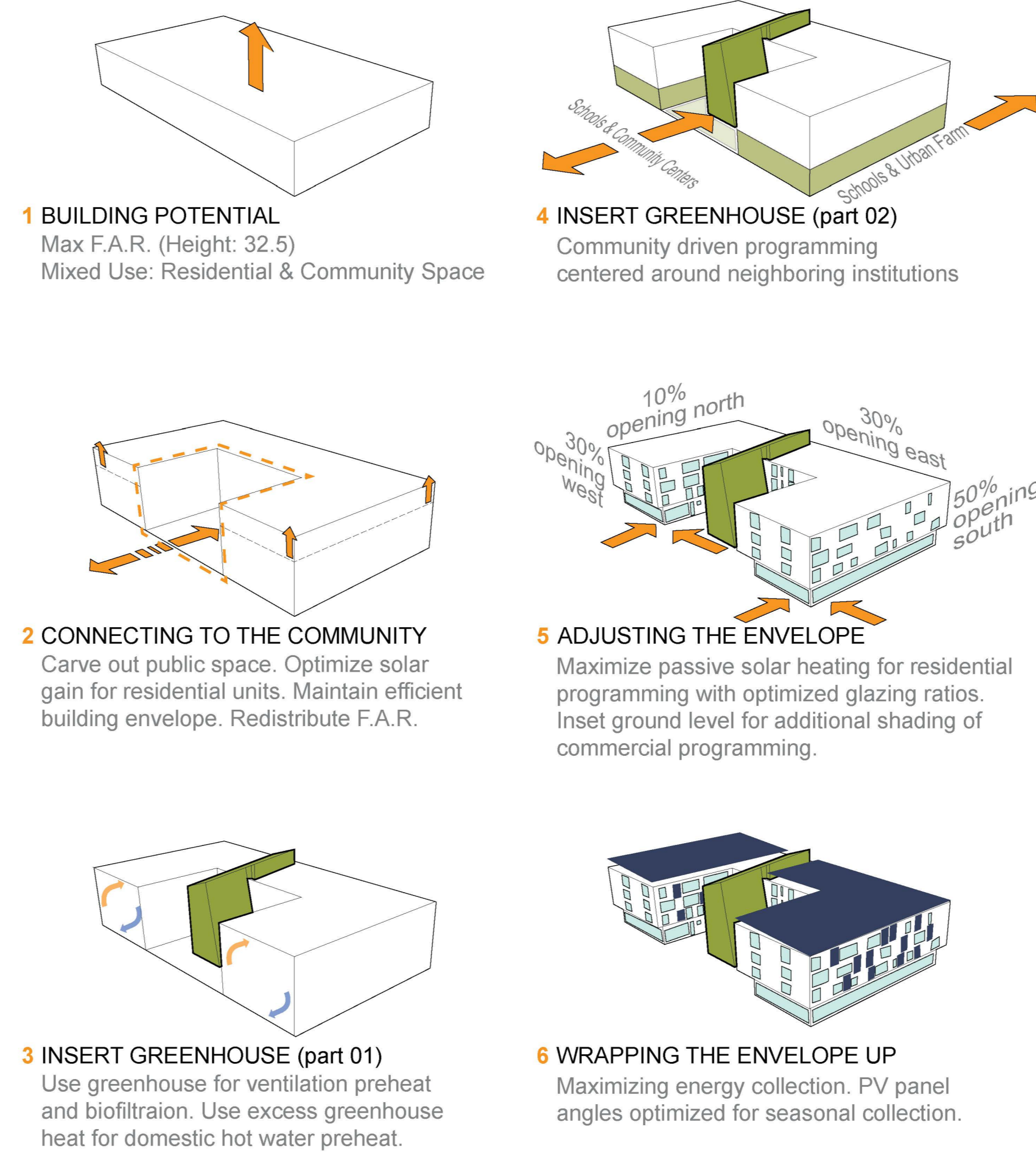


SITE PLAN
1"=20'



SCHEMATIC BREAKDOWN
NTS

GROWHOUSE

GROWhouse is a net-zero, mixed-use building intimately informed by the community of Rainier Beach, Seattle. The project site is at the institutional heart of the community, near schools, community centers and other institutions and is also in a hotspot for urban farming. GROWhouse embodies this local spirit through a net-zero architecture built around food production, a residential program mixed with community-centric social enterprise, and sustainable building practices. Beyond nurturing these families, the food produced supports ground level social enterprise, while offsetting the energy consumption associated with industrial farming and food transportation. Additionally, the greenhouse itself is tied into the building's energy strategies as a ventilation and domestic hot water preheat source.

