LEED v4 BD&C, Healthcare Gold Certification

74 points

Location & Transportation	9/9	
Sustainable Sites	6/9	
Water Efficiency	8/11	
Energy & Atmosphere	22/35	
Materials & Resources	9/19	
Indoor Environmental Quality	9/16	
Integrative Process		1
Innovation		6
Regional Priority		4

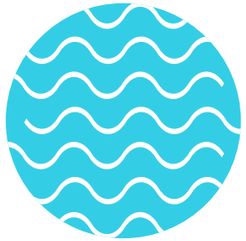
Resilience Approach

Disruptor	Threat	Goal
Sea Level Rise **Storm Surge** **Precipitation**	**Flood** ▪ 1,000 year storm event with sea level rise, storm surge, and breaching of the Charles River Dam	▪ Continue patient care services, including pharmacy operations, in the event of a flood ▪ Prohibit water infiltration into the building
Temperature	**Increased Temperatures** ▪ Climate change-driven average temperature increases of 4-5°F by 2070 with an increase in days over 90°F	▪ Maintain patient and staff comfort under changing climate conditions
Wind	**Hurricane Winds** ▪ Climate change-driven increase in risk of hurricanes along north-east coast. Category III is the predicted hurricane land-fall strength	▪ Avoid facade damage that impairs patient care or creates a public hazard under predicted hurricane events
Seismic	**Earthquake** ▪ No change to structural risk beyond code ▪ Risk of utility disruption based on surrounding site geology / soil conditions and piping infrastructure age	▪ Allow for continued patient care operation after a design seismic event
Blast / Terrorism	**Security** ▪ Vehicle intrusion ▪ Blast	▪ Minimize casualties due to design threats

96 Hour Island Mode

MGH Community Support

Climate Change Resilience



Sea Level Rise + Flood Mitigation

- Electrical service entry on 2nd floor
- Flood resistant ground floor façade and deployable barriers at grade & below grade tunnel connections
- Bridges for secondary means of campus access

Storm & Storm Water Design

- Storm-induced flood conditions considered in flood mitigation design
- Storm water capture, storage, and re-use on-site
- Pervious paving at street level and green roof areas for reduced run-off

