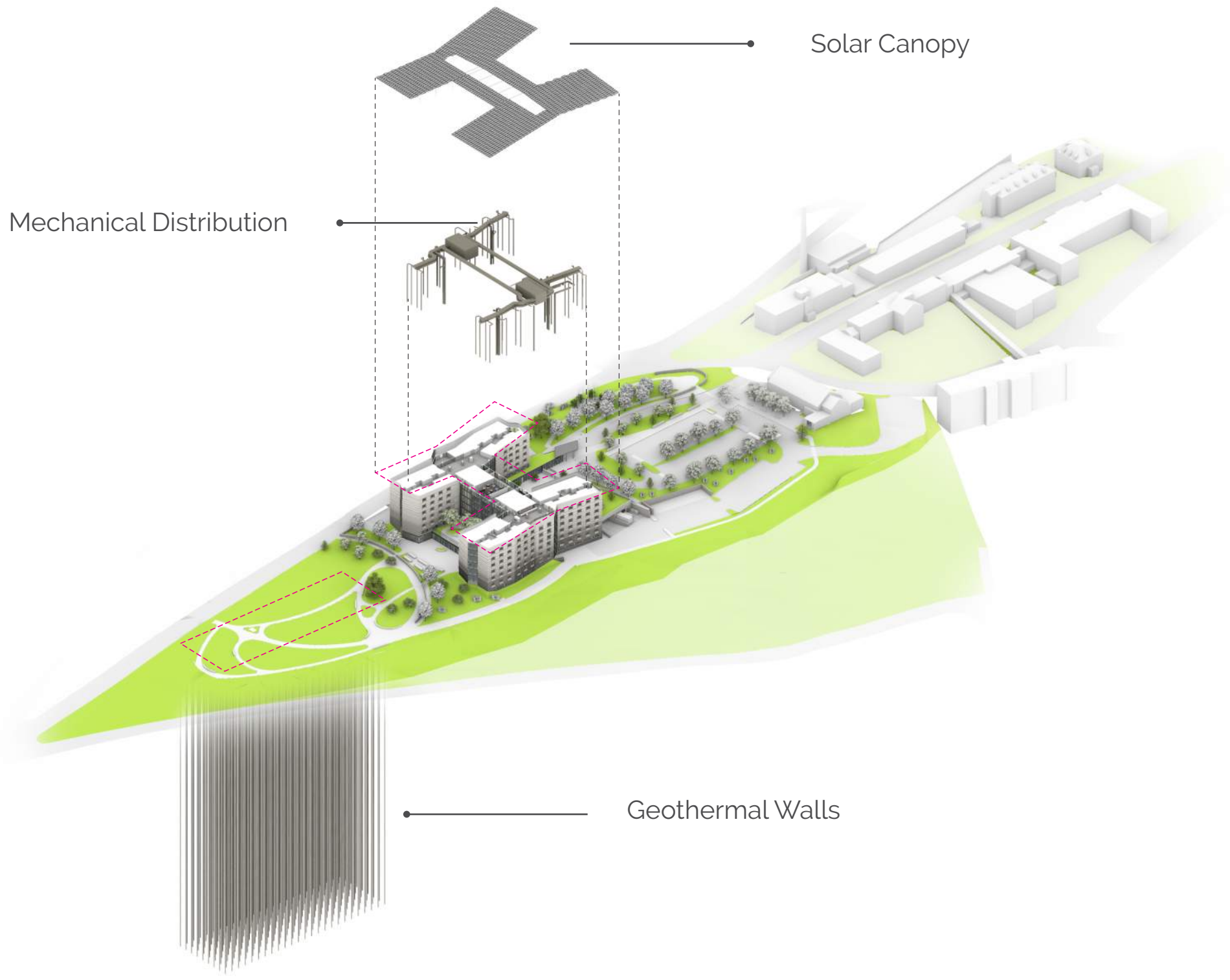
OF THE BUILDING HAS  
QUALITY VIEWS

35%

PREDICTED REDUCTION IN  
INDOOR WATER USE  
compared to the LEED baseline

10%

RENEWABLE ENERGY  
produced onsite



LEED Facts	
New Construction (v2.2)	
Certification	
Targeting LEED GOLD	71
Location & Transportation	4/9
Sustainable Sites	7/9
Water Efficiency	4/11
Energy & Atmosphere	25/35
Material & Resources	8/19
Indoor Environmental Quality	14/16
Innovation in Design	6/6
Regional Priority	3/4