Food Production – Healthy People and Families:

At the heart of GROWhouse - nestled between two wings of residence - is a four-story greenhouse. The greenhouse is accessible from each story and features intensive vertical farming of fruits and vegetables maintained by the residents. Beyond nurturing these families, the food produced supports ground level social enterprise, while the greenhouse itself becomes a key component of the building's energy strategies.

Social Enterprise – Strong Communities and Organizations:

GROWhouse strives to create a space that provides local, nutritious food; a place that grows and strengthens community, and a building that gives back more than it needs. GROWhouse will act as a hub for local urban farms by producing, processing and distributing food. It will also provide a lush community space where local school and community groups will operate food-centered skill-building programs.

Integrated Systems – Supportive Physical Environment:

The building is designed to capture solar energy via three avenues: First, solar panel arrays on the roof and South façade capture solar energy to generate electricity. Second, the building form and varying facades are developed to maximize passive solar gains to heating-dominated residential spaces. Lastly, the greenhouse collects solar light to produce sustainable food sources, and provides ventilation air preheat and domestic hot water preheat via the connected water loop heat pump system. The building system is a ground source heat pump network, which allows for offsetting of heating and cooling loads to reduce overall space conditioning energy consumption. This way, passive solar benefits can be transported around the building as needed.



EXTERIOR VIEW FROM SOUTHWEST



INTERIOR VIEW OF ZERO-WASTE GROCER & COMMUNITY TEST KITCHEN



EXTERIOR VIEW OF COURTYARD

WINNING ENTRY
Geoff Cox, Carolyn Cuthbert, Carly Kandrack, Esteban Matheus, Neal Philipson, Ouri Scott, David Tran

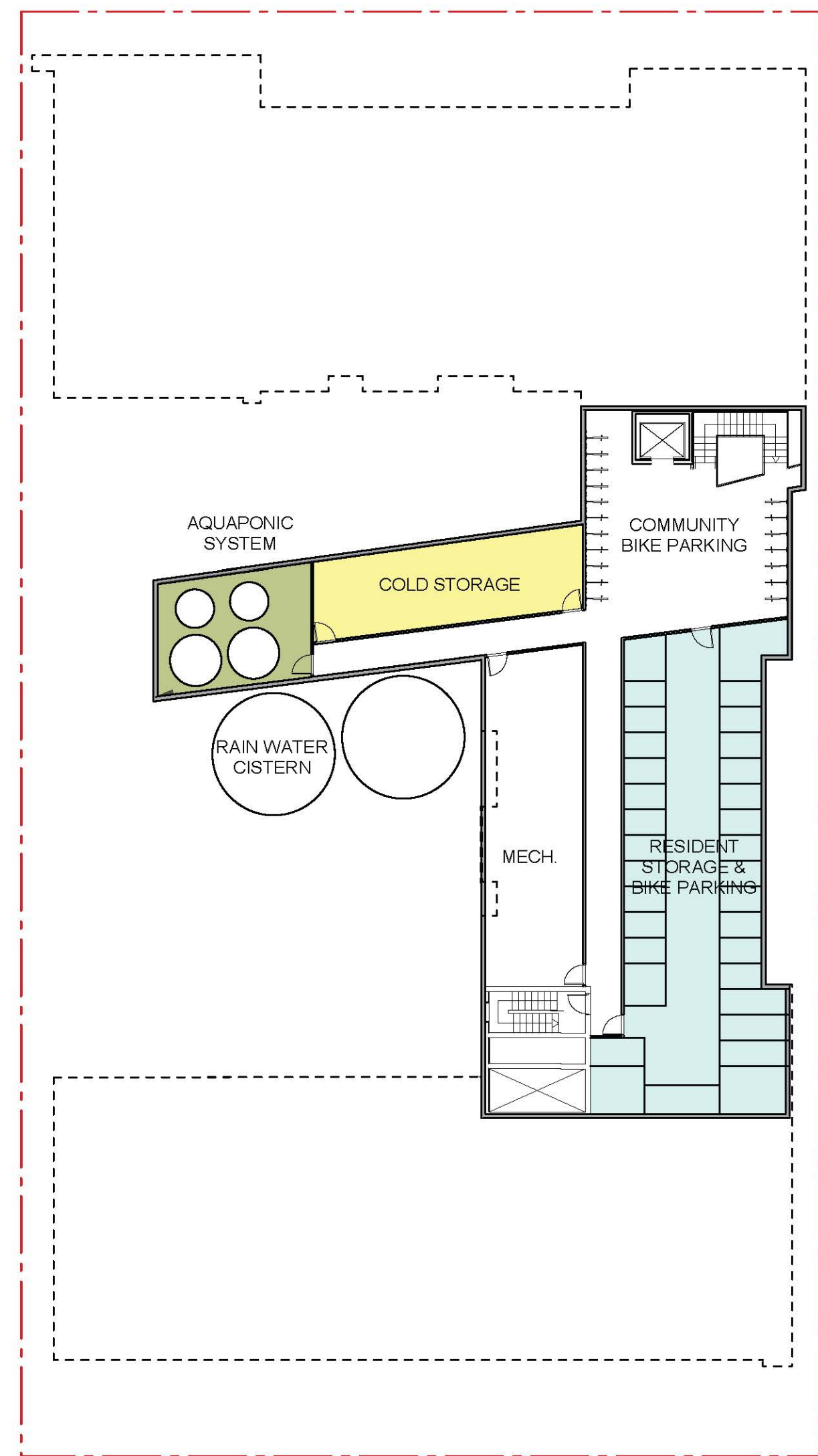
PERFORM
2016
BUILDING DESIGN
COMPETITION