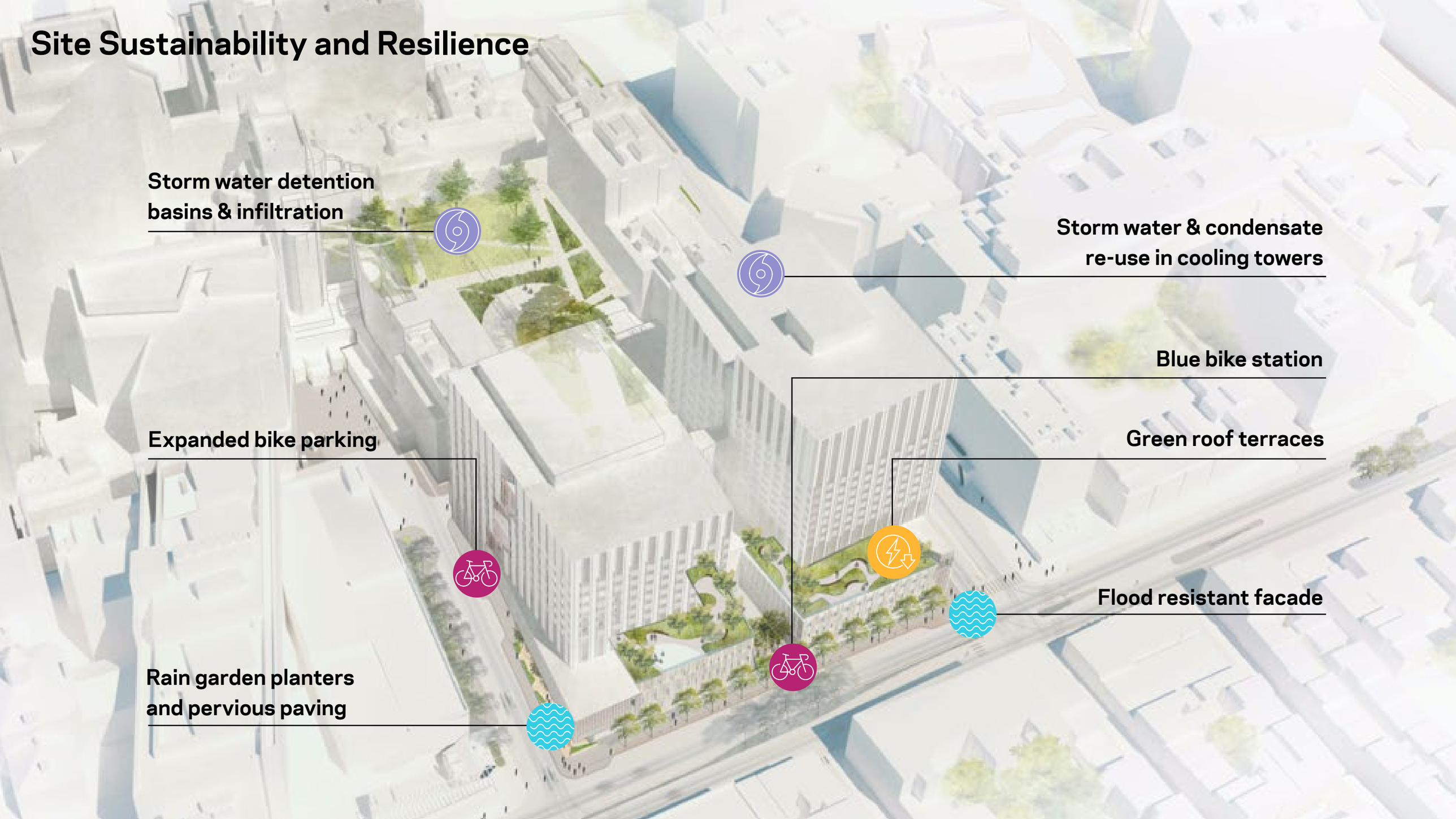
Temperature Rise

- Cooling plant designed around 2070 projected design conditions
- Cooling tower water storage for continuous operation of cooling systems
- Heat island mitigation strategies including high reflectance roofing materials, vegetated roofs, and increased tree canopy