# Akamai Technologies Global Headquarters

Cambridge, Massachusetts

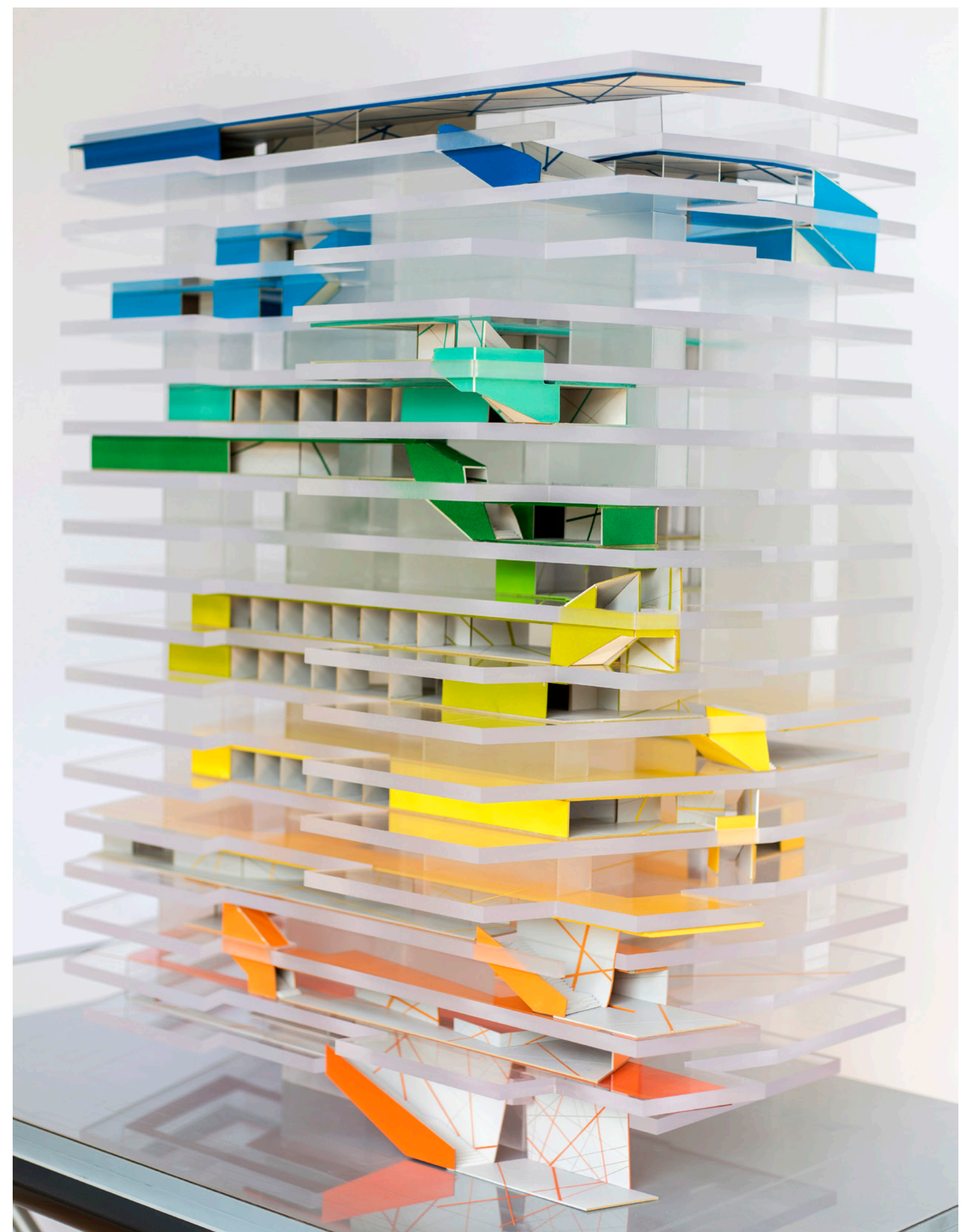
Akamai Technologies, one of the world’s leading companies in the Content Delivery Network field, is rethinking their global headquarters in Cambridge, Massachusetts. In the fall of 2019 they are moving from six different buildings to their new headquarters in Kendall Square to continue to capitalize on the fastest growing tech hub in the country.

Akamai’s vision for their new headquarters is a singular and integrated campus in a sustainable environment tailored to the health and wellness of their employees. The new 19-story, 480,000-square-foot design strategically organizes all collaborative spaces around a continuous path throughout the entire building, encouraging movement throughout the space and both planned encounters and serendipitous interactions. The path, a mile-long experience affectionately referred to as the “Aka-mile”, begins in the warm and welcoming lobby at street level. The Aka-mile arranges many of Akamai’s customer service programs around the first few client reception floors, taking the visitor along a journey of exploration and education around services Akamai offers, and how it has become a leader in the tech industry.

The path to the upper floors for the staff workplaces expresses Akamai’s goals and vision around sustainability, and dovetails with the principles of the WELL Building Standard. Akamai has a serious commitment to the health and wellness of their employees. With an rich and robust series of policies to support employee wellness, Akamai was excited to provide leadership around this new standard, and to seek Gold level certification. In addition Akamai has implemented a number of key sustainability features to support the landlord’s effort to developing the base building to meet LEED Core and Shell at the Gold level.

Many of the public spaces along the Akamile include amenities central to WELL certification. The path weaves its way through interconnecting stairs, through double-height meeting spaces, coffee or juice bars providing healthy nourishment, brainstorming and innovation spaces for meetings of the mind, spaces that support a community of knowledge sharing and invention. Quiet, isolated libraries offer a respite, and living rooms throughout the path allow employees the opportunity to take in a change of scenery. Mega Bytes—a combination food network and activity node—draws people to the top floors of the building, offering the best views of Cambridge and Boston to all employees.

Sasaki’s design unites all of Akamai, encouraging their productivity, wellness, innovation, and creativity and aspiring to new heights.



## Project Team

Owner | Akamai Technologies

Architect | Sasaki

MEP/FP | WSP

Structural | Magnusson Klemencic Associates

Lighting | HLB Lighting Design

Food Service | Colburn & Guyette

AV Design | ACT Associates

Tel/Data, Security | Cosentini

Specs | Kalin Associates

Hardware | ArkaSpecs

Acoustics | Acentech

Code | Howe Engineers

Commissioning | BR+A Consulting Engineers

Sustainability | Cushman & Wakefield

Furniture Vendor | Teknion