HAMMER & HAND

LEVEL -01 PROGRAM

- Rainwater Cistern
- Aquaponics System
- Cold Storage
- Community Bicycle Parking
- Residential Bicycle Parking & Storage Lockers



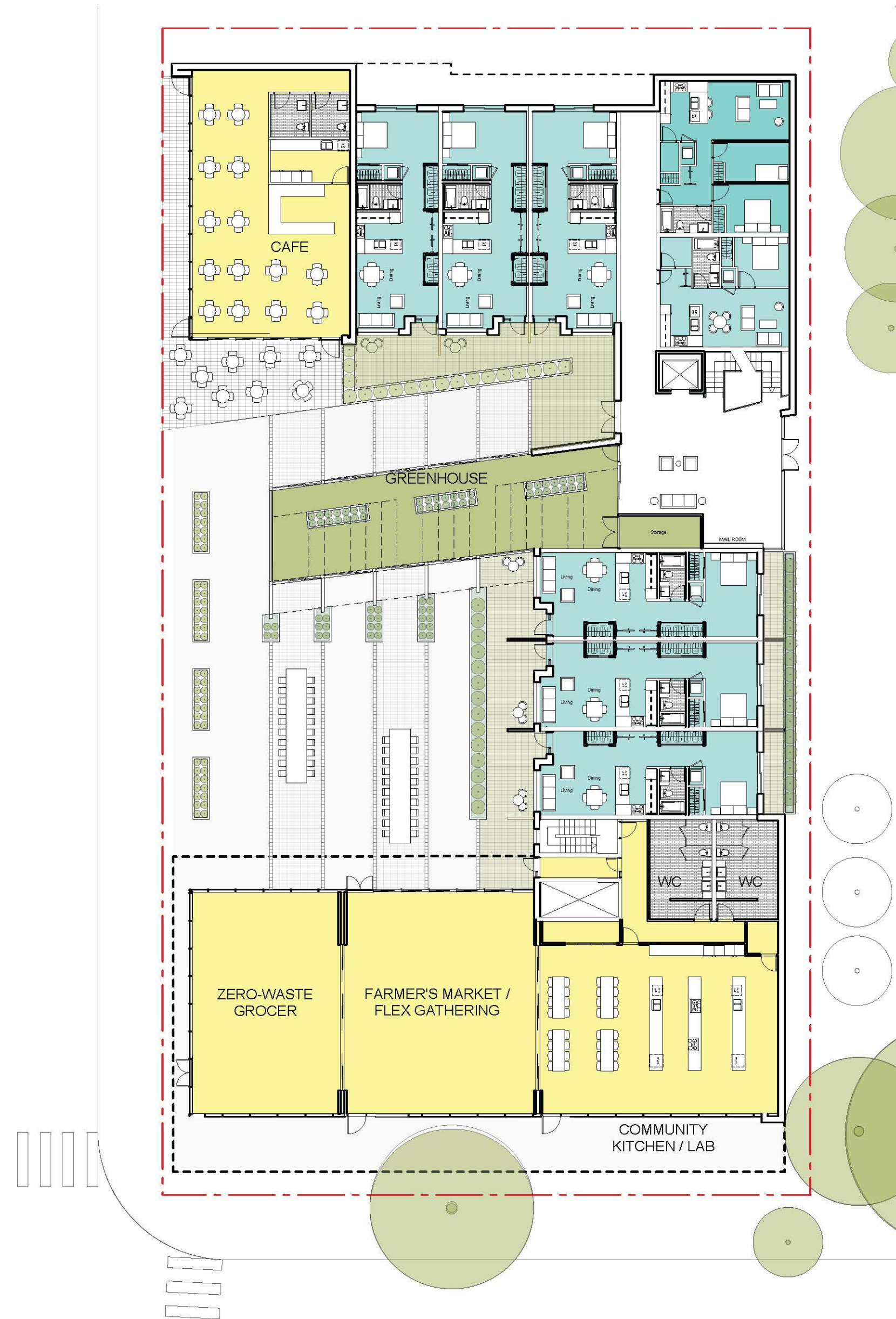
BASEMENT LEVEL -01

FEATURES

- **Aquaponics System** supports a cyclical relationship between living organism waste and plant waste
- **Bicycle Storage** access promotes a healthy, active and emission free transportation type to residents and community members visiting GROWhouse

LEVEL 01 PROGRAM

- Residential Units:
Livework Townhomes with Spill-Out Exterior Space, 1 Bedroom, 2 Bedroom
- Community Test Kitchen/Educational Facility
- Zero-Waste Grocer
- Community Flex Space
- Community Cafe
- Greenhouse Level 01: Labs & Root Planting
- Outdoor Community Courtyard



GROUND LEVEL 01

FEATURES

- **Community Test Kitchen** offers a culinary and educational hub for the GROWhouse, promoting a communal approach to the act of growing, cultivation and finally preparing and eating together
- **Culinary Education & Growth** facilitated by guest chefs and professionals within the culinary and agricultural fields to promote a more knowledgeable local community
- **Zero-Waste Grocer**, flex gathering space, and larger southern courtyard work together with the test kitchen to create one large, event space with the option to divide off using collapsible walled systems for more intimate uses

LEVELS 02-03 PROGRAM

- Residential Units:
1 Bedroom, 2 Bedroom, 3 Bedroom
