

# SUSTAINABLE DESIGN FEATURES

# HomeRise at Mission Bay



## DESIGN FOR EQUITABLE COMMUNITIES

- EQ1.** Integrated into San Francisco's evolving Mission Bay neighborhood, HomeRise creates a healthy, sustainable, supportive community for 140 formerly chronically unhoused individuals that embraces a park-like open space; providing shelter and opportunities for building connection and reintegrating into the community; and restoring health and wellness; and offering job training opportunities.
- EQ2.** Community garden will generate healthy foods onsite for residents and neighbors, and community kitchen will provide opportunities for nutrition education.
- EQ3.** Shared resident amenities and supportive services for efficiency and community building.
- EQ4.** Community Kitchen for nutritional learning, self-reliance, and equity.
- EQ5.** Transit + Bicycle + Pedestrian oriented location.
- EQ6.** Universal design elements address the needs of residents with physical disabilities and allow for aging-in-place.
- EQ7.** Gender neutral restrooms in common areas.



## DESIGN FOR ENERGY

- EN1.** **Solar Electric Battery Backup System powers core services for resiliency during emergency power loss; lighting spaces for safety and security, keeping medications stable, and powering charging phones and mobility devices; supports wellness, provides refuge for residents & broader HomeRise community.**
- EN2.** High performance building enclosure and windows reduce thermal energy loss.
- EN3.** Sunshades reduce heat gain from south facing windows.
- EN4.** LED lighting and Energy Star rated appliances used throughout the building.
- EN5.** Operable windows and ceiling fans to reduce cooling demand, and tempered supply air to reduce heating demand for thermal comfort & natural ventilation in units.
- EN6.** Rooftop solar photovoltaic panel system generates electricity for common areas.
- EN7.** Solar thermal panels reduce water heating energy needs.
- EN8.** Generous unit windows provide ample natural light reducing need for electric lights.



## DESIGN FOR DISCOVERY

- DI1.** As the second such development by the project team, a goal of the design process was to improve upon the previous design through input from the non-profit developers, programs operators, facility management and city partners; a post-occupancy evaluation as well as a community advisory committee.
- DI2.** PV energy generation monitoring and energy disclosure ordinances allow for post-occupancy energy evaluation.
- DI3.** Post-occupancy surveys and thermal studies to be completed after first year of building use.
- DI4.** One year walk through to assess the overall building performance including operational experience and feedback.
- DI5.** Factory fabricated/ modular Lessons Learned roundtable held with design team. Educational tours for young architectural, structural engineering and contractors team members.
- DI6.** Construction process lessons learned presentations held in Architect's office to share knowledge.



## DESIGN FOR RESOURCES

- RE1.** Decreased embodied carbon by achieving up to 50% cement replacement in concrete mixes.
- RE2.** Rapidly renewable bamboo plywood and cork as accent materials in common areas.
- RE3.** High Pressure Laminate (HPL) exterior siding panels are made from real wood sourced from sustainably managed, PEFC certified forests.
- RE4.** Ground floor concrete slab polished and sealed to provide durable floor with minimal material use.
- RE5.** VOC-free paints throughout project.
- RE6.** Durable materials to provide longer lifespan of finishes and reduced maintenance.
- RE7.** More than 85% of construction waste materials (by weight) diverted from landfill via waste diversion recycling program.



## DESIGN FOR ECONOMY

- EM1.** **Strengthens community by housing and supporting formerly unhoused people; utilizes multiple sustainable strategies (from materials to building systems); and lowers costs through innovative modular construction processes, onsite energy production to reduce energy bills, and by installing durable, low-maintenance materials.**
- EM2.** **Provides multiple benefits across a triple bottom line: Onsite solar hot water and solar electric systems generate clean energy, create a healthier environment, reduce reliance on fossil fuels, and lower utility bills.**
- EM3.** Manages construction cost by combining factory-built modular and site-built construction.
- EM4.** Pair of studio apartments with shared corridor form highly efficient factory-built modules.
- EM5.** Factory-built construction minimized construction waste and close proximity to factory minimized transportation costs.
- EM6.** Wood construction with minimal concrete structure reduced building weight and foundation costs.
- EM7.** Designing highly efficient studio units, with minimal variation between units, maximizes the number of units within the zoned height limit, maximized the economies of scale.
- EM8.** Combines durable finishes at pedestrian level with warmer softer finishes above reach range to enhance the welcoming residential feel to minimize life-cycle costs through efficiency and durability.