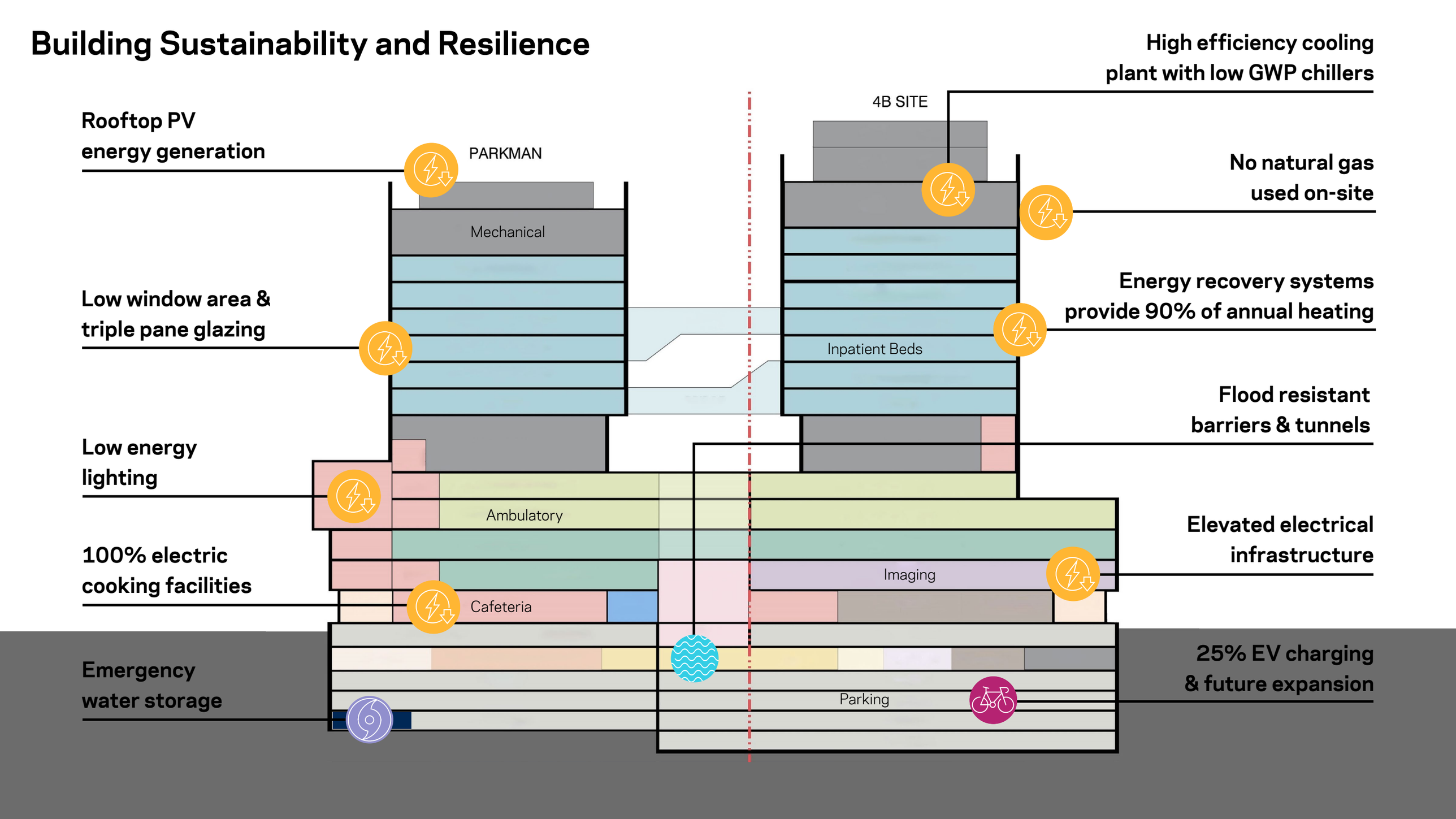
Connectivity

- EV charging infrastructure for 25% of parking spaces with capability to expand
- Expanded bike parking for the campus
- New Blue Bike station at main entrance

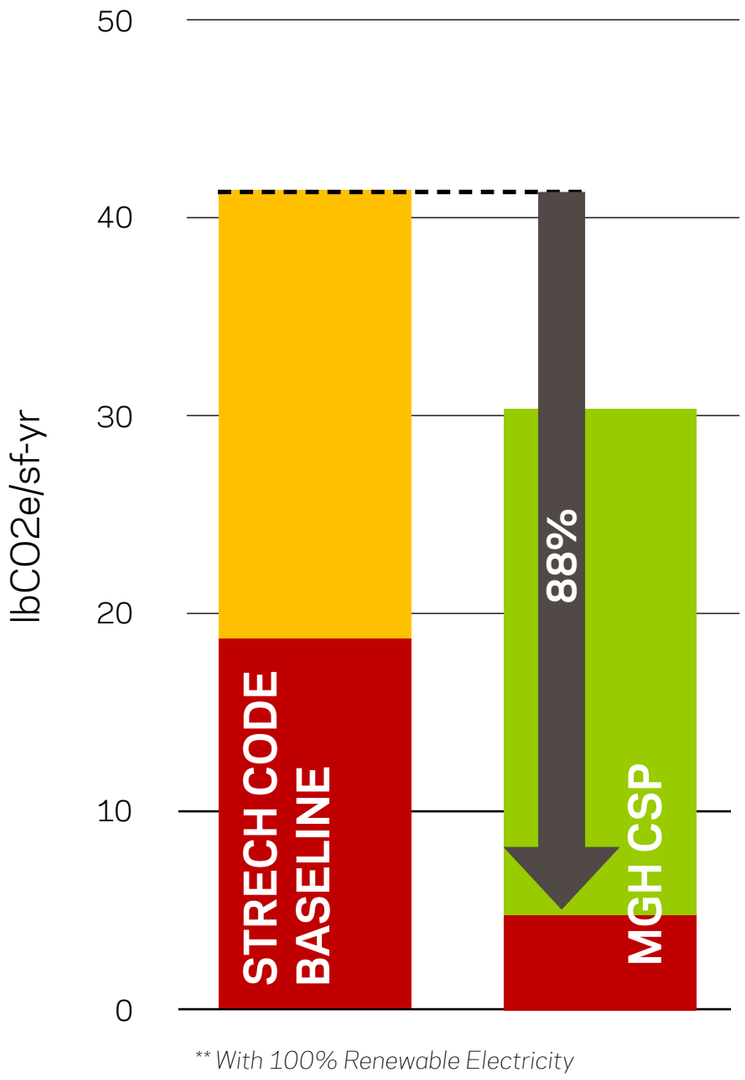
Site Sustainability and Resilience



Building Sustainability and Resilience



Energy and Carbon Performance



*** With 100% Renewable Electricity*

KEY

- Renewable Electric
- Electric
- Natural Gas
- District Steam

Energy Performance

Site EUI - 163 kBTU/sf-yr

Savings vs. MA Stretch Energy Code

- 25% site energy savings
- 88% CO2e savings

Carbon Neutral Operations

Commitment to 100% renewable electricity and carbon offsets