- Residential Access to Balcony Facade Network
- Residential Playroom Amenity
- Communal Kitchen Amenity
- Greenhouse Level 02: Leafy Planting
- Greenhouse Level 03: Legume Planting



TYPICAL LEVEL 02-03

FEATURES

- **Multi-Use Amenity Rooms** coupled with tighter, more efficient layouts in the residential units promotes a communal lifestyle within GROWhouse
- **Common Spaces** at the east of the greenhouse structure, heightening awareness of the integrated framework and providing a daily visual connection to all residents
- **Balcony Facade Networks**, thermally broken and hung from the steel frame trellis structure at the roof level, all supported by the base building CLT construction, provide individual planting opportunity to residents

LEVEL 04 PROGRAM

- Residential Units:
1 Bedroom, 2 Bedroom, 3 Bedroom
- Community Childcare Amenity
- Terrace Access for Childcare Use
- Residential Exercise Room Amenity
- Greenhouse Level 04: Fruit Planting

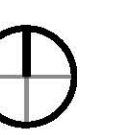


LEVEL 04

FEATURES

- **Community Childcare** and **Communal Kitchen** are intended for use by residents, but also by local community members as a greater outreach in the integration and education of the broader community
- **Rooftop Patio Garden** (as shown on the Site Plan, Page 1) for residents and local community members provides additional accessibility to outdoor space and an elevated vantage point to admire the systems and processes of the greenhouse.