## DESIGN FOR ECOSYSTEMS

- ES1.** Native habitat restoration replaces post-industrial landscape.
- ES2.** Exterior light fixtures are "dark sky" compliant.
- ES3.** Designed to bird safe standards.
- ES4.** Native pollinator garden with drought-tolerant landscaping.
- ES5.** Garden courtyard is sheltered from prevailing northwesterly winds.
- ES6.** New landscape typography established to integrate stormwater.
- ES7.** The community garden's espalier will engage users and passersby with the delightful scent of fruit.



## DESIGN FOR CHANGE

- CH1.** Resiliency Checklist developed and used with team during design to identify priorities for the project.
- CH2.** Hinged slab ramp and entry stair design accommodates the anticipated extensive settlement of the adjacent sidewalks and streets, ensuring accessible paths over time.
- CH3.** Raised ground floor mitigates against sea level rise, future flooding, and reduces long term maintenance and retrofitting costs.
- CH4.** Hinged slabs and buried stairs allow the building to remain accessible over time as the bay fill soils sink up to 17".
- CH5.** Solar battery back-up infrastructure is in place for system installation once funding is secured, to store and supply solar electric energy for use in emergencies when power grid is down.
- CH6.** Common areas are designed to be flexible, to accommodate multiple uses, and can be partitioned into smaller spaces or combined into larger spaces.
- CH7.** Certain common areas include option for mechanical cooling in peak heat events.
- CH8.** Air supplied to units is tempered at the roof. As the climate warms, cooling units can be added at the roof to provide cooled air to the units.
- CH9.** Air supplied to units is filtered at the roof, to provide clean air during wildfire season and other days with unhealthy particulate in the air. Further, all the filters can be changed at the rooftop, simplifying maintenance.



## DESIGN FOR WATER

- WA1.** Dual-plumbed to flush all toilets with recycle water when the city charges the recycled water mains.
- WA2.** 100% stormwater managed on-site in storm water infiltration and treatment planters, demonstrating water conservation efforts to the occupants in their experience of the landscape.
- WA3.** Low-flow water fixtures throughout.
- WA4.** Drip irrigation w/ smart sensors at streetscape & courtyard plantings.
- WA5.** Resilient planting selection of drought tolerant and native plants, including flood tolerant plants in bioretention areas.



## DESIGN FOR WELL-BEING

- WE1.** **HomeRise at Mission Bay connects residents to the unique history and climate of Mission Bay. To assist with integrating the residents into the neighborhood, a generous community garden is located between the private, resident courtyard and Bridgeview Way. The community garden is for use by both residents and neighbors, creating a place for building new relationships, giving the neighborhood a valuable gardening resource that would not otherwise exist, and enhancing the experience along Bridgeview Way, while offering additional privacy to the courtyard.**
- WE2.** Biophilic design integrating lush courtyard with multiple interior spaces for respite, healing, and community-building activities.
- WE3.** Enhanced indoor air filtration system at units and common areas for improved indoor air quality and occupant health.
- WE4.** Building materials and finishes selected for low/no off-gassing to provide healthy indoor air quality.
- WE5.** Common areas feature art by local artists with themes inspired by the community.
- WE6.** Universal design features promote ease of circulation and wayfinding in common areas and hallways.
- WE7.** Unit kitchens are equipped with shut-off timers at cooktops that will protect residents from fire and smoke.
- WE8.** Designed for preventative care, the supportive services are located between the building entry and elevators, increasing interaction between staff and residents to promote health, self-sufficiency and community.



## DESIGN FOR INTEGRATION

See **bolded** items throughout.