- COMMUNAL USE
- INTEGRATED SYSTEMS
- RESIDENTIAL UNITS



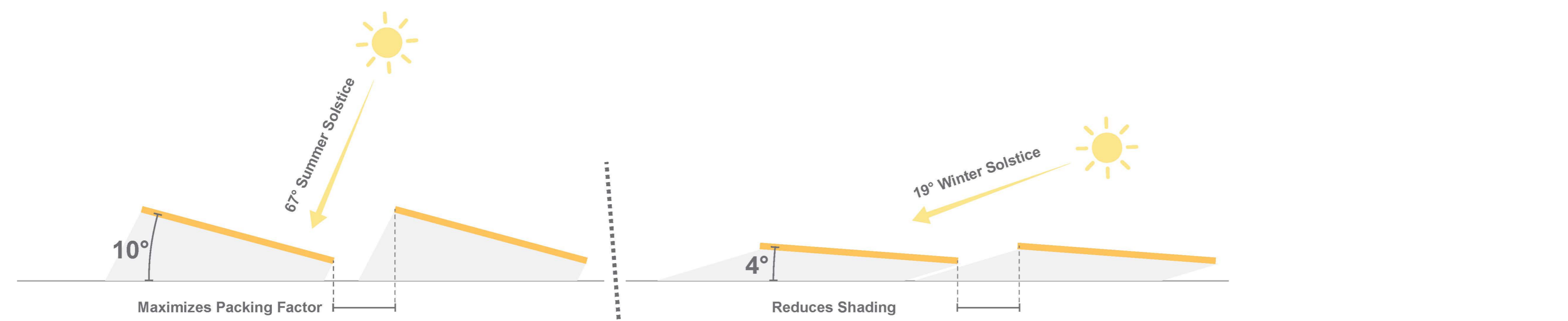
FLOOR PLANS
1"=20'

WINNING ENTRY

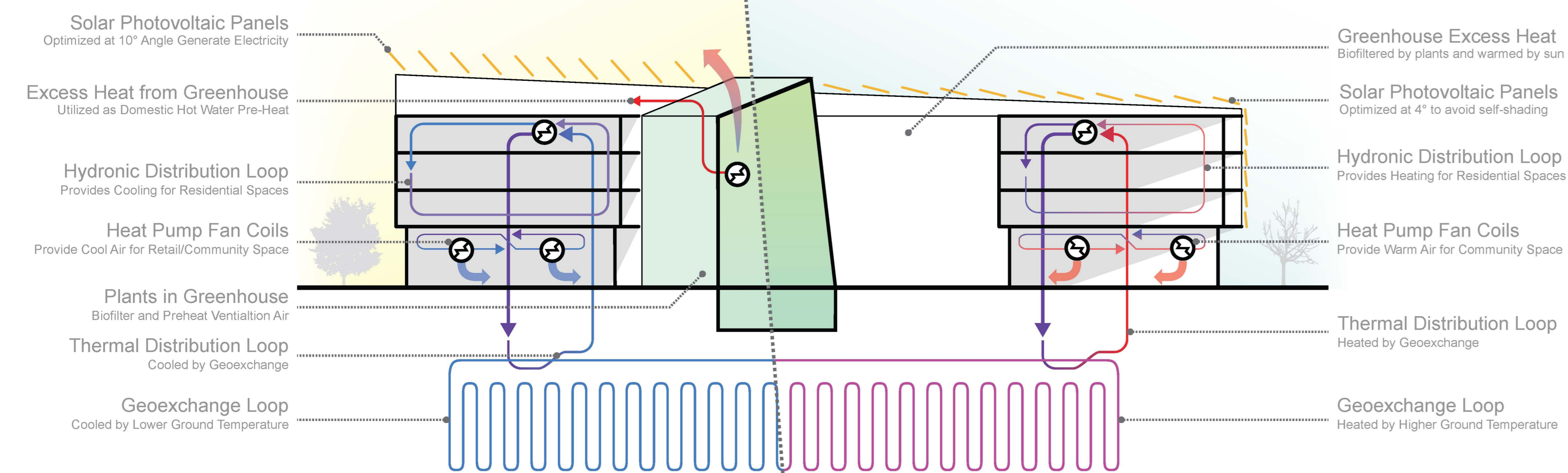
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PG&RFORM
2016
BUILDING DESIGN
COMPETITION





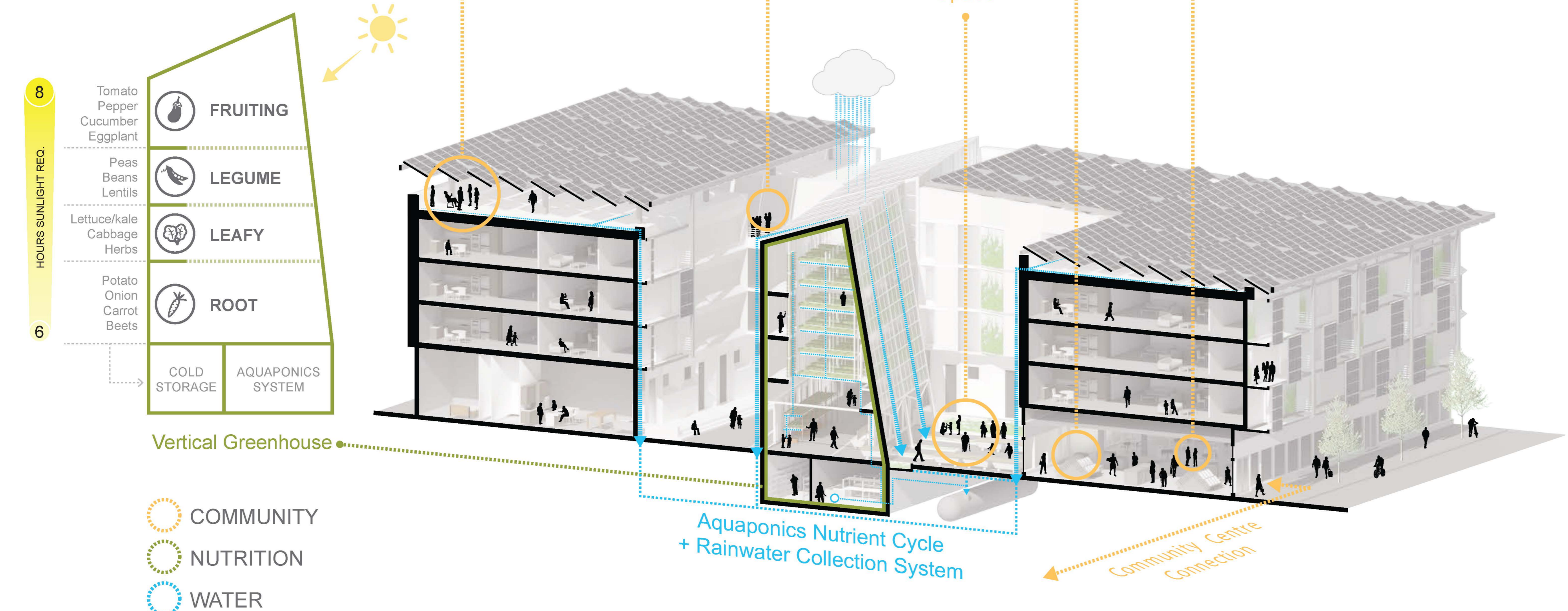
ADAPTIVE SOLAR PV ARRAY



INTEGRATED ENERGY SYSTEMS

"Food is not just fuel. Food is about family, food is about community, food is about identity. And we nourish all those things when we eat well."

Michael Pollan



HEALTHY LIVING FRAMEWORK



NORTH ELEVATION
1"=20'



SOUTH ELEVATION
1"=20'



EAST ELEVATION
1"=20'



WEST ELEVATION
1"=20'

WINNING ENTRY
Geoff Cox, Carolyn Cuthbert, Carly Kandrack, Esteban Matheus, Neal Philipsen, Ori Scott, David Tran

PGRFORM
2016
BUILDING DESIGN
COMPETITION

